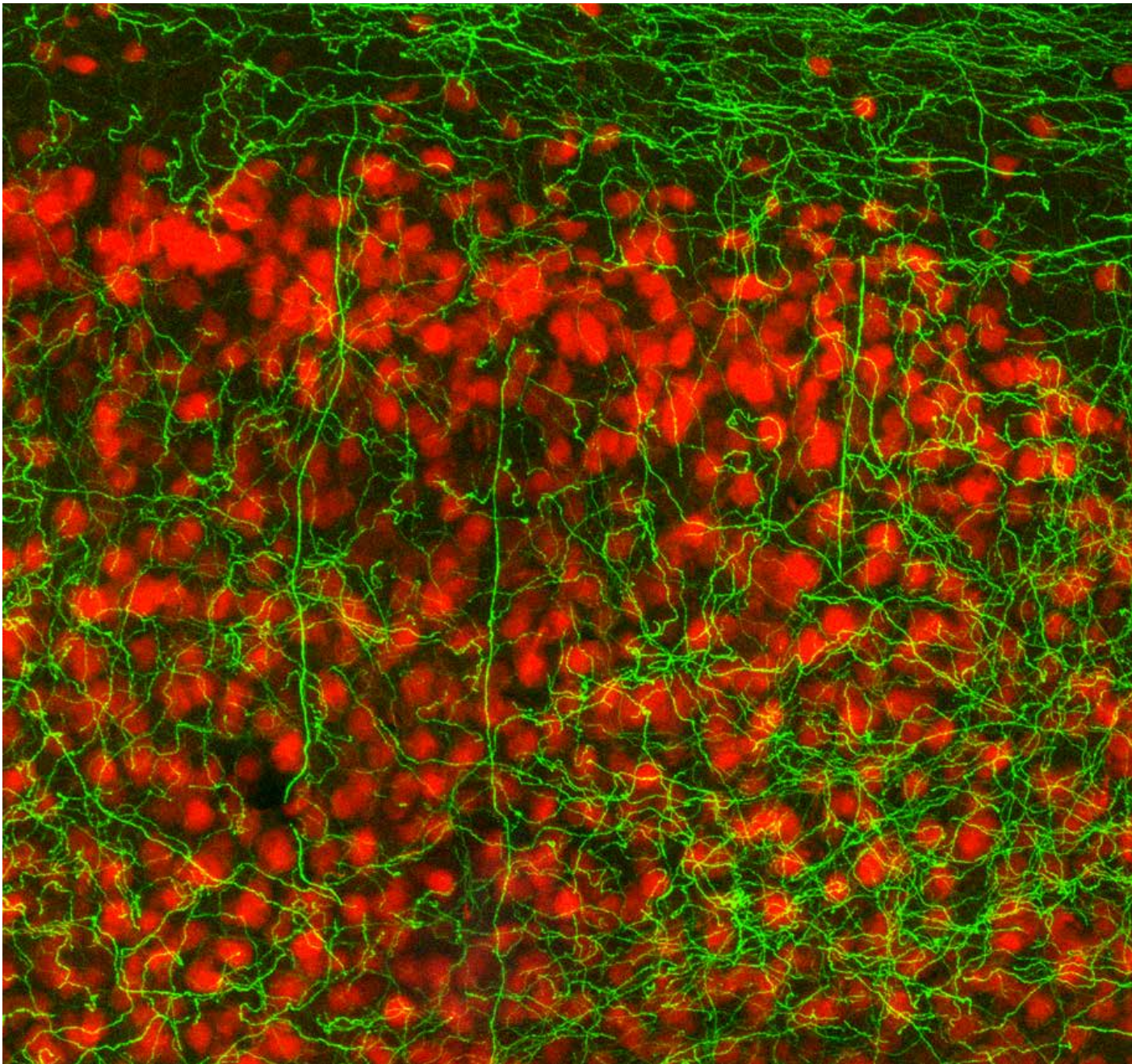
Neuroscience 2015

Chicago | October 17-21

Wednesday

Scientific Session Listings 639–830

Society for Neuroscience



Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office
Logistics and Programming
Logistics
McCormick Place: Hall A, (312) 791-6700

Programming
McCormick Place: Hall A, (312) 791-6705

Volunteer Leadership Lounge
McCormick Place: S505A, (312) 791-6735

General Information Booths
McCormick Place:
Gate 3 Lobby, (312) 791-6724
Hall A (312) 791-6725

Press Offices
Press Room
McCormick Place: Room S501ABC
(312) 791-6730

Exhibit Management
McCormick Place: Hall A, (312) 791-6740

First Aid and Hospital Numbers
First Aid Station
McCormick Place: Level 2.5S, (312) 791-6060

Mercy Hospital
2525 S Michigan Avenue
Chicago, IL 60616
(312) 567-2000

Physicians Immediate Care
811 S. State Street
Chicago, IL 60605
(312) 566-9510

Walgreens Pharmacy
(closest to McCormick Place)
3405 S. Martin Luther King Drive
Chicago, IL 60616
(312) 326-4064

Venues
McCormick Place
2301 S. Martin Luther King Drive
Chicago, IL 60616

Fairmont Chicago, Millennium Park Hotel
200 N. Columbus Drive
Chicago, IL 60601
(312) 565-8000

Hyatt Regency Chicago Downtown Hotel
(not connected to McCormick Place)
151 E. Wacker Drive
Chicago, IL 60601
(312) 565-1234

Key to Poster Floor by Themes
The poster floor begins with Theme A and ends with Theme H. Refer to the poster floor map at the end of this booklet.

Theme

- **A** Development
- **B** Neural Excitability, Synapses, and Glia: Cellular Mechanisms
- **C** Disorders of the Nervous System
- **D** Sensory and Motor Systems
- **E** Integrative Systems: Neuroendocrinology, Neuroimmunology and Homeostatic Challenge
- **F** Cognition and Behavior
- **G** Novel Methods and Technology Development
- **H** History, Teaching, Public Awareness, and Societal Impacts in Neuroscience

Note: Theme H Posters will be located in Hall A beginning at 1 p.m. on Saturday, Oct. 17, and will remain posted until 5 p.m., Sunday, Oct. 18.

Cover Image: This image shows the outer layers of cingulate cortex of a mouse in which eYFP is expressed in basal forebrain cholinergic neurons (green). Fibers from these neurons are distributed in the outer cortical layers among neurons that were immunostained with an antibody against NeuN (red).

Bernard Bloem, Luc Schoppink, Diana C. Rotaru, Amu Faiz, Patrick Hendriks, Huibert D. Mansvelder, Wilma D.J. van de Berg, and Floris G. Wouterlood, 2014, *The Journal of Neuroscience*, 34(49): 16234-16246.

Complete Session Listing

Wednesday AM

SPECIAL LECTURE *McCormick Place*

639. The Genetic Logic of Synapse Formation and Axon Regeneration — CME

Wed. 8:30 AM - 9:40 AM — Hall B1

Speaker: Y. JIN*, Howard Hughes Med. Institute, Univ. of California-San Diego.*

Genetic dissection in *C. elegans* has long been a powerful approach to discover the function of genes and to elucidate the molecular and cellular network underlying how synapses form and function. Recent technological innovation using laser surgery of single axons and *in vivo* imaging has also made *C. elegans* a new model for axon regeneration. Importantly, genes regulating synaptogenesis and axon regeneration are highly conserved in function across animal phyla. This lecture will focus on the key findings and discuss implications to human health.

SYMPOSIUM *McCormick Place*

640. New Approaches to Understanding How the Hypothalamus Controls Adaptive and Integrative Behavior — CME

Wed. 8:30 AM - 11:00 AM — S100A

Chair: W. WISDEN

This symposium will present new genetic and ethological methods that are changing researchers' ideas about hypothalamic function. Presenters will explore how circuitry controlling the sleep-wake cycle has inbuilt local circadian clocks; how fast and slow signalling onto hypothalamic neurons allows metabolic integration; how such circuitry is also adapted to regulate emotion; and finally, speakers will examine some of the ion channels and receptors involved in governing the activity of these circuitries.

8:30 **640.01** Introduction.

8:35 **640.02** Local clocks in histaminergic neurons unite circadian and homeostatic sleep drives. W. WISDEN. *Imperial Col. London.*

9:10 **640.03** Hypothalamus: Fear and feeding. C. T. GROSS. *EMBL.*

9:45 **640.04** How channels regulate excitability in the brain's clock: The suprachiasmatic nucleus. A. MEREDITH. *Univ. of Maryland Sch. of Med.*

10:20 **640.05** Independent computations: Optogenetic analysis of peptide-small molecule co-transmission and sleep. A. ADAMANTIDIS. *Univ. of Bern.*

10:55 **640.06** Closing Remarks.

SYMPOSIUM *McCormick Place*

641. Adolescent Alcohol Exposure: Long-Term Neurobiological and Behavioral Consequences — CME

Wed. 8:30 AM - 11:00 AM — S105

Chair: S. REGUNATHAN
Co-Chair: A. NORONHA

Human studies show that morphological changes in the brain during adolescence contribute to attention, impulse control, information processing, violence, and responses to rewards. Alcohol consumption during adolescence is highly prevalent, and yet very little is known about the long-lasting consequences. The four speakers in this symposium will describe recent findings on behavioral, cellular, molecular, and structural alterations in adult animals after alcohol exposure during adolescence.

8:30 **641.01** Introduction.

8:35 **641.02** Long-lasting behavioral consequences of adolescent intermittent alcohol: Exposure timing and sex matter. L. SPEAR. *Binghamton Univ.*

9:10 **641.03** Enduring effects of Adolescent Ethanol Exposure on functional circuitry of hippocampus and prefrontal cortex. S. SWARTZWELDER. *Duke Univ. Med. Ctr.*

9:45 **641.04** Persistent neuroimmune gene induction: Neurodegeneration and altered neurocircuitry following adolescent alcohol exposure. F. CREWS. *Univ. of North Carolina at Chapel Hill.*

10:20 **641.05** Adolescent alcohol drinking has enduring effects on prefrontal myelin. H. RICHARDSON. *Univ. of Massachusetts Amherst.*

10:55 **641.06** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

642. Optogenetic Dissection of the Basal Forebrain Neuromodulatory Control of Cortical Activation, Plasticity, and Cognition — CME

Wed. 8:30 AM - 11:00 AM — S100B

Chair: S. LIN
Co-Chair: A. KEPECS

The basal forebrain (BF) is a major ascending arousal center and has long been implicated in cognitive functions such as attention and learning. Recent studies using optogenetics to target specific BF cell-types have led to a renaissance in this field and are beginning to yield new insights about circuit mechanisms during behavior. This minisymposium will discuss recent advances in the roles of BF cholinergic and non-cholinergic neurons in cognition via their dynamic modulation of cortical activity.

1:30 **642.01** Introduction.

1:35 **642.02** Central cholinergic neurons are rapidly recruited by reinforcement feedback. A. KEPECS. *Cold Spring Harbor Lab.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:55 **642.03** Cholinergic basal forebrain input educes reward timing in the primary visual cortex. M. G. HUSSAIN SHULER. *Johns Hopkins Univ.*

2:15 **642.04** Cholinergic signals in mouse barrel cortex during active whisker sensing. C. C. H. PETERSEN. *Brain Mind Institute, Ecole Polytechnique Federale de Lausanne (EPFL).*

2:35 **642.05** Non-cholinergic basal forebrain neurons as a gain modulation signal for the decision-making process. S. LIN. *NIH.*

2:55 **642.06** Basal forebrain circuit for brain state control. M. XU. *HHMI /UC Berkeley.*

3:15 **642.07** Moving beyond cholinergic neurons: Control of arousal and gamma oscillations by cortically-projecting basal forebrain parvalbumin neurons. R. E. BROWN. *VA BHS & Harvard Med. Sch.*

3:35 **642.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

643. 3D Retinal Organoids From Human Pluripotent Stem Cells: Promise to Alleviate Blindness or Better Disease Model? — CME

Wed. 8:30 AM - 11:00 AM — S406A

Chair: M. SEILER

This minisymposium will bring together translational and basic science researchers who use pluripotent stem cells and adult tissue as tools to repair vision. The promise of 3D retinal organoids derived from stem cells is high. What is not clear is whether this presents only a better model for human retinal diseases or carries a real promise for retinal replacement as well. Speakers will discuss the potential of 3D retinal organoid approach to generate immature human retinal sheets for vision repair.

8:30 **643.01** Introduction.

8:35 **643.02** Human pluripotent stem cell-derived retinal ganglion cells: Basic science applications and translational implications. J. MEYER. *Indiana Univ.*

8:55 **643.03** Re-engineering the retina using 3D-scaffolds. D. A. LAMBA. *Buck Inst. for Res. on Aging.*

9:15 **643.04** ● 3D-retinal progenitor sheets for vision restoration. M. J. SEILER. *UC Irvine, Sch. of Med.*

9:35 **643.05** Induced to cure: Engineering iPS cell derived RPE scaffolds to treat degenerative eye diseases. K. BHARTI. *Natl. Eye Inst. (NIH).*

9:55 **643.06** Epigenetic (DNA methylation) changes in neural retina and RPE in 3D stem cell-derived retinal tissue. I. O. NASONKIN. *Univ. of Pittsburgh.*

10:15 **643.07** Building a functional retina with hiPS cells. M. CANTO SOLER. *Johns Hopkins Univ.*

10:35 **643.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

644. Reward-Driven Learning in Primary Sensory Cortices — CME

Wed. 8:30 AM - 11:00 AM — S406B

Chair: A. KIRKWOOD

Maximizing reward and avoiding punishment is an important behavioral drive, and animals routinely learn what stimuli and actions predict favorable and aversive outcomes. This panel will discuss the emerging idea that learning to recognize reward-predicting stimuli involves remodeling at early stages of perception in the primary sensory cortices. Covered topics will include perceptual learning in the human primary visual cortex, how cortical cells "learn" to predict attributes of the reward, and the underlying synaptic mechanisms.

8:30 **644.01** Introduction.

8:35 **644.02** The role of reward in perceptual learning. T. WATANABE. *Brown Univ.*

8:55 **644.03** The effect of reward on sleep consolidation involving the primary visual cortex. Y. SASAKI. *Brown Univ.*

9:15 **644.04** Coding of anticipatory information in the gustatory system of alert rodents. A. FONTANINI. *Stony Brook Univ.*

9:35 **644.05** Eligibility traces for LTP and LTD in cortex. A. KIRKWOOD. *Johns Hopkins Univ.*

9:55 **644.06** Theta oscillations in visual cortex emerge with experience to convey expected reward time and experienced reward rate. C. L. ZOLD. *Inst. de Fisiología y Biofísica Bernardo Houssay.*

10:15 **644.07** Stable reinforcement learning via temporal competition between LTP and LTD synaptic eligibility traces. H. SHOUVAL. *Univ. of Texas at Houston.*

10:35 **644.08** Closing Remarks.

SPECIAL LECTURE *McCormick Place*

645. Striatal Synaptic Dysfunction in Parkinson's and Huntington's Diseases — CME

Wed. 10:00 AM - 11:10 AM — Hall B1

Speaker: D. J. SURMEIER*, Northwestern Univ. Med. Sch.*

Traditional models of basal ganglia disorders are grounded in the assumption that network dysfunction is driven by alterations in intrinsic excitability of striatal neurons. Recent work has challenged this assumption, showing that mouse models of Parkinson's disease have profound cell-specific alterations in striatal synaptic strength and connectivity. Cell-specific synaptic dysfunction also is being found in mouse models of Huntington's disease. This talk will summarize this work and link it to the motor symptoms of these two diseases.

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

SPECIAL LECTURE *McCormick Place*

646. A Causal Analysis of the Attentional Network — CME

Wed. 11:30 AM - 12:40 PM — Hall B1

Speaker: R. DESIMONE*, McGovern Inst. Brain Res. at MIT.*

The most behaviorally-relevant stimuli in scenes are selected for processing and control over behavior ("attention"). The effects of selection are widespread, making it difficult to distinguish cause from effect in the attentional network. However, the flow of control can be inferred through the analysis of timing and the use of "causal" methods such as pharmacological inactivation and optogenetics to establish the impact of one circuit on another. This lecture will explore the emerging new insights into the biological mechanism of attention.

NANOSYMPOSIUM

647. Parkinson's Disease: Rodent Models I

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, S405

8:00 **647.01** Comprehensive studies of α-synuclein striatal seeding in non-transgenic and transgenic α-synuclein mice. C. G. JANUS*; P. CHAKRABARTY; M. BROOKS; C. HERNANDEZ; L. COLON-PEREZ; M. FEBO; D. BORCHELT; T. GOLDE; B. GIASSON. *Univ. of Florida, Univ. of Florida.*

8:15 **647.02** R1441C-LRRK2 BAC transgenic rats show progressive motor impairment and neurophysiological changes in dopamine circuit function. A. KAUFMANN; M. SLOAN; D. POTGIETER; J. ALEGRE-ABARRATEGUI; R. EXLEY; T. DELTHEIL; S. THRELFELL; K. BRIMBLECOMBE; M. CIOROCH; D. BANNERMAN; S. CRAGG; R. WADE-MARTINS; J. BOLAM*; P. J. MAGILL; P. D. DODSON. *MRC Brain Network Dynamics Unit, Univ. of Oxford, Univ. of Oxford, Univ. of Oxford, Univ. of Oxford.*

8:30 **647.03** LRRK2 modulates phagocytic activity of microglia via phosphorylation of the actin-nucleating complex WAVE-2. P. MARCOGLIESE*; K. KIM; C. WEI; J. YANG; E. ABDEL-MESSIH; G. KABBACH; R. S. SLACK; M. E. HAQUE; K. VENDEROVA; M. G. SCHLOSSMACHER; D. S. PARK. *Univ. of Ottawa, United Arab Emirates Univ., Univ. of the Pacific, Ottawa Hosp. Res. Inst.*

8:45 **647.04** ▲ Effect of the overexpression of LRRK2 fragments containing the kinase domain: A study in rats using lentiviral and adeno-associated vectors. N. CRESTO*; M. GAILLARD; E. DIGUET; D. BELLET; L. LEGROUX; L. KAMGUE; L. FRANCELLE; J. MITJA; G. AURÉGAN; C. JOSÉPHINE; M. GUILLERMIER; D. HOUITTE; C. JAN; F. PETIT; P. HANTRAYE; N. DÉGLON; K. CAMBON; A. BEMELMANS; E. BROUILLET. *MIRCen CEA UMR 9199.*

9:00 **647.05** Impact of pathogenic or endogenous LRRK2 on tau metabolism, pathology and neurodegeneration in mouse brain. A. TRAN NGUYEN; G. DANIEL; P. VALDES; B. SCHNEIDER; D. J. MOORE*. *Van Andel Res. Inst., EPFL.*

9:15 **647.06** LRRK2 modulates α-synuclein toxicity *in vitro* and *in vivo.* S. MACISAAC*; A. MILNERWOOD; M. VOLTA; S. BERGERON; E. MITCHELL; I. TATARNIKOV; M. FARRER. *Ctr. For Applied Neurogenetics, Univ. of British Columbia, Univ. of British Columbia.*

9:30 **647.07** Neurotransmitter receptor trafficking and synapse maintenance in the p.D620N knock-in mouse model of Parkinson's disease. C. KADGIEN; L. MUNSIE; I. TATARNIKOV; D. BECCANO-KELLY; J. KHINDA; S. MACISAAAC; M. FARRER; A. J. MILNERWOOD*. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

9:45 **647.08** Activity-dependent plasticity of glutamatergic synapses in cortico-striatal co-cultures from G2019S LRRK2 transgenic mice. N. KUHLMANN*; A. MILNERWOOD; M. FARRER. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

10:00 **647.09** Effects of tyrosine hydroxylase overexpression in transgenic mice. L. M. VECCHIO*; M. K. BERMEJO; A. J. RAMSEY; G. W. MILLER; A. SALAHPOUR. *Univ. of Toronto, Emory Univ.*

10:15 **647.10** A novel transgenic mouse line co-expressing alpha-synuclein and p25alpha displays increased oligomer formation. L. BERKHOUDT LASSEN; P. H. JENSEN*; C. BETZER; T. MOOS. *Univ. Aarhus, Aarhus Univ., Aalborg Univ.*

10:30 **647.11** PINK1 gene mutations differentially impair striatal dopamine-dependent synaptic plasticity. G. MADEO*; M. MALTESE; G. MARTELLA; E. VALENTE; J. SHEN; M. FEDERICI; N. MERCURI; A. SHIBATA; Y. SMITH; P. BONSI; A. PISANI. *Univ. of Rome Tor Vergata, Fondazione Santa Lucia IRCCS, Inst. di Ricovero e Cura a Carattere Scientifico, Casa Sollievo della Sofferenza, Univ. of Salerno, Harvard Med. Sch., Yerkes Natl. Primate Res. Center, Dept Neurol. and Udall Ctr. of Excellence for Parkinson's Disease, Emory Univ.*

10:45 **647.12** Longitudinal behavioral characterization of genetic mouse models of Parkinson's disease. S. CATALDI*; M. VOLTA; S. PASCHALL; S. BERGERON; M. J. FARRER; A. J. MILNERWOOD. *Univ. of British Columbia, Univ. of British Columbia.*

11:00 **647.13** Neuroprotective effects of lixisenatide and liraglutide in the MPTP mouse model of Parkinson's disease. C. HOLSCHER*; M. SHARMA; J. JALEWA; W. LIU; L. LI; G. LI. *Lancaster Univ., Lancaster Univ., Shanxi Med. Univ., Shanxi Med. Univ.*

11:15 **647.14** Point of entry: A first step towards bacterial Parkinsonism. J. R. LEHESTE*; K. E. RUVOLO; M. CAUGHEY; M. GOLDFINGER; G. TORRES. *NYIT Col. of Osteo. Med.*

NANOSYMPOSIUM

648. Ataxias and Non-Huntington's Disease Neurodegenerative Diseases

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, N426A

8:00 **648.01** The NINDS repository collection of patient-derived biomaterials available for neurodegenerative disease research. C. A. PEREZ*; K. REEVES; J. SANTANA; S. HEIL; A. GREEN; A. AMBERSON; D. HUBER; G. BALABURSKI. *Coriell Inst.*

8:15 **648.02** BubR1 mutant mice exhibit motor function deficits and Purkinje cell dysfunction. C. CHOI*; C. CHO; J. WELBY; B. JEON; M. JANG. *Mayo Clin., Mayo Clin. Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:30 **648.03** A *Drosophila* model of CLN4B, a neurodegenerative adult-onset Neuronal Ceroid Lipofuscinosis, links CSPα's chaperone activity to toxicity. E. IMLER*; J. S. PYON; Y. ZHANG; S. S. CHANDRA; K. E. ZINSMAIER. *Univ. of Arizona, Yale Univ., Yale Univ., Univ. of Arizona.*

8:45 **648.04** Antisense oligonucleotides lowering ATXN2 expression for the treatment of spinocerebellar ataxia type 2 (SCA2). D. R. SCOLES*; M. SCHNEIDER; P. MEERA; K. FIGUEROA; M. H. T. HO; G. HUNG; F. RIGO; C. BENNETT; T. OTIS; S. PULST. *Univ. of Utah, Univ. of California Los Angeles, Isis Pharmaceuticals, Inc.*

9:00 **648.05** The kinase RIPK1 regulates progranulin levels. A. R. MASON*; L. ELIA; S. FINKBEINER. *Gladstone Inst. of Neurolog. Dis., Taube-Koret Ctr., UCSF DSCB Grad. Program, UCSF Med. Scientist Training Program, UCSF Departments of Physiol. and Neurol.*

9:15 **648.06** Characterization of the expression and interactions of C9orf72 protein isoforms in neuronal cells and human brain. A. HAAPASALO*; M. TAKALO; S. LESKELÄ; M. MARTTINEN; H. SOININEN; M. HILTUNEN; A. M. REMES. *Univ. of Eastern Finland, Kuopio Univ. Hosp.*

9:30 **648.07** Altered Na+ homeostasis lead to neuronal hyperexcitability in a cellular model of Rapid onset Dystonia Parkinsonism. E. AKKURATOV; M. ANDERSSON; T. LIEBMANN; M. LINDSKOG; H. BRISMAR; A. APERIA; N. P. FRITZ*. *Karolinska Institutet, KTH the Royal Inst. of Technol.*

9:45 **648.08** Increased expression of the frontotemporal dementia risk factor TMEM106B causes C9orf72-dependent alterations in lysosomes and autophagosomes. A. S. CHEN-PLOTKIN*; J. BUSCH; T. UNGER; N. JAIN; T. SKRINAK; R. CHARAN. *Univ. of Pennsylvania Dept of Neurol.*

10:00 **648.09** MRI of mouse model of TDP-43 shows widespread volume loss at 10 weeks of age. L. WANG*; T. RUSSELL; A. WATERS; D. PROCISSI; H. DONG; K. R. SADLEIR; L. KUKREJA; J. G. CSERNANSKY; M. MESULAM; R. J. VASSAR; C. GEULA. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

10:15 **648.10** Nuclear family sequencing in Multiple System Atrophy identifies novel genes associated with disease. M. J. HUENTELMAN; I. SCHRAUWEN; J. J. CORNEVEAUX; K. M. RAMSEY; A. L. SINIARD*. *Tgen.*

10:30 **648.11** Purkinje cell mitochondrial oxidative defect and mtDNA depletion in an animal model of spinocerebellar ataxia type 1. M. RIPOLONE; V. LUCCHINI; G. FAGIOLARI; D. RONCHI; A. BORDONI; F. FORTUNATO; S. MESSINA; S. BONATO; M. MEREGALLI; S. CORTI; G. COMI; M. MOGGIO; M. SCIACCO*. *Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Ctr. Dino Ferrari,, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Univ. degli Studi di Milano Milano, Italy, IRCCS Inst. Auxologico Italiano, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Ctr. Dino Ferrari, Fondazione IRCCS Ca' Granda Ospedale Maggiore Poli.*

10:45 **648.12** A novel porcine model of ataxia telangiectasia reproduces neurological features and motor deficits of human disease. R. BERALDI; M. C. KRUER*; C. CHUN-HUNG; C. ROGERS; J. WEIMER; A. KOVÁCS; D. MEYERHOLZ; B. DARBRO; B. DACKEN; K. WEBER; D. PEARCE. *Sanford Children's Hlth. Res. Ctr., Sanford Children's Hlth. Res. Ctr., Sanford Children's Hlth. Res. Ctr., Exemplar Genet., Dept. of Pathology, Univ. of Iowa, Dept. of Cytogenetics/Pediatrics, Univ. of Iowa Carver Col. of Med., Exemplar genetics, Sanford Children's Hlth. Res. Center, Sioux Falls, SD, United States.*

11:00 **648.13** Surgical decompression attenuates neurobehavioral deficits in an experimental model of cervical spondylotic myelopathy in mice. P. VIDAL VERA*; S. K. KARADIMAS; S. FORNER; W. D. FOLTZ; M. G. FEHLINGS. *UHN, Toronto Western Res. Inst. and spinal program, Krembil Neurosci. Centre, Univ. Hlth. Network, Toronto, ON, Canada, Toronto Western Res. Inst. and spinal program, Krembil Neurosci. Centre, Univ. Hlth. Network, Inst. of medical Sciences, Univ. of Toronto, Univ. Federal de Santa Catarina, currently Univ. of California Irvine, Radiation Med. Program, Princess Margaret Hosp., STTARR Innovation Ctr. Toronto, Toronto Western Res. Inst. and spinal program, Krembil Neurosci. Centre, Univ. Hlth. Network, . Inst. of Med. Sciences, Univ. of Toronto, Dept. of Surgery, Div. of Neurosurgery, Univ. of Toronto.*

NANOSYMPOSIUM

649. Ischemia: Cellular Mechanisms

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, S404

8:00 **649.01** When E3-ligases don't play tag: Unfolding the protective roles of CHIP in hypoxia. B. N. LIZAMA-MANIBUSAN*; A. M. PALUBINSKY; A. J. WINLAND; A. GUPTA; R. SINGER; B. MCLAUGHLIN. *Vanderbilt Univ. Med. Ctr., Dartmouth-Hitchcock Med. Ctr.*

8:15 **649.02** Mitochondria dysfunction opens blood-brain barrier and exacerbates murine experimental stroke. X. REN; H. HU*; J. W. SIMPKINS. *West Virginia University, Exptl. Stroke Core, Ctr. For Basic and Translational Stroke Res., West Virginia University, Ctr. For Basic and Translational Stroke Res.*

8:30 **649.03** Amyloid-β25-35 potentiates ischemia-induced neuronal injury. A. A. BEHENSKY*; J. CUEVAS. *Univ. of South Florida.*

8:45 **649.04** Ischemic postconditioning inhibits the accumulation of macrophages derived from monocytes and their M1 polarization in the ischemic mouse brain after stroke. H. ZHAO*; Y. ZHANG; X. XIONG; D. YAN; Z. JIAN; Q. JI; Y. JI. *Stanford Univ.*

9:00 **649.05** Resveratrol preconditioning induces a novel extended window of ischemic tolerance in the mouse brain. K. B. KORONOWSKI*; K. R. DAVE; I. SAUL; V. CAMARENA; J. W. THOMPSON; J. T. NEUMANN; J. I. YOUNG; M. A. PEREZ-PINZON. *Univ. of Miami, Univ. of Miami.*

9:15 **649.06** Endothelial Caveolin-1 regulates the neurogenic vascular niche. J. A. BONDS*; M. K. TOBIN; R. MINSHALL; D. PELLIGRINO; O. LAZAROV. *Univ. of Illinois, Chicago, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:30 **649.07** Inhibiting Caspase-2: A novel neuroprotective strategy to combat neonatal hypoxic-ischaemic brain injury. C. THORNTON*; C. ALVIANI; A. A. BABURAMANI; E. JACOTOT; P. GRESSENS; H. HAGBERG. *Ctr. For the Developing Brain, KCL, Univ. Pierre & Marie Curie, Inserm U1141, Univ. of Gothenburg.*

9:45 **649.08** Promoting damaged protein refolding boosts neuroprotection afforded by ischemic preconditioning. A. M. PALUBINSKY*; B. N. LIZAMA-MANIBUSAN; I. S. KHAN; J. E. GESTWICKI; R. J. SINGER; B. MCLAUGHLIN. *Vanderbilt Univ. Med. Ctr., Dartmouth Hitchcock Hosp., Univ. of California, San Francisco, Vanderbilt Univ. Med. Ctr.*

10:00 **649.09** Spatiotemporal progression of microcalcification in the hippocampal CA1 region following transient forebrain ischemia in rats. An ultrastructural study. T. RIEW*; Y. SHIN; J. CHO; H. KIM; J. PARK; H. PAK; M. LEE. *Dept. of Anatomy, Col. of Medicine, The Catholic Univ. of Korea, Catholic Neurosci. Institute, The Catholic Univ. of Korea, Cell Death Dis. Res. Center, The Catholic Univ. of Korea, Integrative Res. Support Center, Lab. of Electron Microscope, Col. of Medicine, The Catholic Univ. of Korea.*

10:15 **649.10** Increased cerebral capillary density following severe transient neonatal hypoxia in mice. J. C. LAMANNA; C. P. TSIPIS; X. SUN; K. XU*. *Case Western Reserve Univ.*

10:30 **649.11** Interactions between HIF-1 and SKN-1/Nrf in the response to hydrogen sulfide. D. L. MILLER*; J. HORSMAN; K. MANBECK. *Univ. of Washington.*

10:45 **649.12** ● CD95/CD95L Identification in acute ischemic stroke patient's serum. O. HUET*; S. RATKOVICH-GONZÁLEZ; D. ARANA-VALADEZ; S. LUQUÍN; L. JAVE-SUÁREZ. *Univ. De Guadalajara, Inst. Mexicano del Seguro Social, Univ. de Guadalajara.*

NANOSYMPOSIUM

650. Spinal Cord Injury: Therapeutic Strategies

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, S102

8:00 **650.01** Functional recovery from chronic spinal cord injury by the reactivation of endogenous microglia. M. HAMANOUE*; K. MORIOKA; K. HAYAKAWA; K. NAKAJIMA; T. OGATA; K. TAKAMATSU. *Toho Univesity Sch. of Med., Toho Univ. Grad. Sch. of Med., Brain and Spinal Injury Ctr. (BASIC), The Univ. of Tokyo, Grad. Sch. of Med., Soka Univ., Natl. Rehabil. Ctr. for Persons with Disabilities.*

8:15 **650.02** Flubendazole reduces pathogenic B cell activation and improves recovery after spinal cord injury in rats. C. YU*; C. ROGERS; V. BONDADA; J. JONES; M. SANDS; A. SHREWSBURY; S. BONDADA; J. W. GEDDES. *Univ. of Kentucky Col. of Med., Univ. of Kentucky Col. of Med.*

8:30 **650.03** ku0063794, a dual mtorc1 and mtorc2 inhibitor, reduces neural tissue damage and locomotor impairment after spinal cord injury in mice. I. PATERNITI*; D. IMPELLIZZERI; M. CORDARO; R. SIRACUSA; E. ESPOSITO; S. CUZZOCREA. *Univ. of Messina.*

8:45 **650.04** Targeted complement inhibition improves recovery in murine spinal cord injury model. A. NARANG*; H. ZHU; C. ATKINSON; X. F. YANG; L. KULIK; M. HOLERS; S. TOMLINSON. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Univ. of Colorado, Ralph H. Johnson Veterans Affairs Med. Ctr.*

9:00 **650.05** Enhanced regeneration and functional recovery after root avulsion by manipulation of proteoglycan receptor protein tyrosine phosphatase-σ. H. LI; C. W. WONG; W. LI; C. RUVEN; L. HE; X. WU; B. LANG; J. SILVER; W. WU*. *the Univ. of Hong Kong, HKU, Case Western Reserve Univ., The Univ. Of Hong Kong.*

9:15 **650.06** Riluzole attenuates the decompression induced ischemia reperfusion injury and enhances the beneficial impact of decompression in cervical spondylotic myelopathy. S. K. KARADIMAS*; A. LALIBERTE; W. FOLTZ; M. G. FEHLINGS. *Krembil Discovery Tower.*

9:30 **650.07** Pharmacological manipulation of macrophage phenotype with azithromycin improves recovery and tissue sparing in spinal cord injury. W. M. BAILEY; B. ZHANG; K. J. BRAUN; T. J. KOPPER; M. B. ORR; J. C. GENSEL*. *Univ. of Kentucky.*

9:45 **650.08** b cell-targeted therapy with anti-cd20 monoclonal antibody reduced secondary tissue damage and enhanced behavioral recovery following experimental spinal cord injury in mice. S. CUZZOCREA*; D. IMPELLIZZERI; G. BRUSCHETTA; M. CORDARO; R. CRUPI; E. ESPOSITO. *Univ. of Messina.*

10:00 **650.09** ● Characterization of intraspinal pressure following traumatic rodent spinal cord injury. Z. KHAING; L. CATES; A. FISCHEDICK; C. HOFSTETTER*. *Univ. of Washington.*

10:15 **650.10** Rapid *in vivo* detection of spinal cord injury severity with advanced diffusion magnetic resonance spectroscopy. N. P. SKINNER*; B. D. SCHMIT; S. N. KURPAD; M. D. BUDDE. *Med. Col. of Wisconsin, Med. Col. of Wisconsin, Marquette Univ., Med. Col. of Wisconsin, Clement J. Zablocki Veteran's Affairs Med. Ctr.*

10:30 **650.11** Dynamics of inflammatory immune response in a mouse model of traumatic spinal cord injury. M. HASSANPOUR GOLAKANI*; M. G. MOHAMMAD; H. LI; S. N. BREIT; M. RUITENBERG; D. A. BROWN. *St Vincent'S Ctr. For Applied Med. Res., The Univ. of New South Wales (UNSW), The Univ. of Queensland.*

NANOSYMPOSIUM

651. Neurodegeneration Drug Discovery: Gene Therapy and Others

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, S403

8:00 **651.01** ● Development of a first-in-human intrathecal scAAV9 gene therapy for giant axonal neuropathy. S. J. GRAY*; R. M. BAILEY; D. ARMAO; S. NAGABHUSHAN KALBURGI. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

8:15 **651.02** A novel TwinkPark mouse model to understand the impact of increased mitochondrial DNA deletions in dopaminergic neurons and Parkinsonism. G. CORTOPASSI*; L. SONG. *UC DAVIS.*

8:30 **651.03** Towards gene therapy in the brain: Delivery to the NHP CNS using AAV-5. B. BLITS*; L. SAMARANCH; J. BRINGAS; W. SAN SEBASTIAN; K. BANKIEWICZ; H. PETRY. *Uniqure, Interventional Neuro Center, Univ. of California San Francisco.*

8:45 **651.04** ● Drug discovery for Alzheimer's and related tauopathies targeting a novel proteolytic mechanism intrinsic to tau oligomers. G. PAPIANI; P. LOPEZ; D. ROMERO; P. KRISHNAMURTHY; E. J. DAVIDOWITZ*; J. G. MOE. *Oligomerix, Inc.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 **651.05** Synuclein strains cause distinct synucleinopathies *in vivo.* W. PEELAERTS; L. BOUSSET; A. VAN DER PERREN; A. MOSKALYUK; R. PULIZZI; M. GIUGLIANO; C. VAN DEN HAUTE; R. MELKI; V. BAEKELANDT*. *KU Leuven, Lab. for Neurobio. and Gene Therapy, Paris-Saclay Inst. of Neurosci., Theoretical Neurobio. & Neuroengineering Lab.*

9:15 **651.06** Aav9 delivery of galactosyl-ceramidase attenuates neuronal and myelin disease in a mouse model of krabbe's disease. M. S. MARSHALL*; B. JAKUBAUSKAS; Y. ISSA; S. M. KARUMUTHIL; M. S. SANDS; S. J. GRAY; E. R. BONGARZONE. *Univ. of Illinois at Chicago Col. of Medic, Univ. of North Carolina, Washington Univ.*

9:30 **651.07** Metal ion chelation enhances tissue plasminogen activator (tPA)-induced thrombolysis: An *in vitro* and *in vivo* study. X. YU; Y. V. LI*. *Ohio Univ., Ohio Univ., Ohio Univ.*

9:45 **651.08** ● Restoration of hearing in the Pmca2 deafness mouse model by protein delivery and CRISPR/Cas9-medated hair cell genome editing. Z. CHEN*; Y. TAO; X. GAO; J. ZURIS; D. LIU. *Mass Eye & Ear Infirmary, Massachusetts Eye & Ear Infirmary, Harvard Med. Sch., Harvard University, HHMI.*

10:00 **651.09** ● Gene therapy rescues disease phenotype in a spinal muscular atrophy with respiratory distress type 1 (SMARD1) mouse model. M. NIZZARDO; C. SIMONE; F. RIZZO; S. SALANI; P. RINCHETTI; R. DEL BO; S. DAMETTI; K. FOUST; B. K. KASPAR; N. BRESOLIN; G. P. COMI*; S. CORTI. *Univ. of Milan, The Ohio State Univ., The Res. Inst. at Nationwide Children's Hosp., Univ. of Milan, Ospedale Maggiore Policlinico.*

10:15 **651.10** A potential choroid plexus-directed gene therapy with AAV5 in MPS IIIB mice. S. KAN*; S. Q. LE; Q. D. BUI; P. I. DICKSON. *LA BioMed At Harbor-UCLA Med. Ctr.*

10:30 **651.11** Behavioral outcome of X-ALD mouse after rAAV9-ABCD1 treatment. Y. GONG*; D. MU; J. REN; C. MAGUIRE; F. EICHLER. *MGH.*

10:45 **651.12** ● Motor neuron targeted αCAR-IGF-1 lentiviral vector is neuroprotective in model of ALS. I. ELEFTHERIADOU*; I. MANOLARAS; E. IRVINE; N. D. MAZARAKIS. *IMPERIAL COLLEGE LONDON, Imperial Col. London, Imperial Col. London.*

11:00 **651.13** ● Small molecules targeting tau aggregation demonstrate correlated efficacy in an *in vivo* tauopathy model. O. ADOLFSSON; F. CAPOTOSTI; N. SREENIVASACHARY; J. MOLETTE; E. GABELLIERI; Y. VARISCO; H. KROTH; D. T. HICKMAN; W. FROESTL; A. PFEIFER; A. MUHS*. *AC Immune SA.*

NANOSYMPOSIUM

652. Auditory System: Temporal, Frequency, and Spectral Processing

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, N226

8:00 **652.01** A feature detection circuit for song pattern recognition in the cricket brain. B. HEDWIG*; S. SCHOENEICH; K. KOSTARAKOS. *Univ. of Cambridge, Univ. of Cambridge, Karl-Franzens Univ.*

8:15 **652.02** Specific neuronal populations in the dorsal cochear nucleus that responds to sound can be controlled using optogenetic and chemogenetic proteins. T. B. MALFATTI*; M. M. HILSCHER; R. N. LEAO; K. E. LEAO. *Brain Inst. of the Federal Univ. of Rio G.*

8:30 **652.03** Mind the gap: Two dissociable mechanisms of temporal processing in the auditory system. J. F. LINDEN*; L. A. ANDERSON. *Univ. Col. London.*

8:45 **652.04** Two types of interneurons differentially modulate tone-evoked responses in the primary auditory cortex. J. BLACKWELL*; M. AIZENBERG; L. MWILAMBWE-TSHILOBO; S. JONES; R. G. NATAN; M. N. GEFFEN. *Univ. of Pennsylvania.*

9:00 **652.05** Functional architecture of mouse auditory cortex in response to tones and sweeps. J. B. ISSA*; B. D. HAEFFELE; M. ZHANG; E. D. YOUNG; D. T. YUE. *Johns Hopkins Univ.*

9:15 **652.06** Adaptive estimation of sparse point process models enhances resolution of spectrotemporal receptive field plasticity analysis. A. SHEIKHATTAR; J. B. FRITZ; S. A. SHAMMA; B. BABADI*. *Univ. of Maryland, Univ. of Maryland.*

9:30 **652.07** Topographic representation of frequency-selective attention in human auditory cortex. F. K. DICK; M. LEHET; L. L. HOLT*. *Birkbeck College/UCL Ctr. for Neuroimaging, Carnegie Mellon Univ.*

9:45 **652.08** Effects of sensorineural hearing loss on cortical entrainment to auditory temporal envelopes. R. E. MILLMAN*; G. PRENDERGAST; S. L. MATTYS. *York Neuroimaging Centre, Univ. of York, Univ. of Manchester, Univ. of York.*

NANOSYMPOSIUM

653. Cerebellum: Learning and Cognition

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, S402

8:00 **653.01** The specific relationship between excitatory inputs and climbing fiber receptive fields in deep cerebellar nuclear neurons. F. L. BENGTSSON*; H. JORNTELL. *Univ. of Lund, BMC F10.*

8:15 **653.02** Parallel fibers that cross the midline in the oculomotor vermis are not critical to saccade deceleration. F. R. ROBINSON*; E. BUZUNOV; A. MUELLER; J. OJEMAN. *Univ. Washington, Univ. Washington, Standord Univ., Univ. Washington.*

8:30 **653.03** Synaptic plasticity tuned for behaviorally relevant timing. A. SUVRATHAN*; H. L. PAYNE; J. L. RAYMOND. *Stanford Univ.*

8:45 **653.04** Can the transfer of short-term saccadic adaptation to new directions be led back to changes in the responses of purkinje cell simple spikes? A. SHARMA*; K. MARCINIAK; P. W. DICKE; P. THIER. *Hertie Inst. For Clin. Brain Res., Hertie Inst. For Clin. Brain Res.*

9:00 **653.05** The human cerebellar cortex and the instrumental control of learned behaviour. G. P. D. ARGYROPOULOS; J. L. MILLS; N. RAMNANI*. *Royal Holloway Univ. of London.*

9:15 **653.06** Optimizing cerebellar transcranial direct current stimulation for visuomotor learning - anterior versus posterior lobe of cerebellum. A. DUTTA*. *Inst. Natl. De Recherche En Informatique Et En Automatique (INRIA).*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:30 **653.07** Bidirectional modulation of motor skill learning by non-invasive cerebellar stimulation. T. POPA*; F. GHEYSEN; G. LASNE; M. PÉLÉGRINI-ISSAC; G. ALBOUY; S. MEUNIER; H. BENALI; J. DOYON. *NIH/NINDS/HMCS, Inst. du Cerveau et de la Moëlle Epiniere (ICM), Ghent Univ., Ghent Univ., Sorbonne Universités, UPMC Univ. Paris 06, CNRS, INSERM,, Univ. of Montreal, Univ. of Montreal, NIH/NINDS/HMCS.*

9:45 **653.08** The interaction between working memory and motor performance in cerebellar ataxia. S. I. KRONEMER*; C. L. MARVEL. *Johns Hopkins Univ. Sch. of Med.*

10:00 **653.09** Altered microstructural connectivity of the cerebellar peduncles is related to motor dysfunction: A longitudinal DTI study in stroke patients. A. JAILLARD*; C. HUBER; L. LAMALLE; M. G. HOMMEL; F. RENARD. *Univ. Hosp. Grenoble, CHU Grenoble, IRMaGe - Inserm US 17 CNRS UMS 3552, CHU Grenoble, Univ. Joseph Fourier.*

10:15 **653.10** Cerebellar contributions to language: A combined TDCS-FMRI study. C. J. STOODLEY*; A. M. D'MELLO; D. SHOOK; W. HAYWARD; P. E. TURKELTAUB. *American Univ., Georgetown Univ. Med. Ctr., MedStar Rehabil. Hosp.*

10:30 **653.11** Delineating a role for the cerebellum in sensory processing during vocal behavior in patients with cerebellar ataxia. Z. K. AGNEW*; J. GILL; S. NAGARAJAN; R. IVRY; J. F. HOUDE. *UCSF Med. Sch., UC Berkeley, UCSF Med. Sch.*

10:45 **653.12** Cerebro-cerebellar circuitry for body language reading. A. A. SOKOLOV*; M. ERB; F. E. POLLICK; W. GRODD; K. SCHEFFLER; R. S. J. FRACKOWIAK; K. J. FRISTON; M. A. PAVLOVA. *Ctr. Hospitalier Universitaire Vaudois (CHUV), Univ. Col. London, Univ. of Tübingen Med. Sch., Univ. of Glasgow, Max Planck Inst. for Biol. Cybernetics, Ctr. Hospitalier Universitaire Vaudois (CHUV).*

11:00 **653.13** The cerebellar contribution to social cognition - a Lasso regression analysis. F. HOCHE*; X. GUELL; J. C. SHERMAN; M. G. VANGEL; J. D. SCHMAHMANN. *Massachusetts Gen. Hosp., Massachusetts Gen. Hospital, Psychology Assessment Ctr., Massachusetts Gen. Hospital, Martinos Ctr. for Biomed. Imaging.*

11:15 **653.14** ● Cerebellar transcranial magnetic stimulation to impact network connectivity in schizophrenia. M. A. HALKO*; I. GONSALVEZ; A. STERN; J. SCHMAHMANN; A. PASCUAL-LEONE. *Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr., Massachusetts Gen. Hosp. / Harvard Med. Sch.*

NANOSYMPOSIUM

654. Basal Ganglia and Basal Forebrain: Behavioral Control

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, S401

8:00 **654.01** Gene expression, dendrite morphology, and neuronal activation of indirect basal ganglia pathway nuclei in a mouse model of repetitive behavior. A. MUEHLMANN*; L. CURRY-POCHY; M. MAHMOOD; M. KING; M. H. LEWIS. *Univ. of Florida, Univ. of Florida.*

8:15 **654.02** Real-time *in vivo* plasticity of corticostriatal afferent activity during skill learning. D. A. KUPFERSCHMIDT*; G. CUI*; D. M. LOVINGER*. *NIH/NIAAA, Natl. Inst. of Envrn. Hlth. Sci.*

8:30 **654.03** A cortico-basal ganglia-thalamocortical circuit model for executive control and working memory. W. WEI*; X. WANG. *New York Univ., NYU Shanghai.*

8:45 **654.04** Neural correlates of bidirectional kinetic control and reinforcement in the basal ganglia. E. A. YTTRI*; J. T. DUDMAN. *Janelia - HHMI, Janelia - HHMI.*

9:00 **654.05** Neural mechanisms of sustained attention in rats despite of sensory modalities. D. WU*; H. DENG; Z. WANG. *Inst. of Neurosci.*

9:15 **654.06** Optimal context dependent decision making with probabilistic population codes. D. ROBLES LLANA*; A. POUGET. *Univ. of Geneva.*

9:30 **654.07** Roles of the centromedian nucleus of thalamus and its projection to the striatum in cognitive and behavioral biases. M. KIMURA*; K. YAMANAKA; T. MINAMIMOTO; Y. HORI; Y. UEDA. *Brain Sci. Institute, Tamagawa Univ., Juntendo University, Fac. of Hlth. and Sports Sci., Natl. Inst. of Radiological Sci., Kansai Med. Univ.*

9:45 **654.08** Withdrawn.

10:00 **654.09** ● A novel rat probabilistic choice task models the effects of losses disguised as wins: Implications for gambling disorder. C. A. WINSTANLEY*; J. N. FERLAND; S. MURCH; L. CLARK. *Univ. British Columbia, Univ. of British Columbia.*

10:15 **654.10** Lateral habenula inactivation impairs cued switching performance in rats. P. M. BAKER*; S. A. RAYNOR; S. J. Y. MIZUMORI. *Univ. of Washington.*

10:30 **654.11** The underlying mechanism of individual variation in sensory-guided probabilistic decision making. T. KURIKAWA*; T. HANDA; T. FUKAI. *RIKEN, Brain Sci. Inst., Res. center Caesar.*

10:45 **654.12** Neural correlates of anticipatory spatial attention using local field potential recordings with 5-choice serial reaction time task in rats. V. LJUBOJEVIC*; P. LUU; P. R. GILL; L. BECKETT; K. TAKEHARA-NISHIUCHI; E. DE ROSA. *Cornell Univ., Univ. of Toronto, Rambus Labs.*

NANOSYMPOSIUM

655. New Insight into Neural Circuitry Controlling Inflammation

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 8:00 AM – *McCormick Place*, N230

8:00 **655.01** Probing the contribution of maternal antibodies to Autism Spectrum Disorder. L. BRIMBERG*; S. MADER; V. JEGANATHAN; P. HUERTA; B. VOLPE; B. DIAMOND. *The Feinstein Inst. for Med. Res.*

8:15 **655.02** ● Characterization of stimulation parameters that activate the cholinergic anti-inflammatory pathway and fiber types mediating this effect in rodents, canines, and RA patients. Y. A. LEVINE*; A. DRAKE; A. CARAVACA; M. FALTYS; R. ZITNIK. *Setpoint Med. Corp.*

8:30 **655.03** Vagus nerve stimulation as an innovative treatment in inflammatory bowel diseases. B. L. BONAZ*; V. SINNIGER; S. PELLISSIER; D. HOFFMANN; N. MATHIEU; C. TROCMÉ; L. VERCUEIL; D. CLARENÇON. *Dept of Gastroenterology and Liver Dis., Grenoble Inst. of Neurosciences (GIN, INSERM U836), Univ. of Savoie Mont-Blanc, Dept. of Psychology, Dept. of Neurosurg., Dept. of Biol., Dept. of Neurol.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:45 **655.04** Tumor necrosis factor induces a cytokine specific sensory vagus neurogram. H. A. SILVERMAN*; S. ROBBIATI; B. E. STEINBERG; A. STIEGLER; T. TSAAVA; E. A. BATTINELLI; P. T. HUERTA; K. J. TRACEY; S. S. CHAVAN. *Lab. of Biomed. Science, Ctr. for Biome, Hofstra North Shore-LIJ Sch. of Med. at Hofstra Univ., Lab. of Immune and Neural Networks, Feinstein Inst. for Med. Res., Circulatory Technology, Inc.*

9:00 **655.05** ● Prolonged suppression of tnf release in macrophages following transient electrical vagus nerve stimulation. P. S. OLOFSSON*; M. W. TUSCHE; C. REARDON; M. ROSAS-BALLINA; Y. A. LEVINE; L. K. HUDSON; W. R. PARRISH; M. FALTYS; P. K. GREGERSEN; B. DIAMOND; T. W. MAK; U. ANDERSSON; K. J. TRACEY. *Ctr. For Mol. Medicine, L8:03, Univ. Hlth. Network, The Feinstein Inst. for Med. Res., SetPoint Medical, Inc., Karolinska Institutet.*

9:15 **655.06** Activation of viral immune pathways in the ICV-STZ model: Considerations for the pathogenesis of cognitive disorders. R. SANKOWSKI*; C. D'ABRAMO; P. T. HUERTA; Y. AL-ABED. *Feinstein Inst. For Med. Res., Elmezzi Grad. Sch. for Mol. Med., Feinstein Inst. For Med. Res., Feinstein Inst. For Med. Res.*

9:30 **655.07** From selective cholinergic pharmacology to device-generated brain neuromodulation for controlling peripheral inflammation. V. A. PAVLOV*; H. A. SILVERMAN; M. DANCHO; A. REGNIER-GOLANOV; M. OCHANI; W. HANES; S. S. CHAVAN; E. GOLANOV; Y. AL-ABED; N. M. NATHANSON; V. F. PRADO; M. A. M. PRADO; K. J. TRACEY. *The Feinstein Inst. for Med. Res., Baylor Col. of Med., The Houston Methodist Res. Inst., The Feinstein Inst. for Med. Res., Univ. of Washington, Robarts Res. Inst., The Univ. of Western Ontario.*

NANOSYMPOSIUM

656. Human Brain Networks

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, N228

8:00 **656.01** Dynamic modularity and integration during spontaneous neural activity. M. A. BERTOLERO*; B. T. T. YEO; D. J. LURIE; M. D'ESPOSITO. *Univ. of California, Berkeley, Natl. Univ. of Singapore.*

8:15 **656.02** Structural topology lends stability to a dynamic functional landscape. K. SHEN; R. HUTCHISON; B. MISIC; M. BERMAN; S. EVERLING; A. R. MCINTOSH*. *Baycrest Ctr., Harvard Univ., Indiana Univ., Univ. of Chicago, Univ. of Western Ontario.*

8:30 **656.03** Exploring the dynamic organization of the human brain at rest. J. M. REINEN*; B. YEO; R. HUTCHISON; J. T. BAKER; J. L. ROFFMAN; J. W. SMOLLER; A. J. HOLMES. *Columbia Univ., Yale Univ., Natl. Univ. of Singapore, Harvard Univ., McLean Hosp., Massachusetts Gen. Hosp.*

8:45 **656.04** ● Neural hubs leading the dance: A Kuramoto model simulation of dynamic synchrony in the human connectome. R. SCHMIDT*; K. J. R. LAFLEUR; M. A. DE REUS; L. H. VAN DEN BERG; M. P. VAN DEN HEUVEL. *Brain Ctr. Rudolf Magnus, UMC Utrecht.*

9:00 **656.05** Functional brain modules reconfigure at multiple scales across the human lifespan. R. F. BETZEL*; B. MISIC; Y. HE; J. RUMSCHLAG; X. ZUO; O. SPORNS. *Indiana Univ., Univ. of Chinese Acad. of Sci., Key Lab. of Behavioral Sci. and Magnetic Resonance Imaging Res. Center, Inst. of Psychology, Indiana Univ. Network Sci. Inst.*

9:15 **656.06** Properties that contribute to functional connectivity differences between task and rest. C. GRATTON*; T. O. LAUMANN; E. M. GORDON; B. ADEYEMO; S. E. PETERSEN. *Washington Univ. in St Louis.*

9:30 **656.07** Functional diversity and specialization of brain areas associated with behavioral, social, and emotional dysfunction. D. J. LURIE*; Z. SHEHZAD; M. A. BERTOLERO; B. T. T. YEO; M. D'ESPOSITO; M. P. MILHAM. *Univ. of California, Berkeley, Yale Univ., Natl. Univ. of Singapore, Natl. Univ. of Singapore, Univ. of California, Berkeley, Univ. of California, Berkeley, Child Mind Inst., Nathan S. Kline Inst. for Psychiatric Res.*

9:45 **656.08** Reverse inference revisited. B. YEO*; F. M. KRIENEN; S. B. EICKHOFF; P. T. FOX; M. D'ESPOSITO; M. A. BERTOLERO. *Natl. Univ. of Singapore, George Washington Univ., Heinrich-Heine Univ. Düsseldorf, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Univ. of California Berkeley.*

10:00 **656.09** Large-scale neural reconfiguration during response control in ADHD. J. R. COHEN*; A. D. BARBER; M. A. LINDQUIST; S. H. MOSTOFSKY. *Kennedy Krieger Inst., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Bloomberg Sch. of Publ. Hlth.*

NANOSYMPOSIUM

657. Learning and Memory: Hippocampal Circuits

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, N227

8:00 **657.01** Intrinsic functional connectivity MRI of the hippocampal memory system in mice reveals coupling of sensory and association networks. E. BERGMANN*; G. ZUR; G. BERSHADSKY; A. KAVUSHANSKY; I. KAHN. *Technion – Israel Inst. of Technol.*

8:15 **657.02** A subtractive approach to learning: Assessing activity in the hippocampus during acquisition versus performance. T. G. WEYAND*; M. KETCHUM; P. WINSAUER. *LSU-Med Ctr., LSU-Med Ctr.*

8:30 **657.03** Mapping time onto space: Spatial and temporal interactions among hippocampal place cells. J. L. KUBIE*; E. PASTALKOVA. *SUNY Downstate Med. Ctr., Janelia Res. Campus, HHMI.*

8:45 **657.04** Cell-type specific septal innervation of hippocampal formation. J. A. DELA CRUZ*; X. XU. *Univ. of California, Irvine.*

9:00 **657.05** Circuit connection mapping of the subicular neurons projecting to hippocampal CA1. Y. SUN*; X. XU. *Univ. of California, Irvine.*

9:15 **657.06** Is dentate gyrus pattern separation necessary for cognitive discrimination? M. T. VAN DIJK*; A. A. FENTON. *New York Univ. Sch. of Med., New York Univ., SUNY Downstate Med. Ctr.*

9:30 **657.07** A distinct population of paraventricular nucleus vasopressin neurons excite the hippocampal CA2 area to promote social memory. A. S. SMITH*; S. K. WILLIAMS AVRAM; J. SONG; W. S. YOUNG. *Natl. Inst. of Mental Health, NIH.*

9:45 **657.08** Through synapses to spatial memory maps: A topological model. Y. A. DABAGHIAN*; A. BABICHEV; S. CHOWDHURY; F. MEMOLI. *Jan and Dan Duncan Neurolog. Res. Institute, Baylor Col. of Med., Baylor Col. of Medicine, Rice Univ., Ohio State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 **657.09** Hippocampal longitudinal axis segmentation: PCA-based automated segmentation tool. G. LERMA-USABIAGA*; E. IGLESIAS; P. M. PAZ-ALONSO. *BCBL, Basque Ctr. on Cognition, Brain and Language.*

10:15 **657.10** CCR5 is a suppressor for learning and memory. M. ZHOU*; S. GREENHILL; S. HUANG; T. SILVA; Y. SANO; S. WU; Y. CAI; Y. NAGAOKA; D. CAI; Y. LEE; M. CHU; K. WONG; K. YAMAMOTO; K. FOX; A. J. SILVA. *UCLA, Cardiff Univ.*

10:30 **657.11** Novel place field formation in hippocampal area CA1. K. C. BITTNER*; C. GRIENBERGER; J. C. MAGEE. *HHMI Janelia Farm.*

DYNAMIC POSTERS

DP08. Dynamic Posters–Wednesday Morning

Wed. 8:00 AM – *McCormick Place*, Hall A

All dynamic poster presentations will take place during the full four-hour session time. The theme of the dynamic poster being presented is indicated by the letter in the leftmost column.

B DP01 **DP08.01** Oxytocin enables maternal behavior by balancing cortical inhibition. *B. JONES MARLIN; M. MITRE; J. A. D'AMOUR; M. V. CHAO; R. C. FROEMKE. *Mol. Neurobio., New York University, Sch. of Med., New York Univ. Sch. of Med.*

B DP02 **DP08.02** Pain induced synaptic plasticity in the amygdala. *S. KISSIWAA; E. E. BAGLEY. *Pharmacol., Univ. of Sydney.*

D DP03 **DP08.03** Large-scale long-term two-photon calcium imaging on awake monkey revealed sparsity and complexity in v1 neural codes. *S. TANG. *Peking Univ.*

D DP04 **DP08.04** A self-directed and automated mouse forelimb task for high-throughput assessment of motor-learning in the home cage. *G. SILASI; F. BOLANOS; J. BOYD; J. LEDUE; M. VANNI; S. H. SCOTT; T. H. MURPHY. *Psychiatry, Univ. of British Columbia, Dept. of Biomed. and Mol. Sci., Queens Univ.*

E DP05 **DP08.05** Behavioral state, neuroendocrine state, and social context induce brain transcriptional regulatory network plasticity in the honey bee apis mellifera. *A. R. HAMILTON; I. M. TRANIELLO; G. E. ROBINSON. *Neurosci. Program, Carl R. Woese Inst. for Genomic Biol., Dept. of Entomology, Univ. of Illinois at Urbana-Champaign.*

E DP06 **DP08.06** Glutamate output from infralimbic prefrontal cortex attenuates cardiovascular and endocrine reactivity to acute psychogenic stress. *B. MYERS; J. M. MCKLVEEN; A. E. B. PACKARD; S. P. WILSON; Y. M. ULRICH-LAI; J. P. HERMAN. *Psychiatry and Behavioral Neurosci., Univ. of Cincinnati, Pharmacology, Physiology, and Neurosci., Univ. of South Carolina.*

F DP07 **DP08.07** Counterfactual learning in obsessive compulsive and hoarding disorders. *H. PUSHKARSKAYA; D. HENICK; D. TOLIN; I. LEVY; C. PITTENGER. *Section of Comparative Medicine, Yale Sch. of Me, Yale Univ., Hartford Hosp., Inst. of Living.*

F DP08 **DP08.08** Distinct contributions of adult-born hippocampal granule cells to memory encoding. N. B. DANIELSON; P. KAIFOSH; J. D. ZAREMBA; M. LOVETT-BARRON; J. TSAI; C. A. DENNY; E. BALOUGH; A. GOLDBERG; L. J. DREW; A. LOSONCZY; R. HEN; *M. A. KHEIRBEK. *Psychiatry & Neurosci., Columbia Univ., Stanford Univ., Univ. Col. London.*

G DP09 **DP08.09** Three-dimensional ultrastructural segmentation of actin in dendritic spines. *A. V. HERZ; D. PATIRNICHE; T. WEINKAUF; E. BUSHONG; S. PHAN; M. ELLISMAN. *Ludwig-Maximilians-Universität München, KTH Stockholm, UCSD.*

G DP10 **DP08.10** Determining the microstructural basis of human MRI using CLARITY. *C. LEUZE; M. GOUBRAN; E. A. FERENCZI; B. HSUEH; E. PLOWEY; Q. TIAN; R. TOMER; M. ZEINEH; K. DEISSEROTH; J. A. MCNAB. *Radiology, Stanford Univ., Bioengineering, Stanford Univ., Pathology, Stanford Univ., Electrical Engineering, Stanford Univ., Howard Hughes Med. Institute, Stanford Univ., Psychiatry & Behavioral Sciences, Stanford Univ.*

POSTER

658. Adult Neurogenesis

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A1 **658.01** Ethanol consumption impacts adult neurogenesis in a sex, time, and region dependent manner as determined by genetic fate mapping. E. L. MCGRATH*; J. GAO; T. DUNN; B. S. KAPHALIA; K. T. DINELEY; K. A. CUNNINGHAM; P. WU. *UTMB.*

9:00 A2 **658.02** ACE2 activity sustains serotonin levels that mediate the running-induced effect on adult neurogenesis. F. C. KLEMPIN*; M. BADER; R. SANTOS; N. ALENINA. *Max-Delbruck-Centrum (MDC), UFMG.*

10:00 A3 **658.03** Expression and function of Sox Neuro in the development of the *Drosophila* adult nervous system. S. SINGH*; K. DAWSON-SCULLY; J. R. NAMBU. *Florida Atlantic Univ.*

11:00 A4 **658.04** Shedding light on serotonin in depression, and its linked role to adult neurogenesis. M. PETERMANN*; N. ALENINA; G. KRONENBERG; F. KLEMPIN. *Max Delbrueck Ctr. For Mol. Sci. In Helm, Max Delbrueck Ctr. for Mol. Med., Charité - Univ. Med. Berlin.*

8:00 A5 **658.05** The role of kainate receptors in regulating maturation of adult-born granule neurons. Y. ZHU*; A. CONTRACTOR. *Northwestern Univ.*

9:00 A6 **658.06** ▲ The effect of intranasal manganese exposure on adult neurogenesis in the subventricular zone (svz). V. LAI*; S. O'NEAL; W. ZHENG. *Zheng Lab., Zheng Lab.*

10:00 A7 **658.07** Deletion of cohesin decreases adult neurogenesis in the subventricular zone. Y. FUJITA*; T. YAMASHITA. *Dept Mol Neurosci, Grad Sch. Med, Osaka Univ.*

11:00 A8 **658.08** The role of klotho in adult neurogenesis. A. M. LASZCZYK*; S. FOX; D. NETTLES; G. D. KING. *Univ. of Alabama At Birmingham.*

8:00 A9 **658.09** ● NGF regulates adult neurogenesis through a $p75^{NTR}$-ERK-miRNA-9 axis . J. SHI*; S. M. MASSA. *Dept. of Veterans Affairs Med. Ctr. and Univ. of California.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 A10 **658.10** Exogenous factors induce rod- and cone-specific progenitors from adult retinal stem cells. B. G. BALLIOS*; S. KHALILI; K. GRISÉ; L. DONALDSON; G. BERNIER; V. A. WALLACE; D. VAN DER KOOY. *Univ. Toronto, McMaster Univ., Maisonneuve-Rosemont Hospital, Ctr. de recherché, Univ. de Montréal.*

10:00 A11 **658.11** Effect of Aβ oligomers in adult mouse hippocampal neural precursor cells (NPCs). M. SILVA-LUCERO; M. CARDENAS-AGUAYO*; G. RAMIREZ-RODRIGUEZ; M. MERAZ-RIOS. *CINVESTAV-IPN, Natl. Inst. of Psychiatry "Ramón de la Fuente Muñiz".*

POSTER

659. Cell Fate Mechanisms

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A12 **659.01** ▲ Global transcriptomic analysis of compensatory response to genetic perturbation of the notch signaling pathway. A. HALLERAN*; C. RATNAYAKE; C. GOLINO; B. RABE; M. MCDONOUGH; M. SAHA. *Col. of William and Mary.*

9:00 A13 **659.02** Regulation of Ptf1a to generate a balanced neural network in the spinal cord. B. MONA*; J. M. AVILA; D. M. MEREDITH; J. E. JOHNSON. *UT Southwestern Med. Ctr.*

10:00 A14 **659.03** Dual function of suppressor-of-fused in cortical progenitors during mammalian corticogenesis. O. R. YABUT*; K. YOON; G. FERNANDEZ; T. HUYNH; S. J. PLEASURE. *Univ. of California, San Francisco, Sungkyunkwan Univ.*

11:00 A15 **659.04** Assessing the septal contribution to olfactory bulb interneuron diversity and the role of Gsx2 in septal progenitors. S. QIN*; H. CHAPMAN; S. M. WARE; R. R. WACLAW; K. CAMPBELL. *Cincinnati Children's Hosp. Med. Ctr., Univ. of California, Davis, Indiana Univ. Sch. of Med., Cincinnati Children's Hosp. Med. Ctr.*

8:00 A16 **659.05** CoREST1 and CoREST2 express in primary culture of midbrain dopaminergic neurons. M. GONZÁLEZ; L. A. PEREIRA; M. E. ANDRES*. *Pontificia Univ. Catolica De Chile.*

9:00 A17 **659.06** Ets factors regulate neural stem cell depletion and gliogenesis in perinatal development and glioma. H. PARK; R. LEVY; C. ANTONUK; J. MOLINA; M. DUTRA-CLARKE; A. AKHTAR; G. KIM; X. HU; S. BANNYKH; R. VERHAAK; M. DANIELPOUR; J. J. BREUNIG*. *Cedars-Sinai Hosp., MD Anderson.*

10:00 A18 **659.07** Understanding the role of Prdm13 in dorsal interneuron specification. A. URUENA*; J. CHANG; M. BORROMEO; R. KOLLIPARA; R. HAMMER; J. JOHNSON. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

11:00 A19 **659.08** Mechanistic insights into regulation of the neuron-glia cell fate switch in the developing hippocampus by transcription factor Lhx2. B. MURALIDHARAN*; U. MAHESHWARI; S. PRADHAN; K. KARMODIYA; R. GUPTA; C. BALAJI; V. KINARE; B. ROY; S. K. GODAVARTHI; D. CHAUHAN; U. KOLTHUR-SEETHARAM; S. GALANDE; S. TOLE. *Tata Inst. of Fundamental Res., Friedrich Miescher Inst. for Biomed. Res., Indian Inst. of Sci. Educ. and Res.*

8:00 A20 **659.09** Genetic interactions of Lhx2, Pax6 and Foxg1 in early the patterning of telencephalic domains. G. GODBOLE*; A. SHETTY; B. CHEN; G. MIYOSHI; G. FISHELL; S. TOLE. *TIFR, Harvard Univ. Dept. of Stem Cell and Regenerative Biol., Univ. of California Santacruz, NYU Neurosci. Institute, NYU Langone Med. Ctr.*

9:00 A21 **659.10** Decoding subpallial neuronal diversity by single cell transcriptomic profiling. J. SYMMANK*; D. PENSOLD; N. HAAG; G. SALINAS-RIESTER; T. LINGNER; C. POMMERENKE; F. LUDEWIG; T. PIELER; G. ZIMMER. *Univ. Hosp. Jena, Univ. Hosp. Jena, Univ. of Goettingen.*

10:00 A22 **659.11** ▲ Nato3 is sufficient to drive Lmx1b expression in the developing neural tube. N. HUISINGH; D. MARTINEZ; J. STRAIGHT; M. K. TAYLOR*. *Grand Valley State Univ., Grand Valley State Univ., Grand Valley State Univ.*

11:00 A23 **659.12** A NanoString-based single cell approach for transcriptomic profiling of embryonic interneuron subtypes. D. PENSOLD*; J. SYMMANK; N. HAAG; G. SALINAS-RIESTER; T. LINGNER; C. POMMERENKE; F. LUDEWIG; T. PIELER; G. ZIMMER. *Univ. Hosp. Jena, Univ. Hosp. Jena, Univ. of Goettingen.*

8:00 A24 **659.13** NeuroD6 is required for the survival of midbrain dopaminergic neurons projecting to the intermediate lateral septum. S. KHAN*; A. TRUCKENBRODT; S. STOTT; A. CHABRAT; M. LÉVESQUE; M. UNGLESS; S. ANG. *The Francis Crick Inst., Ctr. de recherche de l'Institut universitaire en santé mentale de Québec, MRC Clin. Sci. Centre, Fac. of Medicine, Imperial Col. London.*

9:00 A25 **659.14** ▲ Comparison of the effects of mouse, chick and human nato3, a bhlh transcription factor, on floor plate marker expression in the developing neural tube. D. DOYLE*; N. HUISINGH; S. DURHAM; M. TAYLOR. *Grand Valley State Univ.*

10:00 A26 **659.15** Epigenetic mechanisms in midbrain development. H. V. HEESBEEN*; M. P. SMIDT. *Univ. of Amsterdam.*

11:00 A27 **659.16** Withdrawn.

8:00 A28 **659.17** The role of Gsx2:Ascl1 protein-protein interactions on progenitor maturation in lateral ganglionic eminence (LGE) progenitors of the mouse. K. ROYCHOUDHURY*; M. NAKAFUKU; B. GEBELEIN; K. CAMPBELL. *Cincinnati Children's Hosp.*

POSTER

660. Molecular Mechanisms of Neuronal Identity

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A29 **660.01** miRNA-pseudogenes interactions as a regulator of neural stem cell pluripotency and a target for ethanol teratogenesis. N. SALEM; S. BALARAMAN; R. HOLGATE; E. RAYMOND; R. C. MIRANDA*. *Texas A&M Hlth. Sci. Ctr, Col. of Med.*

9:00 A30 **660.02** A role for NOTCH pathway in the specification of glial precursors during hindbrain development. M. S. DOMOWICZ*; M. MCGOVERN; J. G. HENRY; D. SANTANA; D. VAVAL; N. B. SCHWARTZ. *Univ. of Chicago.*

10:00 A31 **660.03** Gas1 is present in the germinal niches of the developing dentate gyrus and cortex. E. ESTUDILLO*; P. ZAVALA; G. PEREZ-SANCHEZ; A. AYALA-SARMIENTO; J. SEGOVIA-VILA. *CINVESTAV.*

11:00 A32 **660.04** Neurog2 and Ascl1 play a key role in development of mouse ventromedial hypothalamus. S. ASLAN POUR KAL BOLANDI*; G. WILKINSON; C. SCHUURMANS; D. M. KURRASCH. *Univ. of Calgary, Univ. of Calgary.*

8:00 A33 **660.05** Increased dosage of DYRK1A enhances STAT activity and astrocytic differentiation of neocortical progenitors in a mouse model of Down's syndrome. N. KURABAYASHI*; K. SANADA. *The Univ. of Tokyo.*

9:00 A34 **660.06** An assessment of the requirements for the Fgf receptor substrate (FRS) genes during early telencephalon development. S. NANDI*; G. GUTIN; N. KAMATKAR; K. W. LEE; F. WANG; G. FISHELL; M. GOLDFARB; J. M. HEBERT. *Albert Einstein Col. of Med., Hunter Col., Texas A&M Hlth. Sci. Ctr., NYU Langone Med. Ctr.*

10:00 A35 **660.07** Identification of gene regulatory networks in cone development. T. ELISEEVA*; J. A. BRZEZINSKI; K. JONES; K. PARK. *Univ. of Colorado Denver, Univ. of Colorado Sch. of Med.*

11:00 A36 **660.08** Progressive differentiation and instructive capacities of amniotic fluid and cerebrospinal fluid proteomes following neural tube closure. K. CHAU*; M. SPRINGEL; K. BROADBELT; H. PARK; S. TOPAL; M. LUN; H. MULLAN; T. MAYNARD; H. STEEN; A. LAMANTIA; M. LEHTINEN. *Boston Children's Hosp., Harvard Med. Sch., UMass Med. Sch., Boston Univ. Sch. of Med., The George Washington Univ. Sch. of Med. and Hlth. Sci.*

POSTER

661. Cell Migration in Neurodevelopment

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A37 **661.01** Autism-associated proteins Negr1 and FGFR2 together regulate cell migration and autism-related behaviors in mice. J. SZCZURKOWSKA*; F. PISCHEDDA; B. PINTO; F. MANAGO; C. HAAS; F. PAPALEO; M. SCHÄFER; G. PICCOLI; L. CANCEDDA. *Inst. Italiano Di Tecnologia, Univ. of Milan, Scuola Normale Superiore, Univ. of Freiburg, Univ. Med. Ctr. of Mainz, Univ. of Milan.*

9:00 A38 **661.02** Reelin, ephs and ephrins: Neuronal migration or synaptic plasticity? T. POHLKAMP*; X. XIAN; L. XIAO; R. SULTANA; H. H. BOCK; M. HENKEMEYER; J. HERZ. *Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr., Heinrich-Heine-University, Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr.*

10:00 A39 **661.03** Wnt signaling regulates multipolar-to-bipolar transition of migrating neurons in the cerebral cortex. R. BOCCHI*; M. BOITARD; K. EGERVARI; V. PETRENKO; B. VIALE; S. GREMAUD; E. ZGRAGGEN; P. SALMON; J. Z. KISS. *Dept. of Neurosciences - Fac. of Med.*

11:00 A40 **661.04** Spontaneous neurodevelopmental malformations in rats and mice are visible with magnetic resonance histology. R. L. RAMOS*. *NYIT-COM.*

8:00 A41 **661.05** Sp9 regulates MGE-derived cortical interneuron development. Z. LIU*; Y. YOU; Q. LIANG; Z. YANG. *Fudan Univ.*

9:00 A42 **661.06** Injectable biomaterials alter progenitor cell migration and inflammation after injury to the young adult brain. R. MOTALLEB*; E. J. BERNS; S. I. STUPP; G. H. KUHN. *Neurosci. and Physiol., Dept. of Biomed. Engin., Dept. of Materials Sci. and Engineering. Dept. of Chemistry. Dept. of Med. and Inst. for BioNanotechnology in Med.*

10:00 A43 **661.07** Rapamycin can prevent, but not reverse, aberrant migration of pten knockout neurons. S. A. GETZ*; T. DESPENZA, Jr; M. LI; B. W. LUIKART. *Geisel Sch. of Med. At Dartmouth, Icahn Sch. of Med. at Mount Sinai.*

11:00 A44 **661.08** ▲ Embryonic BAGAergic system is affected by alcoholism in rats. D. M. SANTOS*; R. N. ISAYAMA; R. R. RAMOS; E. N. YAMAZAKI; D. UZIEL. *UNICASTELO, UFRJ.*

8:00 A45 **661.09** ▲ Cell migration of pituitary adenoma cells on collagen type I-III. D. AVILA*; A. ORTIZ-PLATA; C. SOLANO-AGAMA; M. MENDOZA-GARRIDO. *Ctr. For Res. and Advanced Studies, Natl. Inst. of Neurol. and Neurosurg.*

9:00 A46 **661.10** ADP-ribosylation factor 6 controls the transition of migrating neurons from intermediate zone to cortical plate. Y. HARA*; H. SAKAGAMI. *Kitasato Univ. Sch. of Med.*

10:00 A47 **661.11** Conditional knockout of paxillin in the nervous system disrupts migrating neuron morphology and delays cortical lamination. M. RASHID*; J. BELMONT; D. CARPENTER; C. TURNER; E. OLSON. *SUNY Upstate Med. Univ., SUNY Upstate Med. Univ., SUNY Upstate Med. Univ.*

11:00 A48 **661.12** INM-like migration of newly born post-mitotic rod photoreceptors in the early post-natal mouse retinal neuroepithelium. N. D. AGHAIZU*; K. WARRE-CORNISH; M. R. ROBINSON; P. V. WALDRON; R. R. ALI; R. A. PEARSON. *UCL Inst. of Ophthalmology, Kings Col. London.*

8:00 A49 **661.13** Deletion of Dcc results in mispositioning of spiral ganglion neurons during cochlear development. Y. KIM*; S. WANG; H. W. TAO; L. I. ZHANG. *USC.*

9:00 A50 **661.14** N-cadherin and Astrotactin interact to regulate granule cell migration in the developing cerebellum. Z. HORN*; M. E. HATTEN. *Rockefeller Univ.*

10:00 A51 **661.15** Slit/Robo signals maintain motor neurons inside the spinal cord by regulating the integrity of the basement membrane. M. KIM*; H. LEE; G. S. MASTICK. *Univ. of Nevada, Reno.*

11:00 A52 **661.16** Radial and tangential migration of telencephalic somatostatin neurons originated from the mouse diagonal area. J. L. FERRAN*; N. MORALES-DELGADO; P. MERCHÁN; B. CASTRO-ROBLES; M. MARTINEZ-DE-LA-TORRE; C. DÍAZ; L. PUELLES. *Sch. of Medicine, Univ. of Murcia, Cincinnati Children's Hosp. Med. Center, Univ. of Cincinnati Col. of Med., Inst. of Biomed. Res. of Lleida, Univ. of Lleida, Sch. of Medicine, Univ. of Castilla-La Mancha.*

8:00 A53 **661.17** ▲ Impaired interneuron development after disruption of Foxg1 disruption. W. SHEN*; Y. YANG; Y. WEI. *Institude of Life Sci. of Southeast Univ., institude of life science of southeast university, Institude of life science of Southeast university.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 A54 **661.18** The essential role of RBM8a in brain development. C. MCSWEENEY*; D. REYNOLDS; A. SEBASTIAN; J. VITALE; Y. ZHOU; F. DONG; D. DENG; L. LIU; X. JIANG; J. JIANG; Y. WANG; I. ALBERT; Y. MAO. *Penn State Univ., Univ. of California Irvine, Shanghai Jiaotong Univ.*

10:00 A55 **661.19** Widespread neurodevelopmental malformations of the cerebellar vermis in genetically engineered mice. J. A. CUOCO*; A. ESPOSITO; S. SETH; S. O'MALLEY; Y. TANG; P. T. SMITH; R. L. RAMOS. *New York Inst. of Technol. Col. of Osteop, SUNY Suffolk County Community Col.*

11:00 A56 **661.20** Cdk12 regulates neurogenesis and late-born neuronal migration in the developing mouse cerebral cortex. M. FANN*; H. CHEN. *Natl. Yang-Ming Univ.*

8:00 A57 **661.21** Regulation of the actin cytoskeleton by the Ndel1-Tara complex is critical for cell migration and invasion. J. HONG; Y. KWAK; Y. WOO; S. KIM; C. PARK; S. LEE; K. SANADA; M. NGUYEN; S. PARK*. *POSTECH, Univ. of Tokyo, Univ. of Calgary.*

9:00 A58 **661.22** Cell mechanics underlying nuclear translocation of migrating neurons. H. UMESHIMA*; Y. K. WU; K. NOMURA; S. YOSHIKAWA; S. SAKUMA; F. ARAI; M. KANEKO; M. KENGAKU. *iCeMS, Kyoto Univ., Kyoto Univ., Osaka Univ., Nagoya Univ.*

10:00 A59 **661.23** Identifying molecular mechanisms behind local cortical microcircuit assembly. S. LODATO*; L. GOFF; A. C. ZHANG; A. GROFF; E. J. STRONGE; A. SHETTY; J. RINN; P. ARLOTTA. *Harvard Univ., The Broad Inst. of MIT and Harvard, John Hopkins University, Sch. of Medicine.*

11:00 A60 **661.24** Novel function of PIWIL1 in neuronal polarization and migration via regulation of microtubule-associated proteins. P. ZHAO*; M. YAO; S. CHANG; L. GOU; M. LIU; Z. QIU; X. YUAN. *Inst. of Neuroscience, CAS, Inst. of Biochem. and Cell Biology, CAS, Hussman Inst. for Autism.*

8:00 A61 **661.25** Yes-associated protein (Yap) function in normal cerebellar development and medulloblastoma. L. J. HUGHES*. *Temple Univ.*

9:00 A62 **661.26** ADAMTS-3 is the major protease that inactivates Reelin in brain. H. OGINO*; A. HISANAGA; Y. KONDO; H. TSUIJI; T. KOHNO; M. HATTORI. *Nagoya City Univ.*

10:00 A63 **661.27** Prolonged hypoxia depletes SVZ neural stem/progenitor cell pools critical for cortical development in piglets. P. D. MORTON*; L. KOROTCOVA; B. LEWIS; V. KUMAR; F. SHAIKH; E. SHORT; J. ZHANG; S. MORI; J. A. FRANK; V. GALLO; R. A. JONAS; N. ISHIBASHI. *Childrens Natl. Med. Ctr., Childrens Natl. Med. Ctr., NIH, Johns Hopkins Sch. of Med.*

11:00 A64 **661.28** JNK signaling maintains the integrity of cortical interneuron migratory streams during corticogenesis. A. K. MYERS*; K. BAKER; J. P. SNOW; S. E. HICKLING; C. A. SMITH; E. S. TUCKER. *West Virginia Univ.*

POSTER

662. Patterning and Cell Death

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A65 **662.01** Deciphering astrocyte spatial patterning cues. V. M. PUNAL*; F. BRECHA; J. KAY. *Duke Univ.*

9:00 A66 **662.02** Effect of depleting microglia on developmental cell death in the mouse brain. J. A. STRAHAN*; N. G. FORGER. *Georgia State Univ.*

10:00 A67 **662.03** Valproic acid exposure *in utero* causes neocortical dysgenesis: Altered proliferation/differentiation pattern of neural progenitor cells. K. FUJIMURA*; T. MITSUHASHI; S. SHIBATA; S. SHIMOZATO; T. TAKAHASHI. *Keio Univ. Sch. of Med., Keio Univ. Sch. of Med.*

11:00 A68 **662.04** The transcription regulator Lmo3 is required for correct cell fate specification in the globus pallidus. S. BISWAS*; L. GAN. *Univ. of Rochester.*

8:00 A69 **662.05** Characterizing the role of adhesion G protein-coupled receptor GPR56 in cortical lamination. M. OKAMOTO*; R. LUO; X. PIAO. *Boston Children's Hospital, Harvard Med. Sch.*

9:00 A70 **662.06** Wntless is required for compartmentation and lamination in cerebellar development. J. T. YEUNG*; D. GOLDOWITZ. *CMMT, Univ. of British Columbia, Child and Family Res. Inst.*

10:00 A71 **662.07** Differential dependency of hindbrain serotonergic neuron development on transforming growth factor betas. E. CHLEILAT*; E. ROUSSA. *Univ. of Freiburg.*

11:00 A72 **662.08** Understanding the role of GABAergic signaling in larval zebrafish development. A. J. VANLEUVEN*; L. BEEBE; R. E. BALL; M. O'CONNOR; T. DORE; J. D. LAUDERDALE. *Univ. of Georgia, Univ. of Georgia, New York Univ.*

8:00 A73 **662.09** Developmental control of cortical GABAergic interneuron number via Pten signaling. J. SEJOURNE*; D. T. PAGE. *The Scripps Res. Inst. Florida.*

9:00 A74 **662.10** ▲ Signaling centers that pattern developing cerebral cortex are conserved between mice and ferrets. W. D. JONES*; S. M. GUADIANA; E. A. GROVE. *Univ. of Chicago.*

10:00 A75 **662.11** ▲ The role of PDK1 in the development of mice dentate gyrus. X. HAN; M. XU; B. LIU; T. TIAN; C. ZHAO; J. GAO*. *Southeast Univ., Nanjing Med. Univ., Nanjing Med. Univ.*

POSTER

663. Postnatal Neurogenesis: Molecular Mechanisms

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A76 **663.01** Activation of the mTOR pathway drives neurogenesis and alters neuronal fate in the olfactory bulb. N. W. HARTMAN*; A. GUBISTA; A. DECARLO; D. HELLTHALER. *Stockton Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 A77 **663.02** Identification of neurogenic S-nitrosylation targets in neural stem cells. I. M. ARAUJO*; A. I. SANTOS; D. M. SILVA; A. S. LOURENÇO; A. IZQUIERDO-ÁLVAREZ; E. RAMOS; C. M. CARVALHO; A. MARTÍNEZ-RUIZ. *Univ. of Algarve, NIF 505 387 27, Univ. of Algarve, Hosp. Universitario de la Princesa, Inst. de Investigación Sanitaria Princesa, Ctr. for Neurosci. and Cell Biol.*

10:00 A78 **663.03** Zinc transporter 3 gene deletion alters adult hippocampal neurogenesis. B. CHOI*; I. KIM; B. LEE; J. KIM; A. KHO; S. LEE; M. SOHN; S. SUH. *Hallym University, Col. of Med., Hallym University, Col. of Med., Inha Univ.*

11:00 A79 **663.04** A maturational transition of distict Wnt signals enables a stage-specific regulation of dentate granule cell neurogenesis. S. T. SCHAFER*; J. HAN; M. PENA; F. H. GAGE. *Salk Inst. For Biol. Studies.*

8:00 A80 **663.05** The interaction of neuronal Sema6D and microglial Plexin-A1 in developmental neuronal death in hippocampus. T. ITO*; K. YOSHIDA; T. NEGISHI; K. YUKAWA. *Meijo Univ.*

9:00 A81 **663.06** A role for lipocalin-2 in hippocampal neurogenesis modulation. P. MORGADO*; A. C. FERREIRA; S. D. MESQUITA; A. NOVAIS; S. NEVES; N. SOUSA; J. A. PALHA; J. C. SOUSA; F. MARQUES. *Life and Hlth. Sci. Res. Inst. (ICVS), Univ. of Minho, ICVS/3B's-PT Government Associate Lab.*

10:00 A82 **663.07** Sp8 and Sp9 coordinately regulate olfactory bulb interneuron development. J. LI*; C. WANG; D. QI; Y. YOU; Z. YANG. *Fudan Univ.*

11:00 A83 **663.08** Estrogen receptor-beta (ERβ) expression in the sexually dimorphic nucleus of preoptic area (SDN-POA) and the 3rd ventricle stem cell niche. Z. HE*; M. G. PAULE; S. A. FERGUSON. *Natl. Ctr. For Toxicology Res.*

8:00 A84 **663.09** Sustained increase of neuronal polysialic acid level does not affect the nervous system development and maintenance but induces a mild behavioral deficit that may be attributed to synaptic dysfunction. S. NGAMLI FEWOU*; I. RÖCKLE; H. HILDEBRANDT; K. HAASTERT; C. GROTHE; V. GIESELMANN; M. ECKHARDT. *Fac. of Hlth. Sciences, Univ. Des Montagn, Univ. of Bonn, Univ. of Hannover medical school, Univ. of Hannover medical school, Univ. of Bonn.*

9:00 A85 **663.10** Diazepam Binding Inhibitor (DBI) regulates the hippocampal stem cell pool. I. G. DUMITRU; A. NEITZ; J. ALFONSO; H. MONYER*. *DKFZ / A230, Heidelberg Univ. Hosp.*

10:00 A86 **663.11** Synaptosomal Associated Protein-25 (SNAP-25) is not essential for the survival and morphological maturation of newborn dentate granule cells in adult hippocampus. K. C. GUSTUS*; L. LI; Y. GU; S. GE; L. CUNNINGHAM; M. C. WILSON. *Univ. of New Mexico, Stony Brook Univ.*

11:00 A87 **663.12** β1-integrin and BMP pathway interactions in the regulation of the adult hippocampal stem cell niche. S. M. BROOKER*; A. M. BOND; C. PENG; J. A. KESSLER. *Northwestern Univ. Feinberg Sch. of Med.*

8:00 A88 **663.13** The transcription factor NeuroD2 regulates synaptic integration in the postnatal olfactory bulb. S. BUGEON*; O. HARDT; A. BOSIO; H. CREMER; A. DE CHEVIGNY. *Developmental Biol. Inst. of Marseille, Miltenyi Biotec GmbH.*

9:00 A89 **663.14** Activity-dependent regulation of neurogenesis after stroke. H. LIANG*; S. T. CARMICHAEL. *UCLA.*

10:00 A90 **663.15** The Wnt receptor Frizzled-1 regulates neurogenesis in the adult hippocampus. L. VARELA-NALLAR*; M. D. MARDONES; N. C. INESTROSA. *Ctr. Inv. Biomedicas, Univ. Andres Bello, Ctr. Envejecimiento y Regeneracion (CARE), P. Univ. Catolica de Chile.*

11:00 A91 **663.16** The role of post-translational modification of FOXP2 in brain development. N. USUI*; M. CO; M. HARPER; M. A. RIEGER; J. D. DOUGHERTY; G. KONOPKA. *Univ. of Texas Southwestern Med. Ctr., Washington Univ. Sch. of Med.*

8:00 A92 **663.17** Granule neuron progenitors in the developing murine cerebellum exhibit asymmetric cell division. A. CHATTERJEE*; P. HALDIPUR; I. SIVAPRAKASAM; V. BABU; S. GOVINDAN; S. MANI. *Indian Inst. of Sci., Natl. Brain Res. Ctr.*

9:00 A93 **663.18** ▲ The Akt-mtor pathway is a key regulator of neurogenesis in the subventricular zone. G. PEZZANO*; M. A. FINGER; J. MERCURIO; N. W. HARTMAN. *Stockton Univ.*

10:00 A94 **663.19** Regulation of adult neurogenesis by the hippocampal cholecystokinin network. R. H. OLSEN*; S. LIM; I. HANIFF; J. SONG. *UNC Chapel Hill, UNC Chapel Hill, UNC Chapel Hill, UNC Chapel Hill.*

11:00 A95 **663.20** CPEB4 regulates olfactory experience-dependent granule cell survival in the early postnatal olfactory bulbs. C. TSENG; Y. HUANG*. *Academia Sinica/ Institute of Biomed. Sci., Natl. Def. Med. Center/Graduate Inst. of Life Sci.*

8:00 A96 **663.21** L-type voltage gated calcium channels Cav1.2 and Cav1.3 in adult neurogenesis. B. VOELKENING; T. WEBER; D. BARTSCH*. *CIMH and Med. Fac. Mannheim, Heidelberg Univ., AHG Klinik Wilhelmsheim.*

9:00 A97 **663.22** Down regulated necdin expression triggers proliferation of postmitotic neurons of the rat cortex. S. LIU*; R. LIU; H. QUE; J. YANG; Q. LIN; Y. LIU; S. JING; S. JING. *Beijing Inst. of Basic Med. Sci.*

10:00 A98 **663.23** Gmip-mediated inactivation of RhoA controls speed of neuronal migration in the postnatal mouse brain. H. OTA*; T. HIKITA; M. SAWADA; T. NISHIOKA; M. MATSUMOTO; M. KOMURA; A. OHNO; Y. KAMIYA; T. MIYAMOTO; N. ASAI; A. ENOMOTO; M. TAKAHASHI; K. KAIBUCHI; K. SOBUE; K. SAWAMOTO. *Nagoya City Univ. Grad. Sch. of Med. Sci., Nagoya City Univ. Grad. Sch. of Med. Sci., Nagoya Univ. Grad. Sch. of Med., Nagoya Univ. Grad. Sch. of Med.*

11:00 A99 **663.24** Genetic deletion of intracellular fibroblast growth factor 14 (fgf14) disrupts transition of late immature to mature newly born granule neurons in the adult dentate gyrus. M. A. ALSHAMMARI*; T. K. ALSHAMMARI; F. SCALA; M. N. NENOV; F. LAEZZA. *Univ. of Texas Med. Br., King Saud Univ.*

8:00 A100 **663.25** EphA4-ephrin signaling regulates postnatal development of the rostral migratory stream. M. EASTMAN*; K. L. BAKER; N. B. GALLO; J. C. CONOVER. *Univ. of Connecticut.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 A101 **663.26** CHD7 fine-tunes Reelin expression in cerebellar neuron progenitors by remodeling chromatin structure. D. WHITTAKER*; K. L. H. RIEGMAN; B. PIJUAN SALA; H. HEBAISHI; S. KASAH; T. YU; A. CARUSO; A. MARQUES; C. MICHETTI; A. SHAH; W. TEE; D. REINBERG; C. PONTING; M. SCATTONI; F. WARDLE; H. VOLK; I. MCGONNELL; C. FERNANDES; M. A. BASSON. *King's College, London, The Royal Vet. Col., King's Col. London, King's Col. London, Inst. Superiore di Sanità, Univ. of Oxford, Howard Hughes Med. Inst., King's Col., Inst. of Psychiatry.*

10:00 A102 **663.27** The role of camkiiα-expressing granule cells in the adult olfactory bulb. S. MALVAUT*; L. DAROLES; L. DAVID; S. GRIBAUDO; I. CAILLÉ; A. SAGHATELYAN. *CRIUSMQ, UMR 8246 Neuro-Paris-Seine, Univ. Pierre et Marie Curie.*

11:00 A103 **663.28** Engrailed-2 plays a cell autonomous role in regulating proliferation and cell death in hippocampal neural stem cells *in vitro.* M. DURENS*; S. CHUNG; E. DICICCO-BLOOM. *Rutgers Univ., Rutgers Robert Wood Johnson Med. Sch.*

8:00 A104 **663.29** AP2gamma regulates post-natal glutamatergic neurogenesis and modulates emotional and cognitive function. N. D. ALVES; A. MATEUS-PINHEIRO; P. PATRÍCIO; E. CAMPOS; A. R. MACHADO-SANTOS; J. SILVA; V. SARDINHA; J. OLIVEIRA; J. NINKOVIC; N. SOUSA; L. PINTO*. *Life and Hlth. Sci. Res. Inst. - Sch. of Hlth. Sci. - UM, ICVS/3B's – PT Government Associate Lab., Inst. for Stem Cell Research, Helmholtz Ctr. Munich German Res. Ctr. for Envrn. Hlth. (GmbH), Physiological Genomics, Med. Faculty, Univ. of Munich.*

9:00 A105 **663.30** Mbd1- knockout alters the progression of adult neurogenesis *in vivo.* E. JOBE*; Y. GAO; J. MLADUCKY; X. ZHAO. *Univ. of Wisconsin.*

POSTER

664. Postnatal Neurogenesis: Environmental and Pharmacologic Regulation

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 A106 **664.01** ▲ Neurodevelopmental effects of octopamine in isolation-induced social behaviors in Pheidole dentata. R. S. GORE*; M. A. SEID. *Univ. of Scranton.*

9:00 A107 **664.02** Global and site-specific epigenetic impact of alcohol on the developing brain and partial protection by S-adenosylmethionine. M. RESENDIZ*; J. REITER; F. ZHOU. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

10:00 A108 **664.03** Role of adenosine A2A receptors on brain-derived neurotrophic factor (BDNF)-induced neurogenesis in the subventricular zone of Sprague-Dawley rats. S. XAPELLI*; F. FERREIRA; D. M. PEDRO; M. DUARTE-SAMARTINHO; F. F. RIBEIRO; A. M. SEBASTIÃO. *Inst. De Medicina Mol., Inst. de Farmacologia e Neurociências, Faculdade de Medicina da Univ. de Lisboa.*

11:00 B1 **664.04** Both inherent and acquired aerobic capacity protect against a chemotherapy-induced decline in cardiorespiratory and hippocampal fitness. C. M. TOGNONI*; N. S. NATH; S. M. LOOMIS; R. M. PEACE; E. A. BABB; E. F. O'STEEN; L. G. KOCH; S. L. BRITTON; L. W. JONES; C. L. WILLIAMS. *Duke Univ., Duke Univ. Med. Ctr., Univ. of North Carolina at Chapel Hill, Greenville Hlth. Syst., Univ. of Michigan, Mem. Sloan-Kettering Cancer Ctr.*

8:00 B2 **664.05** Maternal ingestion of artificial sweeteners and it's effect on the developing cerebellum. Z. M. BAUCHI*; R. A. KAREEM; A. ALHASSAN. *Ahmadu Bello Univ.*

9:00 B3 **664.06** Withdrawn.

10:00 B4 **664.07** An investigation of the early cellular responses associated with an ischemic event: Cortical and hippocampal profile of cellular markers EGFR, CD133, NeuN and Nestin. G. WEMHOFF*; R. SWEAZEY; B. HONG-GOKA; S. TOPALOV; F. CHANG. *Indiana Med. Sch.*

11:00 B5 **664.08** ● Periodic Fasting Mimicking Diet reverses age-dependent decline in neurogenesis and enhance cognitive performance. I. CHOI*; P. CHILDRESS; G. NAVARRE; S. BRANDHORST; V. LONGO. *USC.*

8:00 B6 **664.09** The effects of synaptic zinc, fluoxetine and stress on adult hippocampal neurogenesis. J. M. BOON*; M. J. CHRUSCH; R. H. DYCK. *Univ. of Calgary, Univ. of Calgary.*

9:00 B7 **664.10** Long-term impact of neonatal ethanol exposure on hippocampal adult neurogenesis, BDNF expression, and bdnf DNA methylation in rats. K. E. BOSCHEN*; K. J. CRISS; T. L. ROTH; A. Y. KLINTSOVA. *Univ. of Delaware, Univ. of Delaware.*

10:00 B8 **664.11** Voluntary exercise mediated enhanced neurogenesis does not impair the recall of retrograde memory. A. K. SHETTY*; M. KODALI; T. MEGAHED; V. MISHRA; B. SHUAI; X. RAO; B. HATTIANGADY. *Inst. for Regenerative Med, TAMHSC Col. of Med., Olin E. Teague Veterans' Med. Center, Central Texas Veterans Hlth. Care Syst.*

11:00 B9 **664.12** Curcumin improves memory and mood with enhanced neurogenesis and alleviation of inflammation and oxidative stress in a model of gulf war illness. M. KODALI*; B. HATTIANGADY; G. SHETTY; B. SHUAI; X. RAO; A. K. SHETTY. *Inst. for Regenerative Med, TAMHSC Col. of Med., Olin E. Teague Veterans' Med. Center, Central Texas Veterans Hlth. Care Syst.*

8:00 B10 **664.13** The 5-HT3 receptor is essential for exercise-induced hippocampal neurogenesis and antidepressant effects. M. KONDO; Y. NAKAMURA; Y. ISHIDA; S. SHIMADA*. *Grad. Sch. of Medicine, Osaka Univ.*

9:00 B11 **664.14** Vitamin C deficiency disrupts normal cellular composition within the subventricular zone neurogenic niche. N. A. JARA*; M. CIFUENTES; F. MARTÍNEZ; K. SALAZAR; F. NUALART. *Univ. De Concepción, Univ. de Málaga.*

10:00 B12 **664.15** Retinoids attenuate neonatal hyperoxia-induced neurodevelopmental impairment in mice. M. RAMANI*; N. AMBALAVANAN; T. VAN GROEN; I. KADISHA. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B13 **664.16** Effects of perinatal exposure to PCBs on thyroid hormones, spinogenesis and neurogenesis in mice dentate gyrus. A. PINSON*; A. S. PARENT; N. WOODS; C. CHRISTINA; A. BENSEN; A. GERARD; E. NAVEAU; J. P. THOME; J. P. BOURGUIGNON; G. L. WESTBROOK. *Univ. of Liege, Giga Neurosciences, Vollum Institute, Oregon Hlth. and Sci. Univ., Lab. of Animal Ecology and Ecotoxicology (LEAE, CART), Univ. of Liège.*

8:00 B14 **664.17** 12-deoxyphorbols isolated from Euphorbia resinifera promote neural stem cell proliferation and adult neurogenesis via PKC activation. N. GERIBALDI-DOLDÁN; E. FLORES-GIUBI; M. MURILLO-CARRETERO; F. GARCÍA-BERNAL; M. CARRASCO; A. J. MACÍAS-SÁNCHEZ; J. DOMÍNGUEZ-RISCART; C. VERÁSTEGUI; R. HERNÁNDEZ-GALÁN; C. CASTRO*. *Univ. de Cádiz, Univ. de Cádiz.*

9:00 B15 **664.18** ▲ Social isolation, ethanol, and golgi in planarians. B. LOVELL; T. MCCHARLES; N. LANDRY; A. D. STILLAR*; A. WEEKS; M. SAARI. *Nipissing Univ.*

10:00 B16 **664.19** Early alterations in the mouse brain following an exposure to shock waves of a single blast. D. UPADHYA*; A. B. ROBBINS; B. HATTIANGADY; M. KODALI; B. SHUAI; G. A. SHETTY; M. MORENO; A. K. SHETTY. *Insti. Regenerative Med, TAMHSC Col. of Med., Olin E. Teague Veterans' Med. Center, Central Texas Veterans Hlth. Care Syst., Texas A&M Univ.*

11:00 B17 **664.20** Methamphetamine promotes neuronal differentiation and strengthens long-term potentiation of immature dentate granule neurons. S. BAPTISTA*; F. BORGES; N. MILHAZES; A. SILVA; A. BACCI. *Lab. of Pharmacol. and Exptl. Therapeutics, IBILI, Fuculty of Medi, 3CIQUP/Department of chemistry and Biochem., Lab. of Pharmacol. and Exptl. Therapeutics, IBILI, Fuculty of Medicine, Univ. of Coimbra, Sorbonne Universite´s UPMC Univ. Paris 06, UMR S 1127, Paris, France, 7Inserm U 1127, Paris, France, 8CNRS UMR 7225.*

8:00 B18 **664.21** Calorie restriction protects against age-related dysregulation of neural stem cells in the murine subventricular zone. D. M. APPLE*; R. SOLANO FONSECA; M. C. TEXIERA DOS SANTOS; S. MAHESULA; C. ZHU; E. KOKOVAY. *Univ. of Texas Hlth. Sci. Ctr. San Antonio, Univ. of Texas Hlth. Sci. Ctr. San Antonio.*

9:00 B19 **664.22** Subventricular zone NSC grafting into the hippocampus after status epilepticus modifies disease by curtailing epileptogenesis and inflammation. G. ZANIRATI*; B. HATTIANGADY; B. SHUAI; J. BLAIR; A. K. SHETTY. *Texas A&M Hlth. Sci. Ctr. Col. of Med., Inst. for Regenerative Med., Olin E. Teague Veterans' Med. Center, Central Texas Veterans Hlth. Care Syst.*

10:00 B20 **664.23** ▲ The effects of caloric restriction on neurogenesis. A. CARBAJAL*; M. Y. CALAMUCHA; M. FUSE; C. MOFFATT; C. DULDULAU. *San Francisco State Univ., San Francisco State Univ.*

11:00 B21 **664.24** Chronic intermittent hypoxia suppresses adult neurogenesis and disrupts synaptic plasticity in the dentate gyrus of the hippocampus. M. A. KHUU*; C. M. PAGAN; M. LESLIE; J. M. RAMIREZ; A. J. GARCIA, III. *Seattle Childrens Res. Inst., Univ. of Washington, Univ. of Washington.*

8:00 B22 **664.25** Low-level manganese and nanosilver alter adult neural stem cell morphology and gene expression during differentiation. R. J. COOPER; A. PARSONS-WHITE; A. RAMIREZ; N. SPITZER*. *Marshall Univ. - Biol. Sci.*

9:00 B23 **664.26** Galactic cosmic radiation (28Si) reduces dentate gyrus neurogenesis in the long-term in a dose-dependent manner. A. K. WALKER*; C. W. WHOOLERY; D. R. RICHARDSON; R. P. REYNOLDS; P. D. RIVERA; H. SHIH; R. L. REDFIELD; M. J. LUCERO; D. H. BEDDOW; S. MUKHERJEE; B. P. C. CHEN; A. J. EISCH. *Univ. of Texas Southwestern, Univ. of Texas Southwestern.*

10:00 B24 **664.27** Effects of castration on adult hippocampal neurogenesis. K. ATKINSON*; T. ALKAM; S. DIAZ; A. ROBBINS; R. N. PECHNICK. *Western Univ. of Hlth. Sci., California State Polytechnic Univ., Pitzer Col.*

11:00 B25 **664.28** Effects of prenatal and/or adolescent exposure to nicotine on hippocampal neurogenesis in adult rats. T. ALKAM*; S. O'DONNELL; R. N. PECHNICK. *Western Univ. of Hlth. Sci.*

8:00 B26 **664.29** Role of systemic and local insulin-like growth factor-I in the regulation of the sequential stages of postnatal/adult hippocampal neurogenesis. C. VICARIO-ABEJON*; V. NIETO-ESTEVEZ; C. O. OUESLATI-MORALES; J. PICKEL. *Cajal Institute, CSIC, NIMH, Natl. Inst. of Hlth. (NIH).*

POSTER

665. Induced Pluripotent Stem Cells: Neural Differentiation

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 B27 **665.01** ● Characterization of NMDA receptors in human induced pluripotent stem cell-derived neurons. H. FUKUI; H. VON DER KAMMER*; I. NEAGOE; A. STUMPF; Y. LU; D. HE; R. FRANCIS; J. CHEN; P. REYNEN; M. ALAOUI-ISMAILI. *Evotec AG, Goethe Univ., Genentech.*

9:00 B28 **665.02** Topographical influence on differentiation of pluripotent stem cells into regionalized dopaminergic neurons. K. K. TAN*; W. LIM; C. CHAI; K. LIM; E. L. K. GOH; E. K. F. YIM. *Mechanobiology Inst., Duke-NUS Grad. Med. Sch. Singapore.*

10:00 B29 **665.03** Influence of carbonyl stress on neural cells derived from induced pluripotent stem cell. Y. HORIUCHI*; N. OBATA; I. NOHARA; A. KOBORI; K. TORIUMI; M. ITOKAWA; M. ARAI. *Tokyo Metropolitan Inst. of Med. Sci.*

11:00 B30 **665.04** Generating functional cortical neurons and astrocytes from human pluripotent stem cells in 3D cultures. S. A. SLOAN*; A. M. PASCA; L. E. CLARKE; Y. TIAN; C. D. MAKINSON; N. HUBER; J. PARK; C. KIM; N. O'ROURKE; K. D. NGUYEN; S. J. SMITH; J. R. HUGUENARD; D. H. GESCHWIND; B. A. BARRES; S. P. PASCA. *Stanford Univ., UCLA, Yonsei Univ. Col. of Med., Allen Inst. for Brain Sci.*

8:00 B31 **665.05** Induction of neural stem cell migration through transposon-mediated reprogramming. F. SIDDIQI*; A. L. TRAKIMAS; R. RISBUD; E. D. MARSH; J. H. WOLFE. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia.*

9:00 B32 **665.06** ● Differentiation of midbrain floor plate progenitors and dopaminergic neurons from human pluripotent stem cells. S. SHIN*; M. DERR; Y. YAN; L. SANGENARIO; K. VEDVIK; A. HANNAY; D. KUNINGER. *Thermo Fisher Scientific.*

10:00 B33 **665.07** Human iPSC-derived neurons: Ideal for electrophysiological and toxicological assays. B. MURPHY*; G. LUERMAN; A. EHLICH; T. PALM; A. DUENBOSTELL; R. KETTENHOFEN; A. NICOLINI; B. BADER; A. PIELKA; C. EHNERT; A. VOSS; O. SCHRÖDER; H. BOHLEN. *Axiogenesis Inc, Axiogenesis AG, Axion Biosystems, NeuroProof GmbH.*

11:00 B34 **665.08** ▲ Selective stimulation of AT2 angiotensin II receptor subtype increases neural stem cell proliferation. B. BLANCO; L. COULING; P. PATEL; S. KAMISETTY; M. TRIVEDI; J. MUNOZ; R. C. SPETH*. *Pine Crest Sch., Nova Southeastern Univ., Nova Southeastern Univ., Nova Southeastern Univ., Georgetown Univ.*

8:00 B35 **665.09** Cell type and species specific toxicity screen of human neural stem cells and rat cortical neurons. J. P. STEINER*; A. G. EFTHYMIOU; K. MATHER; N. CHESTER; X. WANG; M. RAO; N. MALIK; A. NATH. *Natl. Inst. of Health/NINDS, Natl. Inst. of Arthritis and Musculoskeletal and Skin Dis.*

9:00 B36 **665.10** Exploring the role of estrogen in early corticogenesis using human induced pluripotent stem cells. C. SHUM*; S. MACEDO; K. WARRE-CORNISH; D. P. SRIVASTAVA. *King's Col. London, King's Col. London.*

10:00 B37 **665.11** Skip (stemcell knowledge and information portal). One stop database for researchers, commercial entities and citizens. T. KONDO*; S. KAWASE; J. TSUYAMA; T. SHIMURA; K. FUJIMORI; S. SUZUKI; S. ITO; M. TSUJIMOTO; K. KOSAKI; T. MASUI. *Dept. of Physiol. Keio University, Sch. of Med., Human Stem Cells Informatization Project of the Ministry of Hlth.*

11:00 B38 **665.12** Long-term electrophysiological activities and drug responses in cultured human iPSC derived neurons. A. ODAWARA*; Y. SHI; H. JIKO; I. SUZUKI. *Tohoku Inst. of Technol., Axol Biosci. Ltd, Alpha MED Scientific Inc.*

8:00 B39 **665.13** Development and integration of engrafted induced pluripotent stem cells-derived 3-dimensional cerebral organoids. N. DAVIAUD*; H. ZOU. *Mount Sinai Sch. of Medecine.*

9:00 B40 **665.14** Probing network dynamics in an *in vitro* model of human cortex development. M. PETER*; P. KIRWAN; F. J. LIVESEY. *Gurdon Inst.*

10:00 B41 **665.15** Common marmoset ipsc-derived midbrain floorplate neuroprogenitors. S. C. VERMILYEA*; S. GUTHRIE; M. MEYER; K. BRAUN; K. SMUGA-OTTO; S. HOWDEN; J. A. THOMSON; S. ZHANG; T. G. GOLOS; M. E. EMBORG. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Morgridge Inst. for Res., Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

11:00 B42 **665.16** Using neural stem cells to evaluate the potential developmental neurotoxic effects of silver nanoparticles. F. LIU*; M. MAHMOOD; Y. XU; F. WATANABE; A. S. BIRIS; D. K. HANSEN; A. INSELMAN; D. CASCIANO; T. A. PATTERSON; M. G. PAULE; W. SLIKKER, Jr.; C. WANG. *Natl. Ctr. For Toxicological Research/FDA, Univ. of Arkansas at Little Rock.*

8:00 B43 **665.17** Positive biocompatibility of several graphene derivatives with dopaminergic cells at long term culture. N. RODRIGUEZ-LOSADA; R. WENDELBO; E. ARENAS; J. A. AGUIRRE*. *Dept. of Physiology. Fac. of Med., Abalonyx AS, Karolinska Institutet.*

9:00 B44 **665.18** Small molecule approach to direct differentiation of human induced pluripotent stem cells to sensory neurons. D. K. SHUM*; S. CAI; L. HAN; Y. S. CHAN. *Dept. of Biochem., Fac Med, The Univ. of Hong Kong, Dept. of Physiol., Fac Med, The Univ. of Hong Kong.*

10:00 B45 **665.19** Pre-clinical *in vitro* and *in vivo* characterization of xeno-free and foot-print-free iPSC-derived cell preparations for Parkinson's disease cell therapy. T. M. OSBORN*; P. J. HALLETT; M. MOORE; A. CASLER; D. DINESH; C. SKORIK; J. A. KORECKA; A. ASTRADSSON; J. SCHUMACHER; R. SPEALMAN; T. M. SCHLAEGER; O. ISACSON. *McLean Hospital/Harvard Med. Sch., Boston Children's Hosp.*

11:00 B46 **665.20** HESX1 regulates neural induction from human embryonic stem cells. C. T. HUANG*; J. LU; L. FOWLER; Y. CHEN; J. CAO; S. ZHANG. *Waisman Center/University of Wiscosin, Madison, Univ. of Wiscosin, Madison,, Univ. of Wiscosin, Madison.*

8:00 B47 **665.21** Functional properties of cortical neurons derived from human induced pluripotent stem cells maintained in a single-cell and feeder-free culture. T. ARAKI*; T. ONO; K. TESHIMA; T. SHIRAKAWA; H. AOYAMA; Y. KATO; T. YAMASHITA; A. DOI; S. KOBAYASHI; Y. SUZUKI; N. SATO; Y. KOGUCHI; M. SAKURAI. *Mitsubishi Tanabe Pharma Corp., Mitsubishi Tanabe Pharma Corp., Mitsubishi Tanabe Pharma Corp.*

9:00 B48 **665.22** Expression of neurogranin during differentiation of hiPS cells to cortical neurons. F. H. NAZIR*; L. AGHOLME; K. HUANG; E. PORTELIUS; H. KVARTSBERG; H. WELLINGTON; K. BLENNOW; H. ZETTERBERG; P. BERGSTRÖM. *Instit of Neurosci and Physiol, Univ. of Gothenburg, Program of Developmental Neurobiology, NICHD, NIH, Clin. Neurochemistry Laboratory, Inst. of Neurosci. and Physiology, Univ. of Gothenburg, UCL Inst. of Neurol.*

10:00 B49 **665.23** Treatment with gamma–secretase inhibitor for neural stem/progenitor cells derived from tumorigenic human induced pluripotent stem cells. T. OKUBO*; A. IWANAMI; J. KOHYAMA; G. ITAKURA; M. MASTUMOTO; M. NAKAMURA; H. OKANO. *Keio Univ. Sch. of Med., Keio Univ. Sch. of Med., Keio Univ. Sch. of Med.*

11:00 B50 **665.24** ▲ Study on the cell transplantation and differeniation of retinal progenitor derived from human embroynic stem cells. S. WANG*; X. WANG; K. XIONG; D. GU; G. ZHOU. *Fudan Univ.*

8:00 B51 **665.25** Reproducible generation of functionally active networks of GABAergic and glutamatergic neurons through directed differentiation of human iPSCs. Y. XIE*; R. J. SCHUTTE; N. N. NG; A. T. PHAM; S. S. SCHUTTE; M. G. BANUELOS; A. E. STOVER; K. ESS; A. L. GEORGE, Jr.; M. A. SMITH; P. H. SCHWARTZ; D. K. O'DOWD. *Univ. of California, Irvine, Children's Hosp. of Orange County, Vanderbilt Univ., Northwestern Univ.*

9:00 B52 **665.26** *In vitro* modeling of early retinogenesis with human pluripotent stem cells. A. SRIDHAR*; S. K. OHLEMACHER; J. S. MEYER. *Indiana University-Purdue Univ. Indianapolis, Indiana Univ.*

10:00 B53 **665.27** Self-organization of polarized cerebellar tissue in 3D culture of human pluripotent stem cells. K. MUGURUMA*; H. KAWAKAMI; K. HASHIMOTO; Y. SASAI. *Cell Asymmetry RIKEN CDB, Hiroshima Univ., RIKEN CDB.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B54 **665.28** Improved differentiation of mouse embryonic stem cells into Purkinje Neurons. C. J. ALEXANDER*; J. A. HAMMER, III. *NHLBI, NIH.*

8:00 B55 **665.29** ● Molecular characterization of human stem cells differentiated into transplantable retinal sheets via 3d neurosphere retinogenesis. B. T. MCLELLAND; A. MATHUR; C. TSE; T. ESTRADA-HERNANDEZ; S. KAYSER; G. MISTOR; H. S. KEIRSTEAD; M. J. SEILER*. *UC Irvine, Sch. of Med., California Stem Cell, Inc. (since acquired by Neostem, Inc.).*

9:00 B56 **665.30** Visualization of photoreceptors derived from human iPSC by using CRISPR/Cas9 system. K. HOMMA*; M. KANEDA. *Nippon Med. Sch.*

POSTER

666. Synapse Refinement

Theme A: Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 B57 **666.01** Skilled grasping requires non-apoptotic Bax/Bak-mediated corticospinal circuit refinement. Z. GU*; N. SARRAD; M. L. BACCEI; J. LI; M. UENO; M. LIANG; J. H. MARTIN; Y. YOSHIDA. *Cincinnati Children's Hosp. Med. Ctr., City Col. of the City Univ. of New York, Univ. of Cincinnati Med. Ctr.*

9:00 B58 **666.02** Activity-dependent synapse refinement requires the cytoskeleton regulator CRMP. S. CASPER*; T. HERMAN. *Univ. of Oregon.*

10:00 B59 **666.03** KCC2-mediated Cl- extrusion prevents propofol-induced dendritic spine loss. M. PUSKARJOV*; H. FIUMELLI; A. BRINER; T. BODOGAN; K. DEMETER; C. LACOH; K. KAILA; L. VUTSKITS. *Univ. of Helsinki, King Abdullah Univ. of Sci. and Technol., Univ. of Geneva Med. Sch., Univ. Hosp. of Geneva, Inst. of Exptl. Med. of the Hungarian Acad. of Sci.*

11:00 B60 **666.04** Astrocyte-derived ATP mediates synapse eliminaton in the thalamus. J. YANG*; H. YANG; D. ZHOU; X. LI; L. QIN; H. LOU; S. DUAN; H. WANG. *Dept. of Neurobio.*

8:00 B61 **666.05** Glial cells control synaptic plasticity of competing nerve terminals and alter synaptic connectivity at mammalian neuromuscular junctions. H. DARABID*; R. ROBITAILLE. *Univ. de Montreal, Groupe de recherche sur le systeme nerveux central, Univ. de Montreal.*

9:00 B62 **666.06** NMDA receptor signaling at the neuromuscular junction accelerates developmental synapse elimination. K. E. PERSONIUS*; S. B. UDIN. *Univ. at Buffalo, Univ. at Buffalo.*

10:00 B63 **666.07** Activity-dependent molecular mechanisms underlying synaptic refinement at the *Drosophila* NMJ. F. J. VONHOFF*; H. KESHISHIAN. *Yale Univ., Yale Univ.*

11:00 B64 **666.08** Target-dependent retrograde signaling mediates synaptic plasticity at the *Drosophila* neuromuscular junction. B. A. BERKE*; H. KESHISHIAN. *Yale Univ., Yale Univ.*

8:00 B65 **666.09** Quantifying synaptic reorganization in the developing cerebellum using serial section scanning electron microscopy data. A. M. WILSON*; R. SCHALEK; A. SUISSA-PELEG; T. R. JONES; S. KNOWLES-BARLEY; J. W. LICHTMAN. *Harvard Univ.*

9:00 B66 **666.10** Neuroligin-2 regulates postnatal development of climbing fiber-Purkinje cell synapses in the cerebellum. E. LAI*; N. UESAKA; M. KANO. *The Univ. of Tokyo.*

POSTER

667. Nicotinic Acetylcholine Receptors: Structure and Function

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 B67 **667.01** Cotinine, the major metabolite of nicotine, alters trafficking and assembly of nicotinic acetylcholine receptors. A. M. FOX*; F. H. MOONSCHI; C. I. RICHARDS. *Univ. of Kentucky.*

9:00 B68 **667.02** Nocturnal frontal lobe epilepsy-associated intracellular-loop mutant subunits alter single-channel properties of alpha4beta2-nicotinic receptor isoforms. M. M. WELTZIN*; A. A. GEORGE; R. J. LUKAS; P. WHITEAKER. *The Barrow Neurolog. Inst.*

10:00 B69 **667.03** Characterization of nicotinic acetylcholine receptors formed by gain of function α6 subunit. L. AZAM*; J. M. MCINTOSH. *Univ. of Utah, Univ. of Utah and George E. Wahlen Veterans Affair Med. Ctr.*

11:00 B70 **667.04** Modulation of nicotine reward-associated behaviors by mir-542-3p. A. CASSERLY*; L. LIU; R. ZHAO-SHEA; E. HOGAN; M. SCOFIELD; A. R. TAPPER; P. D. GARDNER. *Univ. of Massachusetts Med. Sch.*

8:00 B71 **667.05** Differential modulation of α3β4 and α3β4α5 nAChR isoforms by the endogenous neuromodulator lynx1. A. A. GEORGE*; B. EATON; R. J. LUKAS; P. WHITEAKER. *The Barrow Neurolog. Inst.*

9:00 B72 **667.06** Functional impact of 13 single nucleotide polymorphisms causing missense mutations of human α7 nicotinic receptor. Y. CHANG*; Q. ZHANG; Y. DU; Y. HUANG; R. J. LUKAS. *Barrow Neurolog. Inst., St. Joseph's Hosp. & Med. Ctr., St. Joseph's Hosp. & Med. Center/ Sichuan Univ., Univ. of California at Los Angeles, St. Joseph's Hosp. & Med. Ctr.*

10:00 B73 **667.07** The prototoxin LYPD6B modulates heteromeric alpha3 beta4 containing nicotinic acetylcholine receptors (nAChRs) but not alpha7 homomers. V. OCHOA*; P. WHITEAKER; A. A. GEORGE; R. NISHI. *Univ. Vermont, Barrow Neurolog. Inst.*

11:00 B74 **667.08** ● Chimeras of first transmembrane domain identify important residues for expressing extracellular domain α4β2 nicotinic acetylcholine receptors. G. B. WELLS*; A. M. GALVAN; A. M. PERSON. *Texas A&M Univ. Hlth. Sci. Ctr.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 B75 **667.09** Differential effects of varenicline and nicotine on endogenous α3β4* nicotinic acetylcholine receptors in human adrenal chromaffin cells. A. ALBILLOS*; L. RUEDA-RUZAFA; J. M. MCINTOSH; J. PASSAS; C. DE CASTRO-GUERIN; J. BLAZQUEZ; C. GONZALEZ-ENGUITA; A. J. HONE. *UNIVERSIDAD AUTONOMA DE MADRID, UNIVERSITY OF UTAH, HOSPITAL DOCE DE OCTUBRE, HOSPITAL LA PAZ, HOSPITAL CLINICO SAN CARLOS, FUNDACION JIMENEZ DIAZ.*

9:00 B76 **667.10** Exploiting ligand selectivity to understand allosteric receptor opening upon agonist binding. D. INDURTHI*; T. BALLE; P. AHRING; M. CHEBIB; N. ABSALOM. *Univ. of Sydney.*

10:00 B77 **667.11** Critical determinants of alpha7 nAChR allosteric activation and modulation: Pharmacological agents and structural epitopes that separate those activities. G. A. THAKUR*; R. PAPKE; A. KULKARNI; N. HORENSTEIN. *Northeastern Univ., Univ. of Florida, Univ. of Florida.*

11:00 B78 **667.12** ▲ Modulation of the alpha 7 nicotinic acetylcholine receptor by ibuprofen. J. C. RODRIGUEZ*; J. O. COLON-SAEZ; J. A. LASALDE DOMINICCI. *Univ. of Puerto Rico Rio Piedras Campus.*

8:00 B79 **667.13** Nicotinic acetylcholine receptor subtypes expressed in the rodent habenula. R. VENKATESH*; R. P. YASUDA; T. H. GUPTA-GOLDENBERG; B. B. WOLFE; K. J. KELLAR. *Georgetown Univ.*

9:00 B80 **667.14** The role of calcium and calcium-sensitive signaling pathways in nicotine-induced upregulation of alpha 7 receptors expressed in xenopus oocytes. K. DEBOEUF*; M. ISLAM; J. PANCHAL; J. ROSE; J. FARLEY. *Indiana Univ., Indiana Univ., Indiana Univ., Duke Univ. Med. Ctr.*

10:00 B81 **667.15** 3-(2-chlorophenyl)-5-(5-methyl-1-(piperidin-4-yl)-1H-pyrrazol-4-yl)isoxazole is a selective positive allosteric modulator of low-sensitivity (α4)3(β2)2 nicotinic acetylcholine receptor. A. K. HAMOUDA*; Z. WANG; T. S. MOHAMED; A. B. ALASKARI. *Texas A&M Hlth. Sci. Ctr., Texas A&M Hlth. Sci. Ctr.*

11:00 B82 **667.16** Expression and purification of the intracellular domain of an anionic pentameric ligand-gated ion channel. A. PANDHARE; M. JANSEN*. *TTUHSC.*

8:00 B83 **667.17** Species difference pharmacology of native α3β4* nicotinic acetylcholine receptors in rat, cow, and human adrenal chromaffin cells. L. RUEDA*; A. J.HONE; J. MCINTOSH; J. PASSAS; A. ALBILLOS. *Univ. Autónoma De Madrid, Univ. Autónoma de Madrid, Univ. of Utah, Hosp. 12 de Octubre.*

9:00 B84 **667.18** The β2/β2 interface of the (α4β2)2β2 nicotinic acetylcholine receptor does not bind competitive ligands. K. NEW; I. BERMUDEZ*; S. MAZZAFERRO. *Oxford Brookes Univ.*

10:00 B85 **667.19** ACR-16 nAChRs are actively transported to synapses by a CDC-42 dependent pathway. A. J. KALLARACKAL*; J. MELLEM; D. MADSEN; A. MARICQ. *Univ. of Utah.*

11:00 B86 **667.20** Nicotine induced upregulation of alpha 7 nicotinic acetylcholine receptor expressed in xenopus oocytes: Key factors and determinants of upregulation. M. ISLAM*; K. DEBOEUF; P. B. SCHWARTZ; T. MURUGESAN; J. ROSE; J. FARLEY. *Indiana Univ. Bloomington, Indiana Univ. Bloomington, Duke Univ. Med. Ctr.*

POSTER

668. Nicotinic Acetylcholine Receptors: Structure and Pharmacology

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 B87 **668.01** Antiallodynic effects of substituted N-aryl piperidinium salts: Alpha7 nAChR silent agonists. N. HORENSTEIN; D. BAGDAS; M. QUADRI; M. DAMAJ*; R. L. PAPKE. *Univ. of Florida, Virginia Commonwealth Univ., Univ. of Florida.*

9:00 B88 **668.02** Synthesis and structure activity relationships for α7 nAChR silent agonism in N-phenylpiperazinium salts. N. HORENSTEIN*; M. QUADRI; C. STOKES; R. PAPKE. *Univ. Florida, Univ. of Florida, Univ. of Florida.*

10:00 B89 **668.03** Insights into an emerging class of α7 nAChR silent agonists and NF-κB signaling mechanisms in immune cells. T. M. GOULD*; M. QUADRI; N. A. HORENSTEIN; R. L. PAPKE. *Univ. of Florida, Univ. of Florida.*

11:00 B90 **668.04** Chimeric acetylcholine binding protein for structure-guided insecticide design. J. BOBANGO*; T. T. TALLEY. *Idaho State Univ.*

8:00 B91 **668.05** Structure-activity guided design and analysis of arylidene anabaseines and myosmines reveal two distinct binding modes with the acetylcholine binding protein. T. T. DENTON*; T. T. TALLEY; J. BOBANGO. *Washington State Univ. Col. of Pharm., Idaho State Univ. Col. of Pharm.*

9:00 B92 **668.06** A survey of high resolution acetylcholine binding protein X-ray structures reveals details of tertiary and quaternary movements of the protein, both real and imagined, upon ligand binding. T. T. TALLEY*; T. T. DENTON; J. BOBANGO. *Idaho State Univ. Col. of Pharm., Washington State Univ.*

10:00 B93 **668.07** ● Walking in the chemical space identifies a novel cognitive enhancer acting at the α7 nAChRs. D. C. BERTRAND*; J. REYMOND; S. BERTRAND; T. SCHAER; F. MARGER; J. BÜRGI; P. M. CALLAHAN; A. TERRY. *Hiqscreen, Dept. of Chem. and Biochem., Dept. of Pharmacol. & Toxicology.*

11:00 B94 **668.08** Novel alpha 7 nicotinic acetylcholine receptor (nAChR) modulator, HiQ0013 exhibits pro-cognitive effects in young and aged animal models. A. V. TERRY*, JR; P. CALLAHAN; C. HERNANDEZ; M. PLAGENHOEF; J. REYMOND; S. BERTRAND; J. BURGI; D. BERTRAND. *Georgia Regents Univ., Univ. of Berne, HiQScreen Sàrl.*

8:00 B95 **668.09** ● Beta-amyloid and Lypd6 compete for binding to nicotinic acetylcholine receptors in human brain extracts. M. ARVANITI*; J. D. MIKKELSEN; M. S. THOMSEN. *Univ. of Copenhagen, Copenhagen Univ. Hosp. Rigshospitalet.*

9:00 B96 **668.10** ● Unravelling the alpha7 nicotinic acetylcholine receptor complex using affinity purification. M. S. THOMSEN*; E. N. LYUKMANOVA; M. A. SHULEPKO; J. D. MIKKELSEN. *Dept. of Drug Design and Pharmacology, Univer, Copenhagen Univ. Hosp., Russian Acad. of Sci., Lomonosov Moscow State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

669. Ligand Gated Ion Channels: Glycine and 5-Hydroxytryptamine Receptors

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 B97 **669.01** Direct actions of glycine on neurons of the mesencephalic trigeminal nucleus of the rat. V. SILVEIRA; F. R. MORALES; I. POSE*. *Facultad De Medicina.*

9:00 B98 **669.02** ● Pathogenic mechanisms of glycine receptor antibodies in human disease. S. J. CRISP*; A. VINCENT; D. M. KULLMANN. *Inst. of Neurology, Univ. Col. London, Univ. of Oxford.*

10:00 B99 **669.03** Functional ion channel properties are altered by a single amino acid exchange in the human glycine receptor α1. G. LANGLHOFER; P. BAUMANN; C. VILLMANN*. *Univ. Wuerzburg.*

11:00 B100 **669.04** Expression and subcellular localization of glycine receptor subunits and synaptic glycine transporter 2 in the nucleus accumbens of C57/BL6 mice. B. FÖRSTERA*; B. MUNOZ; K. STANIC; P. MURATH; L. G. AGUAYO. *Univ. de Concepcion, Univ. de Concepcion.*

8:00 B101 **669.05** ● Agonist and antagonist monoclonal antibodies with selectivity for ligand-gated glycine receptor isoforms. J. SIMARD; K. MICHELSEN; B. GRUBINSKA; Y. WANG; B. HALL; P. SHAFFER; J. GINGRAS*. *Amgen Inc., Amgen Inc.*

9:00 B102 **669.06** Molecular mechanisms for zinc-induced allosteric potentiation of GlyR α1 receptors. C. WANG; N. ZHOU; D. WU*. *Grad. Inst. of Clin. Med. Science, China Med. Univ., China Med. University, Grad. Inst. of Clin. Med. Science.*

10:00 B103 **669.07** Functional reconstitution of glycinergic synapses incorporating defined glycine receptor subunit combinations. Y. ZHANG*; C. L. DIXON; A. KERAMIDAS; J. W. LYNCH. *Queensland Brain Inst.*

11:00 B104 **669.08** New excitatory and inhibitory pharmacogenetic receptors based on the ivermectin-activated glycine receptor. J. W. LYNCH*; R. ISLAM. *Univ. of Queensland, Univ. of Queensland.*

8:00 B105 **669.09** Interaction of quinazolines with the E binding loop of the serotonin-type 3A (5-HT3A) receptor determined using double mutant cycling. S. N. KHATRI*; O. ALWASSIL; D. PHILIP; M. DUKAT; M. SCHULTE. *Univ. of Sci., Philadelphia Col. of Pharmacy, Univ. of Sci., Sch. of Pharmacy, Virginia Commonwealth Univ.*

9:00 B106 **669.10** Effects of chronic caffeine exposure on rat brain serotonergic systems. P. WILLIAMS*. *Univ. of Colorado Boulder.*

POSTER

670. GABAergic Synapses

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 B107 **670.01** Oxytocin receptor activation depolarizes spiny hilar interneurons and induces GABA release in the dentate gyrus of the rat hippocampus. S. W. HARDEN*; C. J. FRAZIER. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 B108 **670.02** Anatomical and functional expression of channelrhodopsin-2 (ChR2) in the basal forebrain and thalamus of the Vglut2-ChR2-eYFP BAC optogenetic mouse. D. W. DUBOIS*; D. A. MURCHISON; K. S. MONTGOMERY; A. S. FINCHER; A. H. MAHNKE; W. H. GRIFFITH. *Texas A&M Univ. Hlth. Sci. Ctr.*

10:00 B109 **670.03** Brain-derived estradiol controls hunger state-dependent plasticity of GABA synapses. J. GARDNER GREGORY*; E. R. HAWKEN; S. ANGELIS; E. C. DUMONT. *Queens Univ.*

11:00 B110 **670.04** Impaired gaba plasticity at ovbnst synapses predicts compulsive drinking in cfr-induced schedule-induced polydipsia. S. ANGELIS*; J. GARDNER GREGORY; E. R. HAWKEN; M. H. NAUGHTON; C. P. NORMANDEAU; E. C. DUMONT. *Queens Univ.*

8:00 B111 **670.05** Cell type differences in light-evoked GABAergic synaptic transmission in basal forebrain neurons from VGAT-ChR2-eYFP optogenetic mice. K. S. MONTGOMERY*; D. W. DUBOIS; D. A. MURCHISON; A. S. FINCHER; A. H. MAHNKE; U. H. WINZER-SERHAN; U. H. WINZER-SERHAN; W. H. GRIFFITH. *Texas A&M Hlth. Sci. Ctr., Texas A&M Hlth. Sci. Ctr.*

9:00 B112 **670.06** Insulin modulates GABAA-mediated tonic currents in the prefrontal cortex. S. L. HERNANDEZ*; S. TRUJEQUE-RAMOS; S. MIHAILESCU. *Facultad de Med., Facultad de Med.*

10:00 C1 **670.07** Inhibitory co-transmission with glutamate in hippocampal primary neurons. C. A. BURLESON*; H. SHU; S. MENNERICK. *Washington Univ. in St. Louis.*

11:00 C2 **670.08** ▲ Nicotine reduces inhibitory synaptic currents in mouse layer 5 prefrontal cortex. R. D. CUEVAS OLGUIN*; E. ESQUIVEL-RENDÓN; O. IBAÑEZ-SANDOVAL; H. ARIAS; M. ATZORI. *UASLP, Univ. Autonoma de San Luis Potosi, Univ. Autonoma de San Luis Potosi, California Northstate Univ. Col. of Med.*

8:00 C3 **670.09** Changes in inhibitory synaptic transmission in glutaric acidemia type I. M. E. CALCAGNOTTO*; L. MEIER; M. VENDRAMIN PASQUETTI; B. JUNGES; M. GANZELLA; S. LOUREIRO; A. UMPIERREZ AMARAL; D. M. KOELLER; S. I. GOODMAN; M. WOONTNER; M. WAJNER; D. GOMES DE SOUZA. *UFRGS, Oregon Hlth. and Sci. Univ., Univ. of Colorado Denver.*

9:00 C4 **670.10** 5-HT6 receptor ligands modulate seizure thresholds and inhibitory synaptic transmission in the dentate gyrus. G. J. REMIGIO*; G. W. SAUNDERS; P. J. WEST. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

10:00 C5 **670.11** Ultrastructure of basket cell-to-granule cell synapses in a rat model of temporal lobe epilepsy. P. BUCKMASTER*; K. THIND; R. YAMAWAKI. *Stanford Univ.*

Wed. AM

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 C6 **670.12** Oxytocinergic modulation and plasticity in cortical and subcortical circuits. J. SCHIAVO*; R. FROEMKE. *New York Univ.*

8:00 C7 **670.13** Developmental change in the modulation by oxytocin of synaptic transmission in rat spinal substantia gelatinosa neurons. C. JIANG*; T. FUJITA; L. ZHU; C. WANG; T. YU; R. HIRAO; E. KUMAMOTO. *Fac. Med. Saga Univ.*

POSTER

671. Long-Term Potentiation Signaling Mechanisms II

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 C8 **671.01** Regulation of Arc protein by SUMOylation during LTP in the adult dentate gyrus *in vivo.* S. S. PATIL*; R. R. NAIR; C. BRAMAHAM. *Inst. of biomedicine.*

9:00 C9 **671.02** A potential role for postsynaptic synaptotagmins in LTP. D. WU*; T. BACAJ; W. MORISHITA; D. GOSWAMI; R. MALENKA; T. SÜDHOF. *Stanford Univ.*

10:00 C10 **671.03** LPS-induced neuroinflammation alters synaptic plasticity at the mossy fiber - CA3 synapse. A. M. AVILA*; G. HERRERA-LOPEZ; C. TECUATL-TOLAMA; E. GALVAN. *Cinvestav.*

11:00 C11 **671.04** Roles of 5-HT3a receptors in hippocampal long-term synaptic plasticity and learning. Y. HUANG*; Y. YU; D. CAO; R. HAO; Y. QI; H. XU; X. LIU; N. LU. *Fudan Univ.*

8:00 C12 **671.05** Chronic nicotine reverses memory impairments and attenuates hippocampal-medial prefrontal cortex synaptic plasticity dysfunctions in the streptozotocin model of sporadic Alzheimer's disease. I. M. ESTEVES*; C. LOPES-AGUIAR; R. N. RUGGIERO; M. T. ROSSIGNOLI; L. KANDRATAVICIUS; R. N. ROMCY-PEREIRA; J. P. LEITE. *FMRP/USP Ribeirão Preto, FMRP/USP-University of São Paulo, Federal Univ. of Rio Grande do Norte (UFRN).*

9:00 C13 **671.06** The developmental onset age of hippocampal LTP in mice. G. CAO; K. M. HARRIS*. *Univ. of Texas.*

10:00 C14 **671.07** Metaplastic regulation of CA1 Schaffer collateral pathway plasticity by Hebbian mGluR1a-mediated plasticity at excitatory synapses onto somatostatin-expressing interneurons. O. C. VASUTA*; J. ARTINIAN; I. LAPLANTE; S. HEBERT-SEROPIAN; K. ELAYOUBI; J. LACAILLE. *Univ. De Montréal,, Univ. de Montréal.*

11:00 C15 **671.08** Contribution of M-currents to the effects of neurotrophins on long-term potentiation in sympathetic ganglion. F. R. CIFUENTES*; E. R. ARIAS; M. A. MORALES. *Inst. de Investigaciones Biomedicas, UNAM, Inst. de Investigaciones Biomedicas, UNAM.*

8:00 C16 **671.09** Functional requirement of hippocampal CaMKII in long-term potentiation. M. J. KOOL*; N. Z. BORGESIUS; M. R. HOJJATI; G. M. VAN WOERDEN; Y. ELGERSMA. *Erasmus MC.*

9:00 C17 **671.10** AMPA receptor dynamics and LTP regulated by a cyclin protein. E. CHO*; D. KIM; Y. HUR; D. J. WHITCOMB; P. REGAN; J. HONG; H. KIM; Y. SUH; K. CHO; M. PARK. *Korea Inst. of Sci. and Technol., Korea Univ. of Sci. and Technol., Univ. of Bristol, Univ. of Bristol, Seoul Natl. Univ. Col. of Med.*

10:00 C18 **671.11** Optical Imaging of miniature synaptic Ca^{2+}-transients to monitor synaptic potentiation. G. NADEAU*; T. WIESNER; M. LEMIEUX; P. DE KONINCK. *Inst. Universitaire En Santé Mentale Du Québec.*

11:00 C19 **671.12** TARP γ8 and GSG1L function in GluA1 and GluA4 subunit-specific synaptic delivery of AMPARs in classical conditioning. J. KEIFER*; N. K. TIWARI; Z. ZHENG. *Neurosci Grp, Univ. South Dakota Sch. Med.*

8:00 C20 **671.13** Metabolic processes driving long term potentiation. P. MIRANDA*; H. PARK; C. PEQUIGNOT; S. SACCHETTI; H. LI; K. ALAVIAN; H. IMAMURA; H. NOJI; J. SHEPHERD; A. CHAVES; R. S. ZUKIN; E. A. JONAS. *Yale Sch. of Med., Yale Univ., Imperial Col. London, Kyoto Univ., Univ. of Tokyo, Univ. of Utah, Albert Einstein Col. of Med.*

9:00 C21 **671.14** The epigenetic modulation of aberrant synaptic plasticity in Tuberous Sclerosis Complex. T. BASU*; K. J. O'RIORDAN; W. POTTER; N. KHAN; A. ROOPRA. *Univ. of Wisconsin-Madison.*

10:00 C22 **671.15** Modulation of synaptic plasticity and associativity in hippocampal CA2 pyramidal neurons by substance P. A. DASGUPTA*; M. HAKIM; S. SREEDHARAN. *NATIONAL UNIVERSITY OF SINGAPORE, Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

11:00 C23 **671.16** Long-term potentiation of excitatory synaptic transmission from ipsilateral pericentral canal to motoneurons of neonatal rat spinal cord slices. H. SONG; L. ZHANG; W. QIN; Y. SHI; M. WANG*. *Wannan Med. Col., Wannan Med. Col.*

8:00 C24 **671.17** ▲ Septal facilitation of normal and LTP electrophysiological responses in the rat perforant path. S. E. HAMILTON; N. A. UPRIGHT; M. K. MOSES-HAMPTON; J. J. RAMIREZ*. *Davidson Col.*

9:00 C25 **671.18** Running exercise mitigates the negative consequences of stress on hippocampal LTP. R. M. MILLER*; D. MARRIOT; J. TROTTER; R. DE ROQUE; D. LYMAN; T. HAMMOND; J. WELCH; A. FIELD; B. WALKER; N. CHRISTENSEN; D. HAYNIE; M. LEWIS; Z. BADURA; J. G. EDWARDS. *Brigham Young Univ.*

10:00 C26 **671.19** Exercise training prevents hypobaric hypoxia induced neurodegeneration and synaptic strength. V. JAIN*; S. B. SINGH; K. RAVI. *Defence Inst. of Physiol. and Allied Sci., Vallabhbhai Patel Chest Inst., Defence Inst. of Physiol. and Allied Sci.*

11:00 C27 **671.20** Exercise reverses deficits in hippocampal long term potentiation in mice selected for high voluntary wheel running. K. D. PARFITT*; A. R. K. AYABE; K. GUAN; Z. THOMPSON; T. GARLAND, Jr. *Dept of Neurosci., Pomona Col., UC Riverside.*

8:00 C28 **671.21** Neuroepigenetic blockade of HDAC3i reverses Alzheimer's pathology in murine hippocampus. K. MUTHUKUMARAPPAN*; T. BEHNISH; S. SAJIKUMAR. *Natl. Univ. of Singapore, Inst. of Brain Sci., Natl. Univ. of Singapore.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 C29 **671.22** Heterosynaptic LTP of NMDA receptor-mediated transmission in the dentate gyrus. A. RODENAS-RUANO*; P. E. CASTILLO. *Albert Einstein Col. Med.*

10:00 C30 **671.23** Characterization of *Aplysia* KIBRA, a conserved PKM stabilizing protein. L. FERGUSON*; S. CHEN; J. PARK; D. GLANZMAN; W. SOSSIN. *McGill Univ., Univ. of California.*

11:00 C31 **671.24** Hippocampal stratum oriens interneurons express endocannabinoid biosynthetic enzymes and undergo anandamide-dependent potentiation. L. N. FRIEND*; R. WILLIAMSON; C. MERRILL; S. NEWTON; M. CHRISTENSEN; J. EDWARDS. *Brigham Young Univ., BYU, UC Irvine.*

8:00 C32 **671.25** Excitatory and inhibitory plasticity at an associative hippocampal circuit. K. R. JENSEN*; P. E. CASTILLO. *Albert Einstein Col. of Med.*

9:00 C33 **671.26** Kainate receptor activation regulates KCC2 function. D. GARAND*; M. WOODIN. *Univ. of Toronto.*

POSTER

672. Modulation of Neuronal Firing Properties II

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 C34 **672.01** Ectopic activity of nociceptive sensory neurons in an animal model of cancer-induced pain. Y. ZHU*; E. SEIDLITZ; R. UNGARD; N. ZACAL; G. SINGH. *McMaster Univ., McMaster Univ.*

9:00 C35 **672.02** Alterations in neuronal function of central nucleus of amygdala in BK beta-1 or 4 knockout mice following chronic intermittent ethanol exposure. Q. LI*; C. CONTET; S. TREISTMAN; S. D. MOORE. *Duke Univ. Med. Ctr., Durham VA Med. Ctr., The Scripps Res. Inst., Inst. of Neurobio.*

10:00 C36 **672.03** Characterization of spines undergoing ryanodine receptor induced enhancement of activity related calcium transients. A. THEIS*; D. SCHMITZ; F. W. JOHENNING. *Charité - Universitätsmedizin Berlin, Bernstein Ctr. for Computat. Neurosci. Berlin, Cluster of Excellence "NeuroCure", DZNE-German Ctr. for Neurodegenerative Dis.*

11:00 C37 **672.04** HCN channels dysregulation leads to increased excitability of hippocampal neurons from PrP−/− mice. J. FAN*; P. STEMKOWSKI; S. A. G. BLACK; I. A. SOUZA; G. W. ZAMPONI. *Univ. of Calgary.*

8:00 C38 **672.05** ▲ Chronic toluene exposure alters the neural activity in medial prefrontal cortex of adolescents rats. M. ARMENTA-RESÉNDIZ*; S. L. CRUZ; E. J. GALVAN. *CINVESTAV Sede Sur.*

9:00 C39 **672.06** Clarithromycin increases neuronal excitability by reducing gaba-ergic signaling. E. K. BICHLER*; C. C. CRON; P. S. GARCÍA. *Atlanta VA Med. Ctr., Emory Univ.*

10:00 C40 **672.07** ATP depletion supresses action potential firing independently of synaptic transmission. S. J. LUCAS*; C. B. MICHEL; Y. SWEENEY; M. H. HENNIG; B. P. GRAHAM; I. D. FORSYTHE. *Univ. of Leicester, Univ. of Stirling, Univ. of Edinburgh.*

11:00 C41 **672.08** Neuropeptide Y modulates the spike discharge characteristics in mesencephalic trigeminal neurons. S. SEKI; S. TANAKA*; Y. ONO; T. TSUJI; M. KOGO. *Osaka University, Grad. Sch. of Dent.*

8:00 C42 **672.09** Spike amplification by the afterhyperpolarization; a possible mechanism of short term synaptic plasticity? N. KUCZEWSKI*; N. FOURCAUD-TROCMÉ; S. GARCIA; P. DUCHAMP-VIRET. *Ctr. de Récherche en Neurosci. de Lyon.*

9:00 C43 **672.10** Strongly enhanced activin signaling after electroconvulsive seizures impacts on granule cell excitability. F. ZHENG; A. S. LINK; C. ALZHEIMER*. *Univ. Erlangen-Nuremberg, Univ. Erlangen-Nuremberg.*

10:00 C44 **672.11** Measurement and simulation of temperature effects on axonal conduction, synaptic transmission and network activity - Implications for the evolution of hibernation. T. BULLMANN*; K. DELIGKARIS; A. HIERLEMANN; U. FREY. *RIKEN QBiC, ETH Zurich.*

11:00 C45 **672.12** Uncovering cellular properties from network dynamics. J. GJORGJIEVA*; G. DRION; E. MARDER. *Brandeis Univ.*

8:00 C46 **672.13** Contribution of different neuromodulators on persistent firing in hippocampal CA1 pyramidal cells. M. J. VALERO-ARACAMA*; M. M. SAUVAGE; M. YOSHIDA. *Ruhr Univ. Bochum.*

9:00 C47 **672.14** Intrinsic properties of mouse entorhinal cortex layer II/III interneurons and principal cells identify seven functional groups. M. FERRANTE*; B. TAHVILDARI; A. DUQUE; D. SALKOFF; E. W. ZAGHA; M. E. HASSELMO; D. A. MCCORMICK. *Boston Univ., Yale Sch. of Med., Boston Univ.*

10:00 C48 **672.15** Input/output properties of interneurons in the medial entorhinal cortex. J. J. MARTINEZ*; J. A. WHITE. *Univ. of Utah, Boston Univ.*

11:00 C49 **672.16** BK channel alternative splicing contributes to homeostatic adaptation of neuronal excitability. B. LI*; B. SUUTARI; R. W. TSIEN. *New York Univ. Med. Ctr.*

8:00 C50 **672.17** ● Pyramidal neuron heterogeneity in the monkey posterior parietal and dorsolateral prefrontal cortices. G. GONZALEZ-BURGOS*; T. MIYAMAE; D. ARION; D. A. LEWIS. *Univ. of Pittsburgh.*

9:00 C51 **672.18** ● β-arrestin signaling increases excitability of fast-spiking interneurons in the prefrontal cortex. S. GEE*; P. O'DONNELL. *Pfizer.*

10:00 C52 **672.19** ▲ Intrinsic plasticity during state-dependent calcium homeostasis in hippocampal model neurons. S. SRIKANTH*; R. NARAYANAN. *Indian Inst. of Science, Bangalore.*

11:00 C53 **672.20** The biphasic effect of L-lactate on hippocampal cells spike frequency. G. HERRERA-LOPEZ*; E. J. GALVAN. *CINVESTAV SUR.*

8:00 C54 **672.21** Unitary synaptic connections among substantia nigra pars reticulata neurons. M. H. HIGGS*; C. J. WILSON. *The Univ. of Texas at San Antonio.*

9:00 C55 **672.22** The mechanism for beta frequency membrane resonance and its effect on spiking in striatal LTS interneurons. S. C. SONG*; J. A. BEATTY; C. J. WILSON. *Univ. of Texas At San Antonio, Michigan State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C56 **672.23** Prolonged spinal networks activation induces adaptive alterations in spinal motoneuron intrinsic excitability. J. LOMBARDO*; M. HARRINGTON. *Delaware State Univ.*

11:00 C57 **672.24** Chemogenetic control of the activity of cholinergic interneurons in the striatum. S. CHOI*; Y. DING; E. V. MOSHAROV; U. KANG. *Columbia Univ., Columbia Univ.*

8:00 C58 **672.25** ▲ Inverse stochastic resonance in cerebellar Purkinje cells. A. BUCHIN*; S. RIEUBLAND; M. HAUSSER; A. ROTH; B. GUTKIN. *Ecole Normale Superieure, Peter the Great Saint-Petersburg Polytechnic Univ., Univ. Col. London, Higher Sch. of Econ.*

POSTER

673. Alzheimer's Disease: Animal Models

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 C59 **673.01** Memory, activity, olfaction, and sleep in a transgenic rat model of Alzheimer's disease. L. KRYCH; R. REITH; A. K. SMITH; R. M. COHEN; C. B. SMITH*. *NIH, NIMH-SNPM, Emory Univ. Sch. of Med.*

9:00 C60 **673.02** Alzheimer's disease early pathology and behavioral characterization in male and female 5xFAD mouse model of Alzheimer's disease. T. HALL*; C. LEARMAN; E. BATES; L. PALADUGU; M. SONG; J. ROSSIGNOL; G. DUNBAR. *Field Neurosciences Inst. Lab. for Restorative Neurol., Central Michigan Univ., Field Neurosciences Inst., Central Michigan Univ., Central Michigan Univ.*

10:00 C61 **673.03** ● High-throughput phenotyping of transgenic AD models. D. BRUNNER*; T. HANANIA; M. MAZZELLA; H. HAIN; E. SABATH; V. ALEXANDROV; J. BERGER; P. KABITZKE; K. COX; M. WINDISCH. *Psychogenics Inc.*

11:00 C62 **673.04** Assessing outcomes of a middle cerebral artery occlusion injury in an APP transgenic rat. A. M. REGIS*; V. HACHINSKI; S. N. WHITEHEAD. *Western Univ., Western Univ.*

8:00 C63 **673.05** Increased cellular senescence in mouse models of Alzheimer's disease (or amyloidosis). G. F. PASSOS*; R. DA COSTA; R. MEDEIROS; D. H. CRIBBS. *UFRJ, Univ. of California, Irvine.*

9:00 C64 **673.06** Hindlimb locomotion pattern changes are detected in both the intact and spinalized Alzheimer's disease model J20 mice. R. HUANG*; M. S. JOSEPH; R. R. ROY; H. ZHONG; E. H. KOO; R. V. EDGERTON; D. C. LU. *UCLA, UCLA, UCLA, UCLA, UCLA, UCSD.*

10:00 C65 **673.07** Age-related changes in feeding behaviours, weight, hormones, and metabolism in 12-month old female 5xFAD mice. W. H. GENDRON*; R. E. BROWN; S. PELLETIER; Y. ANINI. *Dalhousie, Dalhousie.*

11:00 C66 **673.08** Peripheral nervous system is vulnerable before significant development of pathology in Alzheimer's disease mouse model. J. KIM*; A. A. B. RASHEED; S. YOO; C. MOON. *DGIST.*

8:00 C67 **673.09** Aerobic glycolysis in the frontal cortex correlates with memory performance in wild-type but not APP/PS1 mice: Implications for metabolic intervention in Alzheimer's disease. R. A. HARRIS*; R. CUMMING. *Univ. of Western Ontario, Univ. of Western Ontario.*

9:00 C68 **673.10** ● ▲ Young to middle-aged dogs with high Abeta-levels in CSF are impaired on learning in standard cognition tests. H. BORGHYS*; D. DHUYVETTER; B. VAN BROECK; J. ARAUJO; M. BROOKS. *Janssen Res. & Develop., janssen, Janssen, InterVivo, Intervivo.*

10:00 C69 **673.11** ● Breaking Down Alzheimer's disease in Trisomy 21. L. PULFORD*; M. RICKMAN; S. NOY; J. TOSH; D. ABUCEWICZ; V. L. J. TYBULEWICZ; E. M. C. FISHER; F. K. WISEMAN. *Inst. of Neurol., The Francis Crick Inst.*

11:00 C70 **673.12** A graph diffusion model predicts a primarily retrograde pattern of pathology propagation in mouse models of Alzheimer's disease. C. MEZIAS*; E. LOCASTRO; A. RAJ. *Cornell University, Weill Cornell Med. Col.*

8:00 C71 **673.13** How does Trisomy 21 in Down syndrome exacerbate Alzheimer's disease pathology in a novel mouse model, Tc1xJ20? X. CHOONG*; M. ZANDA; V. PLAGNOL; V. L. J. TYBULEWICZ; F. K. WISEMAN; E. M. C. FISHER. *Univ. Col. London, LonDownS Consortium, Univ. Col. London, Wellcome Trust Sanger Inst., The Francis Crick Inst.*

9:00 C72 **673.14** Alzheimer's disease research in the 21st century: The shift towards a new paradigm. F. PISTOLLATO*; C. P. CHANDRASEKERA. *Physicians Committee For Responsible Med.*

10:00 C73 **673.15** Baseline neuropathological and behavioral phenotypes for transgenic mice expressing apoE3 and apoE4. S. HALAVI*; M. DULCICH; R. E. HARTMAN. *Loma Linda Univ.*

11:00 C74 **673.16** ● The effect of acute BACE1 inhibition on early cognitive deficits in a mouse model of Aβ toxicity. M. LOOS*; E. REMMELINK; B. LUBBERS; R. E. VAN KESTEREN; M. VERHAGE; A. B. SMIT. *Sylics, VU Univ. Amsterdam, VU Univ. Amsterdam.*

POSTER

674. Alzheimer's Disease: Neurodegeneration

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 C75 **674.01** APP-induced neurodegeneration is mediated by the unfolded protein response. A. GUMASTE*; S. JIAO; L. BELLUSCIO. *NIH.*

9:00 C76 **674.02** Perk inhibitor prevents neural death in mouse model of Alzheimer's disease. S. JIAO*; A. GUMASTE; L. BELLUSCIO. *NIH.*

10:00 C77 **674.03** TRB3 mediates neuronal cell death evoked by β-amyloid by a dual mechanism: Apoptosis and autophagy. S. SALEEM; S. C. BISWAS*. *CSIR-Indian Inst. of Chem. Biol.*

11:00 C78 **674.04** Histopathologic markers are related to *in vivo* cortical atrophy in primary progressive aphasia with Alzheimer's pathology. D. T. OHM*; G. KIM; A. MARTERSTECK; S. WEINTRAUB; E. BIGIO; M. MESULAM; E. ROGALSKI; C. GEULA. *Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 C79 **674.05** ▲ Lack of evidence for peroxynitrite formation in nitric oxide-induced death in retinal cell cultures. C. COUGHLIN; S. SAJJAD; K. NELSON; O. ANDERSON; M. RAJSOMBATH; D. GRAY*. *Simmons Col., Simmons Col.*

9:00 C80 **674.06** Separation of neurodegeneration and memory loss in a *Drosophila* model of Alzheimer's disease. Y. HU*; B. LIANG; Y. ZHONG. *Sch. of Life, Tsinghua Univ., HaiNan Normal Univ.*

10:00 C81 **674.07** Progressive degeneration and functional impairment of gray matter oligodendrocytes in a mouse model of Alzheimer's disease. E. GONZALEZ FERNANDEZ*; J. D. ROTHSTEIN; S. KANG. *Shriners Pediatric Hosp. Ctr., The Johns Hopkins Univ. Sch. of Med., The Johns Hopkins Univ. Sch. of Med., Temple Univ. Sch. of Med.*

11:00 C82 **674.08** Targeting the stress pathway in cognitive decline. P. SPILMAN*; J. CAMPAGNA; B. JAGODZINSKA; K. POKSAY; O. GOROSTIZA; A. MATALIS; D. E. BREDESEN; V. JOHN. *Easton Ctr. for Alzheimer's Dis. Research, Univ. of California, Buck Inst. for Res. on Aging.*

8:00 C83 **674.09** Presenilin 1-induced apoptosis is mainly mediated γ-secretase-independently by PSAP and also γ-secretase-dependently by FLIP. L. ZENG; F. ZHANG; C. HU; D. C. XU; M. CUI; M. CUI; X. XU*. *Univ. of Tennessee, Princeton Univ., Univ. Tennessee.*

9:00 C84 **674.10** Progressive degeneration of monoaminergic afferents in the J20 line of amyloid precursor protein mouse model. C. GALLARDO*; S. E. LESNE; M. K. LEE. *Univ. of Minnesota - Twin Cities, Univ. of Minnesota.*

POSTER

675. Alzheimer's Disease: Clinical Detection and Biomarkers

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 C85 **675.01** Alzheimer's disease classification with novel microstructural metrics from diffusion-weighted MRI. T. M. NIR*; J. E. VILLALON-REINA; B. GUTMAN; N. JAHANSHAD; L. ZHAN; C. R. JACK, Jr; M. W. WEINER; P. M. THOMPSON. *USC Imaging Genet. Ctr., Mayo Clin., Univ. of California San Francisco.*

9:00 C86 **675.02** Cognitive reserve is differentially associated with grey matter atrophy in frontotemporal lobar degeneration and Alzheimer's disease. K. PLACEK*; L. MASSIMO; C. OLM; D. IRWIN; V. M. Y. LEE; J. Q. TROJANOWSKI; V. M. VAN DEERLIN; C. T. MCMILLAN; M. GROSSMAN. *Univ. of Pennsylvania.*

10:00 C87 **675.03** ● Quantitative EEG characterization of mAChR1: The use of qEEG as a potential biomarker for therapeutic targets of Alzheimer's disease. S. GARSON; A. GOTTER; J. STEVENS; S. FOX; P. L. TANNENBAUM; A. SAVITZ; L. S. LUBBERS; M. H. PAUSCH; D. C. BESHORE; J. M. USLANER; C. J. WINROW; Z. WU*. *Merck & Co.*

11:00 C88 **675.04** White matter microstructure in an empirically-derived fornix template is associated with neuropathological markers of Alzheimer's disease. C. BROWN*; G. A. JICHA; F. A. SCHMITT; L. J. VAN ELDIK; C. D. SMITH; B. T. GOLD. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

8:00 C89 **675.05** Subcortical volume and morphology in Alzheimer's disease and mild cognitive impairment. M. R. PATEL*; G. DEVENYI; V. KONG; M. CHAKRAVARTY. *Douglas Mental Hlth. Univ. Inst., McGill Univ., McGill Univ.*

9:00 C90 **675.06** Heterogeneity in neuroanatomical differences in relation to amyloid burden in mild cognitive impairment. V. KONG*; G. DEVENYI; R. PATEL; M. CHAKRAVARTY. *Douglas Mental Hlth. Univ. Inst., McGill Univ., McGill Univ.*

10:00 C91 **675.07** ● 5-HT2c agonists-induced changes in cerebral blood oxygen-level dependent (BOLD) pharmacologic magnetic resonance imaging (phMRI) in awake rats and blockade with 5-HT2c antagonist: A potential pharmacodynamic biomarker. S. J. BAKER*; G. FOX; K. DRESCHER; J. BEAVER; A. M. BASSO. *AbbVie Labs, AbbVie Labs.*

11:00 C92 **675.08** ● Rapid, fully automated method for quantitative analysis of PET amyloid scans in Alzheimer's disease. P. H. KUO*; P. K. BHARADWAJ; W. P. KRAFFT; M. C. FITZHUGH; G. E. ALEXANDER; G. ZUBAL. *Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med., Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Arizona Alzheimer's Consortium, Z-Concepts LLC.*

8:00 C93 **675.09** Apolipoprotein E4 allele differentially modulates cerebral blood flow and blood-brain barrier permeability in Alzheimer's disease. A. MONTAGNE*; J. PA; D. A. NATION; S. R. BARNES; M. P. ELLIS; K. KISLER; A. R. NELSON; S. V. REGE; M. D. SWEENEY; A. P. SAGARE; J. MAKSHANOFF; Y. SHI; R. E. JACOBS; A. W. TOGA; M. G. HARRINGTON; C. Y. LIU; M. LAW; H. C. CHUI; B. V. ZLOKOVIC. *USC, USC, USC, Caltech, Huntington Med. Res. Inst., USC, USC.*

9:00 C94 **675.10** ● Electrophysiological alterations by 5-HT2C receptor agonist CP-809,101 in sleep EEG and power spectral activity. P. VESELCIC; Y. MORDASHOVA; K. M. WICKE*. *Abbvie Germany Gmbh & Co KG.*

10:00 C95 **675.11** Synchrotron x-ray fluorescence indicates enhanced zinc load in plaques of CRND8 animals supplemented with dietary copper. P. A. KAKALEC*; K. N. BOGGS; S. N. HOWELL; C. M. GROEBER TRAVIS; J. M. FLINN. *George Mason Univ., George Mason Univ., Walter Reed Army Inst. of Res.*

11:00 C96 **675.12** Concurrence of mild cognitive impairment and increased cerebral iron load, as measured by quantitative susceptibility mapping, is associated with increased frontotemporal functional connectivity at rest. J. VAN BERGEN*; X. LI; M. WYSS; J. HUA; S. SCHREINER; S. STEININGER; F. QUEVENCO; S. LEH; A. GIETL; R. NITSCH; K. PRUESSMANN; P. C. M. VAN ZIJL; C. HOCK; P. G. UNSCHULD. *Univ. of Zurich, Kennedy Krieger Inst. and Johns Hopkins Sch. of Med., ETH Zurich.*

8:00 D1 **675.13** ▲ Family history of Alzheimer's disease is associated with myelin content in preclinical Alzheimer's disease. C. A. CANDA*; J. SOJKOVA; D. C. DEAN, III; J. P. O'GRADY; S. HURLEY; N. J. DAVENPORT; O. C. OKONKWO; S. ASTHANA; M. A. SAGER; S. C. JOHNSON; A. L. ALEXANDER; B. B. BENDLIN. *Univ. of Wisconsin Sch. of Med. and Pub, Univ. of Wisconsin Sch. of Med. and Publ. Hlth., Wm. S. Middleton Mem. VA Hosp., Univ. of Wisconsin Madison, Univ. of Wisconsin Sch. of Med. and Publ. Hlth., Univ. of Oxford, Univ. of Wisconsin Sch. of Med. and Publ. Hlth., Univ. of Wisconsin Sch. of Med. and Publ. Hlth.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

9:00 D2 **675.14** Genetic risk scores for Alzheimer's disease are associated with thinning of hippocampal complex subregions. T. M. HARRISON*; E. P. LAU; Z. MAHMOOD; A. C. BURGGREN; G. W. SMALL; S. Y. BOOKHEIMER. *UCLA, UCLA.*

10:00 D3 **675.15** ● Intracranial 4D blood flow analyses in the Alzheimer's disease spectrum. S. E. BERMAN*; L. RIVERA; L. R. CLARK; A. M. RACINE; C. ILLINGWORTH; J. M. OH; P. CARY; C. M. CARLSSON; B. B. BENDLIN; S. ASTHANA; P. TURSKI; H. ROWLEY; O. WIEBEN; S. C. JOHNSON. *Wisconsin Alzheimer's Dis. Res. Ctr., Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, VA Geriatric Res. Educ. and Clin. Centers, Univ. of Wisconsin Sch. of Med. and Publ. Hlth.*

11:00 D4 **675.16** Local shape differences are associated with amyloid beta load and neuropsychological performance in cognitively normal elderly individuals. C. SCHROEDER*; A. GIETL; M. M. CHAKRAVARTY; M. M. PARK; L. MICHELS; S. KOLLIAS; P. G. UNSCHULD; S. L. KROLL; A. M. KÄLIN; C. HOCK; S. E. LEH-SEAL. *Univ. of Zurich, Douglas Mental Hlth. Univ. Institute, McGill Univ., Div. of Neuroradiology, Univ. of Zurich.*

8:00 D5 **675.17** Comparison of diffusion weighted imaging protocols for investigating Alzheimer's disease in ADNI. A. ZAVALIANGOS-PETROPULU*; N. JAHANSHAD; C. JACK; M. WEINER; M. A. BERNSTEIN; R. I. REID; P. M. THOMPSON. *Univ. of Southern California IGC, Mayo Clin., UCSF Sch. of Med.*

9:00 D6 **675.18** Structurally distinct amyloid-β species among Alzheimer's disease patients - revisiting a Pittsburgh compound B-refractory case. J. MAHLER*; J. RASMUSSEN; M. I. DIAMOND; K. P. R. NILSSON; L. C. WALKER; F. BAUMANN; M. JUCKER. *Hertie Inst. For Clin. Brain Res., German Ctr. for Neurodegenerative Dis., Univ. of Texas Southwestern Med. Ctr., IFM, Emory Univ.*

10:00 D7 **675.19** Differences in inmunosignal distribution pattern for Aβ and pTau between late-onset sporadic and early-onset familial Alzheimer's disease. D. M. TRUJILLO*; H. ARBOLEDA; F. LOPERA. *Univ. Nacional De Colombia, Univ. Nacional De Colombia, Univ. de Antioquia.*

POSTER

676. Parkinson's Disease: Rodent Models II

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 D8 **676.01** Behavioural and pet-ct striatal evaluation after the unilateral implantation of dopamine in striatum achieves to attenuate motor abnormalities in hemiparkinsonian rat model. P. VERGARA-ARAGON*; M. VALVERDE AGUILAR; M. PALOMERO RIVAS; M. VELAZQUEZ PANIAGUA; I. SÁNCHEZ CERVANTES; I. LOPEZ MARTINEZ; L. COLIN BARENQUE; R. MAYEN DIAZ; D. VÁZQUEZ MATÍAS; K. PINEDA ROMERO; R. GONZALEZ TREJO; A. SOLANA ROJAS; P. VERGARA ARAGÓN. *Facultad De Medicina, IPN, UNAM, UNAM, UNAM.*

9:00 D9 **676.02** Stable and highly reproducible low dose 6-OHDA model of Parkinson's disease. A. PENTTINEN*; J. ANTTILA; K. ALBERT; M. H. VOUTILAINEN; R. K. TUOMINEN; M. AIRAVAARA. *Univ. of Helsinki, Univ. of Helsinki.*

10:00 D10 **676.03** Frontocortical overexpression of alpha-synuclein in adult rats reproduces executive cognitive deficits related to Parkinson´s disease. H. S. LINDGREN; D. S. TAIT; V. FRANCARDO; Z. BIMPISIDIS; M. LUNDBLAD; V. J. BROWN; S. B. DUNNETT; M. A. CENCI*. *Lund Univ., Sch. of Psychology and Neuroscience, Univ. of St Andrews, Lund Univ., Cardiff Univ.*

11:00 D11 **676.04** Effects of melatonin on non-motor symptoms and oxidative stress induced by a single intranasal administration of 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) in mice, an animal model of Parkinson's disease. J. M. MACK*; T. M. MOURA; C. L. GONÇALVES; A. L. DAFRE; M. FARINA; R. D. S. PREDIGER. *Univ. Federal De Santa Catarina, Univ. Federal De Santa Catarina.*

8:00 D12 **676.05** Comparison of striatum and substantia nigra site of CDNF administration in rat 6-OHDA model of Parkinson's disease. K. ALBERT*; M. H. VOUTILAINEN; A. PANHELAINEN; R. K. TUOMINEN; M. AIRAVAARA; M. SAARMA. *Univ. of Helsinki.*

9:00 D13 **676.06** Synergistic damage of commercially available environmental toxins in Parkinson's disease models. E. M. JANEZIC*; J. E. CAVINESS; S. G. KANDA; Y. KIM. *Delaware State Univ.*

10:00 D14 **676.07** Pramipexole combined with non-viral transfection of BDNF recovers motor behavior in unilateral 6-OHDA-lesioned rats. L. R. QUINTERO; L. F. RAZGADO; A. J. ESPADAS; P. E. REYNA; A. SIERRA; V. ANAYA; I. JIMENEZ; D. MARTINEZ-FONG; J. ACEVES*. *Ctr. Investigacion Del IPN, Estudios Superiores de Iztacala UNAM, Ctr. Investigacion Del IPN.*

11:00 D15 **676.08** Body and facial pain in an animal model of Parkinson's diseases and its possible mechanism and treatment. A. TRUONG*; G. G. ACOSTA; R. SHI. *Purdue Univ., Purdue Univ.*

8:00 D16 **676.09** Symptomatology in Parkinson's disease: A translational behavioural study in two different 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) mouse models. M. SANTORO*; V. MELIS; P. MOREAU; J. V. FORRESTER; G. RIEDEL; P. TEISMANN. *Univ. of Aberdeen, Univ. of Aberdeen, Univ. of Aberdeen.*

9:00 D17 **676.10** Characterisation of cognitive dysfunction in an alpha-synuclein rodent model of Parkinson's disease. E. K. DOLAN*; Y. M. NOLAN; A. M. SULLIVAN. *Univ. Col. Cork.*

10:00 D18 **676.11** *In vivo* μPET imaging of neuroinflammation in a rat model exhibiting parkinsonian-like pathology. C. CORWIN*; M. NUNEZ-SANTOS; A. NIKOLOPOULOU; Y. KANG; S. VALLABHAJOSULA; P. SERRANO; J. BABICH; M. FIGUEIREDO-PEREIRA. *Hunter College, CUNY, The Grad. Center, CUNY, Weill Cornell Med. Col., Hunter College, CUNY.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 D19 **676.12** Decoupled involvement of the dorsolateral striatum and of the pre-frontal cortex in depressive symptoms in 6-hydroxydopamine rat model of Parkinson's disease. F. C. MATHEUS*; D. RIAL; J. I. REAL; C. LEMOS; R. N. TAKAHASHI; L. J. BERTOGLIO; R. A. CUNHA; R. D. PREDIGER. *Federal Univ. of Santa Catarina, Univ. of Coimbra.*

8:00 D20 **676.13** Role of bdnf/trkb pathway in l-dopa-induced dyskinesia in mice. A. PELOSI*; J. CORVOL; B. XU; J. GIRAULT; D. HERVÉ. *Inst. du Fer a Moulin, Inserm UMR-S 839, Univ. Pierre et Marie Curie-Paris 6, Inserm, UMR-S 1027, ICM, Pitié-Salpêtrière Hosp., CNRS, UMR 7225, Assistance Publique Hôpitaux de Paris, Inserm, Clin. Investigation Ctr. (CIC-1422), Pitié-Salpêtrière Hosp., The Scripps Res. Inst.*

9:00 D21 **676.14** Development of an early stage model of Parkinson's disease. K. FARMER*; C. RUDYK; T. FORTIN; C. A. SMITH; N. PROWSE; J. C. SMITH; S. P. HAYLEY. *Carleton Univ., Carleton Univ.*

10:00 D22 **676.15** Long-term effect of sub-anesthetic ketamine infusion in reducing L-DOPA-induced dyskinesias. M. J. BARTLETT; L. M. LEPOIDEVIN; R. M. JOSEPH; K. L. PARENT; N. D. LAUDE; L. B. LAZARUS; M. L. HEIEN; M. ESTEVEZ; S. J. SHERMAN; T. FALK*. *Univ. of Arizona Col. of Med., Univ. of Arizona, Neurometrica, LLC.*

11:00 D23 **676.16** An age- and time-course study of the responses to nigrostriatal lesions and dopaminergic treatments in mice. F. BEZ*; V. FRANCARDO; M. A. CENCI. *Lund Univ., Lund Univ.*

8:00 D24 **676.17** ▲ Cineradiographic analysis of respiratory movements in a murine model mimicking different stages of Parkinson's disease. P. SALES DE CAMPOS*; L. R. S. M. KAWAMURA; K. HASEGAWA; Y. KUMEI; J. L. ZEREDO. *Univ. De Brasília, JAXA/Institute of Space and Astronautical Sci., Dept. of Hard Tissue Engineering, Tokyo Med. and Dent. Univ.*

9:00 D25 **676.18** ● The neuroprotective effect of GDNF Family Ligand Mimetics in unilateral 6-hydroxydopamine-model of Parkinson´s disease in rats. J. RENKO*; Y. SIDOROVA; M. VOUTILAINEN; J. SAKKI; M. KARELSON; M. SAARMA; R. K. TUOMINEN. *Univ. of Helsinki, Tartu Univ. & GeneCode Ltd.*

10:00 D26 **676.19** Zolpidem ameliorates motor impairments in unilateral 6-OHDA rodent model of Parkinson's disease. R. ASSINI*; E. D. ABERCROMBIE. *Rutgers Univ. - Newark.*

11:00 D27 **676.20** Subthalamic deep brain stimulation reduces pathological information transmission to the thalamus in a rat model of parkinsonism. C. ANDERSON*; A. DORVAL. *Univ. of Utah.*

8:00 D28 **676.21** ● Vagus nerve stimulation paired with motor training does not improve forelimb function or strength in 6-hydroxydopamine-lesioned rats. A. NGUYEN*; A. RUIZ; S. HAYS; M. KILGARD; R. RENNAKER. *Univ. of Texas At Dallas, Univ. of Texas At Dallas.*

9:00 D29 **676.22** Non-motor behavioral alterations and cell degeneration in extranigral brain regions of the DJ-1 knockout rat. T. L. KYSER*; A. M. HEMMERLE; B. A. GARNER; O. EKHATOR; S. M. FLEMING; K. B. SEROOGY. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati.*

10:00 D30 **676.23** Admixing of two mice strains with differential susceptibility to 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) positively modulates the nigral dopaminergic phenotype. V. D. J*; H. YARREIPHANG; T. R. RAJU; P. A. ALLADI. *Natl. Inst. of Mental Hlth. and Neuro Scie.*

11:00 D31 **676.24** Intranasal insulin protects against 6-OHDA-induced dopaminergic neuron loss in the substantia nigra and alleviates motor behavioral deficits in rats. Y. PANG*; S. LIN; L. TIEN; J. SHEN; C. WRIGHT; L. FAN; A. BHATT; R. SAVICH. *Univ. Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Fu Jen Catholic Univ.*

8:00 D32 **676.25** Unilateral nigrostriatal dopamine lesions produce transient changes in urinary and motor function in a rat model of Parkinson's disease. W. F. COLLINS*, III; O. Y. WANG; N. P. PHAGU; Y. KAMMILI; M. F. KRITZER. *Stony Brook Univ.*

9:00 D33 **676.26** Cognitive and motor deficits in a rodent model of Parkinson's disease displaying concurrent dopamine and acetylcholine loss. C. Y. OSTOCK*; M. M. CONTI; T. LAROSE; S. MEADOWS; C. BISHOP. *Binghamton Univ., Binghamton Univ.*

10:00 D34 **676.27** ● Fundamental differences in parkinsonian rat limbic regions contribute to anxious behavior and diminished responsiveness to diazepam. K. A. O'CONNOR*; A. RAMIREZ-ZAMORA; E. MOLHO; J. G. PILITSIS; D. SHIN. *Albany Med. Col., Albany Med. Ctr., Albany Med. Ctr.*

11:00 D35 **676.28** Parkin knockout rats are hypersensitive to the neurotoxic effects of methamphetamine. B. A. KILLINGER*; A. MOSZCZYNSKA. *Wayne State Univ., Wayne State Univ.*

POSTER

677. Alpha-Synuclein Mechanisms in Parkinson's Disease

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 D36 **677.01** Mechanisms of alpha-synuclein mediated toxicity in the aged rat brain. I. M. SANDOVAL*; N. K. POLINSKI; B. DALEY; N. MARCKINI; F. P. MANFREDSSON; C. E. SORTWELL; T. J. COLLIER. *Michigan State Univ.*

9:00 D37 **677.02** ● Bpoz-2 gene therapy ameliorates alpha-synucleinopathy in a53t transgenic mouse model of Parkinson's disease. A. ROY*; S. B. RANGASAMY; M. KUNDU; K. PAHAN. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*

10:00 D38 **677.03** The Ubc9 SUMO-conjugase associates with and regulates α-synuclein SUMOylation, enhancing its half-life and aggregate formation. E. CARTIER*; H. KIM. *Delaware State Univ.*

11:00 D39 **677.04** Developing novel α-synuclein binding peptides to identify, monitor, and inhibit α-synuclein fibril formation. A. R. BRAUN*; D. R. WOLDRING; B. HACKEL; M. K. LEE. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 D40 **677.05** Modulation of the microglial inflammatory response to alpha-synuclein oligomers by heparin-induced GAPDH prefibrils. J. E. SEPULVEDA DIAZ*; S. B. SOCIAS; C. AVILA; C. M. TORRES-BUGEAU; D. PAPY-GARCIA; P. P. MICHEL; R. N. CHEHIN; R. RAISMAN-VOZARI. *ICM-INSERM U1127, Hop. Pitie-Salpetriere, Inst. Superior de Investigaciones Biológicas (INSIBIO),CONICET-UNT, CRRET ERL CNRS 9215, UPEC.*

9:00 D41 **677.06** ● Lewy Body extracts from Parkinson's disease Brains as models for high-throughput screens of neurotoxicity and α-synuclein spreading from cell-to-cell through endocytosis. E. BEZARD*; F. CAVALIERE; L. CERF; B. DEHAY; M. BOURDENX; P. RAMOS-GONZALEZ; J. OBESO; C. MATUTE; F. ICHAS. *Inst. of Neurodegenerative Dis., Univ. del Pais Vasco, Fluofarma, Ctr. Integral en Neurociencias.*

10:00 D42 **677.07** ▲ Alpha-synuclein and heavy metals: Examining the neuromodulatory role of human native alpha-synuclein in cadmium transport dynamics and homeostasis using a dopaminergic cell model of Parkinson's disease. W. CHONG*; G. KWAKYE. *Oberlin Col., Oberlin Col.*

11:00 D43 **677.08** Contrasting homeostatic failure of *in vivo* activity by dopamine substantia nigra neurons in response to aging or mutant alpha-synuclein. M. SUBRAMANIAM*; J. ROEPER. *Inst. For Neurophysiol.*

8:00 D44 **677.09** Alpha-synuclein affects trace metal content in primary neuronal cultures. E. CARBONI*; P. LINGOR; A. CARMONA; S. RODEAU; E. BARSKI; R. ORTEGA. *Univ. of Goettingen, Univ. of Bordeaux.*

9:00 D45 **677.10** Modulation of synaptoneurosome glutamate release by aggregated proteoforms of α-synuclein. J. B. WATSON*; K. LITTLEJOHN; S. YUAN; B. KOO; J. P. WHITELEGGE; T. A. SARAFIAN. *David Geffen Sch. Med. UCLA, UCLA.*

10:00 D46 **677.11** The oxysterol 27-hydroxycholesterol-induced epigenetic regulation of α-synuclein. O. GHRIBI*; J. SCHOMMER. *Univ. of North Dakota Sch. of Med.*

11:00 D47 **677.12** Identification of protein interactions regulated by alpha-synuclein Serine 129 phosphorylation. M. M. MARANO; K. HAN; M. S. FRASER; T. F. LANGMAN; A. TANDON*. *Univ. of Toronto.*

8:00 D48 **677.13** Secretion and uptake of alpha-synuclein via extracellular vesicles in cultured cells. C. I. LÖÖV*; L. BALAJ; J. BERGSTROM; X. O. BREAKEFIELD; B. T. HYMAN; M. INGELSSON. *Massachusetts Gen. Hosp., Uppsala Univ.*

9:00 E1 **677.14** α-Synuclein disrupts the intracellular trafficking of iron import proteins (Fet3, Ftr1) in Saccharomyces cerevisiae. S. N. WITT*; D. PATEL. *LSU Hlth. Sci. Ctr. / Biochem.*

10:00 E2 **677.15** Activated Microglia Modulate α-synuclein secretion via JNK activation in α-synucleinopathic PC12 catecholaminergic neurons. D. P. CHRISTENSEN*; P. EJLERSKOV; I. RASMUSSEN; F. VILHARDT. *Univ. of Copenhagen, Dept. of Cell. and Mol. Med., Biotech Res. & Innovation Ctr., Univ. of Copenhagen.*

11:00 E3 **677.16** Fyn kinase mediates aggregated α-synuclein import and priming of the NLRP3 inflammasome in microglia. N. PANICKER*; S. SARKAR; M. NEAL; D. HARISCHANDRA; H. JIN; H. SAMINATHAN; V. ANANTHARAM; A. KANTHASAMY; A. KANTHASAMY. *Iowa State Univ.*

8:00 E4 **677.17** Pum2-mediated translational regulation of alpha-synuclein mRNA in neurites and crosstalk with mitochondria. Y. KIM*; G. JE; S. GUHATHAKURTA; S. BASU; E. BOK; A. CRISTOVAO. *Burnett Sch. of Biomed. Sci., Kyung-Hee Univ., Univ. of Central Florida, Univ. of Beira Interior.*

9:00 E5 **677.18** De-repression of TET1 by oxidative stress regulates alpha-synuclein expression in dopaminergic neurons. S. GUHATHAKURTA*; S. BASU; E. BOK; G. JE; Y. KIM. *Burnett Sch. of Biomed. Sci., Univ. of Central Florida, Kyung-Hee Univ.*

10:00 E6 **677.19** Implication of 8-oxodG-mediated Transcriptional Mutagenesis in sporadic Parkinson's disease. S. BASU*; S. GUHATHAKURTA; E. BOK; G. JE; A. CRISTOVAO; Y. KIM. *Univ. of Central Florida, Univ. of Central Florida, Univ. of Central Florida, Kyung-Hee Univ., Univ. of Beira Interior.*

11:00 E7 **677.20** Alpha-synuclein overexpression negatively regulates insulin receptor substrate 1 by activating mTORC1/S6K1 signaling. H. YANG*. *Parkinson's Dis. Center, Capital Med. Univer.*

8:00 E8 **677.21** Heparan sulfate is involved in cellular uptake of alpha-synuclein amyloid fibrils but not oligomers. E. IHSE*; J. D. ESKO; E. MASLIAH. *Univ. of California San Diego, UCSD, UCSD.*

9:00 E9 **677.22** Inclusion seeding by mutant α-synuclein fibrils in primary neuronal cultures and in transgenic mice. N. J. RUTHERFORD*; M. BROOKS; B. I. GIASSON. *Dept. of Neuroscience, Univ. of Florida.*

10:00 E10 **677.23** Genetic and size determinants of alpha-synuclein mediated vesicle rupture. W. P. FLAVIN; O. I. ZHURBICH; S. SKARPATHIOTIS; E. CAMPBELL*. *Loyola Univ. Chicago, Loyola Univ. Chicago, Loyola Univ. Chicago, Loyola Univ. Chicago.*

POSTER

678. Therapeutics of Parkinson's Disease: Neuroprotection

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 E11 **678.01** Neuroprotective effects of zonisamide against lactacystin-induced neurodegeneration do not involve changes in system xc- expression. E. BENTEA*; J. VAN LIEFFERINGE; T. DEMUYSER; S. KOBAYASHI; L. DENEYER; G. ALBERTINI; E. MERCKX; K. MAES; H. SATO; I. SMOLDERS; J. LEWERENZ; A. MASSIE. *Vrije Univ. Brussel, Yamagata Univ., Niigata Univ., Univ. of Ulm.*

9:00 E12 **678.02** A novel neuroprotective aurimmed compound as a potential therapeutic for Parkinson's disease. J. E. CAVINESS*. *Delaware State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 E13 **678.03** The neuroprotective effects of near infrared light (670nm) when applied at different periods in relation to MPTP insult. F. REINHART*; N. EL MASSRI; N. TORRES-MARTINEZ; F. DARLOT; C. CHABROL; D. M. JOHNSTONE; J. STONE; J. MITROFANIS; A. BENABID; C. MORO. *CEA, Univ. Grenoble Alpes, Univ. of Sydney.*

11:00 E14 **678.04** Development of a novel brain penetrant multifunctional iron chelator dopamine agonist for symptomatic and neuroprotective therapy of Parkinson's disease. A. K. DUTTA*, Dr; B. DAS; L. XU; T. ANTONIO; M. REITH. *Wayne State Univ., New York Univ.*

8:00 E15 **678.05** ▲ Chronic caffeine mitigates aberrant motor learning: Insights into reduced Parkinson's disease risk in caffeine drinking populations. A. C. KROK*; J. L. KORANDA; J. A. BEELER; X. ZHUANG. *Univ. of Chicago, Queens Col. CUNY.*

9:00 E16 **678.06** Pre- and post-synaptic mechanisms for nicotine's protective effect against Parkinson's disease. J. KORANDA*; A. C. KROK; D. S. MCGEHEE; J. A. BEELER; X. ZHUANG. *The Univ. of Chicago, The Univ. of Chicago, Queens Col. CUNY.*

10:00 E17 **678.07** Modeling Parkinson's disease in aged rats: The neuroprotective effects of caffeine against the neurotoxicity of 6-hydroxydopamine. G. H. BEAGLEY*; C. O. HALEY. *Alma Col., Alma Col.*

11:00 E18 **678.08** Glycyrrhizic acid attenuates dopaminergic neurodegeneration in rotenone model of Parkinson's disease. E. HAQUE*; H. JAVED; S. ABUL KHAIR; S. AZIMULLAH; S. OJHA. *UAE Univ., UAE Univ., UAE Univ.*

8:00 E19 **678.09** The effect of flavonoids against paraquat induced oxidative stress and neurotoxicity in *Drosophila* melanogaster. D. R. JHONSA*; L. BADGUJAR; B. SUTARIYA; M. SARAF. *Bombay Col. of Pharm.*

9:00 E20 **678.10** Effects of naringin treatment on the neuroprotection and neurorestoration in animal models of Parkinson's disease. H. KIM; M. JEON; H. JANG; S. KIM; J. PARK; U. JUNG; S. KIM*. *Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyungpook Natl. Univ.*

10:00 E21 **678.11** Protective effects of pyrroloquinoline quinone against the cell death caused by 6-hydroxydopamine and hydrogen peroxide. Y. YAMADA*; M. NAKAMICHI. *Dept of Biotech and Chem Fac of Engin. Kinki Univ.*

11:00 E22 **678.12** Multi-therapeutic potentials of silibinin for the treatment and prevention of Parkinson's disease. Y. LEE*. *Dept. of Pharm.*

8:00 E23 **678.13** Neuroprotective effects of antidepressants via upregulation of neurotrophic factors. S. SHADFAR*; D. CHOI. *Yeungnam Univ.*

9:00 E24 **678.14** Neuroprotective effects of DNP on the MPTP-induced Parkinson's disease mouse model. A. KIM*. *Pusan Natl. Univ.*

10:00 E25 **678.15** Pretreatment of morin alleviates neurotoxicity in Parkinson's disease mouse model. J. LEE*. *Pusan Natl. Univ.*

11:00 E26 **678.16** Traditional medicines: Mechanisms of neuroprotection and the Nrf-2 antioxidant pathway in Parkinson's disease models. A. JACQUET*; S. Y. MA; J. ROCHET. *Purdue Univ.*

8:00 E27 **678.17** ▲ Neuroprotective effect of beta-caryophyllene in parkinsonism model with 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) on adult C57BL/6 mice. H. A. SUCRES-BERNES*; J. M. VIVEROS-PAREDES; V. CHAPARRO-HUERTA; R. E. GOZALEZ-CASTAÑEDA; C. R. GARCIA-LEMUS; M. E. FLORES-SOTO. *Univ. De Guadalajara, Univ. De Guadalajara, Ctr. de Investigación Biomedica de Occidente, Inst. Tecnologico y de Estudios Superiores, Univ. de Guadalajara.*

9:00 E28 **678.18** Is Liraglutide effective in 6-hydroxydopamine induced rat model of Parkinson's disease? M. K. SHARMA*; J. JALEWA; C. HOLSCHER. *Lancaster Univ.*

10:00 E29 **678.19** Alaskan blueberry and Sirtuin 1-mediated neuroprotection in a Caenorhabditis elegans model of Parkinson's disease. M. MAULIK*; S. KUHN; B. E. TAYLOR. *Univ. of Alaska Fairbanks, Univ. of Alaska Fairbanks, Univ. of Alaska Fairbanks, Univ. of Alaska Fairbanks.*

11:00 E30 **678.20** N-acetyl-cysteine in combination with igf-1 enhances neuroprotection against proteasome dysfunction-induced neurotoxicity in sh-sy5y cells. B. CHENG*; A. ROMAN; A. KUANG; E. CASILLAS. *Univ. Texas Hlth. Sci. Ctr., UT-PAN-American.*

8:00 E31 **678.21** Beta-Caryophyllene ameliorates oxidative stress and neuroinflammation in rat model of rotenone-induced Parkinson's disease. S. K. OJHA*; C. SHARMA; H. JAVED; S. AZIMULLAH; S. BEGUM; E. HAQUE. *UAE UNIVERSITY, UAE Univ., UAE Univ., UAE Univ.*

9:00 E32 **678.22** Necdin promotes mitochondrial biogenesis to prevent neurodegeneration in experimental Parkinson's disease. K. HASEGAWA*; T. YASUDA; C. SHIRAISHI; K. FUJIWARA; H. MOCHIZUKI; K. YOSHIKAWA. *Osaka Univ., Natl. Ctr. for Child Hlth. and Develop.*

10:00 E33 **678.23** ● Nigella sativa oil reduces extrapyramidal side effects (EPS)-like behavior in haloperidol-treated rats. T. MALIK*; S. HASAN; S. PERVEZ; T. FATIMA; D. J. HALEEM; H. DONG. *Northwestern Univ., Northwestern Univ., The Aga Khan Univ., The Aga Khan Univ., The Aga Khan Univ., The Univ. of Karachi.*

11:00 E34 **678.24** DA-9805, mixture of herbal extracts, promotes the degradation of α-synuclein in SH-SY5Y cells via autophagy activation. H. BYUN*; H. KIM; J. KIM; J. KOH. *Asan Inst. For Life Sci., Asan Med. Ctr.*

8:00 E35 **678.25** Because it does not influence MAO-B and DAT activities, the Near Infrared light therapy is a promising protective strategy against Parkinson's disease. F. REINHART; F. DARLOT; C. CHABROL; C. GAUDE; D. RATEL; N. TORRES-MARTINEZ; A. BENABID; C. MORO*. *Cea-Grenoble, Leti-Clinatec, Univ. Grenoble Alpes.*

9:00 E36 **678.26** Neuroprotective effect of Korea Red Ginseng extract on 1-methyl-4-phenylpyridinium ion (MPP^+)-induced apoptosis in PC12 cells. S. RYU*; S. T. KIM. *Sch. of Korean Medicine, Pusan Natl. Universi.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

679. Autism: Synaptic and Cellular Mechanisms II

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 E37 **679.01** Longitudinal characterization of microglial gene expression profile and behavioral, morphological and neurophysiological abnormalities in a mouse model of autism spectrum disorder. M. E. WOODBURY*; S. IKEZU; J. I. LUEBKE; P. CHAO; T. IKEZU. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

9:00 E38 **679.02** Cytoplasmic function of AUTS2 in neural network formation. M. HOSHINO*; T. NAGAI; W. SHEN; A. SAKAMOTO; S. TAYA; R. HASHIMOTO; T. HAYASHI; M. ABE; M. YAMAZAKI; K. NAKAO; T. NISHIOKA; K. SAKIMURA; K. YAMADA; K. KAIBUCHI; K. HORI. *Natl. Inst. of Neuroscience, NCNP, Nagoya Univ., Niigata Univ., Saitama Med. Univ.*

10:00 E39 **679.03** Development of dendritic structure in the btbr mouse model of autism. F. ALSHAMMARI; N. CHENG; M. KHANBABAEI; E. HUGHES; R. TOBIAS; J. M. RHO*. *Cumming Sch. of Medicine, Univ. of Calgary, Alberta Children's Hospital, Univ. of Calgary.*

11:00 E40 **679.04** ● RNA-binding protein Celf6 regulates actively translated mRNAs enriched in neuromodulatory neurotransmitter cell populations. M. A. RIEGER*; J. D. DOUGHERTY. *Washington Univ. St. Louis, Washington Univ. St. Louis.*

8:00 E41 **679.05** Regulation of synaptic function in hippocampal CA1 pyramidal cells by neuroligins. M. JIANG*; J. S. POLEPALLI; R. C. MALENKA; T. C. SÜDHOF. *Stanford Univ., Stanford Univ., Howard Hughes Med. Inst.*

9:00 E42 **679.06** The role of Neuroligins on synaptic transmission at Calyx of Held during development. B. ZHANG*; L. CHEN; T. SUDHOF. *Stanford medical school.*

10:00 E43 **679.07** Leveraging iPSCs to define molecular mechanisms of autism. J. H. MILLONIG*; P. MATTESON; P. YEUNG; M. WILLIAMS; S. PREM; Z. PANG; L. BRZUSTOWICZ; C. LU; E. DICICCO-BLOOM. *Rutgers-Rwjms, Rutgers RWJMS, Rutgers RWJMS, Rutgers RWJMS, Rutgers U.*

11:00 E44 **679.08** effect of co-ultramicronized PEALut treatment in a murine model of autism spectrum disorder. R. CRUPI*; D. IMPELLIZZERI; G. BRUSCHETTA; R. SIRACUSA; M. CORDARO; E. ESPOSITO; S. CUZZOCREA. *Univ. of Messina, Univ. of Manchester.*

8:00 E45 **679.09** NSF interacts with SERT and modulates its trafficking: Implications for path ophysiology in autism. K. IWATA*; H. MATSUZAKI; T. TACHIBANA; K. NAKAMURA; T. KATAYAMA; N. MORI. *Univ. of Fukui, Osaka City Univ., Hirosaki Univ., Osaka Univ., Hamamatsu Univ. Sch. of Med.*

9:00 E46 **679.10** Disruption of circuit formation and refinement in a mouse model of autism. N. CHENG*; M. KHANBABAEI; E. HUGHES; R. TOBIAS; K. MURARI; J. M. RHO. *Univ. of Calgary.*

10:00 E47 **679.11** Characterization of heritable small nucleotide variations in GCN2: Implications for autism spectrum disorder. A. G. VOROBYEVA*; A. BHATTACHARYA; I. IOSSIFOV; T. DEVER; E. KLANN. *New York Univ., Cold Spring Harbor, NIH.*

11:00 E48 **679.12** Using exogenous factor treatments to define differences in autism patient-derived neural stem cells. M. WILLIAMS*; S. PREM; X. ZHOU; P. MATTESON; P. YEUNG; C. LU; Z. PANG; L. BRZUSTOWICZ; J. MILLONIG; E. DICICCO-BLOOM. *Rutgers Univ., Rutgers, Robert Wood Johnson Med. Sch.*

8:00 F1 **679.13** Autism patient derived neural stem cells (nscs) exhibit neurite extension and migration phenotypes. S. PREM*; M. WILLIAMS; X. ZHOU; P. MATTESON; P. YEUNG; C. LU; Z. PANG; L. BRZUSTOWICZ; J. MILLONIG; E. DICICCO-BLOOM. *Rutgers, Robert Wood Johnson, Rutgers, Robert Wood Johnson, Child Hlth. Inst., Rutgers Univ.*

9:00 F2 **679.14** Testosterone and the Brain: A molecular study into Autism Spectrum Disorders using a human stem cell model. D. ADHYA*; K. JOZWIK; J. CARROLL; J. PRICE; D. P. SRIVASTAVA; S. BARON-COHEN. *Univ. of Cambridge, Univ. of Cambridge, King's College, London.*

10:00 F3 **679.15** Characterization of zinc biology in the Autism Spectrum associated Disorder Phelan McDermid Syndrome using patient biosamples and iPS derived cells. S. PFAENDER*; A. GRABRUCKER; T. BOECKERS. *Ulm Univ., Neurocenter.*

11:00 F4 **679.16** Comprehensive approach with an analytical battery to elucidate pathophysiological role of RBFOX1/A2BP1, a "hub" gene in the ASD gene transcriptome network. K. NAGATA*; N. HAMADA; H. ITO; H. TABATA. *Inst. For Developmental Research, Aichi Human Service Ctr., Inst. for Developmental Research, Aichi Human Service Ctr.*

8:00 F5 **679.17** Zn2+ reverses functional deficits in a de novo dopamine transporter variant associated with autism spectrum disorder. A. SHEKAR*; P. J. HAMILTON; A. N. BELOVICH; N. B. CHRISTIANSON; N. G. CAMPBELL; J. S. SUTCLIFFE; A. GALLI; H. J. G. MATTHIES; K. ERREGER. *Vanderbilt Univ., Vanderbilt Univ., Icahn Sch. of Med. at Mount Sinai, Vanderbilt Univ.*

9:00 F6 **679.18** Effects of trace metal imbalances on excitatory synapses of hippocampal neurons. S. HAGMEYER*; J. CRISTÓVÃO; K. MANGUS; C. M. GOMES; A. M. GRABRUCKER. *Univ. Ulm, Faculdade de Ciências da Univ. de Lisboa.*

10:00 F7 **679.19** Integrative analysis of RNA-seq and whole genome sequencing reveals perturbed gene co-expression networks in autism. G. COPPOLA*; K. ARDHANAREESWARAN; J. MARIANI; A. ABYZOV; F. VACCARINO. *Yale Univ., Mayo Clin.*

11:00 F8 **679.20** ● A neuroenergetic model of the autism brain predicts clinical results from postmortem donors. Z. SACCOMANO*; E. C. AZMITIA. *New York Univ., New York Univ.*

8:00 F9 **679.21** Annotation and curation of autism-related protein-protein interaction datasets into AutDB, a genetic database for autism. W. PEREANU*; C. CROFT SWANWICK; S. MUEND; S. BANERJEE-BASU. *Mindspec.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

680. Autism: Physiology and Systems

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 F10 **680.01** The neural substrate of autism spectrum disorder and attention hyperactivity disorder. H. OHTA*; T. ITAHASHI; C. KANAI; M. NAKAMURA; K. KANJI; H. YAMADA; A. IWANAMI; N. KATO; R. HASHIMOTO. *Showa Univ., Kanagawa Psychiatric Ctr., Showa Univ., Tokyo Metropolitan Univ.*

9:00 F11 **680.02** ▲ An mri study in autistic children:structural and functional abnormalities in brain areas related to central oxytocin and arginine-vasopressin system. X. SHOU*; J. HAN; R. ZHANG; X. XU; X. ZENG; Y. LIU; H. YUAN; Y. XING; M. JIA; Q. WEI; S. HAN. *Neurosci. Res. Institute, Peking Univ., Sch. of Basic Med. Sciences, Peking Univ., Key Lab. for Neuroscience, Ministry of Education/National Hlth. and Family Planning Commission, Peking Univ., Peking Univ. Third Hosp., Peking Univ. Third Hosp., Mental Hlth. Institute, Peking Univ., Key Lab. of Ministry of Health, The Ministry of Publ. Hlth., Yangguangyouyi Rehabil. Ctr., Sch. of Basic Med. Sciences, Peking Univ.*

10:00 F12 **680.03** Investigation of *in vivo* glutamate concentrations in autism spectrum disorders with single-voxel spectroscopy. J. E. SIEGEL-RAMSAY*; S. ELEY; S. CAMPBELL; H. BRANIGAN; A. STANFIELD; M. DAUVERMANN; S. LAWRIE. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Ediburgh, MIT.*

11:00 F13 **680.04** Transdiagnostic neural basis for impaired phonological working memory across reading disability and autism spectrum disorder. Z. QI*; C. LU; A. HARRIS; L. W. WEIL; M. HAN; K. HALVERSON; T. K. PERRACHIONE; M. KJELGAARD; W. KENNETH; H. TAGER-FLUSBERG; J. D. E. GABRIELI. *MIT, Beijing Normal Univ., Boston Univ.*

8:00 F14 **680.05** ● Local resting state functional connectivity in autism: Multisite variability and effect of eye status. S. NAIR*; M. M. BERKEBILE; C. P. CHEN; J. O. MAXIMO; R. A. MÜLLER. *San Diego State Univ., Univ. of Alabama, Birmingham, UCSD.*

9:00 F15 **680.06** Abnormal cerebellar functional connectivity in children with autism spectrum disorder. R. HANAIE*; I. MOHRI; K. KAGITANI-SHIMONO; I. HIRATA; J. MATSUZAKI; F. NAGATANI; Y. WATANABE; M. TANIIKE. *United Grad. Sch. of Child Development, Osaka Univ., Dept. of Pediatrics, Osaka Univ. Grad. Sch. of Med., Dept. of Diagnos. and Interventional Radiology, Osaka Univ. Grad. Sch. of Med.*

10:00 F16 **680.07** Atypical intrinsic functional connectivity of FFA is associated with social communication deficit in ASD. W. ZHAO*; I. FISHMAN; A. LEGENKAYA; S. NAIR; M. SULLIVAN; Y. GAO; M. BERKEBILE; R. MUELLER. *SDSU.*

11:00 F17 **680.08** Delineating adaptive neural mechanisms in individuals with autism when processing unimodal vs. bimodal real-world stimuli using functional MRI. P. J. WEBSTER*; C. FRUM; A. KURKOWSKI-BURT; J. W. LEWIS. *West Virginia Univ., West Virginia Univ., West Virginia Univ.*

8:00 F18 **680.09** Hyper-synchronization of brain activity in ASD during face-to-face conversation. K. JASMIN*; S. J. GOTTS; Y. XU; S. LIU; C. RIDDELL; J. INGEHOLM; A. R. BRAUN; A. MARTIN. *UCL Inst. of Cognitive Neurosci., NIMH, NINDS.*

9:00 F19 **680.10** ▲ Developmental differences in functional connectivity in autism. T. K. MCALLISTER-DAY*; T. MADHYASTHA; M. REITER; M. K. ASKREN; N. KLEINHANS; W. A. CHAOVALITWONGSE; T. GRABOWSKI, Jr. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

10:00 F20 **680.11** Association between age and rich-club structure in autistic and neurotypical human brains. T. WATANABE*; G. REES. *Inst. of Cognitive Neuroscience, Univ. Col. London, Wellcome Trust Ctr. for Neuroimaging, UCL.*

11:00 F21 **680.12** White matter microstructure differences in adolescents with autism, psychosis and 22q11.2 deletion syndrome. J. GALVIS*; J. E. VILLALON; G. PRASAD; C. CORBIN; T. M. NIR; L. KUSHAN-WELLS; C. E. BEARDEN; P. M. THOMPSON. *USC Keck Sch. of Med., USC, UCLA, USC Keck Sch. of Med.*

8:00 F22 **680.13** Relationship between language network connectivity and language deficits in children with Autism Spectrum Disorder. Y. GAO*; S. NAIR; A. LEGENKAYA; S. PUNYAMURTHULA; I. FISHMAN; R. MÜLLER. *San Diego State University/ Univ. of Californ, San Diego State Univ.*

9:00 F23 **680.14** Deficits in the brain's reading network in children with autism ameliorated by language remediation. J. O. MAXIMO*; D. L. MURDAUGH; A. R. LEMELMAN; C. E. CRIDER; S. E. O'KELLEY; R. K. KANA. *Univ. of Alabama At Birmingham.*

10:00 F24 **680.15** Global and modular resting state network topology in autism, phenylketonuria, and traumatic brain injury. R. M. ZAMZOW*; J. P. HEGARTY II; K. R. BELLESHEIM; M. H. PRICE; J. D. JOHNSON; G. YAO; D. Q. BEVERSDORF; S. E. CHRIST. *Univ. of Missouri.*

11:00 F25 **680.16** Motor imagery induced event-related desynchronization(ERD) of mu rhythm in ASD. Y. CHEN*; K. TSOU; C. WONG; H. CHEN; Y. FAN; C. WU. *Natl. Taiwan Univ., Child Developmental Assessment & Intervention, Ctr. Dept. of Child & Adolescent Psychiatry, Taipei City Hosp., Dept. of Sociology, Natl. Chengchi Univ., Dept. of psychiatry, Natl. Taiwan Hosp. & Col. of Med.*

8:00 F26 **680.17** Links between thalamocortical and cerebrocerebellar intrinsic functional connectivity in autism spectrum disorder. M. M. BERKEBILE*; A. NAIR; A. J. KHAN; S. NAIR; M. DATKO; R. MUELLER. *San Diego State Univ., UCSD, Suffolk Univ., UCSD.*

9:00 F27 **680.18** ▲ Attention-based learning deficits in individuals with autism suggest constitutively elevated norepinephrine levels. M. C. GRANOVETTER*; E. ELDAR; Y. NIV. *Princeton Univ., Univ. Col. London.*

10:00 F28 **680.19** Resting-state functional connectivity predicts prospective change in social functioning and adaptive behaviors. M. PLITT*; K. A. BARNES; G. L. WALLACE; L. KENWORTHY; A. MARTIN. *Lab. of Brain and Cognition, Natl. Instit, Lab. of Brain and Cognition, NIMH.*

11:00 F29 **680.20** ▲ Investigating the effects of Neuro Feedback training on the functional brain connectivity of children on the autism spectrum. A. COURELLI*; H. COURELLIS; E. FRIEDRICH; J. A. PINEDA. *UCSD, UCSD.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 F30 **680.21** Are sensory problems in autism really sensory? M. ZINNI; M. WESTERFIELD; S. WEE; L. CHUKOSKIE; J. TOWNSEND*. *UCSD, Neuroverse, Inc., UCSD, UCSD.*

9:00 F31 **680.22** Relationship between neural coherence and attention in autism spectrum disorder. A. FLORES; T. ANDERSEN; C. SWICK; R. GOODCASE; J. BRENNAN; I. KOVELMAN; S. BOWYER; R. LAJINESS-O'NEILL*. *Eastern Michigan Univ., Univ. of Michigan, Henry Ford Hlth. Systems.*

10:00 F32 **680.23** Brainstem morphometry in individuals with and without autism spectrum disorders. S. E. CHRIST*; M. C. ABRAHAM; G. YAO; D. Q. BEVERSDORF. *Univ. of Missouri.*

11:00 F33 **680.24** Gamma band oscillations to reveal neural network cortical coherence dysfunction in autism spectrum disorder. K. HUANG*; Y. LIN; S. S. F. GAU. *Natl. Taiwan Univ. Hosp., Grad. Inst. of Brain and Mind Sciences, Natl. Taiwan Univ., Dept. of Psychiatry, Natl. Taiwan Univ. Hospital, Taipei, Taiwan, Dept. of Psychiatry, Natl. Taiwan Univ. Hospital, Taipei, Taiwan, Taipei, Taiwan.*

8:00 F34 **680.25** An altered divisive normalization model of autism. J. PATTERSON*; A. ROSENBERG; D. ANGELAKI. *Baylor Col. of Med.*

POSTER

681. Down Syndrome

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 F35 **681.01** Environmental and pharmacological intervention restores cognitive impairment in a mouse model of Down syndrome. M. DIERSSEN*; S. CATUARA. *CRG - Ctr. For Genomic Regulation.*

9:00 F36 **681.02** Deficits in a radial-arm maze spatial pattern separation task in a mouse model for Down syndrome. M. E. STRINGER; I. ABEYSEKERA; R. J. ROPER; C. R. GOODLETT*. *IUPUI, IUPUI, IUPUI.*

10:00 F37 **681.03** Delayed maturation of visual system in the mouse model of Down syndrome Ts65Dn. M. R. STASKO; D. B. VICTORINO; J. J. SCOTT-MCKEAN; B. L. ZAMPIERI; A. C. COSTA*. *Case Western Reserve Univ.*

11:00 F38 **681.04** Spinal cord abnormalities in the Ts65Dn mouse model of Down syndrome. N. M. AZIZ*; J. L. OLMOS-SERRANO; T. F. HAYDAR. *Boston Univ. Sch. of Med.*

8:00 F39 **681.05** Endogenous DNA damage and cellular death pathways in Down Syndrome. A. PINTO*; M. M. SERAFINI; C. LANNI; S. GOVONI; M. RACCHI; E. PROSPERI; D. NECCHI. *Univ. of Pavia, Inst. of Mol. Genet. of the Natl. Res. Council.*

9:00 F40 **681.06** Microarray analysis of entorhinal cortex stellate cells in the Ts65Dn mouse model of Down syndrome and Alzheimer's disease following maternal choline supplementation (MCS). H. M. CHAO*; M. J. ALLDRED; S. LEE; E. PETKOVA; S. D. GINSBERG. *Nathan Kline Inst., Nathan Kline Inst., New York Univ. Langone Med. Ctr., Nathan Kline Inst., Nathan Kline Inst., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr.*

10:00 F41 **681.07** Hippocampal network activity in a mouse model for Down syndrome. G. J. LEVENGA*; M. ROCHE; H. WONG; P. CAIN; C. A. HOEFFER. *Univ. of Colorado Boulder, Inst. for Behavioral Genet., Dept. of Integrated Physiol.*

11:00 F42 **681.08** Effects of monoacylglycerol lipase inhibitor JZL184 on adult neurogenesis in Ts65Dn mice, a model of Down syndrome. D. FOZOONMAYEH; M. SAWA; J. YU; A. BECKER; A. M. KLESCHEVNIKOV*. *Univ. of California San Diego.*

8:00 F43 **681.09** Effects of maternal choline supplementation (MCS) on neurotrophin and neurotrophin receptor expression in the Ts65Dn mouse model of Down syndrome and Alzheimer's disease. S. D. GINSBERG*; M. J. ALLDRED; I. ELAROVA; A. SALTZMAN; S. LEE; E. PETKOVA; B. E. POWERS; B. J. STRUPP; E. J. MUFSON. *Nathan Kline Inst., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr., Nathan Kline Inst., Nathan Kline Inst., New York Univ. Langone Med. Ctr., Cornell Univ., Cornell Univ., Barrow Neurolog. Inst., Rush Univ. Med. Ctr.*

9:00 F44 **681.10** Lingual and laryngeal myosin heavy chain isoform characterization of the Ts65Dn mouse model of Down syndrome. T. J. GLASS*; N. P. CONNOR. *Univ. of Wisconsin.*

10:00 G1 **681.11** Absence of Down syndrome-related prenatal phenotypes in the Dp(16)1Yey/+ mouse model of Down syndrome. J. GOODLIFFE*; T. F. HAYDAR. *Boston Univ. Sch. of Med.*

11:00 G2 **681.12** ● Mechanism of synaptic vesicle exocytosis in neuronal cell lines derived from the cerebral cortex of and trisomy 16 fetal mouse, an animal model of Down syndrome: Regulation by cortical actin. J. VASQUEZ; A. CARDENAS; P. A. CAVIEDES*. *Univ. de Valparaiso, ICBM Fac Medicine, Univ. of Chile.*

8:00 G3 **681.13** ▲ Ts65Dn mice exhibit rapid forgetting in the social transmission of food preferences task: Further evidence for impaired hippocampal function. N. A. SANTIAGO*; S. E. KIM; B. E. POWERS; B. J. STRUPP. *Cornell Univ.*

9:00 G4 **681.14** Elucidating the role of metals in the Down syndrome brain. N. MALAKOOTI*; M. A. PRITCHARD; R. C. KIM; I. T. LOTT; I. VOLITAKAS; B. R. ROBERTS; D. I. FINKELSTEIN; P. A. ADLARD. *Univ. of Melbourne, Monash Univ., Univ. of California.*

10:00 G5 **681.15** Canonical wnt signalling alterations correlate with hsa21 trisomy and the kinase activity of dyrk1a. S. GRANNO*; D. BERWICK; F. WISEMAN; V. PLAGNOL; M. ZANDA; V. TYBULEWICZ; E. FISHER; K. HARVEY. *UCL, UCL, UCL, UCL, Francis Crick Inst.*

11:00 G6 **681.16** Maternal choline supplementation (MCS) alters CA1 pyramidal neuron gene expression in adult Ts65Dn and normal disomic (2N) offspring. M. J. ALLDRED*; S. LEE; E. PETKOVA; S. D. GINSBERG. *Nathan Kline Inst., New York Univ. Langone Med. Ctr., Nathan Kline Inst., Nathan Kline Inst., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr.*

8:00 G7 **681.17** Netrin-1 induces local translation of Down syndrome cell adhesion molecule in axonal growth cones. S. JAIN; K. WELSHHANS*. *Kent State Univ., Kent State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

682. Developmental Disorders: Angelman's

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 G8 **682.01** A novel neurosteroid improves specific phenotypes of the Angelman Syndrome mouse model. S. L. BLANKENSHIP*; J. GRIECO; M. ROGAWSKI; E. WEEBER. *Univ. of South Florida Morsani Col. of Med., Univ. of South Florida, Univ. California, Davis.*

9:00 G9 **682.02** Exploring alternative diffusion tensor measures to study atypical development in 22q11.2 deletion syndrome. J. VILLALON REINA*; J. GALVIS; C. CORBIN; T. NIR; L. KUSHAN; P. M. THOMPSON; C. BEARDEN. *Imaging Genet. Ctr., Dept. of Psychiatry and Biobehavioral Sci.*

10:00 G10 **682.03** Assessing the neuroanatomy and behaviour in a mouse model of Angelman Syndrome revealed several sex differences. J. ELLEGOOD*; J. K. Y. LAI; K. C. RILETT; R. N. MACKENZIE; J. P. LERCH; J. A. FOSTER. *Hosp. For Sick Children, McMaster Univ.*

11:00 G11 **682.04** Role of Arc in plasticity deficits associated with Angelman syndrome. E. D. PASTUZYN*; J. D. SHEPHERD. *Univ. of Utah.*

8:00 G12 **682.05** Defining the phenotype: Increases in neuronal density and glia-to-neuron ratio in the pre-commissural caudate head in Williams syndrome. K. HANSON*; C. N. BROWN; V. A. JUDD; H. A. ORFANT; U. BELLUGI; K. SEMENDEFERI. *UCSD, UCSB, Salk Inst. for Biol. Res.*

9:00 G13 **682.06** Using machine learning to identify a cortical neuroanatomic signature of 22q11.2 Deletion Syndrome. D. SUN; R. JONAS; E. KRIKORIAN; L. KUSHAN; M. GUDBRANDSEN; E. DALY; C. ECKER; C. MURPHY; D. MURPHY; M. CRAIG; C. E. BEARDEN*. *UCLA, King's Col. London.*

10:00 G14 **682.07** Go/NoGo EEG experiment reveals cortical slowing in motor initiation in the children with cerebral palsy. C. LI; C. CHANG; C. PENG; J. DUANN*. *Natl. Hemei Exptl. Sch., China Med. Univ., China Med. Univ., China Med. Univ.*

11:00 G15 **682.08** Morphological analysis of TSC-1 deleted pyramidal neurons. K. DALEEN; T. MANGOUBI; R. COX; A. YOSHII*. *UIC, MIT, UIC.*

8:00 G16 **682.09** Spontaneous epileptiform activity and low seizure threshold in a mouse model of Angelman Syndrome. A. DAO*; H. A. BORN; A. ANDERSON. *Baylor Col. of Med.*

9:00 G17 **682.10** Motor control during dual-task situations in Williams syndrome. K. WUEBBENHORST*; N. HOLL. *EUFH Med. Rostock, Rostock Univ.*

10:00 G18 **682.11** Strain-specific behavioral deficits in the maternally deficient Ube3a Angelman syndrome mouse model. H. A. BORN*; A. T. DAO; A. E. ANDERSON. *Baylor Col. of Med., Texas Children's Hosp., Baylor Col. of Med.*

11:00 G19 **682.12** ● Dorsal-ventral patterning in a neurodevelopmental model of bipolar disorder. M. BAME*; C. J. DELONG; M. G. MCINNIS; K. S. O'SHEA. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

8:00 G20 **682.13** The basic neurobiology of Pitt-Hopkins Syndrome. A. J. KENNEDY*; J. J. DAY; D. SWEATT. *Univ. of Alabama at Birmingham.*

9:00 G21 **682.14** Molecular characterization of KLHL15 mutations that cause intellectual disability. J. SONG*; R. MERRILL; M. SHAW; R. CARROLL; V. KALSCHEUER; F. MCKENZIE; L. JOLLY; J. GÉCZ; S. STRACK. *Univ. of Iowa, The Univ. of Adelaide, The Univ. of Adelaide, Max Planck Inst. for Mol. Genet., Genet. Services of Western Australia.*

10:00 G22 **682.15** Enhanced transmission at the calyx of Held synapse in a mouse model for Angelman syndrome. T. WANG*; Y. ELGERSMA; J. G. G. BORST. *Erasmus Med. Ctr.*

POSTER

683. Developmental Disorders: Other

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 G23 **683.01** The cognitive and behavioral phenotypes of individuals with CHRNA7 duplications. M. GILLENTINE*; C. P. SCHAAF. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst.*

9:00 G24 **683.02** Behavioral and neuroanatomical characterization of mice with a mutation of the candidate dyslexia susceptibility gene Dyx1c1. A. R. RENDALL*; A. TARKAR; H. M. CONTRERAS-MORA; J. LOTURCO; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut.*

10:00 G25 **683.03** ▲ Statistical learning of spatial cues in virtual hebb-williams maze. L. GUO; Y. CHEN; A. BATTISON*; L. GABEL. *Lafayette Col., Lafayette Col., Lafayette Col., Lafayette Col.*

11:00 G26 **683.04** Sex-dependent effects of adolescent methylphenidate and guanfacine on impulsive choice and cocaine self-administration. K. J. NORMAN; J. L. LUKKES*; B. S. THOMPSON; S. L. ANDERSEN. *McLean Hosp., McLean Hospital, Harvard Med. Sch., McLean Hospital/ Harvard Med. Sch.*

8:00 G27 **683.05** Neural correlates of phonological and orthographic processing in children with developmental dyslexia. X. YAN*; Y. DENG; F. CAO. *Michigan State Univ., Inst. of Psychology, Chinese Acad. Sci.*

9:00 G28 **683.06** Shared prefrontal cortical gene expression profiles between adolescent SHR/NCrl and WKY/NCrl rats showing attentional deficits. I. DELA PENA*; J. DE LA PENA; B. KIM; D. HAN; J. CHEONG. *Loma Linda Univ., Sahmyook Univ., Seoul Natl. Univ. Hosp., Chung-Ang Univ. Med. Sch.*

10:00 G29 **683.07** ● Thalamic centromedian/parafascicular complex DBS in Tourette syndrome modulates motor and non-motor networks. P. TESTINI*; W. S. GIBSON; H. MIN; K. R. GORNY; J. P. FELMLEE; K. M. WELKER; C. A. EDWARDS; M. L. SETTELL; E. K. ROSS; B. T. KLASSEN; K. H. LEE. *Mayo Clin.*

11:00 G30 **683.08** Disrupted white matter connectivity in dyslexic children: A multivariate pattern analysis. Z. CUI*; Z. XIA; H. SHU; G. GONG. *Sch. of Brain and Cognitive Science, Beijing Nor.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 G31 **683.09** ● Reduced electrophysiological connectivity during visual word recognition in dyslexic children. G. ŽARIC*; J. M. CORREIA; G. FRAGA GONZÁLEZ; J. TIJMS; M. W. VAN DER MOLEN; L. BLOMERT; M. BONTE. *Maastricht Univ., Univ. of Amsterdam, IWAL institute.*

9:00 G32 **683.10** Gut microbiome in ADHD and its relation to brain function. E. AARTS*; T. EDERVEEN; J. NAAIJEN; M. ZWIERS; J. BOEKHORST; H. TIMMERMAN; J. GLENNON; B. FRANKE; R. COOLS; J. BUITELAAR; S. VAN HIJUM; A. ARIAS VASQUEZ. *Radboud Univ. Nijmegen, Radboud university medical centre, Radboud university medical centre, NIZO food research B.V., Top Inst. Food and Nutr.*

10:00 G33 **683.11** A father's exposure to nicotine and its surprising consequences for the offspring. D. M. MC CARTHY*; S. E. LOWE; T. J. MORGAN, Jr; E. N. CANNON; F. FAN; J. ZHU; P. G. BHIDE. *Florida State University,College of Med.*

11:00 G34 **683.12** Distinct associations between neural speech discrimination responses and verbal cognition in dyslexic and fluently reading children. L. KIMPPA*; E. PARTANEN; K. ALHO; T. KUJALA. *Cognitive Brain Res. Unit, MINDLab / Ctr. of Functionally Integrative Neurosci. (CFIN), Div. of Cognitive Psychology and Neuropsychology, Cognitive Brain Res. Unit.*

8:00 G35 **683.13** The basal ganglia in relation to executive dysfunction in ADHD and reading disorder. A. C. JAGGER*; A. A. OLECHOWSKI; L. ALVES; M. Y. KIBBY. *Southern Illinois Univ. - Carbondale.*

9:00 G36 **683.14** Functional neuroimaging of visuospatial working memory tasks enables accurate identification of attention deficit and hyperactivity disorder. R. HAMMER*; G. E. COOKE; M. A. STEIN; J. R. BOOTH. *Northwestern Univ., Northwestern Univ., Univ. of Illinois, Urbana-Champaign, Univ. of Washington Sch. of Med., The Univ. of Texas at Austin.*

10:00 G37 **683.15** Variability in the auditory-evoked neural response as a potential mechanism for dyslexia. T. M. CENTANNI*; D. PANTAZIS; L. DENNA; J. D. E. GABRIELI; T. P. HOGAN. *MIT, MGH Inst. of Hlth. Professions.*

11:00 G38 **683.16** Modeling attention-deficit hyperactivity disorder in the albino rat: Comparison between spontaneously hypertensive rats, wistar-kyoto hyperactive, wistar-kyoto hypertensive and naples high excitability lines. E. CARBONI; L. A. RUOCCO; C. TRENO; U. GIRONI CARNEVALE; F. SADILE; R. SERPE; R. ASPIDE; A. G. SADILE*. *Univ. of Cagliari, Second Univ. of Naples, Federico II Univ., M. Aresu, Univ. of Cagliari, Bellaria Hosp. Bologna, Second Univ. of Naples, Sch. of Medicine, Dept. Expt. Med.*

8:00 G39 **683.17** ▲ Virtual hebb williams maze: A practicable early detection method for dyslexia? L. GUO; N. ESCALONA; Y. CHEN; R. SZTEINBERG; D. TRUONG; A. BATTISON; J. BOSSON-HEENAN; J. PFAFFMANN; J. R. GRUEN; E. JOHNSON; L. A. GABEL*. *Lafayette Col., Lafayette Col., Yale Univ. Sch. of Med., Lafayette Col., Yale Univ. Sch. of Med., Boise State Univ., Lafayette Col.*

9:00 G40 **683.18** Animal model of cognitive dysfunction responding to ADHD therapies. E. ANDRIAMBELOSON; E. POIRAUD; B. HUYARD; L. GORJ; S. M. O'CONNOR*; S. WAGNER. *Neurofit, Bionomics Limited.*

10:00 G41 **683.19** Prenatal nicotine exposure produces attention deficits in male and female mice. F. FAN; A. GANNON; O. N. JACKSON; P. S. BOHLEM; S. B. STERLING; D. MCCATHY; T. SPENCER; J. BIEDERMAN; P. G. BHIDE; J. ZHU*. *Florida State Univ. Col. of Med., Massachusetts Gen. Hospital, Harvard Med. Sch.*

11:00 G42 **683.20** ● Pattern recognition in stop-signal fMRI classifying ADHD from siblings and controls. T. WOLFERS*; D. VAN ROOIJ; A. MARQUAND; C. BECKMANN; B. FRANKE; J. K. BUITELAAR. *Radboud Univ., Radboud Univ. Med. Ctr., Univ. Med. Ctr. Groningen, King's Col., Radboud Univ. Med. Ctr., Univ. of Oxford, Radboud Univ. Med. Ctr., Radboud Univ. Med. Ctr.*

8:00 G43 **683.21** ● The glutamate pathway is associated with hyperactive/impulsive symptoms and autism symptoms in Attention-Deficit/Hyperactivity Disorder. J. NAAIJEN*; J. BRALTEN; S. FARAONE; J. GLENNON; B. FRANKE; J. BUITELAAR. *Radboud UMC, State Univ. of New York Upstate Med. Univ.*

9:00 G44 **683.22** Methylation of germ cell DNA as the basis for transgenerational transmission of nicotine-induced cognitive phenotypes. T. J. MORGAN*, JR; D. M. MCCARTHY; S. E. LOWE; P. G. BHIDE. *Florida State Univ.*

10:00 H1 **683.23** Speech-evoked brainstem responses relate to KIAA0319 variants and phonological skills in pre-reading children: A biomarker for dyslexia? E. N. NEEF*; J. BRAUER; A. WILCKE; H. KIRSTEN; B. MÜLLER; M. A. SKEIDE; J. LIEBIG; I. KRAFT; G. SCHAADT; N. KRAUS; F. EMMRICH; A. D. FRIEDERICI. *Max Planck Inst., Fraunhofer Inst. for Cell Therapy and Immunol., Northwestern Univ.*

11:00 H2 **683.24** FEZ1 regulates autophagy and protects against neuropsychiatric manifestation. A. SUMITOMO*; K. NAKAYAMA; A. SAWA; T. TOMODA. *MIC, Grad. Sch. of Med., Kyoto Univ., Kyushu Univ., Johns Hopkins Univ. Sch. of Med.*

8:00 H3 **683.25** The role of dyslexia-susceptibility candidate genes Kiaa0319 and Kiaa0319-Like in brain development. L. GUIDI*; I. MARTINEZ-GARAY; Z. G. HOLLOWAY; M. BAILEY; T. SCHNEIDER; A. P. MONACO; A. VELAYOS-BAEZA; Z. MOLNAR. *Univ. of Oxford, Univ. of Durham.*

9:00 H4 **683.26** A transgenic animal model of the hyperactive phenotype of ADHD. I. I. DELA PEÑA*; J. DELA PENA; H. KIM; I. DELA PENA; J. RYU; B. KIM; D. HAN; J. CHEONG. *Uimyung Res. Inst. For Neuroscience, Sahmyook Univ., Dept. of Pharmaceut. and Administrative Sciences, Loma Linda Univ., Sch. of Life Science, Kyungpook Natl. Univ., Div. of Child & Adolescent Psychiatry, Dept. of Psychiatry, Chung Ang Univ. Med. Sch.*

10:00 H5 **683.27** Altered regional homogeneity in children with ADHD: A surface-based analysis. J. YOO*; I. KIM; B. KIM; B. JEONG. *Korea Advanced Inst. of Sci. and Technol., Seoul Natl. Univ. college of medicine, Seoul Natl. Univ. college of medicine, Korea Advanced Inst. of Sci. and Technol.*

11:00 H6 **683.28** Goal-directed behavior is impaired in Spontaneously Hypertensive Rats and Methylphenidate remediates this deficit in a dose-dependent manner. J. Y. NATSHEH*; F. AL-SHAMMARY; A. KOSC; M. W. SHIFLETT. *Rutgers, The State Univ. of New Jersey, Al-Quds Univ. Med. Sch., Rutgers, the State Univ. of New Jersey.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 H7 **683.29** ● New EEG measures reveal infra-slow fluctuations in both attending and ignoring in adults with ADHD that provide high accuracy in discriminating ADHD from control. A. LENARTOWICZ; G. V. SIMPSON*; S. R. O'CONNELL; S. L. M. NOAH; A. L. HEAD; R. M. BILDER; J. T. MCCRACKEN; S. Y. BOOKHEIMER; R. REID; M. S. COHEN. *UCLA, Think Now.*

9:00 H8 **683.30** Characterizing the effects of Tsc1 mutations on thalamic circuit function. R. MARTINEZ-GARCIA; J. M. SMITH; S. R. CRANDALL; B. VOELCKER; M. ZERVAS; B. W. CONNORS*. *Brown Univ.*

POSTER

684. Developmental Disorders: Animal Models I

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 H9 **684.01** Acute prenatal exposure to valproic acid (VPA) alters social and anxiety-like behaviors in prairie voles. L. L. ELVIR*; H. WANG; F. DUCLOT; Y. LIU; Z. WANG; M. KABBAJ. *Florida State Univ., Florida State Univ.*

9:00 H10 **684.02** Functional connectivity impairments resulting from neurofibromin deficiency are linked to striatal dysfunction. B. SHOFTY*; E. BERGMANN; N. COHEN; A. KAVUSHINSKY; S. CONSTANTINI; I. KAHN. *Technion, Tel-Aviv Med. Ctr.*

10:00 H11 **684.03** Adolescent suppression of prefrontal nicotinic signaling shapes attention. E. NABEL*; M. DEMARS; J. SHORT; H. KOIKE; H. MORISHITA. *Icahn Sch. of Med. At Mount Sinai.*

11:00 H12 **684.04** Brain tissue and plasma amino acid concentration in developing rats prenatally exposed to valproic acid. A. PUIG-LAGUNES*; L. ROCHA; A. PUIG-NOLASCO; I. ZAMORA-BELLO; E. VELAZCO-CERCAS; R. MEDEL-MATUS; J. MEDEL-MATUS; J. MANZO; R. TOLEDO CÁRDENAS; M. LÓPEZ-MERAZ. *Ctr. De Investigaciones Cerebrales, Univ., CINVESTAV, Univ. Veracruzana, Neurol. Div.*

8:00 H13 **684.05** Experience-dependent morphological changes in the indirect basal ganglia pathway mediate repetitive motor behaviors. A. BECHARD; N. CACODCAR; M. A. KING; A. MUEHLMANN; M. H. LEWIS*. *Univ. of Florida, Univ. of Florida, Univ. of Florida, UF Col. of Med.*

9:00 H14 **684.06** Novel murine models of creatine transporter deficiency. L. BARONCELLI*; M. ALESSANDRÌ; J. TOLA; E. PUTIGNANO; D. NAPOLI; M. MIGLIORE; E. AMENDOLA; F. ZONFRILLO; C. GROSS; M. MAZZANTI; V. LEUZZI; G. CIONI; T. PIZZORUSSO. *Neurosci. Institute, CNR, Dept. of Developmental Neuroscience, IRCCS Stella Maris Scientific Inst., Mouse Biol. Unit, European Mol. Biol. Lab. (EMBL), Fondazione Pisa per la Scienza, Dept. of Paediatrics, Child Neurol. and Psychiatry, Sapienza Univ. of Rome, Dept. of Clin. and Exptl. Medicine, Univ. of Pisa, Dept. of Neuroscience, Psychology, Drug Res. and Child Hlth. NEUROFARBA, Univ. of Florence.*

10:00 H15 **684.07** Generation and characterization of a CNS-specific Ikbkap/Elp1 mouse model of Familial Dysautonomia. M. A. MERGY*; M. CHAVERRA; L. GEORGE; N. PODGAJNY; H. WALLER; A. GRINDELAND; C. CUSICK; G. CARLSON; F. LEFCORT. *Montana State Univ., McLaughlin Res. Inst.*

11:00 H16 **684.08** Chemogenetic inactivation of dorsal anterior cingulate cortex neurons disrupts attentional behavior in mouse. H. KOIKE*; M. DEMARS; J. SHORT; E. NABEL; S. AKBARIAN; M. BAXTER; H. MORISHITA. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

8:00 H17 **684.09** Neural activation differences in prefrontal-striatal-cerebellar circuitry and striatal gene expression in a selectively bred hyperactive mouse line. P. MAJDAK*; B. PANOZZO; E. L. GROGAN; T. K. BHATTACHARYA; J. S. RHODES. *UIUC, UIUC.*

9:00 H18 **684.10** Enhanced ascending serotonergic system activity in the Timothy syndrome mouse model of autism spectrum disorder. D. G. EHLINGER*; C. M. PANZINI; K. G. COMMONS. *Boston Children's Hosp/Harvard Med. Sch.*

10:00 H19 **684.11** Ectopic sox2 cells and neuroglial heterotopia in the hindbrain of the frog model of fetal alcohol syndrome. B. KATBAMNA*; T. BEEBE; C. IDE. *Western Michigan Univ., Western Michigan Univ.*

11:00 H20 **684.12** Characterization of BTBR $T^{+tf/J}$ mouse model for autism spectrum disorder. J. PUOLIVÄLI; J. OKSMAN; T. HEIKKINEN; R. PUSSINEN; S. SAARIO*; K. LEHTIMÄKI; A. NURMI. *Charles River Discovery Services.*

8:00 H21 **684.13** Diminished rates of protein synthesis in a mouse model of Tuberous Sclerosis Complex: An mTORC1-dependent phenomenon. R. M. REITH*; T. HUANG; T. BURLIN; C. BEEBE SMITH. *Natl. Inst. of Mental Hlth.*

9:00 H22 **684.14** Congenic and BAC transgenic manipulations of BTBR mice correct interhemispheric connectivity defects. A. SNYDER-KELLER*; K. MANLEY; K. KLUETZMAN; V. J. BOLIVAR. *New York State Dept. of Hlth., U Albany Sch. of Publ. Hlth.*

10:00 H23 **684.15** Foxp2 function in the adult brain. C. A. FRENCH*; M. CORREIA; S. E. FISHER; R. M. COSTA. *Champalimaud Ctr. For the Unknown, Max Planck Inst. for Psycholinguistics.*

11:00 H24 **684.16** ▲ Region-specific requirement for ERK/MAPK signaling in regulating GABAergic interneuron number and excitatory synaptic drive during development. J. S. MARTINEZ; J. D. NICHOLS; T. R. ANDERSON; J. NEWBERN*. *Arizona State Univ., Univ. of Arizona - Col. of Med.*

8:00 H25 **684.17** Analysis of Gtf2i mutant mice exhibiting social behavioral abnormality. S. UEDA*; A. SAWA; T. SAKURAI. *MIC, Grad. Sch. of Med., Kyoto Univ., Dept. of Psychiatry, Johns Hopkins Univ. Sch. of Med.*

9:00 H26 **684.18** Altered adult neurogenesis and enhanced seizure propensity in oligophrenin-1 knock-out mice, a murine model of X-linked intellectual disability. M. ALLEGRA*; C. SPALLETTI; B. VIGNOLI; S. AZZIMONDI; I. BUSTI; M. CANOSSA; M. CALEO. *Inst. Di Neuroscienze CNR, Scuola Superiore Sant'Anna, Univ. di Bologna, Univ. degli Studi di Pisa.*

10:00 H27 **684.19** Neonatal one-day binge-like ethanol exposure results in an acute loss of neurons in the anteroventral and anterodorsal thalamic nucleus in the rat: A stereological investigation. R. M. NAPPER*; G. GIBSON; J. MITTENDORFF-GOODALL. *Univ. of Otago.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 H28 **684.20** Allopregnanolone mediates tics and sensorimotor gating in the D1CT-7 animal model of Tourette syndrome. L. J. MOSHER*; S. C. GODAR; G. PINNA; M. BORTOLATO. *Kansas Univ., Univ. of Illinois.*

8:00 H29 **684.21** Development of Pten mutant neuronal cultures as an *in vitro* model of cortical dysplasia. I. K. NIKOLAEVA*; P. SWIATKOWSKI; T. KAZDOBA; B. CROWELL; G. MAESTRI; B. L. FIRESTEIN; G. D'ARCANGELO. *Rutgers, the State Univ. of New Jersey, Rutgers, the State Univ. of New Jersey.*

9:00 H30 **684.22** Determining the role of gtf2i family transcription factors in social behavior and oxytocin regulation. N. D. KOPP*; J. DOUGHERTY. *Washington Univ. Sch. of Med.*

10:00 H31 **684.23** Transgenerational transmission and modification of behavioral deficits induced by prenatal immune activation. U. WEBER-STADLBAUER*; U. MEYER. *Univ. Zurich - Vetsuisse.*

11:00 H32 **684.24** Neuroanatomical abnormalities in a PAX6 deficient mouse model. A. M. BOBILEV*; K. K. JOHNSON; C. J. BLATCHER; K. HEKMATYAR; J. D. LAUDERDALE. *The Univ. of Georgia, The Univ. of Georgia.*

8:00 H33 **684.25** Neuronal heterotopias affect the activities of distant brain areas and lead to behavioral deficits. K. ISHII*; K. KUBO; T. ENDO; K. YOSHIDA; S. BENNER; Y. ITO; H. AIZAWA; M. ARAMAKI; A. YAMANAKA; K. TANAKA; N. TAKATA; K. F. TANAKA; M. MIMURA; C. TOHYAMA; M. KAKEYAMA; K. NAKAJIMA. *Keio Univ. Sch. of Med., Keio University, Sch. of Med., Grad. Sch. of Medicine, The Univ. of Tokyo, Med. Res. Institute, Tokyo Med. and Dent. Univ., Res. Inst. of Envrn. Medicine, Nagoya Univ., Waseda Univ. Fac. of Human Sci.*

POSTER

685. Developmental Disorders: Animal Models II

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 H34 **685.01** ▲ Hyperactivation of ERK1/2 signaling in developing GABAergic circuits reduces parvalbumin interneuron number and increases cortical excitability. M. A. MORENO*; L. T. HEWITT; G. R. BJORKLUND; C. W. DANIELS; M. F. OLIVE; F. SANABRIA; S. MARSH; D. M. TREIMAN; W. D. SNIDER; J. M. NEWBERN. *Arizona State Univ., Arizona State Univ., Barrow Neurolog. Inst., Univ. of North Carolina Sch. of Med.*

9:00 H35 **685.02** Mechanisms by which systemic administration of insulin-like growth factor ii reverses autism spectrum disorder phenotypes in mice. A. B. STEINMETZ*; S. A. STERN; A. S. KOHTZ; C. M. ALBERINI. *New York Univ.*

10:00 H36 **685.03** Deficiency and haploinsufficiency of bridging integrator 1 (Bin1) causes abnormalities in the developing mouse brain. K. D. ONOS*; L. C. GRAHAM; C. J. ACKLIN; X. WANG; G. W. CARTER; G. R. HOWELL. *The Jackson Lab., Tufts Univ.*

11:00 H37 **685.04** The effects of *in utero* valproic acid exposure on placental transfer and brain development in autism: A T2 MR study. L. S. TRUICA*; S. RAZA; J. K. MCCREARY; I. Q. WHISHAW; R. GIBB. *Canadian Ctr. For Behavioral Neurosci., Canadian Ctr. for Behavioural Neurosci.*

8:00 H38 **685.05** Maternal influences on pup ultrasonic vocalizations in D2 and M5 deficient mice. J. S. YEOMANS*; D. I. WASSERMAN; T. CURRY; B. J. PEREIRA; P. TSELICHTCHEV; M. LAM. *Univ. Toronto, Guelph Univ., McMaster Univ., Univ. Toronto.*

9:00 H39 **685.06** Can a poor sleep/wake cycle contribute to hippocampal malfunction in a mouse model of neurodevelopmental disabilities? D. H. LOH; H. WANG; F. Y. LEE; D. S. WHITTAKER; K. Y. CHENG; E. C. DELL'ANGELICA; C. S. COLWELL; C. A. GHIANI*. *UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

10:00 H40 **685.07** Spontaneous motor behavior of *Drosophila* fragile X mental retardation 1 (dfmr1) mutants reveals perseverative and excessive grooming. D. R. ANDREW*; M. E. MOE; R. L. DOSER; L. L. RESTIFO. *Univ. of Arizona, Lycoming Col., Univ. of Arizona, Univ. of Arizona.*

11:00 H41 **685.08** The impact of maternal diet on large scale network patterns and behavior in macaque offspring. J. S. RAMIREZ*; E. L. SULLIVAN; B. D. MILLS; J. VALLEAU; E. EARL; O. MIRANDA-DOMINGUEZ; D. A. FAIR. *Oregon Hlth. & Sci. Univ., Oregon Natl. Primate Res. Ctr.*

8:00 H42 **685.09** The effects of creatine loss in adult creatine transporter conditional knockout mice. K. C. UDOBI*; M. R. SKELTON. *Cincinnati Children's Res. Fndn.*

9:00 H43 **685.10** Examination of cortizol receptor and endogenous opioid expression in a primate model of self injurious behavior. B. FORET*; M. JACKSON; J. A. FONTENOT; E. C. ROMERO; J. A. SMITH; D. L. HASSELSCHWERT; K. M. SMITH. *Univ. of Louisiana At Lafayette, New Iberia Res. Ctr.*

10:00 H44 **685.11** Involvement of Cadherin-13 in the regulation of the response to early-life stress and environmental enrichment. O. RIVERO*; S. POPP; D. KISER; S. SICH; K. LESCH. *Univ. Clin. Wuerzburg.*

11:00 H45 **685.12** Wdfy3 links defective cortical neurogenesis to autism spectrum disorders. K. ZARBALIS*; L. OROSCO; A. ROSS; S. CATES; S. SCOTT; D. WU; J. SOHN; D. PLEASURE; S. PLEASURE; I. ADAMOPOULOS. *UC Davis/Shriners Hosp. For Children, UC Davis/Shriners Hosp. for Children, UCSF, Dept. of Neurol.*

8:00 H46 **685.13** Developing a ferret model of cortical dysmaturation following newborn brain injury. F. F. GONZALEZ*; A. MIKHAILOVA; P. S. MCQUILLEN; S. F. SORRELLS; J. K. ELLIS. *UCSF, Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco.*

9:00 H47 **685.14** Sex specific deficits in affective behavior in a rodent model of autism. T. M. HENNESSEY*; C. BARRETT; S. RYAN; L. WANG; D. RAINNIE. *Emory Univ., Emory Univ., Emory Univ.*

10:00 H48 **685.15** Gestational ethanol exposure during the first trimester most dramatically decreases gaba activity in the dorsolateral striatum of mice. S. I. SHIN*; V. C. CUZON-CARLSON. *OHSU/ONPRC, OHSU/ONPRC.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 I1 **685.16** ● Behavioral deficits and cholinergic pathway abnormalities in male Sanfilippo B mice. P. DICKSON*; S. Q. LE; S. KAN; B. BENEDICT; Q. BUI; J. CUSHMAN; M. S. SANDS. *Harbor-Ucla, UCLA, Washington Univ. in St. Louis.*

8:00 I2 **685.17** Too much, too early: Effects of sensory overstimulation in early life. S. RAVINDER*; J. S. B. RAMIREZ; D. CHRISTAKIS; J. M. RAMIREZ; S. FERGUSON. *Seattle Children's Res. Inst., Oregon Hlth. and Sci. Univ.*

9:00 I3 **685.18** Dynamics of Inositol 1,4,5-triphosphate receptor type 1 (IP3R1) in neonatal anoxia. J. M. IKEBARA*; M. V. DAMICO; D. S. CARDOSO; F. A. DOS SANTOS; G. S. V. HIGA; S. H. TAKADA; A. H. KIHARA. *Univ. Federal Do ABC.*

10:00 I4 **685.19** Identification of brain morphology defects in *Drosophila* CASK mutants. J. TELLO*; W. GRONENBERG; L. RESTIFO. *Univ. of Arizona.*

11:00 I5 **685.20** Impaired plasticity in adult visual cortex following neonatal hypoxia. E. W. ATKINSON; H. ZHANG; J. E. COLEMAN*. *Univ. of Florida.*

8:00 I6 **685.21** Structural basis underlying therapeutic sensitive period for autistic behaviors in cerebellar mouse model of TSC. P. TSAI*; J. ELLEGOOD; J. LERCH; W. REGEHR; M. SAHIN. *UT Southwestern, Toronto Sick Kids Children's Hosp., Harvard Med. Sch., Boston Children's Hosp.*

POSTER

686. Developmental Disorders: Animal Models III

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 I7 **686.01** Chronic intranasal oxytocin administration in the 16p11.2 mouse model has a marginal effect on behaviour and no effect on neuroanatomy. Z. BUCHWALD*; J. ELLEGOOD; E. ANAGNOSTOU; J. LERCH. *Mouse Imaging Ctr., Bloorview Res. Inst.*

9:00 I8 **686.02** Impairment in spatial memory and alteration in excitatory synaptic transmission in Myosin9a heterozygous mice. E. VEZZOLI*; A. FOLCI; L. MURRU; S. BASSANI; L. PONZONI; F. LONGO; E. MORETTO; L. GEROSA; J. ZAPATA; D. BRAIDA; M. BÄHLER; M. SALA; M. FRANCOLINI; M. PASSAFARO. *Univ. of Milan, PhD Sch. in Exptl. and Clin. Pharmacol. Sciences, Univ. of Milan, CNR Inst. of Neurosci., Univ. of Milan, Westfälische Wilhelms-Universität Münster - Inst. für Molekulare Zellbiologie.*

10:00 I9 **686.03** Long-term cognitive impairment in a murine model of intraventricular hemorrhage in the preterm infant. A. SEGADO-ARENAS; C. INFANTE-GARCIA; J. RAMOS-RODRIGUEZ; S. LUBIAN-LOPEZ; M. GARCIA ALLOZA*. *Hosp. Universitario Puerta del Mar, Div. of Physiology, Sch. of Med.*

11:00 I10 **686.04** ▲ Developmental exposure to fluoxetine alters social behavior and arginine vasopressin receptor binding in prairie voles (Microtus ochragaster) associated with Autism Spectrum Disorder. M. C. PALUMBO*; R. H. LARKE; S. M. FREEMAN; K. L. BALES. *Univ. of California, Davis, California Natl. Primate Res. Ctr.*

8:00 I11 **686.05** A bidirectional threshold of ERK/MAPK signaling regulates axonal outgrowth in developing corticospinal neurons. L. XING*; G. R. BJORKLUND; X. LI; Y. WU; W. D. SNIDER; J. M. NEWBERN. *UNC Chapel Hill, Arizona State Univ.*

9:00 I12 **686.06** Electron microscopic evaluation of myelination in the sensorymotor cortex in a neonatal hypoxic-ischemia model that has hindlimb motor dysfunction without neuronal loss. Y. UEDA*; H. TAKASE; S. MISUMI; A. ISHIDA; C. JUNG; H. HIDA. *Nagoya City Univ. Grad Sch. Med. Sci., Nagoya City Univ. Grad Sch. Med. Sci., Nagoya City Univ. Grad Sch. Med. Sci.*

10:00 I13 **686.07** Crosstalk between paternal Pax6 mutation and aging accelerates vocal communication. R. KIMURA*; K. YOSHIZAKI; K. KOIKE; H. INADA; N. OSUMI. *Tohoku Univ. Grad. Sch. of Med.*

11:00 I14 **686.08** The effects of prenatal exposure to valproic acid on the development of juvenile-typical social play in rats. S. RAZA*; B. T. HIMMLER; S. M. HIMMLER; A. HARKER; B. KOLB; S. M. PELLIS; R. GIBB. *Univ. of Lethbridge.*

8:00 I15 **686.09** ● Complex behavioral and functional phenotype in a rat prenatal valproate model of autism. G. LEVAY*; C. CSOLLE; R. KEDVES; K. SAGHY; K. KORDAS; A. VARGA; T. SPISAK; D. GAJARI; V. ROMAN. *Gedeon Richter Plc., Gedeon Richter Plc., Gedeon Richter Plc.*

9:00 I16 **686.10** Live group B Streptococcus-induced maternal immune activation: Gender dichotomic chorioamnionitis and autistic-like traits in male offspring. M. ALLARD*; J. BERGERON; M. DESCOTEAUX; L. TREMBLAY; M. LEPAGE; L. FORTIER; C. POYART; G. SÉBIRE. *Univ. de Sherbrooke, Univ. Paris Descartes, McGill Univ.*

10:00 I17 **686.11** Effects of perinatal administration of antidepressants on behavior of the adult offspring in Sprague-Dawley rats. J. NELMS SPROWLES*; J. R. HUFGARD; A. GUTIERREZ; R. A. BAILEY; S. A. JABLONSKI; M. T. WILLIAMS; C. V. VORHEES. *Div. of Neurology, Cincinnati Children's Hosp., Cincinnati Children's Res. Fndn., Univ. of Cincinnati.*

11:00 I18 **686.12** Human-Mouse:Disease Connection, utilizing mouse models to gain insights on autism. M. TOMCZUK*; S. M. BELLO; C. L. SMITH; J. A. KADIN; J. E. RICHARDSON; J. T. EPPIG; &. THE MOUSE GENOME INFORMATICS GROUP. *The Jackson Lab.*

8:00 I19 **686.13** Weaker myelin expression in layer II-III of the sensorymotor cortex in a neonatal hypoxic-ischemia model that has hindlimb motor dysfunction without neuronal loss. R. NISHIGAKI; S. MISUMI*; M. SUZUKI; Y. UEDA; S. OGAWA; C. JUNG; H. HIDA. *Nagoya City Univ. Grad Sch.*

9:00 I20 **686.14** Using the valproate-induced autistic spectrum disorder rat model to study the effect of minocycline on social emotional behavior. P. CHEN*; M. NG; C. WANG; H. LIN. *Natl. Cheng Kung Univ. Hosp., Natl. Cheng Kung Univ. Hosp., Col. of Medicine, Kaohsiung Med. Univ., Sch. of Medicine, Natl. Yang-Ming Univ.*

10:00 I21 **686.15** Mechanisms and rescue strategy for complex neuropsychiatric disorders in inborn error of peptide metabolism. M. KIM*; Y. BAE; S. YOON; W. SONG; S. LEE. *Seoul Natl. Univ. Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 I22 **686.16** Gender difference in maternal low protein-diet offsrings: Oxidative stress evaluation. D. SANTANA; D. FERREIRA; S. SOUSA; M. RODRIGUES; E. SANTANA; C. ANDRADE SILVA; B. ANDRADE DA COSTA; C. LAGRANHA*. *UFPE-CAV, CAV-UFPE, Univ. Federal de Pernambuco.*

8:00 I23 **686.17** The role of Slitrk-1 gene in striatal cholinergic interneurons in behavioral manifestations mimicking Tourrette syndrome. J. DU*; H. LEE; L. CHIOU. *Taipei City Hosp., Grad. Inst. of Pharmacology, Col. of Medicine, Natl. Taiwan Univ., Grad. Inst. of Brain and Mind Sciences, Col. of Medicine, Natl. Taiwan Univ.*

9:00 I24 **686.18** Mouse models of human PIK3CA-related segmental overgrowth have treatment-responsive epilepsy. A. ROY*; J. SKIBO; F. KALUME; J. NI; S. RANKIN; Y. LU; W. B. DOBYNS; G. B. MILLS; J. J. ZHAO; S. J. BAKER; K. J. MILLEN. *Seattle Children's Res. Inst., Dana Farber Cancer Inst., St. Jude Children's Res. Hosp., The Univ. of Texas MD Anderson Cancer Ctr.*

10:00 I25 **686.19** The iron deficiency diet during development induces oxidative stress in relation to age and gender. P. VIEYRA-REYES*; C. JIMENEZ-GARCES; M. HERNANDEZ-GONZALEZ; D. MILLA-ALDACO. *Depto Neurofisiologia De La Conducta. Facultad De, Depto Neurofisiologia De La Conducta. Facultad De Medicina. Uaemex, Dept. de Neuropatología Molecular, Inst. de Fisiología Celular, Univ. Nacional Autónoma de México.*

11:00 I26 **686.20** Neurological consequences of a TMEM67 mutation in the Wpk rat model of hydrocephalus. J. S. PETERS; J. A. MEYER*; J. W. SHIM; E. MAUE; S. AHMED; J. C. WATSON; L. JIANG; A. A. RILEY; B. P. MCCARTHY; S. A. PERSOHN; D. H. FULKERSON; P. R. TERRITO; B. L. BLAZER-YOST. *IU Sch. of Med., Indiana Univ. - Purdue Univ., IU Sch. of Med., IU Sch. of Med.*

8:00 I27 **686.21** Genome-wide methylation changes following early and late prenatal immune activation: Focus on the prefrontal cortex. J. RICHETTO*; R. MASSART; M. SZYF; M. A. RIVA; U. MEYER. *Univ. of Zurich - Vetsuisse, McGill Univ., CNRS, McGill Univ., Universita' degli Studi di Milano.*

9:00 I28 **686.22** Decreased performance in an active avoidance task in the valproic acid rat model of autism. J. R. HOLLERMAN*; T. J. BARR; W. Z. PADEN; J. D. CROSS. *Allegheny Col., Allegheny Col.*

10:00 I29 **686.23** ● Behavioral and transcriptomic alterations in 15q13.3 homozygous knockout mice. A. FORSINGDAL*; M. BERTALAN; K. FEJGIN; V. NIELSEN; T. WERGE; J. NIELSEN. *H. Lundbeck A/S, Univ. of Copenhagen.*

11:00 I30 **686.24** Effect of cocaine on striatal dopamine clearance in an animal model of developmental stress and attention-deficit/hyperactivity disorder. V. A. RUSSELL*; J. S. WOMERSLEY; L. A. KELLAWAY; D. J. STEIN; G. A. GERHARDT. *Univ. Cape Town, Univ. Cape Town, Univ. Cape Town, Univ. of Kentucky.*

8:00 I31 **686.25** ▲ Social isolation during the critical period affects excitatory neuronal activity in mouse medial prefrntal cortex. K. YAMAMURO*; H. YOSHINO; Y. OGAWA; K. OKAMURA; Y. NISHIHATA; Y. SAITO; T. KISHIMOTO. *Dept. of Psychiatry, Nara Med. Univ., Dept. of Physiol. 1, Nara Med. Univ.*

9:00 I32 **686.26** Docosahexaenoic acid (DHA) rescued autistic symptoms accompanied by dopaminergic change on a gene/prenatal stress mouse model. F. MATSUI*; K. YOSHIMOTO; P. HECHT; K. FRITSCHE; M. WILL; D. BEVERSDORF. *Kyoto Prefectural Univ. of Medicine, North Me, Univ. of Missouri, Hiroshima Inst. of Technol.*

POSTER

687. Ischemia and Hemorrhage: Animal Models

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 I33 **687.01** Novel usefulness of cylinder test for assessing long-term dysfunction in mouse model of mild ischemic stroke. L. LIU*; M. WEIDER; Y. DWEIK; S. DORE. *Univ. of Florida, Col. of Med., Univ. of Florida, Col. of Med.*

9:00 I34 **687.02** Effects of transient ischemia and D-cycloserine on aromatase expression in the rat brain. J. DHAWAN*; A. BIEGON. *Stony Brook Univ.*

10:00 I35 **687.03** Neuronal remodelling following cerebral photothrombotic infarcts in mice. N. GORLAMANDALA*; J. PARMAR; A. J. CRAIG; J. M. POWER; A. V. KRISHNAN; G. D. HOUSLEY. *UNSW Australia, Inst. of Neurolog. Sci.*

11:00 I36 **687.04** Laropiprant, a clinically tested prostaglandin D2 DP1 receptor antagonist, minimizes brain injury following intracerebral hemorrhage. M. MENDES; S. DORE; A. S. AHMAD*. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:00 I37 **687.05** Intermittent surge of brain-heart coupling prior to sudden death in ischemic rats. F. TIAN*; D. LI; T. LIU; M. WANG; J. BORJIGIN. *Univ. of Michigan, Veterans Admin. Ann Arbor Healthcare Syst.*

9:00 I38 **687.06** Post-stroke spontaneous hypothermia predicts stroke severity and is correlated with mitochondrial impairment. X. REN*; H. HU; D. DOLL; J. SUN; J. WIMSATT; M. KESSLER; J. SIMPKINS. *West Virginia Univesity Robert C. Byrd Healthe Sci. Ctr., West Virginia Univesity Robert C. Byrd Healthe Sci. Ctr., West Virginia Univesity Robert C. Byrd Healthe Sci. Ctr., West Virginia Univesity Robert C. Byrd Healthe Sci. Ctr.*

10:00 I39 **687.07** An examination of sex differences in neocortical excitatory synapse number in the aged rat. V. BORKOWSKI*; S. TSAI; J. L. MARTIN; H. HIOKI; A. E. MARINOPOULOS; K. S. HSU; C. M. PAPADAPOULOS; G. L. KARTJE. *Vincent Borkowski, Loyola Univ. Chicago, Hines VA, Dept. of Cell and Mol. Physiol., Dept. of Morphological Brain Science, Grad. Sch. of Medicine, Kyoto Univ., Loyola Univ. Chicago.*

11:00 I40 **687.08** ● Classification of the lateral cerebellar nucleus neuronal activity during skilled reaching tasks. H. PARK*; J. COOPERRIDER; H. H. CHAN; C. WATHEN; J. T. GALE; M. D. JOHNSON; K. B. BAKER; A. G. MACHADO. *Cleveland Clin., Univ. of Minnesota.*

8:00 I41 **687.09** Granulocyte-colony stimulating factor enhances the angiogenetic effect of indirect bypass surgery for chronic cerebral hypoperfusion in a rat model. K. ORITO*; M. MORIOKA. *Kurume Med. Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 I42 **687.10** An eye-opener for stroke: Pathological consequences of reduced blood flow in the ipsilateral eye following transient middle cerebral artery occlusion in adult rats. C. BORLONGAN*; J. LEE; N. TAJIRI; S. ACOSTA; H. NGUYEN. *Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*

10:00 I43 **687.11** High throughput identification and quantification of peri-infarct depolarization in mouse cortex with optical intrinsic signal imaging. J. BUMSTEAD*; A. KRAFT; X. YANG; A. BAUER; J. CULVER; J. LEE; J. LU. *Washington Univ. In St. Louis, Washington Univ. In St. Louis, Washington Univ. In St. Louis, Guangzhou First Municipal People's Hosp.*

11:00 I44 **687.12** The spatial and temporal distribution of immature, proliferating and mature oligodendrocytes in a rat intracerebral hemorrhage model. M. J. JOSEPH*; J. CALIAPERUMAL; L. C. SCHLICHTER. *Toronto Western Res. Inst., Univ. of Toronto.*

8:00 I45 **687.13** Caffeine and/or hypothermia intervention for neonatal hypoxic-ischemic injury: Effects on behavioral outcomes in a rat model. H. M. CONTRERAS*; A. L. SMITH; A. R. RENDALL; T. S. ROSENKRANTZ; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut Hlth. Ctr.*

9:00 I46 **687.14** Is infarct location a predictor of the degree of post-stroke motor recovery? S. KARTHIKEYAN*; M. JEFFERS; A. CARTER; D. CORBETT. *Univ. of Ottawa, Univ. of Ottawa, Canadian Partnership for Stroke Recovery.*

10:00 I47 **687.15** Evaluation of compensatory re-organization and damage to the contralateral hemisphere following experimentally induced neonatal hypoxic ischemic brain injury in rats. A. L. SMITH*; T. S. ROSENKRANTZ; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut Hlth. Ctr.*

11:00 I48 **687.16** Crossed cerebellar atrophy of the lateral cerebellar nucleus following endothelin-1 induced stroke. H. H. CHAN*; J. COOPERRIDER; A. LIU; H. PARK; J. T. GALE; A. G. MACHADO. *Cleveland Clin., Cleveland Clin.*

8:00 J1 **687.17** Docosahexanoic acid improves mitochondrial funcionality and integrity in neonatal brain after hipoxia-ischemia. E. HILARIORODRIGUEZ*; M. REVUELTA; L. URIGÜEN; A. ALVAREZ; O. ARTEAGA. *Univ. of the Basque Country.*

9:00 J2 **687.18** ● New animal model for brain edema. N. MATSUKI*; T. KITAGAWA; Y. HOSHI; Y. IKEDA-MATSUO; R. KOYAMA; Y. IKEGAYA. *Univ. Tokyo, Kitazato Univ.*

10:00 J3 **687.19** Vulnerable vasculature and inflammation contribute to the exacerbation of transient focal ischemia in a genetic mouse model of type 1 diabetes. A. C. LO*; A. K. W. LAI. *Dept. of Ophthalmology, The Univ. of Hong Kong, The Univ. of Hong Kong.*

11:00 J4 **687.20** Resveratrol improves long-term memory impairments and neuronal conexions in hypoxia-ischemic brain injury in neonatal rats. O. ARTEAGA; M. REVUELTA; L. MARTINEZ-MILLAN; L. URIGÜEN; A. ALVAREZ; A. MARTINEZ-IBARGÜEN; J. PINEDA*; E. HILARIO. *Univ. of the Basque Country-UPV/EHU.*

8:00 J5 **687.21** Withdrawn.

9:00 J6 **687.22** Antioxidant treatments recover the alteration of auditory evoked potentials and reduce morphological damage in the inferior colliculus after perinatal asphyxia in rat. A. MARTINEZIBARGUEN*; O. ARTEAGA; A. ALVAREZ; E. HILARIO; M. REVUELTA. *Univ. of Basque Country Med. Sch., UPV/EHU.*

10:00 J7 **687.23** ● Modulation of the lateral cerebellar nucleus during motor learning. J. COOPERRIDER*; J. T. GALE; R. GOPALAKRISHNAN; H. PARK; C. WATHEN; H. H. CHAN; A. G. MACHADO. *Cleveland Clin.*

11:00 J8 **687.24** Intrauterine ischemia and systemic inflammation: A model of encephalopathy of prematurity. B. CARUSILLO*; V. GERZANICH; J. SIMARD. *Univ. of Maryland-Baltimore.*

8:00 J9 **687.25** Neuroprotective effects of (-)-Phenserine against ischemia/reperfusion injury through the ERK-1/2 signaling pathway *in vitro* and *in vivo.* J. LAI*, ESQ. *Taipei Med. Univ.*

9:00 J10 **687.26** ERV, an analgesic drug, suppresses the development of brain edema after focal ischemia: Analysis using 7-T MRI. Y. NAKAJO*; Q. ZHAO; K. YAMATO; J. ENMI; H. IIDA; H. KATAOKA; J. C. TAKAHASHI; H. YANAMOTO. *Lab. of Neurol. and Neurosurg., NCVC, Rakuwa-kai Otowa Hosp, Dept. of Neurosurg., Natl. Cerebral and Cardiovasc. Ctr., Dept. of Invest. Radiol., Natl. Cerebral and Cardiovasc. Ctr. Res. Inst., Dept. of Cardiovasc. Science, Div. of Surgical Med., Osaka Univ. Grad. Sch. of Med.*

10:00 J11 **687.27** Defining an alternative murine model of cerebral ischemia: Focal vasoconstriction via endothelin-1. C. DOJO SOEANDY*; F. SALMASI; J. HENDERSON. *Univ. of Toronto.*

11:00 J12 **687.28** ▲ Specific and local overexpression of haptoglobin improves anatomical and functional outcomes in the autologous blood intracerebral hemorrhage model. T. ESFANDIARY*; J. L. LECLERC; A. DANG; J. SANTIAGO-MORENO; S. DORE. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

688. Traumatic Brain Injury: Animal Models II

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 J13 **688.01** Blocking gsk-3beta increase post tbi prevents memory impairment. S. A. FARR*; M. L. NIEHOFF; V. B. KUMAR; J. E. MORLEY. *St Louis Univ/VA Med. Ctr., St. Louis Univ., St. Louis Univ.*

9:00 J14 **688.02** Re-expression of developmental thrombospondins after experimental diffuse traumatic brain injury coincides with injury-induced temporal profile of synaptic markers. S. OGLE*; H. MAY; R. K. ROWE; B. RUMNEY; S. JOHNSON; P. ADELSON; J. LIFSCHITZ; T. CURRIER THOMAS. *Univ. of Arizona-College of Med., BARROW Neurolog. Institute@Phoenix Children's Hosp., Banner Univ. Med. Center-Phoenix, Phoenix VA Healthcare Syst., Univ. of Bath, Univ. of Arizona-College of Med.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 J15 **688.03** Noise-induced maladaptive anxiety-like and risk assessment behaviors were reverted by rearing periadolescent rats in an environmental enrichment. S. J. MOLINA; M. MICELI; F. CAPANI; L. R. GUELMAN*. *Fac Med, UBA-CEFYBO-CONICET, Inst. de Investigaciones Cardiológicas "Prof. Dr. Alberto C. Taquini" (ININCA), UBA-CONICET.*

11:00 J16 **688.04** Chronic impairment of cerebral blood flow in a mouse model of repetitive mild traumatic brain injury. C. E. LYNCH*; B. MOUZON; C. BACHMEIER; F. CRAWFORD. *The Roskamp Inst., The Open Univ., James A. Haley Veteran's.*

8:00 J17 **688.05** Time dependent changes in the brain stem of rats exposed to blast-induced neurotrauma. F. GHODDOUSSI*; S. V. SAJJA; E. L. ETNYRE; P. VANDEVORD; M. P. GALLOWAY. *Wayne State University, Sch. of Med., Johns Hopkins Sch. of Med., Wayne State University-School of Med., Sch. of Biomed. Engin. and Sciences, Virginia Polytechnic and State Univ., Wayne State University-School of Med.*

9:00 J18 **688.06** The effects of mild TBI on spatial memory: Impaired discrimination of novel spatial locations rooted in altered *in vivo* hippocampal activity. R. PATERNO*; H. METHENY; B. JOHNSON; C. SMITH; G. XIONG; A. COHEN. *Children Hosp. of Philadelphia, Univ. of Pennsylvania, Perelman Sch. of Med.*

10:00 J19 **688.07** Characterizing the role of hif-1α as a mediator of blood-brain barrier dysfunction in blast neurotrauma. W. HUBBARD; M. LASHOF-SULLIVAN; J. ECK; E. LAVIK; P. J. VANDEVORD*. *Virginia Tech. Univ., Case Western Reserve Univ.*

11:00 J20 **688.08** Longitudinal characterization of gait disturbances following repeated mild traumatic brain injury in rats. A. MOUNTNEY*; J. FLERLAGE; C. RHO; W. YANG; F. TORTELLA; D. SHEAR. *Walter Reed Army Inst. of Res.*

8:00 J21 **688.09** Language impairments in traumatic brain injury: A case series. M. HALL*; L. CLOUTMAN; A. WOOLLAMS. *Univ. of Manchester.*

9:00 J22 **688.10** Early chronic traumatic encephalopathy in young athletes after concussive head injury and a mouse model of impact concussion. L. E. GOLDSTEIN*; C. E. TAGGE; A. M. FISHER; A. GAUDREAU-BALDERRAMA; M. W. WOJNAROWICZ; O. MINAEVA; J. A. MONCASTER; N. CASEY; X. ZHANG; O. MIRY; L. R. VOSE; G. SUBAH; K. R. GOPAUL; G. F. HALL; R. O. CLEVELAND; W. C. MOSS; L. VELISEK; T. D. STEIN; P. K. STANTON; A. C. MCKEE. *Boston Univ. Sch. of Med., Boston Univ. Alzheimer's Dis. Ctr., Boston Univ. Col. of Engin., New York Med. Col., Univ. of Massachusetts Lowell, Univ. of Oxford, Lawrence Livermore Natl. Lab., Boston VA Med. Ctr.*

10:00 J23 **688.11** Visual dysfunction screening in mice after TBI using an optomotor assessment of the optokinetic response. S. FERGUSON*; B. MOUZON; D. APONTE; G. CRYNEN; V. MATHURA; M. MULLAN; F. CRAWFORD. *Roskamp Inst., James A Haley Veterans' Hosp.*

11:00 J24 **688.12** Effect of age and APOE isoform on traumatic brain injury in mice. E. L. CASTRANIO*; A. MOUNIER; J. SCHUG; N. F. FITZ; R. KOLDAMOVA; I. LEFTEROV. *Univ. of Pittsburgh, Univ. of Pennsylvania, Univ. of Pennsylvania.*

8:00 J25 **688.13** ● Choice impulsivity is increased following frontal traumatic brain injury in rats. K. M. MARTENS*; C. L. WELLINGTON; C. A. WINSTANLEY; C. VONDER HAAR. *Univ. of British Columbia.*

9:00 J26 **688.14** ● Increased cocaine self-administration is associated with changes in neuroinflammatory markers following frontal traumatic brain injury. C. VONDER HAAR*; J. N. FERLAND; L. RIPARIP; S. ROSI; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of California-San Francisco.*

10:00 J27 **688.15** ▲ Development and validation of a novel experimental animal model of post-traumatic stress disorder (PTSD). N. SINGH*; D. GARABADU; S. KRISHNAMURTHY. *Indian Inst. of Technol. (BHU).*

11:00 J28 **688.16** Establishment and characterization of a rodent model of repetitive subconcussive traumatic brain injury. M. LONG*; A. M. FITZSIMMONS; K. C. H. PANG; V. SANTHAKUMAR; B. J. PFISTER. *New Jersey Inst. of Technol., Rutgers Grad. Sch. of Biomed. Sci., Neurobehavioral Res. Lab., Rutgers New Jersey Med. Sch.*

8:00 J29 **688.17** A novel mouse model of chronic PTSD and repetitive mild TBI with translation to a human clinical population. M. ALGAMAL*; J. O. OJO; B. MOUZON; M. MULLAN; D. DIAMOND; F. CRAWFORD. *Roskamp Inst., The Open Univ., James A. Haley Veterans' Hosp., Chronic Effects of Neurotrauma Consortium, Univ. of South Florida.*

9:00 J30 **688.18** Transcriptomics of antiepileptogenic targets after traumatic brain injury. A. LIPPONEN*; M. HILTUNEN; J. PAANANEN; N. PUHAKKA; A. PITKÄNEN. *Univ. of Eastern Finland.*

10:00 J31 **688.19** Traumatic brain injury elicits hemisphere-dependent motor and memory deficits in C57BL6/J mice. L. D. O'BRIEN*; T. M. REEVES; A. J. MORALES; A. H. LICHTMAN. *Virginia Commonwealth Univ., Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

11:00 J32 **688.20** Lesion-induced brain plasticity: Massive increase in neuron number in the monkey amygdala following early or late hippocampal lesion. L. J. CHAREYRON*; D. G. AMARAL; P. LAVENEX. *Univ. of Fribourg, UC Davis, Univ. of Lausanne.*

8:00 J33 **688.21** Head-down tilt as a model for intracranial hypertension during spaceflight. C. A. FULLER*; H. GOMPF; E. L. ROBINSON; T. M. HOBAN-HIGGINS. *Univ. of California.*

9:00 J34 **688.22** A mouse model of blast-induced mild traumatic brain injury that yields behavioral deficits and neuron injury is associated with neuroinflammation in the forebrain. B. T. WRIGHT*; Y. GAO; S. A. HELDT; W. BU; Y. DENG; N. DEL MAR; M. G. HONIG; A. J. REINER. *Univ. of Tennessee Hlth. Sci. Ctr.*

10:00 J35 **688.23** Radial water tread maze distinguishes cognitive deficits in mice with traumatic brain injury and Alzheimer's disease. M. M. CLINE*; J. YUMUL; L. HYSA; D. MURRA; E. BRIM; G. GARWIN; W. C. LADIGES; S. MINOSHIMA; D. J. CROSS. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Utah.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 J36 **688.24** The role of tau and other pathologies in an animal model of repetitive mild traumatic brain injury. B. C. MOUZON*; C. BACHMEIER; J. OLUBUNMI; S. FERGUSON; V. MATHURA; C. LYNCH; R. WILLIAMS; E. MUFSON; F. CRAWFORD. *The Roskamp Inst., James A. Haley Veterans' Hosp., The Open Univ., RTI Intl., Barrow Neurolog. Inst.*

8:00 J37 **688.25** Impaired fatty acid oxidation after traumatic brain injury exaggerates the glial response and promotes cell death. J. N. JERNBERG*; C. BOWMAN; M. WOLFGANG; J. LEE; S. SCAFIDI. *Johns Hopkins, Johns Hopkins.*

9:00 J38 **688.26** Human chorionic gonadotropin treatment improves cognitive and motor performance following focal penetrating traumatic brain injury in adult male rats. R. I. GEDDES*; K. HAYASHI; M. WEHBER; R. A. RAUH; S. V. MEETHAL; C. S. ATWOOD. *Univ. of Wisconsin at Madison.*

10:00 J39 **688.27** Neuropathological alterations in the hilus after diffuse brain injury. M. R. GROVOLA; J. P. HARRIS; D. CULLEN; J. A. WOLF*. *Philadelphia Veterans Affairs Med. Ctr., Univ. of Pennsylvania.*

11:00 J40 **688.28** Diffuse traumatic brain injury affects chronic corticosterone levels and alters neuron morphology in the paraventricular nucleus. T. C. THOMAS*; R. K. ROWE; B. M. RUMNEY; H. G. MAY; C. D. CONRAD; S. M. HARMAN; P. A. PERMANA; P. D. ADELSON; J. LIFSHITZ. *Univ. of Arizona; Col. of Med. - Phoenix, BARROW Neurolog. Inst. at Phoenix Children's Hosp., Phoenix VA Hlth. Care Syst., Univ. of Bath, Univ. of Arizona; Col. of Med. - Phoenix, Arizona State Univ.*

8:00 J41 **688.29** The effect of prolonged sleep deprivation on cognitive and behavioral outcomes following mild traumatic brain injury. R. CHIARIELLO; A. SHAH; N. WILKINS; M. BUDDE; C. OLSEN; F. A. PINTAR; D. THOMAS; B. D. STEMPER*. *Dept. of Neurosurgery, Med. Col. of Wisconsin, Med. Col. of Wisconsin, Veterans Affairs Med. Ctr., Dept. of Pediatric Emergency Med. Med. Col. of Wisconsin.*

POSTER

689. Neurotoxicity: Protective Mechanisms

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 J42 **689.01** Gamma-decanolactone effects on pilocarpine-mediated seizure in mice and oxidative stress parameters in N9 Cells. P. PEREIRA*; P. PFLÜGER; V. COELHO; L. DA SILVA; C. VIEIRA; N. BERWIG; R. STAUB; C. VIAU; J. SAFFI. *Univ. Federal do Rio Grande do Sul, Univ. Federal de Ciências da Saúde de Porto Alegre.*

9:00 J43 **689.02** An animal model of brain reversible vasogenic edema. S. KIMURA*; Y. YANG; J. THOMPSON; Y. YANG; L. SILLERUD; G. ROSENBERG. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Hlth. Sci. Ctr.*

10:00 J44 **689.03** Differential effects of seed extracts of citrus fruits against hydrogen peroxide-induced toxicity in SH-SY5Y cells. K. SUEN*; W. TANG; P. HAU; H. MA; P. CHOW; Y. HUNG; P. SHI; W. CHAU; W. CHAN; C. CHANG. *Po Leung Kuk Laws Fndn. Col., The Univ. of Hong Kong.*

11:00 J45 **689.04** Activation of glp-1 receptors up-regulates apurinic/apyrimidinic endonuclease 1 protects neurons against oxidative dna damage. J. YANG*; Y. LIN; P. CHUANG; S. CHEN. *Kaohsiung Chang Gung Mem. Hosp.*

8:00 J46 **689.05** ▲ Social isolation alters the toxic effects of ethanol in planarians. T. MCCHARLES; B. LOVELL; N. LANDRY; A. STILLAR; A. WEEKS; M. J. SAARI*. *Nipissing Univ.*

9:00 J47 **689.06** ● Development and utilisation of a high content assay to identify putative small molecule modulators of expression and trafficking of the neuronal survival factor NMNAT2. J. FRANCIS; D. F. FISCHER*; G. SMITH; G. MCALLISTER; W. J. RAY; M. GECK DO; D. VENKITARAMANI. *BioFocus, Charles River, Biofocus, Charles River, Inst. for Applied Cancer Science, MD Anderson Cancer Ctr.*

10:00 J48 **689.07** Insulin receptor substrate -1 protects against neonatal hypoxic-ischemic encephalopathy. Y. TU*; H. SHIH; C. HUANG. *Natl. Cheng Kung Univ. Hospital,, Natl. Cheng Kung Univ. Hospital, Tainan, Taiwan, Natl. Cheng Kung Univ. Hospital, Tainan, Taiwan.*

11:00 K1 **689.08** Orchestrated activation of the glutamatergic and cannabinoid systems can promote neuroprotection in primary cultured corticostriatal neurons. F. M. RIBEIRO*; E. M. L. BATISTA; T. H. FERREIRA-VIEIRA; F. A. MOREIRA. *Univ. Federal De Minas Gerais.*

8:00 K2 **689.09** Timed released of cerebrolysin using drug loaded titanate nanospheres improves behavioral functions and reduces brain pathology in Parkinson's disease. A. OZKIZILCIK*; A. SHARMA; D. F. MURESANU; J. V. LAFUENTE; Z. R. TIAN; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *Univ. of Arkansas, Uppsala Univ. Hopsital, Univ. of Med. & Pharm., Univ. of Basque Country, Univ. of Arkansas, Indian Inst. of Technology, Banaras Hindu Univ., Ever NeuroPharma.*

9:00 K3 **689.10** Nanowired delivery of Bradykinin BK2 receptor antagonist HOE-140 induces neuroprotection in heat stroke through nitric oxide synthase and dynorphin downregulation. L. FENG*; A. SHARMA; D. F. MURESANU; J. V. LAFUENTE; A. OZKIZILCIK; Z. R. TIAN; H. S. SHARMA. *Bethune Intl. Peace Hosp., Uppsala Univ. Hosp., Univ. of Med. & Pharm., Univ. of Basque Country, Univ. of Arkansas.*

10:00 K4 **689.11** Endocytosis of Nanomedicines: The case of glycopeptide engineered PLGA nanoparticles. G. TOSI*; B. RUOZI; A. VILELLA; F. PEDERZOLI; F. FORNI; M. ZOLI; M. A. VANDELLI; D. BELLETTI; A. SHARMA; H. S. SHARMA. *Te.far.t.I, Dept of Life Sciences, Univ. of Modena and Reggio Emilia, Univ. of Modena and Reggio Emilia, Te.far.t.I, Dept of Life Sciences, Univ. of Modena and Reggio Emilia, Nanomedicine Group, Te.Far.T.I. center, Uppsala Univ. Hopsital.*

11:00 K5 **689.12** Nanowired cerebrolysin reduces Sleep deprivation induced regional brain derived neurotrophic factor decline and exacerbation of brain pathology and behavioral dysfunctions. A. SHARMA*; D. MURESANU; J. V. LAFUENTE; H. MOESSLER; A. OZKIZILCIK; Z. R. TIAN; R. PATNAIK; H. S. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Univ. of Basque Country, Ever NeuroPharma, Univ. of Arkansas, Indian Inst. of Technology, Banaras Hindu Univ., Uppsala Univ. Hopsital.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 K6 **689.13** Repeated forced swim stress exacerbates methamphetamine-induced neurotoxicity. Neuroprotective effects of nanowired delivery of a 5-HT3-receptor antagonist ondansetron. J. V. LAFUENTE*; A. SHARMA; E. A. KIYATKIN; D. F. MURESANU; R. PATNAIK; H. S. SHARMA. *Univ. of Basque Country, Uppsala Univ. Hopsital, Natl. Inst. on Drug Abuse, NIDA-IRP, Univ. of Med. & Pharm., Indian Inst. of Technology, Banaras Hindu Univ.*

9:00 K7 **689.14** SiO2-nanoparticles associated with hypertension exacerbates blood-brain barrier breakdown, edema formation and cellular injuries following traumatic brain injury. A. NOZARI*; A. SHARMA; J. V. LAFUENTE; D. F. MURESANU; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *Massachusetts Gen. Hosp., Uppsala Univ. Hopsital, Univ. of Basque Country, Univ. of Med. & Pharm., Indian Inst. of Technology, Banaras Hindu Univ., Ever NeuroPharma.*

10:00 K8 **689.15** Nanodelivery of Mesenchymal Stem Cells with Cerebrolysin potentiates neprilysin level and decreases brain pathology and amyloid-beta peptide in Alzheimer's disease. H. S. SHARMA*; D. F. MURESANU; J. V. LAFUENTE; Z. TIAN; A. OZKIZILCIK; H. MOESSLER; R. PATNAIK; A. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Univ. of Basque Country, Univ. of Arkansas, Ever Neuro Pharma, Banaras Hindu University, Indian Inst. of Technol., Uppsala Univ. Hosp.*

11:00 K9 **689.16** Cerebrolysin improves memory and learning of the spontaneously hypertensive rats. V. CABRERA PEDRAZA*; C. SOLIS; R. VAZQUEZ-ROQUE; F. DE LA CRUZ; S. ZAMUDIO; M. GOMEZ-VILLALOBOS; G. FLORES. *Escuela Nacional De Ciencias Biologicas, IPN, Inst. de Fisiologia, Benemerita Univ. Autonoma de Puebla.*

8:00 K10 **689.17** L-Lactate as a neuroprotective agent against excitotoxicity: Implication of an energy-dependent process. P. JOURDAIN*; I. ALLAMAN; P. MARQUET; P. J. MAGISTRETTI. *EPFL, CNP-CHUV, KAUST.*

9:00 K11 **689.18** ▲ Neuroprotection with androgens following partial motoneuron depletion: A role for microglia. B. J. KILEY; D. R. SENGELAUB*. *Indiana Univ.*

10:00 K12 **689.19** AhR null mice are protected against neurotoxic insult. L. G. GARCIA*; F. PEREZ-SEVERIANO; D. GONZALEZ-ESQUIVEL; G. ELIZONDO; J. SEGOVIA-VILA. *CINVESTAV, Inst. Nacional de Neurología y Neurocirugía.*

11:00 K13 **689.20** The effects of low and high doses of 17β-estradiol on focal cerebral ischemia in rats. E. INGBERG*; E. THEODORSSON; A. THEODORSSON; J. O. STRÖM. *Linköping University/Ike.*

8:00 K14 **689.21** The effects of hemoxygenase-1 on lipopolysaccharide-induced neuroinflammation in astrocyte cultures. J. WANG*; C. CHEN; S. CHEN. *Dept Nursing (Basic Med. Sci), Hungkuang Univ., Li-Shin Hosp., Dept. of Nursing (Basic Med. Science).*

9:00 K15 **689.22** Differential targeting of HSPA (HSP70) heat shock protein family members in human neuronal cells following cellular stress. C. A. DEANE; I. R. BROWN*. *Univ. of Toronto Scarborough.*

10:00 K16 **689.23** Inhibition of the IL-1 and TNF signaling pathways for neuroprotection is additive following acute soman-induced seizure in mice. E. A. JOHNSON*; J. IRWIN; K. LAITIPAYA; J. CHANDLER; L. SHUMWAY; T. FERRARA-BOWENS; M. WEGNER. *US Army Med. Res. Inst. of Chem. Def.*

11:00 K17 **689.24** Control of neuronal ryanodine receptor mediated calcium signaling by steroid hormone receptors. P. KOULEN*. *Univ. of MO - Kansas City.*

8:00 K18 **689.25** Glycyrrhizin suppresses oxidative stress in the hippocampus and olfactory bulb on status epilepticus in a lithium-pilocarpine seizure model. S. GONZÁLEZ-REYES*; J. J. SANTILLÁN-CIGALES; J. PEDRAZA-CHAVERRI; R. GUEVARA-GUZMÁN. *UNAM, UNAM, UNAM.*

9:00 K19 **689.26** X-irradiation-induced decrease in drebrin clusters within dendritic spines of cultured hippocampal neurons: Association with NMDA receptor and histone deacetylase activities. S. MIAO; N. KOGANEZAWA; T. HIRUMA; K. HANAMURA; A. PUSPITASARI; R. T. ROPPONGI; T. SHIRAO*. *Gunma Univ. Grad Sch. Med.*

10:00 K20 **689.27** Protective effects of PACAP against alcohol-induced toxicity in SH-SY5Y cells. S. MANAVALAN*; D. BROWN; L. AKINFIRESOYE; S. TADESSE; K. MANAYE; A. TAMAS; D. REGLODI; Y. TIZABI. *Univ. of Pecs, Hungary, Howard Univ. Col. of Med., Howard Univ. Col. of Med.*

11:00 K21 **689.28** Intranasal CNS delivery of catalytic bio-scavengers to protect against organophosphate threat agents: Preliminary studies. A. P. APPU*; A. PEETHAMBARAN; J. K. S. KRISHNAN; J. R. MOFFETT; A. M. A. NAMBOODIRI. *Uniformed Services Univ. of Hlth. Sci.*

8:00 K22 **689.29** Developmental regulation of stress-inducible neuroprotective protein pDING in human fetal brain with maternal alcohol and SSRI exposure. N. DARBINIAN*; N. MERABOVA; G. TATEVOSIAN; M. ALAMGIR; E. CHABRIERE; L. GOETZL. *Temple Univ. Sch. of Med., Aix-Marseille Univ., Univ. de France, Temple Univ.*

9:00 K23 **689.30** Hyperhomocysteinemia increases ER stress and Impairs autophagic flux in murine therapy brain that is reversible with vitamin therapy. M. TRIPATHI*; C. ZHANG; B. K. SINGH; R. A. SINHA; K. MOE; D. DE SILVA; P. M. YEN. *Natl. Neurosci. Inst., Duke-NUS Grad. medical Sch., Newcastle Univ. Med.*

POSTER

690. Models of Neurodegeneration

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 K24 **690.01** Inhibition of quinolinate neosynthesis causes a rapid increase in extracellular kynurenic acid levels in the rat brain. H. WU*; G. COSTANTINO; F. M. NOTARANGELO; R. SCHWARCZ. *Maryland Psych Res. Ctr, Univ. Maryland Sch. Med., Dept. di Farmacia, Universitaì degli Studi di Parma.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 K25 **690.02** ▲ Effect of kynurenines on copper toxicity in primary cultured astrocites. D. RAMÍREZ ORTEGA*; B. PINEDA; D. GONZÁLEZ ESQUIVEL; C. RÍOS; V. PÉREZ DE LA CRUZ. *Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco.*

10:00 K26 **690.03** Kynurenine pathway metabolites modulate neurodegeneration and related phenotypes in *Drosophila.* C. BREDA; K. V. SATHYASAIKUMAR*; F. M. NOTARANGELO; S. S. IDRISSI; J. G. ESTRAINERO; G. G. L. MOORE; E. W. GREEN; C. P. KYRIACOU; R. SCHWARCZ; F. GIORGINI. *Univ. of Leicester, Maryland Psychiatric Res. Center, Univ. of Maryland Sch. of Med.*

11:00 K27 **690.04** Dibutyl phthalate affects Synaptic growth and stability at the *Drosophila* NMJ. K. M. DE LEON*; W. AQUINO; B. MARIE. *Inst. of Neurobio., Inst. of Neurobio.*

8:00 K28 **690.05** Cytomegalovirus affects differentiation and function of neural stem cells upon infection. H. M. GONZÁLEZ*; A. CARRIZALES-HUERTA; M. JIMÉNEZ-CAPDEVILLE; D. NOYOLA; C. G. CASTILLO; A. MARTÍNEZ-SERRANO. *Facultad De Medicina, U.A.S.L.P., Facultad de Ciencias Químicas, Univ. Autónoma de San Luis Potosí, Ctr. de Biología Mol. Severo Ochoa, Univ. Autónoma de Madrid.*

9:00 K29 **690.06** Persistent systemic and brain inflammation and altered brain cholinergic system constituents in murine sepsis survivors. N. ZAGHLOUL; H. SILVERMAN; H. PATEL; S. VALDES FERRER; M. DANCHO; A. REGNIER-GOLANOV; P. OLOFSSON; E. V. GOLANOV*; C. METZ; M. AHMED; S. S. CHAVAN; K. J. TRACEY; V. A. PAVLOV. *North Shore–LIJ Hlth. Syst., The Feinstein Inst. for Med. Res., Baylor Col. of Med., Houston Methodist Hosp.*

10:00 K30 **690.07** The tadpole visual system as a model for assessing the effects of thyroid hormone disruption on brain development. C. K. THOMPSON*; M. TURKEN; K. D. MEDGYESY; H. T. CLINE. *The Scripps Res. Inst., Univ. City High Sch., UCSD.*

11:00 K31 **690.08** An acute inhalation study on the effect of Hydrofluorocarbon 134a gas on the frontal cerebral cortex of albino wistar rats. E. DIKE*; M. N. WOGU; E. EKONG. *Univ. of Port-Harcourt.*

8:00 K32 **690.09** Gender differences in binge alcohol-induced brain damage. M. E. MAYNARD*; C. R. ROBINSON; E. A. BARTON; J. L. LEASURE. *Univ. of Houston.*

9:00 K33 **690.10** Apomorphine attenuate ethanol-induced neurodegeneration in adult rat cortex. M. JO*; H. BADSHSH; N. MUHAMMAD; M. KIM; M. KIM. *Gyeongsang Natl. Univ.*

10:00 K34 **690.11** The potential role of Sigma-1 receptor chaperone in the genesis of autophagosome in neuronal cells. T. WENG*; T. SU; S. TSAI. *Natl. Inst. On Drug Abuse.*

11:00 K35 **690.12** ▲ Antiallodynic interaction of dexmedetomidine plus morphine in cisplatin-induced neuropathic pain in rat. A. ZUÑIGA*; J. REYES GARCÍA; F. FLORES MURRIETA; H. ROCHA GONZALEZ. *INER, INSTITUTO POLITECNICO NACIONAL.*

8:00 K36 **690.13** Intracerebroventricular injection of functionalized titanium dioxide nanoparticles (NBelyax®) and electroencephalographic activity in freely moving rats. V. M. MAGDALENO-MADRIGAL*; G. CONTRERAS-MURILLO; R. FERNÁNDEZ-MAS; P. ARTEAGA-LÓPEZ; G. LEÓN-GUTIÉRREZ; L. ALBARRÁN; S. LEÓN-GUTIÉRREZ; E. GONZÁLEZ-TRUJANO. *Inst. Nacional De Psiquiatría Ramón De La Fuente Muñiz, GRESMEX S.A. de C.V.*

9:00 K37 **690.14** H3K9 acetylation profile and behavioral changes in response to arsenic exposure. N. F. FITZ*; K. NAM; A. MOUNIER; E. L. CASTRANIO; R. KOLDAMOVA; I. LEFTEROV. *Univ. of Pittsburgh.*

10:00 K38 **690.15** ● Therapeutic ionizing radiation-induced cognitive deficits: Modulation by the neurosteroid progesterone. F. ATIF*; S. YOUSUF; J. WANG; D. G. STEIN. *Emory Univ.*

11:00 K39 **690.16** Omic analyses identify lipid and bioenergetic disturbances in the brains of a GWI mouse model at 16-months post-exposure. L. ABDULLAH*; J. E. EVANS; H. MONTAGUE; G. CRYNEN; J. REED; T. NGUYEN; M. HOWLAND; B. MOUZON; Z. ZAKIROVA; T. EMMERICH; D. PARIS; G. AIT-GHEZALA; M. MULLAN; C. BACHMEIER; F. CRAWFORD. *Roskamp Inst., Roskamp Inst.*

8:00 K40 **690.17** Neuronal and microglial cells differ in their sensitivity to glutamate toxicity. H. O. AWWAD*; S. DONG; A. EDWARDS. *Univ. of Oklahoma Hlth. Sci. Ctr.*

9:00 K41 **690.18** Targeting chemobrain: A novel mechanism to prevent chemotherapy induced cognitive deficits in C57Bl/6 mice. P. HUEHNCHEN*; W. BOEHMERLE; M. ENDRES. *Charite Universitätsmedizin Berlin.*

10:00 K42 **690.19** Immunohistochemical study of nrf2-antioxidant response element as of oxidative stress induced by cadmium in developing rats. M. MENDEZ-ARMENTA*; S. MONTES; D. JUÁREZ-REBOLLAR; C. NAVA-RUÍZ; A. SÁNCHEZ-GARCÍA; Y. HERAS-ROMERO; C. RIOS; A. DIAZ-RUÍZ. *Natl. Inst. Neurol Neurosurg.*

11:00 L1 **690.20** Chemical warfare agent-induced gene expression changes in blood and potential use as diagnostic biomarkers. H. M. HOARD-FRUCHEY*; C. C. ROTHWELL; A. A. MELBER; C. S. HOFMANN; K. D. MOTTER; J. W. SEKOWSKI. *USAMRICD, USAECBC.*

8:00 L2 **690.21** Insulin-like growth factor-1 accelerates recovery from botulinum neurotoxin-induced paralysis. J. P. APLAND*; C. H. PHUNG; E. J. GLOTFELTY; T. M. RUSSO; P. M. MCNUTT; M. ADLER. *USAMRICD, USAMRICD.*

9:00 L3 **690.22** Repeated depressive stress exacerbates amyloid-beta peptide infusion induced Alzheimer's disease brain pathology. Neuroprotective effects of PLGA-NPs loaded cerebrolysin. A. K. PANDEY*; A. SHARMA; J. V. LAFUENTE; G. TOSI; B. RUOZI; D. F. MURESANU; H. MOESSLER; R. J. CASTELLANI; R. PATNAIK; H. S. SHARMA. *Senior Res. Fellow, IIT-BHU, Uppsala Univ. Hopsital, Univ. of Basque Country, Nanomedicine Group, Te.Far.T.I. center, Univ. of Med. & Pharm., Ever NeuroPharma, Univ. of Maryland Sch. of Med., Indian Inst. of Technology, Banaras Hindu Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 L4 **690.23** Blood-brain barrier disruption, brain edema formation and neuronal and glial injuries caused by Systemic administration of functionalized Gold Nanoparticles. P. K. MENON*; A. SHARMA; D. F. MURESANU; J. V. LAFUENTE; R. PATNAIK; A. NOZARI; H. S. SHARMA. *Banaras Hindu Univ., Uppsala Univ. Hopsital, Univ. of Med. & Pharm., Univ. of Basque Country, Indian Inst. of Technology, Banaras Hindu Univ., Massachusetts Gen. Hospital, Harvard Univ.*

11:00 L5 **690.24** Cerebrolysin reduces exacerbation of nitric oxide synthase, hemeoxygenase and associated blood-brain barrier breakdown and neuropathology following heat stroke in diabetes. D. F. MURESANU*; A. SHARMA; A. NOZARI; R. PATNAIK; J. V. LAFUENTE; H. MOESSLER; A. OZKIZILCIK; Z. R. TIAN; H. S. SHARMA. *ROMANIAN SOCIETY FOR THE STUDY OF NEUROPROTECTION AND NEUROPLASTICITY, Uppsala Univ. Hopsital, Massachusetts Gen. Hospital, Harvard Univ., Indian Inst. of Technology, Banaras Hindu Univ., Univ. of Basque Country, Ever NeuroPharma, Univ. of Arkansas.*

8:00 L6 **690.25** ▲ Nicotine neurotoxicity in cold environment is exacerbated by alcohol and carbon nanoparticles. S. SHARMA*; D. F. MURESANU; A. NOZARI; J. V. LAFUENTE; R. PATNAIK; A. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Massachusetts Gen. Hospital, Harvard Univ., Univ. of Basque Country, Indian Inst. of Technology, Banaras Hindu Univ., Uppsala Univ. Hopsital.*

POSTER

691. Oxidative Stress-Induced and Other Mechanisms of Neurodegeneration

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 L7 **691.01** Regulation of mirna biogenesis in neuronal stress. Q. YANG*; W. LI; H. SHE; J. DOU; D. DUONG; Y. DU; S. YANG; N. SEYFRIED; Z. MAO. *Tangdu Hosp. / the Fourth Military Med. Univ., school of medicine, Emory Univ., school of medicine, Emory Univ., pharmacology, Univ. of North Texas Hlth. Sci. Ctr., school of medicine, Emory Univ.*

9:00 L8 **691.02** Regulation of nuclear microRNA processing by MeCP2 and impact on dendritic growth. T. CHENG*; Z. QIU. *Inst. of Neuroscience, Chinese Acad. of Scie.*

10:00 L9 **691.03** Loss of Drosha underlies Abeta-induced neurotoxicity. Z. MAO*; W. LI; H. SHE; J. DOU; R. COHEN; G. GAO; Q. YANG. *Emory Univ. Sch. Med., Emory Univ. Sch. Med., The Fourth Military Med. Univ.*

11:00 L10 **691.04** A sarin-like organophosphate induces non-cholinergic cell death via an inflammatory response in SK-N-SH cells. Y. ARIMA*; A. NAMERA; K. YOSHIMOTO; K. MURATA; M. NAGAO. *Hiroshima Univ., Hiroshima Univ., Hiroshima Inst. of Technol.*

8:00 L11 **691.05** Regulation of the expression of neurodegenerative markers through neuronal energy metabolism. M. FLORES LEÓN*; C. ARIAS ÁLVAREZ. *Univ. Nacional Autónoma De México.*

9:00 L12 **691.06** Amyloid induced MRI changes in aged rabbit resembles Alzheimer's disease brain. K. SAI KRISHNA; B. RAMESH; M. SHARMA; J. KOSAGISHARAF*. *KIMS Med. Col. and Hosp., Agr. college, KIMS Med. Col. and Hosp., INDICASAT AIP.*

10:00 L13 **691.07** ▲ Safeguarding effect of protein disulfide isomerase in Aβ intra-hippocampal injected rats; time matters. P. SADEGHI*; F. SHAERZADEH; F. KHODAGHOLI. *Neurosci. Res. Ctr., Shahid Beheshti Univ. of Med. Sci., Hormozgan Univ. of Med. Sci.*

11:00 L14 **691.08** Radiation induces death of proliferating cells, microglia activation, and blood brain barrier damage in the cerebellum after cranial irradiation in young rats. K. ZHOU*; J. EK; M. BOSTRÖM; T. LI; C. XIE; Y. XU; K. BLOMGREN; C. ZHU. *Univ. of Goteborg, Karolinska Univ. Hosp.*

8:00 L15 **691.09** Palmitate impairs insulin signaling in hippocampal neurons. H. M. DE MELO*; G. S. SEIXAS DA SILVA; S. T. FERREIRA; F. G. DE FELICE. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro.*

9:00 L16 **691.10** Manganese loading induces male interspecific predatory aggression in nonaggressive rats. L. GELAZONIA*; I. LAZRISHVILI; T. BIKASHVILI; N. MITAGVARIA. *I. Beritashvili Ctr. Of Exptl. Biomedicine.*

10:00 L17 **691.11** ▲ Hexahydrobenzene produces oxidative stress, and glial reactivity in the adult mouse hippocampus. T. V. CAMPOS ORDONEZ*; D. ZARATE-LOPEZ; V. LOPEZ-VIRGEN; J. VEGA-RIQUER; A. GALVEZ-CONTRERAS; N. MOY-LOPEZ; J. GUZMAN-MUNIZ; O. GONZALEZ-PEREZ. *Univ. of Colima, Sch. of Medicine, Univ. of Colima, Ctr. Universitario de Ciencias de la Salud, Univ. of Guadalajara.*

11:00 L18 **691.12** Intranasal brain delivery of obidoxime prevents mortality and cns damage from organophosphate poisoning. J. KRISHNAN*; P. ARUN; A. APPU; N. VIJAYAKUMAR; T. FIGUEIREDO; M. BRAGA; S. BASKOTA; 1. FREY, II; J. MOFFETT; A. NAMBOODIRI. *USUHS, Ctr. for Memory & Aging, Regions Hospital, Hlth. Partners Inst. for Educ. and Res.*

8:00 L19 **691.13** The zombie apocalypse: Neurodegeneration in Alzheimer's disease includes the apoptosis of healthy bystanders near "undead" senescent neurons. H. CHOW*; K. TSE; K. HERRUP. *Div. of Life Sci., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

9:00 L20 **691.14** Facilitation of neurotransmission in bont/a-paralyzed nerve terminals by 3,4-diaminopyridine does not act through the incorporation of cleaved snap25 in vesicle release. A. B. BRADFORD*; T. M. RUSSO; E. J. GLOTFELTY; K. M. HOFFMAN; P. H. BESKE; P. M. MCNUTT. *US Army Med. Res. Inst. of Chem. Def, US Army Med. Res. Inst. of Chem. Def.*

10:00 L21 **691.15** High-density cobalt induces axonal degeneration and inhibits the motility of axonal motile mitochondria. S. KIKUCHI*; T. NINOMIYA; T. KOHNO; T. KOJIMA; H. TATSUMI. *Sapporo Med. Univ. Sch. of Med., Res. Inst. for Frontier Medicine, Sapporo Med. Univ.*

11:00 L22 **691.16** Oxidative stress effect on purinergic receptors and Glycogen synthase kinase 3 beta in hippocampus of rats exposed lo ozone. R. V. PEREZ*; E. CARMONA-MONTESINOS; E. RODRIGUEZ-MARTINEZ; S. L. RIVAS-ARANCIBIA. *UNAM.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 L23 **691.17** Ozone exposition induces apoptotic cell death mediated by the endoplasmic reticulum stress in hippocampus of rats. A. E. RODRIGUEZ*; M. MÉNDEZ ARMENTA; C. NAVA-RUÍZ; S. L. RIVAS-ARANCIBIA. *Univ. Nacional Autonoma De México, Inst. Nacional de Neurología y Neurocirugía, Manuel Velasco Suárez, Univ. Nacinal Autonoma De Mexico.*

POSTER

692. Methamphetamine and Drug Induced Toxicity

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 L24 **692.01** Characterization of chronic methamphetamine neurotoxicity in Parkin knockout rats. A. SHARMA*; A. FLACK; A. MOSZCZYNSKA. *Wayne State Univ.*

9:00 L25 **692.02** Colonic neurotoxicity in rats that self-administer methamphetamine. A. FLACK; A. L. PERSONS; S. KOUSIK; J. M. GEMECHU*; T. NAPIER; A. MOSCZCYNSKA. *Wayne State Univ., Rush Univ., Rush Univ.*

10:00 L26 **692.03** Alterations in phospho-ser129-α-synuclein in the striatum in rats after binge METH may provide clues to understanding the link between METH abuse and PD. J. M. GEMECHU; A. FLACK*; A. ALBRECHT; A. MOSZCZYNSKA. *Wayne State Univ.*

11:00 L27 **692.04** Acute d-amphetamine unmasks the effects of adolescent methylmercury exposure on delay discounting in mice. S. BOOMHOWER*; M. NEWLAND. *Auburn Univ.*

8:00 L28 **692.05** Neuroaids on methamphetamine and cART: Depletion of neuronal energy supplies. A. B. SANCHEZ*; G. P. VARANO; M. KINOMOTO; C. M. DE ROZIERES; R. MAUNG; I. C. CATALAN; C. C. DOWLING; N. E. SEJBUK; M. M. HOEFER; M. KAUL. *Sanford-Burnham Med. Res. Inst., Univ. of California San Diego.*

9:00 L29 **692.06** Brain iron loading impairs dopaminergic function and promotes ADHD-like behavior. Q. YE*; J. CHANG; M. HAN; Y. LI; H. ALSULIMANI; A. V. MENON; R. DETH; J. KIM. *Northeastern Univ., Nova Southeastern Univ.*

10:00 L30 **692.07** Phenotype comparisons of ALDH1L1 BAC-TRAP mice under control and neurotoxic (MPTP) conditions. K. A. KELLY*; A. R. LOCKER; L. T. MICHALOVICZ; D. B. MILLER; J. P. O'CALLAGHAN. *CDC-NIOSH.*

11:00 L31 **692.08** Histopathological indices of rotenone-evoked dopaminergic toxicity: Neuroprotective effects of acetyl-L-carnitine. Z. K. BINIENDA*; B. GOUGH; S. SARKAR. *Natl. Ctr. Toxicological Res/Food and Drug Adm.*

8:00 L32 **692.09** Rotenone affects the nigral dopaminergic system more readily when the exposure occurs at prenatal and early postnatal life than when it occurs at gestation, lactation or adulthood. M. GÓMEZ-CHAVARÍN*; J. RAMIREZ SANTOS; P. PADILLA; G. PERERA-MARIN; G. GUTIERREZ-OSPINA. *UNAM-Biomedical Res. Institutute, UNAM - Med. Fac., UNAM-Biomedical Res. Inst., UNAM-Biomedical Res. Inst., UNAM-Veterinary Med. Fac., UNAM-Biomedical Res. Inst.*

9:00 L33 **692.10** Mitophagy alleviated CPF induced neurotoxicity in SH-SY5Y cells by PINK1/Parkin pathway. J. ZHANG*; H. DAI; L. ZHAO. *Dept. of Neurol., Third Xiangya Hosp.*

10:00 L34 **692.11** Investigating *in vitro* neurotoxicity of antiretroviral agents. V. T. CIAVATTA*; C. CRON; S. TENG; W. R. TYOR; P. GARCIA. *Dept. of Veteran Affairs, Emory Univ., Emory Univ., Emory Univ., Dept. of Veteran Affairs, Emory Univ., Dept. of Veteran Affairs.*

11:00 L35 **692.12** Neurodegenerative potential of the aqueous leaf extract of ocimum gratissimum: A histological and biochemical study. M. I. AJIBOLA*; R. B. IBRAHIM; A. A. SAFIRIYU; A. T. ETIBOR; M. A. MUSTAPHA; A. IMAM. *Kampala Intl. Univ., Kampala Intl. Univ., Univ. of Ilorin.*

8:00 L36 **692.13** ▲ The impairs on mitochondrial membrane potential, cellular dysfunction and circling behavioral in the mechanism of xanthurenic acid toxicity *in vivo.* J. G. REYES OCAMPO*; B. PINEDA; D. GONZÁLEZ-ESQUIVEL; L. SÁNCHEZ-CHAPUL; C. RÍOS; A. JIMÉNEZ-ANGUIANO; D. SILVA-ADAYA; V. PEREZ-DE LA CRUZ. *Inst. Nacional de Neurología y Neurocirugía, Univ. Autonóma Metropolitana, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Rehabilitación, Inst. Nacional de Neurología y Neurocirugía.*

9:00 L37 **692.14** Acute and subchronic neuropharmacological, genotoxic, and mutagenic profiles of a Brazilian fruit compound, garcinielliptone FC, in mice. J. N. PICADA*, SR; V. R. COELHO; L. S. PRADO; C. G. VIEIRA; L. P. SOUZA; G. C. GONÇALVES; P. PFLUGER; M. T. C. VALLE; M. B. LEAL; E. DALLEGRAVE; A. B. F. FERRAZ; P. PEREIRA. *Lutheran Univ. of Brazil, Federal Univ. of Rio Grande do Sul, Univ. Federal de Ciências da Saúde de Porto Alegre.*

10:00 L38 **692.15** Potential adverse effects of sevoflurane on developing monkey brain: From abnormal lipid metabolism to neuronal damage. C. WANG*; F. LIU; S. W. RAINOSEK; J. L. FRISCH-DAIELLO; T. A. PATTERSON; M. G. PAULE; W. SLIKKER, Jr.; X. HAN. *Natl. Ctr. For Toxicological Research/FDA, Univ. of Arkansas for Med. Sci., Sanford-Burnham Med. Res. Inst. at Lake Nona.*

11:00 L39 **692.16** The utility of a nonhuman primate model for assessing general anesthetic-induced developmental neurotoxicity: Sevoflurane as test agent. M. G. PAULE*; S. LIU; X. ZHANG; R. CALLICOTT; G. NEWPORT; T. A. PATTERSON; S. M. APANA; M. S. BERRIDGE; M. P. MAISHA; J. P. HANIG; W. SLIKKER, Jr.; C. WANG. *FDA's Natl. Ctr. For Toxicological Res., 3D-Imaging, FDA's Natl. Ctr. for Toxicological Res., FDA's Ctr. for Drug Evaluation and Res., FDA's Natl. Ctr. for Toxicological Res.*

8:00 L40 **692.17** Effects of manganese exposure on the dopaminergic system and antioxidant enzymes in Caenorhabditis elegans with mutations in AKT signaling pathway. T. V. PERES*; M. R. MIAH; L. ARANTES; R. B. LEAL; M. ASCHNER. *Albert Einstein Col. of Med., Univ. Federal de Santa Maria, Univ. Federal de Santa Catarina.*

9:00 L41 **692.18** Oxidative stress as a key event in malaoxon-induced neurotoxicity in primary cell cultures of cortical neurons. D. K. VENSKE*; A. A. DOS SANTOS; C. SUÑOL; M. FARINA. *Univ. Federal De Santa Catarina, . Inst. d'Investigacions Biomèdiques de Barcelona, Consejo Superior de Investigaciones Científicas (IIBB-CSIC), IDIBAPS, CIBER Epidemiología y Salud Pública (CIBERESP).*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 L42 **692.19** ▲ Potential neuroprotective effect of docosahexaenoic acid in rotenone-treated rats. N. SERRANO*; V. PÉREZ DE LA CRUZ; A. JIMÉNEZ-ANGUIANO; J. PEDRAZA-CHAVERRI. *Natl. Inst. of Neurol. and Neurosurg., Autonomous Metropolitan Univ., Natl. Autonomous Univ. of Mexico.*

11:00 L43 **692.20** Pathophysiology and experimental therapeutics of tetramethylenedisulfotetramine (tetramine) poisoning. D. L. SPRIGGS*; S. DEBUS; R. KREMPEL; J. SKOVIRA. *USAMRICD.*

8:00 L44 **692.21** Dose and gender effects of chronic arsenic exposure in locomotor activity and lipid peroxidation in the dopaminergic system of C57BL/6 mice. R. CONTRERAS-LÓPEZ; M. DÍAZ-MUÑOZ; M. GIORDANO; V. RODRIGUEZ CORDOVA*. *Inst. de Neurobiologia UNAM, Inst. de Neurobiologia UNAM, Inst. de Neurobiologia UNAM.*

9:00 M1 **692.22** Negative effects of a mixture of lead and aluminum on neurodevelopmental behavior in rats. F. CHIGR*; K. EL MANJA; H. MALQUI; N. OUASMI; M. NAJIMI. *Sultan Moulay Slimane University, Fac. of Scien, Fac. of Sci. and Techniques.*

10:00 M2 **692.23** ▲ The effects of methyl parathion on the nigrostriatal system. J. BEAN; K. R. SHEPHERD*. *Morehouse Col., Morehouse Sch. of Med.*

11:00 M3 **692.24** Ultrastuctural changes in fetal mouse retina induced by two different doses of diazepam. M. MARQUEZ-OROZCO*; G. DE LA FUENTE-JUAREZ; A. MARQUEZ-OROZCO. *Univ. of Mexico (UNAM).*

8:00 M4 **692.25** Permanent histological and ultrastructural alterations of the mesencephalic structures in mice prenatally exposed to diazepam. A. MARQUEZ-OROZCO*; G. DE LA FUENTE-JUAREZ; M. C. MARQUEZ-OROZCO. *Univ. of Mexico (UNAM).*

9:00 M5 **692.26** Morphoquantitative evaluation of fibroelastic components in basilar and middle cerebral arteries of rats exposed to passive smoking. R. N. ISAYAMA*; E. ROBELLO; N. L. FROIO; C. A. FABREGA-CARVALHO. *UNICASTELO, Faculdade de Medicina de Jundiaí (FMJ).*

10:00 M6 **692.27** Loss of DMT1 function is associated with elevated brain copper levels and ADHD-like behavior. M. HAN*; J. CHANG; J. KIM. *Northeastern Univ.*

11:00 M7 **692.28** ● Consumption of fluoridated water leads to damage on the prefrontal cortex III layer of the rat. P. MARIA ISABEL*. *Univ. De Guadalajara.*

8:00 M8 **692.29** ● Eribulin and paclitaxel differentially affect mouse sciatic nerve biochemistry: Implications for mechanisms underlying chemotherapy-induced peripheral neuropathy. S. J. BENBOW; B. M. COOK; K. M. WOZNIAK; B. S. SLUSHER; B. A. LITTLEFIELD; L. WILSON; S. FEINSTEIN*; M. JORDAN. *Neurosci. Res. Inst., Brain Sci. Inst., EISAI Inc.*

9:00 M9 **692.30** Selective regional targets of hydrogen sulfide poisoning in a mouse model. W. RUMBEIHA*; P. ANANTHARAM; B. MAHAMA; E. WHITLEY; A. KANTHASAMY. *Iowa State Univ., Iowa State Univ., Pathogenesis LLC.*

POSTER

693. Somatosensory and Pain Disorders

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 M10 **693.01** LPA-induced peripheral itch sensation and cellular signaling involving LPA_5 receptor, phospholipase D and TRPA1/TRPV1. H. KITTAKA*; K. UCHIDA; N. FUKUTA; M. TOMINAGA. *Okazaki Inst. for Integrative Biosci., SOKENDAI (The Grad. Univ. for Advanced Studies).*

9:00 M11 **693.02** Increased resurgent sodium currents in Nav1.8 contribute to nociceptive sensory neuron hyperexcitability in small fiber neuropathy. Y. XIAO*; C. BARBOSA; T. CUMMINS, R. *Indiana Univ. Sch. Med.*

10:00 M12 **693.03** A model for herpes zoster opthalmicus. C. P. STINSON*. *Texas A&M Baylor Col. of Dentistry-Biomedical S.*

11:00 M13 **693.04** Increased EEG gamma-band power and spontaneous cortical spreading depression in Cav2.1 R192Q mice. T. HOUBEN*; R. SHYTI; R. R. KLEVER; T. J. L. PERENBOOM; M. SCHENKE; M. D. FERRARI; K. EIKERMANN-HAERTER; C. AYATA; A. M. J. M. VAN DEN MAAGENDBERG; E. A. TOLNER. *Leiden Univ. Med. Ctr., Massachusetts Gen. Hospital, Harvard Med. Sch.*

8:00 M14 **693.05** STAT3-dependent reactive astrocytes in the spinal dorsal horn contribute to the maintenance of chronic itch in mice. M. SHIRATORI-HAYASHI*; K. KOGA; H. TOZAKI-SAITOH; Y. KOHRO; J. HACHISUKA; H. OKANO; M. FURUE; K. INOUE; M. TSUDA. *Grad. Sch. of Pharmaceut. Sciences, Kyushu, Grad. Sch. of Pharmaceut. Sci. Kyushu Univ., Grad. Sch. of Med. Kyushu Univ., Keio Univ. Sch. of Med.*

9:00 M15 **693.06** Interleukin-1β decreases potassium conductance but does not alter the phenotype of medium sized dorsal root ganglion neurons. M. NOH*; P. L. STEMKOWSKI; P. A. SMITH. *Univ. of Alberta, Univ. of Alberta, Univ. of Calgary.*

10:00 M16 **693.07** Small-animal neuroimaging analysis of the pain matrix in acute and chronic pain model rats. Y. L. CUI*; H. TOYODA; E. HAYASHINAKA; Y. WADA; Y. WATANABE. *RIKEN Ctr. for Life Sci. Technologies, Ctr. for Information and Neural Networks.*

11:00 M17 **693.08** Disrupted functional connectivity of the sensorimotor cortex in complex regional pain syndrome. J. HOTTA*; J. SAARI; N. FORSS; R. HARI. *Aalto Univ., Aalto Univ., Univ. of Helsinki and Helsinki Univ. Hosp.*

8:00 M18 **693.09** The comparison and new findings of invasive and non-invasive neuromodulation methods. R. ROKYTA*; J. FRICOVA. *3rd Fac Med. Charles Univ. Prague, Charles Univ. in Prague, First Fac. of Med.*

9:00 M19 **693.10** Differential modulation of default mode network (DMN) connectivity by self-administered acupressure in fatigued breast cancer survivors. J. HAMPSON*; E. ICHESCO; V. VERMA; B. D. WRIGHT; T. KHABIR; S. ZICK; R. E. HARRIS. *UNIVERSITY OF MICHIGAN, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 M20 **693.11** Human sensory neurons derived from iPS as a human *in vitro* model of peripheral pain. E. GRAS LAVIGNE*; D. BUTTIGIEG; L. L'HOMME; C. BADJA; M. OUAMER; R. STEINSCHNEIDER; F. MAGDINIER. *Neuronexperts, Neuron Experts, INSERM UMR_U910 GMGF.*

11:00 M21 **693.12** Function and dysfunction of Kv3.4 channels in DRG neurons: Implications in pain signaling and peripheral pain sensitization induced by SCI. T. MUQEEM*; V. PINTO; M. COVARRUBIAS. *Thomas Jefferson Univ., Univ. of Minho.*

8:00 M22 **693.13** Intravenous injection of mesenchymal stem cells reversed morphine tolerance in mice. J. CHENG*; L. LIU; Z. HUA; H. WU. *Cleveland Clin.*

9:00 M23 **693.14** The effect of visual information produced by modified mirror therapy in patients with phantom limb pain. A. SAKAMOTO*; D. SUGIYAMA; M. KAWAMATA. *Shinshu Univ. /school of Med.*

10:00 M24 **693.15** Phosphodiesterases as targets for the treatment of neuropathic pain. I. YALCIN-CHRISTMANN*; S. MEGAT; V. LELIEVRE; A. LACAUD; E. WALTISPERGER; R. SCHLICHTER; M. FREUND MERCIER; S. HUGEL; M. BARROT. *CNRS-DR10 INCI UPR3212.*

11:00 M25 **693.16** ▲ Bortezomib-induced peripheral neuropathy: Clinical data and nerve fiber density measurements in skin biopsies. M. BECHAKRA; J. L. JONGEN*. *Erasmus MC.*

8:00 M26 **693.17** 5β-reduced neurosteroid enhances recovery and reduces hyperalgesia in a rodent model of postoperative pain. S. JOKSIMOVIC*; D. F. COVEY; K. KRISHNAN; V. JEVTOVIC-TODOROVIC; S. M. TODOROVIC. *Univ. of Virginia/Old Med. Sch., Washington Univ. Sch. Med.*

9:00 M27 **693.18** Activation of protein kinase B mediates pain related responses induced by the bone metastases of breast cancer cells. F. JIANG*; G. DING. *Xinhua Hosp. Affiliated To Shanghai Jiao Tong U, Xinhua Hosp. Affiliated To Shanghai Jiao Tong Univ.*

10:00 M28 **693.19** ● Altered resting state connectivity in individuals with fibromyalgia following an acute pain stimulus. E. ICHESCO*; T. PUIU; J. P. HAMPSON; A. E. KAIRYS; D. J. CLAUW; S. E. HARTE; S. J. PELTIER; R. E. HARRIS; T. SCHMIDT-WILCKE. *Chronic Pain and Fatigue Res. Ctr. - Univ. of Michigan, Univ. of Michigan, Univ. of Colorado, Bergmannsheil Ruhr Univ.*

11:00 M29 **693.20** Music-induced analgesia increases the amplitude of BOLD fMRI in the left angular gyrus. E. A. GARZA-VILLARREAL*; P. VUUST; F. A. BARRIOS; L. VASE; E. BRATTICO; E. PASAYE-ALCARAZ; T. S. JENSEN; Z. JIANG. *Natl. Inst. of Psychiatry, Univ. of Aarhus, Univ. Nacional Autonoma de Mexico, Univ. of Aarhus, Univ. of Helsinki, Aarhus Univ. Hosp., Kessler Fndn.*

8:00 M30 **693.21** Cortical spreading depression induced by targeted optogenetic activation of cortical pyramidal neurons. Z. KILLEEN*; A. PARGA; J. NICHOLS; C. WU; T. ANDERSON. *Univ. of Arizona-College of Med. Phoenix.*

9:00 M31 **693.22** ▲ Study of the nociceptive response in female high yawning rats with an anxious trait. S. L. RUGERIO*; J. R. EGUIBAR; C. CORTES. *Benemérita Univ. Autónoma De Puebla, Benemérita Univ. Autónoma De Puebla.*

10:00 M32 **693.23** Nociceptive reflex stimulus intensity threshold or reflex amplitude? A painful choice in the objective quantification of central sensitization. L. D. LINDE*; L. R. BENT; J. P. DICKEY; J. Z. SRBELY. *Univ. of Guelph, Western Univ.*

11:00 M33 **693.24** ● Sepiapterin reductase as a new target to reduce chronic pain hypersensitivity. A. LATREMOLIERE*; A. LATINI; N. ANDREWS; S. CRONIN; M. FUJITA; K. GORSKA; R. HOVIUS; C. ROMERO; S. CHUAIPHICHAI; M. PAINTER; G. MIRACCA; O. BABANIYI; A. REMOR; K. DUONG; P. RIVA; L. BARRETT; N. FERREIRÓS; A. NAYLOR; J. PENNINGER; I. TEGEDER; J. ZHONG; J. BLAGG; K. CHANNON; K. JOHNSSON; M. COSTIGAN; C. J. WOOLF. *Harvard Med. Sch., Boston Children's hospital, LABOX, Univ. Federal de Santa Catarina, Inst. of Mol. Biotech. of the Austrian Acad. of Sci. (IMBA), EPFL, Inst. of Chem. Sci. and Engineering, Inst. of Bioengineering, Natl. Ctr. of Competence in Res. (NCCR) in Chem. Biol., Dept. of Cardiovasc. Medicine, Univ. of Oxford, John Radcliffe Hosp., Pharmazentrum Frankfurt, Inst. für Klinische Pharmakologie, Klinikum der Goethe-Universität, The Canterbury Consulting Group, Unit 43 Canterbury Innovation Ctr., Burke Med. Res. Inst. and Brain and Mind Res. Institute, Weill Med. Col. of Cornell UniversityB, The Canterbury Consulting Group.*

8:00 M34 **693.25** Suppression of oral cancer and chemotherapy-induced chronic pain symptoms by a synthetic peripherally-restricted cannabinoid receptor agonist. Y. MULPURI; D. DANG; B. L. SCHMIDT; H. H. SELTZMAN; I. SPIGELMAN*. *UCLA, New York Univ. Col. of Dent., Res. Triangle Inst.*

9:00 M35 **693.26** Neuropathic pain promotes gene expression adaptations in stress and depression related brain regions. G. DESCALZI*; S. GASPARI; I. PURUSHOTHAMAN; L. SHEN; V. ZACHARIOU. *Icahn Sch. of Med. at Mount Sinai.*

10:00 M36 **693.27** The therapeutic potential of neurokinin 1 receptor antagonist for arthritic pain and cartilage destruction in rat model of osteoarthritis. T. KIM; H. JEON; Y. KIM; E. SONG; Y. YOON; J. KIM*. *Korea Univ. Coll Hlth. Sci., Rehabil. Sci. Program, Korea Univ., Grad. Sch., Korea Univ. Col. Med.*

11:00 M37 **693.28** Peripheral nerve injury alters synaptic input and intrinsic connectivity in lamina II excitatory dorsal horn neurons in neuropathic pain states. N. GONG*; T. IKRAR; G. HAGOPIAN; Z. LUO; X. XU. *Univ. of California, Irvine, Univ. of California, Irvine.*

8:00 M38 **693.29** Lateralization of pain-related neural oscillations in the central nucleus of the amygdala. M. KAJUMBA*; A. L. HARRIS; J. N. STRAND; Y. PENG. *Univ. of Texas At Arlington.*

POSTER

694. Fear and Anxiety: Behavior

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 M39 **694.01** Trait vulnerability to anxiety and chronic stress interact to affect acoustic startle amplitude. M. L. JACOBSON*; P. PEDULLA; D. J. KIM; B. J. ANDERSON. *Stony Brook Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 M40 **694.02** Impacts of maternal separation on an animal model of posttraumatic stress disorder using a shuttle box in rats. M. TANICHI*; H. TODA; S. ENOMOTO; K. SHIMIZU; M. UENOYAMA; Y. MASUDA; R. NAKAGAWA; M. NIBUYA; A. YOSHINO. *Natl. Def. Med. Col.*

10:00 M41 **694.03** The pain of others: Empathy's influence on anxiety- and depression-like behaviour in female mice. S. MALDONADO BOUCHARD*; A. KLEIN; J. S. MOGIL. *McGill Univ.*

11:00 M42 **694.04** Examining associative and non-associative fear memories in the rat exposure test. K. FALLON*; P. MACCALLUM; J. WHITEMAN; T. KENNY; D. SKINNER; G. MARTIN; J. BLUNDELL. *Mem. Univ. of Newfoundland.*

8:00 M43 **694.05** Aging-related changes in the neural circuits underlying fear memories. M. SEHGAL*; T. S. BULA; B. HUMMER; B. K. FULLEYLOVE-KRAUSE; K. L. FELDMANN; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee.*

9:00 M44 **694.06** Maternal inhibition of vicarious blood-injection-injury phobic syncope: A case report. M. ONEILL*; A. R. HIRSCH. *Caribbean Med. Univ., Mercy Hosp.*

10:00 M45 **694.07** The appetitive and aversive context modulates choice behavior, autonomic responses, and the neuronal activity in the primate caudate. Y. UEDA*; K. NAKAMURA. *Kansai Med. Univ.*

11:00 M46 **694.08** Quantitative analysis of monkey emotional gestures by a markerless 3D motion capture. R. V. BRETAS; T. NAKAMURA; J. MATSUMOTO*; Y. TAKAMURA; E. HORI; T. ONO; H. NISHIJO. *Univ. of Toyama.*

8:00 M47 **694.09** Intracerebroventricular infusion of neuropeptide Y reduces the behavioral effects of social defeat stress and promotes anxiolytic-like behaviors in Syrian hamsters. C. M. MARKHAM*; T. LACEY; K. KENNIEL; R. KINGSTON; M. EDWARDS. *Morehouse Col., Spelman Col., Morehouse Col.*

9:00 M48 **694.10** Norepinephrine transmission between locus coeruleus and central amygdala regulates aversive Pavlovian-to-instrumental transfer. V. CAMPESE*; J. SOROETA; E. VAZEY; G. ASTON-JONES; J. LEDOUX; R. SEARS. *New York Univ., Univ. of Arkansas, Rutgers, New York Univ., Nathan Kline Inst.*

10:00 N1 **694.11** Selectively-bred anxious rat phenotype is characterized by an early emergence of classical fear conditioning. D. CHANG*; J. HIDER; P. BLANDINO; R. M. SULLIVAN; H. AKIL; J. DEBIEC. *Univ. of Michigan, Emotional Brain Inst.*

11:00 N2 **694.12** Differential gene expression after contextual fear conditioning in a novel fearful DxH recombinant inbred mouse strain. R. WICKRAMASEKARA; J. BOUMA; K. BEISEL; D. M. YILMAZER-HANKE*. *Creighton Univ., Creighton Univ.*

8:00 N3 **694.13** ▲ Galanin administration in the medial prefrontal cortex suppresses expression of conditioned fear memory and modulates plasticity during fear extinction. D. BHATTI; J. M. SMITH; P. V. HOLMES*. *Univ. Georgia.*

9:00 N4 **694.14** Selective ablation of the intercalated neurons of the amygdala increased the anxiety-like behavior in the Elevated Plus Maze. E. PALOMARES*; O. HERNANDEZ PEREZ; M. CRESPO RAMÍREZ; R. AGUILAR ROBLERO; K. FUXE; M. PÉREZ DE LA MORA. *Inst. de Fisiología Celular, Inst. de Fisiología Celular, Karolinska Institutet.*

10:00 N5 **694.15** Persistent inflammatory pain reduces sexually motivated hedonic behavior in male rats. M. H. PITCHER*; F. TARUM; M. LEHMANN; M. BUSHNELL. *NIH, NIH, NIH.*

11:00 N6 **694.16** Maternal TNF during gestation programs the balance between risk taking and avoidance. B. LIU*; B. ZUPAN; M. TOTH. *Weill Cornell Med. Col., Vassar Col.*

8:00 N7 **694.17** Exposure to social defeat stress increases morphine consumption and depression-like behavior mediated by the endogenous kappa opioid system. K. A. HYMEL*; J. M. MEDINA; S. O. EANS; M. L. GANNO; H. M. STACY; J. P. MCLAUGHLIN. *Univ. of Florida, Torrey Pines Inst. for Mol. Studies.*

9:00 N8 **694.18** ▲ Empathy for Pain: Mice undergoing neuropathic pain induce specific effects on pain response in cagemates subjected to various nociceptive tests. D. B. SOUZA*; R. L. NUNES-DE-SOUZA; A. L. M. CANTO-DE-SOUZA. *Univ. Federal De São Carlos, UNESP.*

10:00 N9 **694.19** Mice undergoing neuropathic pain induce anxiogenic-like effects and hyperalgesia in cagemates. A. CANTO-DE-SOUZA*; A. C. NUNCIATO; B. C. PEREIRA; C. R. ZANIBONI; G. FACHINI; D. BAPTISTA-DE-SOUZA. *Psychobiology Group, Dept of Psychology, UFSCar, Grad. Program in Psychology/UFSCar, Joint Grad. Program in Physiological Sci. UFSCar/UNESP.*

11:00 N10 **694.20** Blockade of medial prefrontal cortex mineralocorticoid receptors impairs defensive reaction in mice exposed to the olfactory fear conditioning. R. R. SOUZA*; V. F. CAMPOS; A. CANTO-DE-SOUZA. *Univ. Federal De Sao Carlos, Univ. Federal de Sao Carlos.*

8:00 N11 **694.21** Chemical inhibition of the left medial prefrontal cortex facilitates anxiety-related behavior in mice subjected to social defeat (but not to restraint) stress. R. L. NUNES-DE-SOUZA*; N. S. COSTA; M. A. VICENTE. *Univ. Estadual Paulista, UNESP, Univ. Estadual Paulista, UNESP.*

POSTER

695. Alcohol: Neural Mechanisms

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 N12 **695.01** Repeated binge drinking increases perineuronal nets in the insular cortex. H. CHEN*; D. HE; A. W. LASEK. *UIC.*

9:00 N13 **695.02** Alterations in ethanol taste-elicited neuronal activity in the insular cortex following chronic ethanol exposure. E. DRIVER; B. FERETIC; J. PENPRASE; J. GODFREY; C. QUINTANILLA; S. M. BRASSER*. *San Diego State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 N14 **695.03** Chemogenetic inactivation of the insular cortex increases interoceptive sensitivity to alcohol. A. A. JARAMILLO*; P. A. RANDALL; Z. A. MCELLIGOTT; J. BESHEER. *Univ. of North Carolina at Chapel Hill.*

11:00 N15 **695.04** *In vivo* two-photon imaging reveals modulation of synaptic and spiking activity in visual cortex following acute and chronic exposure to alcohol. P. O'HERRON; M. LEVY; M. F. LOPEZ; J. J. WOODWARD; P. KARA*. *MUSC.*

8:00 N16 **695.05** Orbitofrontal cortex neurons are activated during alcohol and sucrose self-administration. J. HERNANDEZ*; D. MOORMAN. *Univ. of Massachusetts - Amherst.*

9:00 N17 **695.06** Investigating changes in medial prefrontal cortex and basolateral amygdala neuronal morphology following long-term ethanol consumption. P. M. KLENOWSKI*; M. SHARIFF; A. BELMER; M. FOGARTY; M. BELLINGHAM; S. BARTLETT. *Queensland Univ. of Technol., Univ. of Queensland.*

10:00 N18 **695.07** mPFC modulates interoceptive sensitivity to a nicotine + alcohol compound cue: Functional validation using designer receptors exclusively activated by designer drugs. P. A. RANDALL*; A. A. JARAMILLO; Z. MCELLIGOTT; J. BESHEER. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

11:00 N19 **695.08** Alcohol addiction impairs human hippocampal neurogenesis: Effects on proliferation, neuronal stem cells and immature neurons. G. DHANABALAN*; T. WARDI LE MAITRE; K. ALKASS; H. DRUID. *Karolinska Inst.*

8:00 N20 **695.09** Prolonged abstinence from chronic ethanol exposure impairs hippocampal cognition and plasticity within the hippocampus. M. C. STAPLES*; M. J. FANNON; C. D. MANDYAM. *The Scripps Res. Inst.*

9:00 N21 **695.10** Chronic ethanol self-administration in female macaques disrupts presynaptic dopamine neurotransmission. C. SICILIANO*; E. S. CALIPARI; J. T. YORGASON; D. M. LOVINGER; Y. MATEO; V. A. JIMENEZ; C. M. HELMS; K. A. GRANT; S. R. JONES. *Wake Forest Sch. of Med., Natl. Inst. on Alcohol Abuse and Alcoholism, Oregon Hlth. & Sci. Univ.*

10:00 N22 **695.11** Repeated systemic administration of taurine influences the dopamine elevating properties of ethanol in the rat nucleus accumbens. L. IVANOFF*; L. ADERMARK; B. SÖDERPALM; M. ERICSON. *Inst. of Neurosci. and Physiol.*

11:00 N23 **695.12** ▲ Neurosteroids modulate ethanol effects on dopamine release in the nucleus accumbens via actions on GABA(A) receptors on VTA GABA neurons. T. J. WOODWARD*; D. M. HEDGES; A. C. NELSON; H. PARK; N. D. SCHILATY; S. C. STEFFENSEN. *Brigham Young Univ.*

8:00 N24 **695.13** The lateral septum and its involvement in ethanol-induced dopamine elevation. M. ERICSON*; J. MORUD; S. JONSSON; B. SÖDERPALM. *Neurosci. and Physiol.*

9:00 N25 **695.14** Key role of dopamine signaling in spine pruning and LTD formation in ethanol dependence. G. MULAS; G. TALANI; E. SANNA; M. DIANA; S. SPIGA*. *Univ. Cagliari, Natl. Res. Council, Univ. of Sassari, Univ. Cagliari.*

10:00 N26 **695.15** ▲ Brain morphology, nutritional and behavioral evaluation of rats exposed to chronic alcohol intake. D. PARIZOTTO*; D. M. DOS SANTOS; H. C. MARCUSSO; R. N. ISAYAMA; T. ITIDA; C. Z. CASTELLI; M. R. DA CUNHA. *UNICASTELO, UNICASTELO, UNIANCHIETA-Jundai, Faculdade de Medicina de Jundiaí (FMJ).*

11:00 N27 **695.16** Genomic signatures of alcohol preference in the HAD1/LAD1 and HAD2/LAD2 replicate rat models. C. LO*; W. M. MUIR; A. C. LOSSIE; H. J. EDENBERG; T. LIANG; Y. LIU; F. C. ZHOU. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Office of Behavioral and Social Sci. Research, NIH, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

8:00 N28 **695.17** Alcohol-induced changes in cannabinoid modulation of noradrenergic neurons. R. WYROFSKY*; B. A. S. REYES; T. RETSON; J. HOEK; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med., Thomas Jefferson Univ., Thomas Jefferson Univ.*

9:00 N29 **695.18** Neuromodulatory mechanism underlying ethanol-induced behavioral disinhibition. G. P. ARANDA*; K. HAN; J. LIM; P. SABANDAL; P. D. EVANS. *Univ. of Texas At El Paso, Univ. of Texas at El Paso, The Babraham Inst.*

10:00 N30 **695.19** The impact of chronic alcohol exposure on fear-related memories: A role for mGluR5. J. MCGONIGAL; H. HAUN; J. T. GASS*. *Med. Univ. South Carolina.*

11:00 N31 **695.20** Ketamine prevention of alcohol-induced depressive-like behavior is pharmacokinetic-independent. L. AKINFIRESOYE*; O. KALEJAIYE; Y. TIZABI. *Howard Univ. Col. of Med.*

8:00 N32 **695.21** Alcohol affects vocal learning and activation of underlying basal ganglia of zebra finches. C. R. OLSON*; D. C. OWEN; A. E. RYABININ; C. V. MELLO. *OHSU.*

9:00 N33 **695.22** Ethanol-induced behavioral disinhibition. I. MERCADO*; P. SABANDAL; J. BURCIAGA; K. HAN. *Univ. of Texas at El Paso.*

10:00 N34 **695.23** Inhibition of the ethanol-induced potentiation of glycine receptors by small molecules that interfere with Gβγ binding. L. S. SAN MARTIN*; F. E. CERDA; C. JIN; L. G. AGUAYO; J. L. GUZMAN. *Univ. De Concepcion, Univ. De Concepcion, Res. Triangle Inst.*

11:00 N35 **695.24** Quantitative EEG differences between subjects with hazardous alcohol consumption and subjects with alcohol dependence. L. NUÑEZ-JARAMILLO*; W. V. HERRERA-MORALES; L. RAMÍREZ-LUGO; J. V. REYES-LÓPEZ; E. SANTIAGO-RODRÍGUEZ. *División De Ciencias De La Salud. Univ. De Quintana Roo, Univ. de Quintana Roo, Univ. Nacional Autónoma de México, Univ. Autónoma de Querétaro, 4Diagnóstico, Tratamiento e Investigación Neurológica, S.C.*

8:00 N36 **695.25** Assessing gender differences in nicotinic acetylcholine receptor contributions to ethanol consumption and reward. M. G. DERNER*; A. V. SACINO; P. D. GARDNER; A. R. TAPPER. *Univ. of Massachusetts Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 N37 **695.26** Adenosine mediated hippocampal-accumbal neuroproteome alterations in equilibrative nucleoside transporter 1 null mice. A. OLIVEROS*; S. CHOI; D. HINTON; C. VADNIE; D. CHOI. *Mayo Clin., Mayo Clin.*

10:00 N38 **695.27** Intermittent- vs continuous alcohol access in female rats: Effects on deprivation phenotype and maternal behavior as a consequence of the drinking pattern. A. BRANCATO*; C. VITA; F. PLESCIA; C. CANNIZZARO. *Univ. of Palermo, Univ. of Palermo.*

11:00 N39 **695.28** ALDH2 deficiency increases the sensitivity to cannabis as well as ethanol-induced hypothermia and motor impairment in mice. X. LIU*; L. WAN; G. LUO; D. LOVINGER; L. ZHANG. *NIAAA/NIH.*

8:00 N40 **695.29** History of drug intake leads to compulsive appetite via disruption in non-homeostatic control of food intake. A. LAQUE*; N. SUTO; Y. HAO; A. MATZEU; G. DE GUGLIELMO; T. KERR; R. MARTIN-FARDON; T. JHOU; R. C. RITTER; F. WEISS. *The Scripps Res. Institue, Med. Univ. of South Carolina, Washington State Univ.*

9:00 N41 **695.30** Embryonic ethanol exposure affects numerical discrimination ability and sex preference of adult zebrafish (Danio rerio). D. SEGUIN*; R. GERLAI. *Univ. of Toronto, Univ. of Toronto Mississauga.*

POSTER

696. Genetics of Addiction

Theme C: Disorders of the Nervous System

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 N42 **696.01** Individual differences in delay discounting by heterogeneous stock rats. J. B. RICHARDS*; P. J. MEYER; S. GRISAFI; G. KELLY; A. GEORGE; A. A. PALMER. *Res. Inst. On Addictions, Univ. of Buffalo, Univ. of Chicago.*

9:00 N43 **696.02** Sex-dependent relationships between Pavlovian conditioned approach and cocaine-induced locomotion in heterogeneous stock rats. C. L. VERSAGGI; C. P. KING; J. A. TRIPI*; L. C. SOLBERG WOODS; A. A. PALMER; J. B. RICHARDS; P. J. MEYER. *State Univ. of New York At Buffalo, Med. Col. of Wisconsin, Univ. of Chicago, Res. Inst. on Addictions.*

10:00 N44 **696.03** Sex-dependent correlations between addiction-related traits in heterogeneous stock rats. P. MEYER*; C. P. KING; J. F. LUCKE; C. L. VERSAGGI; J. A. TRIPI; L. SOLBERG-WOODS; A. A. PALMER; J. B. RICHARDS. *Univ. at Buffalo, Res. Inst. on Addictions, Med. Col. of Wisconsin, Univ. of Chicago.*

11:00 N45 **696.04** Quantitative trait loci mapping of oxycodone reward and naloxone aversion in c57bl/6 substrains. L. R. GOLDBERG*; S. L. KIRKPATRICK; N. YAZDANI; W. E. JOHNSON; M. K. MULLIGAN; C. BRYANT. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Univ. of Tennessee Hlth. Sci. Ctr.*

8:00 N46 **696.05** Identifying human striatal gene networks and pathways associated with obesity. C. WU; Z. JIANG; S. P. GARAMSZEGI; X. XIE; N. F. TSINOREMAS; D. C. MASH*. *Univ. Miami Miller Sch. Med., Univ. Miami Miller Sch. Med., Dept of Neurology, Univ. Miami Miller Sch. Med.*

9:00 N47 **696.06** Hnrnph1 is a quantitative trait gene for methamphetamine sensitivity. N. YAZDANI*; C. C. PARKER; Y. SHEN; M. A. GUIDO; L. A. KOLE; S. L. KIRKPATRICK; J. E. LIM; G. SOKOLOFF; R. CHENG; W. JOHNSON; A. A. PALMER; C. D. BRYANT. *Boston Univ. Sch. of Med., Middlebury Col., Boston Univ. Sch. of Med., The Univ. of Chicago, Univ. of Iowa, Australian Natl. Univ.*

10:00 N48 **696.07** ● A polymorphism in the OPRM1 3' untranslated region is associated with methadone efficacy in treating opioid dependence. R. CRIST*; G. A. DOYLE; E. C. NELSON; W. H. BERRETTINI. *Univ. of Pennsylvania, Washington Univ.*

11:00 O1 **696.08** ▲ Association of GABRA2 polymorphisms and haplotype analysis in Alcohol Dependence. B. M. SHANKARAPPA*. *Natl. Inst. of Mental Hlth. and Neuroscien.*

8:00 O2 **696.09** Reduced cadherin 13 expression alters dopaminergic fibers and cocaine-related behaviors in mice. G. R. UHL*; J. DRGONOVA; L. HARTSTEIN; M. BAUMANN; B. RANSCHT. *NMVAHCS, BRINM and NIH/NIDA, NIH/NIDA, NIH/NIDA, Sanford-Burnham Reserach Inst.*

9:00 O3 **696.10** Adolescent cocaine experience differentially augments adult sensitization and alters nucleus accumbens epigenetic profiles in selectively bred rats that differ in addiction liability. A. PARSEGIAN*; J. GARCIA-FUSTER; P. BLANDINO; S. J. WATSON, Jr; S. B. FLAGEL; H. AKIL. *The Mol. & Behavioral Neurosci. Inst., IUNICS, Univ. of the Balearic Islands, Univ. of Michigan.*

10:00 O4 **696.11** Serum exosomal microRNA-137 is a potential biomarker for repeated psychostimulant exposure. H. IM*; E. NAM; B. KIM; J. KIM; S. LEE; H. KIM; J. WOO. *Korea Inst. of Sci. & Technol.*

11:00 O5 **696.12** Significant association of rs2240158 in the glutamate receptor subunit gene (GRIN3B) with heroin addiction. X. XIE*; H. LIU; W. ZHOU. *Ningbo Inst. of Microcirculation and Henbane, Lab. of Behavioral Neuroscience, Sch. of Medicine, Ningbo Univ., Ningbo Addiction Res. and Treatment Ctr.*

8:00 O6 **696.13** Identification of addiction-relevent genes using high-throughput drug naïve behavioral screens in the knock out mouse project (KOMP). P. E. DICKSON*; T. WILCOX; J. NDUKUM; J. CLARK; J. A. BUBIER; S. J. RIZZO; J. C. CRABBE; J. M. DENEGRE; K. L. SVENSON; R. E. BRAUN; V. KUMAR; E. J. CHESLER. *The Jackson Lab., Oregon Hlth. & Sci. Univ.*

POSTER

697. Cross-Modal Processing: Spatial Factors

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 O7 **697.01** Tolerance for perceiving a stable world depends on visual and vestibular variability. I. GARZORZ*; P. R. MACNEILAGE. *Grad. Sch. of Systemic Neurosciences, Univ. Hosp. of Munich.*

9:00 O8 **697.02** Audio-motor spatial integration during curvature exploration. S. FINOCCHIETTI*; G. CAPPAGLI; E. COCCHI; M. GORI. *Inst. Italiano Di Tecnologia, Inst. David Chiossone Onlus.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 O9 **697.03** Audiovisual integration in areas MT & MST of marmoset monkeys. T. A. CHAPLIN*; B. J. ALLITT; M. A. HAGAN; N. S. C. PRICE; R. RAJAN; M. G. P. ROSA; L. L. LUI. *Monash Univ., Monash Univ., Monash Univ.*

11:00 O10 **697.04** ▲ The relationship between body representation and visuospatial perception. K. NAKATA*; S. NOBUSAKO; S. MORIOKA. *KIO UNIVERSITY.*

8:00 O11 **697.05** Tactile and crossmodal localization in adults with autism spectrum disorder. M. HENSE*; S. BADDE; S. KÖHNE; J. HABICH; I. DZIOBEK; B. RÖDER. *Univ. of Hamburg, Humboldt Univ. of Berlin.*

9:00 O12 **697.06** Mechanisms of multisensory stochastic resonance in the superior colliculus. N. HUIDOBRO*; I. MENDEZ-BALBUENA; B. DE LA TORRE VALDOVINOS; E. MANJARREZ. *INSTITUTO DE FISIOLOGIA, BENEMERITA UNIVERSIDAD AU, Benemerita Univ. Autonoma de Puebla.*

10:00 O13 **697.07** Spatial influences on audio-visual interactions in the monkey brain. R. S. MUERS*; M. J. BARTOLO; T. D. GRIFFITHS; A. THIELE; C. I. PETKOV. *Inst. of Neurosci., Wellcome Trust Ctr. for Neuroimaging.*

11:00 O14 **697.08** Neural correlates of multisensory behavior in the auditory cortex. A. HAMMOND-KENNY; V. M. BAJO; A. J. KING; F. R. NODAL*. *Univ. of Oxford, Univ. of Oxford.*

8:00 O15 **697.09** Assigning a touch on the hand to a foot: Post hoc construction of tactile location. T. HEED*; B. RÖDER; S. BADDE. *Univ. of Hamburg, Univ. of Hamburg.*

9:00 O16 **697.10** The role of auditory cortex in the audiovisual ventriloquist aftereffect. B. ZIERUL*; B. RÖDER; C. TEMPELMANN; P. BRUNS; T. NOESSELT. *Hamburg Univ., Otto-von-Guericke Univ., Otto-von-Guericke Univ., Otto-von-Guericke Univ.*

10:00 O17 **697.11** Interactions between visual capture and front-back confusions in sound localization. C. MONTAGNE; Y. ZHOU*. *Arizona State Univ.*

11:00 O18 **697.12** Landmark processing by retrosplenial and postsubicular head direction cells. Y. R. LOZANO*; P. I. JACOB; M. A. VALENCIA-GARZA; K. J. JEFFERY. *Univ. Col. London.*

POSTER

698. Adaptation and Plasticity in Visual Cortex

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 O19 **698.01** A potential extrastriate locus for adaptation to composite radial frequency patterns. S. J. LAWRENCE*; B. D. KEEFE; R. J. W. VERNON; A. D. GOUWS; H. D. BROWN; A. R. WADE; D. J. MCKEEFRY; A. B. MORLAND. *Univ. of York, Bradford Sch. of Optometry and Vision Sci., Hull York Med. Sch.*

9:00 O20 **698.02** Adaptation-induced changes in gain, but not correlation, account for perceptual aftereffects. N. S. PRICE*; E. ZAVITZ; H. YU; M. G. ROSA. *Physiology, Monash Univ.*

10:00 O21 **698.03** Stimulus dependence of receptive field organization in the visual wulst of owls. J. MACHADO DE SOUSA; P. VIEIRA; C. MONIER; M. PANANCEAU; Y. FRÉGNAC; J. BARON*. *Univ. Federal De Minas Gerais, Unité de Neuroscience, Information et Complexité (CNRS-UNIC).*

11:00 O22 **698.04** Adaptation-induced tuning shifts in excitatory and inhibitory neurons of primary visual cortex. D. J. THENGONE*; Y. YU; E. I. NITZANY; J. D. VICTOR. *Weill Cornell Grad. Sch. of Med. Sci.*

8:00 O23 **698.05** Cross-correlation investigation of neurons in supra and infragranular layers in cat V1 before and following adaptation. N. CHANAURIA*; V. BHARMAURIA; L. BACHATENE; S. CATTAN; J. ROUAT; S. MOLOTCHNIKOFF. *Univ. of Montreal, Univ. of Sherbrooke.*

9:00 O24 **698.06** Decoding visual stimulus orientation from adapted neural populations. T. B. CZUBA*; A. KOHN. *Albert Einstein Col. of Med.*

10:00 O25 **698.07** ▲ Neural adaptation in primary visual cortex of awake primates. M. ALIKHANI*; A. RAHIMABADI; H. RAHIMI NASRABADI; M. ZANGANE; V. DAVOODNIA; R. LASHGARI. *Inst. For Res. In Fundamental Sci., Inst. For Res. In Fundamental Sci., Sch. of Electrical Engineering, Iran Univ. of Sci. and technology, Natl. Brain Mapping Center, Shahid Beheshti Med. Univ.*

11:00 O26 **698.08** Adaptation to orientation statistics in the visual cortex of awake mice. M. PACHITARIU*; C. STRINGER; M. CARANDINI; K. D. HARRIS. *Univ. Col. London.*

8:00 O27 **698.09** Short-term light or pattern but not orientation deprivation alters interocular balance in adult macaque visual cortex. D. Y. TS'O*; M. BEGUM. *SUNY - Upstate Med. Univ.*

9:00 O28 **698.10** Neural mechanism of reactivation of consolidated visual perceptual learning revealed by the concentration of excitatory and inhibitory neurotransmitters. J. BANG*; K. SHIBATA; T. WATANABE; Y. SASAKI. *Brown Univ.*

10:00 O29 **698.11** Visual adaptation modulates correlated activity within and between cortical areas. C. A. HENRY*; A. KOHN. *Albert Einstein Col. of Med.*

11:00 O30 **698.12** Pulse trains to percepts: The challenge of creating a perceptually intelligible world with sight recovery technologies. I. FINE*; G. M. BOYNTON. *Univ. of Washington, Univ. of Washington.*

8:00 O31 **698.13** Braille processing in visual cortex of congenitally blind individuals. S. KANJLIA; J. S. KIM*; M. BEDNY. *Johns Hopkins Univ.*

9:00 O32 **698.14** Can an fMRI signature of reorganization of visual processing in patients with retinal lesions be found in normally sighted individuals? H. D. BROWN*; A. D. GOUWS; R. GALE; S. J. D. LAWRENCE; R. J. W. VERNON; H. A. BASELER; A. B. MORLAND. *Univ. of York, York Teaching Hosp. NHS Fndn. Trust, Hull York Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 O33 **698.15** Exploring the preservation of specificity in 'visual' areas of the human congenitally blind brain using the EyeMusic Sensory Substitution Device and fMRI imaging. S. MAIDENBAUM; S. ABBOUD; S. DEHAENE; A. AMEDI*. *Fac. of Medicine, The Hebrew Univ. of Jer, Colle`ge de France, Universite´ Paris 11, Inst. Natl. de la Sante´ et de la Recherche Me´dicale.*

11:00 O34 **698.16** Examining tactile motion responses within hMT+. F. JIANG*; M. S. BEAUCHAMP; I. FINE. *Univ. of Nevada, Reno, Univ. of Texas Med. Sch. at Houston, Univ. of Washington.*

POSTER

699. Striate Cortex: Response Properties

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 O35 **699.01** Parallel processing of center and surround signals in the superficial and deep layers of macaque V1. M. BIJANZADEH*; L. NURMINEN; A. ANGELUCCI. *Univ. of Utah, Neurosci. Program, Moran Eye Institute, Univ. of Utah.*

9:00 O36 **699.02** Anatomical and functional specificity of V2-to-V1 feedback circuits in the primate visual cortex. F. FEDERER*; S. MERLIN; A. ANGELUCCI. *Univ. of Utah.*

10:00 O37 **699.03** Frontal cortex for top-down control: Organization of long-range inputs and outputs. S. ZHANG*; M. XU; W. CHANG; J. DO; Y. DAN. *HHMI /UC Berkeley, HHMI/UC Berkeley, UC Berkeley.*

11:00 O38 **699.04** Readout of fine-resolution shape contours from V1 activity via bottom-up reconstruction. G. ZURAWEL*; I. SHAMIR; H. SLOVIN. *The Leslie and Susan Gonda (goldschmied) Multidisciplinary Brain Res. Ctr.*

8:00 O39 **699.05** Natural images and redundancy reduction in primate visual cortex. L. O. NURMINEN*; M. BIJANZADEH; A. ANGELUCCI. *Univ. of Utah.*

9:00 O40 **699.06** Effects of naturalistic vision on contrast sensitivity and V1 activity. J. NIEMEYER*; M. PARADISO. *Brown Univ.*

10:00 O41 **699.07** Conductance-based interactions predict the suppressive effect of interacting propagating waves in awake monkey visual cortex. A. DESTEXHE*; Y. ZERLAUT; S. CHEMLA; A. REYNAUD; F. CHAVANE. *CNRS, CNRS.*

11:00 O42 **699.08** Visually-driven behavior at the limits of sensory information. B. SRIRAM*; A. CRUZ-MARTÍN; L. LI; D. BISHOP; A. GHOSH. *UCSD Div. of Biol., Boston Univ., F. Hoffmann-La Roche.*

8:00 O43 **699.09** ▲ Decoding orientation of contrast edges from evoked and induced oscillatory brain activity. M. FANG; J. LI; Q. LI; R. CICHY; D. PANTAZIS*. *MIT, Massachusetts Gen. Hosp., MIT.*

POSTER

700. Organization of ExtraStriate Cortex

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 O44 **700.01** Occipital vertical fiber system in human and macaque. H. TAKEMURA*; F. PESTILLI; K. S. WEINER; G. A. KELIRIS; S. LANDI; J. SLIWA; F. Q. YE; M. BARNETT; D. A. LEOPOLD; W. A. FREIWALD; N. K. LOGOTHETIS; B. A. WANDELL. *Natl. Inst. of Information and Communicatio, Japan Society for the Promotion of Sci., Indiana Univ., Stanford Univ., Max Planck Inst. for Biol. Cybernetics, Univ. of Antwerp, The Rockefeller Univ., Natl. Inst. of Hlth.*

9:00 O45 **700.02** ● Population receptive field changes in hV5/MT+ of healthy subjects with simulated visual field scotomas. A. PAPANIKOLAOU*; G. A. KELIRIS; S. LEE; N. K. LOGOTHETIS; S. M. SMIRNAKIS. *Max-Planck Inst. For Biol. Cybernetics, Baylor Col. of Med., Univ. of Antwerp.*

10:00 O46 **700.03** Deriving contrast response functions from fMRI responses to natural images. W. ZUIDERBAAN*; S. O. DUMOULIN. *Utrecht Univ.*

11:00 O47 **700.04** Linking attentional modulations of single-voxel population receptive fields and region-level spatial reconstructions. V. A. VO*; T. C. SPRAGUE; J. T. SERENCES. *UCSD.*

8:00 O48 **700.05** The field of view available to cortical reading circuitry. R. LE*; M. BARNETT; B. WANDELL; N. WITTHOFT. *Stanford Univ.*

9:00 P1 **700.06** Different population-level measurements and analysis techniques enable complementary insights into attentional modulation of visual responses. T. C. SPRAGUE*; S. ITTHIPURIPAT; J. T. SERENCES. *UCSD, UCSD.*

10:00 P2 **700.07** Changes in the temporal dynamics of BOLD co-fluctuations underlie the variability of cortico-cortical population receptive field maps derived from resting-state data. N. GRAVEL*; B. HARVEY; S. DUMOULIN; B. CURCIC-BLAKE; F. CORNELISSEN. *Groningen Univ., Utrecht Univ., Groningen Univ.*

11:00 P3 **700.08** Lines of Baillarger *in vivo* and *ex vivo:* Myelin contrast across lamina at 7T MRI and histology. A. FRACASSO*; S. J. VAN VELUW; F. VISSER; J. J. M. ZWANENBURG; S. O. DUMOULIN; N. PETRIDOU. *Utrecht Univ., Brain Ctr. Rudolf Magnus, Univ. Med. Ctr., Philips Med. Systems, Helmholtz institute.*

8:00 P4 **700.09** Columnar segregation of color- and disparity-selective stripes in human areas V2 and V3. R. B. TOOTELL*; J. R. POLIMENI; S. NASR. *MGH-NMR Ctr., Martinos Ctr. for Biomed. Imaging.*

9:00 P5 **700.10** Curvature-biased cortical areas in human visual cortex and its functional implications. X. YUE*; A. GANDHI; L. G. UNGERLEIDER. *NIH, NIH.*

10:00 P6 **700.11** Why can't we see our own eyeblinks? An ECoG study. T. GOLAN; I. DAVIDESCO; M. MESHULAM; D. M. GROPPE; P. MÉGEVAND; M. S. GOLDFINGER; E. YEAGLE; L. MELLONI; C. E. SCHROEDER; A. D. MEHTA; L. Y. DEOUELL; R. MALACH*. *The Hebrew Univ. of Jerusalem, Neurosci. Institute, Princeton Univ., Weizmann Institute, Neurobio. Dept., Hofstra North Shore LIJ Sch. of Med. and Feinstein Inst. of Med. Res., Columbia Univ. Col. of Physicians and Surgeons, Nathan Kline Inst., The Hebrew Univ. of Jerusalem.*

11:00 P7 **700.12** A shift toward dendrite targeting inhibition in extrastriate visual cortex. D. MORROW-JONES*; A. DISNEY. *Vanderbilt Univ., Vanderbilt Univ.*

8:00 P8 **700.13** Age-related shift in E-I balance in dorsal visual pathway. C. SIU*; K. M. MURPHY. *McMaster Univ., McMaster Univ.*

POSTER

701. Binocular Vision: Stereopis and Amblyopia

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 P9 **701.01** Perception of depth sign from motion parallax relies on combining extra-retinal signals regarding eye and body rotation. V. KOGAN*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Baylor Col. of Med.*

9:00 P10 **701.02** The role of disparity and viewpoint in the processing of observed actions. S. FERRI*; G. RIZZOLATTI; G. A. ORBAN. *Univ. of Parma.*

10:00 P11 **701.03** Natural binocular fixations in humans and binocular disparity. M. S. BANKS*; W. W. SPRAGUE; S. RESSIER. *Univ. of California, Univ. of California.*

11:00 P12 **701.04** ● Effects of drift speed and stimulus size on binocular rivalry rate and mixed percept duration in healthy individuals: Implications for endophenotype studies in clinical psychiatric groups. S. MILLER*; P. C. F. LAW; T. T. NGO. *Monash Univ., Monash Alfred Psychiatry Res. Ctr., Genet. Epidemiology Laboratory, QIMR Berghofer Med. Res. Inst.*

8:00 P13 **701.05** Loss of binocular depth perception by genetic functional inactivation of ipsilateral retinal projections. T. DOLIQUE*; S. SEDIGHI; K. CULLEN; F. CHARRON. *Inst. De Recherches Cliniques De Montréal, Dept. of Physiology, McGill Univ., Dept. of Anat. and Cell Biology, McGill Univ., Dept. of Biology, and Div. of Exptl. Medicine, McGill Univ., Dept. of Medicine, Univ. of Montreal, Integrated Program in Neuroscience, McGill Univ.*

9:00 P14 **701.06** A probabilistic approach to multiple object tracking in three-dimensions. J. R. COOKE*; R. J. VAN BEERS; A. C. TER HORST; P. MEDENDORP. *Radboud Univ. Nijmegen, VU Univ. Amsterdam.*

10:00 P15 **701.07** Disparity selective adaptation to correlated and anticorrelated patterns in V1 neurons requires computation across a broad population of neurons. P. L. APARICIO*; B. G. CUMMING. *Natl. Eye Inst.*

11:00 P16 **701.08** Binocular imbalance in macaque MT in strabismic amblyopia. T. J. VAN GROOTEL*; J. A. MOVSHON; L. KIORPES. *New York University, Ctr. For Neural Sci.*

8:00 P17 **701.09** Radial frequency discrimination is impaired in amblyopic non-human primates. S. SHARIAT TORBAGHAN*; B. N. BUSHNELL; L. KIORPES. *New York Univ.*

9:00 P18 **701.10** Receptive-field center/surround interactions in V2 neurons of amblyopic monkeys. B. ZHANG*; X. TAO; E. L. I. SMITH; J. WENSVEEN; Y. CHINO. *Nova Southeastern Univ., Univ. of Houston.*

10:00 P19 **701.11** Loss of binocular disparity selectivity following monocular deprivation in mouse V1. J. PATTADKAL*; B. SCHOLL; N. PRIEBE. *The Univ. of Texas at Austin.*

POSTER

702. Eye Movements and Perception

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 P20 **702.01** Dynamic representation of saccades in mouse frontal cortex. R. KIMURA*; H. OSAKI, M; T. K. SATO, M; T. R. SATO, M. *Tuebingen Univ., UCL Inst. of Ophthalmology, JST, PRESTO.*

9:00 P21 **702.02** ● Decomposing saccade-related potentials using ICA. M. MIYAKOSHI*; O. BALKAN; C. LEE; F. MEDEIROS; S. MAKEIG. *Swartz Ctr. For Computat. Neuroscience, INC, UCSD, Univ. of California San Diego.*

10:00 P22 **702.03** Saccadic preparation at the presentation of visual stimuli to the leading and unleading eye. V. MOISEEVA*; M. SLAVUTSKAYA; V. SHULGOVSKIY. *Lomonosov Moscow State Univ., Higher Sch. of Econ.*

11:00 P23 **702.04** Power and frequency of human visually induced gamma-band activity reflects retinal but not perceived stimulus speed. B. F. HANDEL*; P. FRIES. *Ernst Strüngmann Inst. (ESI) For Neurosci. In Cooperation With Max Planck, Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society, Donders Inst. for Brain, Cognition and Behaviour.*

8:00 P24 **702.05** A coarse-to-fine neural dynamics resulting from eye movements. A. CASILE*; M. RUCCI. *Inst. Italiano di Tecnologia and Harvard Medica, Boston Univ.*

9:00 P25 **702.06** Head centered encoding in monkey area V1 as the basis of a veridical percept of upright despite false torsion of the eyes due to Listing´s law. M. F. KHAZALI*; F. BUNJES; P. W. DICKE; P. THIER. *Hertie Inst. For Clin. Brain Res., Hertie Inst. for Clin. Brain Res.*

10:00 P26 **702.07** Contributions of response magnitude and variability to the presaccadic enhancement of visual representations. M. SHAMS-AHMAR; H. KARIMI; M. PARSA; R. EBRAHIMPOUR; B. NOUDOOST*. *Inst. for Res. in Fundamental Sci., Shahid Rajaee Teacher Training Univ., Montana State Univ., Shahid Rajaee Teacher Training Univ.*

11:00 P27 **702.08** Visual and presaccadic activity in Area 8A of the dorsolateral prefrontal cortex in macaque monkeys. K. BULLOCK*; F. PIEPER; A. SACHS; J. C. MARTINEZ-TRUJILLO. *Western Univ., McGill Univ., Inst. for Neuro- & Pathophysiology, The Ottowa Hosp. Res. Institute, Univ. of Ottowa, Robarts Res. Institute, Western Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 P28 **702.09** Saccadic corollary discharge underlies stable visual perception. W. M. JOINER; J. CAVANAUGH*; R. A. BERMAN; R. H. WURTZ. *George Mason Univ., NEI, NIH, NIH.*

9:00 P29 **702.10** Evidence for an eye-centered perception of stimulus orientation during saccades. T. MURDISON*; G. BLOHM; F. BREMMER. *Queen's Univ., Canadian Action and Perception Network (CAPNet), Assn. for Canadian Neuroinformatics and Computat. Neurosci. (CNCN), Philipps-Universität Marburg.*

10:00 P30 **702.11** High-gain visual feedback impairs response time in older adults. M. KWON*; Y. CHEN; E. A. CHRISTOU. *Univ. of Florida.*

11:00 P31 **702.12** Magnifying the scale of visual biofeedback improves posture. D. A. JEHU*; J. THIBAULT; Y. LAJOIE. *Univ. of Ottawa, Univ. of Ottawa.*

8:00 P32 **702.13** ● Enhancement of eye movements in Parkinson's disease as a result of CN-NINM intervention. Y. I. VERBNY*; G. VISHWANATHAN; K. SKINNER; M. TYLER; K. KACZMAREK; Y. DANILOV. *Dept. Biomed. Engineering, Univ.Wisconsin-Madison.*

9:00 P33 **702.14** Temporal coupling of action and perception in Parkinson's disease. E. PRETEGIANI; N. VANEGAS-ARROYAVE; E. J. FITZGIBBON; M. HALLETT; L. M. OPTICAN*. *Natl. Eye Inst., Natl. Inst. of Neurolog. Disorders and Stroke.*

POSTER

703. Dorsal Root Ganglion Neuron Modulation and Function

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 P34 **703.01** Age-dependent alterations in the excitability of small-diameter IB4-negative mouse dorsal root ganglia neurons. M. A. Mlś; E. B. STEVENS; A. D. RANDALL*. *Univ. of Bristol, Pfizer Neurosci. and Pain Res. Unit, Univ. of Exeter.*

9:00 P35 **703.02** PSD-95-immunoreactivity in epithelial cells and nerve fibers of the rat cornea. B. K. CARR*; S. A. GEURKINK; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Sci., Oklahoma State Univ. Ctr. for Hlth. Sci.*

10:00 P36 **703.03** Investigating the trafficking mechanisms of TRESK, a two-pore domain potassium channel implicated in pain. J. P. GIBLIN*; D. SUDRIA; A. CASTELLANOS; A. ANDRES; G. CALLEJO; X. GASULL. *Univ. of Barcelona.*

11:00 P37 **703.04** Osmolarity changes contribute to nociceptive sensitization induced by activation of Protease-Activated Receptor 2 (PAR-2) in the rat. K. KIDO*; E. MASAKI. *Tohoku Univ. Hospital, Dept. of Dent. Anesthesia.*

8:00 P38 **703.05** *In vivo* inflammation causes increased current amplitude in myelinated sensory neurons through mechanosensitive proteins. A. M. REYNOLDS*; A. D. WEYER; C. L. O'HARA; C. L. STUCKY. *Med. Col. of Wisconsin.*

9:00 P39 **703.06** Withdrawn.

10:00 P40 **703.07** Single Cell qPCR analysis of expression changes following nerve injury and regeneration. P. C. ADELMAN*; K. M. BAUMBAUER; R. L. FRIEDMAN; K. H. LEE; H. R. KOERBER. *Univ. of Pittsburgh, Univ. of Connecticut.*

11:00 P41 **703.08** ● Heating of deeper skin layers might detect spontaneously active heat-sensitized nociceptors. M. I. NEMENOV; B. NAMER; R. SCHMIDT; I. KLEGGETVEIT; M. BACKONJA; E. JORUM; M. SCHMELZ*. *Stanford Univ., Univ. Erlangen/Nuremberg, Univ. Uppsala, Oslo Univ., Univ. of Wisconsin-Madison, Heidelberg Univ.*

8:00 P42 **703.09** Stimulated CGRP release from GDNF-responsive procine DRG neurons is higher compared to NGF-responsive ones both in somata and neurites, *in vitro.* S. SAUER; A. KLUSCH; C. GORZELLANY; R. JONAS; P. W. REEH*; S. SCHNEIDER; M. SCHMELZ; M. PETERSEN. *Dept. of Physiol., Dept. of Anesthesiol., Dept. of Dermatol., Dept. of Anesthesiol., Univ. Erlangen-Nuremberg.*

9:00 Q1 **703.10** Mechanisms of gpcr-gq-induced action potential discharge in vagal c-fiber terminals. H. SUN; S. MEEKER; M. KOLLARIK; F. RU; B. J. UNDEM*. *Johns Hopkins, Johns Hopkins, Johns Hopkins Asthma Ctr.*

10:00 Q2 **703.11** Vascular afferents innervating lumbosacral veins have distinct immunohistochemical phenotypes in DiI-traced DRG neurons. V. HENAO; H. D. NGUYEN; V. P. DUGAN; B. Y. COOPER; R. D. JOHNSON*. *Univ. Florida, Univ. Florida, Univ. Florida.*

11:00 Q3 **703.12** Characterization of optogenetic activation of non-peptidergic C-fibers. K. H. LEE*; J. HACHISUKA; P. C. ADELMAN; S. E. ROSS; B. M. DAVIS; H. R. KOERBER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 Q4 **703.13** A newly identified selective mechano-sensitive K2P opener reduces rat dorsal root ganglion (DRG) neuronal excitability. A. J. LOUCIF*; P. SAINTOT; B. ANTONIO; S. ZELLMER; L. CAO; N. CASTLE; E. STEVENS. *Pfizer Ltd, Pfizer Neurosci. & Pain Res. Unit (NPRU), Pfizer Neurosci. & Pain Res. Unit (NPRU).*

9:00 Q5 **703.14** Elevated levels of glutaminase and aspartate aminotransferase in rat drg neurons during adjuvant-induced arthritis. B. R. BOLT*; Z. ZHANG; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Sci.*

POSTER

704. Peripheral Mechanisms: Pain and Touch

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Q6 **704.01** ● Molecular profiling of sensory neurons innervating different peripheral tissues following *in vivo* retrograde labeling and laser capture microdissection. R. S. BREESE; Y. BAI; W. FURY; Y. WEI; M. NI; C. ADLER; C. LIN; A. J. MURPHY; L. E. MACDONALD; N. ALESSANDRI-HABER*. *Regeneron Pharmaceuticals.*

9:00 Q7 **704.02** Flotillin 1 is enriched in nociceptive sensory neurons and its interactome is altered in response to inflammation. B. K. DRAGOO; R. GEGUCHADZE; D. C. MOLLIVER*. *Univ. New England.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 Q8 **704.03** Cage bedding material affects mechanical behavioral thresholds, heat thresholds and texture preference in mice. F. MOEHRING*; C. L. O'HARA; C. L. STUCKY. *Med. Col. of Wisconsin.*

11:00 Q9 **704.04** Growth hormone regulates the age-dependent sensitization of cutaneous nociceptors during developmental inflammation through an insulin-like growth factor receptor type 1 dependent mechanism. X. LIU*; L. QUEME; P. LU; K. GREEN; F. LEE; A. SHANK; R. HUDGINS; M. JANKOWSKI. *Cincinnati Children's Hosp., Shaanxi Univ. of Chinese Med., Univ. of Cincinnati, Cincinnati.*

8:00 Q10 **704.05** Muscle IL-1β mediates ischemia and reperfusion injury-induced sensitization of group III and IV muscle afferents. J. L. ROSS*; L. F. QUEME; P. LU; E. R. COHEN; R. C. HUDGINS; M. P. JANKOWSKI. *Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp. Med. Ctr.*

9:00 Q11 **704.06** Ionic mechanisms of peripheral analgesic effect of Substance P. N. GAMPER*; D. HUANG; L. OOI; J. LINLEY; C. PEERS; H. ZHANG. *Univ. Leeds, Hebei Med. Univ., Univ. Leeds.*

10:00 Q12 **704.07** Translation of the atypical protein kinase C, PKMζ, mediates the enhancement of excitability and the development of mechanical hyperalgesia produced by Nerve Growth Factor. A. KHODOROVA*; J. KAYS; Y. ZHANG; S. YOUNG; R. WEK; G. R. STRICHARTZ; G. D. NICOL. *Harvard Med. Sch. Brigham and Women's Hosp, Sch. of Medicine, Indiana Univ., Sch. of Medicine, Indiana Univ.*

11:00 Q13 **704.08** Peripheral glutamate receptors contribute to Fos expression in the spinal dorsal horn through interaction between peripheral nerve terminals. A. LI; D. CAO*; Y. GUO; Y. ZHAO. *Stomatological Hospital, Xi'An Jiaotong Univ., Sch. of Basal Med. Science, Xi'an Jiaotong Univ. Hlth. Sci. Ctr.*

8:00 Q14 **704.09** P38 MAPK activation is required in glial P2X7-dependent and neuronal P2Y1-mediated inhibition of P2X3 expression in dorsal root ganglion neurons. Y. CHEN*; G. LI; L. HUANG. *Univ. of Texas Med. Br.*

9:00 Q15 **704.10** Effect of bisphosphonates and bisphosphonates-induced ATP analogues on P2X receptors. Y. ISHCHENKO; A. SHAKIRZYANOVA; R. GINIATULLINA; P. TURHANEN; J. MÄÄTTÄ; J. MÖNKKÖNEN; R. GINIATULLIN*. *Univ. of Eastern Finland.*

10:00 Q16 **704.11** A possible role for P2X7 receptors expressed by satellite glial cells from dorsal root ganglia in nociceptive responses. A. F. NEVES*; F. S. OLIVEIRA; C. M. C. LOTUFO; C. A. PARADA. *Biol. Inst. / UNICAMP, Fac. of Med. - UFU, Inst. of Biomed. Sci. / UFU.*

11:00 Q17 **704.12** *In vivo* regulation of P body dynamics in mouse dorsal root ganglion neurons by AMPK activation and peripheral nerve injury. G. L. MEJIA*, JR; K. FIOCK; O. K. MELEMEDJIAN; G. DUSSOR; T. J. PRICE. *Univ. of Texas At Dallas, Univ. of Maryland.*

8:00 Q18 **704.13** Pronociceptive role of metabotropic P2Y1 receptor in different models of neuropathic pain. V. GRANADOS-SOTO*; J. B. PINEDA-FARIAS; P. BARRAGAN-IGLESIAS. *Dept. de Farmacobiologia, Cinvestav, Sede Sur, Cinvestav, Sede Sur.*

9:00 Q19 **704.14** ● Differential accumulation of Nav1.8 mRNA with de novo long 3'UTR in sensory axons after peripheral nerve injury. T. HIRAI*; Y. MULPURI; I. SPIGELMAN; I. NISHIMURA. *Tokyo Med. and Dent. Univ., UCLA, UCLA, UCLA.*

10:00 Q20 **704.15** eIF4E phosphorylation links BDNF translation to pathological pain plasticity. J. K. MOY*; A. KHOUTORSKY; M. N. K. ASIEDU; C. G. GKOGKAS; G. DUSSOR; T. J. PRICE. *Univ. of Texas At Dallas, McGill Univ., Univ. of Edinburgh.*

11:00 R1 **704.16** Analyzing axons within normal human skin biopsies reveals demographic differences and developmental pruning until the mid-20's. A. L. OAKLANDER*; H. M. DOWNS; M. M. KLEIN. *Mass Gen Hosp, Harvard Med. Sch.*

POSTER

705. Pain Models: Pharmacology

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 R2 **705.01** ▲ Hyperbaric oxygen produces antinociception in mice by activating CB1 cannabinoid receptors. A. C. STOUDT*; Y. ZHANG; D. Y. SHIRACHI; R. M. QUOCK. *Washington State Univ., Washington State Univ., Univ. of the Pacific.*

9:00 R3 **705.02** ● ▲ ALGOGram™: A new research tool to valuate drugs in multiple pain areas. Y. DARBAKY; L. DIOP*. *ANS Biotech.*

10:00 R4 **705.03** The formalin test: Initial excitation and biphasic activation. K. KISTNER; T. HOFFMANN; S. SAUER; T. KICHKO; P. REEH; M. J. FISCHER*. *Univ. of Erlangen-Nürnberg, Univ. of Erlangen-Nuremburg.*

11:00 R5 **705.04** AMPAKines relieve both pain and pain-related depression by potentiating AMPA receptors in the nucleus accumbens. C. SU*; H. LIN; N. PAWLAK; J. WANG. *NYU Med. Ctr., New York Universty.*

8:00 R6 **705.05** ▲ Antinociceptive effects of JWH015, a synthetic cannabinoid. N. Z. GREENE; R. M. CRAFT*. *Washington State Univ.*

9:00 R7 **705.06** Mechanism underlying oral ulcerative mucositis-induced pain in chemotherapy-received rat model. K. YAMAGUCHI; K. ONO*; S. HITOMI; N. HARANO; T. SAGO; S. WATANABE; K. INENAGA. *Kyushu Dent. Univ.*

10:00 R8 **705.07** Anti nociceptive effects of carica papaya leaves extract: Modulation by dopaminergic, gabaergic and serotonergic receptors. B. V. OWOYELE*; R. A. AWEDA; A. A. BABALOLA. *Univ. of Ilorin, Univ. of Ilorin.*

11:00 R9 **705.08** Oxytocin alleviates orofacial hypersensitivity following infraorbital nerve injury in rats. A. KUBO*; M. SHINODA; D. C. YEOMANS; K. IWATA. *Nihon Univ. Sch. of Dent., Stanford Univ. Sch. of Med.*

8:00 R10 **705.09** ● Novel methylcyclohexyl benzene derivatives: Functional cannabinoid receptor mediated antinociception vs cannabimimetic effects in mice. J. L. WILKERSON*; T. GRIM; A. MORALES; M. BHOWMICK; A. MAHADEVAN; A. H. LICHTMAN. *Virginia Commonwealth Univ. MCV, Organix Inc.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 R11 **705.10** Influence of GPR40/FFA1 on the regulation of central post-stroke pain. S. TOKUYAMA*; S. HARADA; K. NAKAMOTO. *Kobe Gakuin Univ.*

10:00 R12 **705.11** Olfactory bulb evoked field potential by electrical stimulation of the olfactory epithelium in the anesthetised mouse: Development of a potential Nav1.7 channel blocker assay. J. ALLARD*; W. MINER. *E-Phys.*

11:00 R13 **705.12** ● A comparison between nonhuman primate and rat models of acute chemotherapy-induced peripheral neuropathy. Y. SHIDAHARA; S. NEMOTO; Y. AWAGA; M. TAKASHIMA; A. HAMA*; A. MATSUDA; H. TAKAMATSU; K. UMEMURA. *Hamamatsu Pharma Research, Inc., Hamamatsu Univ. Sch. of Med.*

8:00 R14 **705.13** Microglia contribute to non-inflammatory pain in early phases of collagen-induced arthritis. F. R. NIETO; A. K. CLARK; J. GRIST; V. CHAPMAN; M. A. MALCANGIO*. *King's Col. London, Univ. of Nottingham, Wolfson CARD, The Wolfson Wing.*

9:00 R15 **705.14** ● [Leu11]-HK-1-derived peptides with D-Trp have longer antipruriceptive effects in rats. H. FUNAHASHI; R. NAONO-NAKAYAMA; Y. MIYAHARA; Y. ISHIDA*; T. NISHIMORI. *Dep Psychiatry, Fac of Med, Univ. Miyazaki, Div. Integrative Physiology, Fac Medicine, Univ. Miyazaki.*

10:00 R16 **705.15** ▲ Anti-allodynic effect of a sigma-1 antagonist in a model of neuropathic pain in rats. J. V. ESPINOSA-JUAREZ; O. A. JARAMILLO-MORALES; J. N. CORONA-RAMOS; J. G. NAVARRETE-VÁZQUEZ; F. J. LOPEZ MUNOZ*. *CINVESTAV, Univ. Atonoma del Estado de Morelos.*

11:00 R17 **705.16** ▲ Investigating the antinociceptive effect of hyperbaric oxygen in an animal model of fibromyalgia: Role of nitric oxide. P. SMITH*; A. L. BREWER; Y. ZHANG; D. Y. SHIRACHI; R. M. QUOCK. *Washington State Univ., Washington State Univ., Univ. of the Pacific.*

8:00 R18 **705.17** Hyperbaric oxygen suppresses paclitaxel-induced neuropathic pain through the rostral ventromedial medulla (RVM). Y. ZHANG; D. Y. SHIRACHI; R. M. QUOCK*. *Washington State Univ., Univ. of the Pacific, Washington State Univ.*

9:00 R19 **705.18** ● Broad spectrum efficacy in rodent pre-clinical pain models with LY2969822, a metabotropic glutamate2/3 agonist prodrug. M. P. JOHNSON*; M. A. MUHLHAUSER; E. S. NISENBAUM; R. M. A. SIMMONS; B. M. FORSTER; K. L. KNOPP; L. YANG; D. MORROW; D. LI; J. D. KENNEDY; S. SWANSON; J. A. MONN. *Eli Lilly & Co, Eli Lilly & Co, Eli Lilly & Co.*

10:00 R20 **705.19** Possible involvement of spinal dopamine receptor subtypes in trigeminal nerve injury-induced mechanical hypersensitivity of rats. K. NAKAI*; A. NAKAE; T. KUBO; Y. MINEGISHI; Y. FUJINO; K. HOSOKAWA. *Univ. of Fukui Hosp., WPI Immunol. Frontier Res. Center, Osaka Univ., Osaka Univ. Grad. Sch. of Med., Osaka Univ. Grad. Sch. of Med.*

11:00 S1 **705.20** The contribution of Nucleus Raphe Magnus to the analgesia produced by centrally administered CDP-choline. M. S. GURUN*; M. K. GURBUZOGLU-ULKAN; D. BAGDAS; D. GOK-YURTSEVEN; O. EYIGOR. *Uludag Univ. Med. Fac.*

POSTER

706. Tactile Sensation

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 S2 **706.01** A novel integrated EEG and neural modeling approach to uncovering the mechanisms of transcranial alternating current stimulation. C. BLACK*; U. AGRAWAL; M. LADOW; J. SANTOYO; J. VOIGTS; C. MOORE; S. JONES. *Brown Univ., MIT.*

9:00 S3 **706.02** ▲ The role of muscular beta oscillations and modulation with transcranial alternating current stimulation in predicting tactile detection. U. AGRAWAL*; C. BLACK; M. LADOW; J. SANTOYO; C. KERR; C. MOORE; S. JONES. *Dept. of Neuroscience, Brown Univ., Brown Univ., Brown Univ., Brown Univ.*

10:00 S4 **706.03** Testing the modulation of cortical dynamics and somatosensory perception using alpha and gamma-band transcranial alternating current stimulation. J. F. SANTOYO*; C. BLACK; U. AGRAWAL; M. LADOW; B. GREENBERG; S. JONES; C. MOORE. *Brown Univ., Brown Univ., Brown Univ., Brown Univ.*

11:00 S5 **706.04** ● Robot-aided measurement of proprioceptive function in healthy and clinical populations. J. HOLST-WOLF*; I. YEH; N. ELANGOVAN; J. AMAN; L. CAPPELLO; L. MASIA; J. KONCZAK. *Univ. of Minnesota, Italian Inst. of Technol., Nanyang Technological Univ.*

8:00 S6 **706.05** ● Robot-assisted assessment of proprioception: Normative data in healthy adults. I. YEH*; J. AMAN; N. ELANGOVAN; J. HOLST-WOLF; L. CAPPELLO; L. MASIA; J. KONCZAK. *Univ. of Minnesota, Italian Inst. of Technol., Nanyang Technological Univ.*

9:00 S7 **706.06** Potential applicability of laryngeal vibrotactile stimulation as a noninvasive therapeutic method for spasmodic dysphonia. S. KHOSRAVANI*; Y. TSENG; I. YEH; J. AMAN; J. KONCZAK. *Univ. of Minnesota.*

10:00 S8 **706.07** ● Virtual reality visuomotor training improves proprioceptive acuity and transfers to untrained motor task. N. ELANGOVAN*; L. CAPPELLO; J. AMAN; L. MASIA; J. KONCZAK. *Univ. of Minnesota, Italian Inst. of Technol., Nanyang Technological Univ.*

11:00 S9 **706.08** A push-pull pathway from somatosensory cortex to spinal trigeminal nuclei for motor control of the vibrissae. P. M. KNUTSEN*; N. MERCER LINDSAY; D. KLEINFELD. *UCSD.*

8:00 S10 **706.09** Brainstem areas controlling exploratory nose motion in rodents. A. KURNIKOVA*; M. DESCHÊNES; J. D. MOORE; D. KLEINFELD. *UC San Diego, Univ. Laval, Harvard Univ.*

9:00 S11 **706.10** Projections from vibrissa motor cortex to the spinal trigeminal nuclei. N. MERCER LINDSAY*; P. M. KNUTSEN; D. GIBBS; H. J. KARTEN; D. KLEINFELD. *UCSD.*

10:00 S12 **706.11** Designing an animal model to investigate corneal neurotization as a means of restoring sensation in patients with corneal anesthesia. J. CATAPANO*; M. P. WILLAND; A. ALI; T. GORDON; G. H. BORSCHEL. *The Hosp. for Sick Children, Univ. of Toronto.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 S13 **706.12** Proprioceptive tuning to appendage mechanics: A comparison of pectoral fin proprioception in fishes. B. R. AIELLO*; M. W. WESTNEAT; M. E. HALE. *Univ. of Chicago.*

8:00 S14 **706.13** Tactile sensation in a flexible biological membrane: Investigating touch in fish pectoral fins. A. R. HARDY*; B. M. STEINWORTH; M. E. HALE. *Univ. of Chicago.*

9:00 S15 **706.14** Mechanical response of isolated rat whiskers to airflow: Bending direction, bending magnitude and vibration frequency. Y. S. W. YU*; M. M. GRAFF; M. J. Z. HARTMANN. *Northwestern Univ., Northwestern Univ.*

10:00 S16 **706.15** Responses of trigeminal ganglion neurons to the 3D mechanics of whiskers. N. E. BUSH*; L. A. HUET; A. E. T. YANG; P. KUMARAPPAN; J. A. ELLIS; M. J. Z. HARTMANN. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

11:00 S17 **706.16** Evidence for tuning to stimulus directionality in the responses of neurons with multi-whisker receptive fields in spinal trigeminal nucleus interpolaris. C. S. BRESEE*; N. E. BUSH; A. S. KALOTI; E. C. JOHNSON; S. N. NAUFEL; M. G. PERICH; D. L. JONES; M. J. Z. HARTMANN. *Northwestern Univ., Univ. of Illinois at Urbana Champagne, Northwestern Univ., Northwestern Univ.*

8:00 S18 **706.17** Inferring the neural representations underlying perceptual invariance in touch. H. P. SAAL*; J. D. LIEBER; Z. M. BOUNDY-SINGER; A. I. WEBER; S. J. BENSMAIA. *Univ. of Chicago.*

9:00 S19 **706.18** Neurons in primary somatosensory cortex encode complex hand postures and movements. G. TABOT*; J. M. GOODMAN; A. S. RAJAN; A. K. SURESH; N. G. HATSOPOULOS; S. J. BENSMAIA. *Univ. of Chicago, Univ. of Chicago.*

10:00 S20 **706.19** The coding of natural textures in primate somatosensory cortex. J. LIEBER*; H. P. SAAL; S. J. BENSMAIA. *Univ. of Chicago.*

11:00 T1 **706.20** A model that simulates the response of the somatosensory nerves to arbitrary spatio-temporal deformations of the skin of the hand. B. P. DELHAYE*; H. P. SAAL; B. C. RAYHAUN; S. J. BENSMAIA. *Univ. of Chicago.*

8:00 T2 **706.21** What can bionic fingers tell us about objects? Extracting behaviorally relevant features from finger sensors output. B. P. DELHAYE; E. W. SCHLUTER*; M. S. JOHANNES; K. D. KATYAL; F. V. TENORE; S. J. BENSMAIA. *The Univ. of Chicago, The Univ. of Chicago, Johns Hopkins Univ. Applied Physics Lab.*

9:00 T3 **706.22** Do proprioceptive neurons in somatosensory cortex encode muscle length? J. GOODMAN*, JR; G. A. TABOT; A. S. RAJAN; A. K. SURESH; N. G. HATSOPOULOS; S. J. BENSMAIA. *Univ. of Chicago.*

10:00 T4 **706.23** Tactile responses of single neurons in the ventral caudal nucleus of awake humans. J. S. NEIMAT; J. P. NOEL; H. P. SAAL; J. F. DAMMANN, III; S. J. BENSMAIA; M. A. HARVEY*. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Univesity of Chicago.*

11:00 T5 **706.24** Tactile coding in the cuneate nucleus of macaques. A. K. SURESH*; T. TOMLINSON; J. WINBERRY; J. M. ROSENOW; L. E. MILLER; S. J. BENSMAIA. *Univ. of Chicago, Northwestern Univ.*

POSTER

707. Basal Ganglia: Input Integration

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 T6 **707.01** Depression of corticostriatal transmission and responsiveness of striatal projection neurons to phosphodiesterase 10A inhibition in neuronal nitric oxide synthase knockout mice. F. E. PADOVAN NETO*; S. CHAKROBORTY; J. F. HARMS; C. J. SCHMIDT; A. R. WEST. *Rosalind Franklin Univ., Pfizer Global Res. and Develop.*

9:00 T7 **707.02** Intrinsic properties of striatal neurons determine similar corticostriatal and thalamostriatal postsynaptic suprathreshold responses. M. A. ARIAS*; J. BARGAS; D. TAPIA; E. GALARRAGA. *Inst. de Fisiología Celular UNAM.*

10:00 T8 **707.03** Alterations in gating of hippocampal and amygdalar inputs to the nucleus accumbens induced by disinhibition of the prefrontal cortex. M. TSE*; M. AUGER; S. B. FLORESCO. *Univ. British Columbia, Univ. British Columbia.*

11:00 T9 **707.04** Action of parvalbumin expressing interneurons in the striatal microcircuit. M. DUHNE*; E. LARA; A. LAVILLE; J. BARGAS. *Inst. De Fisiologia Celular UNAM.*

8:00 T10 **707.05** Coinciding decreases in discharge rate suggest that spontaneous pauses in firing of external pallidum neurons are network driven. E. SCHECHTMAN*; A. ADLER; M. DEFFAINS; H. GABBAY; S. KATABI; A. MIZRAHI; H. BERGMAN. *Bergman Lab, Dept. Med. Neurobio., NYU Sch. of Med. and Ctr. for Neural Science, New York Univ., Hebrew University-Hadassah Sch. of Med.*

9:00 T11 **707.06** Synaptic properties of projections from primary somatosensory cortex onto different types of striatal neurons. Y. M. JOHANSSON*; G. SILBERBERG. *Karolinska Institutet.*

10:00 T12 **707.07** Up-states in striatal medium spiny neurons depend on spatial and temporal distribution of cortical input. D. B. DORMAN*; K. T. BLACKWELL. *Krasnow Inst. For Advanced Study, George Mason.*

11:00 T13 **707.08** ● Optogenetic assessment of dynamic input integration in the ventral striatum. J. M. BROOKS*; P. O'DONNELL. *Pfizer.*

8:00 T14 **707.09** Properties of motor cortico-subthalamic neurons: An *in vitro* study. L. FROUX; M. LE BON - JEGO; S. MORIN; E. NORMAND; A. FRICK; J. BAUFRETON; A. I. TAUPIGNON*. *CNRS Univ. Bordeaux Segalen UMR 5293, CNRS Univ. Bordeaux Segalen UMR 5297, INSERM U862.*

9:00 T15 **707.10** Distinct cortical GABAergic projecting neurons differentially modulate the activity of striatal neurons. S. MELZER*; M. GIL; M. MICHAEL; H. MONYER. *Howard Hughes Med. Institute, Harvard Med. S, Med. Fac. of Heidelberg Univ. and German Cancer Res. Ctr. (DKFZ).*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 T16 **707.11** Cortically induced responses in the basal ganglia through the cortico-striatal neurons. H. SANO*; K. KOBAYASHI; S. CHIKEN; S. KATO; K. KOBAYASHI; A. NAMBU. *Nat Inst. for Physiol Sci., Nat Inst. for Physiol Sci., Fukushima Med. Univ.*

11:00 T17 **707.12** Plasticity in collateral connectivity of striatal projection neurons follows learning of a skilled motor task. V. G. LOPEZ HUERTA*; Y. NAKANO; M. GARCIA-MUNOZ; G. W. ARBUTHNOTT. *Okinawa Inst. of Sci. and Technol. Sch. Corp., Okinawa Inst. of Sci. and Technol. Grad. Univ.*

8:00 T18 **707.13** Modulatory role of dopamine D4 receptor on methamphetamine-induced dopamine release. J. BONAVENTURA*; C. QUIROZ; M. RUBINSTEIN; G. TANDA; S. FERRÉ. *NIDA/NIH, Inst. de Investigaciones en Ingeniería Genética y Biología Molecular, Consejo Nacional de Investigaciones Científicas y Técnicas.*

9:00 T19 **707.14** Functional anatomy of the infralimbic-accumbens pathway: A microdialysis-optogenetic approach. C. R. QUIROZ*; M. ORRU; W. REA; A. CIUDAD; S. FERRE. *NIDA, IRP, NIH, DHHS.*

10:00 T20 **707.15** Corticostriatal pathways underlying bilateral sensory integration in the mouse striatum. R. REIG*; G. SILBERBERG. *Karolinska Institutet.*

11:00 U1 **707.16** Thalamostriatal system controls selection and flexibility of motor actions. K. KOBAYASHI*; S. KATO; M. OKAMOTO; S. EIFUKU. *Fukushima Med. Univ., Fukushima Med. Univ.*

POSTER

708. Basal Ganglia Anatomy and Physiology

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 U2 **708.01** Neuronal activity in the marmoset basal ganglia thalamocortical circuit during rest and spontaneous locomotion. M. F. ARAUJO*; R. MOIOLI; E. MORYA. *Inst. Santos Dumont, Santos Dumont Inst.*

9:00 U3 **708.02** Exclusivity in the connections of the rostral division of the zona incerta. D. S. ZAHM*; M. T. DESTA. *St. Louis Univ. Sch. of Med.*

10:00 U4 **708.03** Primary motor cortex leads globus pallidus in the encoding of kinematics in rhesus macaques. P. J. RICE; B. PASQUEREAU; O. DRINKWATER; R. S. TURNER*. *Univ. of Washington, Univ. of Pittsburgh, Weill Cornell Med. Col.*

11:00 U5 **708.04** Loss of neuropilin 2 induces aberrant corticostriatal circuit activity and impairs goal-directed instrumental behavior in mice. M. W. SHIFLETT; M. ASSOUS; E. MARTINEZ; E. CHOE; J. M. TEPPER; T. S. TRAN*. *Rutgers Univ., Rutgers Univ., Rutgers Univ.*

8:00 U6 **708.05** ● Dysfunction of subthalamic nucleus neurons in mouse models of Huntington's disease. J. F. ATHERTON*; E. MCIVER; V. BEAUMONT; D. J. SURMEIER; M. D. BEVAN. *Northwestern Univ., CHDI Fndn.*

9:00 U7 **708.06** ▲ A new task to characterize striatal mechanisms for running control in mice. C. SALES-CARBONELL; L. KHALKI; D. M. ROBBE*. *Inst. de Neurobiologie de la Méditerranée.*

10:00 U8 **708.07** Plasticity of motor cortex-subthalamic nucleus transmission in experimental Parkinson's disease. H. CHU*; M. D. BEVAN. *Northwestern Univ., Northwestern Univ.*

11:00 U9 **708.08** Calcium dynamics predicts direction of synaptic plasticity in striatal spiny projection neurons. J. JEDRZEJEWSKA-SZMEK*; S. DAMORADAN; D. B. DORMAN; K. T. BLACKWELL. *George Mason Univ., George Mason Univ., George Mason Univ.*

8:00 U10 **708.09** Simultaneous functional imaging and neurochemical recording during subthalamic nucleus deep brain stimulation. E. K. ROSS*; H. MIN; M. SETTELL; A. MCCONICO; S. CHO; C. BLAHA; S. CHANG; K. BENNET; K. LEE. *Mayo Clin. Col. of Med., Mayo Clin.*

9:00 U11 **708.10** Beta oscillations between the subthalamic nucleus and substantia nigra pars reticulata during automatic and voluntary movement. J. J. JANTZ*; M. WATANABE; R. LEVY; D. P. MUNOZ. *Queen's Univ.*

10:00 U12 **708.11** Chemogenetic restoration of autonomous subthalamic nucleus activity ameliorates motor deficits in experimental Parkinson's disease. E. MCIVER*; J. ATHERTON; D. SURMEIER; M. D. BEVAN. *Northwestern Univ.*

11:00 U13 **708.12** ▲ Localization of glycinergic neurons in the rodent thalamus. P. LOZANO*; M. PANDO; M. MIRANDA. *Univ. of Texas At El Paso, Univ. of Texas at El Paso.*

8:00 U14 **708.13** Movement modulates phase-locking between neuronal discharge in human STN and cortical oscillations. W. J. LIPSKI*; R. S. TURNER; D. J. CRAMMOND; E. D. KONDYLIS; A. ALHOURANI; M. J. RANDAZZO; M. RICHARDSON. *Univ. Pittsburgh, Univ. Pittsburgh.*

9:00 U15 **708.14** How do the basal ganglia control reaching movements? J. C. HOUK; B. W. PETERSON*. *Northwestern Univ. Med. Sch.*

10:00 U16 **708.15** Glutamatergic transmission blockade in the striatum reduces dyskinesias in parkinsonian monkeys. S. M. PAPA*; A. SINGH. *Emory Univ., Yerkes Natl. Primate Res. Center, Emory Univ. Atlanta.*

11:00 U17 **708.16** Striatal oscillations in advanced parkinsonian monkeys and their regulation by glutamatergic transmission. A. SINGH*; S. PAPA. *Yerkes Natl. Primate Res. Center, Emory University,, Yerkes Natl. Primate Res. Center, Emory Univ. Atlanta.*

8:00 U18 **708.17** How the cerebellum and the basal ganglia cooperate together for sensorimotor learning ? L. PIDOUX*; A. LEBLOIS. *Ctr. De Neurophysiologie, Physiologie Et Patholo, CNRS UMR 8119, Univ. Paris Descartes.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 U19 **708.18** Understanding the role of glutamate in deep brain stimulation of the subthalamic nucleus using enzyme-based microelectrode amperometry in a transgenic mouse model. E. S. ARVIDSSON*; Å. KONRADSSON-GEUKEN; N. SCHWEIZER; S. PUPE; M. PAPATHANOU; Å. WALLÉN-MACKENZIE. *Uppsala University, Depratment of Comparative Phys.*

10:00 U20 **708.19** After effects of microstimulation in human globus pallidus. F. LUO*; D. CLARK; L. KIM; M. NOOR; Z. KISS. *Univ. of Calgary.*

11:00 U21 **708.20** Acetylcholine evokes spontaneous muscarinic IPSCs in medium spiny neurons overexpressing GIRK channels. A. MAMALIGAS; C. FORD*. *Case Western Reserve Univ., Case Western Reserve Univ.*

8:00 U22 **708.21** Enkephalin disinhibits striatal patches via the delta opioid receptor. S. NEUFELD*; M. R. BANGHART; N. MULDER; B. SABATINIT. *Harvard Med. Sch., Howard Hughes Med. Inst.*

9:00 U23 **708.22** VTA-AcbSh circuitry analysis and modulation of the response to novelty. H. LI*; M. CRANSTON; C. MACTUTUS; M. AKSENOVA; B. KANTOR; R. BOOZE. *Univ. of South Carolina.*

POSTER

709. Finger and Grasp: Age, Pathology, and Physiology

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 U24 **709.01** Task properties determine age-related differences in force control. S. VIELUF*; J. TEMPRADO; R. SLEIMEN-MALKOUN. *Aix Marseille Univ., Aix-Marseille Univ.*

9:00 U25 **709.02** The effects of dual tasking on bimanual grip force control in older adults. H. HIBINO*; R. CARLSON; S. H. BROWN. *Sch. of Kinesiology, Univ. of Michigan, Univ. of Michigan, Sch. of Kinesiology.*

10:00 U26 **709.03** Sensorimotor memory and sensorimotor integration abilities dissociate in a post MCA stroke population. B. KC*; K. FERCHO; L. A. BAUGH. *Univ. of South Dakota.*

11:00 U27 **709.04** The influence of transcranial direct current stimulation timing on motor skill acquisition in older adults. B. J. POSTON*; A. JACKSON; Z. RILEY; E. L. HEISLER; R. R. WALSH; J. L. ALBERTS. *Univ. of Nevada Las Vegas, Indiana University-Purdue Univ. Indianapolis, Cleveland Clin.*

8:00 U28 **709.05** Postnatal motor cortex stroke alters development of the rubrospinal system. P. T. WILLIAMS*; J. H. MARTIN. *City Col. of the City Univ. of NY.*

9:00 U29 **709.06** Neural correlates of passive forefinger kinematics: Effects of amplitude, direction and velocity. J. DUENAS*; J. SULZER; P. STAEMPFLI; M. HEPP-REYMOND; S. KOLLIAS; E. SEIFRITZ; R. GASSERT. *ETH Zuerich, Univ. of Texas, Univ. of Zurich, Univ. Hosp. of Zurich.*

10:00 U30 **709.07** Correlated deficits in finger individuation following unilateral stroke in the affected and unaffected hand. N. EJAZ*; J. XU; B. HERTLER; M. BRANSCHEIDT; M. WIDMER; N. KIM; M. HARRAN; J. C. CORTES; A. V. FARIA; P. A. CELNIK; T. KITAGO; A. LUFT; J. W. KRAKAUER; J. DIEDRICHSEN. *UCL, Johns Hopkins Univ., Univ. of Zurich, Columbia Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

11:00 U31 **709.08** White matter changes in pianists with focal hand dystonia. K. KITA*; K. UEHARA; S. FURUYA; R. OSU; T. SAKAMOTO; T. HANAKAWA. *Chiba Univ., Integrative Brain Imaging Center, Natl. Ctr. of Neurol. and Psychiatry, Sophia Univ., ATR, Natl. Ctr. of Neurol. and Psychiatry Hosp.*

8:00 U32 **709.09** Effects of age and handedness effects on hand motor recovery after sensorimotor cortex lesions in Macaca mulatta. W. G. DARLING*; S. M. HYNES; M. A. PIZZIMENTI; D. L. ROTELLA; J. GE; K. S. MORECRAFT; R. J. MORECRAFT. *Univ. Iowa, Univ. Iowa, Univ. of South Dakota.*

9:00 U33 **709.10** The effect of developmental dyslexia on grip and load force coordination while holding an object during cyclical arm movement. P. B. DE FREITAS*, JR; S. T. PEDÃO. *Univ. Cruzeiro Do Sul, Univ. Cruzeiro do Sul.*

10:00 U34 **709.11** Changes in neural activity patterns during recovery of fine finger control after stroke. J. XU*; N. EJAZ; B. HERTLER; M. BRANSCHEIDT; M. WIDMER; N. KIM; M. HARRAN; J. C. CORTES; A. V. FARIA; P. A. CELNIK; T. KITAGO; A. LUFT; J. W. KRAKAUER; J. DIEDRICHSEN. *Johns Hopkins Univ., Univ. Col. London, Univ. of Zürich, Columbia Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

11:00 U35 **709.12** Abnormal eeg oscillations in writer's cramp. G. CISOTTO*; K. KITA; K. UEHARA; Y. HASHIMOTO; T. SAKAMOTO; J. USHIBA; T. HANAKAWA. *Univ. of Padua, Chiba Univ., Natl. Ctr. of Neurol. and Psychiatry, Kitami Inst. of Technol., Natl. Ctr. of Neurol. and Psychiatry, Keio Univ.*

8:00 U36 **709.13** Abnormalities of the finger movements in musician's dystonia. S. FURUYA*; K. TOMINAGA; F. MIYAZAKI; E. ALTENMÜLLER. *Sophia Univ., Osaka Univ., Hannover Univ. of Music, Drama and Media.*

9:00 U37 **709.14** Neural correlates of error processing in the elderly. E. NIESSEN*; G. R. FINK; P. H. WEISS; J. STAHL. *Res. Ctr. Juelich, Dept. of Individual Differences and Psychological Assessment.*

10:00 U38 **709.15** ▲ Effects of tactile feedback on manual function in patients with type II diabetes. N. OCHOA*; G. GOGOLA; S. L. GORNIAK. *Univ. of Houston, Ctr. for Neuromotor and Biomechanics Res., Shriner's Hosp. for Children.*

11:00 U39 **709.16** Motor and sensory components of finger representations in the human brain. J. DIEDRICHSEN*; G. PRICHARD; J. O'REILLY. *Univ. Col. London, Western Univ., Oxford Univ.*

8:00 U40 **709.17** Effects of absent somatosensory feedback on digital isometric force control. W. ZHANG*; B. FAULKNER; B. SHERMAN; M. ALCORN; M. MACINA; C. BENSON; B. HAHN. *Col. of Staten Island/ CUNY, Col. of Staten Island / CUNY, Staten Island Univ. Hosp.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 U41 **709.18** 7T fMRI reveals preserved SI topography of phantom fingers decades post amputation. S. KIKKERT*; J. KOLASINSKI; S. JBABDI; I. TRACEY; C. F. BECKMANN; H. JOHANSEN-BERG; T. R. MAKIN. *Univ. of Oxford, Radboud Univ., Univ. of Oxford.*

POSTER

710. Motor Learning: Mechanisms

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 U42 **710.01** Changes in neuronal ensemble activities in the motor cortex during motor learning. Z. SHEN*; Y. FENG; K. XIAO. *Inst. of Neurosci., CAS Ctr. for Excellence in Brain Sci., Shanghai Inst. for Biol. Sciences, CAS.*

9:00 V1 **710.02** Do consolidation of motor memory and interlimb transfer of adaptation rely on common processes? H. LEFUMAT*; P. MUTHA; J. VERCHER; C. MIALL; F. SARLEGNA. *CNRS & Aix-Marseille Univ., Indian Inst. of Technol. Gandhinagar, Sch. of Psychology, Univ. of Birmingham.*

10:00 V2 **710.03** ▲ Modulation of sensorimotor β-band activity by unilateral kinematic-errors in bimanual coordination tasks. J. ALAYRANGUES; F. TORRECILLOS; A. BROVELLI; N. MALFAIT*. *CNRS / INT.*

11:00 V3 **710.04** Gain alteration of feedback control and adaptation induced by acquisition of a novel visuomotor map of reaching movements. T. HAYASHI*; A. YOKOI; M. HIRASHIMA; D. NOZAKI. *The Univ. of Tokyo, Grad Sch. Educ, Univ. Col. London, Ctr. for Information and Neural Networks.*

8:00 V4 **710.05** Decomposing motor memory decay into trial- and time-dependent components. A. SASAKI*; D. NOZAKI. *Univ. of Tokyo.*

9:00 V5 **710.06** Neuroplasticity in primary somatosensory cortex supports motor learning by observing. H. R. MCGREGOR*; P. L. GRIBBLE. *The Univ. of Western Ontario.*

10:00 V6 **710.07** Does representation of sensory delays in the motor system depend on the magnitude of the delay? G. AVRAHAM*; A. FARSHCHIANSADEGH; A. KARNIEL; O. DONCHIN; L. SHMUELOF; F. A. MUSSA-IVALDI; I. NISKY. *Ben-Gurion Univ. of the Negev, Northwestern Univ., Rehabil. Inst. of Chicago.*

11:00 V7 **710.08** Learning novel sensory-motor maps: Learning to move to auditory targets. F. T. VAN VUGT*; D. J. OSTRY. *McGill Univ., McGill Univ.*

8:00 V8 **710.09** Effective connectivity changes before and after sudden and gradual visual-motor adaptation. P. BÉDARD; J. N. SANES*. *Brown Univ.*

9:00 V9 **710.10** Neural substrates of the initial stages of human motor learning. A. SIDARTA*; N. BERNARDI; S. VAHDAT; D. J. OSTRY. *McGill Univ.*

10:00 V10 **710.11** Plastic changes in dendritic spines of pyramidal neurons from prefrontal cortex underlie motor learning in rats. M. N. VÁZQUEZ HERNÁNDEZ*; D. GONZÁLEZ-TAPIA; N. I. MARTÍNEZ-TORRES; M. HERNÁNDEZ-GONZÁLEZ; I. GONZÁLEZ-BURGOS. *Ctr. De Investigación Biomédica De Occidente, Univ. Politécnica de la Zona Metropolitana de Guadalajara, Univ. de Guadalajara.*

11:00 V11 **710.12** Representation of reaching movements in motor cortex: A modeling perspective. W. W. TEKA*; K. HAMADE; S. N. MARKIN; R. F. ROGERS; I. A. RYBAK; Y. I. MOLKOV. *Indiana Univ. – Purdue Univ. Indianapolis, Drexel Univ. Col. of Med., CHDI Mgmt.*

8:00 V12 **710.13** Difficulty of visual transformation modulates the contributions of explicit and implicit learning with and without tDCS. S. LIEW*; T. THOMPSON; J. RAMIREZ; P. BUTCHER; J. TAYLOR; P. CELNIK. *USC, Johns Hopkins Sch. of Med., Princeton Univ.*

9:00 V13 **710.14** Concurrent reach and tracking adaptations of moving and static targets. M. N. AYALA*; P. SHARMA; D. Y. P. HENRIQUES. *York Univ.*

10:00 V14 **710.15** Individual differences in TMS sensitivity influence the effect of tDCS in a motor adaptation task. L. LABRUNA*; M. J. DABIT; B. VANDERSCHELDEN; A. STARK-INBAR; M. NITSCHE; R. B. IVRY. *UC Berkeley, Posit Sci. Corp., Georg-August-University, Leibniz Res. Ctr. for Working Envrn. and Human Factors, Ruhr-University Bochum.*

11:00 V15 **710.16** Distinct modulations in sensorimotor post- and pre-movement β-synchronization related to error salience processing and sensorimotor adaptation. F. TORRECILLOS*; J. ALAYRANGUES; B. E. KILAVIK; N. MALFAIT. *AMU & CNRS- Inst. De Neurosciences De La Timone.*

8:00 V16 **710.17** Effect of protein synthesis inhibition in monkey primary motor cortex on performance of sequential movements. M. OHBAYASHI*; P. L. STRICK. *Univ. of Pittsburgh, Sch. of Medicine, Syst. Neurosci. Inst., CNBC, Dept. of Neurobio., Veterans Affairs Med. Ctr.*

9:00 V17 **710.18** Task intuitiveness and non-linear filtering of surface electromyography facilitate learning of proportional 3D position control of a myoelectrically-controlled robot. A. FEINMAN*; T. D. SANGER. *USC.*

10:00 V18 **710.19** The role of dorsolateral prefrontal cortex in motor learning during force-field adaptation: A continuous theta-burst stimulation study. K. TREWARTHA*; J. P. GALLIVAN; J. FLANAGAN. *Queen's Univ.*

11:00 V19 **710.20** The feedback response to error is a teaching signal during motor adaptation. S. T. ALBERT*; R. SHADMEHR. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

8:00 V20 **710.21** Occlusion of LTP-like plasticity in the primary motor cortex following adaptive motor learning. S. UEHARA*; F. MAWASE; P. CELNIK. *Johns Hopkins Univ., Natl. Inst. of Information and Communications and Technol., Japan Society for the Promotion of Sci., Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 V21 **710.22** Reaching for a good aiming strategy in people with cerebellar degeneration. R. MOREHEAD*; J. A. TAYLOR; R. B. IVRY. *UC Berkeley, Princeton Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 V22 **710.23** Contrasting roles of distinct LFP beta bands in motor cortex and their relation to spiking activity. B. E. KILAVIK*; A. RIEHLE. *INT, CNRS - Aix-Marseille Univ.*

11:00 V23 **710.24** Unimanual and bimanual reach to grasp movements in typically developing children and children with Autism Spectrum Disorder. R. RODGERS; G. BELLINGER; C. FREER; B. TRAVERS; A. H. MASON*. *Univ. of Wisconsin - Madison.*

8:00 V24 **710.25** Decoding movement goals from human reach-related areas in a pro-/anti-reach task. H. GERTZ*; A. LINGNAU; K. FIEHLER. *Justus-Liebig Univ. Giessen, Exptl. Psychology, Ctr. for Mind/ Brain Sci.*

9:00 V25 **710.26** ▲ Comparison of cognitive motor integration deficits associated with concussion and Alzheimer's disease risk. A. T. VAN WIJNGAARDEN; M. DALECKI; K. M. HAWKINS; L. E. SERGIO*. *York Univ., Ctr. for Vision Res.*

10:00 V26 **710.27** Children show cognitive-motor integration deficits nearly two years after concussion. M. DALECKI*; D. ALBINES; A. MACPHERSON; L. E. SERGIO. *York Univ., York Univ., York Univ.*

11:00 V27 **710.28** Primed vs unprimed paired associative stimulation: A single-subject proof of principle exploration. K. FROST*; M. CHEN; J. CAREY. *Univ. of Minnesota.*

POSTER

711. Oral Motor and Speech

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 V28 **711.01** Pre-articulatory activity in human sensory cortex. K. FORSETH*; E. BARTOLI; G. HICKOK; N. TANDON. *UT Hlth. Sci. Ctr. In Houston, Univ. of California.*

9:00 V29 **711.02** Motor planning for speech modulates auditory responses differently in stuttering vs. nonstuttering adults. A. DALIRI; L. MAX*. *Boston Univ., Univ. Washington.*

10:00 V30 **711.03** Perceptual context effects on auditory feedback processing in speech production. N. BOURGUIGNON*; S. R. BAUM; D. M. SHILLER. *CHU Sainte-Justine, Univ. de Montréal, Ctr. for Res. on the Brain, Language and Music, McGill Univ.*

11:00 V31 **711.04** Asymmetrical specialization of cortical-striatal white matter connections for motor speech control. J. J. SIDTIS*; A. MUBEEN; B. ARDEKANI; D. SIDTIS. *Nathan Kline Inst., Nathan Kline Inst., New York Univ.*

8:00 V32 **711.05** Voluntary imitation of fundamental frequency and vocal tract length in human speech: A multimodal investigation using functional and real-time anatomical MRI. C. MCGETTIGAN*; D. CAREY; V. CARTEI; M. MIQUEL. *Royal Holloway, Univ. of London, Univ. Col. London, Univ. of Sussex, Queen Mary Univ. of London.*

9:00 V33 **711.06** Disrupted feedforward but spared feedback control during speech in patients with cerebellar degeneration. B. PARRELL*; J. HOUDE; S. NAGARAJAN; R. IVRY. *Univ. of California, Berkeley, Univ. of California, San Francisco, Univ. of California, San Francisco.*

10:00 V34 **711.07** Cortical representation of articulatory gestures and phonemes during speech production. E. M. MUGLER*; M. GOLDRICK; R. D. FLINT; M. C. TATE; J. M. ROSENOW; M. W. SLUTZKY. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

11:00 V35 **711.08** Cerebellar tdcs during speech perceptual learning dissociates the act of indicating perception from perceptual change. D. R. LAMETTI*; L. OOSTWOUD WIJDENES; J. BONAIUTO; S. BESTMANN; J. C. ROTHWELL. *Univ. Col. London.*

8:00 V36 **711.09** ● Testing a new localizer task for the central control of vocalization using variations in voice onset for words. M. DIETRICH*; E. J. HUNTER; S. H. FREY. *Univ. of Missouri, Michigan State Univ., Washington Univ.*

9:00 V37 **711.10** Speech consists of simultaneous activation of the emotional and somatic motor system. G. HOLSTEGE*; H. H. SUBRAMANIAN. *The Univ. of Queensland, Herston Qld 4006, Australia, The Univ. of Queensland.*

10:00 V38 **711.11** Adaptation to altered auditory feedback in speech to assess transfer of learning in complex serial movements. T. CAUDRELIER; J. SCHWARTZ; P. PERRIER; C. SAVARIAUX; A. ROCHET-CAPELLAN*. *Univ. Grenoble Alpes, Gipsa-Lab, CNRS, Gipsa-Lab.*

11:00 V39 **711.12** Vocal motor development and coordination in wild type and Foxp2 heterozygous mutant mice. G. A. CASTELLUCCI*; D. A. MCCORMICK. *Yale Univ., Haskins Labs.*

8:00 V40 **711.13** A temporal predictive code for voice motor control: Evidence from neurophysiology and vocal behavior. R. BEHROOZMAND*; S. SANGTIAN; O. KORZYUKOV; C. LARSON. *Univ. of South Carolina, Northwestern Univ.*

9:00 V41 **711.14** A representation of the larynx in macaque monkey M1. C. M. CERKEVICH*; P. L. STRICK. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Veterans Affairs Med. Ctr.*

POSTER

712. Voluntary Movement and Motor Plasticity

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 V42 **712.01** Aerobic exercise modulates bilateral intracortical and interhemispheric primary motor cortex excitability. J. L. NEVA*; K. E. BROWN; C. S. MANG; L. A. BOYD. *Univ. of British Columbia, Univ. of British Columbia.*

9:00 V43 **712.02** A single bout of aerobic exercise impacts excitability of cerebellar circuits for a non-exercised upper limb muscle. C. MANG*; N. J. SNOW; J. L. NEVA; K. E. BROWN; K. L. CAMPBELL; L. A. BOYD. *Univ. of British Columbia, Univ. of British Columbia.*

10:00 V44 **712.03** Differential off-line effects of 10 Hz and 20 Hz transcranial alternating current stimulation on motor cortical excitability. H. NAKAZONO*; K. OGATA; S. TOBIMATSU. *Fac. of Med. Sciences, Kyushu Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 V45 **712.04** Modulation of cTBS after-effects following aerobic exercise. A. M. SINGH*; W. R. STAINES. *Univ. of Waterloo.*

8:00 V46 **712.05** The effect of aerobic exercise coupled with transcranial direct current stimulation on motor learning. J. BAER*; M. B. KOLAR; A. HARRISON; R. NEWMAN-NORLUND. *Univ. of South Carolina.*

9:00 V47 **712.06** Targeted human cortical and spinal neuroplasticity by transpinal stimulation. M. KNIKOU*; L. DIXON; D. SANTORA; M. M. IBRAHIM. *City Univ. of New York.*

10:00 V48 **712.07** Effects of prior hand use on practice-dependent plasticity and ballistic motor skill learning. S. J. HUSSAIN*; K. J. COLE. *Univ. of Iowa.*

11:00 W1 **712.08** Effects of anodal tDCS on motor skill learning in the acute phase of stroke: Mechanistic and therapeutic considerations. P. HAUFLER; M. ROCHA CURADO; B. FRITSCH; J. REIS*. *Univ. of Freiburg.*

8:00 W2 **712.09** Multimodal imaging to assess structural and functional changes associated with motor skill acquisition in healthy adults. B. LAKHANI*; M. R. BORICH; J. N. JACKSON; K. P. WADDEN; S. PETERS; A. VILLAMAYOR; A. MACKAY; I. VAVASOUR; A. RAUSCHER; L. A. BOYD. *Univ. of British Columbia, Emory Univ.*

9:00 W3 **712.10** Influence of inter-train interval on the efficacy of repetitive transcranial magnetic stimulation. R. CASH*; A. DAR; J. HUI; L. DE RUITER; C. BURKE; J. DOWNAR; R. CHEN. *Toronto Western Res. Inst., Univ. Hlth. Network.*

10:00 W4 **712.11** Short-latency afferent inhibition differentially suppresses motor cortical networks depending upon visual attention load. J. L. MIRDAMADI*; L. Y. SUZUKI; T. R. ERICKSON; A. S. FEINGOLD; S. K. MEEHAN. *Univ. of Michigan.*

11:00 W5 **712.12** Activation training alters corticomotor excitability of the gluteus maximus. Y. KUO*; C. M. POWERS; A. C. SOUTHAM; Y. LEE; B. E. FISHER. *USC, Chang Gung Univ.*

8:00 W6 **712.13** From motor pathway to song system - functional brain specialization in birds. A. SIMON*; S. LETZNER; O. GÜNTÜRKÜN. *Ruhr-Universität Bochum.*

9:00 W7 **712.14** Influence of motor cortex stimulation plus motor training on neuroplasticity. C. L. MASSIE*; C. L. WHITE. *Indiana Univ., Indiana Univ.*

10:00 W8 **712.15** Paired stimulation induces spike-timing dependent plasticity of neural connections in primate sensorimotor cortex. S. SEEMAN*; B. J. MOGEN; E. E. FETZ; S. I. PERLMUTTER. *Univ. of Washington.*

11:00 W9 **712.16** Corticospinal population activity during motor learning. A. J. PETERS*; J. LEE; S. X. CHEN; T. KOMIYAMA. *UC San Diego.*

8:00 W10 **712.17** Plasticity of inhibitory effect on indirect cortico-motoneuonal pathways in humans. T. NAKAJIMA*; S. SUZUKI; G. FUTATSUBASHI; S. IRIE; T. KOMIYAMA; Y. OHKI. *Kyorin Unversity Sch. of Med., Chiba Univ.*

9:00 W11 **712.18** Electrical cortical stimulation paired with volitional movement produces subsequent intra- and inter-hemispheric effects in the nonhuman primate. A. R. BOGAARD*; S. ZANOS; A. G. RICHARDSON; E. E. FETZ. *Univ. of Washington, Univ. of Washington, Univ. of Pennsylvania.*

10:00 W12 **712.19** Tool-use learning in rats. A. NAGANO*; K. AOYAMA. *Doshisha Univ., Doshisha Univ.*

11:00 W13 **712.20** ● 4-Aminopyridine strongly increases motor cortex and spinal stimulation responses at a clinically relevant dose. A. SINDHURAKAR*; A. MISHRA; T. BETHEA; J. IACI; T. PARRY; J. B. CARMEL. *Burke Med. Res. Inst., Acorda Therapeut., Brain and Mind Res. Inst.*

8:00 W14 **712.21** Role of cAMP response element-binding protein and its target genes during motor skill learning. B. OUIMET*; G. BUREAU; M. CYR. *Univ. Du Québec À Trois-Rivières.*

9:00 W15 **712.22** Probing the role of motor cortex in motor skill learning. S. B. WOLFF*; B. P. OLVECZKY. *Harvard Univ.*

10:00 W16 **712.23** Are changes in cerebellar excitability effector-specific? D. SPAMPINATO*; P. A. CELNIK. *Johns Hopkins Unviersity Sch. of Med., Johns Hopkins Sch. of Med.*

11:00 W17 **712.24** Updating eye-hand coordination when manipulating objects with complex dynamics. F. DANION*; C. LANDELLE; A. MONTAGNINI; L. PERRINET; L. MADELAIN. *CNRS, INT, URECA.*

8:00 W18 **712.25** Visuomotor coupling is necessary for the development of sensorimotor integration in mouse visual cortex. A. ATTINGER*; B. WANG; G. KELLER. *Friedrich Miescher Inst.*

9:00 W19 **712.26** ● Effects of vagus nerve stimulation paired with motor training on contralesional cortical plasticity after brain injury. D. PRUITT*; A. SCHMID; K. FLANAGAN; B. BAKER; C. ABE; R. MORRISON; J. TRIEU; S. SHAH; M. P. KILGARD; R. L. RENNAKER, II. *The Univ. of Texas At Dallas, The Univ. of Texas at Dallas.*

10:00 W20 **712.27** Motor and limb performance assessment with OptiMan an operator-independent fully-automated multi-sensor system for forelimb strength, gait performance, motor coordination and motor learning assessment. Y. WINTER*; H. MUNAWAR; W. CLEMENT; C. JUNG; C. REIMERTZ; M. RIVALAN. *Humboldt Univ. - Inst. Biologie, Humboldt Univ., Sanofi-Aventis Deutschland GmbH - R&D BioInnovation / Chronic Inflammatory Dis., PhenoSys GmbH.*

11:00 W21 **712.28** Betasort: A computation model of serial learning. G. G. JENSEN*; F. MUÑOZ; Y. ALKAN; V. P. FERRERA; H. S. TERRACE. *Columbia Univ., Columbia Univ.*

8:00 W22 **712.29** ▲ A novel test “Arenomat” for studying spatio-temporal integration. K. MALENINSKA; A. STUCHLIK*. *Inst. of Physiology, Acad. of Sci. of the Czech Republic, Inst. of Physiology, Acad. of Sci. of the Czech Republic.*

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* Indicates abstract’s submitting author

POSTER

713. Brain Machine Interfaces: Invasive Applications

Theme D: Sensory and Motor Systems

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 W23 **713.01** Cortical control of co-contraction and its use for the regulation of stiffness in brain-machine interfaces. R. RUIZ-TORRES*; L. E. MILLER. *Northwestern Univ.*

9:00 W24 **713.02** Concurrent independent brain-computer interface and movement control from the same cortical site. L. BASHFORD*; J. WU; D. SARMA; K. COLLINS; J. OJEMANN; C. MEHRING. *Imperial Col. London, Univ. of Freiburg, Univ. of Washington, Univ. of Washington.*

10:00 W25 **713.03** Neural responses to Activity-Dependent Stimulation (ADS) within different cortical areas. A. AVERNA*; D. GUGGENMOS; C. DUNHAM; S. BARBAY; G. VAN ACKER; M. CHIAPPALONE; R. NUDO. *Inst. Italiano Di Tecnologia (IIT), Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

11:00 W26 **713.04** Brain machine interface control through neurofeedback guided beta rhythm modulation. S. TORENE*; J. T. RITT; F. H. GUENTHER. *Boston Univ., Boston Univ., Boston Univ.*

8:00 W27 **713.05** Semi-chronic chamber system for multi-scale electrophysiology in non-human primates. A. L. ORSBORN*; C. WANG; K. CHIANG; M. M. MAHARBIZ; J. VIVENTI; B. PESARAN. *New York Univ., Duke Univ., Univ. of California, Berkeley.*

9:00 W28 **713.06** Stimulation in primate caudate nucleus modulates action selection in probabilistic reward task. S. R. SUMMERSON*; P. KHANNA; E. L. RICH; J. D. WALLIS; J. M. CARMENA. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley.*

10:00 W29 **713.07** Phase-dependent coding of decision information in posterior parietal cortex. D. J. HAWELLEK*; Y. T. WONG; N. D. DAW; B. PESARAN. *New York Univ., The Univ. of Melbourne, New York Univ.*

11:00 W30 **713.08** Decoding arm movements using epidural ECoG in non-human primate. H. CHOI*; J. LEE; K. MIN; K. AHN; K. LEE; D. JANG. *Hanyang Univ., Seoul Natl. Univ.*

8:00 W31 **713.09** Changes in functional connectivity due to brain-computer interface learning. K. CASIMO; K. E. WEAVER*; J. D. WANDER; A. KO; J. G. OJEMANN; F. DARVAS. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

9:00 W32 **713.10** Towards a responsive deep brain stimulation system for essential tremor. E. OPRI*; J. B. SHUTE; R. MOLINA; K. FOOTE; M. S. OKUN; A. GUNDUZ. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

10:00 W33 **713.11** Detection of tourette syndrome tics via centromedian thalamus lfp and acute trial of closed loop stimulation. J. B. SHUTE*; E. ORPI; R. MOLINA; J. ROSSI; M. OKUN; K. FOOTE; A. GUNDUZ. *UF, Univ. of Florida, Univ. of Florida.*

11:00 W34 **713.12** Default mode network electrocorticographic brain-computer interface. D. J. CALDWELL*; J. D. WANDER; K. E. WEAVER; D. SARMA; J. D. OLSON; L. A. JOHNSON; R. P. N. RAO; J. G. OJEMANN. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

8:00 W35 **713.13** Changes in post-synaptic efficacy of primate corticospinal cells is associated with compensatory changes in firing patterns. Y. NISHIMURA; S. I. PERLMUTTER; R. W. EATON; E. E. FETZ*. *Natl. Inst. for Physiological Sci., Univ. of Washington.*

9:00 W36 **713.14** Neural ensemble activity characterizes sleep states, active movement, and movement observation in motor cortex. J. B. ZIMMERMANN*; C. E. VARGAS-IRWIN; J. P. DONOGHUE. *Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr.*

10:00 W37 **713.15** Predicting decision outcomes from single realizations of lateral prefrontal cortex neuronal activity. C. BOULAY*; M. LEAVITT; F. PIEPER; J. MARTINEZ-TRUJILLO; A. SACHS. *Ottawa Hosp. Res. Inst., Univ. of Ottawa, McGill Univ., Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Western Ontario, Ottawa Hosp. Res. Inst.*

11:00 W38 **713.16** Transfer of operantly conditioned firings between different neuron groups with BMI in rats. K. SONG*; S. TAKAHASHI; Y. SAKURAI. *Doshisha Univ.*

POSTER

714. Somatic Correlates of Stress

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 W39 **714.01** Supraoptic nucleus of hypothalamus modulates cardiovascular responses evoked by acute restraint stress in rats. S. LOPES AZEVEDO*; E. A. FORTALEZA; A. A. SCOPINHO; C. BUSNARDO; F. M. A. CORREA. *Sch. of Med. of Ribeirao Preto/USP.*

9:00 W40 **714.02** ● Heart-rate variability and power spectral densities as neurophysiological indices of post-traumatic stress disorder. R. T. CHANG*; S. J. SMITH; V. TAN; K. A. CORREA; M. CRYSTAL; R. JOHNSON; C. BERKA. *Advanced Brain Monitoring, BBN Raytheon.*

10:00 W41 **714.03** Sigma-1 receptor mediates depressive behaviors induced by cardiovascular diseases. K. FUKUNAGA*; Y. SHINODA. *Tohoku Univ. Grad Sch. Pharm Sci.*

11:00 W42 **714.04** ▲ Anorexia induced stress involved changes in neurons morphology and neurotrophic factors in the serotonin 4 receptors knockout mice. M. EL OUAHLI*; F. CHIGR; M. NAJIMI; V. COMPAN. *Fac. of Sci. and Techniques, institut de Génomique Fonctionnelle.*

8:00 W43 **714.05** Stress, anorexia and neuroendocrine regulation of food intake. M. NAJIMI*; F. CHIGR. *Fac. of Sci. and Techniques, Fac. of Sci. and Techniques.*

9:00 W44 **714.06** Anti-inflammatory effects of PGRN on the temperature and food intake via suppressing the level of circulating cytokines. T. MATSUWAKI*; K. YAMANOUCHI; M. NISHIHARA. *The Univ. of Tokyo.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 W45 **714.07** Erythropoietin and high fat diet-induced brain inflammation. S. DEY; J. ANHUT; M. GASSMANN; C. T. NOGUCHI*. *NIH, Univ. of Zurich.*

11:00 W46 **714.08** T cells mediate behavioral, hormonal and cytokine responses in the learned helplessness paradigm. S. M. CLARK*; C. SONG; X. LI; L. H. TONELLI. *Univ. of Maryland Sch. of Med., VA Maryland Hlth. Care Syst.*

8:00 W47 **714.09** Early life stress activates microglial cells and induces an inflammatory response in the hippocampus of male rat pups. L. TORNER*; A. ROQUE GALICIA; A. OCHOA ZARZOSA. *Inst. Mexicano Del Seguro Social, Univ. Michoacana deSan Nicolas de Hidalgo.*

9:00 W48 **714.10** Differential effects of stress on microglial cell activation in male and female medial prefrontal cortex. J. L. BOLLINGER*; C. L. WELLMAN. *Indiana Univ., Indiana Univ., Indiana Univ.*

10:00 X1 **714.11** Involvement of progranulin in regulating neurogenesis and microglial activation in the hippocampus under acute infectious stress conditions. Y. MA*; T. MATSUWAKI; K. YAMANOUCHI; M. NISHIHARA. *The Univ. of Tokyo.*

11:00 X2 **714.12** Gene network analysis of spinal cord in the model of chronic water avoidance stress. S. BRADESI*; I. KARAGIANNIDIS; K. BAKIRTZI; S. MAHURKAR JOSHI; D. ILIOPOULOS; C. POTHOULAKIS; E. A. MAYER. *UCLA Ctr. for Neurobio. of stress, UCLA, Ctr. for Systems David Geffen Sch. of Med. at Univ. of California.*

8:00 X3 **714.13** Structural and functional consequences of chronic psychosocial stress on the microbiota-gut-brain axis and immunity. A. BHARWANI*; J. BIENENSTOCK; J. FOSTER; M. SURETTE; P. FORSYTHE. *McMaster Univ., McMaster Univ., McMaster Univ.*

9:00 X4 **714.14** Stress-induced galectin-1 in serum accumulates in lymphoid organs and may modulate the immune response. T. KADOYA*; K. YAMADA; Y. NARIMATSU; M. OONUKI; T. YAMAMOTO; K. KODA; K. SASAGURI. *Maebashi Inst. of Technol., Kanagawa Dent. Univ. Grad. Sch., Jichi Med. Univ.*

10:00 X5 **714.15** ▲ Biochemical analysis of markers of oxidative stress and its association with psychological stress in students. A. E. GONZÁLEZ*, SR; S. GONZÁLEZ; E. BALTAZAR-GAYTAN; P. AGUILAR; G. FLORES. *Benemérita Univ. Autónoma De Puebla, Benemérita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma de Puebla, Benemérita Univ. Autónoma De Puebla.*

11:00 X6 **714.16** Suggestion of the analysis method to extract the relationship between the brain activity and salivary metabolites during acute psychosocial stress. T. OKAMURA*; T. HIROYASU. *Doshisha Univ.*

8:00 X7 **714.17** Habituation of plasma corticosterone and neuroimmune alterations in response to repeated daily exposure to several distinct stress challenges in Sprague Dawley rats. D. LOVELOCK*; M. SAMMAKIA; T. DEAK. *Binghamton Univ.*

9:00 X8 **714.18** Implications of stress and infection on neuroimmune function and behavior as potential risk factors for developing postpartum depression. C. K. POSILLICO*; J. M. SCHWARZ. *Univ. of Delaware.*

10:00 X9 **714.19** Role of c-Src in oxidant-mediated Toll-like receptor 4 signaling. O. J. IGWE*; Y. ZHANG; R. KARKI. *Univ. Missouri- KC.*

11:00 X10 **714.20** ▲ Psychological stress increases indices of neuroinflammation. M. WARWICK; K. KORNACKER; L. THAN; D. Y. LO*. *Coe Col.*

8:00 X11 **714.21** A pre-conditioning stress accelerates increases in mouse plasma inflammatory cytokines induced by stress. Y. CHENG*; R. JOPE; E. BEUREL. *Univ. of Miami.*

9:00 X12 **714.22** Repeated, not single, stress induces persistent polyi:c-induced allodynia and depressive-like behavior in rats. T. OKA*; T. CHIJIWA. *Grad. Sch. of Med. Sciences, Kyushu Univ.*

10:00 X13 **714.23** Repeated stressor exposure differentially effects microglia and peripheral macrophages proinflammatory cytokine production and the regulation by norepinephrine. D. F. BARNARD; J. D. JOHNSON*. *Kent State Univ.*

11:00 X14 **714.24** Basal HPA axis activity is related with responses of inflammatory gene expression to acute stress. X. CHEN; C. M. MCINNIS; D. WANG; L. HANLIN; D. GIANFERANTE; M. V. THOMA; N. ROHLEDER*. *Brandeis Univ., USC.*

8:00 X15 **714.25** Sphingosine-1-phosphate receptors are novel regulators of the hypothalamic-pituitary-adrenal (HPA) axis. N. SOTUYO*; S. LUZ; S. BHATNAGAR. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

9:00 X16 **714.26** Stress response profiles in women during the active hormone and inactive no-hormone weeks of hormonal contraception. A. E. YCAZA*; S. E. NIELSEN; M. MATHER. *USC.*

POSTER

715. Estrogen Signaling and Behavior

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 X17 **715.01** Pubertal activation of estrogen receptor α in the medial amygdala is necessary for the expression of male-type social behavior in adult mice. K. SANO; M. NAKATA; S. MUSATOV; S. TSUKAHARA; N. YAMAGUCHI; T. SAKAMOTO*; S. OGAWA. *Univ. of Tsukuba, Weill Cornell Univ. Med. Col., Saitama Univ., Aich Med. Univ., Kyoto Tachibana Univ.*

9:00 X18 **715.02** Role of estrogen receptor β in the dorsal raphe nucleus in the regulation of female sexual behavior in mice. C. MORIMOTO; K. SANO; M. NAKATA; S. MUSATOV; N. YAMAGUCHI; T. SAKAMOTO; S. OGAWA*. *Univ. of Tsukuba, Weill Cornell Univ. Med. Col., Aich Med. Univ., Kyoto Tachibana Univ.*

10:00 X19 **715.03** Effect of site-specific knockdown of estrogen receptor α or β in the medial preoptic area on postpartum aggression in female mice. K. NAGATA*; Y. MIYATA; K. SANO; S. MUSATOV; S. OGAWA. *Univ. of Tsukuba, Weill Cornell Med. Col.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

11:00 X20 **715.04** The role of estrogen receptor β in adult medial amygdala in the regulation of male social behavior. M. NAKATA*; K. SANO; S. MUSATOV; N. YAMAGUCHI; T. SAKAMOTO; S. OGAWA. *Univ. of Tsukuba, Weill Cornell Univ. Med. Col., Aichi Med. Univ., Kyoto Tachibana Univ.*

8:00 X21 **715.05** Site-specific action of testosterone via estrogen receptor β, not α, in the medial preoptic area is required for the full expression of aggressive behavior in male mice. N. YAMAGUCHI*; K. SANO; M. NAKATA; S. MUSATOV; T. SAKAMOTO; S. OGAWA. *Dept. of Pharmacol, Aichi Med. Univ., Univ. of Tsukuba, Weill Cornell Univ. Med. Col., Kyoto Tachibana Univ.*

9:00 X22 **715.06** Estrogen receptor GPR30/GPER colocalizes with isotocin in the preoptic area of a social fish. L. A. MANGIAMELE*; R. R. THOMPSON. *Smith Col., Bowdoin Col.*

10:00 X23 **715.07** Recurrent clusters of gene expression characterize the impact of the estrous cycle in the rat brain. A. KACPURA; R. SCHMIDT; L. WELCH; S. DE LACALLE*. *Heritage Col. of Osteo. Med., Russ Col. of Engin.*

11:00 X24 **715.08** Changes in socio-sexual interactions during transition from non-estrus to estrus in devocalized as well as vocalizing hormone-treated, ovariectomized rats housed in a semi-natural environment. O. LE MOENE*; E. SNOEREN; X. CHU; A. AGMO. *Universitetet I Tromsø, Fac. of Hlth. and Sci.*

8:00 X25 **715.09** Differences in oxytocin, vasopressin, dopamine and estrogen receptor expression in female and male oxytocin knockout (OTKO) mice. A. B. LUCION*; V. LAZZARI; J. ZIMMERMANN-PERUZATTO; R. O. BECKER; S. ALMEIDA; M. GIOVENARDI. *Univ. Federal do Rio Grande Sul UFRGS, Univ. Federal de Ciencias da Saude de Porto Alegre, Univ. Federal do Rio Grande Sul UFRGS, Univ. Federal de Ciencias da Saude de Porto Alegre.*

9:00 X26 **715.10** A comparison of maternal hormonal influences in two animal models of autism. H. GARMAN*; A. LEE; J. KASS; P. WHITAKER-AZMITIA. *Stony Brook Univ., Stony Brook Univ., Stony Brook Unversity, Stony Brook Univ., Stony Brook Univ.*

10:00 X27 **715.11** ▲ Estradiol-G protein-coupled estrogen receptor 1 facilitation of sexual receptivity via direct regulation of the orphanin FQ/N-ORL-1 system in the arcuate nucleus of the hypothalamus. D. N. TRAN*; N. LONG; C. SEREY; K. SINCHAK. *California State Univ. Long Beach.*

11:00 X28 **715.12** ▲ Protein-protein interactions underly the interdependence of progesterone receptor-B, dopamine D1 receptor and Src family kinase signaling in the plasma membrane of the arcuate nucleus of the hypothalamus of female rats. J. PHAN*; D. LE; T. CHUON; K. SINCHAK. *California State University, Long Beach.*

8:00 X29 **715.13** Estradiol-GPER facilitation of lordosis in the female rat is via direct regulation of the orphanin FQ-ORL-1 system in the arcuate nucleus. N. P. LONG*; S. M. CHOKR; K. SINCHAK. *California State Univ. Long Beach.*

POSTER

716. Social Behavior: Oxytocin and Vasopressin

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 X30 **716.01** Oxytocin receptors in the insular cortex mediate social affective behavior in rat. M. M. ROGERS*; A. F. PIERCE; J. P. CHRISTIANSON. *Boston Col., Boston Col.*

9:00 X31 **716.02** Effects of repeated presentation of social stimuli on social investigatory behavior in oxytocin receptor knockout male mice. S. SAGOSHI*; K. NISHIMORI; T. SAKAMOTO; S. OGAWA. *Univ. of Tsukuba, Tohoku Univ., Kyoto Tachibana Univ.*

10:00 X32 **716.03** Effects of vasopressin V1a receptor in the bed nucleus of the stria terminalis on social withdrawal in males and females. N. DUQUE*; M. Q. STEINMAN; R. HAO; S. YOKOYAMA; B. C. TRAINOR. *UC Davis.*

11:00 X33 **716.04** Examination of oxytocin and vasopressin on the three chamber sociability test in male or female mice injected flutamide or letrozole. Y. MOMOTA*; T. AMANO; H. KAWABATA; H. SAITOH. *Sch. of Hlth. Sci., Sch. of Hlth. Science, Akita Univ., Sch. of Hlth. Sci.*

8:00 X34 **716.05** Oxytocin receptor in the periphery of the perinatal mouse. R. VAIDYANATHAN; C. N. CARLTON; E. KIDWAI; T. A. MERRITT; I. SAKINAH; J. R. QUINTANA; G. G. HOFFMAN; E. A. HAMMOCK*. *Florida State Univ., Florida State Univ.*

9:00 X35 **716.06** Prolactin decreases social avoidance and is required for short-term social memory. M. DONHOFFNER*; R. I. WOOD. *USC, Keck Sch. of Med. of the Univ. of Southern California.*

10:00 X36 **716.07** Effects of intranasal and intraperitoneal oxytocin administration on social interaction and hypothalamic-pituitary-adrenal activity in rats. P. KENT*; A. AWADIA; D. ENSAN; L. ZHAO; D. SILVA; C. CAYER; Z. MERALI. *Uottawa Inst. of Mental Hlth. Res., Univ. of Ottawa Inst. of Mental Hlth. Res., Mcgill Univ.*

11:00 X37 **716.08** Arginine vasopressin influences the social behavior of free-living Richardson's ground squirrels (Urocitellus richardsonii). A. R. FREEMAN; J. F. HARE; G. ANDERSON; H. K. CALDWELL*. *Kent State Univ., Univ. of Manitoba.*

8:00 X38 **716.09** Sex-specific influence of vasotocin cell groups on behavioral phenotype and phasic response to social contact in a gregarious finch. C. L. PETERSEN*; S. E. SCHROCK; M. A. KINGSBURY; J. L. GOODSON. *Indiana Univ.*

9:00 X39 **716.10** Experience-induced facilitation of mouse empathetic behavior. T. SAKAGUCHI*; S. IWASAKI; K. OKAMOTO; Y. IKEGAYA. *The Univ. of Tokyo.*

10:00 X40 **716.11** Molecular mechanisms underlying sex differences in the brain oxytocin system. N. B. WORLEY*. *Boston Col.*

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* Indicates abstract's submitting author

11:00 X41 **716.12** Sub region-specific distribution of μ-opioid receptors in the striatum of juvenile rats: Implications for social novelty preference. C. J. SMITH*; A. M. RATNASEELAN; M. L. POEHLMANN; A. H. VEENEMA. *Boston Col.*

8:00 X42 **716.13** Vasopressin regulates social play in sex-specific ways through glutamate modulation in the lateral septum. R. BREDEWOLD*; J. K. SCHIAVO; M. VERREIJ; G. RO; A. H. VEENEMA. *Boston Col.*

9:00 X43 **716.14** Dynamic vasopressin release in the lateral septum during social recognition in adult and juvenile male and female rats. B. DIBENEDICTIS*; R. BREDEWOLD; A. H. VEENEMA. *Boston Col.*

10:00 X44 **716.15** Vasopressin modulates lateral septum neuronal activity in sex-specific ways in juvenile rats. A. H. VEENEMA*; R. BREDEWOLD; J. VARELA; J. P. CHRISTIANSON. *Boston Col.*

11:00 X45 **716.16** Emotion reading with eye tracker. S. PARK*; S. NAM; H. CHOI; D. KIM. *KAIST.*

8:00 X46 **716.17** Analysis of neural/molecular mechanisms of mate-guarding behavior in small fish, medaka. S. YOKOI*; T. OKUYAMA; Y. KAMEI; K. NARUSE; Y. TANIGUCHI; S. ANSAI; M. KINOSHITA; L. J. YOUNG; N. TAKEMORI; T. KUBO; H. TAKEUCHI. *Univ. of Tokyo, Natl. Inst. for Basic Biol., Kyorin Univ., Kyoto Univ., Emory Univ., Ehime Univ., Okayama Univ.*

9:00 X47 **716.18** Generation of Oxtr cDNAHA-Ires-Cre mice for gene expression with oxytocin receptor specific manner. S. HIDEMA*; Y. HIRAOKA; H. MIZUKAMI; T. FUKUDA; S. SUZUKI; A. OTSUKA; S. MIYAZAKI; K. NISHIMORI. *Grad. Sch. of Agr. Sciences/Tohoku Un, Jichi Med. University,, Grad. Sch. of Agr. Sciences/Tohoku Un.*

10:00 X48 **716.19** Intranasal oxytocin enhances socially transmitted fear behavior in mice. M. T. PISANSKY*; J. C. GEWIRTZ. *Univ. of Minnesota, Univ. of Minnesota.*

POSTER

717. Social Behavior

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Y1 **717.01** ▲ A history of enrichment alters the outcome of a social preference task in adolescent rats. K. L. PATTERSON*; H. L. JOHNSON; E. A. ARTZ; O. W. FIELDS; R. GUCWA; D. I. ALEWEL; M. C. ZRULL. *Appalachian State Univ.*

9:00 Y2 **717.02** The effects of a hyperandrogenic prenatal environment on early and later-life social behaviour. C. S. WASSON*; C. HOWES; M. CASTRO; A. SMART; A. J. GIUGA; N. J. MACLUSKY; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph, Univ. of Guelph.*

10:00 Y3 **717.03** The effects of hyperandrogenic prenatal environment on later life social learning and gonadal hormone sensitivity. C. HOWES*; C. S. WASSON; M. CASTRO; A. SMART; A. J. GIUGA; N. J. MACLUSKY; E. CHOLERIS. *Univ. of Guelph.*

11:00 Y4 **717.04** ● Investigation of neural activity during social eavesdropping in male golden hamsters using c-Fos immunohistochemistry and local field potential recording. C. LIU*; W. YU; C. CHANG; T. HUANG; W. LAI. *Natl. Taiwan Univ.*

8:00 Y5 **717.05** GABA neurons in the BNST and MA respond to social stimuli. N. RIGNEY*; K. MCDANIEL; A. PETRULIS. *Georgia State Univ.*

9:00 Y6 **717.06** Rapid formation of social memories in songbirds. D. C. TOCCALINO*; H. SUN; J. T. SAKATA. *McGill University, IPN, McGill Univ., McGill Univ.*

10:00 Y7 **717.07** Rats demonstrate helping behavior toward a soaked cagemate. N. SATO*; L. TAN; K. TATE; M. OAKADA. *Kwansei Gakuin Univ.*

11:00 Y8 **717.08** Early post-natal sleep fragmentation prevents normal social development in male, but not female, prairie voles. E. A. D. HAMMOCK; D. L. COCKING; M. M. LIM*. *Florida State Univ., Portland VA / Oregon Hlth. & Sci. Univ.*

8:00 Y9 **717.09** Neural architecture of a pair bond: Calcium imaging of the nucleus accumbens in awake-behaving prairie voles. E. CARAZO; A. M. CUNNINGHAM; R. HEN; M. A. KHEIRBEK; Z. R. DONALDSON*. *Columbia Univ., New York State Psychiatric Inst.*

9:00 Y10 **717.10** ● Longitudinal analysis of individual, social and prosocial behaviors in a naked mole-rat colony. M. SANSONE; M. STENDARDI; L. OVEREEM; T. DZEDZITS; M. KRESS; E. MEEHAN; D. P. MCCLOSKEY*. *City Univ. of New York, City Univ. of New York, Grad. Ctr. at CUNY, City Univ. of New York, City Univ. of New York.*

POSTER

718. Social Behavior: Genetic and Molecular Basis

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Y11 **718.01** Understanding heterogeneity in social behavior using QTL mapping in BXD mouse strains. A. T. KNOLL*; N. FOX; P. LEVITT. *Children's Hosp. Los Angeles, Univ. of Maryland.*

9:00 Y12 **718.02** MUPET - A novel software tool for high-throughput analysis of mouse ultrasonic vocalizations. M. VAN SEGBROECK; A. T. KNOLL; P. R. LEVITT*; S. NARAYANAN. *USC, Children's Hosp. Los Angeles.*

10:00 Y13 **718.03** Mapping of genetic factors for intermale aggressive behavior on mouse chromosome 15. A. TAKAHASHI*; H. SUGIMOTO; S. KATO; T. SHIROISHI; T. KOIDE. *Univ. of Tsukuba, Natl. Inst. of Genet., Jichi Med. Univ., The Inst. of Statistical Mathematics, Natl. Inst. of Genet.*

11:00 Y14 **718.04** Differential methylation as a function of social status in a cichlid fish, Astatotilapia burtoni. A. T. HILLIARD*; D. XIE; Z. MA; M. SNYDER; R. D. FERNALD. *Stanford Univ., Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 Y15 **718.05** Neurogenomics of alternative reproductive tactics in the blenniid fish Salaria pavo. S. D. CARDOSO*; D. GONÇALVES; A. GOESMANN; A. V. M. CANÁRIO; R. F. OLIVEIRA. *Inst. Gulbenkian De Ciência, Champalimaud Ctr. for the Unknown, Inst. of Sci. and Environment, Univ. of St. Joseph, Justus-Liebig-University, CCMAR – Ctr. de Ciências do Mar, Univ. do Algarve.*

9:00 Y16 **718.06** The neurogenomic substrate of and extended phenotype in Lake Malawi cichlid fish. R. YORK*; H. FRASER; R. D. FERNALD; J. T. STREELMAN. *Stanford Univ., Stanford Univ., Georgia Inst. of Technol.*

10:00 Y17 **718.07** Creatine transporter knockout mice show increased anxiety, increased depressive-like behaviors, and reductions in sociability. A. N. KOKENGE*; M. R. SKELTON. *Cincinnati Children's Res. Fndn., Univ. of Cincinnati.*

11:00 Y18 **718.08** Altered DNA methylation pattern in the amygdala of rats genetically prone to high versus low anxiety. C. R. MCCOY*; N. L. JACKSON; T. PTACEK; E. J. LEFKOWITZ; J. J. DAY; S. M. CLINTON. *Univ. of Alabama At Birmingham.*

8:00 Y19 **718.09** Early-life exposure to the SSRI paroxetine disrupts DNA methylation in the early postnatal hippocampus. M. E. GLOVER*; C. R. MCCOY; N. L. JACKSON; S. M. CLINTON. *Univ. of Alabama at Birmingham.*

9:00 Y20 **718.10** A2 noradrenergic neurons regulate forced swim test immobility. H. NAM*; I. KERMAN. *Univ. of Alabama At Birmingham.*

POSTER

719. Human Memory Processes: Encoding, Retrieval, and Pattern Separation

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Y21 **719.01** Multivariate analysis of electrical stimulation to predict memory performance. Y. EZZYAT*; J. BURKE; D. LEVY; A. LYALENKO; M. SPERLING; A. SHARAN; G. WORRELL; M. KUCEWICZ; B. JOBST; K. DAVIS; T. LUCAS; R. GROSS; B. LEGA; J. STEIN; S. DAS; D. RIZZUTO; M. KAHANA. *Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Thomas Jefferson Univ. Hosp., Mayo Clin., Geisel Sch. of Med. at Dartmouth, Hosp. of the Univ. of Pennsylvania, Hosp. of the Univ. of Pennsylvania, Emory Univ. Hosp., Univ. of Texas, Southwestern, Hosp. of the Univ. of Pennsylvania, Univ. of Pennsylvania.*

9:00 Y22 **719.02** Human hippocampal theta and its relationship to speed, memory, and voluntary movement. J. MILLER*; M. SPERLING; A. SHARAN; K. DAVIS; J. JACOBS. *Drexel Univ., Thomas Jefferson Univ. Hosp., Hosp. of the Univ. of Pennsylvania, Columbia Univ.*

10:00 Y23 **719.03** Dissecting induced high frequency activity in humans during short-term memory tasks and stimulation. M. T. KUCEWICZ*; B. M. BERRY; B. H. BRINKMANN; M. R. SPERLING; B. C. JOBST; R. E. GROSS; B. LEGA; J. M. STEIN; S. DAS; S. M. STEAD; D. S. RIZZUTO; M. J. KAHANA; G. A. WORRELL. *Mayo Clin., Jeffrson Univ. Hosp., Dartmouth-Hitchcock Med. Ctr., Emory Univ., UT Southwestern Med. Ctr., Hosp. of the Univ. of Pennsylvania, Univ. of Pennsylvania.*

11:00 Y24 **719.04** Biomarkers of human memory encoding during spatial navigation. T. J. COFFEY*; J. MILLER; S. LEE; M. SPERLING; A. SHARAN; G. WORRELL; B. BERRY; B. JOBST; K. DAVIS; T. LUCAS; R. GROSS; S. DAS; J. STEIN; B. LEGA; D. RIZZUTO; J. JACOBS. *Drexel Univ., Drexel Univ., Univ. of Trento, Jefferson Univ. Hosp., Thomas Jefferson Univ. Hosp., Mayo Clin., Mayo Clin., Dartmouth-Hitchcock Med. Ctr., Hosp. of the Univ. of Pennsylvania, Emory Univ., Univ. of Pennsylvania Sch. of Med., UT Southwestern Med. Ctr., Univ. of Pennsylvania, Columbia Univ.*

8:00 Y25 **719.05** Characterization of neural dynamics in response to electrical stimulation for designing a closed-loop control architecture for memory enhancement. B. MAHMOUDI*; R. GROSS; M. KAHANA. *Emory Univ., Univ. of Pennsylvania.*

9:00 Y26 **719.06** Electrical stimulation in the medial temporal lobe alters memory encoding. J. JACOBS*; T. COFFEY; J. MILLER; S. LEE; M. SPERLING; A. SHARAN; A. ASADI-POOYA; G. WORRELL; B. BERRY; B. JOBST; K. DAVIS; T. LUCAS; R. GROSS; S. DAS; J. STEIN; D. RIZZUTO. *Columbia Univ., Drexel Univ., Univ. of Trento, Thomas Jefferson Univ., Mayo Clin., Dartmouth-Hitchcock Med. Ctr., Hosp. of the Univ. of Pennsylvania, Emory Univ., Univ. of Pennsylvania Sch. of Med., Univ. of Pennsylvania.*

10:00 Y27 **719.07** Frequency-specific network connectivity during encoding predicts subsequent free recall. C. S. INMAN*; M. J. JUTRAS; J. T. WILLIE; B. C. JOBST; M. R. SPERLING; A. D. SHARAN; T. H. LUCAS; K. A. DAVIS; D. S. RIZZUTO; R. E. GROSS. *Emory Univ., Univ. of Washington, Dartmouth-Hitchcock Med. Ctr., Thomas Jefferson Univ., Univ. of Pennsylvania.*

11:00 Y28 **719.08** Modulation of macaque hippocampal activity with entorhinal and septal stimulation. A. G. RICHARDSON*; P. K. WEIGAND; D. S. RIZZUTO; M. J. KAHANA; T. H. LUCAS. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

8:00 Y29 **719.09** Multivariate pattern analysis of the neural correlates of memory and lexical semantics measured using invasive electrocorticography during a free recall task. A. C. CONNOLLY*; J. DAMIANOS; P. HORAK; M. SPERLING; A. ASADI-POOYA; G. WORRELL; B. BERRY; K. DAVIS; R. GROSS; B. LEGA; D. RIZZUTO; M. KAHANA; B. JOBST. *Geisel Sch. of Med. at Dartmouth, Dartmouth Col., Thomas Jefferson Univ. Hosp., Mayo Clin., Univ. of Pennsylvania Hosp., Emory Univ., Univ. of Texas Southwestern, Univ. of Pennsylvania.*

9:00 Y30 **719.10** Examining biomarkers of memory encoding and effects of electrical stimulation in human subjects performing paired associates learning. J. H. WITTIG*, JR; R. YAFFE; S. INATI; G. WORRELL; T. LUCAS; A. SHARAN; D. RIZZUTO; K. ZAGHLOUL. *NINDS, John's Hopkins, Mayo Clin., Univ. of Pennsylvania, Jefferson Hosp.*

10:00 Y31 **719.11** Interictal epileptiform discharges impair performance in a word recall task. P. HORAK*; A. ROBBINS; A. CONNOLLY; S. MEISENHELTER; M. TESTORF; M. SPERLING; A. ASADI-POOYA; G. WORRELL; B. BERRY; K. DAVIS; R. GROSS; B. LEGA; D. RIZZUTO; B. JOBST. *Geisel Sch. of Med., Thayer Sch. of Engin., Jefferson Univ. Hosp., Mayo Clin., Univ. of Pennsylvania Hosp., Emory Univ., Univ. of Texas Southwestern, Univ. of Pennsylvania, Dartmouth-Hitchcock Med. Ctr.*

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* Indicates abstract's submitting author

11:00 Y32 **719.12** Using a detailed computational model of behavior to decompose the subsequent memory effect in free recall. Z. TIGANJ*; J. M. DI LASCIO; J. F. BURKE; Y. EZZYAT; P. B. SEDERBERG; M. J. KAHANA; D. RIZZUTO; M. W. HOWARD. *Boston Univ., Univ. of Pennsylvania, Ohio State Univ.*

8:00 Y33 **719.13** Decoding episodic retrieval processes: Frontoparietal and medial temporal lobe contributions to free recall. J. E. KRAGEL*; S. M. POLYN. *Vanderbilt Univ.*

9:00 Y34 **719.14** Oscillatory correlates of enhanced memorability following a shift in the perceptual modality of studied material. J. D. MCCLUEY*; S. M. POLYN. *Vanderbilt Univ.*

10:00 Y35 **719.15** The effects of exercise on the neural correlates of pattern separation. B. KIRWAN*; S. SPENCER; M. I. NASH. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ.*

11:00 Y36 **719.16** An fMRI investigation on how testing format affects performance on a pattern separation task. M. ANDERSON*; C. DOXEY; B. KIRWAN; M. NASH. *Brigham Young Univ.*

8:00 Y37 **719.17** An fmri investigation of the impact of sleep on pattern separation. C. DOXEY*; B. KIRWAN. *Brigham Young Univ., Brigham Young Univ.*

9:00 Y38 **719.18** Neural correlates of repetitive versus randomly sequenced learning of context-dependent associations. D. R. O'YOUNG*; J. L. VOSS. *Northwestern Univ.*

10:00 Y39 **719.19** Targeted enhancement of hippocampal-cortical networks alters neural correlates of object-location association memory. A. NILAKANTAN*; D. BRIDGE; E. GAGNON; J. WANG; J. VOSS. *Northwestern Univ.*

11:00 Y40 **719.20** Dominance provides structure to episodic memories. D. J. BRIDGE*; J. L. VOSS. *Northwestern Univ. Feinberg Sch. of Med.*

8:00 Y41 **719.21** Memory awareness modulation due to theta-burst stimulation of distinct prefrontal cortical networks. A. J. RYALS*; J. L. VOSS. *Northwestern Univ.*

9:00 Y42 **719.22** Refresh my memory: Context information from episodic memory affects working memory maintenance. A. NOVICK*; A. M. BORNSTEIN; J. D. COHEN. *Princeton Univ.*

10:00 Y43 **719.23** Developing a neurocognitive model of memory integration. N. W. MORTON*; A. R. PRESTON. *The Univ. of Texas at Austin.*

11:00 Y44 **719.24** The effect of task demands on activity in hippocampal subfields and MTL cortices in a pattern separation task. S. M. STARK; C. E. STARK*. *Univ. of CA, Irvine, Univ. CA, Irvine.*

POSTER

720. Human Decision Making: Risk and Impulsivity

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Z1 **720.01** Propranolol influences reference-dependence in intertemporal choice. K. M. LEMPERT*; S. F. LACKOVIC; R. H. TOBE; P. W. GLIMCHER; E. A. PHELPS. *New York Univ., Nathan Kline Inst., New York Univ.*

9:00 Z2 **720.02** The role of reward immediacy in temporal discounting. U. BROMBERG*; C. BÜCHEL; J. PETERS. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. Med. Ctr. Hamburg Eppendorf.*

10:00 Z3 **720.03** Treating impulsivity: Temporal discounting in heroin users undergoing treatment. S. LOPEZ-GUZMAN*; A. B. KONOVA; J. ROTROSEN; S. ROSS; P. W. GLIMCHER. *NYU, New York Univ., Bellevue Hosp. Ctr.*

11:00 Z4 **720.04** The interaction of episodic future thinking and temporal discounting in pathological gambling. A. WIEHLER*; J. PETERS. *Univ. Med. Ctr. Hamburg-Eppendorf.*

8:00 Z5 **720.05** Tracking the neural dynamics of hypothesis evaluation with model-based fMRI. N. MARINSEK*; B. O. TURNER; M. B. MILLER. *Univ. of California, Santa Barbara.*

9:00 Z6 **720.06** Neural manifestations of decision making are insensitive to confidence among pathological gamblers. M. E. HUDGENS-HANEY*; J. P. HAMM; E. A. KRUSEMARK; A. S. GOODIE; J. E. MCDOWELL; B. A. CLEMENTZ. *Univ. of Georgia, Univ. of Georgia, Univ. of Wisconsin.*

10:00 Z7 **720.07** Does temporal discounting predict future drug use? Structural mri and behavioral assessment at 14 and 18 years old. S. MACKEY*; B. CHAARANI; P. SPECHLER; K. KAN; K. HUDSON; C. ORR; R. R. ALTHOFF; H. GARAVAN; T. HE IMAGEN CONSORTIUM. *Univ. of Vermont, EU Framework 6.*

11:00 Z8 **720.08** The genetic and neural correlates of risky decision making in young adults with antisocial substance disorder. H. YARDLEY*; M. DALWANI; J. SAKAI; S. MIKULICH-GILBERTSON; T. CROWLEY; M. MCQUEEN. *Univ. of Colorado Boulder, Univ. of Colorado Denver.*

8:00 Z9 **720.09** Do we need to treat risk? Attitudes toward risk and ambiguity in opioid addiction. A. B. KONOVA*; S. LOPEZ-GUZMAN; J. ROTROSEN; S. ROSS; P. W. GLIMCHER. *New York Univ., New York Univ. Med. Ctr., Bellevue Hosp. Ctr.*

9:00 Z10 **720.10** Cortical activity underlying risk and reward decision-making. I. SAEZ*; J. J. LIN; E. CHANG; J. PARVIZI; G. SCHALK; P. BRUNNER; R. T. KNIGHT; M. HSU. *Univ. of California Berkeley, Univ. of California Irvine, Univ. of California San Francisco, Stanford Univ., Wadsworth Ctr.*

10:00 Z11 **720.11** Individual differences in risk-taking: The role of executive functions and anxiety in predicting ambiguous events. Á. TAKÁCS*; A. KÓBOR; K. JANACSEK; F. HONBOLYGÓ; D. NEMETH. *Eotvos Lorand Univ., Hungarian Acad. of Sci., Eötvös Loránd Univ., Hungarian Acad. of Sci.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

11:00 Z12 **720.12** Modulation of feedback-related negativity amplitude on the balloon analogue risk task. A. W. MCCOY*; M. E. YOUNG. *Kansas State Univ.*

8:00 Z13 **720.13** Performance and ERP in the Iowa Gambling task is related to body weight and daily eating behavior in Japanese healthy young females. F. ISHIKAWA; K. YAMANAKA*. *Showa Women's Univ.*

POSTER

721. Social Cognition: Neural Processes and Disorders

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Z14 **721.01** Moral transgressions and dirty bodies: Embodiment of the Macbeth effect is mapped topographically onto the somatosensory cortex. M. SCHAEFER*; M. ROTTE; H. HEINZE; C. DENKE. *Med. Sch. Berlin, Univ. of Magdeburg, Charite Universitätsmedizin Berlin.*

9:00 Z15 **721.02** The effects of gratitude expression on neural activity and plasticity. J. W. BROWN*; P. KINI; S. MCINNIS; N. GABANA; J. WONG. *Indiana Univ., Indiana Univ.*

10:00 Z16 **721.03** Alteration of sensitivity toward the Holocaust related media content by negative Mass Media. S. TUKAIEV*; I. ZYMA; M. MAKARCHUK; N. PLAKHOTNYK; J. GRIMM; A. ENZMINGER; Y. HAVRYLETS; V. RIZUN. *Natl. Taras Shevchenko Univ. of Kyiv, Inst. of Biol., Univ. of Vienna, Natl. Taras Shevchenko Univ. of Kyiv.*

11:00 Z17 **721.04** An investigation of shared population coding for olfaction and social processing. T. R. KOSCIK*; W. A. CUNNINGHAM; A. K. ANDERSON. *Dept. of Psychology, Univ. of Toronto, Univ. of Toronto, Cornell Univ.*

8:00 Z18 **721.05** ● ▲ Social pain changes pain sensitivity in people with anxiety state. R. AKAGUCHI*; M. OSUMI; S. MORIOKA. *KIO UNIVERSITY.*

9:00 Z19 **721.06** Social anxiety tendency affects event-related potential (ERP) during gaze perception. Y. TSUJI*; S. SHIMADA. *Meiji Univ., Meiji Univ.*

10:00 Z20 **721.07** Mu rhythm desynchronization during the observation of emotional and non-emotional facial expressions in 30-month-old infants. H. RAYSON*; J. BONAIUTO; P. F. FERRARI; L. MURRAY. *Univ. of Reading, Univ. Col. London, Univ. of Parma, Univ. of Reading.*

11:00 Z21 **721.08** Do different brain systems support the ability to recognize negative and non-negative emotions following traumatic brain injury? A. RIGON*; M. W. VOSS; L. TURKSTRA; B. MUTLU; M. C. DUFF. *Univ. of Iowa, Univ. of Wisconsin.*

8:00 Z22 **721.09** Transcranial direct current stimulation to dorsolateral prefrontal cortex enhances the drop of activity in the ventral prefrontal social brain network during economic game. T. NIHONSUGI; M. HARUNO*. *Gifu Shotoku Univ., Natl. Inst. of Information and Communication Technol.*

9:00 Z23 **721.10** Neural specializations for interpersonal interaction in a competitive gambling task. M. R. PIVA*; X. ZHANG; A. NOAH; S. CHANG; J. HIRSCH. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

10:00 Z24 **721.11** ▲ Task-related activation and de-activation predict individual differences in both empathy and analytic reasoning. S. F. DORAN; R. FERNANDEZ GALAN; H. J. CHIEL; A. JACK*. *Case Western Reserve.*

11:00 Z25 **721.12** Estimation of inter-personal relationship in synchronous rhythmic communication by EEG and behavioral synchronizations. M. KAWASAKI*; E. MIYAUCHI. *Univ. of Tsukuba, RIKEN, Brain science institute.*

8:00 Z26 **721.13** Neural substrates of motor coordination in joint action. M. O. ABE*; T. KOIKE; S. OKAZAKI; S. K. SUGAWARA; K. TAKAHASHI; K. WATANABE; N. SADATO. *Hokkaido Univ., Natl. Inst. For Physiological Sci., Res. Ctr. for Advanced Technol. and Science, The Univ. of Tokyo, Sch. of Fundamental Sci. and Engineering, Waseda Univ.*

9:00 Z27 **721.14** Social cognition in amyotrophic lateral sclerosis. E. AMBRON*; L. PIRETTI; L. VERRIELLO; L. SEGNAN; R. ELEOPRA; R. RUMIATI. *SISSA, Santa Maria della Misericordia Hosp.*

10:00 Z28 **721.15** Resting state functional connectivity of the anterior insula and inferior frontal gyrus predicts in-group bias. Z. MORADI*; D. MANTINI; A. YANKOUSKAYA; G. HUMPHREYS. *Dept. of Exptl. Psychology.*

11:00 Z29 **721.16** Modeling the neurodynamic interactions and organizations of teams. R. STEVENS*. *IMMEX/UCLA.*

8:00 Z30 **721.17** Political preferences modulate neural correlates of trusting decisions. Y. FAN*; R. HSUNG; H. LIU; Y. DU; T. YANG; S. CHEN; N. YEN; C. WU. *Dept. of Sociology, Natl. Chengchi Univ., Dept. of Imaging Physics, The Univ. of Texas MD Anderson Cancer Ctr., Dept. of Economics, Natl. Cheng-Chi Univ., Dept. of Psychology, Natl. Cheng-Chi Univ., Res. Ctr. for Mind, Brain, and Learning, Natl. Cheng-Chi Univ., Sch. of Occup. Therapy, Col. of Medicine, Natl. Taiwan Univ., Dept. of Psychiatry, Natl. Taiwan Univ. Hosp. & Col. of Med.*

9:00 Z31 **721.18** Antisocial behavior and genetic variation in the oxytocin receptor. D. HOVEY*; M. LINDSTEDT; A. ZETTERGREN; L. JONSSON; A. JOHANSSON; J. MELKE; N. KEREKES; H. ANCKARSÄTER; P. LICHTENSTEIN; S. LUNDSTRÖM; L. WESTBERG. *Univ. of Gothenburg, Univ. of Turku, Univ. of Gothenburg, Karolinska Institutet.*

10:00 Z32 **721.19** The effects of prefrontal lesions and oxytocin receptor gene (OXTR) polymorphism on religious fundamentalism in traumatic brain injury (TBI) patients. W. ZHONG*; I. CRISTOFORI; J. BULBULIA; F. KRUEGER; J. GRAFMAN. *Rehabil. Inst. of Chicago, Northwestern Univ., Victoria Univ. of New Zealand, George Mason Univ., George Mason Univ., Northwestern Univ.*

11:00 Z33 **721.20** Aberrant paralimbic network activity during the processing of moral violations in criminal psychopathy. M. SIMMONITE*; D. S. KOSSON; C. L. HARENSKI; V. D. CALHOUN; K. A. KIEHL. *Rosalind Franklin Univ. of Med. and Scien, The Mind Res. Network.*

8:00 Z34 **721.21** Electrophysiological markers of distinct facets of empathy and their relation to trait empathy and psychopathy. K. L. LEWIS*; J. M. COWELL; J. DECETY. *Univ. of Chicago.*

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* Indicates abstract's submitting author

9:00 Z35 **721.22** How do narcissistic people view others' minds?: FMRI studies on empathy and perspective-taking. N. KIM*; M. KIM; H. JUNG; S. KANG; J. KWAN; M. CHUNG; H. KIM. *Korea Univ., Gachon Univ., Sung Shin Women's Univ.*

10:00 Z36 **721.23** Decreased neuronal population and increase gliosis in Orbito Frontal, Dorso Lateral and Ventro Medial cortex of people who committed suicide. E. BALTAZAR-GAYTAN*; P. AGUILAR ALONSO; F. GARCIA DOLORES; A. DÍAZ FONSECA; R. VAZQUEZ ROQUE; F. DE LA CRUZ LOPEZ; G. FLORES. *Benemerita Univ. Autonoma de Puebla, Posgrado en Ciencias Químicas, Área de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas, Univ. Autónoma de Puebla, Área de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas, Univ. Autónoma de Puebla., Inst. de Ciencias Forenses, Tribunal Superior del Distrito Federal, Av. Niños Héroes 132, Col. Doctores, C.P. 0627, Facultad de Ciencias Químicas, Benemerita Univ. Autonoma de Puebla,, Lab. Neuropsiquiatria, Inst. de Fisiología. Benemerita Univ. Autonoma de Puebla, Lab. Fisiología de la Conducta. Escuela Nacional de Ciencias Biológicas.*

11:00 Z37 **721.24** Over-arousal as a mechanism between alcohol use and intimate partner violence. B. C. FINK*; E. CLAUS; J. F. CAVANAGH; D. A. HAMILTON; D. BARTO. *Univ. of New Mexico, Mind Res. Network, Univ. of New Mexico.*

8:00 Z38 **721.25** Psychophysiological correlates of impulsive aggression in real-time. J. FANNING*; R. LEE; M. BERMAN; E. COCCARO. *Univ. of Chicago, Univ. of Chicago, Mississippi State Univ.*

9:00 Z39 **721.26** Attention deficit hyperactivity disorder: Increased coupling in the salience network. E. T. ROLLS*; X. JI; T. GE; W. CHENG; J. ZHANG; L. SUN; Y. WANG; J. FENG. *Oxford Ctr. For Computat. Neurosci., Fudan Univ., Peking Univ., Univ. of Warwick.*

10:00 Z40 **721.27** Alpha power modulations predict student distractibility in a classroom setting. L. WAN*; S. DIKKER; I. DAVIDESCO; L. KAGGEN; J. ROWLAND; J. MCCLINTOCK; D. POEPPEL; M. DING. *Univ. of Florida, New York Univ., Utrecht Univ., Trevor Day Sch., Max-Planck-Institute.*

POSTER

722. Mechanisms of Attention II

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 Z41 **722.01** Task-related functional connectivity study of attentional control in monkeys. P. F. BALAN*; A. GERITS; W. VANDUFFEL. *KU Leuven.*

9:00 Z42 **722.02** Distinct neurobiological mechanisms of top-down attention. T. Z. LUO*; J. H. R. MAUNSELL. *The Univ. of Chicago, The Univ. of Chicago.*

10:00 Z43 **722.03** Asymmetrical light experience affects endogenously determined lateralization pattern in the pigeon. S. LETZNER*; M. MANNS; E. UNVER; O. GUNTURKUN. *Ruhr-University Bochum Inst. For Cognitive Neurosci.*

11:00 Z44 **722.04** Neural correlates of posterior parietal cortex in a cross-modal selective attention task. Y. ZUO*; Z. WANG. *Inst. of Neurosci., Inst. of Neurosci.*

8:00 AA1 **722.05** ▲ The activation of the lateral septum increased the release of brain histamine. P. FARIAS*; J. DIAZ; A. OCAMPO; J. VALDES; F. TORREALBA. *Univ. Catolica De Chile, Univ. de Chile, Univ. Catolica de Chile.*

9:00 AA2 **722.06** Where and how are relevant sensory signals for perceptual decisions selected in the brain and mapped onto appropriate actions? J. DITTERICH*. *Univ. of California.*

10:00 AA3 **722.07** Spatiotemporal characterization of perisaccadic receptive field structure and attentional modulation in area V4. A. C. MARINO*; J. A. MAZER. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

11:00 AA4 **722.08** Is spatial attentional gain modulation in area MT of primate visual cortex mediated by the cholinergic system? V. K. VEITH*; C. QUIGLEY; S. TREUE. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci.*

8:00 AA5 **722.09** Modulating the noradrenergic system at rest. C. GUEDJ; E. MONFARDINI; A. REYNAUD; A. FARNÈ; M. MEUNIER; F. HADJ-BOUZIANE*. *INSERM U1028, CNRS UMR5292, Univ. UCBL, Inst. de Médecine Environnementale.*

9:00 AA6 **722.10** An open-source and low-cost operant conditioning equipment for studying auditory discrimination in common marmosets. M. W. RIBEIRO*; J. F. R. NETO; F. L. BRASIL; M. F. P. ARAÚJO. *Edmond and Lily Safra Intl. Inst. of N.*

10:00 AA7 **722.11** Attention-accumulation process in gaze behavior during multi-cue decision making with manual response and free eye-movement. R. AKAISHI*; E. HOSHI. *Frontal Lobe Project.*

11:00 AA8 **722.12** Response properties of neurons in the pigeon NCL during a perceptual decision making task. R. PUSCH*; J. PACKHEISER; O. GÜNTÜRKÜN; M. C. STÜTTGEN. *Ruhr-University Bochum, Johannes Gutenberg Univ. Mainz.*

8:00 AA9 **722.13** Functional connectivity properties of the rat brain during conscious wakefulness and isoflourane-induced unconsciousness. M. E. GHANTOUS*; P. CHANG; A. BARIA; V. APKARIAN. *Northwestern University-Apkarian Lab.*

9:00 AA10 **722.14** Space influences motor and visual cortical excitability: Effects of hand location on motor evoked potentials and eye position on phosphene thresholds. H. B. COSLETT*; M. DE WIT; O. FASEYITAN. *Hosp. of Univ. PA., Moss Rehab Res. Inst., Univ. of Pennsylvania.*

10:00 AA11 **722.15** Neural correlates of subjective value in the nematode worm Caenorhabditis elegans. A. W. KATZEN*; W. T. HARBAUGH; S. R. LOCKERY. *Univ. of Oregon, Univ. of Oregon, Univ. of Oregon.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

723. Appetitive and Incentive Learning and Memory II

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 AA12 **723.01** Changes in neuronal activity in the nucleus accumbens core during the acquisition of instrumental behavior in rats. M. VEGA VILLAR*; K. L. CAREF; J. J. KIM; J. C. HORVITZ; S. M. NICOLA. *The Grad. Center, CUNY, Albert Einstein Col. of Med., Albert Einstein Col. of Med., City Col. of New York, CUNY, Albert Einstein Col. of Med.*

9:00 AA13 **723.02** Enhancement of operant responding for food reward by DREADD activation of pyramidal neurons projecting from the mPFC to the nucleus accumbens. D. M. WARTHEN*; K. L. GASSMANN; S. M. KHALIL; N. P. ROGERS; L. S. ZWEIFEL; M. M. SCOTT. *Univ. of Virginia, Univ. of Washington.*

10:00 AA14 **723.03** Role of the Core of the Accumbens in Operant Acquisition. S. JONKMAN*; P. KENNY. *Mount Sinai Sch. of Med.*

11:00 AA15 **723.04** Opotogenetic activation of adenosine A2A receptor signaling in the dorsomedial striatopallidal neurons suppress goal-directed behavior. J. CHEN*; Y. LI; Y. HE; M. CHEN; L. CHEN; P. LI; B. LI; H. LI; Z. HUANG; Z. LI. *Boston Univ. Sch. Med., Wenzhou Med. Univ., Fudan Univ. Sch. of Med., Third Military Med. Univ.*

8:00 AA16 **723.05** The goal-directed pathway: A bilateral corticostriatal pathway mediates the acquisition of goal-directed actions. G. HART*; L. A. BRADFIELD; S. Y. FOK; B. W. BALLEINE. *Univ. of Sydney.*

9:00 AA17 **723.06** The effect of appetitive context pre-exposure on inhibitory avoidance learning. M. J. OLVERA-CALTZONTZIN*; M. MIRANDA. *Inst. De Neurobiología Univ. Nacional Au.*

10:00 AA18 **723.07** Symmetrical transfer effects between instrumental and consummatory tasks in rats selected for Low Avoidance/High Anxiety. C. TORRES*; L. CUENYA; M. SABARIEGO; R. DONAIRE; A. FERNÁNDEZ-TERUEL; M. R. PAPINI. *Univ. of Jaen, Lab. de Psicología Exptl. y Aplicada, Inst. de Investigaciones Médicas Alfredo Lanari, CONICET, Univ. of California San Diego, Autonomous Univ. of Barcelona, Texas Christian Univ.*

11:00 AA19 **723.08** ● Binge eating rats exhibit compulsive and perseverative behaviour in a novel food reward/punished responding model. D. J. HEAL*; P. HUTSON; S. GODDARD; R. BRAMMER; S. VICKERS. *RenaSci Ltd, Shire Develop. Inc.*

8:00 AA20 **723.09** ● Binge-eating rats show marked impulsivity in a delay discounting test. S. P. VICKERS*; P. HUTSON; S. GODDARD; M. HALLAM; R. BRAMMER; D. HEAL. *Renasci Ltd, Shire Develop. Inc.*

9:00 AA21 **723.10** Individual differences in voluntary alcohol consumption predict operant extinction, but not devaluation, in rats. H. FISHER*; A. PAJSER; C. L. PICKENS. *Kansas State Univ.*

10:00 AA22 **723.11** Chollinergic interneurons bidirectionally control extinction learning for a cocaine associated context. J. C. FINKELSTEIN*; J. LEE; I. WITTEN. *Princeton Univ., Princeton Univ.*

11:00 AA23 **723.12** Comparing dopamine signaling in dorsal and ventral striatum during a reinforcement learning task. N. F. PARKER*; T. J. DAVIDSON; C. M. CAMERON; J. P. TALIAFERRO; N. D. DAW; I. B. WITTEN. *Princeton Univ., Stanford Univ., New York Univ.*

8:00 AA24 **723.13** ● The long term consumption of hypocaloric diets poor in vitamin c and protein exposed to temperatures from 40 to 50°c alters anxiety behavior. R. B. GARCIA*; A. E. GÓMEZ-MARTÍNEZ; T. NERI-GÓMEZ; T. C. SOSA-LARIOS; A. CHINCHILLAS-SÁNCHEZ; A. C. MÉNDOZA-REYES; S. L. MORIMOTO-MARTÍNEZ. *UNAM, Fac Quimica, UNAM, FAC. QUIMICA, IMSS, INSTITUTO NACIONAL DE CIENCIAS MEDICAS Y NUTRICION "SALVADOR ZUBIRAN", UNAM.FACULTAD DE QUIMICA, UNAM, INSITUTUTO NACIONAL DE CIENCIAS MEDICAS Y NUTRICIÓN.*

9:00 AA25 **723.14** ▲ Systemic dopamine D1 and D2 receptor agonism differentially reverses environmental enrichment attenuated sucrose cue-reactivity after 1 or 30 days of forced abstinence. E. GLUECK; D. GINDER; J. HYDE; F. GRIFFIN; N. INGERMANN; K. NORTH; H. REISTERER; M. KROLL; J. W. GRIMM*. *Western Washington Univ.*

10:00 AA26 **723.15** Environmental enrichment attenuates incubation of cue-induced reinstatement of sucrose seeking but not sucrose consumption in rats. K. AOYAMA*. *Doshisha Univ.*

11:00 AA27 **723.16** Chronic restraint stress causes a delayed increase in craving for palatable food via a dopamine D_1-like receptor-mediated mechanism. K. T. BALL*; O. BEST; J. LUO; L. MILLER. *Bloomsburg Univ, Pennsylvania.*

8:00 AA28 **723.17** Changes on prefrontal dopaminergic receptors, appetitive taste memory retrieval and appetitive re-learning, induced by prolonged sugar consumption. S. CAYNAS*; G. RODRÍGUEZ-GARCÍA; I. DELINT-RAMÍREZ; M. I. MIRANDA. *Univ. Nacional Autonoma de Mexico - Inst. de Neurobiologia, Univ. Autonoma De Nuevo Leon.*

9:00 AA29 **723.18** Escalation of palatable food consumption by rats with increased reward availability. S. T. WHITE*; I. KRASNOVA; J. L. CADET. *Natl. Inst. on drug abuse, Natl. Inst. on drug abuse.*

10:00 AA30 **723.19** Incentive salience attributed to a reward-associated stimulus promotes suboptimal choice in pigeons and rats. A. P. SMITH*; J. J. CHOW; A. BAILEY; T. R. ZENTALL; J. S. BECKMANN. *Univ. of Kentucky.*

11:00 AA31 **723.20** The paraventricular nucleus of the thalamus regulates cued food-seeking during reward omission. F. H. DO MONTE*; A. M. MINIER-TORIBIO; G. J. QUIRK. *Univ. of Puerto Rico.*

8:00 AA32 **723.21** Approach-avoidance processing: The role of nucleus accumbens shell D1 and D2 receptors in conflict resolution. D. NGUYEN*; V. FUGARIU; R. ITO. *Univ. of Toronto.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

724. Learning and Memory: Hippocampus, Rhinal, and Parietal Cortex

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 AA33 **724.01** Investigations of the human cortical networks involved in task-irrelevant spatial change detection. M. F. HAUSER*; V. WIESCHOLLECK; C. BELLEBAUM; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Intl. Grad. Sch. of Neurosci., Inst. of Exptl. Psychology, Heinrich Heine Univ.*

9:00 AA34 **724.02** The metabotropic glutamate receptor mGlu5 regulates the direction of opposing forms of synaptic plasticity at mossy fiber - CA3 and commissural/ associational - CA3 synapses. D. MANAHAN-VAUGHAN*; H. HAGENA. *Ruhr Univ. Bochum.*

10:00 AA35 **724.03** Engagement of the descending and ascending pathways to the piriform cortex in synaptic plasticity in behaving rodents. C. STRAUCH*; D. MANAHAN-VAUGHAN. *Ruhr-University Bochum, Med. Fac., Intl. Grad. Sch. of Neurosci.*

11:00 AA36 **724.04** Hippocampal synaptic information encoding in the form of LTD is enable by olfactospatial and audiospatial learning. B. E. DIETZ*; M. A. E. ANDRÉ; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Med. Fac., Intl. Grad. Sch. of Neurosci.*

8:00 AA37 **724.05** Acute intracerebral treatment with amyloid-beta (1-42) modifies neuronal oscillations that occur in conjunction with LTP induction and impairs LTP *in vivo*. A. N. KALWEIT*; H. YANG; J. COLITTI-KLAUSNITZER; Z. BOZSÓ; L. FÜLÖP; B. PENKE; D. MANAHAN-VAUGHAN. *Ruhr-University Bochum, Univ. of Szeged.*

9:00 AA38 **724.06** Influence of directional information in place field representations of space. M. LORKOWSKI*; S. ZHANG; F. DRAHT; F. SCHÖNFELD; L. WISKOTT; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Ruhr Univ. Bochum, Ruhr Univ. Bochum.*

10:00 AA39 **724.07** Role of BDNF in context-dependent and independent extinction of an appetitive spatial learning task. A. B. LEHR*; M. A. E. ANDRÉ; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Ruhr Univ. Bochum.*

11:00 AA40 **724.08** BDNF knock-down lead to impairments of hippocampal synaptic plasticity *in vivo* and contributes to the facilitation of synaptic plasticity through environmental enrichment. J. AARSE*; T. NOVKOVIC; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Med. Fac., Intl. Grad. Sch. of Neurosci.*

8:00 AA41 **724.09** Impaired hippocampal function as a consequence of psychosis. V. DUBOVYK*; T. GRÜTER; V. WIESCHOLLECK; V. ALIANE; D. MANAHAN-VAUGHAN. *Ruhr-University Bochum.*

9:00 AA42 **724.10** The 5-Hydroxytryptamine4 (5-HT4) receptor supports differentiated encoding of informational content in the hippocampus. H. TWARKOWSKI*; H. HAGENA; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Med. Fac., Intl. Grad. Sch. of Neurosci.*

10:00 AA43 **724.11** Exploration of positional or directional spatial cues results in functionally distinct immediate early gene activation in different hippocampal subregions. T. HOANG*; V. ALIANE; D. MANAHAN-VAUGHAN. *Ruhr Univ. Bochum, Med. Fac., Intl. Grad. Sch. of Neuroscience, Ruhr-University Bochum.*

11:00 AA44 **724.12** The locus coeruleus controls the direction of change and persistency of hippocampal synaptic plasticity through the activation of both ß-adrenergic receptors and dopamine D1/5 receptors. N. HANSEN*; N. LEMON; D. MANAHAN-VAUGHAN. *Univ. of Bonn, Ruhr-University Bochum, Ruhr-University Bochum.*

8:00 AA45 **724.13** Prefrontal connections of the perirhinal and postrhinal cortices in the rat. E. HWANG*; B. S. WILLIS; R. D. BURWELL. *Brown Univ., Brown Univ., Brown Univ.*

9:00 AA46 **724.14** Neuronal correlates in rat posterior parietal cortex and the lateral posterior thalamic nucleus during performance on a visuospatial attention task. F. YANG*; R. D. BURWELL. *Brown Univ., Brown Univ.*

10:00 AA47 **724.15** Disconnection of the perirhinal and postrhinal cortices impairs recognition of objects-in-context. V. R. HEIMER-MCGINN*; D. L. POETA; R. D. BURWELL. *Brown Univ., Brown Univ.*

11:00 AA48 **724.16** Contextual dependency of conditioning and extinction in approach and avoidance behaviors. T. K. JACOBSON*; J. R. PHILLIPS; R. D. BURWELL. *Brown Univ., Brown Univ.*

8:00 BB1 **724.17** Impact of cues versus reward location on CA1 place cells. F. SHARIF*; S. ROYER. *KIST.*

9:00 BB2 **724.18** The default mode network in rhesus monkeys with selective bilateral lesions of the hippocampus. A. M. SPIEGEL*; H. GU; Y. YANG; H. LU; J. YOUNG; C. HEROLD; D. CHARLES; S. EDMONDS; J. LIVERMORE; E. A. MURRAY; E. A. STEIN; P. R. RAPP. *Natl. Inst. on Aging, Natl. Inst. on Drug Abuse, Natl. Inst. on Aging, Natl. Inst. of Mental Hlth.*

10:00 BB3 **724.19** Bio-physical model of perirhinal cortex reveals memory storage mechanisms. A. ALTURKI*; P. SAMARTH; F. FENG; D. B. HEADLEY; D. PARÉ; S. S. NAIR. *Univ. of Missouri, Rutgers Univ.*

11:00 BB4 **724.20** Automatic expression of recognition memory signals in the perirhinal cortex of rhesus monkeys. S. GUDERIAN*; M. ROSSA; R. SAUNDERS; M. MISHKIN. *NIH/NIMH.*

8:00 BB5 **724.21** Impact of Kv7 KCNQ channel blockade in perirhinal cortex on visual recognition memory formation in macaques. B. CORGIAT; D. K. YU; A. PISCOPELLO; M. MISHKIN; J. N. TURCHI*. *NIMH, NIH, NIMH, NIH.*

9:00 BB6 **724.22** Cortical and subcortical projections of the entorhinal layer III neurons of the rat. S. OHARA*; K. ITO; Y. SOTA; K. TSUTSUI; M. P. WITTER; T. IIJIMA. *Tohoku Univ. Grad Sch. Life Sci., Kavli Inst. for Sys Neurosci and Cen for Neural Comp, NTNU.*

10:00 BB7 **724.23** ● Characteristic neocortical ensembles encode essential information for different visual shape discriminations. A. I. GELLER*; G. ZHANG; H. ZHAO; N. COOK; M. JAN; E. CHOI; M. SVESTKA; 1. G. COOK. *LSUHSC, Tufts Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

11:00 BB8 **724.24** Long-term representation of complex stimuli in the mouse parietal cortex: *In vivo* two-photon c-fos imaging. M. ROSHCHINA*; O. IVASHKINA; K. TOROPOVA; A. DRONOVA; K. ANOKHIN. *NRC Kurchatov Institute, Nbics-Center, Anokhin Inst. of Normal Physiol. RAMS.*

8:00 BB9 **724.25** Sequential processing of paired stimuli in medial temporal lobe subregions perirhinal cortex, lateral entorhinal cortex, dentate gyrus and CA1 supports formation of a time-bridging associative response. E. E. SUTER*; C. WEISS; J. F. DISTERHOFT. *Northwestern Univ.*

POSTER

725. Learning and Memory: Hippocampal Circuits

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 BB10 **725.01** CA1 rate and temporal coding in the absence of CA3 input. S. J. MIDDLETON; T. J. MCHUGH*. *Riken Brain Sci. Inst., RIKEN Brain Sci. Inst. - Wako, Univ. of Tokyo.*

9:00 BB11 **725.02** An examination of the local circuitry and impact on network activity by supramammillary nucleus inputs to area CA2 of the hippocampus. R. A. PISKOROWSKI*; V. ROBERT; V. CHEVALEYRE; L. THERREAU. *CNRS UMR8118.*

10:00 BB12 **725.03** The role of CA2 in regulating information flow in the hippocampus. R. BOEHRINGER*; D. POLYGALOV; A. J. Y. HUANG; R. A. PISKOROWSKI; V. CHEVALEYRE; T. J. MCHUGH. *Riken Brain Sci. Inst., Univ. Paris Descartes, Univ. of Tokyo.*

11:00 BB13 **725.04** Supramammillary input to hippocampal CA2 modulates social memory. M. WINTZER*; A. J. Y. HUANG; R. BOEHRINGER; D. POLYGALOV; A. Z. WEITEMIER; S. CHEN; L. M. Y. YU; R. A. PISKOROWSKI; V. ROBERT; T. J. MCHUGH. *Riken BSI, CNRS UMR8118, Univ. Paris Descartes, Grad. Sch. of Arts and Sciences, Univ. of Tokyo.*

8:00 BB14 **725.05** Hippocampal CA3 plasticity and transmission are required for social memory. M. CHIANG*; A. HUANG; T. J. MCHUGH. *RIKEN BSI, Dept. of Life Sci. and Biomed. Science, Grad. Sch. of Advanced Sci. and Engineering, Waseda Univ., 3Department of Life Sciences, Grad. Sch. of Arts and Sciences, Univ. of Tokyo.*

9:00 BB15 **725.06** CA2 place cells maintain a coherent population representation of a dynamically changing environment. H. LEE*; C. WANG; S. DESHMUKH; J. J. KNIERIM. *Johns Hopkins Univ.*

10:00 BB16 **725.07** Functional dissociation along the proximodistal axis of CA1. S. S. DESHMUKH*; J. L. JOHNSON; J. J. KNIERIM. *Indian Inst. of Sci., The Johns Hopkins Univ.*

11:00 BB17 **725.08** Multiscale simultaneous response of grid cells to conflicting reference frames. F. SAVELLI*; J. D. LUCK; J. J. KNIERIM. *Johns Hopkins Univ.*

8:00 BB18 **725.09** Landmark vector coding in complete darkness in area CA1 of the hippocampus. V. PULIYADI*; S. S. DESHMUKH; J. L. JOHNSON; J. J. KNIERIM. *The Johns Hopkins Univ.*

9:00 BB19 **725.10** Place cells in virtual reality dome reveal interaction between conflicting self-motion and landmark cues. M. S. MADHAV*; R. P. JAYAKUMAR; F. SAVELLI; H. T. BLAIR; N. J. COWAN; J. J. KNIERIM. *Johns Hopkins Univ., Johns Hopkins Univ., UCLA.*

10:00 BB20 **725.11** Neurons in the hilus of the dentate gyrus have multiple place fields in multiple environments. D. GOODSMITH; K. M. CHRISTIAN*; S. KIM; H. SONG; J. J. KNIERIM. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

11:00 BB21 **725.12** Deep-layer LEC neurons convey slightly more spatial information than superficial-layer neurons in open-field foraging tasks. C. WANG*; G. RAO; H. LEE; J. J. KNIERIM. *Johns Hopkins Univ., Mind/Brain Inst.*

8:00 BB22 **725.13** Optogenetic manipulation of memory encoding in primate hippocampus. I. OPRIS*; L. SANTOS; D. KLORIG; D. FETTERHOFF; D. W. GODWIN; R. E. HAMPSON; S. A. DEADWYLER. *Wake Forest Sch. of Med.*

9:00 BB23 **725.14** Inactivation of the C57BL/6J mouse hippocampus disrupts discrimination and avoidance of objects that are either stationary or moving around the environment. H. N. ASGEIRSDOTTIR*; R. W. STACKMAN, Jr. *Florida Atlantic Univ., Florida Atlantic Univ.*

10:00 BB24 **725.15** Hippocampal NMDA receptors are involved in rats' spontaneous object recognition only under high memory load condition. K. YAMADA*; M. SUGITA; Y. ICHITANI. *Univ. Tsukuba.*

11:00 BB25 **725.16** Bidirectional modulation of context fear in the dentate gyrus. B. E. BERNIER*; H. KIM; A. AYOUB; B. V. ZEMELMAN; M. R. DREW. *Univ. Texas At Austin.*

8:00 BB26 **725.17** Dentate Gyrus is required for the acquisition, but not the expression, of trace eyelid conditioning in mice. Y. KIM*; B. BERNIER; M. DREW; M. MAUK. *The Univ. of Texas At Austin.*

9:00 BB27 **725.18** Spatial memory functions for adult neurogenesis are modulated by stress in male and female rats. T. P. O'LEARY; J. S. SNYDER*. *Univ. of British Columbia, Univ. of British Columbia.*

10:00 BB28 **725.19** A shared neural ensemble links distinct contextual memories encoded close in time. D. J. CAI*; D. AHARONI; T. SHUMAN; J. SHOBE; J. BIANE; J. LOU; I. KIM; K. BAUMGAERTEL; A. LEVENSTAIN; M. TUSZYNSKI; M. MAYFORD; P. GOLSHANI; A. J. SILVA. *UCLA, UCLA, UCLA, UCSD, The Scripps Res. Inst., UCLA.*

11:00 BB29 **725.20** Functional organization of hippocampal microcircuits regarding the embryonic birthdate of neurons *in vivo.* S. REICHINNEK*; A. MALVACHE; V. VILLETTE; R. COSSART. *Susanne Reichinnek, INMED.*

8:00 BB30 **725.21** Hippocampal replay correlates retrieval of fear memory in inhibitory avoidance task. C. WU*; C. KEMERE; D. JI. *Baylor Col. of Med., Rice Univ., Baylor Col. of Med.*

9:00 BB31 **725.22** Anatomical localisation of episodic-like memory in the mouse. O. MONTEIRO; A. GUTOREVA; L. M. KAFER; R. C. KING; J. J. LAMBERT; R. F. LANGSTON*. *Div. of Neuroscience, Med. Res. Inst.*

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* Indicates abstract's submitting author

10:00 BB32 **725.23** Motivational state influences the content of hippocampal sequences. A. CAREY; M. A. VAN DER MEER*. *Dartmouth Col.*

11:00 BB33 **725.24** Neural plasticity in episodic memory: Functional and structural connectivity changes associated with learning and after fornix transection in macaques. A. S. MITCHELL*; D. J. MITCHELL; S. CHAKRABORTY; A. H. BELL; A. C. H. LEE. *Univ. of Oxford, MRC Cognition and Brain Sci. Unit, Imperial Col., Univ. of Toronto, Rotman Res. Inst.*

8:00 BB34 **725.25** Activating positive memory engrams suppresses depression-like behavior. S. RAMIREZ*; X. LIU; C. J. MACDONALD; A. MOFFA; J. ZHOU; R. L. REDONDO; S. TONEGAWA. *MIT, Northwestern Univ., MIT.*

9:00 BB35 **725.26** Specific contribution of CA1 to the reconsolidation of contextual fear memory: An optogenetic/Arc molecular imaging study. V. LUX*; O. MASSECK; S. HERLITZE; M. M. SAUVAGE. *Ruhr-Universitaet Bochum, Ruhr-Universität.*

10:00 BB36 **725.27** Imaging the spatio-temporal organization of “replay” in the CA1 region of awake mice. A. MALVACHE*; V. VILLETTE; S. REICHINNEK; R. COSSART. *INMED, INSERM U901.*

11:00 BB37 **725.28** Systematic data mining of hippocampal synaptic properties. K. MORADI*; C. L. REES; D. W. WHEELER; A. O. KOMENDANTOV; C. M. WHITE; D. J. HAMILTON; S. VENKADESH; M. SULIMAN; G. A. ASCOLI. *George Mason Univ.*

8:00 BB38 **725.29** The firing of medial septal PV+ interneurons reduces the population activity of CA1 pyramidal neurons - potential microcircuit mechanisms. D. JUSTUS*; F. FUHRMANN; L. SOSULINA; H. KANEKO; C. HANNES; T. BEUTEL; D. FRIEDRICHS; S. SCHOCH; M. FUHRMANN; S. REMY. *German Ctr. for Neurodegenerative Dis. (DZNE), Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

POSTER

726. Learning and Memory: Genes, Signaling, and Neurogenesis II

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 BB39 **726.01** Postnatal choline supplementation ameliorates long-term disruptions in behavior and hippocampal gene expression resulting from fetal iron deficiency. B. C. KENNEDY; M. KOHLI; J. MAERTENS; M. T. PISANSKY; P. V. TRAN; J. C. GEWIRTZ*; M. K. GEORGIEFF. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 BB40 **726.02** SCOP mediated circadian regulation of recognition memory. K. SHIMIZU*; Y. FUKADA. *Dept. Biol. Sciences, The Univ. of Tokyo.*

10:00 BB41 **726.03** Diabetes affects adversely and differentially the hippocampal neurogenesis during pregnancy and non-pregnancy period in young rats. M. S. RAO*; S. SHIVANANDAN; A. M. SONY. *Kuwait Univ.*

11:00 BB42 **726.04** ● What happens to mouse hippocampal-dependent behavior and neurogenesis on the way to Mars? One small step for mousekind.. A. J. EISCH*; M. J. LUCERO; R. L. REDFIELD; N. ITO; D. R. RICHARDSON; R. P. REYNOLDS; G. PALCHIK; S. MUKHERJEE; A. K. WALKER; C. W. WHOOLERY; H. SHIH; P. D. RIVERA; S. G. BIRNBAUM; B. P. C. CHEN. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

8:00 BB43 **726.05** Image-guided cranial irradiation-induced ablation of dentate gyrus neurogenesis diminishes extinction of young - but not old - morphine reward memories. M. L. MENDOZA*; P. D. RIVERA; R. P. REYNOLDS; A. L. JUST; S. G. BIRNBAUM; A. J. EISCH. *UT Southwestern Med. Ctr.*

9:00 BB44 **726.06** Opposite effects of behavioral experience on zif268 expression in mature and immature adult-born hippocampal neurons. K. A. HUCKLEBERRY*; G. KANE; R. MATHIS; S. COOK; M. R. DREW. *The Univ. of Texas At Austin.*

10:00 BB45 **726.07** Behavioral alterations following combined binge alcohol and nicotine exposure in adult rats: An analysis of spatial learning and memory. R. T. LINGG; A. M. FORMICA; A. C. ROCCAFORTE; D. M. HAYES*. *Radford Univ.*

11:00 BB46 **726.08** Effects of extremely low-frequency electromagnetic fields on olfactory memory in mice: Role of increased neurogenesis and characterization of underlying molecular mechanisms. A. MASTRODONATO*; S. A. BARBATI; L. LEONE; C. COLUSSI; M. V. PODDA; C. GRASSI. *Univ. Cattolica Med. Sch., Inst. of Cell Biol. and Neurobio.*

8:00 BB47 **726.09** ▲ Chemotherapy impairs cognitive performance and reduces neurogenesis in mice, independent of nutritional intervention. A. SHERIFF*; T. K. BHATHACHARYA; A. COBERT; C. RENDEIRO; H. CHEN; E. J. ROY; W. G. HELFERICH; J. S. RHODES. *Univ. of Illinois At Urbana-Champaign, Beckman Inst., Univ. of Illinois, Univ. of Illinois, Univ. of Illinois, Univ. of Illinois.*

9:00 BB48 **726.10** Thalamic stimulation in awake rats induces neurogenesis in the hippocampal formation. F. CHAMAA; W. SWEIDAN; Z. NAHAS; N. SAADE; W. ABOU-KHEIR*. *American Univ. of Beirut.*

10:00 BB49 **726.11** Genetic manipulation of adult-born hippocampal neurons rescues memory in a mouse model of Alzheimer’s disease. C. RAMPON*; K. RICHETIN; T. ANDRAINI; M. MOULIS; N. TONI; T. GALLOPIN; L. ROYBON; P. BELENGUER; M. MIQUEL. *CNRS Univ. Toulouse 3, Ctr. for Developmental Biol., Dept. of Fundamental Neurosciences,, Lab. de Neurobiologie, Stem Cell Lab. for CNS disease Modeling.*

11:00 BB50 **726.12** GSK3β isoform-selective regulation of depression-like behavior, novel object recognition and hippocampal neural precursor cell proliferation. M. PARDO*; E. ABRIAL; R. JOPE; E. BEUREL. *Univ. of Miami.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

POSTER

727. Cortical and Hippocampal Circuits: Models of Spatial Navigation

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 BB51 **727.01** Synaptic plasticity with dendritic computing achieves the association of preplay patterns and place fields in hippocampus. T. HAGA*; T. FUKAI. *RIKEN Brain Sci. Inst.*

9:00 BB52 **727.02** An efficient coding theory for a dynamic trajectory predicts non-uniform allocation of grid cells to modules in the entorhinal cortex. N. WEISS*; A. MORIEL; H. AGMON; Y. BURAK. *Hebrew Univ. of Jerusalem, Hebrew Univ. of Jerusalem.*

10:00 BB53 **727.03** Prefrontal cortex reservoir network learns to reconstruct navigation sequences by concatenating place-cell snippets replayed in hippocampus. N. CAZIN; J. FELLOUS; A. WEITZENFELD; P. F. DOMINEY*. *INSERM U846, Univ. of Arizona, Univ. of South Florida, INSERM U846.*

11:00 BB54 **727.04** Retrosplenial cortical neural populations simulate future trajectories. A. M. MILLER*; W. MAU; H. LI; K. YU; S. PARAUDA; D. M. SMITH. *Cornell Univ., Boston Univ., Weill Cornell Med. Col.*

8:00 BB55 **727.05** An attractor model of probabilistic localization. I. KANITSCHEIDER*; A. POUGET; I. FIETE. *The Univ. of Texas at Austin, Univ. of Geneva, Univ. of Rochester, Gatsby Computat. Neurosci. Unit, Univ. of Texas at Austin.*

9:00 BB56 **727.06** A model of cognitive navigation inspired by the hippocampus. A. V. SAMSONOVICH*; G. A. ASCOLI. *George Mason Univ.*

10:00 BB57 **727.07** A neural computation model of the goal direction based on the reactivation of place cells, grid cells and stripe cells. J. K. LAI*; M. S. MITSUZAWA; Y. YAMAGUCHI. *Kyushu Inst. of Technol., RIKEN BSI.*

11:00 BB58 **727.08** Distal cue configuration-dependent rate remapping in the hippocampal place cells in an allocentric memory task. S. PARK*; I. LEE. *Seoul Natl. Univ.*

8:00 BB59 **727.09** Computational investigation of the direct transformation of grid cell spike activities into hippocampal ramp-like input and spike phase precession of place cell. S. PARK*; J. KWAG. *Korea Univ.*

9:00 BB60 **727.10** Why the entorhinal grid map is discretized: How a geometric progression of grid scales enables goal-directed navigation, error correction and modular arithmetic. M. B. STEMMLER*; A. MATHIS; A. V. M. HERZ. *Ludwig-Maximilians-Universität Munich, Harvard Univ.*

10:00 BB61 **727.11** From grid cells to place cells with realistic field sizes. T. NEHER*; A. AZIZI; S. CHENG. *Ruhr-university-Bochum, Mercator Res. Group "Structure of Memory", Internation Grad. Sch. for Neurosci., Mercator Res. Group.*

11:00 BB62 **727.12** A computational model of information-flow in the hippocampal formation of the rat. M. PYKA*; S. CHENG. *Univ. of Bochum, Univ. of Bochum.*

8:00 BB63 **727.13** A parametric anatomic model of the pigeon hippocampal formation. R. GÖRLER*; O. GÜNTÜRKÜN; M. PYKA. *Ruhr-Universität Bochum, Ruhr-Universität Bochum, Ruhr-Universität Bochum.*

9:00 BB64 **727.14** The role of semantic representation in episodic memory. J. FANG*; S. CHENG. *Ruhr-University Bochum.*

10:00 BB65 **727.15** A hippocampal network for spatial coding during immobility. K. KAY*; M. SOSA; J. CHUNG; M. P. KARLSSON; M. C. LARKIN; I. GROSSRUBATSCHER; L. M. FRANK. *UCSF, Stanford Univ.*

11:00 BB66 **727.16** Self-organized formation of place cell responses in robotic simulations based on slowness principle. S. KUMAR*; F. SCHÖNFELD; L. WISKOTT; S. CHENG. *Ruhr Univ. Bochum, Ruhr Univ. Bochum, Ruhr Univ. Bochum.*

8:00 BB67 **727.17** Apolipoprotein E4 impairs slow gamma oscillations during hippocampal sharp-wave ripples in a mouse model of Alzheimer's disease. A. GILLESPIE*; Y. LIN; M. KARLSSON; K. KAY; S. YOON; L. FRANK; Y. HUANG. *Gladstone Inst. of Neurolog. Dis., UCSF.*

9:00 BB68 **727.18** Real-time estimation of hippocampal replay content. X. DENG*; D. F. LIU; M. KARLSSON; L. M. FRANK; U. T. EDEN. *Boston Univ., UCSF, UCSF.*

10:00 BB69 **727.19** Data-driven hippocampus ca1 modeling in the human brain project. A. ROMANI*; N. ANTILLE; J. A. DYNES; J. FALCK; M. GEVAERT; L. KANARI; J. G. KING; S. LANGE; A. MERCER; E. B. MULLER; S. RAMASWAMY; M. W. REIMANN; L. R. J. RIQUELME; C. A. RÖSSERT; Y. SHI; M. TELEFONT; A. THOMSON; W. A. H. VAN GEIT; H. MARKRAM. *EPFL ENT CBS BBP, UCL.*

POSTER

728. Fear Memory: Molecular Mechanisms

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 BB70 **728.01** ▲ Differential rearing effects on NR2B subunit expression in the rat amygdala and hippocampus during acquisition of Pavlovian conditioned fear. L. E. KOMER*; E. K. REINHARDT; G. R. ERICKSON; M. E. CAIN. *Kansas State Univ., Kansas State Univ.*

9:00 BB71 **728.02** NMDA receptor-dependent signaling in excitatory prefrontal neurons controls fear discrimination and fear extinction. A. CORCHES*; P. VIEIRA; N. BAVADIAN; A. HIROTO; K. WESTBROOK; E. KORZUS. *Univ. of California, Riverside.*

10:00 BB72 **728.03** ● Trace-fear conditioning alters the expression of NMDA receptor related genes in relevant brain regions. D. T. BALU*; K. T. PRESTI; J. T. COYLE. *McLean Hosp. / Harvard Univ.*

11:00 BB73 **728.04** Remote fear memory is regulated in the medial amygdala via tuberoinfundibular peptide of 39 residues acting through parathyroid hormone 2 receptors. M. C. TSUDA*; T. B. USDIN. *NIMH/NIH.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 BB74 **728.05** Contextual fear-conditioning alters phosphodiesterase-4A intron expression in the hippocampus. R. HANSEN*, III; S. POPLAWSKI; G. PORCARI; R. HAVEKES; L. PEIXOTO; T. ABEL. *Univ. of Pennsylvania, Ibis Biosci., Washington State Univ.*

9:00 BB75 **728.06** Deletion of PAC1 receptors from the medial intercalated cells of the amygdala enhances fear generalization and decreases the rate of fear extinction. A. K. RAJBHANDARI*; Y. HUANG; V. MAKHIJANI; J. WASCHEK; M. FANSELOW. *Univ. of California-Los Angeles, Univ. of California-Los Angeles.*

10:00 BB76 **728.07** BDNF val66met genotype enhances memory of fear and impairs extinction learning via glucocorticoid signaling. M. NOTARAS*; R. HILL; J. GOGOS; M. VAN DEN BUUSE. *Univ. of Melbourne, Columbia Univ., La Trobe Univ.*

11:00 BB77 **728.08** Opioid-dependent impairment in fear learning and extinction by prefrontal cortical stimulation. A. J. KIRRY; R. C. TWINING; E. M. DONCHECK; M. R. GILMARTIN*. *Marquette Univ.*

8:00 BB78 **728.09** Delay fear conditioning enhances the intrinsic excitability of infralimbic neurons. C. SONG*; V. L. EHLERS; J. C. AITKEN; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee.*

9:00 BB79 **728.10** Experience-dependent modulation of fear conditioning. S. IWASAKI*; T. SAKAGUCHI; Y. IKEGAYA. *Univ. Tokyo.*

10:00 BB80 **728.11** Individual differences in voluntary alcohol consumption predict fear incubation responses and fear acquisition in rats. A. PAJSER*; H. FISHER; M. GREER; P. KALLENBERGER; A. LIMOGES; C. LONG; C. L. PICKENS. *Kansas State Univ.*

11:00 BB81 **728.12** Central activation of GHS-R1a in lateral amygdala blocks aversive memory formation by PLC/IP3/DAG and PI3K/Akt/mTOR pathways. M. YU; Y. ZHOU*; Q. ZHU; M. NIU; Q. KONG. *Qingdao Univ.*

POSTER

729. Fear and Aversion Learning

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 BB82 **729.01** Exogenous BDNF into adult neocortex strengthens a taste aversion memory. A. MARTÍNEZ*; L. F. RODRÍGUEZ DURÁN; M. L. ESCOBAR. *Facultad de Psicología.*

9:00 BB83 **729.02** Long-term associative memory in Caenorhabditis elegans. S. ITO; I. MARUYAMA*. *Okinawa Inst. of Sci. & Technol. Grad. Univ.*

10:00 BB84 **729.03** ▲ Dopaminergic and Serotoninergic modulation on the avoidance response. G. F. ANTUNES*; C. C. OLIVEIRA; M. C. CASTRO; F. V. GOUVEIA; M. D. J. SENO; L. T. SANTOS; M. C. CARVALHO; M. L. BRANDÃO; E. T. FONOFF; M. J. TEIXEIRA; J. P. OTOCH; R. C. R. MARTINEZ. *Inst. Sirio Libanês De Ensino E Pesquisa, Inst. Sírio Libanês de Ensino e Pesquisa, Univ. of Sao Paulo, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Univ. of Sao Paulo, LIM 26 - HCFMUSP.*

11:00 BB85 **729.04** Striatal network organization predicts initial learning of Pavlovian associations. K. BAKHURIN*; V. MAC; P. GOLSHANI; S. C. MASMANIDIS. *UCLA, UCLA.*

8:00 BB86 **729.05** Memory forgetting: Exploring the mechanisms underpinning memory decay. L. O. ALVARES*; R. SACHSER; F. SANTANA; F. DUTRA; A. CRESTANI; J. QUILLFELDT. *Federal Univ. Rio Grande do Sul.*

9:00 BB87 **729.06** Separable memory formation and retrieval circuits generate aversive olfactory imprinting in *C. elegans.* X. JIN*; N. POKALA; C. BARGMANN. *The Rockefeller Univ.*

10:00 BB88 **729.07** Anesthesia-induced conditioned taste aversions. J. ARTHURS*; J. LIN; S. REILLY. *Univ. of Illinois At Chicago.*

11:00 BB89 **729.08** Conditioned inhibition changes in Hermissenda type A photoreceptors. J. FARLEY*. *Indiana Univ.*

8:00 BB90 **729.09** ● Aversive experiences transform amygdalar ensemble coding during fear learning. B. F. GREWE*; J. GRÜNDEMANN; J. LECOQ; L. KITCH; J. MARSHALL; J. PARKER; J. LI; A. LÜTHI; M. SCHNITZER. *Stanford Univ., FMI.*

9:00 BB91 **729.10** Learning to ignore: A fundamental role for the prelimbic cortex in down-regulating attention towards irrelevant cues during fear conditioning. M. SHARPE*; S. KILLCROSS. *Princeton Neurosci. Inst., UNSW.*

10:00 BB91 **729.11** ● A robotically controlled laser and real time subject tracking software for the study of approach and avoidance. J. WILSON*; M. KESLER; S. PELEGRIN; L. KALVI; A. GRUBER; H. STEENLAND. *Neurotek Innovative Technol., Univ. of Lethbridge.*

11:00 BB93 **729.12** Goal-directed visuomotor learning and long-term memory of free-swimming zebrafish larvae is unveiled via high-throughput automated detection and analyses of hunting sequences. A. M. LAMBERT*; M. A. MASINO. *Harvard Univ., Univ. of Minnesota- Twin Cities.*

8:00 CC1 **729.13** Neurogranin gene deletion increases stress responsivity in heterozygous mice. V. CESTARI; D. SARAULLI; S. FARIOLI VECCHIOLI; V. MASTRORILLI; F. D'ALESSANDRO; M. COSTANZI; S. DE MARCHIS; R. VENTURA*. *Sapienza Univ. of Rome, IBCN - CNR, Lumsa Univ., Univ. of Torino, Univerity la Sapienza Rome.*

9:00 CC2 **729.14** The dynamic nature of systems consolidation: Stress during learning as a switch guiding the rate of the hippocampal dependency and memory quality. L. K. PEDRAZA CORREA*; R. A. SIERRA ORDOÑEZ; F. ZACOUTEGUY; J. HAUBRICH; J. QUILLFELDT; L. ALVARES. *Federal Univ. of Rio Grande Do Sul.*

10:00 CC3 **729.15** Temporal transcriptome and epigenome changes in the brain and blood of mouse models simulating post-traumatic stress disorder. S. MUHIE; A. GAUTAM; N. CHAKRABORTY; R. HAMMAMIEH; J. MEYERHOFF; M. JETT*. *Frederick Natl. Lab. for Cancer Res., US Army Med. Command, USACEHR, US Army Med. Command, CEHR.*

11:00 CC4 **729.16** Ability to discriminate between highly ambiguous contexts is dependent on the sensory modality of contextual cues. R. J. BALOG*; R. J. KEELEY; N. S. HONG; R. J. MCDONALD. *Univ. of Lethbridge, Canadian Ctr. For Beha, Univ. of Lethbridge.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

730. Decision Making: Neurocircuitry

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 CC5 **730.01** Effort based decision making in people with motivational deficits. C. LE HERON*; S. MANOHAR; T. CHONG; A. BLAKE; M. JACKSON; M. HUSAIN. *Univ. of Oxford, Univ. of Oxford, John Radcliffe Hosp.*

9:00 CC6 **730.02** Offline TMS-fMRI reveals integration of reward, task and response information across corticostriatal circuits. M. VAN HOLSTEIN*; M. FROBOESE; J. O'SHEA; I. TONI; E. AARTS; R. COOLS. *Radboud Univ. Nijmegen, Donders Inst. for Brain, Cognition and Behavior, Radboud Univ. Nijmegen, Oxford Univ., Radboud Univ. Med. Ctr.*

10:00 CC7 **730.03** Local network differences in reactive aggression measured with resting-state fMRI and graph theory. F. D. UQUILLAS*; G. GAN; A. ZILVERSTAND; M. A. PARVAZ; R. N. PRESTON-CAMPBELL; D. TOMASI; S. J. MOELLER; P. MALAKER; T. MALONEY; R. Z. GOLDSTEIN; N. ALIA-KLEIN. *Icahn Sch. of Med. At Mount Sinai, Natl. Inst. on Alcohol Abuse and Alcoholism.*

11:00 CC8 **730.04** The neural representation of optimal decision-making during human spatial forward planning. R. KAPLAN*; J. KING; R. KOSTER; D. BUSH; W. D. PENNY; N. BURGESS; K. J. FRISTON. *Univ. Col. London, Univ. Pompeu Fabra, Univ. Col. London, Univ. Col. London, Univ. Col. London.*

8:00 CC9 **730.05** Dissociation of amygdala and dopamine contributions to exploratory decision making in rhesus monkeys. V. D. COSTA*; O. DAL MONTE; D. R. LUCAS; E. A. MURRAY; B. B. AVERBECK. *NIMH/NIH.*

9:00 CC10 **730.06** Why Adaptive Coding? Signal and noise in neural transmission and adaptive coding in economic choices. A. RUSTICHINI*; C. PADOA-SCHIOPPA; N. BRUNEL. *Univ. of Minnesota, Washington Univ., Univ. of Chicago.*

10:00 CC11 **730.07** A neuro-computational model of economic decisions. C. PADOA-SCHIOPPA*; A. RUSTICHINI. *Washington Univ. in St Louis, Univ. of Minnesota.*

11:00 CC12 **730.08** Neural activity in basolateral amygdala encodes reward magnitude and risk of punishment in a risky decision-making task in rats. C. A. ORSINI*; M. FEBO; J. L. BIZON; B. SETLOW. *UNIVERSITY OF FLORIDA.*

8:00 CC13 **730.09** A novel group of dopamine neurons encoding stable object value memories. H. F. KIM*; A. GHAZIZADEH; O. HIKOSAKA. *NIH, NEI, LSR.*

9:00 CC14 **730.10** Temporal backpropagation of basal forebrain reward-prediction-error signals underlies associative learning. H. MANZUR*; K. VLASOV; S. LIN. *NIH, Natl. Inst. of Hlth. - Natl. Inst. on Aging.*

10:00 CC15 **730.11** Topographic mapping of neocortical oscillations elicited by optogenetic stimulation of basal forebrain parvalbumin neurons. E. HWANG*; B. KIM; R. E. BROWN; T. KIM; J. T. MCKENNA; R. W. MCCARLEY; J. CHOI. *Korea Inst. of Sci. and Technol., VA BHS & Harvard Med. Sch., Kyung Hee Univ. Hosp. at Gangdong.*

11:00 CC16 **730.12** Optogenetic dissection of motivational salience neuronal circuits in the basal forebrain. A. SCAGLIONE*; R. GREENFIELD; S. LIN. *NIA-NIH-IRP.*

8:00 CC17 **730.13** Neuroanatomical investigation of basal forebrain glutamatergic neurons using vGlut2-tdTomato mice. J. T. MCKENNA*; M. GAMBLE; C. YANG; J. M. MCNALLY; A. HULVERSON; S. WINSTON; S. THANKACHAN; R. W. MCCARLEY; R. E. BROWN. *VA Boston Healthcare/Harvard Med. Sch., Stonehill Col.*

9:00 CC18 **730.14** Basal forebrain vGluT2-positive neurons: Electrophysiological properties and cholinergic modulation. C. YANG*; J. T. MCKENNA; R. E. BROWN. *VA Boston Healthcare Syst. and Harvard Med. Sch.*

10:00 CC19 **730.15** Decoding the value related signal represented in the multiple areas of the prefrontal cortex using the ECoG electrodes. S. TANAKA*; K. KAWASAKI; I. HASEGAWA; T. SUZUKI; M. SAKAGAMI. *Tamagawa Univ. Brain Sci. Inst., Niigata Univ. Sch. of Med., Ctr. for Information and Neural Networks.*

11:00 CC20 **730.16** The neural basis of self-initiated movements in the larval zebrafish. A. JOUARY*; S. MEHYAOUI; G. SUMBRE. *IBENS INSERM U1024, IBENS INSERM U1024.*

8:00 CC21 **730.17** Prediction of rat lever pressing based on hippocampal theta oscillation. N. TANAKA*; K. SANO; R. MIYATA; T. AONISHI; G. CAPI; K. USUI; S. KAWAHARA. *Univ. of Toyama, Univ. of Toyama, Univ. of Ryukyus, Tokyo Inst. of Technol., Univ. of Toyama.*

9:00 CC22 **730.18** A medial prefrontal-striosome circuit is selectively engaged by cost-benefit conflict decision-making. L. G. GIBB*; A. FRIEDMAN; D. HOMMA; K. AMEMORI; S. J. RUBIN; A. S. HOOD; M. H. RIAD; A. M. GRAYBIEL. *MIT.*

10:00 CC23 **730.19** Striatal high-firing interneurons mediate inhibitory prefrontal-striosomal signaling during cost-benefit conflict decision-making. A. FRIEDMAN*; D. HOMMA; L. G. GIBB; L. G. GIBB; K. AMEMORI; S. J. RUBIN; A. S. HOOD; M. H. RIAD; A. M. GRAYBIEL. *MIT.*

11:00 CC24 **730.20** Compartmental selectivity of a prefronto-striosomal pathway controlling decision-making under motivational conflict. D. HOMMA*; A. FRIEDMAN; L. G. GIBB; K. AMEMORI; S. J. RUBIN; A. S. HOOD; M. H. RIAD; A. M. GRAYBIEL. *MIT.*

8:00 CC25 **730.21** Properties of striatal beta oscillation at sites identified by microstimulation as controlling approach-avoidance choice behavior. K. AMEMORI*; S. AMEMORI; D. J. GIBSON; A. M. GRAYBIEL. *MIT.*

9:00 CC26 **730.22** Differential effects of granular and agranular inactivations on a rodent slot machine task. P. J. COCKER*; M. Y. LIN; M. M. BARRUS; B. LE FOLL; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of Toronto.*

10:00 CC27 **730.23** Motivation and reward/effort tradeoff: Insights from local field potentials in the ventromedial prefrontal cortex. C. VARAZZANI*; A. SAN-GALLI; F. MEYNIEL; T. ANDRILLON; S. BOURET. *ICM - Brain & Spine Inst., Cognitive Neuroimaging Unit, U992, INSERM, CEA, Lab. de Sci. Cognitives et Psycholinguistique, EHESS/CNRS/ENS-DEC.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 CC28 **730.24** Individual differences in reward sensitivity modulate ventrolateral prefrontal cortex responses to choice. C. CHO*; D. V. SMITH; M. R. DELGADO. *Rutgers Univ.*

8:00 CC29 **730.25** Neural evidence of good-based economic choice under varying action costs. X. CAI*; C. PADOA-SCHIOPPA. *Washington Univ. Sch. of Med., New York Univ. Shanghai.*

9:00 CC30 **730.26** Dissociation of local field and action potentials in supplementary eye field during value based decision-making. X. CHEN; V. STUPHORN*. *Johns Hopkins Univ., Stanford Univ. Sch. of Med.*

10:00 CC31 **730.27** Free choice in a novel reward preference paradigm: Effects of striatal lesions and diverse control experiences. J. RICKER*; R. KOPCHOCK; A. SCHMIDT; D. DANIEL; A. TYSON; H. C. CROMWELL. *Bowling Green State Univ., Bowling Green State Univ.*

11:00 CC32 **730.28** Optical voltage imaging of self-evoked lever-pressing task in head-fixed animals. C. SONG; T. KNOPFEL*. *Imperial Col. London.*

8:00 CC33 **730.29** Auditory discrimination in a novel spherical treadmill apparatus in head-fixed behaving rats. A. M. M. MIGUELEZ FERNÁNDEZ; A. BURMAN; A. I. MARTÍNEZ CÁCERES; B. S. ZANUTTO*; S. E. LEW. *Inst. de Biología y Medicina Exptl. (IBYME-CONICET), Inst. de Ingeniería Biomédica (IIBM-UBA), Univ. Buenos Aires-CONICET.*

POSTER

731. Motivation and Emotion: Reward III

Theme F: Cognition and Behavior

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 CC34 **731.01** Prelimbic α1-adrenergic receptors modulate extinction of amphetamine-induced conditioned place preference. S. PUGLISI-ALLEGRA*; P. SACCOCCIO; C. MILIA; P. CAMPUS; E. LATAGLIATA. *Dept. Psychology, Sapienza Univ. of Rome, Fondazione Santa Lucia, IRCCS.*

9:00 CC35 **731.02** Outcome monitoring and behavioral adjustment by putative pyramidal neurons and interneurons in the primate anterior cingulate cortex during a reversal learning task. T. KAWAI*; H. YAMADA; N. SATO; M. TAKADA; M. MATSUMOTO. *Univ. of Tsukuba, Kwansei Gakuin Univ., Primate Res. Institute, Kyoto Univ.*

10:00 CC36 **731.03** Reward simulation in orbitofrontal cortex. Z. WANG*; B. Y. HAYDEN. *Univ. of Rochester.*

11:00 CC37 **731.04** Formation of a pair bond occurs during the nest coo phase of the breeding cycle in ring doves, Streptopelia risoria. A. M. DIOS; M. CHENG*. *Rutgers Univ., Rutgers Univ.*

8:00 CC38 **731.05** ▲ The effect of estrous cycle on binge-eating behavior induced by intermittent access to sucrose in rats. J. O. SUAREZ-ORTIZ*; F. CORTÉS-SALAZAR; D. DÍAZ-URBINA; A. HERNANDEZ-GUTIERREZ; J. M. MANCILLA-DÍAZ; V. E. LÓPEZ-ALONSO; D. N. VELÁZQUEZ-MARTÍNEZ; R. E. ESCARTÍN-PÉREZ. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México, Inst. Politecnico Nacional, Univ. Nacional Autónoma de México.*

9:00 CC39 **731.06** Prosexual effects of a cabergoline derivative with 5-HT 2b antagonist binding properties. R. A. ANTONIE*; J. PFAUS. *Concordia Univ.*

10:00 CC40 **731.07** ▲ Effects of sucrose concentration on performance on a progressive schedule in rats. F. GONZÁLEZ-NIETO*; K. REYES-SANTIAGO; D. N. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma de México.*

11:00 CC41 **731.08** Nucleus accumbens shell orexin signaling promotes alcohol drinking in mice. K. LEI*; F. W. HOPF; S. A. WEGNER. *Univ. of California, San Francisco.*

8:00 CC42 **731.09** Compulsion-like alcohol drinking changes ampars and d-serine-inhibited nmdars in the accumbens core. T. SEIF; J. A. SIMMS; K. LEI; S. WEGNER; A. BONCI; R. O. MESSING; F. W. HOPF*. *Gallo Ctr., UCSF, NIDA Intramural Res. Program, The Johns Hopkins University, Sch. of Med., The Univ. of Texas at Austin, UCSF.*

9:00 CC43 **731.10** Sign-tracking rats have more thalamic mast cells than goal-tracking rats. C. J. FITZPATRICK*; E. BISWAS; J. D. MORROW. *Univ. of Michigan.*

10:00 CC44 **731.11** Orbitofrontal cortex mediates inhibition within the basolateral amygdala to promote appetitive Pavlovian conditioning. B. T. SAUNDERS*; K. R. VITALE; P. H. JANAK. *Johns Hopkins Univ., Univ. of California, San Francisco.*

11:00 CC45 **731.12** The effect of potato chip craving on the human brain: An fMRI study. S. KREITZ*; L. C. KONERTH; S. HORNDASCH; M. SERGEEVA; M. PISCHETSRIEDER; O. KRATZ; A. HESS. *Inst. For Pharmacol. and Toxicology, Child and Adolescent Psychiatry, Food Chem. Unit, Dept. of Chem. and Pharm.*

8:00 CC46 **731.13** The striatum multiplexes distinct reward signals. D. V. SMITH*; K. S. WANG; M. R. DELGADO. *Rutgers Univ., Rutgers Univ.*

9:00 CC47 **731.14** Neural value estimations related to limited partner perspective during social exchange. A. VALDESPINO*; B. T. HILTON; H. SULLIVAN-TOOLE; B. KING-CASAS; J. A. RICHEY. *Virginia Tech., Virginia Tech.*

10:00 CC48 **731.15** Roles of the medial prefrontal cortex and basolateral amygdala in punished ethanol seeking. A. KOCHARIAN*; L. R. HALLADAY; A. HOLMES. *Natl. Inst. on Alcohol Abuse and Alcoholism.*

11:00 CC49 **731.16** Application of neural ensemble labeling techniques to the investigation of aversion encoding in the ventral striatum. D. M. OPLAND*; C. W. BOND; D. S. ABRAMOV; D. OTTENHEIMER; R. J. DILEONE. *Yale Univ.*

8:00 CC50 **731.17** Surface-based morphometry in lateral prefrontal cortex is associated with reward processing and impulse inhibition in combat deployed veterans with post-traumatic stress disorder. N. D. FOGLEMAN*; F. NAAZ; B. E. DEPUE. *Univ. of Louisville.*

9:00 CC51 **731.18** ▲ Effects of attentional context and stimulus valence on cortical-limbic responses in youth. R. MANIMALETHU*; T. BAWA; K. RAMASESHAN; M. RE; P. BRAMBILLA; V. DIWADKAR. *Wayne State Univ., Univ. of Udine, Univ. of Milan.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 CC52 **731.19** Central obesity is predicted by contrasting prefrontal and striatal BOLD responses to food words in a color-naming Stroop task. L. K. JANSSEN*; I. DUIF; I. VAN LOON; J. H. M. DE VRIES; R. COOLS; E. AARTS. *Radboud University, Donders Inst. For Brain, C, Div. of Human Nutrition, Wageningen Univ., Dept. of Psychiatry, Radboud university medical center.*

11:00 CC53 **731.20** Neural responses to cigarette and monetary gains and losses in deprived smokers. A. H. LEWIS*; H. MANGLANI; M. R. DELGADO. *Rutgers Univ.*

POSTER

732. *In Vivo* Imaging Methods

Theme G: Novel Methods and Technology Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 CC54 **732.01** Fast, non-motorized focus and drift correction for long-term spine imaging with an Electrical Tunable Lens. M. S. SMIRNOV*; A. FERRARI; R. YASUDA; L. YAN. *Max Planck Florida Inst. for Neurosci.*

9:00 CC55 **732.02** Design of an implantable artificial dural window for chronic two-photon optical imaging in non-human primates. E. TRAUTMANN*; D. O'SHEA; S. SHRESTHA; S. LIN; S. RYU; K. SHENOY. *Stanford Neurosciences, Stanford Mechanical Engin., Stanford Electrical Engin., Stanford Univ., Stanford Univ.*

10:00 CC56 **732.03** Improvement in focusing properties enables *in vivo* two-photon laser ablation in deep cortical regions of living mouse brain. K. YAMAGUCHI*; R. KITAMURA; R. KAWAKAMI; T. NEMOTO. *Res. Inst. of Electronic Sci., Grad. Sch. of Information Sci. and Technol.*

11:00 CC57 **732.04** Label-free imaging of Schwann cell myelination by third harmonic generation microscopy. H. LIM*; D. SHAROUKHOV; Y. ZHANG; J. L. SALZER; C. MELENDEZ-VASQUEZ. *Hunter Col., New York Univ. Sch. of Med., Hunter Col.*

8:00 CC58 **732.05** *In vivo* two-photon imaging of hippocampal neurons in dentate gyrus using a newly developed a high-peak power 1064-nm light source based on a gain-switched laser diode. K. SAWADA*; R. KAWAKAMI; Y. KUSAMA; Y. FANG; S. KANAZAWA; Y. KOZAWA; S. SATO; H. YOKOYAMA; T. NEMOTO. *Grad. Sch. of Information Sci. and Technol., Res. Inst. for Electronic Science, Hokkaido Univ., Core Res. for Evolutional Sci. and Technol. (CREST), Japan Sci. and Technol. Agency (JST), New Industry Creation Hatchery Ctr. (NICHe), Tohoku Univ., Inst. of Multidisciplinary Res. for Advanced Materials, Tohoku Univ.*

9:00 CC58 **732.06** Brain temperature changes under near-IR laser illumination. A. SONG*; S. Y. THIBERGE; N. T. EMERSON; H. YANG; D. W. TANK. *Princeton Univ.*

10:00 CC60 **732.07** Brain transmission in four optical windows of near infrared spectral regions from 700 to 2500 nm for deep optical imaging. L. SHI; L. SORDILLO; A. RODRIGUEZ-CONTRERAS*; R. ALFANO. *Inst. for Ultrafast Spectroscopy and Lasers, CCNY, CCNY, CUNY.*

11:00 CC61 **732.08** ● Improvement of green fluorescence imaging system based on implantable CMOS imaging device for freely moving mice. Y. SUNAGA*; H. YAMAURA; M. HARUTA; T. YAMAGUCHI; M. MOTOYAMA; Y. OHTA; H. TAKEHARA; T. NODA; K. SASAGAWA; T. TOKUDA; Y. YOSHIMURA; J. OHTA. *Nara Inst. of Sci. and Technol., Natl. Inst. for Physiological Sci.*

8:00 CC62 **732.09** Label-free NIR reflectance imaging as a complimentary tool for two-photon fluorescence brain imaging. A. ALLEGRA MASCARO*; I. COSTANTINI; E. MARGONI; G. IANNELLO; L. SACCONI; F. S. PAVONE. *European Lab. for Non-linear Spectroscopy, Univ. of Florence, Natl. Res. Council, Univ. Campus Bio-Medico, Univ. of Florence, Intl. Ctr. for Computat. Neurophotonics (ICON) Fndn.*

9:00 CC63 **732.10** Novel skull optical clearing facilitates imaging *in vivo* of Neural Circuitry in infantile mice cerebral cortex. Y. ZHAO; C. ZHANG; T. XU*; D. ZHU. *Wuhan Natl. Lab. For Optoelectronics.*

10:00 CC64 **732.11** ● An implantable hemodynamic imaging device for revealing relation between a blood flow and brain activity in animal behavior. M. HARUTA*; Y. SUNAGA; T. YAMAGUCHI; H. TAKEHARA; Y. OHTA; M. MOTOYAMA; H. TAKEHARA; T. NODA; K. SASAGAWA; T. TOKUDA; J. OHTA. *Nara Inst. of Sci. and Technol.*

11:00 CC65 **732.12** Quantitative evaluation of the resolution of *in vivo* two-photon microscopy by imaging of single fluorescent beads in living mouse brain. R. KITAMURA*; K. YAMAGUCHI; R. KAWAKAMI; T. NEMOTO. *Res. Inst. for Electronic Sci., Grad. Sch. of Information Sci. and Technology, Hokkaido Univ.*

8:00 CC66 **732.13** High speed 3D two-photon imaging and real time movement correction *in vivo* with a second generation Acousto-Optic Lens Microscope. V. GRIFFITHS*; S. K. M. NADELLA; H. ROS; G. KONSTANTINOU; T. KOIMTZIS; C. BARAGLI; P. A. KIRKBY; A. R. SILVER. *UCL, UCL.*

9:00 CC67 **732.14** ● SCAPE microscopy of the awake, behaving mouse brain. E. M. HILLMAN*; V. VOLETI; C. O. LACEFIELD; M. B. BOUCHARD; W. LI; R. BRUNO. *Columbia Univ., Columbia Univ.*

10:00 CC68 **732.15** Flexible, nimble, and quiet two-photon microscope platform for auditory functional imaging of awake marmosets. X. SONG*; Y. GUO; X. LI; X. WANG. *Johns Hopkins University. Dept. of Biomed. Engin., Johns Hopkins Univ.*

11:00 CC69 **732.16** *In vivo* imaging of zebrafish brain structure and function with light sheet microscopy. T. V. TRUONG*; A. ANDREEV; D. B. HOLLAND; J. M. CHOI; S. MADAAN; W. DEMPSEY; G. GROSS; D. B. ARNOLD; K. CZAJKOWSKI; C. KESSELMAN; S. E. FRASER. *USC, USC, USC.*

8:00 CC70 **732.17** Fast three-dimensional imaging of neuronal assemblies in the mouse visual cortex using genetically-encoded neuronal indicators and two-photon microscopy. G. SZALAY*; J. LINDA; G. KATONA; P. MAÁK; M. VERESS; B. RÓZSA. *MTA KOKI, Budapest Univ. of Technol. and Econ., Pázmány Péter Catholic Univ.*

9:00 CC71 **732.18** ● Multilayer cortical imaging in freely behaving animals. S. GULATI; V. CAO; P. JOSHI; S. L. OTTE*. *Inscopix.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 CC72 **732.19** *In vivo* deep two-photon brain imaging with a red-shifted fluorometric Ca^{2+} indicator. C. H. TISCHBIREK*; A. BIRKNER; H. JIA; B. SAKMANN; A. KONNERTH. *Inst. of Neuroscience, TU Munich.*

11:00 CC73 **732.20** Transmission of Laguerre Gaussian, Bessel, and Gaussian beams through rat brain with different orbital angular momentum. L. SHI*; W. WANG; R. GOZALI; M. LAVERY; P. MARQUES; A. RODRÍGUEZ-CONTRERAS; R. ALFANO. *City Col. of New York, Inst. for Ultrafast Spectroscopy and Lasers, Univ. of Glasgow.*

8:00 CC74 **732.21** Optimizing all-optical interrogation for closed-loop control of neural circuits. L. E. RUSSELL*; A. M. PACKER; M. HAUSSER. *Univ. Col. London.*

9:00 CC75 **732.22** Quantitative phase imaging (QPI) of optogenetic signals in neurons. T. KIM*; P. SENGUPTA; M. U. GILLETTE; G. POPESCU. *Univ. of Illinois At Urbana-Champaign, Beckman Inst. for Advanced Sci. and Technol.*

10:00 CC76 **732.23** Real-time analysis of calcium imaging data. A. MITANI*; T. KOMIYAMA. *UCSD.*

11:00 CC77 **732.24** ● The role of conserved polar amino acids at the transmembrane loop regons of a genetically encoded voltage sensor. M. SEPEHRI RAD; B. J. BAKER; M. ALLAHVERDIZADEH*; L. B. COHEN. *Ctr. for Functional Connectomics, Korea Inst. of Sci. and Thechnonoly, Korea Inst. of Sci. and Technol., Dept. of Mol. and Cell. Physiology, Yale Univ. Sch. of Medicine, New Haven, CT.*

8:00 CC78 **732.25** Imaging subcellular voltage dynamics *in vivo* with improved genetically encoded indicators. F. ST-PIERRE*; H. Y. YANG; M. PAN; X. DING; Y. YANG; T. R. CLANDININ; M. Z. LIN. *Stanford Univ.*

9:00 DD1 **732.26** ● Viral delivery of new biosensors for voltage and cAMP signaling. S. MARTINKA; T. E. HUGHES*; P. TEWSON; J. PLATISA; V. PIERIBONE. *MontanaMolecular, Montana State Univ., The John B. Pierce Lab.*

10:00 DD2 **732.27** Imaging voltage in brain slices in Cre-lox targeted interneurons with a hybrid voltage sensor. P. BAYGUINOV*; Y. MA; Y. GAO; X. ZHAO; M. JACKSON. *Univ. of Wisconsin.*

11:00 DD3 **732.28** Semi automated screening system for testing genetically encoded voltage indicators. G. VASAN*; J. PLATISA; A. YANG; V. A. PIERIBONE. *The John B. Pierce Lab., Yale Univ. Sch. of Med.*

8:00 DD4 **732.29** Evaluation of genetically encoded voltage indicators (GEVIs) performance in *Drosophila* melanogaster. J. PLATISA*; X. JIN; M. KUNST; M. N. NITABACH; V. A. PIERIBONE. *The John B Pierce Lab., Yale Univ. Sch. of Med.*

POSTER

733. Technology Development: Projection Mapping

Theme G: Novel Methods and Technology Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 DD5 **733.01** Automated dye microinjection to label mouse and human neurons. B. R. LONG*; E. LEIN; H. PENG. *Allen Inst. For Brain Sci.*

9:00 DD6 **733.02** Transmembrane transport of proteins into neurones by cholera toxin B. J. L. HAIGH*; W. B. TURNBULL; S. DEUCHARS; J. DEUCHARS. *Univ. of Leeds, Univ. of Leeds.*

10:00 DD7 **733.03** Methods for assessing internalization of microparticles into neuronal cells. V. WALLACE*; F. RUBIO; R. CIMBRO; M. J. HENDERSON; L. V. FORTUNO; R. MADANGOPAL; B. HARVEY; B. HOPE. *NIH/NIDA, Johns Hopkins Med. Institutions.*

11:00 DD8 **733.04** SHAFT: A novel method for mapping long-range projections at single neuron resolution and in high-throughput using DNA sequencing. J. M. KEBSCHULL*; P. GARCIA DA SILVA; I. PEIKON; D. F. ALBEANU; A. M. ZADOR. *Cold Spring Harbor Lab., Champalimaud Neurosci. Programme.*

8:00 DD9 **733.05** Neocortical projection neurons receive class-specific patterns of long-range inputs. K. E. BORGES*; N. YAMAWAKI; I. R. WICKERSHAM; C. R. GERFEN; G. M. G. SHEPHERD. *Northwestern Univ., MIT, NIH.*

9:00 DD10 **733.06** ● C.O.M.E.T: Optimized genetic tracers for viral mediated neuronal projection mapping. J. N. DULIN; E. VAN NIEKERK; T. GRIDER; M. H. TUSZYNSKI; D. GIBBS*. *UCSD - Dept Of Neurosciences, Veterans Affairs Med. Ctr.*

10:00 DD11 **733.07** Reversed topographical projection pattern from medial thalamus to anterior cingulate cortex. H. YEH*; I. WU; J. LEE; C. YEN. *Dept. of Life Science, Natl. Taiwan Univ., Neurobio. and Cognitive Sci. Center, Natl. Taiwan Univ.*

11:00 DD12 **733.08** 3d imaging of axons in transparent spinal cords from rodents and nonhuman primates. D. LEE*; C. SODERBLOM; A. DAWOOD; M. CARBALLOSA; A. J. SANTAMARIA; F. D. BENAVIDES; S. JERGOVA; R. M. GRUMBLES; C. K. THOMAS; K. K. PARK; J. D. GUEST; V. P. LEMMON; J. LEE; P. TSOULFAS. *Univ. of Miami Miller School/ Miami Project.*

8:00 DD13 **733.09** Labeling of vagal terminals in the area postrema of Nav1.8-Cre-ChR2 mice. L. GAUTRON*. *Univ. Texas Southwestern Med. Ctr.*

9:00 DD14 **733.10** Development of fluorescent small molecules capable of labeling Lewy body pathology in Parkinson's disease tissue. T. J. GRAHAM*; M. BJERKE; P. T. KOTZBAUER; V. M. -. LEE; J. Q. TROJANOWSKI; R. H. MACH. *Univ. of Pennsylvania, Univ. of Pennsylvania, Washington Univ.*

10:00 DD15 **733.11** The use of optogenetic vector constructs as a dynamic neuronal tracer. D. C. PETERSON*; G. MLYNARCZYK. *Iowa State Univ.*

11:00 DD16 **733.12** *In vivo* tracing of neurons using dye delivery electrodes. S. L. HEIZMANN*; A. KILIAS; P. RUTHER; U. EGERT; M. ASPLUND. *Univ. Freiburg.*

POSTER

734. Whole-Brain Imaging and Atlasing II

Theme G: Novel Methods and Technology Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 DD17 **734.01** A digital rat brain atlas derived from ultra-high-resolution MRI images scanned in three dimensions. T. J. BROZOSKI*; B. ODINTSOV; D. T. BROZOSKI; K. W. WISNER. *SIU Sch. of Med., Univ. of Illinois, Urbana Champaign.*

9:00 DD18 **734.02** ● Development of an SLM-based sheet illumination microscope for large-scale 3-D neural structure and dynamics observation in model organisms. B. A. MADRUGA*; L. A. BENTOLILA; K. ARISAKA. *UCLA, California Nano Systems Inst., Univ. of California.*

10:00 DD19 **734.03** Swept confocally aligned planar excitation (scape) microscopy for large-scale brain imaging in adult *Drosophila* melanogaster. W. LI*; V. VOLETI; E. S. SCHAFFER; C. MENDES; N. MISHRA; R. S. MANN; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ. Med. Ctr.*

11:00 DD20 **734.04** 3d murine brain connectome reconstruction using spatial light interference microscopy (slim). S. KIM*; E. MIN; L. MA; W. JUNG; G. POPESCU; C. BEST-POPESCU. *Univ. of Illinois At Urbana Champaign, Ulsan Natl. Inst. of Sci. and Technol., Zhejiang Normal Univ., Ctr. for Soft and Living Matter, Inst. of Basic Sci.*

8:00 DD21 **734.05** Neuron reconstruction for allen cell types database. Z. ZHOU*; X. LIU; S. SORENSEN; M. FISHER; D. SANDMAN; A. HENRY; N. THATRA; T. DESTA; W. WAKEMAN; S. SUNKIN; E. LEIN; H. ZENG; M. HAWRYLYCZ; J. PHILLIPS; C. KOCH; H. PENG. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

9:00 DD22 **734.06** A multi-modal atlas of the zebrafish brain. J. F. ULLMANN*; A. L. JANKE; N. KURNIAWAN; M. WULLIMANN; D. REUTENS. *The Univ. of Queensland, The Univ. of Queensland, Ludwig Maximilians- Univ.*

10:00 DD23 **734.07** Expansion microscopy of lipids for scalable morphological analysis of neurons and neural circuits. E. D. KARAGIANNIS*; A. H. MARBLESTONE; E. S. BOYDEN. *MIT.*

11:00 DD24 **734.08** Sparse reconstruction light-field microscopy for high-resolution 3d-imaging of neuronal activity. Y. YOON*; N. PAK; L. FREIFELD; M. A. HENNINGER; J. DEGUCHI; N. SAVIDIS; E. S. BOYDEN. *MIT, MIT, MIT, MIT, MIT.*

8:00 DD25 **734.09** Nanoscale resolution, multiplexed, biomolecular imaging of brain circuits via expansion microscopy. F. CHEN*; A. T. WASSIE; S. ALON; E. S. BOYDEN. *MIT.*

9:00 DD26 **734.10** Expansion microscopy in zebrafish. L. FREIFELD*; O. RANDLETT; I. ODSTRCIL; D. MARTIN-ALARCON; J. GAGNON; A. SCHIER; F. ENGERT; E. BOYDEN. *MIT, Harvard Univ.*

10:00 DD27 **734.11** Spatial multiplexing for simultaneous imaging of multiple signaling pathways in a living cell. G. XU*; K. PIATKEVICH; K. ADAMALA; E. BOYDEN. *MIT Media Lab.*

11:00 DD28 **734.12** Next-generation expansion microscopy: 20-nm resolution imaging via physical specimen magnification. J. CHANG*; F. CHEN; E. JUNG; H. BABCOCK; X. ZHUANG; E. BOYDEN. *MIT, Harvard.*

8:00 DD29 **734.13** Expansion Sequencing (ExSEQ): Comprehensive *in situ* transcriptome characterization throughout intact brain circuits. S. ALON*; F. CHEN; E. R. DAUGHARTHY; P. W. TILLBERG; A. H. MARBLESTONE; A. T. WASSIE; G. M. CHURCH; E. S. BOYDEN. *MIT, Harvard Med. Sch.*

9:00 DD30 **734.14** Expansion microscopy of human and nonhuman primate brain specimens. S. S. CHA*; A. QUACH; H. TSENG; J. ZHOU; F. MORTAZAVI; K. HANSEN; F. CHEN; P. W. TILLBERG; R. H. MYERS; D. L. ROSENE; E. S. BOYDEN; X. HAN. *Boston Univ., Boston Univ. Sch. of Med., Massachussetts Inst. of Technol., Boston Univ. Sch. of Med.*

10:00 DD31 **734.15** Protein retention expansion microscopy. P. W. TILLBERG*; F. CHEN; J. YU; K. PIATKEVICH; E. BOYDEN. *MIT, MIT, MIT.*

11:00 DD32 **734.16** A modular protein toolbox for RNA targeting. D. A. MARTIN ALARCON*; K. ADAMALA; K. GUTHRIE-HONEA; E. S. BOYDEN. *MIT, MIT, MIT.*

POSTER

735. Neuroanatomy: Automated Analysis

Theme G: Novel Methods and Technology Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 DD33 **735.01** Synaptomes of electrophysiologically characterized human neocortical neurons. K. D. MICHEVA*; A. KO; E. LEIN; D. V. MADISON; A. DIJKSTRA; W. SEELEY; S. J. SMITH; G. TAMAS; J. TING; N. A. O'ROURKE. *Stanford Univ. Sch. Med., Univ. of Washington, Allen Inst. for Brain Sci., Univ. of California San Francisco, Univ. of Szeged.*

9:00 DD34 **735.02** ● An integrated imaging and staining platform for cubic millimeter scale array tomography. F. C. COLLMAN*; S. DAVIS; O. GLIKO; T. M. KEENAN; K. PARKER; L. E. OSTROFF; S. J. SMITH. *Allen Inst. for Brain Sci.*

10:00 DD35 **735.03** Scalable, automated synapse detection using the open connectome project. W. R. GRAY RONCAL*; A. K. SIMHAL; J. T. VOGELSTEIN; F. COLLMAN; M. A. CHEVILLET; R. BURNS; G. SAPIRO; G. D. HAGER. *Johns Hopkins Univ., JHU Applied Physics Lab., Duke Univ., Johns Hopkins Univ., Johns Hopkins Univ., Allen Inst. for Brain Sci.*

11:00 DD36 **735.04** Quantifying mesoscale neuroanatomy with X-ray microtomography. E. L. DYER*; H. L. FERNANDES; X. XIAO; W. GRAY RONCAL; J. T. VOGELSTEIN; C. JACOBSEN; K. P. KORDING; N. KASTHURI. *Rehabil. Inst. of Chicago, Northwestern Univ. Med. Sch., Argonne Natl. Lab., Applied Physics Lab. of Johns Hopkins Univ., The Johns Hopkins Univ., Northwestern Univ., Boston Univ.*

8:00 DD37 **735.05** Automated GPU-accelerated segmentation of volumetric fiber networks. P. A. GOVYADINOV*; D. MAYERICH. *Univ. of Houston.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 DD38 **735.06** Fast automated segmentation of neural soma in large KESM images of brain tissue. L. SAADATIFARD*; Y. CHOE; L. ABBOTT; D. MAYERICH. *Univ. of Houston, Texas A&M Univ.*

10:00 DD39 **735.07** ● Automatic reconstruction of neurons and vessels in CLARITY-cleared specimens. S. TAPPAN*; D. M. KROLEWSKI; B. MARTIN; M. A. A. KARIM; D. HOPPES; N. ROUSSEL; P. J. ANGSTMAN; S. J. WATSON, Jr.; J. R. GLASER. *MBF Biosci. - MicroBrightField Inc., Univ. of Michigan.*

11:00 DD40 **735.08** ● Automatic stereology of substantia nigra using a novel segmentation framework based on the balloon active contour model. P. R. MOUTON*; P. A. PHOULADY; L. O. HALL; D. GOLDGOF. *Univ. of South Florida Col. of Med., Univ. of South Florida.*

8:00 DD41 **735.10** nTracer: An ImageJ software package for neural circuit reconstruction and analysis from multi-spectral 3D images. D. H. ROOSSIEN*, JR; A. S. DIZAJI; R. HUTH; J. STECHER; J. WEBB; L. BOGART; T. HENSCH; E. D. HERZOG; D. CAI. *Univ. of Michigan Med. Sch., Washington Univ., Harvard Univ.*

9:00 DD42 **735.11** NeuroMorpho.Org: Connecting neuronal morphology with digital neuroscience. R. ARMANANZAS*; R. PAREKH; S. POLAVARAM; S. NANDA; G. A. ASCOLI. *George Mason Univ.*

10:00 DD43 **735.12** A new block-face serial microscopy tomography for computational mapping of brain cells, and an unbiased comparative analysis. K. SEIRIKI*; A. KASAI; T. HASHIMOTO; W. SCHULZE; M. NIU; T. NAKAZAWA; H. HASHIMOTO. *Osaka Univ., Osaka Univ., Shizuoka Univ.*

11:00 DD44 **735.13** Methods for reconstructing 3D brain data from histological sections for making axonal projection maps in the marmoset. H. ABE*; T. TANI; H. MASHIKO; N. MIYAKAWA; K. MIMURA; K. SAKAI; W. SUZUKI; T. KUROTANI; N. ICHINOHE. *RIKEN Brain Sci. Inst., Natl. Ctr. of Neurol. and Psychiatry.*

8:00 DD45 **735.14** Automating the analysis of large-scale electron microscopy image stacks using scalable workflows and high performance computing. A. J. PEREZ*; C. CHURAS; W. WONG; M. CHIU; K. KIM; E. A. BUSHONG; T. J. DEERINCK; S. PANDA; T. TASDIZEN; M. H. ELLISMAN. *UCSD, UCSD, UCSD, UCSD, The Salk Inst., The Univ. of Utah, UCSD.*

9:00 DD46 **735.15** ● Deconvolution in sem - enhancing resolution in x, y and z. B. H. LICH*; F. BOUGHORBEL; P. POTOCEK; E. KORKMAZ; M. LANGHORST. *FEI Electron Optics BV, FEI Munich.*

10:00 DD47 **735.16** Development of a correlation technique between synchrotron x-ray microtomography and transmission electron microscopy for the study of nervous system diseases. P. PARLANTI*; V. CAPPELLO; G. TROMBA; F. BRUN; I. TONAZZINI; M. CECCHINI; V. PIAZZA; M. GEMMI. *Inst. Italiano Di Tecnologia, NEST, Scuola Normale Superiore, Elettra - Sincrotrone Trieste S.C.p.A., Univ. degli studi di Trieste, NEST, Scuola Normale Superiore and Inst. di Nanoscienze - CNR.*

POSTER

736. Optogenetic Studies of Neural Circuits

Theme G: Novel Methods and Technology Development

Wed. 8:00 AM – *McCormick Place*, Hall A

8:00 DD48 **736.01** Top-down bidirectional control of innate anxiety and learned fear. A. ADHIKARI*; T. N. LERNER; J. FINKELSTEIN; S. KIM; J. H. JENNINGS; L. YE; L. A. GUNAYDIN; J. MIRZABEKOV; S. PAK; A. LEI; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Howard Hughes Med. Inst.*

9:00 DD49 **736.02** Anatomical and functional characterization of the rat cholinergic pedunculopontine neurons and projections to dopaminergic cells in the ventral tegmental area. J. CHO*; C. XIAO; J. TREWEEK; K. CHAN; V. GRADINARU. *Caltech, Caltech.*

10:00 DD50 **736.03** Optogenetic rescue of impaired social behavior phenotype in autism. A. SELIMBEYOGLU*; C. K. KIM; M. WRIGHT; A. S. O. HONG; C. RAMAKRISHNAN; L. E. FENNO; T. J. DAVIDSON; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

11:00 DD51 **736.04** Independent circuit wiring and information representation within parallel nigrostriatal dopamine circuits revealed with intact-brain structural and functional analysis. T. N. LERNER*; C. SHILYANSKY; T. J. DAVIDSON; K. E. EVANS; K. T. BEIER; K. A. ZALOCUSKY; A. K. CROW; R. C. MALENKA; L. LUO; R. TOMER; K. DEISSEROTH. *Stanford, Stanford, Stanford, Stanford, Stanford, Stanford, Stanford.*

8:00 DD52 **736.05** Simultaneous multi-fiber photometry calcium recordings from deep brain regions using a single sensor. C. K. KIM*; S. J. YANG; N. PICHAMOORTHY; I. KAUVAR; T. N. LERNER; T. J. DAVIDSON; C. RAMAKRISHNAN; K. DEISSEROTH. *Neurosci. Program, Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

9:00 DD53 **736.06** Next-generation optogenetic chloride channels arising from crystal structure-guided molecular engineering. A. BERNDT*; S. LEE; J. WIETEK; C. RAMAKRISHNAN; S. IYER; S. PAK; S. DELP; P. HEGEMANN; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Humboldt Univ. zu Berlin, Stanford Univ., Howard Hughes Med. Inst., Stanford Univ.*

10:00 DD54 **736.07** Labeling membrane proteins *in vivo* and in PACT cleared tissue with genetically-encoded protein tag technologies. C. BEDBROOK*; M. KATO; S. KUMAR; A. LAKSHMANAN; N. FLYTZANIS; A. J. RICE; P. W. STERNBERG; F. H. ARNOLD; V. GRADINARU. *Caltech, Caltech, Howard Hughes Med. Inst., Caltech, Div. of Biol. and Biol. Engin.*

11:00 DD55 **736.08** Deep brain mapping of functional connectivity in intact circuits via CaMPARI and PACT tissue clearing. N. FLYTZANIS*; C. CHALLIS; L. LOOGER; E. SCHREITER; V. GRADINARU. *Caltech, Howard Hughes Med. Inst.*

8:00 DD56 **736.09** Retention and detection of RNAs in CLARITY. E. L. SYLWESTRAK*; P. RAJASETHUPATHY; M. WRIGHT; A. JAFFE; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ.*

9:00 DD57 **736.10** Quantitative assessment of alternative CLARITY procedures in mouse brain. D. M. KROLEWSKI*; V. KUMAR; B. MARTIN; R. TOMER; K. DEISSEROTH; H. AKIL; S. J. WATSON, Jr. *Univ. of Michigan, Stanford Univ.*

10:00 DD58 **736.11** A novel adeno-associated viral vector based approach to deliver sparse multicolor labels to defined cell types for the mapping of intact neural circuits in PACT cleared tissue. K. CHAN*; B. DEVERMAN; A. GREENBAUM; J. CHO; C. XIAO; S. KUMAR; V. GRADINARU. *Caltech, Caltech.*

11:00 DD59 **736.12** Methods for generating hydrogel-stabilized transparent whole organs and organisms for single-cell phenotyping in both soft and osseous tissues. J. B. TREWEEK*; N. FLYTZANIS; K. CHAN; A. GREENBAUM; B. E. DEVERMAN; T. HE; A. LIGNELL; L. CAI; C. C. FOWLKES; V. GRADINARU. *Caltech, Caltech, Univ. of California, Irvine.*

8:00 DD60 **736.13** Integrated high-resolution, high-throughput structural and functional mapping of large intact nervous systems. R. TOMER*; M. LOVETT-BARRON; L. YE; A. L. SANBORN; N. YOUNG; A. CROW; A. WANG; R. BURNS; J. T. VOGELSTEIN; K. DEISSEROTH. *Bioengineering, Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Johns Hopkins Univ., Johns Hopkins Univ., Stanford Univ.*

9:00 DD61 **736.14** ● Adeno-associated viruses capable of efficient global transduction of the adult central nervous system identified by *in vivo* cell type-specific capsid selection. B. E. DEVERMAN*; P. L. PRAVDO; B. P. SIMPSON; A. BANERJEE; K. Y. CHAN; W. WU; S. R. KUMAR; B. YANG; V. GRADINARU. *Caltech, California Inst. Tech.*

10:00 DD62 **736.15** Head-motion modulation of the activity of optogenetically tagged neurons in the vibrissal thalamus. T. B. ORAM*; E. AHISSAR; O. YIZHAR. *Weizmann Inst. of Sci.*

11:00 DD63 **736.16** Controlling fear associations through optogenetic modulation of amygdala to prefrontal connectivity. O. KLAVIR*; M. PRIGGE; R. PAZ; O. YIZHAR. *Weizmann Inst. of Sci.*

8:00 DD64 **736.17** Strategies for optogenetic silencing of axonal terminals. M. MAHN*; M. PRIGGE; S. RON; O. YIZHAR. *Weizmann Inst. of Sci.*

9:00 DD65 **736.18** Behavioral effects of partial unilateral optogenetic inhibition of the nigrostriatal pathway. V. IYER*; N. PATEL; K. VENKITESWARAN; E. HANDLY; N. IQBAL; C. WHITE; P. SRIDHAR; K. THIAGARAJAN; Z. LIU; C. RAMAKRISHNAN; K. DEISSEROTH; T. SUBRAMANIAN. *Pennsylvania State Univ. Col. of Med., Pennsylvania State Univ., Stanford Univ.*

10:00 DD66 **736.19** Control of bladder function by optogentic modulation on membrane potential of smooth muscle. J. PARK*; J. JANG; J. HONG; H. MOON; H. LEE; H. SHIN; J. SUH. *Korea Inst. of Sci. and Techonology, Ewha Womans Univ., Univ. of Sci. and Technol.*

11:00 DD67 **736.20** Immunological response to optogenetic laser stimulation of fetal ventral mesencephalic transplants. R. E. THOMAS; K. VENKITESWARAN*; E. HANDLEY; M. DAWSON; C. WHITE; A. HARRIS; A. STULL; C. RAMAKRISHNAN; K. DEISSEROTH; T. SUBRAMANIAN. *Penn St Hershey Med. Ctr. & Col. Med., Stanford Univ.*

SPECIAL LECTURE *McCormick Place*

737. Neurocircuitry Controlling Feeding and Drinking Behaviors in Mice — CME

Wed. 1:00 PM - 2:10 PM — Hall B1

Speaker: R. PALMITER*, Univ. of Washington.*

The development of genetic, viral, and optical technologies has revolutionized approaches for dissecting neuronal circuits that control basic behaviors and physiological process, including ingestion. Selective activation of specific neurons stimulates robust feeding or drinking, while activation of other neurons inhibits feeding or drinking. Deciphering the neuronal circuits engaged by these manipulations and the molecular phenotype of neurons involved is an ongoing endeavor.

MINISYMPOSIUM *McCormick Place*

738. Corticospinal Motor Neurons in Health and Disease — CME

Wed. 1:30 PM - 4:00 PM — S100B

Chair: H. OZDINLER

The corticospinal motor neurons (CSMN) act as the "spokesperson" of the cerebral cortex for the initiation and modulation of voluntary movement. Their health is critical for the proper function of motor neuron circuitry and their degeneration is key in numerous motor neuron diseases in which voluntary movement is impaired. Recent developments suggest a key role for CSMN in disease progression and pathology. These neuron populations deserve better attention and understanding.

1:30 **738.01** Introduction.

1:35 **738.02** Understanding the cellular basis of CSMN vulnerability and progressive degeneration. H. OZDINLER. *Northwestern Univ.*

1:55 **738.03** Combining human iPSC's and animal models to determine the role of the upper motor neuron in ALS. C. SVENDSEN. *Cedars-Sinai Med. Ctr.*

2:15 **738.04** Cortical circuits from a corticospinal neuron perspective. G. M. G. SHEPHERD. *Northwestern Univ.*

2:35 **738.05** Insights into UMN dysfunction in ALS utilizing Transcranial Magnetic Stimulation. N. GEEVASINGA. *Univ. of Sydney and Westmead Hosp.*

2:55 **738.06** Molecular mechanisms of corticospinal motor neuron degeneration and regeneration in ALS. C. ROUAUX. *Univ. de Strasbourg.*

3:15 **738.07** Molecular development, diversity, degeneration, and regeneration of corticospinal motor neurons. J. D. MACKLIS. *Harvard Univ.*

3:35 **738.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

739. Pain and Poppies: The Good, the Bad, and the Ugly of Opioid Analgesics — CME

Wed. 1:30 PM - 4:00 PM — S406A

Chair: T. TRANG
Co-Chair: C. CAHILL

Opioid analgesics are the cornerstone of modern pain therapy. However, their use is plagued with major side effects, such as a loss of pain relieving effects (analgesic tolerance), paradoxical pain (hyperalgesia), and addiction. This session will highlight recent breakthroughs in understanding the key causes of these adverse effects and explore the cellular control of opioid systems in reward and aversion. The findings will challenge traditional views of the good, the bad, and the ugly of opioids.

1:30 **739.01** Introduction.

1:35 **739.02** Pain, poppies, and P2X7 receptors. T. TRANG. *Univ. of Calgary.*

1:55 **739.03** Microglial P2X4 receptors in morphine hyperalgesia. M. SALTER. *Hosp. for Sick Children.*

2:15 **739.04** Not the Holy Grail, but the Energizer bunny: Sustained pain relief without narcotic tolerance. H. GUTSTEIN. *MD Anderson Cancer Ctr.*

2:35 **739.05** Loss of spinal A3 adenosine receptor signaling contributes to opioid antinociceptive tolerance and hyperalgesia. D. SALVEMINI. *St. Louis Univ. Sch. of Med.*

2:55 **739.06** Chronic pain causes dysfunction in reward circuitry. C. CAHILL. *Univ. of California Irvine.*

3:15 **739.07** Distinct subpopulations of dynorphin neurons drive aversion and reward. R. AL-HASANI. *Washington Univ.*

3:35 **739.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

740. Emerging Insight Into the Critical Role of Astrocyte Ion Channels in Homeostasis and Neuron-Glia Signaling — CME

Wed. 1:30 PM - 4:00 PM — S105

Chair: M. ZHOU
Co-Chair: M. L. OLSEN

The critical role of astrocyte potassium channels in central nervous system homeostasis has been reemphasized by recent studies conducted in animal disease models. Emerging evidence also supports the signaling role mediated by astrocyte ion channels, such as BEST1, hemichannels, and two-pore channels; these channels enable astrocytes to interact with neurons and regulate synaptic transmission and plasticity. This minisymposium will highlight the recent development and future perspective of these research areas.

1:30 **740.01** Introduction.

1:35 **740.02** Astrocyte dysfunction in Huntington's disease. B. KHAKH. *UCLA.*

1:55 **740.03** Deficits in astrocyte mediate potassium homeostasis contribute to Rett Syndrome disease pathogenesis. M. L. OLSEN. *Univ. of Alabama At Birmingham.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:15 **740.04** Glial face of EAST/SeSAME-Syndrome, Epilepsy, Autism and MS: Critical role of polyamine and sodium in Kir4.1 and GLT1/GLAST interactions. S. N. SKATCHKOV. *Univ. Central Del Caribe.*

2:35 **740.05** mGluR3-mediated TWIK-1 membrane expression and ammonium homeostasis in astrocytes. M. ZHOU. *Ohio State Univ.*

2:55 **740.06** Best1's role in tonic GABA release and neurological diseases. J. C. LEE. *Korea Advanced Inst. of Sci. and Technol.*

3:15 **740.07** Astroglial connexin hemichannels tune glutamatergic synaptic transmission through ATP signaling. G. DALLERAC. *CIRB, CNRS UMR 7241/INSERM U1050 Collège de France.*

3:35 **740.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

741. Understanding Goal-Directed Decision Making in Humans: Computations and Circuits — CME

Wed. 1:30 PM - 4:00 PM — S406B

Chair: A. SHENHAV
Co-Chair: R. W. MORRIS

Goal-directed action selection is critical for adaptive behavior. But fundamental questions remain about its neural realization in humans. What circuits are functionally involved? What computations do these circuits perform? How do these systems interact with other processes that contribute to action selection, and how are these interactions impaired in clinical disorders? The work presented in this minisymposium will offer a fresh view of the computational and neural mechanisms for human goal-directed choice.

1:30 **741.01** Introduction.

1:35 **741.02** Memory in action: The hippocampus' role in guiding goal-directed behavior. A. M. BORNSTEIN. *Princeton Univ.*

1:55 **741.03** Competition and cooperation between multiple learning systems. S. GERSHMAN. *Harvard Univ.*

2:15 **741.04** Constraints and priors in human structure learning. A. COLLINS. *Brown University, CLPS.*

2:35 **741.05** Model-based causal induction. M. LILJEHOLM. *UC Irvine.*

2:55 **741.06** Competition for predictive value in goal-directed learning. R. W. MORRIS. *Univ. of NSW.*

3:15 **741.07** Model-based learning deficits track compulsivity trans-diagnostically. C. M. GILLAN. *Univ. of Cambridge.*

3:35 **741.08** Closing Remarks.

NANOSYMPOSIUM

742. Structural Plasticity

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 1:00 PM – *McCormick Place*, N230

1:00 **742.01** Stress-induced abnormality of dendritic spine dynamics in mouse cerebral cortex. C. CHEN*; Y. ZUO. *Univ. of California, Santa Cruz.*

1:15 **742.02** Synaptic plasticity sets synaptic lifetime. J. S. WIEGERT*; T. G. OERTNER. *Inst. for Synaptic Physiol.*

1:30 **742.03** Simulating the spatial and temporal dynamics of synaptic plasticity. B. R. MONK*; R. MALINOW. *UCSD, UC San Diego, UC San Diego.*

1:45 **742.04** Experience-dependent bimodal plasticity of gabaergic neurons. H. HE*; W. SHEN; H. CLINE. *The Scripps Res. Inst., The Scripps Res. Inst., Hangzhou Normal Univ.*

2:00 **742.05** Spine clustering in a state-structured population model of activity dependent dendritic spines. G. Y. TOUTAIN*; S. CROOK; S. BAER. *Arizona State Univ., Arizona State Univ., Arizona State Univ.*

2:15 **742.06** Measuring molecular dynamics in the brain using 2p-FLIM imaging. T. LAVIV*; R. YASUDA. *Max Planck Florida Institue For Neurosci.*

2:30 **742.07** Inositol hexakisphosphate kinase-3 regulates cerebellar Purkinje cells via spectrin/adducin. C. FU*; J. XU; R. LI; J. A. CRAWFORD; A. B. KHAN; T. M. MA; J. Y. CHA; A. M. SNOWMAN; M. V. PLETNIKOV; S. H. SNYDER. *The Johns Hopkins Univ., The Johns Hopkins Univ., The Johns Hopkins Univ.*

2:45 **742.08** A role of late onset Alzheimer's disease risk factors in synaptic post-endosomal recycling exocytosis, as well as in structural and functional plasticity. B. SCHÜRMANN; K. J. KOPEIKINA; C. ASHFORD; M. MARTIN-DE-SAAVEDRA; M. FORREST; J. M. FAWCETT-PATEL; M. MARTINA; P. PENZES*. *Northwestern Univ., Univ. of Bonn, Nothwestern Univ. Feinberg Sch. Med.*

3:00 **742.09** Divergent phenotypes in a model for depression as compared to impaired trkB signaling. H. VOLKMER*; M. KRIEBEL; S. BEUTER; S. EDUT; O. HADAD; K. TRIPATHI; R. ANUNU; G. RICHTER-LEVIN. *NMI, Univ. of Haifa.*

3:15 **742.10** Cell-autonomous regulation of dendritic spine density by PirB. G. S. VIDAL*; M. DJURISIC; C. J. SHATZ. *Stanford Univ., Stanford Univ.*

NANOSYMPOSIUM

743. Traumatic Brain Injury: Cellular and Mechanisms

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, S403

1:00 **743.01** Blast induced neurotrauma causes overpressure dependent changes to the DNA methylation equilibrium. Z. S. BAILEY*; M. B. GRINTER; P. J. VANDEVORD. *Virginia Tech., Salem Veterans Affairs Med. Ctr.*

1:15 **743.02** cPLA2 mediated lysosomal damage leads to autophagy impairment after TBI. C. SARKAR*; Z. ZHAO; S. LIU; A. I. FADEN; M. M. LIPINSKI. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

1:30 **743.03** Increased number of concussions is associated with higher levels of metabolic dysregulation. Y. D. BRYANT*; L. LEUNG; W. YANG; J. GILSDORF; F. TORTELLA; D. SHEAR. *Walter Reed Army Inst. of Res.*

1:45 **743.04** Mild and repetitive traumatic brain injuries and pathogenic proteins. J. N. CHANG; K. L. SALIGA; C. G. PICK; S. BHASKAR; R. F. MERVIS*; B. A. CITRON. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Sackler Sch. of Med., Neurostructural Res. Labs, Univ. of South Florida Morsani Col. of Med.*

2:00 **743.05** The effect of mild traumatic brain injury (mTBI) on the structural plasticity of the axon initial segment (AIS). M. VASCAK*; M. L. BAER; J. T. POVLISHOCK. *Virginia Commonwealth University, MCV Campus.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:15 **743.06** Neuroprotective transcription factor modulation after blast-induced TBI. B. A. CITRON*; L. RACHMANY; V. RUBOVITCH; K. L. SALIGA; C. G. PICK; J. N. CHANG. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Sackler Sch. of Med.*

2:30 **743.07** Posttraumatic propofol neurotoxicity is mediated via the ProBDNF-p75NTR pathway. A. S. SEBASTIANI*; M. GRANOLD; C. GÖLZ; B. POETTKER; C. WERNER; M. K. E. SCHAEFER; K. ENGELHARD; B. MOOSMANN; S. C. THAL. *Univ. Med. Ctr. of the Johannes Gutenberg-University, Univ. Med. Ctr. of the Johannes Gutenberg Univ., Univ. Med. Ctr. of the Johannes Gutenberg Univ., Univ. Med. Ctr. of the Johannes Gutenberg Univ.*

2:45 **743.08** Controlled cortical impact (CCI) produces regiospecific dysfunction of striatal dopamine (DA) neurotransmission. R. HARUN; M. MUNOZ; M. E. BROUGH; A. K. WAGNER*. *Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh.*

3:00 **743.09** Structural and functional alterations in mouse visual cortex following mild traumatic brain injury. E. WITKOWSKI*; G. DEWALT; A. FOSTER; W. ELDRED; I. DAVISON. *Boston Univ.*

3:15 **743.10** The effect of the novel calpain inhibitor ala-1.0 on traumatic brain injury. R. DUGUE*; S. BRAREN; G. W. HASSEN; P. SERRANO; H. MICHELSON; A. SHULMAN; J. GOODMAN; D. S. F. LING. *SUNY Downstate Med. Ctr., Hunter Col., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., The Inst. for Basic Res. in Developmental Disabilities.*

3:30 **743.11** Serum and diffusion tensor imaging biomarkers in a preclinical model of infant traumatic brain injury. L. L. JANTZIE; J. L. DENSON; J. L. WINER; J. R. MAXWELL; L. A. S. CHAN; S. ROBINSON*. *Univ. of New Mexico, Boston Children's Hosp.*

3:45 **743.12** Influence of a Western Diet on pathological and biochemical outcomes in a mouse model of mild repetitive TBI. F. C. CRAWFORD*; C. BACHMEIER; B. MOUZON; J. OJO; C. LYNCH; S. FERGUSON; M. MULLAN. *Roskamp Inst., James A. Haley Veteran's Hosp., Chronic Effects of Neurotrauma Consortium, The Open University.*

NANOSYMPOSIUM

744. Perioperative Neurotoxicty

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, S404

1:00 **744.01** Mortality differences between C57BL/6 mice from Jackson and Charles River Laboratories due to exposure to isoflurane. C. G. WARD*; T. DEYOUNG; R. ECKENHOFF; M. ECKENHOFF; G. BARR. *Children's Hosp. of Philadelphia, Perelman Sch. of Med., Children's Hosp. of Philadelphia.*

1:15 **744.02** Sevoflurane causes long-lasting dendritic spine head enlargement in mouse hippocampal neurons associated with decreased RhoA Immunolocalization to spine head. J. H. ZIMERING; Y. DONG; F. FANG; Y. ZHANG*; Z. XIE. *Massachusetts Gen. Hosp., Univ. of Rochester Sch. of Med. and Dent.*

1:30 **744.03** Isoflurane impairs dendritic branching of the immature human and rat neurons *in vitro.* A. OKLOPCIC; C. DEFREITAS; D. MILANOVIC; V. JEVTOVIC-TODOROVIC*. *Univ. Virginia, Univ. of Belgrade.*

1:45 **744.04** Exposure to general anesthesia during critical stages of brain development has long lasting effects on the function of surviving synapses. N. LUNARDI*; M. PRILLAMAN; A. OKLOPCIC; H. OSURU; A. ERISIR; S. TODOROVIC; V. JEVTOVIC-TODOROVIC. *Univ. of Virginia Hlth. Syst., Univ. of Virginia, Undergraduate Program, Univ. of Virginia.*

2:00 **744.05** Motivation to work for food two years following neonatal sevoflurane administration in rhesus monkeys. J. C. DE BIASIO*; P. G. BROWNING; S. W. BROOKSHIRE; M. C. ALVARADO; M. G. BAXTER. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Yerkes Natl. Primate Res. Ctr.*

2:15 **744.06** Memory assessment in juvenile rhesus macaques following multiple sevoflurane exposures in infancy. M. C. ALVARADO*; K. L. MURPHY; M. G. BAXTER. *Yerkes NPRC/Emory Univ., Univ. of Oxford, Icahn Sch. of Med. at Mount Sinai.*

2:30 **744.07** A Critical role of matrix metallopeptidase 9 in postoperative neuroinflammation and cognitive dysfunction. Z. ZUO*; J. BI. *Unvi of VA, Univ. of Virginia.*

2:45 **744.08** General anesthesia causes epigenetic histone modulation of target genes important for neuronal development in the immature rat hippocampus. H. OSURU*; L. DALLA MASSARA; D. MILANOVIC; A. OKLOPCIC; V. JEVTOVIC-TODOROVIC. *Univ. of Virginia Hlth. Systems, Dept. of anesthesia and intensive care Univ. of Padua, Dept of neurobiology,Institute for Bioligical research,University of Belgrade.*

3:00 **744.09** Ampakine CX546 rescues anesthesia-induced learning and synaptic deficits by promoting post-anesthesia neuronal activity. G. YANG*; L. HUANG; J. CICHON. *New York Univ. Sch. of Med.*

3:15 **744.10** Anesthetic isoflurane induces apoptosis by separating the binding of CypD, ANT and VDAC in Caenorhabditis elegans. C. LI; Y. DONG; Y. ZHANG; Z. Z. XIE*. *Massachusetts Gen. Hosp. and Harvard Med. Sch.*

3:30 **744.11** Propofol regulates autophagy and cell survival by its effects on intracellular calcium homeostasis. Y. ZHOU; G. REN; Y. LI; S. LI; H. WEI*. *Univ. Pennsylvania, Shanghai First People's Hospital,Jiaotong Univ.*

3:45 **744.12** Basal rhythm and stress reactive cortisol responses in infant rhesus monkeys after multiple anesthetic exposures. J. RAPER*; K. L. MURPHY; J. M. JOHNSON; M. G. BAXTER; M. C. ALVARADO. *Yerkes Natl. Primate Res. Ctr., Emory Univ., Oxford Univ., Icahn Sch. of Med. at Mount Sinai.*

4:00 **744.13** Long-lasting impulsivity, novelty seeking and hyperactivity with anxiety-like behavior in rats after early exposure to anesthesia. P. DIANA*; A. OKLOPCIC; S. JOKSIMOVIC; H. OSURU; C. ORI; V. JEVTOVIC-TODOROVIC. *Univ. degli Studi di Padova, Univ. of Virginia Hlth. Syst.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

NANOSYMPOSIUM

745. New Findings in Neural Mechanism of Addiction

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, S401

1:00 **745.01** 5-HT1A autoreceptors in the dorsal raphe nucleus convey vulnerability to compulsive cocaine seeking. I. YOU*; R. ZHAO-SHEA; G. F. KOOB; D. E. LEONARDO; L. M. BOHN; S. WEE; A. R. TAPPER; P. D. GARDNER. *Univ. of Massachusetts Med. Sch., The Scripps Res. Inst., Natl. Inst. on Alcohol Abuse and Alcoholism, Columbia Univ., New York State Psychiatric Inst., The Scripps Res. Institute-Florida.*

1:15 **745.02** Selective plasticity of connections between hippocampus and nucleus accumbens is a neural substrate of cocaine conditioned place preference. L. L. SJULSON*; D. CASSATARO; V. WOO; A. CUMPELIK; G. BUZSAKI. *NYU Sch. of Med.*

1:30 **745.03** Persistent reduction of MHC-I in dopamine neurons underlies enduring potentiation of its synaptic inputs in cocaine-seeking behavior. G. MURAKAMI*; M. EDAMURA; T. FURUKAWA; A. FUKUDA; T. IWASHITA; D. NAKAHARA. *Hamamatsu Univ. Sch. Med., Hamamatsu Univ. Sch. Med., Hamamatsu Univ. Sch. Med., Hamamatsu Univ. Sch. Med.*

1:45 **745.04** A role for anterior cingulate cortex in mediating economic demand for cocaine. M. H. JAMES*; G. ASTON-JONES. *Brain Hlth. Insitute.*

2:00 **745.05** Determining the contribution of nucleus accumbens glutamatergic afferents during addiction-related behaviors using Gi/o-coupled DREADDs. A. M. WUNSCH*; E. A. DONCKELS; L. M. YAGER; J. F. NEUMAIER; S. M. FERGUSON. *Univ. of Washington, Seattle Children's Res. Inst., Univ. of Washington.*

2:15 **745.06** Investigating a novel role for CaMKII signaling in the control of cocaine-associated memory. M. T. RICH*; M. M. TORREGROSSA. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:30 **745.07** Effect of the novel positive allosteric modulator of mGluR2 AZD8529 on incubation of methamphetamine craving after prolonged voluntary abstinence in a rat model. D. CAPRIOLI*; M. VENNIRO; T. ZERIC; L. XUAN; S. ADHIKARY; R. MADANGOPAL; N. J. MARCHANT; F. LUCANTONIO; G. SCHOENBAUM; J. M. BOSSERT; Y. SHAHAM. *Natl. Inst. on Drug Abuse.*

2:45 **745.08** Reinstatement of 3,4-methylenedioxypyrovalerone-seeking (mdpv) following intravenous self-administration and associated 50-khz ultrasonic vocalizations (usvs). L. R. WATTERSON*; R. GREGG; S. J. SIMMONS; T. GENTILE; D. BARKER; J. W. MUSCHAMP; S. M. RAWLS. *Temple Univ. Sch. of Med., Temple Univ. Sch. of Med., Temple Univ. Sch. of Med., Natl. Inst. on Drug Abuse.*

3:00 **745.09** Cocaine-induced chromatin modifications are associated with increased expression and DNA looping of Auts2. O. ENGMANN*; B. LABONTE; A. MITCHELL; E. CALIPARI; D. BUREK; J. RABKIN; Y. L. HURD; S. AKBARIAN; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Sch. of Med. at Mount Sinai, Fishberg Dept. of Neurosci. and Friedman Brain Inst.*

NANOSYMPOSIUM

746. Visual Motion

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, S102

1:00 **746.01** Plasticity of the motion pathway in adult cats after central retinal lesions. K. BURNAT*; T. HU; M. KOSSUT; U. T. EYSEL; L. ARCKENS. *Nencki Inst., Univ. of Leuven, Ruhr Univ.*

1:15 **746.02** Encodings of implied motion and object category in the two visual pathways. Z. LU*; M. MENG. *Dartmouth Col.*

1:30 **746.03** Binocular models of 3D motion tuning in area MT built from direction and disparity selective V1 circuits. P. M. BAKER*; W. BAIR. *Univ. of Washington.*

1:45 **746.04** Optimal combination of the binocular cues to 3D motion. B. ALLEN*; A. M. HAUN; T. HANLEY; C. S. GREEN; B. ROKERS. *Univ. of Wisconsin - Madison.*

2:00 **746.05** The neural correlates of 3D motion perception. J. M. FULVIO*; B. ROKERS. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

2:15 **746.06** Encoding of multiple component directions of transparently moving stimuli by a subpopulation of neurons in macaque extrastriate area MT provides a plausible neural basis for perceptual direction repulsion. X. HUANG*; J. XIAO. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

2:30 **746.07** Rapid gain rescaling maximizes information about motion fluctuations in MT neurons and pursuit eye movements. B. LIU*; M. MACELLAIO; L. OSBORNE. *Univ. of Chicago.*

2:45 **746.08** Context-dependent robust coding of stimulus speed in primate extrastriate cortex. A. J. DAVIES*; M. G. P. ROSA; H. YU. *Monash Univ.*

3:00 **746.09** The visual motion stream: A speeded route distinct from the dorsal stream that serves a diversity of visual functions and supports continuous perception by motion binding. S. GILAIE-DOTAN*. *UCL.*

3:15 **746.10** V1 neurons respond differently to motion in the world and to self-generated motion due to eye movements. S. MARTINEZ-CONDE; X. G. TRONCOSO; M. B. MCCAMY; A. NAJAFIAN JAZI; J. CUI; J. OTERO-MILLAN; S. L. MACKNIK*; F. M. COSTELA. *SUNY Downstate Med. Ctr., Barrow Neurolog. Inst., UNIC-CNRS, Arizona State Univ., Johns Hopkins Univ.*

3:30 **746.11** Visual guidance of forward flight in birds. D. L. ALTSHULER*; R. DAKIN; T. FELLOWS. *Univ. of British Columbia.*

3:45 **746.12** Response properties of global motion sensitive neurons in the hummingbird and zebra finch midbrain. A. H. GAEDE*; J. P. M. LAM; D. L. ALTSHULER. *Univ. of British Columbia.*

4:00 **746.13** Spatial and temporal frequency tuning to visual motion in human mt+ measured with ecog. A. GAGLIANESE; B. HARVEY; M. J. VANSTEENSEL; S. O. DUMOULIN; N. PETRIDOU*; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht, UMC Utrecht, Univ. of Utrecht.*

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NANOSYMPOSIUM

747. Spatial and Feature Based Attention

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, S402

1:00 **747.01** Modeling the effects of superior colliculus inactivation on performance in a spatial attention task. J. P. HERMAN*; R. J. KRAUZLIS. *Natl. Eye Institute/NIH, NEI / NIH.*

1:15 **747.02** Sensorimotor encoding in Caudate Nucleus during a covert attention task. F. ARCIZET*; R. J. KRAUZLIS. *LSR-NIH.*

1:30 **747.03** Attention-related BOLD modulation with and without superior colliculus inactivation. A. R. BOGADHI*; A. BOLLIMUNTA; D. A. LEOPOLD; R. J. KRAUZLIS. *Natl. Eye Inst. - NIH, Natl. Inst. of Mental Health, NIH.*

1:45 **747.04** ● Layer dependent attentional modulation of neuronal activity in macaque V1 and V4. M. BOYD*; M. A. SAVAGE; C. BRANDT; M. DASILVA; A. THIELE. *Newcastle Univ., Current Address: The Univ. of Manchester.*

2:00 **747.05** How PFC and LIP process single and multiple-object 'pop-out' displays. E. M. MEYERS*; A. LIANG; F. KATSUKI; C. CONSTANTINIDIS. *Hampshire Col., MIT, Harvard Med. Sch., Wake Forest Univ.*

2:15 **747.06** Effects of reversible inactivation of parietal cortex on the processing of visual salience in the frontal eye field. M. ZIRNSAK*; X. CHEN; S. G. LOMBER; T. MOORE. *Stanford Univ., Howard Hughes Med. Institute, Stanford Univ. Sch. of Med., Brain and Mind Institute, The Univ. of Western Ontario.*

2:30 **747.07** Cholinergic control of attentional signals in broad and narrow spiking cells in macaque frontal eye-field. A. THIELE*; C. BRANDT; S. GOTTHARDT. *Newcastle Univ.*

2:45 **747.08** Cholinergic, but not dopaminergic or noradrenergic, enhancement sharpens behavioral spatial tuning. M. A. SILVER*; C. GRATTON; S. YOUSEF; E. AARTS; D. WALLACE; M. D'ESPOSITO. *Univ. of California, Washington Univ., Donders Inst. for Brain, Cognition and Behaviour, Radboud Univ., Univ. of California.*

NANOSYMPOSIUM

748. Controlling Prostheses with Brain Machine Interfaces

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, N226

1:00 **748.01** A bluetooth wireless brain-machine interface for general purpose computer use. P. NUYUJUKIAN*; C. PANDARINATH; C. BLABE; L. HOCHBERG; K. SHENOY; J. HENDERSON. *Stanford Univ., Stanford Univ., Stanford Univ., Veterans Adminstration, Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

1:15 **748.02** Dynamic dimensionality reduction of human motor cortical activity using recurrent neural networks. C. PANDARINATH*; D. SUSSILLO; B. L. SORICE; A. A. SARMA; E. N. ESKANDAR; L. R. HOCHBERG; L. F. ABBOTT; J. M. HENDERSON; K. V. SHENOY. *Stanford Univ., Stanford Univ., Stanford Univ., Massachusetts Gen. Hosp., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Harvard Med. Sch. and Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ., Columbia Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

1:30 **748.03** Increasing brain machine interface performance by online auto-delete based on motor cortical activity. N. EVEN-CHEN*; J. C. KAO; S. D. STAVISKY; S. I. RYU; K. V. SHENOY. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

1:45 **748.04** "Neural hysteresis": Incorporating historical knowledge of neural dynamics to rescue decoder performance. J. C. KAO*; S. I. RYU; K. V. SHENOY. *Stanford Univ., Palo Alto Med. Fndn., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

2:00 **748.05** Engineered learning toward improved brain-machine interface and rehabilitation training. J. J. WILLIAMS*; R. N. TIEN; Y. INOUE; A. B. SCHWARTZ. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:15 **748.06** Modulation of somatosensory cortex during brain control of an anthropomorphic robotic limb. S. N. FLESHER*; A. B. SCHWARTZ; R. A. GAUNT. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:30 **748.07** Blending of brain-machine interface and vision-guided autonomous robotics improves neuroprosthetic arm performance during grasping. J. E. DOWNEY*; J. WEISS; K. MUELLING; A. VENKATRAMAN; J. VALOIS; A. BAGNELL; A. B. SCHWARTZ; J. L. COLLINGER. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh, VA Pittsburgh Healthcare Syst.*

2:45 **748.08** Brain computer interface assisted stroke rehabilitation with multimodal feedback. C. GUGER*; R. ORTNER; N. SABATHIEL. *g.tec Guger Technologies OG, g.tec medical engineering GmbH, Guger Technologies OG.*

3:00 **748.09** Using multiple Utah Slanted Electrode Arrays (USEAs) to control 5-degrees-of-freedom of a virtual prosthetic hand and provide sensations in the phantom hand for a human, transradial amputee. S. WENDELKEN*; D. M. PAGE; T. DAVIS; D. J. WARREN; C. DUNCAN; D. HUTCHINSON; G. A. CLARK. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

3:15 **748.10** Online control over individual finger movements with the modular prosthetic limb using high-density electrocorticography in a human subject. G. HOTSON*; D. P. MCMULLEN; M. S. FIFER; K. D. KATYAL; M. S. JOHANNES; W. S. ANDERSON; N. V. THAKOR; B. A. WESTER; N. E. CRONE. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ. Applied Physics Lab.*

3:30 **748.11** A motor imagery BCI for online control of a humanoid robot using electrocorticograhpic signals. C. KAPELLER*; P. GERGONDET; K. KAMADA; H. OGAWA; F. TAKEUCHI; R. ORTNER; R. PRUECKL; A. KHEDDAR; C. GUGER. *G.Tec Med. Engin. Gmbh, CNRS-AIST Joint Robotics Lab., Asahikawa Med. Univ.*

3:45 **748.12** Engineering perceptual illusions of hand movement to sense the activity of bidirectionally integrated bionic limbs. P. D. MARASCO*; J. S. HEBERT; J. S. SCHOFIELD; Z. C. THUMSER; J. P. CAREY; B. M. ORZELL. *Cleveland Clinic, Lerner Res. Inst., Louis Stokes Cleveland VA Med. Ctr., Univ. of Alberta, Univ. of Alberta.*

4:00 **748.13** Real-time articulatory speech synthesis for brain-computer interfaces. F. BOCQUELET*; T. HUEBER; L. GIRIN; C. SAVARIAUX; B. YVERT. *CLINATEC, Gipsa-Lab INP/CNRS.*

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NANOSYMPOSIUM

749. Stress Peptides and Factors

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, S405

1:00 **749.01** ● Locus coeruleus noradrenergic system response to traumatic stress in PTSD model and early intervention with intranasal NPY. E. L. SABBAN*; L. I. SEROVA; M. LAUKOVA; L. G. ALALUF; E. OLSSON. *New York Med. Coll.*

1:15 **749.02** Neuroanatomical Interactions of NPY and CRF Systems in the amygdala. N. ENMAN*; B. A. REYES; E. J. VAN BOCKSTAELE. *Drexel Univ.*

1:30 **749.03** CRH neurons encode different acute stress levels by activity changes in individual cells and alteration in coordinated population response. C. M. VOM BERG - MAURER*; C. A. TRIVEDI; J. H. BOLLMANN; R. J. DE MARCO; S. RYU. *Max Planck Inst. For Med. Res., Max Planck Inst. for Med. Res.*

1:45 **749.04** Hypothalamic CRH neurons balance inward and outward behavior. T. FUZESI*; J. I. WAMSTEEKER CUSULIN; N. DAVIU; J. S. BAINS. *Hotchkiss Brain Inst.*

2:00 **749.05** The role of orexins in sex differences in the stress response and in cognitive function. L. GRAFE*; A. CORNFELD; S. LUZ; S. BHATNAGAR. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

2:15 **749.06** ● Orexin 2 receptor regulation of the Hypothalamic-Pituitary-Adrenal (HPA) response to acute and repeated stress. D. EACRET*; L. GRAFE; S. LUZ; L. N. WILSON; A. GOTTER; C. WINROW; S. BHATNAGAR. *Children's Hosp. of Philadelphia, Merck & Co, Univ. of Pennsylvania.*

2:30 **749.07** Parvalbumin positive interneurons in CA1 play a role in coordinating theta frequency oscillations and sleep-dependent memory consolidation. N. OGNJANOVSKI*; S. SCHAEFFER; D. MARUYAMA; S. MOFAKHAM; M. ZOCHOWSKI; S. ATON. *Univ. of Michigan Aton Lab., Univ. of Michigan.*

2:45 **749.08** Deficiency of Luman, a transcription factor that alters glucocorticoid signaling, results in stress resilience in mice. R. LU*; M. ZENG; K. TRAN; J. LYMER; A. CARUSO; P. TURNER; E. CHOLERIS; N. MACLUSKY. *Univ. of Guelph, Univ. of Guelph, Univ. of Guelph, Univ. of Guelph.*

3:00 **749.09** Dynamic endocannabinoid responses to stress are influenced by both sex and stressor intensity. H. A. VECCHIARELLI*; T. T. Y. LEE; M. MORENA; J. M. GRAY; M. N. HILL. *Univ. of Calgary, Hotchkiss Brain Inst., Mathison Ctr. for Mental Hlth. Res. and Educ., Univ. of British Columbia.*

3:15 **749.10** IL-6 mediation of prenatal stress effects on embryonic microglia morphology but not anxiety-like behavior. S. B. GUMUSOGLU; R. S. FINE; S. J. MURRAY; H. E. STEVENS*. *Univ. of Iowa, Yale Sch. of Med., Harvard Univ., Univ. of Iowa Col. of Med.*

3:30 **749.11** ● Repeated social defeat stress induced activation of immune system and monocyte trafficking to the brain of mice is attenuated by a non-selective cannabinoid agonist. S. F. LISBOA*; D. SHEA; F. S. GUIMARÃES; J. P. GODBOUT; J. F. SHERIDAN. *Univ. of São Paulo - FMRP, Inst. for Behavioral Med. Research, Ohio State Univ., Ctr. for Brain and Spinal Cord Repair, Ohio State Univ., Ohio State Univ., Ohio State Univ.*

3:45 **749.12** Overnight fasting blunts anxiety-like behavior in rats due to "silencing" of central glucagon-like peptide 1 (GLP-1) neural signaling pathways. L. M. RINAMAN*; H. ZHENG. *Univ. Pittsburgh, Univ. of Pittsburgh.*

4:00 **749.13** κ-opioid and Orphan Opioid Receptor Like-1 receptors in the medial amygdaloid nucleus modulate the neuroendocrine responses to acute restraint stress. A. FASSINI*; A. SCOPINHO; E. FORTALEZA; L. RESSTEL; F. CORREA. *Univ. of Sao Paulo.*

4:15 **749.14** Characterizing vertebrate stress response with mutant zebrafish strains in the hypothalamic-pituitary-adrenal axis. H. LEE*; T. L. POSHUSTA; R. G. KRUG, II; M. R. BERG; K. J. CLARK. *Mayo Grad. Sch., Mayo Clin.*

NANOSYMPOSIUM

750. Visual Imagery

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, N228

1:00 **750.01** Electrophysiological profiles of word and face recognition in neurodevelopmental disorders. E. M. DUNDAS*; M. BEHRMANN; E. COLLINS; Y. GABAY; D. C. PLAUT. *Carnegie Mellon Univ., Univ. of Haifa.*

1:15 **750.02** Eye movement repetition effects do not require the hippocampus or explicit recognition. R. K. OLSEN*; V. SEBANAYAGAM; B. R. BUCHSBAUM; Y. LEE; R. ROSENBAUM; C. L. GRADY; M. MOSCOVITCH; J. D. RYAN. *Rotman Res. Inst., Rotman Res. Inst., Univ. of Toronto, York Univ., Univ. of Toronto.*

1:30 **750.03** Investigating the role of hippocampal subfields in complex scene perception. C. J. HODGETTS*; N. L. VOETS; A. G. THOMAS; A. D. LAWRENCE; K. S. GRAHAM. *Cardiff Univ., Cardiff Univ., Univ. of Oxford, NIMH.*

1:45 **750.04** fMRI reveals different activation patterns for real objects vs. photographs of objects. J. C. SNOW*; S. D. SQUIRES; K. M. STUBBS; J. C. CULHAM. *The Univ. of Nevada, Univ. of Western Ontario.*

2:00 **750.05** Dorsal object representations in the absence of ventral object vision. T. KASSUBA*; M. BEHRMANN; S. KASTNER. *Princeton Univ., Carnegie Mellon Univ.*

2:15 **750.06** Object 3D structure representations in the dorsal pathway is not dependent on the ventral pathway: Evidence from visual agnosia. E. FREUD*; G. AVIDAN; T. GANEL; M. BEHRMANN. *Ben Gurion Univ. of the Negev, Carnegie Mellon Univ.*

2:30 **750.07** Contralateral preference in object recognition - evidence from visual hemiagnosia. J. RENNIG*; M. HIMMELBACH; H. WILHELM; H. KARNATH. *Div. of Neuropsychology, Ctr. of Neurology, Univ. of Tübingen, Knowledge Media Res. Ctr., Baylor Col. of Med., Univ. of Tuebingen, Univ. of South Carolina.*

2:45 **750.08** Subjective vividness ratings of pictures predict exemplar-specific similarity between encoding and recall activity patterns. M. R. JOHNSON*; K. J. MITCHELL; M. K. JOHNSON. *Yale Univ., Univ. of Nebraska, West Chester Univ.*

3:00 **750.09** Category learning biases representations of orientation in early human visual cortex. E. F. ESTER*; T. SPRAGUE; J. SERENCES. *Univ. of California San Diego.*

3:15 **750.10** A warped face space in human cortical and perceptual representations. J. D. CARLIN*; N. KRIEGESKORTE. *MRC Cognition and Brain Sci. Unit.*

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* Indicates abstract's submitting author

3:30 **750.11** A novel paradigm to study the effect of selective adaptation of different levels of the visual hierarchy on binocular rivalry. J. FREYBERG*; C. E. ROBERTSON; S. BARON-COHEN. *Univ. of Cambridge, Harvard Univ., Univ. of Cambridge.*

NANOSYMPOSIUM

751. Human Cognition: Cognitive Control and Flexibility

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, N227

1:00 **751.01** Delineating Default mode and Central Executive Control network in subjects exposed to high altitude. T. K. GANDHI*; S. CHOUHAN; S. B. SINGH. *Defence Inst. of Physiol. & Allied Sci. (DIPAS), DIPAS, DIPAS.*

1:15 **751.02** Antisaccade practice improves efficiency in cognitive control behavior and associated circuitry. A. RODRIGUE*; B. AUSTIN; J. MCDOWELL. *Univ. of Georgia, Univ. of Wisconsin, Univ. of Georgia.*

1:30 **751.03** Brain dynamics during cognitive conflict: Insights from human intracranial recordings. E. BARTOLI*; C. CONNER; N. TANDON. *Uthealth Sci. Ctr. At Houston.*

1:45 **751.04** Surprise recruits a neural suppressive mechanism that generates broad motor response inhibition and also disrupts working memory. J. R. WESSEL*; A. R. ARON. *UC San Diego.*

2:00 **751.05** Disentangling effects of aging on proactive and reactive response inhibition. M. BLOEMENDAAL*; B. B. ZANDBELT; J. B. T. WEGMAN; O. VAN DE REST; R. COOLS; E. AARTS. *Radboud University, Donders Inst. for Brain, Cognition and Behaviour, Ctr. for Cognitive Neuroimaging, Wageningen Univ., Radboud Univ. Med. Ctr.*

2:15 **751.06** Controlling the impulse for reward: A fMRI study of inhibitory control over monetary reward in cigarette smokers. R. HESTER*; E. CHEN; K. CHARLES-WALSH. *Univ. of Melbourne, Univ. of Melbourne.*

2:30 **751.07** Cognitive control of memory and action: A within subject fMRI study. T. W. SCHMITZ*; C. S. FERREIRA; M. C. ANDERSON. *Med. Res. Council, Univ. of Birmingham.*

2:45 **751.08** Cognitive control and affective processing dysregulation in veterans with comorbid ptsd and tbi: An fmri and resting state functional connectivity study. M. WEBER*; J. BIZZELL; J. JOHNSON; E. MELTON; E. ELBOGEN; A. BELGER. *Univ. of North Carolina At Chapel Hill, UNC at Chapel Hill.*

3:00 **751.09** ● Impaired cognitive flexibility is associated with reduced functional connectivity of dorsal fronto-striatal loop circuits in patients with Obsessive Compulsive Disorder (OCD). M. M. VAGHI*; P. KUNDU; P. E. VÉRTES; A. M. APERGIS-SCHOUTE; F. E. VAN DER FLIER; N. A. FINEBERG; A. SULE; A. X. PATEL; E. T. BULLMORE; T. W. ROBBINS. *Dept. of Psychology, Behavioural and Clin. Neurosci. Inst., Brain Imaging Ctr. and Translational and Mol. Imaging Institute, Icahn Inst. of Med. at Mt. Sinai, Dept. Psychiatry, Hertfordshire Partnership Univ. NHS Fndn. Trust and Univ. of Hertfordshire.*

3:15 **751.10** Causal evidence for the organization of prefrontal cortex by content and control. D. E. NEE*; M. D'ESPOSITO. *Univ. of California, Berkeley, Univ. of California, Berkeley.*

3:30 **751.11** The what, where and when of executive function: Dissociating cognitive control processes in the human brain. S. LEMIRE-RODGER*; R. N. SPRENG; W. D. STEVENS; G. R. TURNER. *York Univ., Cornell Univ.*

3:45 **751.12** A standardized decomposition of the posterior cingulate cortex: Heterogeneous recruitment of subregions across cognitive tasks. R. M. BRAGA*; A. HAMPSHIRE; R. LEECH. *Imperial Col. London, Harvard Univ., Massachusetts Gen. Hosp. & Harvard Med. Sch., Imperial Col. London.*

4:00 **751.13** ● High-definition transcranial direct current stimulation to right inferior frontal cortex improves response inhibition. J. HOGEVEEN*; J. GRAFMAN; A. DAVID; M. BIKSON; K. K. HAUNER. *Rehabil. Inst. of Chicago, Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., The City Col. of New York.*

DYNAMIC POSTERS

DP09. Dynamic Posters–Wednesday Afternoon

Wed. 1:00 PM – *McCormick Place*, Hall A

All dynamic poster presentations will take place during the full four-hour session time. The theme of the dynamic poster being presented is indicated by the letter in the leftmost column.

C DP01 **DP09.01** Assessing behavioural flexibility and visual-spatial learning in mouse models of Alzheimer's Disease using automated touchscreen systems: high-throughput techniques to accelerate treatment development. *D. I. WASSERMAN; D. PALMER; S. D. CREIGHTON; F. H. BERALDO; T. S. MASOOD; M. F. COWAN; J. SCHUBERT; M. THORNE; S. KAY; V. F. PRADO; M. A. M. PRADO; B. D. WINTERS. *Psychology, Univ. of Guelph, Guelph, Robarts Res. Inst., Grad. Program in Neurosci., Dept. of Physiol. and Pharmacol., Dept. of Anat. and Cell Biology, Schulich Sch. of Med., Univ. of Western Ontario.*

D DP02 **DP09.02** Transcriptional profiles of supragranular-enriched genes predict corticocortical network architecture in the human brain. *F. M. KRIENEN; B.-T. T. YEO; C. J. CHARVET; R. L. BUCKNER; C. C. SHERWOOD. *The George Washington Univ., Electrical and Computer Engin., Natl. Univ. of Singapore, Harvard Univ.*

D DP03 **DP09.03** Measurement of phasic dopamine signals in the rat nucleus accumbens core and shell in response to noxious stimuli. *C. W. ATCHERLEY; J. Y. XIE; L. LAZARUS; M. L. HEIEN; F. PORRECA. *Res., Mayo Clin., Pharmacol., Chem., Anesthesiol., Univ. of Arizona.*

D DP04 **DP09.04** *In vivo* evidence of V2a reticulospinal neurons involved in arresting locomotion. V. CAGGIANO; *R. LEIRAS; J. BOUVIER; C. BELLARDITA; K. BALUEVA; O. KIEHN. *Neurosci., Karolinska Institutet, Paris-Saclay Inst. for Neurosci., Inst. of Physiology, Christian Albrechts Univ.*

D DP05 **DP09.05** Investigating the role of striatum in habits with optogenetics in a plus maze paradigm. *A. C. CREGO; A. G. MARCHUK; K. S. SMITH. *Dartmouth Col.*

E DP06 **DP09.06** ● Phenotyping sleep-wake traits in inbred and knockout mice from the KOMP2 population to identify potential genes influencing sleep. *M. SETHI; S. S. JOSHI; M. STRIZ; N. COLE; J. RYAN; M. E. LHAMON; A. AGARWAL; S. J. SUKOFF RIZZO; J. M. DENEGRE; R. E. BRAUN; D. W. FARDO; K. D. DONOHUE; E. J. CHESLER; K. L. SVENSON; B. F. O'HARA. *Dept of Biol., Dept of Biostatistics, Dept of Electrical and Computer Engin., Univ. of Kentucky, The Jackson Lab., Signal Solutions, LLC.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

E DP07 **DP09.07** ● Continuous monitoring of resting state networks during natural sleep with diffuse optical tomography. *A. T. EGGEBRECHT; B. J. PALANCA; J. P. CULVER. *Dept. of Radiology, Dept. of Anesthesiol., Washington Univ. Sch. of Med.*

F DP08 **DP09.08** Predicting individual differences in learning rate from resting state fMRI. *M. G. MATTAR; N. F. WYMBS; A. S. BOCK; G. K. AGUIRRE; S. T. GRAFTON; D. S. BASSETT. *Dept. of Psychology, Dept. of Neurol., Dept. of Bioengineering, Univ. of Pennsylvania, Dept. of Physical Med. and Rehabil., Johns Hopkins Med. Inst., Dept. of Psychological & Brain Sci., Univ. of California Santa Barbara.*

F DP09 **DP09.09** Long-term stability and flexibility in behaviorally relevant neural circuit dynamics. *A. K. DHAWALE; R. PODDAR; E. KOPELOWITZ; V. NORMAND; B. P. ÖLVECZKY. *Harvard Univ., École Normale Supérieure.*

G DP10 **DP09.10** 3F4AP: A PET tracer for multiple sclerosis based on 4-aminopyridine. *P. BRUGAROLAS; J. SANCHEZ RODRIGUEZ; A. CAPRARIELLO; J. LACROIX; S.-H. CHENG; D. MURALI; T. BARNHART; R. FREIFELDER; R. MILLER; C.-T. CHEN; O. DEJESUS; F. BEZANILLA; B. POPKO. *Dept. of Neurol., The Univ. of Chicago, Dept. of Biochem. and Mol. Biol., Dept. of Radiology, Univ. of Chicago, Dept. of Neurosciences, Case Western Reserve Univ., Dept. of Med. Physics, Univ. of Wisconsin - Madison.*

POSTER

752. Modeling Disease with Induced Pluripotent Stem Cells

Theme A: Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A1 **752.01** Generation and characterization of a human neuronal model of Spinocerebellar Ataxia Type 6 via induced Pluripotent Stem Cell differentiation. C. BAVASSANO*; A. EIGENTLER; R. STANIKA; S. BOESCH; R. NAT; G. DECHANT. *Med. Univ., Med. Univ., Med. Univ.*

2:00 A2 **752.02** Banking and distribution of motor neurons derived from induced pluripotent stem cells: A focus on motor neuron diseases. L. SHUE*; B. SHELLEY; B. MANDEFRO; R. HO; L. ORNELAS; D. SAREEN; C. N. SVENDSEN. *Cedars-Sinai Med. Ctr.*

3:00 A3 **752.03** ● iBrain-on-a-Chip: A microfluidic platform to model neurodegenerative diseases using induced pluripotent stem cells. S. SANCES*; G. VATINE; C. LUCCHESI; S. J. KERNS; A. LAPERLE; C. HINOJOSA; G. HAMILTON; D. SAREEN; C. N. SVENDSEN. *Cedars Sinai Med. Ctr., Emulate Therapeut.*

4:00 A4 **752.04** Induced pluripotent stem cells to examine the c9orf72 repeat expansion in skeletal muscle. E. SWARTZ*; J. BAEK; M. PRIBADI; G. COPPOLA. *UCLA.*

1:00 A5 **752.05** Subcellular localisation of schizophrenia susceptibility protein ZNF804A in human neurons. P. M. DEANS*; S. HALAI; P. RAVAL; K. WARRE-CORNISH; K. SELLERS; G. D. COCKS; J. PRICE; D. P. SRIVASTAVA. *Inst. of Psychiatry, Psychology & Neurosci.*

2:00 A6 **752.06** Illuminating neuroglia signaling with genetically encoded indicators of neural activity in a human stem cell model of Down Syndrome. G. SHI*; P. JIANG; S. PAPADOPOULOS; A. BHATTACHARYYA; J. WEICK; W. DENG; L. TIAN. *UC Davis, Univ. of Wisconsin, Madison, Univ. of New Mexico.*

3:00 A7 **752.07** Stem cell models of bipolar disorder. A. J. WILLIAMS*; C. J. DELONG; M. BAME; E. C. MARTINEZ; M. C. SMITH; R. DOUCETTE; M. G. MCINNIS; K. O'SHEA. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 A8 **752.08** Aberrant DNA methylation in tumorigenic neural stem cells derived from human-iPS cells. T. IIDA*; A. IWANAMI; J. KOHYAMA; M. MATSUMOTO; H. OKANO; M. NAKAMURA. *Dept of Orthop, Sch. of Med, Keio Univ., Dept of Physiology, Sch. of Med, Keio Univ.*

1:00 A9 **752.09** A transcriptional comparison of human iPSC and mouse models of ALS defines the impact of motor neuron maturation, aging and disease. R. HO*; S. SANCES; G. GOWING; M. AMOROSO; J. O'ROURKE; A. SAHABIAN; H. WICHTERLE; R. BALOH; D. SAREEN; C. N. SVENDSEN. *Cedars-Sinai Med. Ctr., Columbia Univ.*

2:00 A10 **752.10** Combined application of induced neural stem cell and gene therapy in stroke model. Y. YUN*; J. OH; J. KIM; Y. HA. *Yonsei Univ., Stem Cell Res. Ctr.*

3:00 A11 **752.11** ● Acidic fgf promotes neurite outgrowth of cortical neurons and improves neuroprotective effect in a cerebral ischemic rat model. H. CHENG*. *Taipei Veterans Gen Hosp.*

4:00 A12 **752.12** Exploring electrophysiological properties of upper motor neurons and astrocytes in amyotrophic lateral sclerosis. D. J. RUSHTON*; G. M. THOMSEN; S. HOLLEY; G. G. GOWING; J. VIT; O. SHELEST; P. SUEZAKI; M. LEVINE; C. N. SVENDSEN. *Cedars-Sinai Med. Ctr., UCLA.*

1:00 A13 **752.13** Hyperexcitability in stem cell-derived neurons from Dup15q autism and Angelman syndrome patients. J. J. FINK*; T. M. ROBINSON; K. A. BOLDUC; E. S. LEVINE. *Univ. of Connecticut Hlth. Ctr.*

2:00 A14 **752.14** Elucidating retinal ganglion cell development and disease modeling with human pluripotent stem cells. S. OHLEMACHER*; Y. XIAO; A. SRIDHAR; A. HOCHSTETLER; M. SARFARAZI; T. R. CUMMINS; J. S. MEYER. *Indiana University- Purdue Univ. Indianapolis, Indiana Univ., Univ. of Connecticut, Indiana Univ., Indiana Univ.*

3:00 A15 **752.15** A human pluripotent stem cell-derived neuron model as a functional assay for botulinum neurotoxin intoxication. K. M. HOFFMAN*; K. HUBBARD; P. BESKE; E. GLOTFELTY; J. GRYNOVICKI; P. MCNUTT. *MRICD.*

4:00 A16 **752.16** Mislocalization of syntaxin-1 and impaired neurite growth observed in a human iPSC model for STXBP1-related epileptic encephalopathy. S. YAMASHITA*; T. CHIYONOBU; M. YOSHIDA; H. MAEDA; M. ZUIKI; S. KIDOWAKI; K. ISODA; M. MORIMOTO; M. KATO; H. SAITSU; N. MATSUMOTO; T. NAKAHATA; M. SAITO; H. HOSOI. *Kyoto Prefectural Univ. of Med., Ctr. for iPS Cell Res. and Application (CiRA), Kyoto Univ., Yamagata Univ. Fac. of Med., Yokohama City Univ. Grad. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 A17 **752.17** Isogenic iPSCs from an individual with SCN1A mutation mosaicism revealed aberrant dopamine levels in Dravet syndrome neurons. H. MAEDA*; T. CHIYONOBU; M. YOSHIDA; S. YAMASHITA; M. ZUIKI; S. KIDOWAKI; K. ISODA; M. MORIMOTO; T. NAKAHATA; M. SAITO; H. HOSOI. *Kyoto Prefectural Univ. of Med., Ctr. for iPS Cell Res. and Application (CiRA), Kyoto Univ.*

2:00 A18 **752.18** Investigation of the role of astrocytes in bipolar disorder. C. DELONG; E. MARTINEZ; M. BAME; A. WILLIAMS; L. AUGUSTAITIS; M. MCINNIS; K. O'SHEA*. *Univ. Michigan Sch. Med., Univ. Michigan Sch. Med.*

3:00 A19 **752.19** Identifying neural cell phenotypes of Tuberous Sclerosis Complex using patient-derived stem cells. A. ZUCCO*; V. DAL POZZO; A. AFINOGENOVA; B. CROWELL; M. SHELDON; O. DEVINSKY; G. D'ARCANGELO. *Rutgers Univ., Rutgers Univ., Human Genet. Inst. of New Jersey, New York Univ. Langone Sch. of Med.*

1:00 A20 **752.21** Dysregulation of neuronal development pathway proteins in stem-cell derived motor neurons from spinal muscular atrophy patients. D. SAREEN*; H. R. FULLER; B. MANDEFRO; S. L. SHIRRAN; A. GROSS; C. H. BOTTING; G. E. MORRIS. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., RJAH Orthopaedic Hosp., Univ. of St Andrews.*

4:00 A21 **752.20** Establishment of the *in vitro* myelination model using human iPS cell-derived oligodendrocytes. T. YAMASHITA*; T. ONO; A. DOI; S. KOBAYASHI; Y. MIYAMOTO; J. YAMAUCHI; Y. BANDO; S. YOSHIDA; H. AOYAMA; T. ARAKI; Y. KATO; T. SHIRAKAWA; Y. SUZUKI; N. SATO; Y. KOGUCHI. *Mitsubishi Tanabe Pharma Corp., Natl. Res. Inst. for Child Hlth. and Develop., Asahikawa Med. Univ.*

POSTER

753. Development of Motor Systems

Theme A: Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A22 **753.01** Impairment of motor behavior in young mice undergoing postnatal dopaminergic insult. B. R. SOUZA*; L. O. MATOS; L. O. GUARNIERI; G. S. PEREIRA. *Univ. Federal De Minas Gerais, Nucleo de Neurociencias.*

2:00 A23 **753.02** Sensory feedback by spontaneous twitches in the neonatal rat: Spinal cord network dynamics. A. R. INACIO*; A. NASRETDINOV; J. LEBEDEVA; R. KHAZIPOV. *INMED, INSERM UMR 901, Lab. of Neurobiology, Kazan Federal Univ., Lab. of Neurobio.*

3:00 A24 **753.03** ▲ Characterizing the Role of Beclin1/BEC-1 in Neurons of *C. elegans.* A. POWERS*; A. HOLGADO. *Southwestern Oklahoma State Univ.*

4:00 A25 **753.04** ▲ Examining the link between axonal elongation and autophagy. L. VAN*; A. HOLGADO. *Southwestern Oklahoma State Univ.*

1:00 A26 **753.05** ▲ Investigating the interplay of the axonal elongation protein unc-33/crmp and autophagy. E. JANSING*; A. HOLGADO. *Southwestern Oklahoma State Univ.*

2:00 A27 **753.06** ▲ Assessing the role of Autophagy in *C. elegans* neurons. J. GREGSTON*; A. HOLGADO. *Southwestern Oklahoma State Univ.*

3:00 A28 **753.07** Exposure to ketamine during development heightens zebrafish growth spurt. G. TORRES*; J. R. LEHESTE. *NYIT COM, NYIT COM.*

4:00 A29 **753.08** ▲ Activation of distinct exploratory patterns by nicotine in larval zebrafish: Evaluation of a novel testing methodology. B. CHEN; F. M. SCALZO*. *Bard Col.*

1:00 A30 **753.09** Altered cortical thickness in pediatric hemiplegia. R. L. HAWE*; J. P. A. DEWALD. *Northwestern Univ., Northwestern Univ.*

2:00 A31 **753.10** A minimal neural mechanism for explorative behavior in songbirds and human babies. R. DARSHAN*; B. WOOD; S. PETERS; A. LEBLOIS; D. HANSEL. *Hebrew Univ., Lab. of Neurophysics and Physiol., Duke Univ.*

3:00 A32 **753.11** Oculomotor nuclear organization in the larval zebrafish, Danio rerio. M. GREANEY*; D. SCHOPPIK. *New York Univ. Med. Ctr.*

4:00 A33 **753.12** From M1 to Cerebellum: What effect does hand-preference have one the local volumes of motor related structures? J. GERMANN*; R. PATEL; G. A. DEVENYI; M. M. CHAKRAVARTY. *Cerebral Imaging Centre, Douglas Mental Hlth. Uni, Dept. of Psychiatry, Dept. of Biomed. Engin.*

1:00 A34 **753.13** Changes in swimming parameters during the development of Xenopus tadpoles. S. HÄNZI*; L. HOFFMAN; M. PAULIN; H. STRAKA. *Grad. Sch. of Systemic Neurosciences, Dept. Biol. II, Ludwig-Maximilians-University, Dept. of Head & Neck Surgery, Geffen Sch. of Med. at UCLA, Dept. of Zoology, Univ. of Otago.*

2:00 A35 **753.14** Orexinergic modulation on the cervical network regarding the fetal movement using rat brainstem-spinal cord preparation. A. ARATA*; H. SHIMOMURA; M. ITO; A. NISHIYAMA; Y. TAKESHIMA; A. YAMANAKA. *Hyogo Col. of Med., Hyogo Col. of Med., Hyogo Col. of Med., Res. Inst. of Envrn. Medicine, Nagoya Univ.*

3:00 A36 **753.15** Lipopolysaccharide-induced IL-6 and TNFalpha expression in neonatal rat nucleus tractus solitarii (NTS). J. CLAY; M. CUSTER; R. JOHNSON; C. G. WILSON*. *Loma Linda Univ.*

4:00 A37 **753.16** Investigation of the *in vivo* effect of classical and new psychotherapeutic approaches on the behavioural and neurochemical profile of a rat model of Tourette syndrome and control animals - an MRS study. F. RIZZO*; E. NESPOLI; A. ABEI; I. BAR-GAD; V. RASCHE; B. HENGERER; T. BOECKERS; A. G. LUDOLPH. *Ulm Univ., Ulm Univ., Boehringer-Ingelheim Pharma, Ulm Univ., Bar-Ilan Univ., Ulm Univ.*

1:00 A38 **753.17** Altered formation and function of striatal circuitry in the absence of Sox8. P. MERCHAN SALA*; T. L. SCHAEFER; A. A. ASHWORTH; M. WEGNER; K. CAMPBELL. *Cincinnati Children's Med. Ctr., Cincinnati Children's Hosp. Med. Ctr., Univ. of Erlangen, Cincinnati Children's Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 A39 **753.18** Exploring neurodevelopmental aspects of tics in a juvenile rat model of repetitive behavior. E. NESPOLI*; F. RIZZO; A. LUDOLPH; B. HENGERER. *Universitätsklinikum Ulm, Boehringer Ingelheim Pharma GmbH & Co. KG.*

3:00 A40 **753.19** Movement learning processes provide potential etiology for neurological disorders. J. V. JOSE*; D. WU. *Indiana Univ., Indiana Univ.*

4:00 A41 **753.20** Essential roles of leucine-rich glioma inactivated 1 in the development of embryonic and postnatal cerebellum. Y. XIE*; L. ZHOU; J. K. COWELL; Y. SHEN. *Zhejiang Univ., Georgia Regents Univ.*

1:00 A42 **753.21** Massive developmental reduction in the distribution of corticospinal neurons in prenatal macaque. A. R. RIBEIRO GOMES*; E. OLIVIER; H. P. KILLACKEY; C. LAMY; P. MISERY; P. GIROUD; M. BERLAND; K. KNOBLAUCH; C. DEHAY; H. KENNEDY. *Stem-Cell and Brain Res. Inst., Claude Bernard University, Univ. of Lyon, Inst. of Neuroscience, Sch. of Medicine, Univ. of Louvain, Univ. of California Irvine, Univ. Hosp. Lyon-Sud, Hospices civils de Lyon.*

2:00 A43 **753.22** Roles of Runx1 transcription factor in axonal projection of mouse embryonic hypoglossal motoneurons. M. YOSHIKAWA*; S. OZAKI; M. TOMOYUKI; M. MATSUKAWA; M. IMADA; S. AIZAWA; T. SHIGA. *Nihon Univ. Sch. of Med., Fac. of Medicine, Univ. of Tsukuba.*

3:00 A44 **753.23** Retrograde monosynaptic tracing with a recombinant rabies virus reveals transient monosynaptic connections between the corticospinal and motor neurons during development in mice. N. MURABE*; S. FUKUDA; N. ISOO; T. MORI; H. MIZUKAMI; K. OZAWA; Y. YOSHIMURA; M. SAKURAI. *Teikyo Univ. Sch. of Med., Natl. Inst. for Physiological Sci., Jichi Med. Univ.*

4:00 A45 **753.24** Looking at a Vglut2/Pitx2 subpopulation of the subthalamic nucleus - from development to behavior. M. PAPATHANOU*; N. SCHWEIZER; E. ARVIDSSON; S. PUPE; A. WALLEN-MACKENZIE. *Uppsala Univ.*

1:00 A46 **753.25** Neuroanatomical differences between adults who stutter and adults who do not stutter. A. DALIRI*; E. GOLFINOPOULOS; J. A. TOURVILLE; F. H. GUENTHER. *Boston Univ., Boston Univ.*

2:00 A47 **753.26** The COE-type transcription factor UNC-3 cooperates with HOX proteins to generate motor neuron diversity. P. KRATSIOS*; S. KERK; R. MOURAO; O. HOBERT. *Columbia Univ.*

3:00 A48 **753.27** Dab1 modulates grooming duration in mice. A. DELPRATO; B. BONHEUR; M. ALGÉO; L. LU; R. W. WILLIAMS; W. E. CRUSIO*. *Univ. Bordeaux and CNRS, BioScience Project, Univ. of Tennessee Hlth. Sci. Ctr.*

4:00 A49 **753.28** Role of BDNF and TrkB in the excitatory-inhibitory imbalance during the critical period of postnatal respiratory development in the rat. H. ZHANG; X. GAO; M. T. WONG-RILEY*. *Med. Col. of Wisconsin, Med. Col. Wisconsin.*

1:00 A50 **753.29** Engrailed 1 is required for maintaining proper isthmus positioning. W. M. KOUWENHOVEN*; J. V. VEENVLIET; L. P. VAN DER HEIDE; J. A. VAN HOOFT; M. P. SMIDT. *Univ. of Amsterdam.*

POSTER

754. Development of Sensory Systems: Vision

Theme A: Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A51 **754.01** Normative development of functional connectivity in the rhesus monkey visual pathways. Z. A. KOVACS-BALINT*; E. FECZKO; B. HOWELL; E. EARL; L. LI; J. STEELE; S. LEE; Y. SHI; M. STYNER; L. PARR; J. BACHEVALIER; D. FAIR; M. SANCHEZ. *Emory Univ., Emory University, Sch. of Med., Ctr. for Behav. Neurosci., Oregon Hlth. & Sci. Univ., Emory University, Sch. of Med., Univ. of North Carolina, Emory Univ., Sch. of Med.*

2:00 A52 **754.02** Sulcal pits differentially contribute to the development of functional regions in high-level visual cortex. V. S. NATU*; J. GOMEZ; M. A. BARNETT; A. STIGLIANI; K. GRILL-SPECTOR; K. S. WEINER. *Stanford Univ.*

3:00 A53 **754.03** Transient photoreception in the hindbrain is permissive to hatching in Atlantic halibut. J. HELVIK*; O. DRIVENES; L. O. E. EBBESSON; M. EILERTSEN. *Univ. of Bergen, Univesity of Bergen, Uni Res. AS.*

4:00 A54 **754.04** Somatostatin-expressing interneurons in primary visual cortex undergo a developmental switch in neuromodulated excitation. C. E. YAEGER*; D. L. RINGACH; J. T. TRACHTENBERG. *UCLA.*

1:00 A55 **754.05** Gap junctions shape recurrent activity in the tadpole optic tectum. Z. LIU; C. M. CIARLEGLIO; C. D. AIZENMAN; K. G. PRATT*. *Univ. of Wyoming, Brown Univ.*

2:00 A56 **754.06** Visual nucleus-specific targeting and refinement of retinal ganglion cell axons through the cadherin-catenin pathway. D. Q. DAO*; T. H. DAVIS; E. M. ULLIAN. *Univ. of California, San Francisco, American Type Culture Collection.*

3:00 A57 **754.07** Protocadherins control the modular assembly of neuronal columns in the zebrafish optic tectum. M. R. EMOND*; S. COOPER; B. LIEBAU; M. WOLMAN; J. JONTES. *Ohio State Univ., Ohio State Univ., Univ. Wisconsion, Madison.*

4:00 A58 **754.08** The impact of low omega-3/DHA diets on the development of retinofugal projections and differentiation of cholinergic markers in the rat visual system. C. A. SERFATY*; P. C. DE VELASCO; P. C. SANDRE; R. M. DOS SANTOS; A. C. F. MELIBEU; P. C. C. LOPES; B. L. S. A. COSTA. *Federal Fluminense University, Inst. De Biologia, Dept. Neurobiologia, Univ. Federal do Rio de Janeiro, Federal Fluminense University, Inst. De Biologia, Federal Fluminense University, Inst. De Biologia, Univ. Federal de Pernambuco.*

1:00 A59 **754.09** Glutamatergic (stage III) retinal waves and their role in visual development *in vivo*. A. GRIBIZIS*; J. B. ACKMAN; M. C. CRAIR. *Yale Univ., Univ. of California, Santa Cruz.*

2:00 A60 **754.10** Critical period for the effect of visual deprivation on the surface area of visual cortex in animals and humans. A. K. ANDELIN*; C. KROENKE; E. TABER; A. STEVENS; J. OLAVARRIA. *Univ. of Washington, Oregon Hlth. and Sci. Univ.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

3:00 A61 **754.11** ▲ Ecologically relevant scoring of binocular receptive field development by innate learning. I. ADORNO; G. KRATZ; A. OAKLEY; M. V. ALBERT*. *Illinois Math and Sci. Acad., Loyola Univ. Chicago.*

4:00 A62 **754.12** Postmitotic regulation of sensory area patterning in the mammalian neocortex by Lhx2. A. B. ZEMBRZYCKI*; C. G. PEREZ-GARCIA; C. WANG; S. CHOU; D. D. M. O'LEARY. *Salk Inst. MNL-O, Academia Sinica.*

POSTER

755. Development of Limbic, Olfactory, and Gustatory Systems

Theme A: Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A63 **755.01** 5HTTLPR modulates transient non-canonical SERT expression and connectivity in the developing macaque brain. M. K. CAFFREY CAGLIOSTRO*; R. BANSAL; S. GERUM; K. WALSH; N. SEPULVEDA; A. ZIOLKOWSKI; V. ARANGO; D. GUILFOYLE; J. A. GINGRICH; M. S. ANSORGE. *Columbia Univ. and NYSPI, Keck Sch. of Med. of USC, Nathan Kline Inst., Columbia Univ. and NYSPI.*

2:00 A64 **755.02** Social rank and diet affect amygdala functional connectivity with prefrontal cortex during infancy in female Rhesus Macaques. M. PINCUS*; J. GODFREY; E. FECZKO; E. EARL; Y. SHI; M. STYNER; L. LI; B. HOWELL; D. FAIR; K. ETHUN; M. WILSON; M. SANCHEZ. *Emory Univ., Oregon Hlth. & Sci. Univ., Univ. of North Carolina, Inst. of Child Development, Univ. of Minnesota, Emory University, Yerkes Natl. Primate Res. Ctr.*

3:00 A65 **755.03** Epigenomic dissection of sexually dimorphic neural circuits. R. BRONSTEIN*; M. V. WU; J. TOLLKUHN. *Cold Spring Harbor Lab.*

4:00 A66 **755.04** Roles of thalamocortical interactions in the development of mouse prefrontal cortex. A. PROUE; Y. NAKAGAWA*. *Univ. Minnesota.*

1:00 A67 **755.05** PAX6 haploinsufficiency association with reduced amygdala volumes. F. M. LALONDE*; A. RAZNAHAN; J. A. BUTMAN; J. HAN. *NIMH, NIH, Univ. of Tennessee Hlth. Sci. Ctr.*

2:00 A68 **755.06** Early maternal care modulates the development of emotional neurocircuitry in nonhuman primates: Amygdala functional connectivity. E. L. MORIN*; B. HOWELL; K. REDING; D. GUZMAN; E. FECZKO; E. EARL; Y. SHI; M. STYNER; D. FAIR; M. SANCHEZ. *Emory Univ., Emory Univ., Univ. of Minnesota, Natl. Inst. of Mental Hlth., Oregon Hlth. & Sci. Univ., Univ. of North Carolina, Emory Univ.*

3:00 A69 **755.07** A role for the zinc finger transcription factor Tshz1 in the migration and differentiation of the intercalated cells (ITCs) of the amygdala. J. KUERBITZ*; S. EHRMAN; A. N. GARRATT; R. R. WACLAW; K. CAMPBELL. *Cincinnati Children's Hosp., Charite Universitatsmedizin Berlin, Cincinnati Children's Hosp.*

4:00 A70 **755.08** Collapsin response mediator protein 4 (CRMP4) knockout mice showed physiological alterations related to olfactory function. A. TSUTIYA*; M. NISHIHARA; Y. GOSHIMA; R. OHTANI-KANEKO. *Toyo Univ., The Univ. of Tokyo, Yokohama City Univ., Toyo Univ.*

1:00 A71 **755.09** Long-term effect of neonatal isoflurane exposure on the olfactory system in rats. J. LEE*; J. ZHANG; Z. WEI; L. WEI; S. YU. *Emory Univ., Atlanta VA Med. Ctr., Emory Univ.*

2:00 A72 **755.10** Expression of the TrkB receptor declines before birth dividing taste neurons into two equal subpopulations. J. RIOS-PILIER*; R. F. KRIMM. *Univ. of Louisville.*

POSTER

756. Evolution of Development

Theme A: Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A73 **756.01** Next-gen sequencing and an evolution-based search for neocortical layer 4 genes. S. D. BRISCOE*; C. B. ALBERTIN; J. J. ROWELL; C. W. RAGSDALE. *Univ. of Chicago, Univ. of Chicago.*

2:00 A74 **756.02** Visual cortex activation in early monocular and binocular blind macaque: A BOLD-fMRI study during auditory tasks. Z. TANG*; L. WU. *Eye & ENT Hosp. of Fudan Univ.*

3:00 A75 **756.03** BRWD1 associated chromatin regulatory mechanisms in Trisomy 21. L. FARRELLY*; A. LEPACK; Y. LU; W. WENDERSKI; A. SOSHNEV; R. CAO; H. LI; R. ROPER; K. BRENNAND; T. W. MUIR; I. MAZE. *Icahn Sch. of Med. At Mount Sinai, The Rockefeller Univ., Tsinghua Univ., Indiana University, Purdue Univ., Icahn Sch. of Med. At Mount Sinai, Princeton Univ., Icahn Sch. of Med. At Mount Sinai.*

4:00 A76 **756.04** Patterns and gradients of neurogenesis in the avian dorsal thalamus. L. L. BRUCE*; A. M. LYNN; D. A. SCHNEIDER. *Creighton Univ.*

1:00 A77 **756.05** DSCAM promotes cell death. S. YOU*; S. CHEN. *Natl. Taiwan Univ., Natl. Taiwan Univ.*

2:00 A78 **756.06** Regulation of interneuron distribution by the fate of cortical projection neurons. Z. NIOU; S. CHOU*. *Academia Sinica.*

3:00 A79 **756.07** Variation in neuron numbers across the marsupial and primate isocortex: Evidence of shared and derived characters across mammals. C. J. CHARVET*; C. D. STIMPSON; M. A. RAGHANTI; A. H. LEWANDOWSKI; F. M. KRIENEN; C. C. SHERWOOD. *The George Washington Univ., Kent State Univ., Cleveland Metropolis Zoo.*

4:00 A80 **756.08** Activation of Non-LTR retrotransposons specific transcripts in rats in response to stress. S. MUKHERJEE*, JR; D. SHARMA; K. C. UPADHYAYA. *Scool of Life Sciences, Jawaharlal Nehru Universit, Scool of Life Sciences, Jawaharlal Nehru Universit.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 A81 **756.09** ▲ Do the Sexiest Dancers Have the Largest Little Brain?: Associations between display complexity and both brain volume and cerebellar granular layer volume in manakins(Pipridea). G. PANO*; W. R. LINDSAY; L. B. DAY. *The Univ. of Mississippi, The Univ. of Gothenburg.*

2:00 A82 **756.10** Cortical gyrification induced by a hominoid-specific gene HSG1 in the mouse brain. X. JU*; Q. HOU; A. SHENG; K. WU; T. WEN; Z. YANG; X. WANG; Z. LUO. *Inst. of Neurosci., Sch. of Life Sciences, Shanghai Univ., Inst. of Brain Science, State Key Lab. of Med. Neurobiology, Fudan Univ., Inst. of Biophysics, Chinese Acad. of Sci.*

3:00 A83 **756.11** Development of neocortical interhemispheric connections in a pre-callosal marsupial. R. SUAREZ*; A. PAOLINO; L. MORCOM; P. KOZULIN; L. R. FENLON; L. J. RICHARDS. *The Univ. of Queensland, The Univ. of Queensland.*

4:00 A84 **756.12** Detection of drowsiness in driving simulation using EEG and fNIRS. S. AHN*; T. NGUYEN; H. JANG; J. KIM; S. JUN. *Gwangju Inst. of Sci. and Technol., Gwangju Inst. of Sci. and Technol.*

POSTER

757. GPCR II

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A85 **757.01** Influence of aromatic moieties linked to piperazine ring of tetrahydrobenzo[d]thiazole based hybrid compounds impacts efficacy of dopamine D2/D3 agonists at D3 receptors. M. E. REITH*; J. ZHEN; T. ANTONIO; J. C. JACOB; D. GRANDY; A. K. DUTTA; D. E. SELLEY. *New York Univ. Schl Med., New York Univ. Sch. Med., Virginia Commonwealth Univ., Oregon Hlth. & Sci. University, Sch. of Med., Wayne State Univ. Applebaum Coll. Pharm. & Hlth. Sci.*

2:00 A86 **757.02** The putative cannabinoid receptor GPR55: Expression, modulation of hippocampal plasticity and behavior. K. M. HURST*; C. BADGLEY; M. YOUNG; Z. COWAN; J. CALL; J. WELCH; T. ELLSWORTH; J. EDWARDS. *BYU.*

3:00 A87 **757.03** Elevation of intracellular Ca^{2+}mediated by methylmercury toxicity was delayed by dopamine receptor antagonists in pheochromocytoma cells (PC12). D. WIWATRATANA*; W. D. ATCHISON. *Comparative Med. and Integative Biol., Pharmacol. and Toxicology.*

4:00 A88 **757.04** Transactive response DNA binding protein 43 modulation of Cannabinoid type 1 receptor trafficking and signaling. A. G. ROBINSON*; M. R. DESHOTELS; P. WEED; B. OGUNLADE; P. WINSAUER; J. J. GUIDRY; C. M. FILIPEANU. *Howard Univ., Louisiana State Univ.*

1:00 A89 **757.05** Interplay between serotonergic and L1-mediated signaling in regulation of neuronal morphology and functions. D. GUSEVA*; Y. SCHILL; B. MONIKA; J. WLODARCZYK; E. PONIMASKIN. *Hannover Med. Sch., Nenski Inst.*

2:00 A90 **757.06** Expression analysis of the orphan receptor Gpr139 in the mouse brain. A. W. HARRINGTON*; S. W. SUTTON; P. BONAVENTURE; C. LIU; T. LOVENBERG. *Janssen R&D.*

3:00 A91 **757.07** Olfactory marker protein regulates glucagon secretion in mouse pancreatic αTC1-9 cells. Y. CHO*; C. KU; N. KANG; H. LEE; J. KOO; E. LEE. *Endocrine Institute, Yonsei Univ. Col. of Med., Dept. of Brain Science, Daegu Gyeongbuk Inst. of Sci. and Technol. DGIST, Brain Korea 21 PLUS project for medical science, Yonsei Univ. Col. of Med.*

4:00 A92 **757.08** A hydrogen bond in 5-HT1A/D4 selectivity of WAY-100635 analogues: In silico and experimental studies. J. LIEGEOIS*; S. DILLY. *Univ. of Liege Drug Res. Center-Medicinal Chem. Lab., Univ. of Liège, Univ. of Liège.*

1:00 A93 **757.09** Gβγ binds to the extreme C-terminus of SNAP-25 to mediate the action of Gi/o-coupled GPCRs. Z. ZURAWSKI*; S. RODRIGUEZ; K. HYDE; S. ALFORD; H. HAMM. *Vanderbilt Univ., Univ. of Illinois at Chicago.*

2:00 A94 **757.10** Distinct signaling cascades underlie 5-HT6 receptor regulation of neuronal morphology. A. J. LESIAK*; M. BRODSKY; J. F. NEUMAIER. *Univ. of Washington.*

3:00 A95 **757.11** The atypical antidepressants mianserin and mirtazapine induce ERK1/2 signaling and anti-apoptotic effects through activation of the lysophosphatidic acid LPA_1 receptor in mouse hippocampal HT22 cells. M. C. OLIANAS*; S. DEDONI; P. ONALI. *Univ. Cagliari.*

4:00 A96 **757.12** Classification of dopamine receptor genes in vertebrates - Nine subtypes in Osteichthyes -. K. YAMAMOTO*; R. FONTAINE; C. PASQUALINI; P. VERNIER. *CNRS - Paris-Sud University, Neuro-PSI (UMR9197).*

1:00 A97 **757.13** Mechanisms of cannabinoid cb2 receptor-mediated modulations in mouse vta dopamine neurons. J. WU*; B. LARSON; F. GAO; Z. XI; M. GAO. *Barrow Neurolog Inst., NIDA.*

2:00 A98 **757.14** Characterization of a novel dopaminergic agonist that displays spatial bias and functional selectively at the D2 dopamine receptor. D. R. SIBLEY*; R. B. FREE; J. H. SHIN; B. N. MILLER; T. B. DOYLE; A. E. MORITZ; J. L. CONROY; T. F. BRUST; N. T. SOUTHALL; M. FERRER; P. DONTHAMSETTI; J. A. JAVITCH; V. J. WATTS; J. L. KATZ; G. D. STANWOOD; J. W. BERTZ; J. H. WOODS; K. A. EMMITTE; C. W. LINDSLEY; V. A. ALVAREZ. *NINDS-NIH, NIAAA-NIH, Purdue Univ., NCATS-NIH, Columbia Univ., NIDA-NIH, Florida State Univ., Univ. of Michigan, Vanderbilt Univ.*

3:00 A99 **757.15** Presynaptic strength is increased by platelet activating factor via PKC, elevated intracellular calcium, and synapsin phosphorylation. J. W. HAMMOND*; S. LU; H. A. GELBARD. *Univ. of Rochester.*

4:00 A100 **757.16** G Protein-Coupled Receptor 35 agonists mediate analgesic effects through modulation of hyperpolarization-activated cyclic nucleotide gated channels in rat DRG neurons. D. PELLEGRINI-GIAMPIETRO*; F. RESTA; A. MASI; M. SILI; A. LAURINO; F. MORONI; G. MANNAIONI. *Univ. of Florence.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 A101 **757.17** Dopamine receptor/sodium channel protein complex, a target for antiepileptic mood stabilizers? G. FAKHFOURI*; T. DEL'GUIDICEDEL'GUIDICE; A. BARBEAU; M. CHAHINE; J. BEAULIEU. *Laval Univ.*

2:00 A102 **757.18** Sleep deprivation induces changes in 5-HT actions and 5-HT1A receptor expression in the rat hippocampus. V. SUEN; H. AZIZI; A. KWOK; A. NGUYEN; N. KANG; R. SOMVANSHI; U. KUMAR; B. SASTRY*. *Univ. British Columbia Fac Med., The Univ. of British Columbia.*

3:00 A103 **757.19** Persistent adenosine A1 receptor activation within the habenular complex enacts downstream p38 MAPK activation to modulate HCN function and expression and provoke neuronal death. D. M. FERGUSON*; J. STOCKWELL; X. QIN; F. S. CAYABYAB. *Univ. of Saskatchewan.*

4:00 A104 **757.20** Adenosine A1 receptors are required for the adenosine A2A receptor-mediated post-hypoxia synaptic potentiation in the rat hippocampus. X. QIN*; J. STOCKWELL; D. M. FERGUSON; F. S. CAYABYAB. *Univ. of Saskatchewan, Univ. of Saskatchewan.*

1:00 A105 **757.21** G-protein coupled activation of the volume-activated anion channel in human astrocytoma cells. C. E. MOORE; G. LI; J. E. OLSON*. *Wright State Univ., Wright State Univ. Boonshoft Sch. Med.*

2:00 A106 **757.22** Neurotoxicity through prolonged adenosine A1 receptor activation: Cellular, synaptic plasticity, and behavioral implications in the rat hippocampus. J. STOCKWELL*; D. M. FERGUSON; X. QIN; Z. MING; Z. CHEN; F. S. CAYABYAB. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

3:00 A107 **757.23** ▲ Time-of-day dependent expression profile of purinergic receptors in the suprachiasmatic nucleus of the mouse. J. J. LOMMEN*; A. STAHR; M. INGENWERTH; C. VON GALL. *Heinrich-Heine-University, Inst. of Anat. II.*

POSTER

758. GABAergic Synapses and Inhibitory Transmission

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 A108 **758.01** Aldehyde Dehydrogenase 1a1 (ALDH1a1) mediates a novel GABA synthesis pathway in midbrain dopaminergic neurons. J. KIM*; S. GANESAN; S. X. LUO; Y. WU; E. J. HUANG; L. CHEN; J. B. DING. *Dept. of Neurosurgery, Stanford Univ., Univ. of California San Francisco, Stanford Univ.*

2:00 B1 **758.02** *In vivo* structure-function analysis of neuroligin-2 at GABAergic synapses of somatosensory cortex. A. X. YEE*; T. SÜDHOF; L. CHEN. *Stanford Univ., Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med.*

3:00 B2 **758.03** The gephyrin-interacting protein synArfGEF regulates "mismatched" GABAergic synapses in primary hippocampal neurons. S. FRÜH*; S. K. TYAGARAJAN; J. FRITSCHY. *Univ. of Zurich.*

4:00 B3 **758.04** Temporal and spatial integration of GABAergic and glutamatergic synaptic inputs in dendrites. Y. DEMBITCKAYA*; Y. WU; A. SEMYANOV. *Univ. of Nizhny Novgorod, Stanford Univ. Sch. of Med.*

1:00 B4 **758.05** A spatio-temporal analysis of the GABAa receptor-dependent and independent membrane potential response to a gamma-band burst stimulus in area CA1 of hippocampal slice: A VSDI study. T. TOMINAGA*; Y. TOMINAGA. *Inst. of Neuroscience, Tokushima Bunri Univ.*

2:00 B5 **758.06** Striatal dopamine synapses are neuroligin-2-mediated heterologous contacts between dopaminergic presynapse and GABAergic postsynapse. M. UCHIGASHIMA*; M. WATANABE. *Hokkaido Univ. Sch. of Med.*

3:00 B6 **758.07** A-type potassium channels regulate the impact of GABAergic inhibition in pyramidal neurons. J. T. CHANG*; M. J. HIGLEY. *Yale Univ., Yale Univ.*

4:00 B7 **758.08** Evidence that the theory of predictive homeostasis explains the observed strength and decay rate of synaptic inhibition. J. K. KIM; C. D. FIORILLO*. *KAIST.*

1:00 B8 **758.09** Inhibitory interneurons differentially contribute to spontaneous network activity in the developing hippocampus dependent on their embryonic lineage. J. C. WESTER*; C. J. MCBAIN. *NIH.*

2:00 B9 **758.10** Impaired synaptic integration in the Ts65Dn mouse model of Down Syndrome is rectified by negative modulation of α5 subunit-containing GABAA receptors. J. M. SCHULZ*; F. KNOFLACH; A. THOMAS; M. HERNANDEZ; J. BISCHOFBERGER. *Univ. of Basel, Roche Pharma Res. and Early Development, Discovery Neurosci., Small Molecule Research, Roche Innovation Ctr. Basel.*

POSTER

759. Synaptic Integration

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 B10 **759.01** Reciprocal circuits linking the prefrontal cortex and thalamus. J. J. MARLIN*; A. G. CARTER. *New York Univ.*

2:00 B11 **759.02** Excitatory and inhibitory circuits regulating interactions between the PFC and BLA. L. M. MCGARRY*; A. G. CARTER. *New York Univ.*

3:00 B12 **759.03** Characterization of inhibitory and excitatory synaptic input recruited by neocortex or amygdala stimulation in perirhinal and entorhinal neurons *ex vivo.* J. G. WILLEMS*; P. CHAMEAU; T. R. WERKMAN; W. J. WADMAN; N. L. M. CAPPAERT. *Univ. of Amsterdam.*

4:00 B13 **759.04** Differential synaptic connectivity and physiology at layer 5 pyramidal neurons in the prefrontal cortex. P. G. ANASTASIADES; J. J. MARLIN; A. G. CARTER*. *New York Univ.*

1:00 B14 **759.05** Non-linear synaptic integration on striatal spiny projection neuron dendrites is supported by clustered corticostriatal inputs. Y. WU*; R. LALCHANDANI; J. B. DING. *Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 B15 **759.06** ● Subthreshold electrical signaling in dendritic spines: Modeling and measurements. M. A. POPOVIC; N. T. CARNEVALE; D. ZECEVIC*. *Yale Univ. Sch. Med., Yale Univ. Sch. Med.*

3:00 B16 **759.07** A-type K^+ channels impede supralinear summation of clustered glutamatergic inputs in basal and oblique neocortical dendrites. A. BIRO; A. BREMAUD; J. FALCK; A. RUIZ*. *UCL Sch. of Pharm., UCL Sch. of Pharm.*

4:00 B17 **759.08** Direct electrical recordings from dendritic spines using nano-pipettes. K. JAYANT*; J. J. HIRTZ; I. J. PLANTE; D. M. TSAI; W. D. BOER; A. SEMONCHE; D. PETERKA; J. S. OWEN; O. SAHIN; K. L. SHEPARD; R. YUSTE. *Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ.*

1:00 B18 **759.09** ● Input characteristics of mouse visual cortical neurons measured *in vivo* on the dendritic spine assemblies by fast two-photon imaging using genetically encoded calcium indicators in behaving animals. T. TOMPA*; G. SZALAY; G. JUHASZ; L. JUDAK; G. KATONA; P. MAAK; M. VERESS; B. CHIOVINI; B. ROZSA. *Med. Univ. of South Carolina, Univ. of Miskolc, Fac. of Healthcare, Inst. of Exptl. Medicine, Hungarian Acad. of Sci., Pazmany Peter Catholic University, Fac. of Information Technol., Budapest Univ. of Technol. and Econ., Fac. of Information Technology, Pazmany Peter Catholic Univ.*

2:00 B19 **759.10** The synaptic basis of the pattern-electroretinogram (PERG). N. TORRES JIMENEZ*; E. GUSTAFSON; R. F. MILLER. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 B20 **759.11** Astrocytes release glutamate or ATP depending on neuronal activity. A. COVELO*; A. ARAQUE. *Univ. of Minnesota.*

4:00 B21 **759.12** Modulation of sensorimotor gating through PnC afferent structures. J. C. CANO*; S. A. PACE; K. FENELON. *The Univ. of Texas At El Paso.*

1:00 B22 **759.13** Nanocomposite biomaterials based on natural polysaccharides for the development of new cell-instructive 3D scaffold driving central nervous system (CNS) reconstruction. M. MEDELIN*; M. PULIN; D. PORRELLI; A. TRAVAN; M. BORGOGNA; M. COK; I. DONATI; E. MARSICH; S. PAOLETTI; S. BOSI; M. PRATO; R. SCARDIGLI; L. BALLERINI. *Univerisity of Trieste, Univerisity of Trieste, CNR, sissa.*

2:00 B23 **759.14** Artificial 3D networks as novel tools to investigate plasticity phenomena in reconstructed neuronal networks. R. RAUTI*; S. BOSI; M. PRATO; D. SCAINI; L. BALLERINI. *SISSA, Univ. of Trieste, sissa.*

3:00 B24 **759.15** Time translational invariance, the propagation of graded information and the structure of information coding in neural circuits. A. T. SORNBORGER*; Z. WANG; L. TAO. *Mathematics, Peking Univ., Peking Univ.*

4:00 B25 **759.16** Precise balance between contrast tuning of excitation and inhibition enables reliable directional selectivity computation in the retina. A. POLEG-POLSKY*; J. S. DIAMOND. *NIH/NINDS.*

POSTER

760. Neuron-glia Interactions

Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 B26 **760.01** The age of the astrocytes affects neuronal growth. S. HASHEMIAN*; J. PHILLIPS; S. AF BJÉRKEN; I. STRÖMBERG. *Umea Univ., Univ. Col. London, Integrative Med. Biol.*

2:00 B27 **760.02** Withdrawn.

3:00 B28 **760.03** The radial glia role on angiogenesis in the developing cerebral cortex. J. SILVA*; M. SIQUEIRA; D. FRANCIS; D. GISBERT. *Univ. Federal Do Rio De Janeiro.*

4:00 B29 **760.04** ● Increasing functional complexity and maturity of human iPSC-derived neuronal networks *in vitro* by glia co-culture and mixing different neuronal populations. A. PIELKA; A. VOSS; C. EHNERT; K. JÜGELT*; O. H. SCHROEDER; B. M. BADER. *NeuroProof GmbH.*

1:00 B30 **760.05** Characterizing Müller glia network assembly in mouse retina. J. WANG*; J. KAY. *Duke Univ.*

2:00 B31 **760.06** Midline glia express transient receptor potential channel subfamily M member 5 (TRPM5) during embryonic and early postnatal mouse brain development. S. WEN*; S. KUSUMAKSHI; U. BOEHM. *Inst. of Exptl. and Clin. Pharmacolog.*

3:00 B32 **760.07** Distinct roles of GLAST and GLT-1 in regulating cortical network formation and maturation. J. SHIH*; Y. YANG; N. C. DANBOLT; C. DULLA. *Tufts Univ., Sackler Sch. of Grad. Biomed. Sci., Tufts Univ., Univ. of Oslo.*

4:00 B33 **760.08** Neurodegeneration, gliosis, and glial proliferation in two models of temporal lobe epilepsy. J. L. LOEWEN; M. L. BARKER-HALISKI; E. DAHLE; H. WHITE; K. S. WILCOX*. *Univ. of Utah, Univ. of Utah, Univ. Utah, ADD Program.*

1:00 B34 **760.09** Immunohistochemical analyses reveal changes in astrocytic density in the dorsal raphe nucleus after stress. I. S. NICHOLS*; C. O. OKERE; K. PAUL. *Clark Atlanta Univ., Clark Atlanta Univ., Morehouse Sch. of Med.*

2:00 B35 **760.10** ▲ Protein levels of cell adhesion molecules in the supraoptic nucleus of 1- and 4-month-old rats: Implications for a role in axonal sprouting? P. KUBALL*; E. BYE; M. MCCARTHY; A. AL SAEGH; J. ASKVIG. *Concordia Col.*

3:00 B36 **760.11** ● ▲ Electrophysiological effects of glial inhibition on pyramidal neurons in rat brain slices. S. -. DARIANI SAEED*; M. JANAHMADI. *Tehran Univ. of Med. Sci., Neurosci. Res. Ctr. and Dept. of Physiol.*

4:00 B37 **760.12** The cytokine IL-1ß is able to diminish amplitudes of cortical spreading depression (CSD) in adult rats. F. RICHTER; J. LEUCHTWEIS; A. EITNER; E. WEGNER; A. LEHMENKUHLER*; H. SCHAIBLE. *Univ. Hosp. Jena, Pain Inst.*

1:00 B38 **760.13** HIV-1 mediated disruption of Wnt/β-catenin signaling in astrocytes lead to neuronal injury. V. B. LUTGEN*; C. YU; S. NARASIPURA; L. AL-HARTHI. *Rush Univ. Med. Ctr.*

2:00 B39 **760.14** Identification of mineralocorticoid receptors as potential targets to modulate nociceptive neurons but not glia cells. S. A. MOUSA*; M. SHAQURA; X. LI; M. AL-MADOL; A. BEYER-KOCZOREK; S. MICHAEL. *Dep. of Anesthesiology, Charite Univ., Ludwig-Maximilians-University München.*

3:00 B40 **760.15** The role of the pre-Bötzinger complex astrocytes in central respiratory CO2 chemosensitivity. S. SHEIKHBAHAEI*; N. MARINA; V. RAJANI; S. KASPAROV; G. D. FUNK; J. C. SMITH; A. V. GOURINE. *Natl. Inst. of Hlth. (NIH)- NINDS, Univ. Col. London, Univ. of Alberta, Univ. of Bristol.*

4:00 B41 **760.16** Aβ oligomers impacts astrocytic processes calcium excitability and structural plasticity nearby hippocampal synapses. A. BOSSON; S. BOISSEAU; A. BUISSON; M. ALBRIEUX*. *Univ. Grenoble Alpes.*

1:00 B42 **760.17** Serial section electron microscopy of glia in adult neocortex. D. R. BERGER*; J. W. LICHTMAN. *Harvard.*

2:00 B43 **760.18** Relevance of neuron-glia interactions to the action of oxytocin in pain processing. J. WAHIS*; B. BELLANGER; T. MADUNA; V. LELIÈVRE; P. POISBEAU; A. CHARLET. *INCI-CNRS UPR 3212.*

3:00 B44 **760.19** Activity dependent remodeling of ECM monitored by extracellular proteolysis of brevican. J. B. SINGH*; N. J. PANDYA; A. B. SMIT; K. W. LI; C. SEIDENBECHER; R. FRISCHKNECHT. *LIN, LIN, CNCR.*

4:00 B45 **760.20** Mir-133b inhibits glial scar formation and promotes brain remodeling after treatment of stroke in rats with multipotent mesenchymal stromal cells. F. WANG*. *Henry Ford Hosp.*

1:00 B46 **760.21** Akap200 scaffolding protein controls blood-brain barrier responses to alcohol. S. PARKHURST*; A. LEGENDRE; E. KONG; F. W. WOLF. *Univ. of California, Merced, Univ. of California, San Francisco.*

POSTER

761. Alzheimer's Neurodegeneration: Animal Models

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 B47 **761.01** Genome-wide approaches reveal Bexarotene controlled regulatory networks in APOE3 mice. K. NAM*; A. MOUNIER; J. SCHUG; N. F. FITZ; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh, Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 B48 **761.02** GRK5 deficiency renders vulnerability to cognitive deficits triggered by mild intermittent hypoxia. W. Z. SUO*; P. SINGH; W. PENG; Q. ZHANG; X. DING. *Kansas City VA Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Alzheimer's Dis. Ctr.*

3:00 B49 **761.03** Impairment in hippocampal newly-generated neurons maturation and exacerbation of memory loss in a diabetic-like Alzheimer's disease mouse model. E. B. FERREIRO*; M. LANZILLO; A. M. CARVALHO DA SILVA; G. MASTRELLA; S. MOTA; A. R. FONTES; I. L. FERREIRA; C. R. OLIVEIRA; J. VALERO; A. C. REGO. *Ctr. For Neurosci. and Cell. Biol., III-Institute for Interdisciplinary Res. (IIIUC), Univ. of Coimbra, Fac. of Medicine, Univ. of Coimbra.*

4:00 B50 **761.04** High-fat and high-fructose diet intake differentially affects cognitive performance in male and female 3xTg-AD mice. K. R. GUZMAN-RAMOS*; L. X. AYALA-GUERRERO; F. BERMÚDEZ-RATTONI; P. GARCÍA-DELATORRE; G. PACHECO-LÓPEZ. *Univ. Autónoma Metropolitana, Inst. de Fisiología Celular UNAM, Ctr. Médico SXXI.*

1:00 B51 **761.05** A novel administration of systemic streptozotocin leads to alterations relevant to vascular dementia and Alzheimer's disease. A. S. MURTISHAW*; C. F. HEANEY; M. M. BOLTON; K. D. BELMONTE; M. A. LANGHARDT; J. W. KINNEY. *UNLV Neurosci. Doctoral Student, UNLV.*

2:00 B52 **761.06** Sensorimotor Integration measured by a Reaching task in Neurodegenerative disease. M. A. SANTOS*; J. O'DOHERTY; G. RABINOVICI; B. L. MILLER; M. GORNO TEMPINI; P. SABES. *Memory and Aging Ctr. UCSF, UCSF.*

3:00 B53 **761.07** ● Global gene expression in chemical-induced animal model for cognitive disorder. H. LEE*; S. CHOI; S. LEE; S. CHA; K. CHANG; S. KIM. *Chung-Ang Univ. Col. of Med., Korea Res. Inst. of Biosci. and Biotech., Chungbuk Natl. Univ. Col. of Med., UBC Hospital, Univ. of British Columbia.*

4:00 B54 **761.08** Using automated touchscreen system to evaluate attention deficits in mouse models of Alzheimer's disease: Improving the transition from bench to bedside. F. H. BERALDO*; T. S. MASOOD; D. PALMER; D. I. WASSERMAN; S. D. CREIGHTON; M. F. COWAN; B. KOLISNYK; T. GEE; S. LIANG; R. BARTHA; S. C. STROTHER; V. F. PRADO; B. D. WINTERS; M. A. M. PRADO. *Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Guelph, Rotman Res. Institute, Baycrest Hosp., Univ. of Western Ontario, Univ. of Toronto, Univ. of Western Ontario.*

1:00 B55 **761.09** The left fusiform gyrus is the crucial region of the neuroanatomical network underlying the core behavioral profile of semantic dementia. J. DING*; K. CHEN; Y. CHEN; Y. FANG; Q. YANG; Y. LV; N. LIN; Y. BI; Q. GUO; Z. HAN. *Beijing Normal Univ., Huashan Hospital, Fudan Univ., Beijing Normal Univ., Huashan Hospital, Fudan Univ., Chinese Acad. of Sci.*

2:00 B56 **761.10** Alterations of learning-induced hippocampal ripples in a mouse model of Alzheimer's disease impairs spatial memory formation. O. NICOLE*; S. HADZIBEGOVIC; J. GAJDA; B. BONTEMPI, PhD; T. BEM; P. MEYRAND. *CNRS, Univ. Bordeaux, UMR-CNRS5293, Nalecz Inst. of Biocybernetics and biomedical engineering.*

3:00 B57 **761.11** ● Novel 5-HT6 antagonist, SUVN-502 potentiates the effects of Donepezil on neurochemical and electrophysiological activity in rat hippocampus. S. DARIPELLI; G. BHYRAPUNENI; K. MUDIGONDA*; V. BENADE; G. AYYANKI; V. KAMUJU; R. PONNAMANENI; A. MANOHARAN; R. NIROGI. *Suven Life Sci.*

4:00 B58 **761.12** Alleviating effects of Fructus mume extracts on cognitive impairments in 5XFAD transgenic mice. J. PARK*; J. MA; W. JEON; J. HAN. *Konkuk Univ., Korea Inst. of Oriental Med.*

1:00 B59 **761.13** Neuropathological correlates of cognitive impairments in Alzheimer's disease. F. CALON*; C. TREMBLAY; A. FRANÇOIS; M. VANDAL; D. BENNETT. *Laval Univ., Rush Alzheimer's Dis. Ctr.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 B60 **761.14** Impaired hippocampal synapse remodeling on GABAergic neurons correlates with memory deficits. L. C. SCHMID*; M. MITTAG; S. POLL; J. STEFFEN; S. REMY; M. FUHRMANN. *DZNE.*

3:00 B61 **761.15** Lifetime and current physical and cognitive activity: Impact on current cognitive performance. L. L. DROGOS*; G. ESKES; R. LONGMAN; S. GILL; A. TYNDALL; M. H. DAVENPORT; C. M. FRIEDENREICH; D. B. HOGAN; M. D. HILL; B. J. WILSON; M. J. POULIN. *Univ. of Calgary, Univ. of Calgary, Dalhousie Univ., Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

4:00 B62 **761.16** Altered functional connectivity of prefrontal cortex underpins the abnormality of intra-individual variability in reaction time in mild cognitive impairment. P. REN*; R. WU; M. MAPSTONE; F. LIN. *Univ. of Rochester.*

1:00 B63 **761.17** ● Safety, tolerability and pharmacokinetics of a potent and selective 5-HT6 receptor antagonist, SUVN-502 following multiple ascending doses in healthy elderly humans, and effect of gender and food on single dose pharmacokinetics. R. V. NIROGI*; K. MUDIGONDA; K. PENTA; G. BHYRAPUNENI; D. AJJALA; N. MUDDANA; V. PALACHARLA; V. GOYAL; S. PANDEY; R. ABRAHAM; P. JAYARAJAN; R. KAMBHAMPATI; A. SHINDE. *Suven Life Sci.*

2:00 B64 **761.18** S-nitroso-proteome in individuals naturally resistant to Alzheimer's disease. O. ZOLOCHEVSKA*; N. L. BJORKLUND; R. L. WOLTJER; J. E. WIKTOROWICZ; G. TAGLIALATELA. *UTMB, UTMB, OHSU, UTMB.*

3:00 B65 **761.19** Impairment of intradimensional shift in an attentional set-shifting task in rats with chronic bilateral common carotid artery occlusion. D. KIM*; B. CHOI; W. JEON; J. HAN. *Konkuk Univ., Korea Inst. of Oriental Med.*

4:00 B66 **761.20** Role of aberrant expression of neuroprotective genes in DLB and other synucleinopathy disorders. P. C. MONTENEGRO*; K. J. HEAD; B. DEHAY; E. BEZARD; J. JELINEK; Y. LIU; K. P. NEPHEW; J. ROCHET. *Purdue Univ., Purdue Univ., Univ. of Bordeaux Segalen, Temple Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

1:00 B67 **761.21** Functional evaluation of dementia-associated mutations. Q. YUAN*; N. HUSAIN; H. S. JE. *Duke-Nus Grad. Med. School, Natl. Univers, NUS Grad. Sch. for Integrative Sci. and Engineering, Natl. Univ. of Singapore, Dept. of Physiology, Yong Loo Lin Sch. of Medicine, Natl. Univ. of Singapore.*

2:00 B68 **761.22** Chronic treatment with dimethyl sulfoxide (DMSO) affects neuronal structure and function *in vivo.* L. PENAZZI; J. LORENGEL; R. BRANDT; L. BAKOTA*. *Univ. of Osnabrück.*

3:00 B69 **761.23** Braak stage relevance to cognitive impairment in nondemented elderly. E. J. MUFSON*; M. MALEK-AHMADI; K. CHEN. *Barrow Neurologic Inst., Banner Alzheimer's Inst.*

4:00 B70 **761.24** ● 5-HT6 antagonist SUVN-502 potentiates the procognitive and neurochemical effects of combined treatment with donepezil and memantine. R. MEDAPATTI; P. JAYARAJAN*; R. ABRAHAM; G. BHYRAPUNENI; V. BENADE; G. AYYANKI; R. VENKATESHWARLU; N. MUDDANA; R. PONNAMANENI; R. NIROGI. *Suven Life Sci. Ltd.*

1:00 B71 **761.25** Memory dysfunction in a rat model of Alzheimer's disease. C. R. GALLOWAY*; M. L. AIREY; K. RAVIPATI; R. M. COHEN; A. I. LEVEY; J. R. MANNS. *Emory Univ., Emory Univ., Emory Univ., Emory Univ.*

2:00 B72 **761.26** Interaction between metabolic syndrome and Alzheimer's disease. N. IVANOVA*; N. WEISHAUPT; S. N. WHITEHEAD; D. F. CECHETTO. *Western Univ.*

3:00 B73 **761.27** Identification and characterization of a novel $GABA_A$α5 negative allosteric modulator. M. NAKANISHI; S. KAWAHARADA; N. NAKANISHI; K. HAZAMA; H. MIYATA; M. HIGASHINO; A. LEWIS; G. CLARK; M. CHAMBERS; K. HIRST; S. MAIDMENT; A. RAE; G. WISHART; A. KISHI*; T. YASUHIRO; S. KATSUMATA. *ONO Pharmaceut. Co., Ltd, BioFocus.*

4:00 B74 **761.28** ABCA7 variant and its impact on Alzheimer's disease. J. VASQUEZ*; S. ESTUS; J. SIMPSON. *Univ. of Kentucky.*

1:00 B75 **761.29** Amyloid β enhances typical rodent behavior while it impairs contextual memory consolidation. K. G. SALGADO*; F. PEÑA-ORTEGA; R. PRADO-ALCALÁ. *Inst. De Neurobiologia, Univ. Nacional Autónoma de México.*

POSTER

762. Parkinson's Disease: Rodent Models III

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 B76 **762.01** Contribution of neuroinflammation to Parkinson's disease in humanized immune system mice. G. D. MANOCHA*; K. L. PUIG; C. K. COMBS. *Univ. North Dakota, Univ. of North Dakota, Univ. of North Dakota.*

2:00 B77 **762.02** The ROCK inhibitor fasudil alters alpha-synuclein aggregation *in vitro* and improves motor and cognitive behavior in alpha-synuclein.A53T.tg mice *in vivo.* L. TATENHORST*; H. WALLE; K. ECKERMANN; V. DAMBECK; L. FONSECA; T. LOPES DA FONSECA; J. C. KOCH; L. TÖNGES; M. BÄHR; T. F. OUTEIRO; M. ZWECKSTETTER; P. LINGOR. *Univ. Med. Goettingen, Max Planck Inst. for Biophysical Chem., Univ. Med. Goettingen, DFG Res. Ctr. for Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB).*

3:00 B78 **762.03** ● Glucocerebrosidase modulates cognitive and motor activities in Parkinson's disease mouse models. J. CLARKE; E. ROCKENSTEIN; C. VIEL; C. TRELEAVEN; C. KIM; B. SPENCER; A. ADAME; H. PARK; J. DODGE; S. CHENG; L. SHIHABUDDIN; E. MASLIAH; S. SARDI*. *Genzyme, a Sanofi Co., Neurosciences and Pathology Departments, UCSD.*

4:00 B79 **762.04** The role of neuronal peroxisome proliferator-activated receptors in the MPTP mouse model of Parkinson's disease. P. TEISMANN*; R. B. MOUNSEY; H. L. MARTIN; M. C. NELSON; R. M. EVANS. *Univ. of Aberdeen, Salk Inst.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 B80 **762.05** ● Development of a leucine-rich repeat kinase 2 *in vivo* Parkinson's disease model by stereotactic intracranial injection of high-capacity adenoviral vectors. A. KRITZINGER*; T. CIOSSEK; B. FERGER; S. KOCHANEK. *Ulm Univ. Med. Ctr., Boehringer Ingelheim Pharma GmbH & Co KG.*

2:00 B81 **762.06** Loss of ATP13A2 function accelerates the behavioral phenotype in mice that overexpress human wildtype alpha-synuclein. E. DIRR; R. BLACKWOOD; N. SANTIAGO; E. DEVINE; E. MASLIAH; P. SCHULTHEIS; G. SHULL; Y. SUN; M. ROMERO-RAMOS; P. FERNAGUT; E. BEZARD; B. DEHAY; S. M. FLEMING*. *Univ. of Cincinnati, UCSD, Northern Kentucky Univ., Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Univ. of Aarhus, Univ. of Bordeaux, Univ. of Cincinnati.*

3:00 B82 **762.07** Complementary phenotypic characterization of two genetically modified animal models of Parkinson's disease: Line 61 and Line D. S. RAMBOZ*; K. CIRILLO; R. SPRINGER; M. MAZZELLA; M. WINDISCH; K. WALKER. *Psychogenics Inc.*

4:00 B83 **762.08** Dysregulated macroautophagy and mitochondrial dynamics in pd with glucocerebrosidase mutations. H. LI*; A. HAM; M. CHENG; Y. QUAN; S. KUO; G. TANG. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr.*

1:00 B84 **762.09** Loss of striatal mitochondrial mitoNEET leads to a Parkinson's disease phenotype in mice. W. J. GELDENHUYS*; L. LIN; P. SADANA; M. A. SMITH; G. N. WILSON; S. D. CRISH; D. M. INMAN; H. M. YONUTAS; P. G. SULLIVAN; A. S. DARVESH. *Northeast Ohio Med. Univ., Univ. of Kentucky.*

2:00 B85 **762.10** ● Behavioural and histopathological characterization of mice with glucocerebrosidase knock-out in dopaminergic neurons. P. FERNAGUT*; M. ENGELN; S. DOVERO; F. N. SORIA; B. DEHAY; E. NORMAND; M. MARTINEZ-VICENTE; C. GLANGETAS; F. GEORGES; M. VILA; C. LO BIANCO; E. BEZARD. *Inst. Des Maladies Neurodegeneratives, Interdisciplinary Inst. of Neurosci., Vall d'Hebron Res. Inst. (VHIR)-Center for Networked Biomed. Res. on Neurodeg. (CIBERNED) - Catalan Inst. for Res. and Advanced Studies (ICREA), Merck Serono Institute, Neurodegenerative Dis. Department, Geneva, Switzerland, Current position: Diagnos. Develop. Services, Covance Central Lab. Services, Geneva, Switzerland.*

3:00 B86 **762.11** Targeting GBA1 for Parkinson's disease research. K. D. DAVE*; A. K. MARTIG; T. N. MARTINEZ; L. J. PELLEGRINO; L. B. DUNGAN; R. HAMLER; S. W. CLARK; P. D. BUCKETT; Y. CHEN; W. SHAN; W. D. HIRST; M. SASNER; M. HERBERTH; R. SWITZER; T. B. SHERER; B. K. FISKE. *The Michael J. Fox Fndn. For Parkinson's Res., Amicus Therapeut., Pfizer, The Jackson Lab., WIL Res., NeuroScience Associates.*

4:00 B87 **762.12** The effect of aging on catecholamines and purines levels in the basal ganglia of mice carrying the A53T and A30P alpha-synuclein mutations. A. K. PANI; D. B. LESTER; A. KORFF; Y. JIAO*; R. J. SMEYNE. *St.Jude Children's Res. Hosp.*

1:00 B88 **762.13** ● The accelerating rotarod is a more sensitive test for detecting dopamine-related loss of motor function than automated gait analysis. D. ANDERSSON*; M. RONILD; J. FULLERTON STØIER. *H. Lundbeck A/S.*

2:00 B89 **762.14** Sex and genotype specific differences in inflammation and degeneration of the substantia-nigral dopamine system in a multi-hit model of Parkinson's disease. S. BELLEVUE*; Z. DWYER; C. RUDYK; M. CHAIQUIN; S. HAYLEY. *Carleton Univ.*

3:00 B90 **762.15** Loss of striatal cholinergic interneurons in a transgenic synucleinopathy model leads to motor dysfunctions and induces adaptive changes in dopamine receptor levels. S. FRAHM*; K. SCHWAB; M. MAGBAGBEOLU; H. LÜCK; V. MELIS; G. RIEDEL; C. WISCHIK; C. R. HARRINGTON; F. THEURING. *Charite - Universitaetsmedizin Berlin, TauRx Therapeut. Ltd., Univ. of Aberdeen.*

4:00 B91 **762.16** Exogenous induction of α-synucleinopathy is governed by agent and host. M. BACIOGLU*; M. SCHWEIGHAUSER; J. MAHLER; B. M. WEGENAST-BRAUN; K. P. R. NILSSON; H. SCHELL; D. R. SHIMSHEK; P. J. KAHLE; Y. S. EISELE; M. JUCKER. *Hertie Inst. For Clin. Brain Res. (Univ, Hertie Inst. For Clin. Brain Res. (University of Tuebingen) and German Ctr. of Neurodegenerative Dis. (Tuebingen), IFM, Hertie Inst. For Clin. Brain Res. (University of Tuebingen) and German Ctr. of Neurodegenerative Dis. (Tuebingen), Novartis Inst. for BioMedical Res.*

1:00 B92 **762.17** LRRK2 plays a role in substantia nigra dopaminergic cell loss in an environmental toxin model of Parkinson's disease. C. A. RUDYK*; Z. DWYER; S. E. BELLEVUE; S. P. HAYLEY. *Carleton Univ.*

2:00 B93 **762.18** Exploiting the relationship between parkin and DMT1 to generate a novel "gene-environmental" mouse model of Parkinson's disease. B. H. CHAI*; C. ZHANG; A. Y. K. TAI; E. T. E. HONG; T. SOONG; K. LIM. *Natl. Neurosci. Inst., Natl. Univ. of Singapore, Duke-NUS Grad. Med. Sch.*

3:00 B94 **762.19** Progressive age-dependent loss of nigrostriatal dopaminergic neurons in Progranulin deficient mice. R. BANERJEE; N. AMMAL KAIDERY; M. AHUJA; L. YANG; N. STARKOVA; A. DING; J. MORGAN; F. BEAL; A. STARKOV; B. THOMAS*. *CSIR-Indian Inst. of Chem. Biol., Inst. of Neurosciences, Georgia Regents Univ., Kunmig Biomed, Weill Med. Col. of Cornell Univ., Weill Med. Col. of Cornell Univ., Med. Col. of Georgia, Georgia Regents Univ., Med. Col. of Georgia, Georgia Regents Univer.*

4:00 B95 **762.20** Withdrawn.

1:00 B96 **762.21** Nitric oxide modulation effects in the reserpine-induced oral abnormal involuntary movements in rats. M. BORTOLANZA*; A. ISSY; K. BARIOTTO; C. A. DA-SILVA; E. A. DEL-BEL. *Univ. of São Paulo.*

2:00 B97 **762.22** Cannabidiol modulates L-DOPA induced dyskinesia via CB1 receptor. M. S. PEREIRA*; C. SILVA; F. GUIMARÃES; E. DEL BEL. *Univ. De São Paulo, Univ. De São Paulo, Univ. De São Paulo.*

3:00 B98 **762.23** Role of dorsostriatal D3 receptors in motivational processes: Implication for neuropsychiatric symptoms in Parkinson's disease. M. FAVIER; C. CARCENAC; G. DRUI; S. BOULET; M. SAVASTA; S. CARNICELLA*. *Grenoble Inst. Des Neurosciences - Inserm U836.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

4:00 B99 **762.24** Functional connectivity changes following deep brain stimulation in the subthalamic nucleus measured with FDG-PET. E. KORDYS; N. APETZ; F. JUNG; B. NEUMAIER; A. DRZEZGA; L. TIMMERMANN; H. ENDEPOLS*. *Inst. of Radiochemistry and Exp. Molec. Imaging, Univ. Hosp. Cologne, Univ. Hosp. Cologne.*

1:00 B100 **762.25** A novel mouse model of Parkinson's disease: Diamide, a potent thiol oxidant, causes degeneration of dopaminergic neurons and Parkinsonism phenotype in mice. A. RAY*; M. KAMBALI; V. RAVINDRANATH. *Indian Inst. of Sci.*

2:00 B101 **762.26** ● ▲ Levodopa chronic treatment promotes reinforcing properties of pramipexole in an alpha-synuclein rat model of Parkinson's disease: Linking behavior to transcriptional modifications. S. LOIODICE*; P. WINLOW; S. DREMIER; A. HAFIDI; A. NOGUIERA DA COSTA; F. DURIF. *Univ. D'Auvergne EA7280 Npsy-Sydo, UCB Biopharma SPRL.*

POSTER

763. LRRK2 and Other Mechanisms in Parkinson's Disease

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 B102 **763.01** Hdac6 mediates the action of Parkinson's disease-related lrrk2 mutations. C. B. TRENGROVE*; H. LI; J. DUSONCHET; J. Y. BOON; M. GUILLILY; M. LIU; A. MAMAIS; A. CITRO; K. YOUMANS; Z. YUE; R. BANDOPADHYAY; M. A. GLICKSMAN; J. J. COLLINS; B. WOLOZIN. *Boston Univ., Mayo Clin. Col. of Med., Harvard Univ., Boston Univ., Brigham and Women's Hosp., Reta Lila Weston Inst. of Neurolog. Studies, UCL, Inst. of Neurol., Icahn Sch. of Med. at Mount Sinai, Dept. of Biol. Engin. and Inst. for Med. Engin. & Sci.*

2:00 B103 **763.02** LRRK2 kinase inhibitors of different structural classes induce abnormal, but reversible, accumulation of lamellar bodies in type II pneumocytes in non-human primates. M. A. BAPTISTA*; K. M. MERCHANT; S. BHARGHAVA; D. BRYCE; M. ELLIS; A. A. ESTRADA; M. FELL; R. N. FUJI; P. GALATSIS; S. HILL; W. D. HIRST; C. HOULE; M. KENNEDY; X. LIU; M. MADDESS; C. MARKGRAF; H. MEI; E. NEEDLE; S. STEYN; Z. YIN; H. YU; B. K. FISKE; T. B. SHERER. *Michael J. Fox Fndn., Pfizer, Merck and Co., Genentech Inc.*

3:00 B104 **763.03** Histological and clinical pathology in LRRK2-related mouse and rat models. T. N. MARTINEZ*; M. A. S. BAPTISTA; M. A. GREELEY; M. T. HERBERTH; D. KOVARIK; A. MARTIG; K. D. DAVE; M. A. FRASIER; B. FISKE; T. SHERER. *The Michael J. Fox Fndn. For Parkinson's Res., WIL Res.*

4:00 B105 **763.04** ● *Ex vivo* inhibition of LRRK2 phosphorylation by a new kinase inhibitor in peripheral blood cells of subjects with and without G2019S LRRK2 mutation. P. PLAS*; C. ROUSSELIE; F. BONELLO; K. TAHIRI; S. ROLLAND; F. SCHMIDLIN; B. SPINNEWYN; C. TRANCHANT; M. ANHEIM; P. KRACK; A. CASTRIOTO; P. DAMIER; S. LE DILY; T. DANAILA; I. ROULLET-SOLIGNAC; V. CHAIGNEAU; O. RASCOL; S. FORLANI; A. BRICE; P. CHABRIER; J. CORVOL. *IPSEN, Sorbonne Universités, UPMC Univ. Paris 06, INSERM UMRS_1127 and CIC_1422, CNRS UMR_7225, AP-HP, ICM, DNA and Cell Bank, CHU Pitié-Salpêtrière, Paris, France, service de Neurologie Hop. de Hautepierre 1 Avenue Molière 67000 Strasbourg ; et Fédération de Médecine Translationnelle, Faculté de médecine , Strasbourg, Fonctions Cérébrales et Neuromodulation, Inst. des Neurosciences de Grenoble - Inserm U.836-UJF-CEA-CHU, CHU de Nantes, INSERM CIC_0004, Nantes, France, Service de Neurologie, CHU de Lyon, Lyon, France, INSERM, NS-Park network and CIC_9302, CHU de Toulouse, Toulouse, France, DNA and cell bank, ICM CNRS UMR 7225, Inserm U1127, UPMC-P6 UMRS 1127.*

1:00 B106 **763.05** Modulation of LRRK2 kinase activity by a fragment of its COR domain. A. SCHAFFNER*; X. LI; Y. GOMEZ; I. UBARRETXENA; Z. YUE. *Icahn Sch. of Med. At Mt. Sinai, Icahn Sch. of Med. At Mt. Sinai, Icahn Sch. of Med. At Mt. Sinai.*

2:00 B107 **763.06** LRRK2 mediation of alpha-synuclein aggregation. Y. VOSKOBIYNYK*; L. A. VOLPICELLI-DALEY; A. B. WEST. *Univ. of Alabama at Birmingham.*

3:00 B108 **763.07** Elevated Ser(p)-1292 LRRK2 in exosomes from Parkinson's disease subjects. K. B. FRASER*; R. ALCALAY; M. MOEHLE; D. STANDAERT; A. WEST. *Univ. of Alabama At Birmingham, Columbia Univ.*

4:00 B109 **763.08** The role of LRRK2 in inflammaging and Parkinson's disease. E. M. KLINE*; D. A. COOK; G. T. KANNARKAT; J. CHANG; J. LEE; J. M. BOSS; M. G. TANSEY. *Emory Univ.*

1:00 B110 **763.09** ● LRRK2 small molecule inhibitors block α-synuclein-mediated dopaminergic neurodegeneration. H. ABDELMOTILIB*; J. P. DAHER; X. HU; P. GALATSIS; W. D. HIRST; A. B. WEST. *Univ. of Alabama At Birmingham, Univ. of New South Wales, Pfizer neuroscience and pain research unit.*

2:00 B111 **763.10** LRRK2 mediates myeloid cell chemotactic responses. M. S. MOEHLE*; J. P. L. DAHER; T. D. HULL; R. BODDU; H. A. ABDELMOTILIB; J. A. MOBLEY; G. T. KANNARKAT; M. G. TANSEY; A. B. WEST. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Emory Univ.*

3:00 B112 **763.11** Lrrk2 autophosphorylation enhances gtpase activity. Z. LIU*; L. DELUCAS; W. ANDREW. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

4:00 C1 **763.12** ● ▲ Identification and Characterization of a novel LRRK2 kinase inhibitor: ODS2005294. B. SPINNEWYN*; C. BERTHET; G. MAUTINO; O. LAVERGNE; P. BLOM; J. HOFLACK. *IPSEN, Oncodesign.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 C2 **763.13** The protective R1398H LRRK2 variant affects GTPase activity and canonical Wnt signalling. D. C. BERWICK*; J. NIXON-ABELL; S. GRANNO; V. A. SPAIN; C. BLACKSTONE; K. HARVEY. *Univ. Col. London, The Open Univ., NIH.*

2:00 C3 **763.14** Nicotine improves abnormal mitochondrial morphology but not turnover in Parkin loss-of-function *Drosophila* dopaminergic neurons that modulate motor behavior. L. M. BUHLMAN*; J. CACKCOVIC; G. B. CALL; S. GUTIERREZ. *Midwestern Univ., Midwestern Univ.*

3:00 C4 **763.15** Lack of dopaminergic neuron degeneration in the substantia nigra pars compacta of non-human primates with chronic manganese exposure. K. K. GONZALES*; J. MCGLOTHAN; K. H. STANSFIELD; J. S. SCHNEIDER; T. R. GUILARTE. *Columbia Univ., Thomas Jefferson Univ.*

4:00 C5 **763.16** ▲ Disruption of Parkin integrity by caspase or calpain-cleavage induced by proteasomal or mitochondrial impairment and its prevention by cAMP: Relevance to Parkinson's disease. A. STOLL; T. JEAN-LOUIS; H. WANG; Q. HUANG; P. ROCKWELL; M. E. FIGUEIREDO-PEREIRA*. *Hunter Col. CUNY, Hunter Col. CUNY, The Grad. Center, CUNY, Hunter Col. CUNY.*

1:00 C6 **763.17** Role of mutations N370S and L444P of the GBA gene in autophagy and its involvement in Parkinson's disease. P. GARCÍA SANZ*; L. ORGAZ GORDILLO; I. ESPADAS; G. BUENO GIL; E. RODRÍGUEZ TRAVER; J. KULISEVSKY; R. GONZÁLEZ-POLO; J. FUENTES; A. GUTIÉRREZ PÉREZ; C. VICARIO ABEJÓN; R. MORATALLA VILLALBA. *Cajal Inst. /CSIC, CIBERNED, Inst. de Salud Carlos III, Hosp. de la Santa Creu i Sant Pau, F. Enfermería y T.O., Univ. de Extremadura., Facultad de Ciencias, Inst. de Investigación Biomédica de Málaga (IBIMA), Univ. de Málaga.*

2:00 C7 **763.18** Identification of transglutaminase 2 as a novel substrate of PINK1 and its physiological consequence of Lewy body formation in Parkinson's disease. B. MIN; S. LEE; H. RHIM; K. C. CHUNG*. *Yonsei Univ., Ctr. for Neuroscience, Brain Sci. Institute, Korea Inst. of Sci. and Technol. (KIST), Yonsei Univ.*

3:00 C8 **763.19** ● An evolutionarily conserved RAB7L1-LRRK2 pathway regulates lysosome integrity and neurite morphology. T. KUWAHARA*; K. INOUE; T. IWATSUBO; A. ABELIOVICH. *Univ. Tokyo Grad Sch. Med., Columbia Univ.*

4:00 C9 **763.20** Differential kinase function between dimeric/oligomeric and monomeric LRRK2 species isolated from size exclusion chromatography fractions. M. LEANDROU; K. MELACHROINOU; A. MEMOU; L. STEFANIS; H. J. RIDEOUT*. *Biomed. Res. Foundation, Acad. of Athens, Univ. of Athens Med. Sch.*

1:00 C10 **763.21** Post-transcriptional regulation of α-synuclein by lrrk2 through interactions with micrornas in Parkinson's disease. J. BOON*. *Boston Univ. Sch. of Med.*

2:00 C11 **763.22** The kinin system in the 6-hydroxy-dopamine model of Parkinson´s disease. L. M. DATI*; L. R. G. BRITTO. *Univ. of Sao Paulo.*

3:00 C12 **763.23** Characterizing the role of prolyl oligopeptidase in mouse nigrostriatal dopaminergic and GABAergic systems. U. JULKU*; R. SVARCBAHS; M. SAVOLAINEN; S. TIILIKAINEN; T. MYÖHÄNEN. *Univ. of Helsinki.*

4:00 C13 **763.24** Classification of Parkinson's disease genotypes in *Drosophila* using spatiotemporal profiling of vision. A. R. WADE*; R. J. H. WEST; C. J. H. ELLIOTT. *Univ. of York, Univ. of York.*

1:00 C14 **763.25** ▲ Levodopa-induced motor behavior alterations in *Drosophila* larvae. A. DERGAN; J. STANTON; R. GOUGH; B. DIEDERICH; B. A. CHASE*. *Univ. Nebraska-Omaha.*

POSTER

764. Neuroprotective Mechanisms in Parkinson's Disease

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 C15 **764.01** Potential role of FosB and ΔFosB in the differential long-term regulation of parkin expression in central dopaminergic neurons in response to acute neurotoxicant exposure. J. PATTERSON*; K. LOOKINGLAND; J. L. GOUDREAU. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

2:00 C16 **764.02** Identification of neuro-protective genes during the progression of dopaminergic cell loss in zebrafish. S. L. WALKER*; S. CHEN; W. YUNG; Y. KE. *The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong.*

3:00 C17 **764.03** ▲ Neurogenesis in hippocampus induced by administration of L-dopa/melatonin in the hemi-parkinsonian rat. A. SANCHEZ-SORIA; M. MORENO; A. GUTIERREZ-VALDEZ; M. AVILA-COSTA; J. RAMOS-JIMENEZ; V. ANAYA-MARTINEZ*. *FES Iztacala, UNAM Campus Iztacala, UACM.*

4:00 C18 **764.04** Rab7 induces clearance of alpha-synuclein aggregates. B. H. FALKENBURGER*; E. DINTER; T. SARIDAKI; M. NIPPOLD; L. FENSKY; L. DIEDERICHS; A. VOIGT; J. SCHULZ. *RWTH Univ. Aachen.*

1:00 C19 **764.05** Mesenchymal stem cells secretome and its role on brain repair effects on neurogenesis and Parkinson's disease regeneration. F. G. TEIXEIRA*, SR; M. CARVALHO; S. SERRA; K. PANCHALINGAM; S. ANJO; B. MANADAS; L. PINTO; N. SOUSA; L. BEHIE; A. SALGADO. *Life and Hlth. Sci. Res. Inst. (ICVS), Sch. of Hlth. Sciences, Un, Life and Hlth. Sci. Res. Inst. (ICVS), Sch. of Hlth. Sciences, Univ. of Minho, Braga, Portugal., Pharmaceut. Production Res. Facility (PPRF), Univ. of Calgary, Calgary, Canada, CNC - Ctr. for Neurosci. and Cell Biology, Univ. of Coimbra, Portugal.*

2:00 C20 **764.06** NEDD4-mediated HSF1 degradation underlies α-synucleinopathy. F. LIAO*; E. KIM; H. CAI. *Univ. Tennessee Hlth. Sci. Ctr., Natl. Inst. on Aging, Bethesda, MD, 20892, USA.*

3:00 C21 **764.07** ● ▲ Roles of ERα, ERβ and GPER1 receptors in neuroprotective and anti-inflammatory effects of 17β-estradiol in the murine enteric system in a MPTP model of Parkinson's disease. A. POIRIER; M. CÔTÉ; M. BOURQUE; M. MORISSETTE; T. DI PAOLO; D. SOULET*. *CHUQ Res. Ctr., Laval University, Pharm. Fac., CHUQ Res. Ctr., Laval University, Med. Fac.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 C22 **764.08** Endogenous Nociceptin/Orphanin FQ is neurotoxic for nigral dopamine neurons. L. ARCURI*; S. BIDO; R. VIARO; F. LONGO; M. CALCAGNO; P. FERNAGUT; G. CALÒ; E. BEZARD; M. MORARI. *Univ. of Ferrara, Univ. of Ferrara, Univ. de Bordeaux.*

1:00 C23 **764.09** Exercise promotes alterations in Hif1a and Hif2a levels in the SN, which play different roles in the survival of DA neurons in exercise (Hif1a) and standard (Hif2a) conditions. M. SMEYNE; Y. JIAO; L. OAKLEY; R. J. SMEYNE*. *St. Jude Children's Res. Hosp.*

2:00 C24 **764.10** The role of cerebral dopamine neurotrophic factor in zebrafish. Y. CHEN*; S. SEMENOVA; P. PANULA. *Univ. of Helsinki.*

3:00 C25 **764.11** ● Neuroprotective effects of monoacylglycerol lipase inhibition in a 6-hydroxydopamine model of Parkinson's disease in mice. C. PORAZIK*; J. HANSELMANN; N. PASQUARELLI; A. WITTING; B. FERGER. *Boehringer Ingelheim Pharma GmbH & Co. KG, Univ. Ulm.*

4:00 C26 **764.12** Intramuscular administration of C-terminal fragment of tetanus toxin modulates Nrf2 expression and prevents locomotor damage in rats with MPP+. D. JUÁREZ TORRES*; A. CANDALIJA; I. MARTÍNEZ-GARCÍA; J. AGUILERA; F. LUNA; L. MARTÍNEZ MENDIETA; I. D. LIMÓN. *Lab. of Neuropharm. BUAP, Univ. Autonoma de Barcelona, BUAP, BUAP, Inst. Cajal.*

1:00 C27 **764.13** Role of microRNA-155 in alpha-synuclein induced inflammatory response in a model of Parkinson's disease. A. D. THOME*; A. S. HARMS; L. A. VOLPICELLI-DALEY; D. G. STANDAERT. *Univ. of Alabama At Birmingham.*

2:00 C28 **764.14** Nrf2-mediated neuroprotective mechanisms of Dimethylfumarate in a mouse model of Parkinson's disease. M. AHUJA*; N. KAIDERY; L. YANG; N. CALINGASAN; N. SMIRNOVA; A. GAYSIN; I. GAYSINA; T. IWAWAKI; J. MORGAN; R. RATAN; I. GAZARYAN; A. STARKOV; F. BEAL; B. THOMAS. *Georgia Regents Univ., Kunmig Biomed, Weill Med. Col. of Cornell Univ., Burke Cornell Med. Ctr., Northwestern Univ., Univ. of Illinois, Gunma Univ., Georgia Regents Univ.*

3:00 C29 **764.15** Temporal dynamics of 20S and 26S proteasome activities in brain regions containing differentially susceptible central dopaminergic neurons following acute neurotoxicant administration. T. LANSDELL*; K. J. LOOKINGLAND; J. L. GOUDREAU. *Michigan State Universsity, Michigan State Univ., Michigan State Univ.*

4:00 C30 **764.16** Hydroxytyrosol inhibits MAO-B and improves dopaminergic functional recovery after MPP+ administration in rats. G. A. PÉREZ-BARRÓN*; A. MONROY-NOYOLA; M. RUBIO-OSORNIO; S. MONTES; S. GARCÍA-JIMENEZ. *Univ. Autónoma Del Estado De Morelos, Inst. Nacional de Neurología y Neurocirugía.*

1:00 C31 **764.17** Comparative effect of novel incretin analogues in an *in vitro* model of Parkinson's disease. J. JALEWA*; M. K. SHARMA; C. HOLSCHER. *Lancaster Univ.*

2:00 C32 **764.18** Neuroprotective effect of 4R, a tobacco cembranoid on 6-hydroxydopamine-induced Parkinson's disease in rat. J. HAO*; J. HU; P. A. FERCHMIN; V. A. ETEROVIC. *Univ. of Cincinnati, Univ. Central del Caribe.*

3:00 C33 **764.19** Substantia nigra activation as a mechanism of neuroprotection in a progressive mouse model of Parkinson's disease. R. HOOD*; C. MOORE; P. M. FULLER; C. K. MESHUL. *Behavioral Neuroscience, Oregon Hlth. & Sci. U, Portland VA Med. Ctr., Beth Israel Deaconess Med. Ctr.*

4:00 C34 **764.20** Inactivation of calcineurin/cyclophilin D by Cyclosporin A as a neurorestorative target in a progressive MPTP animal model of PD. M. J. CHURCHILL; M. D. SCONCE; C. MOORE; M. DECRESSAC; C. K. MESHUL*. *VA Med. Ctr., Telethon Inst. of Genet. and Med., OHSU.*

1:00 C35 **764.21** Inhibition of Cdk5/p25 hyperactivity by a truncated peptide (TP5), derived from P35, a Cdk5 activator, provides neuroprotection in the MPTP model of Parkinson's disease. B. BALACHANDRAN KRISHNAMMA*; N. D. AMIN; S. SKUNTZ; V. SHUKLA; J. STEINER; P. GRANT; H. C. PANT. *NIH.*

2:00 C36 **764.22** Plasma and brain levels of several steroids following progesterone treatment in neuroprotection of MPTP-treated male mice. M. BOURQUE*; M. MORISSETTE; S. AL SWEIDI; D. CARUSO; R. C. MELCANGI; T. DI PAOLO. *Ctr. De Recherche Du CHU De Quebec, CHUL, Pharmacol. and Biomolecular Sci., Laval Univ.*

3:00 C37 **764.23** Neurorescue effects of Progesterone on dopaminergic neurons in the MPTP mouse model of Parkinson's disease. N. LITIM*; M. MORISSETTE; T. DI PAOLO. *Neurosci. Res. Unit, Ctr. De Recherche Du CHU De Q, Laval Univ.*

4:00 C38 **764.24** Impact of aging on recombinant adeno-associated and lentiviral vector-mediated transduction of the rat nigrostriatal and striatonigral system. N. POLINSKI*; L. CONGDON; L. FISCHER; F. P. MANFREDSSON; M. BENSKEY; C. J. KEMP; N. C. KUHN; A. COLE-STRAUSS; K. STEECE-COLLIER; K. L. PAUMIER; J. W. LIPTON; C. E. SORTWELL. *Michigan State Univ.*

1:00 C39 **764.25** Pharmacological rescue of Parkinson's disease symptoms in *Drosophila* larvae. D. LEE*; E. PODOLSKY; J. BLOSSER. *Ohio Univ., Ohio Univ.*

POSTER

765. Epilepsy Genetics and Seizure Dynamics

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 C40 **765.01** Brain somatic mutations in MTOR cause focal cortical dysplasia type II leading to intractable epilepsy. J. LIM; W. KIM; H. KANG; D. KIM; D. KIM; J. LEE*. *KAIST, Yonsei Univ. Col. of Med., KAIST.*

2:00 C41 **765.02** Characterization of de novo gabrg2 mutations associated with epileptic encephalopathies. D. SHEN*; C. HERNANDEZ; W. SHEN; N. HU; A. PODURI; B. SHIEDLEY; E. GOLDBERG; I. HELBIG; X. ORTIZ-GONZALEZ; J. LEMKE; E. MARSH; R. MACDONALD. *Vanderbilt Univ., Vanderbilt Univ., Boston Children's Hosp., Harvard Med. Sch., Boston Children's Hosp., Univ. of Pennsylvania, the Children's Hosp. of Philadelphia, the Univ. of Pennsylvania, Univ. of Leipzig, Children's Hosp. of Philadelphia, Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C42 **765.03** Scn2a-null heterozygosity improves survival and modifies neurocardiac interaction in the Kcna1-null mouse model of SUDEP. V. MISHRA*; N. GAUTIER; B. K. KARUMURI; R. LIU; I. VLACHOS; L. D. IASEMIDIS; E. GLASSCOCK. *Louisiana State Univ. Hlth. Sci. Ctr., Louisiana Tech. Univ.*

4:00 C43 **765.04** Identification of seizure susceptibility loci using the Collaborative Cross. M. BI*; R. RAM; G. MORAHAN; L. M. ITTNER. *The Univ. of New South Wales, Harry Perkins Inst. of Med. Res., Neurosci. Res. Australia.*

1:00 C44 **765.05** ● Microarray based analysis of novel copy number variants of cohort with epileptic patients in Saudi Arabia. M. I. NASEER*; M. FAHEEM; A. G. CHAUDHARY; F. BIBI; M. M. JAN; M. RASOOL; M. H. AL-QAHTANI. *CEGMR King Abdulaziz Univ., King Abdulaziz Univ., King Abdulaziz Univ., King Abdulaziz Univ.*

2:00 C45 **765.06** Computational models of ictogenesis. T. JACOB*; W. SWIERCZ; K. STALEY. *Massachusetts Gen. Hospital/Harvard Med. Sch., Kiva Systems.*

3:00 C46 **765.07** Statistical and computational modeling of meso- and mircoscale human seizure activity. G. M. FIDDYMENT*; O. AHMED; L. MARTINET; U. EDEN; S. CASH; M. KRAMER. *Boston Univ., Brown Univ., Boston Univ., Mass Gen. Hosp. / Harvard Univ.*

4:00 C47 **765.08** Neuronal field dynamics interact across spatial scales during propagation of human seizures. L. MARTINET*; G. FIDDYMENT; O. J. AHMED; E. N. ESKANDAR; S. S. CASH; M. A. KRAMER. *Boston Univ., Brown Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

1:00 C48 **765.09** Local hubs of the functional modular structure serve as an indicator of the epileptic zone: An iEEG study. B. FILE*; T. NÁNÁSI; B. TÓTH; M. MOLNÁR; C. J. STAM; A. HILLEBRAND; I. ULBERT; L. ENTZ; L. ERőSS; D. FABÓ. *Pázmány Péter Catholic Univ., Inst. of Cognitive Neurosci. and Psychology, RCNS, HAS, Dept. of Clin. Neurophysiol. and MEG Center, VU Univ. Med. Ctr., Natl. Inst. for Clin. Neurosciences, Natl. Inst. for Clin. Neurosciences.*

2:00 C49 **765.10** Expanding the taxonomy of seizure dynamics. J. SCOTT; Y. BHAGAT; C. BERNARD; V. JIRSA; W. C. STACEY*. *Univ. of Michigan, Univ. of Michigan, Aix Marseille Univ.*

3:00 C50 **765.11** Ictal discharges arise from the ictal wavefront in spontaneous human seizures. E. H. SMITH*; J. LIOU; T. DAVIS; E. MERRICKS; B. GREGER; P. HOUSE; G. MCKHANN; R. R. GOODMAN; R. EMERSON; L. BATEMAN; A. TREVELYAN; C. SCHEVON. *Columbia Univ., Columbia Univ., Univ. of Utah, Newcastle Univ., Arizona State Univ., Icahn Sch. of Med. at Mount Sinai, Weill Cornell Med. Col.*

4:00 C51 **765.12** Cognitive activation can suppress epileptic afterdischarges. R. P. LESSER*; H. J. LESSER; P. F. MORRISON; W. R. S. WEBBER. *Johns Hopkins Hosp, Univ. of Pennsylvania, Maine Med. Ctr.*

1:00 C52 **765.13** Brain state predicts success or failure of cognitive effort in suppressing epileptic after discharges. S. E. MULDOON*; J. COSTANTINI; R. P. LESSER; W. R. S. WEBBER; D. S. BASSETT. *Univ. of Pennsylvania, US Army Res. Lab., Johns Hopkins Med. Institutions.*

2:00 C53 **765.14** Phase analysis of network dynamics in human electrocorticography: A potential adjunct to visual inspection for seizure detection. K. J. O'NEILL*, III; K. ASHMONT; P. ADELSON; B. GREGER. *Arizona State Univ., Barrow Neurolog. Inst. at Phoenix Children's Hosp.*

POSTER

766. Epilepsy Networks and Channels

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 C54 **766.01** ▲ Ketogenic diet induces changes in purine-dopamine neuronal system interactions. J. G. RUBIN; M. L. DYER; W. H. CHURCH*. *Trinity Col.*

2:00 C55 **766.02** Functional synaptic connectivity during development of hippocampal neuronal networks *in vitro*. J. SURESH*; A. BHANSALI; J. MARKS; J. WANG; A. K. TRYBA; W. VAN DRONGELEN. *The Univ. of Chicago, Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

3:00 C56 **766.03** Protective effect of erythropoietin, but not that of Epotris, on cognitive function is compromised in rats subjected to status epilepticus when raised in enriched environment. L. BEZIN*; M. OGIER; J. BODENNEC; S. PANKRATOVA; V. BEREZIN; A. BELMEGUENAI. *Lyon Neurosci. Ctr. - CRNL, Inst. for Epilepsy - IDEE, Lyon Neurosci. Ctr. - CRNL, Univ. of Copenhagen.*

4:00 C57 **766.04** Functional analyses of the CDKL5, a causative gene for severe neurodevelopmental disorders accompanied by intractable epilepsies. T. TANAKA*; K. OKUDA; S. KOBAYASHI; T. MURAKAMI; M. FUKAYA; K. TAKAO; A. WATANABE; M. HAGIWARA; M. MIZUGUCHI; H. SAKAGAMI; T. MIYAKAWA; T. MANABE. *The Univ. of Tokyo, Basic Med. Sci., IMSUT, Kitasato Univ. Sch. of Med., Ctr. for Genet. Analysis of Behavior, Natl. Inst. for Physiological Sci., Inst. for Comprehensive Med. Science, Fujita Hlth. Univ.*

1:00 C58 **766.05** Effect of pinealectomy on experimental absence seizures. A. DE FUSCO*; S. MOYANOVA; I. SANTOLINI; R. CELLI; M. MADONNA; C. SCHWARZER; F. NICOLETTI; J. TCHEKALAROVA; R. T. NGOMBA. *IRCCS INM Neuromed, IRCCS INM Neuromed, Innsbruck Med. Univ., Sapienza Univ., Inst. of Neurobiology, Bulgarian Acad. of Sci.*

2:00 C59 **766.06** ● Modulation of intracellular ATP influences seizure activity via the activity-dependent release of adenosine. J. HALL*; B. G. FRENGUELLI. *Univ. of Warwick.*

3:00 C60 **766.07** ● Stimulation-based endpoints for assessing seizurogenic activity with multiwell microelectrode array technology. D. C. MILLARD*; A. M. NICOLINI; C. A. ARROWOOD; J. D. ROSS. *Axion Biosystems.*

4:00 C61 **766.08** Properties of 4-aminopyradine induced epileptiform activity: Multichannel electrophysiology and optical coherence tomography *in vitro.* T. L. MYERS*; O. C. GONZALEZ; M. M. EBERLE; D. BINDER; H. PARK; M. BAZHENOV. *Univ. of California, Riverside.*

1:00 C62 **766.09** Propagating spikes are associated with the emergence of neocortical high-frequency oscillations remote from the epileptic focus in the mouse-model of temporal lobe epilepsy. L. SHEYBANI*; F. PITTAU; G. BIROT; S. VULLIEMOZ; M. SEECK; K. L. SCHALLER; C. M. MICHEL; C. QUAIRIAUX. *Fac. of Medicine, Univ. of Geneva, Functional Brain Mapping laboratory, Neurol. Clin., Neurosurg. Clin.*

2:00 C63 **766.10** Modulation of EEG by hyperventilation in an animal model of absence seizures. K. A. SALVATI*; N. N. KUMAR; M. P. BEENHAKKER. *Univ. of Virginia.*

3:00 C64 **766.11** Manipulating the medial entorhinal cortex via dreadd receptors in a mouse model of temporal lobe epilepsy. B. S. BARKER*; J. A. HOUNSHELL; R. P. GAYKEMA; M. K. PATEL. *Univ. of Virginia.*

4:00 C65 **766.12** Changes in functional imaging of DBA/1 mouse brain in seizure-induced respiratory arrest. S. KOMMAJOSYULA*; M. E. RANDALL; T. J. BROZOSKI; B. ODINTSOV; C. L. FAINGOLD. *Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med., Univ. of Illinois.*

1:00 C66 **766.13** Seizure-like events in the olfactory cortex of the isolated guinea-pig brain are initiated by extracellular potassium changes. L. M. UVA*; M. CHIKHLADZE; S. SACCUCCI; M. MORBIN; M. DE CURTIS. *Fondazione Inst. Neurologico C. Besta.*

2:00 C67 **766.14** Reduced thalamic expression of thrombospondin-1 in a rat model of spontaneous absence epilepsy. I. SANTOLINI; M. GUIDUCCI; T. IMBRIGLIO; R. CELLI; M. CANNELLA; M. MOTOLESE; V. D'AMORE; R. GRADINI*; G. VAN LUIJTELAAR; P. PARISI; F. NICOLETTI; P. STRIANO; R. T. NGOMBA. *I.R.C.C.S. NEUROMED, Child Neurol. and Sleep Pediatric Centre, Ospedale S. Andrea, Univ. Sapienza, Donders Ctr. for Cognition, Donders Inst. for Brain, Cognition and Behaviour, Radboud Univ., Child Neurology, Chair of Pediatrics, NESMOS Department, Fac. of Med. and Psychology, Sapienza Univ., Dept. of Physiol. and Pharmacology, Sapienza Univ., Pediatric Neurol. and Muscular Dis. Unit, Dept. of Neurosciences Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health, G. Gaslini Institute, Univ. of Genoa.*

3:00 C68 **766.15** Challenging the dogma: Ethosuximide reduces natural and pentobarbital-induced spindles and non-REM sleep. L. J. BARUCHIN; M. VENZI; G. DI GIOVANNI; V. CRUNELLI*. *Cardiff Univ.*

4:00 C69 **766.16** Glial waves during seizures - coupled or uncoupled with neurovascular activity? H. MA*; A. G. S. DANIEL; P. LAFFONT; M. ZHAO; T. H. SCHWARTZ. *Weill Cornell Med. Col., Weill Cornell Med. Col., The Browning Sch.*

1:00 C70 **766.17** Two distinct ictal onset patterns in hippocampal CA1 subfield *in vitro*: A potential therapeutic role for oxytocin in controlling seizures. D. SUBRAMANIAN*; E. N. PRALONG; R. T. DANIEL; A. G. CHACKO; R. STOOP; K. S. BABU. *Christian Med. Col., Univ. Hosp. of Lausanne, Univ. Hosp. of Lausanne.*

2:00 C71 **766.18** Functional connectivity analysis of epileptic neural networks with inhibition. K. P. LILLIS*; K. J. STALEY. *Harvard Med. Sch., Massachusetts Gen. Hosp.*

3:00 C72 **766.19** Optogenetic mapping of functional connectivity in freely-moving mice via insertable wrapping electrode array beneath the skull (iWEABS). A. PARK*; S. LEE; C. LEE; J. KIM; H. LEE; S. PAIK; K. LEE; D. KIM. *KAIST (Korea Advanced Inst. of Sci. and Tec, KAIST (Korea Advanced Inst. of Sci. and Tec, KAIST (Korea Advanced Inst. of Sci. and Tec.*

4:00 C73 **766.20** Differential dominant negative suppression of gabrg2 nonsense epilepsy mutations and the protein structural basis. J. KANG*; J. WANG; D. SHEN; G. XIA; W. SHEN; D. XU; R. MACDONALD. *Vanderbilt Univ., Univ. of Missouri, Vanderbilt Univ. Med. Ctr., Univ. of Missouri.*

1:00 C74 **766.21** Modeling SCN8A mutant epilepsy in patient-derived cortical and peripheral neurons. A. M. TIDBALL*; L. LOPEZ-SANTIAGO; X. DU; K. GLANOWSKA; L. ISOM; J. M. PARENT. *Univ. of Michigan, Univ. of Michigan.*

2:00 C75 **766.22** Kinetic models of Slack channel function confirm cooperative gating in Slack-associated epilepsy mutations. I. H. QURAISHI*; J. KRONENGOLD; L. K. KACZMAREK. *Yale Univ., Yale Univ., Yale Univ.*

3:00 C76 **766.23** Neuronal network dysfunctions at the early stage of epileptogenesis in a genetic model of absence epilepsy. G. JARRE*; D. RUDRAUF; A. DEPAULIS; I. GUILLEMAIN. *Grenoble-Institut Des Neurosciences.*

4:00 C77 **766.24** ● The human GluN2A mutation P552R enhances NMDA receptor function and promotes neurotoxicity. S. F. TRAYNELIS*; K. K. OGDEN; W. CHEN; A. TANKOVIC; E. AIZENMAN; K. B. HANSEN; H. YUAN. *Emory Univ. Sch. of Med., Univ. of Pittsburgh, Univ. of Montana.*

1:00 C78 **766.25** Age-dependency of trauma-induced epilepsy in mice. S. SOLTANI*; J. SEIGNEUR; S. CHAUVETTE; I. TIMOFEEV. *CRIUSMQ, Univ. Laval, CRIUSMQ.*

POSTER

767. Neurotoxicity: Neuroprotective Mechanisms

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 C79 **767.01** FTY720 preserves blood-brain barrier integrity and restricts brain edema in rats subjected to subarachnoid hemorrhage. B. CHANGYALEKET; F. ZHAI; A. MUHAMMAD; C. PAISANSATHAN; D. PELLIGRINO; H. XU*; F. TESTAI. *Univ. Illinois Chicago, Univ. Illinois Chicago.*

2:00 C80 **767.02** Attenuation of methamphetamine-induced neurotoxicity by dl-3-n-butylphthalide in sh-sy5y neuroblastoma cell line. J. ZHAO; H. (. XIONG*; J. LIU; Y. LIU; X. ZHANG; H. LI; H. LIU. *Taian City Central Hosp., Univ. of Nebraska Med. Ctr.*

3:00 C81 **767.03** Blueberries affect neuroinflammation and cognition differentially depending on individual cognitive baseline status. N. THANGTHAENG; M. G. MILLER; S. M. POULOSE; D. F. BIELINSKI; D. R. FISHER; B. SHUKITT-HALE*. *Human Nutrit Res. Ctr. On Aging.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 C82 **767.04** ● Aging and walnut-rich diet supplementation affects the expression of immediate-early genes in critical brain regions. S. M. POULOSE; D. F. BIELINSKI*; J. W. CROTT; A. J. ROE; N. THANGTHAENG; B. SHUKITT-HALE. *USDA Human Nutr. Res. Ctr, Tufts Univ., USDA Human Nutr. Res. Ctr, Tufts Univ.*

1:00 C83 **767.05** ● Effects of strawberry supplementation on mobility and cognition in older adults. M. G. MILLER; N. THANGTHAENG*; T. M. SCOTT; B. SHUKITT-HALE. *Jean Mayer USDA Human Nutr. Res. Ctr. On Aging At Tufts Univ.*

2:00 C84 **767.06** Effect of progesterone treatment in streptozotocin-induced diabetic neuropathy. S. YOUSUF*; F. ATIF; M. C. PRUNTY; J. WANG; D. G. STEIN. *Emory Univ., Univ. of Missouri-Columbia.*

3:00 C85 **767.07** Neuroprotective effect of valproic acid in a neonate rat hypoxia model. J. M. ORTEGA IBARRA*, SR; S. J. LÓPEZ PÉREZ. *Univ. De Guadalajara, Univ. De Guadalajara.*

4:00 C86 **767.08** Protective role of folic acid against glutamate-induced excitotoxicity in hippocampal slices is dependent on PI3K/AKT/GSK-3B/B-catenin pathway and inhibition of iNOS. M. MORETTI*; J. BUDNI; S. MOLZ; T. DAL-CIM; M. D. MARTÍN-DE-SAAVEDRA; J. EGEA; M. G. LÓPEZ; C. I. TASCA; A. L. S. RODRIGUES. *Univ. Federal De Santa Catarina, Univ. Federal de Santa Catarina, Univ. do Contestado, Univ. Autónoma de Madrid.*

1:00 C87 **767.09** Binge ethanol exposure increases the Kruppel-like factor 11-monoamine oxidase (MAO) pathway in rats: Examining the use of MAO inhibitors to prevent ethanol-induced brain injury. J. W. DUNCAN*; X. ZHANG; S. JOHNSON; C. UDEMGBA; N. WANG; S. HARRIS; X. OU; C. STOCKMEIER; J. WANG. *Univ. of Mississippi Med. Ctr., Case Western Reserve Univ., Univ. of Mississippi Med. Ctr.*

2:00 C88 **767.10** Rosmarinic acid and carnosic acid display overlapping and distinct neuroprotective effects in cultured cerebellar granule neurons. F. I. TARAM*; E. IGNOWSKI; D. LINSEMAN. *Univ. of Denver, Univ. of Denver.*

3:00 C89 **767.11** Zinc modulates autophagy flux via regulation of cathepsins activity and expression. K. KIM*; S. KANG; R. MEHMOOD; Y. KIM. *Sejong Univ.*

4:00 C90 **767.12** The protective role of erythropoietin on the histological changes in ca1 region of the hippocampus of diabetic mice. M. A. OTHMAN*; E. K. RAJAB; A. H. AL-ANSARI. *Arabian Gulf Univ. Col. of Med., Assiut Univ. Fac. of Med., Ahlia Univ. Col. of Med. and Hlth. Sci., Arabian Gulf Univ. Col. of Med.*

1:00 C91 **767.13** ● Oral administration of AQ is neuroprotective in an acute slice model of oxygen-glucose deprivation. E. L. ADAMS*; V. L. EHLERS; N. B. FETTINGER; S. C. MICHELS; J. R. MOYER, Jr. *Univ. of Wisconsin-Milwaukee.*

2:00 C92 **767.14** Docosahexanoic acid protection under lipotoxicity: Role of pi3k/akt pathway. M. DESCORBETH*; M. DE LEON. *Loma Limda Univ.*

3:00 C93 **767.15** ▲ Vitamin-D3 upregulation of synaptic proteins, activity- dependent neuroprotective protein and bcl-xL may provide neuroprotection to cortical neurons. S. KANG; K. BLACKBURN; D. SLAWSKI; J. K. MORRIS*. *Baldwin Wallace Univ., The Univ. of Toledo, Baldwin Wallace Univ.*

4:00 C94 **767.16** Gene expression is modulated by pleiotrophin absence in the hippocampus of knockout mice. A. E. ROJAS-MAYORQUIN*; C. GONZÁLEZ-CASTILLO; C. GUZMÁN-BRAMBILA; M. PALLÀS; D. ORTUÑO-SAHAGÚN. *Univ. de Guadalajara, Univ. de Guadalajara, Tecnológico de Monterrey, Univ. de Barcelona.*

1:00 C95 **767.17** Geissoschizine methyl ether, an alkaloid from the Uncaria hook, protects oxidative stress-mediated cytotoxicity in neurons. J. SUN*; D. YUAN; X. REN; W. QI; J. W. SIMPKINS. *Univ. of West Virginia Robert C. Byrd Hlth. Sci. Ctr., Shenyang Pharmaceut. Univ.*

2:00 C96 **767.18** B-hydroxybutyrate protects against glucose deprivation-induced neuronal death by the stimulation of the autophagic flux. L. CAMBEROS LUNA*; C. GERÓNIMO-OLVERA; T. MONTIEL; R. RINCÓN-HEREDIA; L. MASSIEU. *Inst. De Fisiología Celular, UNAM.*

3:00 D1 **767.19** PGC-1α gene delivery in the brain reduces Aβ generation, prevents neuronal loss and improves spatial and reference memory in a mouse model of Alzheimer's disease. L. KATSOURI*; Y. M. LIM; A. M. BIRCH; N. MIRZAEI; N. D. MAZARAKIS; M. SASTRE. *Imperial Col.*

4:00 D2 **767.20** The primary function of the hypocretinergic system is to promote survival in health and disease states. M. H. CHASE*; M. XI; S. FUNG; J. ZHANG; S. SAMPOGNA. *Websciences Intl., VA Greater Los Angeles Healthcare Syst., UCLA Sch. of Med.*

1:00 D3 **767.21** Proteinase-activated receptor 2 (PAR2) and neuroprotection: Characterising novel activators in a CNS preparation. S. MOUDIO*. *Strathclyde Univ.*

2:00 D4 **767.22** Spermidine prevents staurosporine-induced neuronal cell death by inhibiting caspase-mediated Beclin 1 cleavage. Y. YANG*; Y. ZHANG; S. CHEN; X. LIN; Y. SONG; C. LI. *Hangzhou Normal Univ., Zhejiang Provincial Key Lab. of Cardio-Cerebral Vascular Detection Technol. and Medicinal Effectiveness Appraisal, Zhejiang Univ.*

3:00 D5 **767.23** Investigating the disease-modifying efficacy of voluntary exercise in experimental Multiple Sclerosis. A. GENTILE; S. BULLITTA; D. FRESEGNA; A. MUSELLA; F. DE VITO; G. GRASSELLI*; G. MANDOLESI; D. CENTONZE. *IRCCS-Santa Lucia Fdtn, Tor Vergata Univ. of Rome, Univ. of Chicago, IRCCS-INM Neuromed.*

4:00 D6 **767.24** Serotonin as a scavenger of hypochlorous acid in the brain. T. M. JEITNER*; M. KALOGIANNIS; E. J. DELIKATNY. *New York Med. Col., Winthrop Univ. Hosp., Univ. of Pennsylvania.*

1:00 D7 **767.25** Effects of treatment with white grape juice on inflammatory cytokines on rats exposed to carbon tetrachloride. C. S. FUNCHAL*; A. ABUJAMRA; F. MACHADO; M. WOHLENBERG; N. MEDEIROS; V. ELSNER; C. DANI. *Ctr. Universitário Metodista, Ctr. Universitário Metodista -IPA.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

768. Cellular Mechanisms of Degeneration and Inflammation in Models of Neurodegenerative Disease

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 D8 **768.01** Multiscale network modeling of myelination dysregulation in Alzheimer's disease. A. T. MCKENZIE*; M. WANG; J. ZHU; K. A. NAVE; B. POPKO; B. ZHANG; P. CASACCIA. *Icahn Sch. of Med. At Mt Sinai, Max Planck Inst., Univ. of Chicago.*

2:00 D9 **768.02** Modulation of nitric oxide synthase I transcription by tau and alpha-synuclein. T. K. RIFE*; D. M. JALIL; A. L. DEAL; T. A. WEAVER; M. M. HUTH. *James Madison Univ.*

3:00 D10 **768.03** Role of HMGB1 inhibitor Glycyrrhizin in diabetic complications. M. CHATTOPADHYAY*; M. GONZALEZ; K. PENNINGTON; S. NARGIS; V. THAKUR. *Texas Tech. Univ. Hlth. Sci. Ctr.*

4:00 D11 **768.04** ● ▲ Temperature modulates stress response of neurons to repetative low-force mechanical impacts. D. C. KLINE; C. BEST-POPESCU; P. SENGUPTA*. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

1:00 D12 **768.05** Sex differences in response to traffic-related air pollution exposure: Male sensitivity to obesity and depressive behavior. N. C. WOODWARD*; A. CROW; Y. ZHANG; A. SAFFARI; C. SIOUTAS; H. ALLAYEE; C. FINCH; T. MORGAN. *USC.*

2:00 D13 **768.06** White matter substrates of limited visual working memory capacity in schizophrenia. M. LAZAR*; D. MALASPINA; O. GONEN. *New York Univ. Sch. of Med.*

3:00 D14 **768.07** Rapid oxidative and inflammatory effects of acute traffic-derived nanoscale particulate matter exposure on olfactory gateways to the brain. H. CHENG*; C. E. FINCH; T. E. MORGAN. *USC.*

4:00 D15 **768.08** Microarray analysis of traffic-related air pollution and LPS treatment of mixed glia. E. BACON*; N. WOODWARD; M. LEVINE; C. SIOUTAS; T. MORGAN; C. FINCH. *USC, Univ. of California Los Angeles.*

1:00 D16 **768.09** ▲ Evaluation of inflammation-related genes polymorphisms in Mexican with Alzheimer's disease: A pilot study. D. TORAL-RIOS; O. ROSAS-CARRASCO; F. MENA-BARRANCO; D. FRANCO-BOCANEGRA; M. MERAZ-RÍOS; V. CAMPOS-PEÑA*. *Ctr. de Investigación y de Estudios Avanzados del IPN, Inst. Nacional de Geriatría, Hosp. Regional de Alta Especialidad de Ixtapaluca, Univ. Nacional Autónoma de México, Ctr. de Investigación y de Estudios Avanzados del IPN, INSTITUTO NACIONAL DE Neurología Y Neurocirugía.*

2:00 D17 **768.10** Amyloid β and LPS inhibition of TGF-β signaling in primary rat microglia. K. O. AFFRAM; K. MITCHELL; S. GOPALASUBRAMANIAN; A. J. SYMES*. *USUHS.*

3:00 D18 **768.11** Generation of a floxed human/mouse-chimeric P2X7 receptor mouse. T. KHAYRULLINA*; A. T. HOPPER; L. DORLEUS; S. B. PODA; R. G. W. STAAL; P. D. WES; T. MÖLLER. *Lundbeck Res. USA.*

4:00 D19 **768.12** Analysis of cortical thickness in patients with Acute-on-chronic liver failure. S. K. YADAV*; M. RANGAN; V. A. SARASWAT; E. WANG; F. MARINCOLA; R. K. GUPTA; M. HARIS. *Sidra Med. and Res. Ctr., Dept. of Gastroenterology, Sanjay Gandhi Post Grad. Inst. of Med. Sciences,, Fortis Mem. Res. Inst.*

POSTER

769. Neuro-Oncology II

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 D20 **769.01** Regulatory effects of VEGF/HO-1 signaling pathway on BDNF-induced cell migratory activity. C. LIN*; S. HUANG; H. LIN; W. YEH; D. LU. *Sch. of Medicine, China Med. Univ., Preventive medicine center,Taichung Tzu Chi Hosp., Grad. Inst. of Neural and Cognitive Sciences, China Med. Univ., Changhua Christian Hosp.*

2:00 D21 **769.02** Executive functions and laterality in patients with frontal tumor. L. V. ORTEGA LEONARD*; Y. DEL RÍO-PORTILLA. *Natl. Autonomous Univ. Of Mexico, Natl. Inst. of Neurol. and Neurosurg.*

3:00 D22 **769.03** ● Development of highly potent, selective BET bromodomain inhibitors that are CNS penetrant and effective in rodent models of brain cancer. J. ALBERT; A. JOHNSTONE; C. PENAS; V. STATHIAS; S. BROTHERS; N. AYAD; S. JOHNSTONE; C. R. WAHLESTEDT*. *IntelliSyn Pharma, Univ. of Miami, IntelliSyn Pharma.*

4:00 D23 **769.04** Selective siRNA-mediated suppression of nSR100 (SRRM4) induces the cell death of small cell lung cancer. M. SHIMOJO*; Y. SHUDO; S. ITO. *Kansai Med. Univ., Kansai Med. Univ., Kansai Med. Univ.*

1:00 D24 **769.05** Neuroplasticity changes in rat brain following targeted Gamma Knife irradiation. J. CONSTANZO*; M. DESCOTEAUX; M. LEPAGE; L. TREMBLAY; M. DUMONT; J. LONGPRÉ; K. KIRBY; S. GEHA; L. MASSON-COTÉ; P. SARRET; B. PAQUETTE. *Sherbrooke Univ., Sherbrooke Univ., Sherbrooke Univ., Sherbrooke Univ.*

2:00 D25 **769.06** Mechanisms underlying the sorting of growth factor receptors. M. B. GIREUD*; A. BEAN. *Ut Houston Hlth. Sci. Ctr., Univ. of Texas Grad. Sch. of Biomed. Sci., UT Houston Hlth. Sci. Ctr., M.D. Anderson Cancer Ctr.*

3:00 D26 **769.07** Neural etiology and characteristics of neurofibromas in human neurofibromatosis type 1 patients. G. HOUK*; J. P. WYMER; P. J. ALBRECHT; P. KNIGHT; H. WEINBERG; F. L. RICE. *Integrated Tissue Dynamics, LLC, Albany Med. Col., Chilren's Tumor Fndn., Mount Sinai Sch. of Med.*

4:00 D27 **769.08** ▲ New model of nociception induced by bone metastasis in rat femur: Behavioral analysis. J. N. CORONA-RAMOS*; O. A. JARAMILLO-MORALES; J. V. ESPINOSA-JUAREZ; M. DÉCIGA-CAMPOS; P. GARCIA-LOPEZ; F. J. LOPEZ-MUÑOZ. *Cinvestav- Sede Sur, CINVESTAV, Inst. Politécnico Nacional, Inst. Nacional de Cancerología.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 D28 **769.09** The interaction of ETS domain protein Elk-1 with mitotic kinases and its phosphorylation in brain tumor model cells. O. ARI UYAR*; O. DEMIR; B. YILMAZ; I. AKSAN KURNAZ. *Sci. Inst., Yeditepe University, Sci. Inst., Gebze Tech. University, Dept. of Mol. Biol.*

2:00 D29 **769.10** Effect of tumor characteristic and location on language activation. J. M. JANSMA*; G. RUTTEN. *UMC Utrecht, Rudolf Magnus Inst. of Neurosci., St. Elisabeth Hosp.*

3:00 D30 **769.11** Lithium prevents irradiation-induced brain injury and long term cognitive dysfunction in the young rat. C. ZHU*; K. ZHOU; C. XIE; Y. ZHANG; T. LI; K. BLOMGREN. *Ctr. For Brain Repair & Rehabilitation, Univ. of Gothenburg, Univ. of Gothenburg, Univ. of Gothenburg, Univ. of Gothenburg, Karolinska Institutet.*

4:00 D31 **769.12** Evidence for the existence of tumor stem progenitor-like cell markers and aggressive prolactin-secreting tumors in the pituitary of fetal alcohol exposed rats. S. JABBAR; O. GANGISETTY; D. K. SARKAR*. *Rutgers, the State Univ. of New Jersey, Rutgers, SUNJ.*

1:00 D32 **769.13** Hippocampal subfield deformity in breast cancer patients with self-reported cognitive concerns. A. APPLE*; A. J. RYALS; L. I. WAGNER; D. CELLA; F. J. PENEDO; J. L. VOSS; L. WANG. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

2:00 D33 **769.14** Blocking Aquaporin 1 ion channel function with AqB011 could be a new therapeutic approach for preventing cancer metastasis. M. KOURGHI*; J. PEI; M. DE IESO; A. YOOL. *The Univ. of Adelaide, The Univ. of Adelaide.*

POSTER

770. Psychosis: Animal Models

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 D34 **770.01** Conditional knockout of Ankyrin-g in mouse forebrain: Potential model of bipolar disorder. S. ZHU*; Z. CORDNER; J. KIM; X. WANG; M. PLETNIKOV; K. TAMASHIRO; C. A. ROSS. *The Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 D35 **770.02** A developmental redox dysregulation leads to impaired thalamocortical network dysfunction in a mouse model of schizophrenia. J. H. CABUNGCAL*; P. STEULLET; R. KRAFTSIK; T. SALT; M. CUENOD; K. Q. DO. *Dept. of Psychiatry, Univ. Hosp. of Lausanne, Univ. of Lausanne, Univ. Col. of London.*

3:00 D36 **770.03** Environmental stressors induce schizophrenia-like symptoms based on genetic dysfunction of cannabinoid type 2 receptor and K-Cl cotransporter KCC2. H. ISHIGURO*; K. TABATA; A. OKABE; N. MOTOHASHI; E. S. ONAIVI. *Univ. of Yamanashi, Div. of Physiome, Dept. of Physiology, Hyogo Col. of Med., William Paterson Univ.*

4:00 D37 **770.04** The relationship between parvalbumin-positive interneuron density in the auditory and frontal cortices and hearing loss in a mouse model of 22q11.2 Deletion Syndrome. F. A. ZINNAMON*; S. S. WENAS; K. H. WANG; J. F. LINDEN. *Univ. Col. London, Natl. Inst. of Mental Hlth.*

1:00 D38 **770.05** A role for microRNA-206 in schizophrenia-related behaviors. M. P. HEYER*; M. ISHIKAWA; G. FENG; P. J. KENNY. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, MIT, Broad Inst. of MIT and Harvard, Icahn Sch. of Med. at Mount Sinai.*

2:00 D39 **770.06** ● Deletion of slc6a7 which encodes PROT, the high-affinity sodium-dependent transporter for L-proline, results in multiple behavioural phenotypes relevant to psychiatric disorders. D. C. HARRISON*; K. BRACKENBOROUGH; J. ROBERTSON; M. HILL; P. GOETGHEBEUR; J. LAWRENCE; C. BENDER; J. DORAN; R. FRADLEY; S. NIZAMI; N. BRICE. *Takeda Cambridge Ltd.*

3:00 D40 **770.07** ● Analysis of the mechanism underlying anxiety-like behavior observed in neuron-specific Dnmt1 knock-out mice. A. KIMURA*; H. NOGUCHI; M. OTSUKA I.; K. IGARASHI; T. IMAMURA; M. NAMIHIRA; K. NAKASHIMA. *Kyushu Univ., Hoshi Univ., AMED-CREST, AMED, Natl. Inst. of Advanced Industrial Sci. and Technol.*

4:00 D41 **770.08** Abnormal hippocampal-mPFC connection in the KCNH2-3.1 transgenic mouse. M. REN*; G. CARR; Z. HU; Q. TIAN; T. M. HYDE; J. E. KLEINMAN; D. R. WEINBERGER; F. YANG. *The Lieber Inst. for Brain Develop.*

1:00 D42 **770.09** Prepulse inhibition deficit correlates with forebrain Neuregulin-1 Type III mRNA overexpression in a novel transgenic mouse model for schizophrenia. J. C. OLAYA*; T. KARL; C. L. HEUSNER; M. MATSUMOTO; C. SHANNON WEICKERT. *Neurosci. Res. Australia, Schizophrenia Res. Inst., Sch. of Psychiatry, Univ. of New South Wales, Neurosci. Res. Australia, Sch. of Med. Sciences, Univ. of New South Wales, Astellas Res. Inst. of America LLC.*

2:00 D43 **770.10** Behavioral screen in DLGAP1 mutant mice for phenotypes relevant to Obsessive Compulsive Disorder and Schizophrenia-like behaviors. M. RAMAKER*; E. V. HO; J. A. KNOWLES; N. H. KOMIYAMA; S. G. N. GRANT; S. C. DULAWA. *Univ. of Chicago, USC, Edinburgh Univ.*

3:00 D44 **770.11** Assessment of minocycline upon cognitive performance in mice haploinsufficient for the schizophrenia risk gene Mitogen-Activated Protein Kinase 7 (Map2k7). J. A. PRATT*; B. J. MORRIS; R. L. OPENSHAW. *Univ. Strathclyde, Univ. of Glasgow.*

4:00 D45 **770.12** Interaction between Redox dysregulation and Neuroinflammation during early development could lead to PVI circuitry impairments in adulthood: Relevance for schizophrenia. D. DWIR*; J. CABUNGCAL; P. STEULLET; R. TIROUVANZIAM; K. Q. DO. *Ctr. For Psychiatric Neurosci. (CNP), Res. Emory Univ. Sch. of Med.*

1:00 D46 **770.13** Effects of post-weaning isolation and the Nurr1-null heterozygous genotype on behavior. J. B. EELLS*; S. X. GUO-ROSS; T. E. BRANYAN. *Mississippi St Univ.*

2:00 D47 **770.14** *In vivo* application of CRISPR/Cas9 for studying Akt/Gsk3 signalling in regulation of mood. J. KHLGHATYAN*; S. CHAMBERLAND; K. TOTH; J. M. BEAULIEU. *Laval Univ.*

3:00 D48 **770.15** ▲ Role of GABAA receptor α1 subunit in ventral striatum medium spine neurons of erbb4-mutant mice. H. GENG*; X. LI. *Inst. of Neuroscience, Zhejiang Univ., Zhejiang Univ.*

4:00 E1 **770.16** ▲ Dopamine D3 receptor antagonism rescues dopamine transporter knockdown-induced deficit in sensorimotor gating and cognition. P. CHANG*. *Chang-Gung University/ Grad. Insititute of Biomed. Sci.*

1:00 E2 **770.17** SLC10A4 knockout mice show abnormal event-related potentials in response to an auditory paired-clicks gating test: Implications for psychiatric disorders. K. E. LEAO*; M. M. HILSCHER; R. N. LEAO; H. PETTERSSON; M. BLUNDER; K. KULLANDER. *UFRN / Brain Inst., Uppsala Univ.*

2:00 E3 **770.18** NMDAR-knockout in parvalbumin interneurons sensitises not protects mice from the effects of MK801. A. BYGRAVE*; S. MASIULIS; D. BANNERMAN; D. KAETZEL. *Univ. of Oxford.*

3:00 E4 **770.19** Amphetamine-induced locomotive activity in heterozygous Disc1 mutant mice. C. LAI*; L. LEE. *Natl. Taiwan University, Col. of Med., Natl. Taiwan University, Col. of Med., Natl. Taiwan Univ.*

4:00 E5 **770.20** Increased striatal dopamine d2 receptor activity is associated with increases in population activity of substantia nigra dopamine neurons. M. O. CHOHAN*; M. CAZORLA; H. MOORE; C. KELLENDONK. *New York State Psychiatric Inst., Columbia Univ., Inst. Curie, New York State Psychiatric Inst., Columbia Univ.*

1:00 E6 **770.21** Sexually dimorphic effects in a double-risk model of psychosis. D. SCOTT*; C. TAMMINGA. *UT Southwestern.*

2:00 E7 **770.22** ▲ Socio-communicative deficits in serine racemase knockout mice. A. E. YOUNG*; M. T. PISANSKY; J. C. GEWIRTZ. *Univ. of Minnesota- Twin Cities, Univ. of Minnesota- Twin Cities, Univ. of Minnesota- Twin Cities.*

3:00 E8 **770.23** Mouse brain expression and function of Regulator of G protein Signaling-12 (RGS12) in sensorimotor gating and locomotive behaviors. J. D. GROSS*; V. SETOLA; K. A. WIX; D. P. SIDEROVSKI. *West Virginia Univ. Sch. of Med.*

4:00 E9 **770.24** Neuregulin 1 and cholinergic control of behavior in mice. L. SERVILIO*; K. LEE. *UC San Diego, Salk Inst.*

1:00 E10 **770.25** ● Mitochondrial dysfunction in humanized DISC1-Boymaw mice. K. K. HIGA*; B. JI; M. A. GEYER; X. ZHOU. *UC San Diego.*

2:00 E11 **770.26** Partial genetic deletion of neuregulin 1 modulates the effects of chronic stress on dendritic morphology in adolescent mice. D. J. CLARKE*; T. CHOHAN; M. S. KASSEM; S. Y. FOK,; M. R. BENNETT; J. C. ARNOLD. *The Univ. of Sydney, Brain and Mind Res. Inst., Bosch Inst., Univ. of Sydney.*

3:00 E12 **770.27** ▲ Mutations in the BLOC-1 subunits dysbindin, muted, and pallidin regulate levels of excitatory and inhibitory markers in the hippocampus. M. ARNOLD; J. L. LARIMORE*; V. FAUNDEZ. *Agnes Scott Col., Agnes Scott Col., Emory Univ.*

4:00 E13 **770.28** Knockdown BCL9 by using *in utero* electroporation results in neural developmental and electrophysiological deficits via Wnt signaling pathway. W. LI*. *Shanghai Jiao Tong Univ.*

1:00 E14 **770.29** Development of schizophrenia-relevant cognitive abnormalities during adolescence: A translational study in mice. M. CIAMPOLI*; F. PAPALEO. *Inst. Italiano Di Tecnologia.*

2:00 E15 **770.30** Behavioral pattern separation in a transdiagnostic anxiety population. K. C. KLEMENHAGEN*; R. HEN; H. B. SIMPSON; A. J. FYER. *Columbia Univ., Columbia Univ., Columbia Univ., New York State Psychiatric Inst.*

POSTER

771. Psychosis: Biochemistry

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 E16 **771.01** Abnormalities in the assembly process of mitochondrial complex I in schizophrenia: A possible cause for mitochondrial dysfunction. O. BERGMAN*; R. KARRY; D. BEN-SHACHAR. *Technion – Israel Inst. of Technol., Technion – Israel Inst. of Technol., Rambam Hlth. Care Campus, the Ruth and Bruce Rappaport Fac. of Medicine, Technion-Israel Inst. of Technology.*

2:00 E17 **771.02** MicroRNA level reductions in Mediodorsal thalamus with 5HTTLPR-SS genotype. K. A. YOUNG*; E. S. CARTER; D. L. PAPPALARDO-CARTER. *Texas A&M HSC / Central Texas VA.*

3:00 E18 **771.03** Neuroproteomic changes caused by decreased expression of the schizophrenia and bipolar disorder associated BRD1 gene in mice. J. H. CHRISTENSEN*; V. PATERNOSTER; M. SVANBORG; A. V. EDHAGER; A. P. RAJKUMAR; P. QVIST; T. FRYLAND; E. A. EICKHARDT; J. PALMFELDT; A. D. BØRGLUM. *Aarhus Univ., The Lundbeck Fndn. Initiative for Integrative Psychiatric Research, iPSYCH, Ctr. for Integrative Sequencing, iSeq, Aarhus Univ., Aarhus Univ. Hosp.*

4:00 E19 **771.04** Glutamatergic dysregulation may cause neurotoxic effects and loss off parvalbumin fast-spiking interneurons in developing Brd1+/- mice. T. FRYLAND*; P. QVIST; A. RAJKUMAR; M. NYEGAARD; O. MORS; T. J. CORYDON; A. D. BØRGLUM; J. H. CHRISTENSEN. *Aarhus Univ., Ctr. for Integrative Sequencing, iSEQ, The Lundbeck Fndn. Initiative for Integrative Psychiatric Research, iPSYCH, Aarhus Univ. Hosp.*

1:00 E20 **771.05** The implication of the schizophrenia-associated BRD1 gene in brain morphology. P. L. QVIST*; S. F. ESKILDSEN; S. RINGGAARD; H. STODKILDE-JORGENSEN; O. MORS; A. D. BORGLUM; J. H. CHRISTENSEN. *Aarhus Univ., Aarhus Univ., Aarhus Univ., Aarhus Univ., Aarhus Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 E21 **771.06** Defective axonal mitochondrial trafficking in a DISC1 translocation mouse model. L. MURPHY*; E. L. V. MALAVASI; H. S. TORRANCE; M. DIDIER; D. J. PORTEOUS; J. K. MILLAR. *Univ. of Edinburgh, Sanofi.*

3:00 E22 **771.07** Regulation of trafficking of a surface protein by DISC1: A live cell imaging approach. K. MILLAR*; E. L. V. MALAVASI; M. DIDIER; Z. TARNAUSKAITE; D. J. PORTEOUS. *Univ. of Edinburgh, Sanofi, Inst. of Genet. and Mol. Med. at the Univ. of Edinburgh.*

4:00 E23 **771.08** Neurogranin deficiency causes neuronal immaturity in the dentate gyrus and frontal cortex of adult mice. H. HAGIHARA*; S. HATTORI; Y. TAKAMIYA; F. L. HUANG; K. HUANG; T. MIYAKAWA. *Fujita Hlth. Univ., CREST, JST, Program of Developmental Neurobiology, NICHD, NIH, Natl. Inst. for Physiological Sci.*

1:00 E24 **771.09** Neurogranin-deficient mice reveal schizophrenia-related behaviors and immaturity of the dentate gyrus. S. HATTORI*; H. HAGIHARA; H. SHOJI; Y. TAKAMIYA; F. L. HUANG; K. HUANG; T. MIYAKAWA. *Fujita Hlth. Univ., NICHD, NIH, Natl. Inst. for Physiological Sci.*

2:00 E25 **771.10** Pentosidine accumulation in the pathophysiology of schizophrenia. M. ARAI*; Y. HORIUCHI; A. KOBORI; M. MIYASHITA; K. TORIUMI; S. HATAKEYAMA; M. ITOKAWA; H. HASHIMOTO. *Tokyo Metropolitan Inst. of Med. Science,, Grad. Sch. Pharmaceut. Sci., Osaka Univ.*

3:00 E26 **771.11** Abnormal glutathione pathway in postmortem dorsolateral prefrontal cortex from people with schizophrenia. Y. ZHANG*; V. S. CATTS; C. S. WEICKERT. *Neurosci. Res. Australia.*

4:00 E27 **771.12** Autofluorescence as a quantitative measurement of schizophrenia patient-derived lymphoblast responses to stress. X. INDURKHYA*; A. RAMOS; N. ELKINS; T. TSUJIMURA; K. ISHIZUKA; A. SAWA; C. KORTH. *Institüt Für Neuropathologie/Uniklinik Düsseldorf, Johns Hopkins Hosp.*

1:00 E28 **771.13** Influence of schizophrenia-associated gene Egr3 on sleep and wakefulness in mice. A. M. MAPLE*; R. K. ROWE; J. L. HARRISON; A. K. MCBRIDE; I. FERNANDEZ; J. LIFSHITZ; A. L. GALLITANO. *Univ. of Arizona Col. of Medicine-PHX, Barrow Neurolog. Inst. at Phoenix Children's Hosp., Univ. of Arizona Col. of Medicine-PHX, Phoenix Veteran Affairs Healthcare Syst., Arizona State Univ., Arizona State Univ.*

2:00 E29 **771.14** Developmental decline of NR2B expression in PFC in the MAM model for schizophrenia: Consequences and mechanism. Y. GULCHINA*; M. A. SNYDER; W. GAO. *Drexel Univ. Col. of Med.*

3:00 E30 **771.15** A negative feedback loop controls NMDA receptor function in cortical interneurons via Neuregulin 2/ ErbB4 signaling. D. VULLHORST*; R. M. MITCHELL; C. KEATING; S. ROYCHOWDHURY; I. KARAVANOVA; J. TAO-CHENG; A. BUONANNO. *NICHD, NIH, Natl. Inst. of Neurolog. Disorders and Stroke.*

4:00 E31 **771.16** Tyrosine hydroxylase, GAD67, vGLUT1, and vGLUT2 proteins in the substantia nigra/ventral tegmental area in schizophrenia. K. E. SCHOONOVER*; L. A. MCCOLLUM; R. C. ROBERTS. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

1:00 E32 **771.17** Withdrawn.

2:00 E33 **771.18** Cholinergic muscarinic receptor expression in post mortem brain tissue of schizophrenia patients. N. P. THOMAS*; E. SCARR; B. DEAN. *Univ. of Melbourne / Psychiatry, The Florey Inst. of Neurosci. and Mental Hlth.*

3:00 E34 **771.19** Investigating the role of the schizophrenia risk gene ZNF804a in early brain development. Y. ZHOU*; F. DONG; X. JIANG; C. MCSWEENEY; Y. MAO. *Penn State University, Biol. Dept., Huck Inst. of the Life Sci.*

4:00 E35 **771.20** Regulation of AMPAR subunits by miR-137 and neuregulin: Implications for schizophrenia. K. THOMAS*; B. ANDERSON; D. HAWKINS; Q. GU; N. SHAH; G. BASSELL. *Emory Univ., Emory Univ.*

1:00 E36 **771.21** The value of interleukin 6 as a peripheral diagnostic marker in schizophrenia. K. A. CHASE*; J. J. CONE; C. ROSEN; R. P. SHARMA. *Univ. of Illinois At Chicago, Univ. of Chicago, Univ. of Chicago, Jesse Brown Veterans Affairs Med. Ctr.*

2:00 E37 **771.22** The protein-protein interaction landscape of Schizophrenia. B. WILKINSON; J. LI; H. YANG; W. ZHANG; F. SUN; K. WANG; M. P. COBA*. *Zilkha Neurogenetic Institute/University of Southern California, Mol. and Computat. Biol. Program, Univ. of Southern California, Los Angeles, California., Dept. of Psychiatry and Behavioral Sciences, USC.*

3:00 E38 **771.23** Histone phosphorylation in schizophrenia and normal subjects; at the end of the cascade. R. P. SHARMA; B. FEINER; J. K. MELBOURNE*; K. A. CHASE. *Univ. of Illinois At Chicago, Jesse Brown Veterans Affairs Med. Ctr., Univ. of Chicago.*

4:00 E39 **771.24** Domain analysis of TRIOBP-1 implies a common basis underlying its actin polymerization activity and its aggregation in schizophrenia. N. J. BRADSHAW*; R. MARREIROS; C. KORTH. *Heinrich Heine Univ.*

1:00 E40 **771.25** *In vivo* biochemical studies with xanomeline emphasize the importance of the M4 subtype of muscarinic receptors. M. POPIOLEK*; J. HARMS; S. GRIMWOOD. *Pfizer.*

2:00 E41 **771.26** The effect of lithium on the alleviation of AKT1-related neuromorphological and behavioral deficits in P19 cell line, primary cell culture, and Akt1 mutant mice. C. CHANG*; D. LUO; T. WANG; V. STUDER; W. LAI. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Normal Univ., Univ. Bordeaux, Natl. Taiwan Univ., Natl. Taiwan Univ.*

3:00 E42 **771.27** ● Electrophysiological characterization of tgDISC1 rats: A preclinical model of DISC1opathies. M. VENZI*; S. TROSSBACH; R. MARREIROS; C. KORTH; N. BRANDON; E. ÅBERG. *Astrazeneca, Karolinska Institutet, Heinrich Heine Univ., Neurosci. iMED, AstraZeneca.*

POSTER

772. Schizophrenia: Antipsychotics

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 E43 **772.01** Rat models of schizophrenia using NMDA antagonist Dizocilpine. Q. CHANG*; W. LACSINA; C. N. COHRON; T. HANANIA. *PsychoGenics Inc.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 E44 **772.02** Risperidone prevents gender-sensitive depression of hippocampal excitatory transmission in a rat model of schizophrenia. A. S. PERETZ*; E. PATRICH; Y. PIONTKEWITZ; I. WEINER; B. ATTALI. *Sackler Sch. of Med. / Tel Aviv Univ., Tel Aviv Univ.*

3:00 E45 **772.03** Developing translatable biomarkers of schizophrenia: Assessment of three NMDA receptor antagonist-based pharmacological mouse models of schizophrenia using the auditory steady state response (ASSR). K. A. RICHARDSON*; E. BUERGER; Y. HIRANO; K. SPENCER; D. GERBER; M. LEVIN. *Galenea Corp, VA Boston Healthcare system and Harvard Med. Sch., Grad. Sch. of Med. Sciences, Kyushu Univ.*

4:00 E46 **772.04** Effect of resveratrol on schizophrenia-like behavior induced by immunogenic challenger by poly(I:C) during pregnancy. F. R. FERREIRA*; T. R. P. POMBO; V. P. L. GONÇALVES; R. L. FROZZA; S. S. GUTERRES; A. R. POHLMANN. *Oswaldo Cruz Fundation - FIOCRUZ, Federal Inst. of Education, Sci. and Technol. of Rio de Janeiro, Federal Univ. of Rio Grande do Sul.*

1:00 E47 **772.05** ● Reversal learning but not set-shifting deficits in the methylazoxymethanol acetate model of schizophrenia: A partial replication with implications for N-Methyl-D-aspartate receptor treatment for cognitive deficits in schizophrenia. A. J. WHYTE*; T. SCHARBERT; D. O' HAGAN; H. MARSTON; D. S. TAIT; V. J. BROWN. *Univ. of St Andrews.*

2:00 E48 **772.06** Design and study of new 5-ht2c agonists for use in treating schizophrenia. J. CHENG*; R. M. RODRIGUIZ; P. M. GIGUERE; B. L. ROTH; W. C. WETSEL; A. P. KOZIKOWSKI. *Univ. of Illinois at Chicago, Duke Univ. Med. Ctr., Univ. of North Carolina Chapel Hill Med. Sch.*

3:00 F1 **772.07** Prior D2 antagonist antipsychotic drug treatment prevents response to novel target compounds in MAM model of schizophrenia: Potential circumvention using aripiprazole. S. SONNENSCHEIN*; K. M. GILL; S. A. MILLER; A. A. GRACE. *Univ. of Pittsburgh.*

4:00 F2 **772.08** Locomotor activity in zebrafish larvae as a behavioural screen for drugs targeting 5-HT_{2C} and/or melatonin receptors. N. RIBEIRO PALHA; A. DEKEYNE*; S. VEIGA; W. BOUCHERON; P. DELAGRANGE; C. LOUIS; P. LESTAGE. *Inst. De Recherches Servier.*

1:00 F3 **772.09** Blocking cortical GABAA receptors impairs sociability in rats. T. A. PAINE*; N. SWEDLOW; L. SWETSCHINSKI. *Oberlin Col.*

2:00 F4 **772.10** ● The use of preclinical assessments of anhedonia and motor function to understand dopamine D2 receptor-mediated behavioral effects. D. B. HORTON*; K. DLUGOLENSKI; N. C. STRATMAN; C. J. SCHMIDT; T. A. CHAPPIE. *Pfizer, Inc, Pfizer, Inc.*

3:00 F5 **772.11** ● Rapastinel (GLYX-13) produces rapid transcriptomic changes associated with synaptic signaling and remodeling: Toward the elucidation of the mechanisms that underlie glutamatergic rapid-acting antidepressants. M. E. SCHMIDT*; A. L. GROSS; R. A. KROES; J. S. BURGDORF; J. R. MOSKAL. *Naurex, Falk Ctr. for Mol. Therapeut.*

4:00 F6 **772.12** The involvement of dopamine D_1 signaling on the cognitive function and the cataleptic effect of a phosphodiesterase 10A inhibitor, PDM-042 in rats. S. MAEHARA*; K. ARAKAWA; N. YUGE; S. FURUSAKO. *Mochida Pharmaceut. Co., Ltd.*

1:00 F7 **772.13** The atypical antipsychotic amisulpride shares discriminative stimulus properties with benzamide derivatives, but not with antipsychotic, antidepressant, or anxiolytic drugs from other chemical classes. T. J. DONAHUE*; K. A. WEBSTER; T. M. HILLHOUSE; C. H. COOPER; K. W. LOVELESS; E. M. LEVIT; A. R. GRANT; R. YOUNG; E. O. DE OLIVEIRA; J. H. PORTER. *Virginia Commonwealth Univ., Univ. of Michigan, Virginia Commonwealth Univ., Georgetown Univ.*

2:00 F8 **772.14** ● Suppression of spreading depolarization and stabilization of dendritic spines by rapastinel (GLYX-13), an NMDA receptor glycine-site functional partial agonist. X. ZHANG*; C. W. SHUTTLEWORTH; J. R. MOSKAL; P. K. STANTON. *New York Med. Coll, Univ. of New Mexico Sch. of Med., Northwestern Univ., New York Med. Coll.*

3:00 F9 **772.15** ● Changes in brain volume in response to estradiol levels, amphetamine sensitization and haloperidol treatment in awake female rats. D. MADULARU; P. P. KULKARNI*; C. F. FERRIS; W. G. BRAKE. *Concordia Univ., Northeastern Univ.*

4:00 F10 **772.16** ● GLYX-13 ameliorates acute ketamine and sub-chronic ketamine- and phencyclidine-induced memory deficits in C57BL/6J mice. H. Y. MELTZER*; L. RAJAGOPAL; J. S. BURGDORF; J. R. MOSKAL. *Northwestern Univ. Sch. of Med., Northwestern Univ., Naurex Inc., Northwestern Univ.*

1:00 F11 **772.17** ● The effects of rapastinel (GLYX-13), a NMDA receptor allosteric modulator, on the mTOR signaling pathway transcriptome. A. L. GROSS*; M. E. SCHMIDT; R. A. KROES; J. S. BURGDORF; J. R. MOSKAL. *Naurex Inc, Falk Ctr. for Mol. Therapeut.*

2:00 F12 **772.18** The fast-off hypothesis revisited: A functional kinetic study of antipsychotic antagonism of the dopamine D2 receptor. J. NILSSON*; K. SAHLHOLM; H. ZEBERG; S. ÖGREN; P. ÅRHEM. *Karolinska Institutet, Karolinska Institutet.*

3:00 F13 **772.19** ● Insulin-like growth factor i produces an antidepressant-like effect through modulation of n-methyl-d-aspartate receptor-independent long-term potentiation-like synaptic plasticity. E. M. COLECHIO*; J. BURGDORF; X. ZHANG; A. GROSS; R. A. KROES; P. K. STANTON; J. R. MOSKAL. *Northwestern Univ., Northwestern Univ., New York Med. Col., Naurex, Inc., Northwestern Univ.*

4:00 F14 **772.20** ● Rapastinel (GLYX-13), an N-methyl-D-aspartate functional glycine site partial agonist, is efficacious in rat surgical models of neuropathic pain. N. GHOREISHI-HAACK*; J. BURGDOF; R. M. BURCH; J. R. MOSKAL. *Naurex Inc, Northwestern Univ., Naurex Inc.*

1:00 F15 **772.21** ● Rapastinel (GLYX-13), an allosteric NMDA receptor modulator, exerts its antidepressant effects by acting at a novel NMDA receptor binding site. R. A. KROES*; J. S. BURGDORF; A. L. GROSS; M. A. KHAN; X. ZHANG; R. M. BURCH; P. K. STANTON; J. R. MOSKAL. *Naurex, Inc., Northwestern Univ., New York Med. Col.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 F16 **772.22** ● NRX-1074, an NMDA receptor modulator with glycine site partial agonist properties, induces rapid and long-lasting antidepressant-like effects in rats. J. S. BURGDORF*; R. A. KROES; X. L. ZHANG; A. L. GROSS; R. M. BURCH; P. K. STANTON; M. A. KHAN; J. R. MOSKAL. *Northwestern Univ., Naurex Inc., New York Med. Col.*

3:00 F17 **772.23** The role of glucocorticoid receptors in the development of behavioural sensitisation to MK-801. E. LEFEVRE*; S. ALEXANDER; D. W. EYLES; T. H. J. BURNE. *Queensland Brain Inst., Queensland Ctr. for Mental Hlth. Res.*

4:00 F18 **772.24** ▲ Antagonism of serotonergic 5-HT2A receptors is a sufficient, but not necessary mechanism for clozapine's discriminative stimulus properties in mice. A. JONES*; K. A. WEBSTER; C. E. MCOMISH; J. H. PORTER. *Virginia Commonwealth Univ., Virginia Commonwealth Univ., Columbia Univ. Med. Ctr.*

POSTER

773. Mood Disorders: Antidepressants I

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 F19 **773.01** ▲ Repeated paroxetine differentially modulates acoustic startle in adolescent male and female rats. E. M. ALDERSON*; Z. R. HARMONY; V. REAL; C. A. CRAWFORD. *California State Univ.*

2:00 F20 **773.02** Modulation of ERK1/2 signaling pathway is the mechanism involved in antidepressant-like activity of zinc. B. SZEWCZYK*; P. MISZTAK; B. POCHWAT; A. RAFALO; M. SOWA-KUCMA; G. NOWAK. *Inst. of Pharmacol. PAS, Jagiellonian Univ. Med. Col., Jagiellonian Univ.*

3:00 F21 **773.03** ● Hdac6 inhibition induced α-tubulin acetylation translocates Gαs from lipid-rafts: A novel mechanism for antidepressant action. H. SINGH*; J. SCHAPPI; A. PRADHAN; M. RASENICK. *UNIVERSITY OF ILLINOIS AT CHICAGO, Jesse Brown VAMC, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Illinois a Chicago.*

4:00 F22 **773.04** Sex, age and genotype differences in the responses to stress and antidepressant treatments. C. NASCA*; D. ZELLI; B. BIGIO; J. KOGAN; T. LAU; E. M. WATERS; B. S. MCEWEN. *The Rockefeller Univ., The Rockefeller Univ.*

1:00 F23 **773.05** Antidepressant-like effects of ferulic acid in combination with piperine: Involvement of monoaminergic system. Y. YU; G. LI; J. PANG; Y. XU; H. ZHANG*. *Wenzhou People's Hospital, Wenzhou Third Clin. Inst. Affiliated to Wenzhou Med. Univ., Ningbo Col. of Hlth. Sci., Sch. of Pharmacy, Wenzhou Med. Univ., Sch. of Pharm. and Pharmaceut. Sciences, State Univ. of New York at Buffalo, West Virginia Univ. Hlth. Sci. Ctr.*

2:00 F24 **773.06** ● Modified lipid raft anchoring of the G protein, Gαs subsequent to chronic antidepressant treatment, is independent of monoamine transporters but requires type 6 adenylyl cyclase (AC6). J. SCHAPPI*; M. RASENICK. *Univ. of Illinois At Chicago.*

3:00 F25 **773.07** ● GIRK2 channel KO of neurons expressing dopamine transporters mimics the effect of antitussives on the forced swimming in mice. I. HONDA*; K. ARAKI; S. HONDA; F. SOEDA; S. MISUMI; K. YAMAMURA; K. TAKAHAMA. *Kumamoto Univ., Inst. of Resource Develop. and Analysis, Kumamoto Univ., Res. Inst. for Drug Discovery, Sch. of Pharmacy, Kumamoto Univ., Kumamoto Hlth. Sci., Univ..*

4:00 F26 **773.08** ● Ketamine Treatment translocates G¬αs From lipid Raft Domains similar to, but on a time scale distinct from, other antidepressants. N. WRAY*; J. SCHAPPI; M. RASENICK. *Univ. of Illinois At Chicago.*

1:00 F27 **773.09** Targeted modulation of Kv7/KCNQ channel in dopaminergic neurons of ventral tegmental area affect the neuronal excitability and behavior of depression model. L. LI; H. SUN; D. JIE; C. NIU; N. GAMPER; X. DU*; H. ZHANG. *Hebei Med. Univ.*

2:00 F28 **773.10** RNAseq reveals clusters of genes in the ventral dentate gyrus that induce resistance to antidepressant treatment. A. A. MATHE*; C. NASCA; B. BIGIO; V. SOUSA; P. SVENNINGSSON; B. S. MCEWEN. *Karolinska Institutet, The Rockefeller Univ., The Rockefeller Univ., Karolinska Inst.*

3:00 F29 **773.11** ● Chronic antidepressants accumulate in lipid rafts and modify acylation state of the G protein, Gαs promoting translocation of Gαs from cholesterol-rich plasma membrane microdomains. S. J. ERB; A. CZYSZ; M. M. RASENICK*. *Univ. Illinois Col. of Pharm., Univ. Illinois Coll Med., Univ. Illinois Coll Med., Univ. Illinois Coll Med., Univ. Illinois Coll Med., Jesse Brown VAMC.*

4:00 F30 **773.12** Dorsal hippocampus P2X7 and prefrontal cortex P2X4 receptor expression is modulated by stress and desipramine treatment. D. E. RIBEIRO*; M. A. P. SILVA; P. C. CASAROTTO; C. BIOJONE; S. R. L. JOCA. *Unversity of São Paulo, Sch. of Pharmaceut. Sci. of Ribeirão Preto - Univ. of São Paulo, Neurosci. Ctr. - Univ. of Helsinki.*

1:00 F31 **773.13** ● Agomelatine reverses the behavioral deficits and the reductions in synaptic, GABAergic and glial makers induced by chronic unpredictable stress in the rat prefrontal cortex. M. BANASR*; M. THOMAS; A. LEPACK; G. SANACORA; R. DUMAN; C. GABRIEL; E. MOCAER. *Yale Univ., Inst. de Recherches Internationales SERVIER.*

2:00 F32 **773.14** Imipramine affects circulating BDNF, prolactin and ACTH in time dependent manner. M. KUSMIDER*; A. FARON-GÓRECKA; J. SOLICH; J. WÓJCIKOWSKI; D. ZURAWEK; P. PABIAN; W. DANIEL; M. DZIEDZICKA-WASYLEWSKA. *Inst. of Pharmacol. P.A.S.*

3:00 F33 **773.15** The regulation mechanism of miR-16 on serotonin related neural circuits through PI3K signaling pathway in Chronic Mild Stress rats model. Z. HU; M. FANG*; Y. YANG. *Dept. of Obstetrics and Gynecology. Hangzhou Red Cross Hosp., Zhejiang Univ.*

4:00 F34 **773.16** Ketamine-induced inhibition of glycogen synthase kinase-3 contributes to the augmentation of AMPA receptor signaling. S. GRIECO*; C. AMADEI; K. DOWNEY; R. JOPE; E. BEUREL. *Univ. of Miami, Univ. of Miami.*

1:00 F35 **773.17** xCT epigenetically promotes homeostatic regulation of the glutamate system in the responses to stress: Implications for next-generation treatments. D. A. ZELLI*; B. S. MCEWEN; C. NASCA. *The Rockefeller Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 F36 **773.18** Stress induced elongation of pyramidal, but not stellate, neurons in the basolateral amygdala with implications for next generation treatment. T. LAU*; B. BIGIO; D. ZELLI; B. S. MCEWEN; C. NASCA. *The Rockefeller Univ., The Rockefeller Univ.*

3:00 F37 **773.19** Sex- and sert-associated differences in stimulated serotonin neurotransmission revealed by fast microdialysis. H. YANG*; M. M. SAMPSON; D. SENTURK; A. M. ANDREWS. *UCLA, UCLA, UCLA, UCLA.*

4:00 F38 **773.20** The key targets of antidepressants revealed by functional brain connectome analysis in macaques. Q. LV; J. PU; G. LI; Z. WANG; Z. SHEN; Q. JIANG; L. YANG; Z. XUE; H. HU; Z. WANG*. *Inst. of Neurosci., Dept. of Anesthesiology, Zhongshan Hosp.*

1:00 F39 **773.21** Acupuncture decreases dendritic arborization and dendritic spine density in basolateral amygdala in social isolated rats. A. DAVILA HERNANDEZ*; M. DEL ANGEL-MUÑOZ; S. ZAMUDIO; C. CAMPOS-RODRIGUEZ; R. GONZALEZ-GONZALEZ; E. RAMIREZ-SAN JUAN. *Inst. Politecnico Nacional.*

2:00 F40 **773.22** Glucocorticoids-IL6 crosstalk allows identification of inherent individual differences that predict and promote vulnerability to social stress. B. S. MCEWEN*; C. NASCA; G. E. HODES; V. KANA; E. J. NESTLER; S. J. RUSSO. *The Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai.*

3:00 F41 **773.23** ● Ketamine elicits sex-dependent rapid and sustained neurobehavioral effects in C57BL/6J mice. C. THELEN*; J. SENS; A. FRANCESCHELLI; P. M. PITYCHOUTIS. *The Univ. of Dayton, Univ. of Dayton.*

4:00 F42 **773.24** ● Resistance to chronic antidepressant treatment: A behavioural and neurogenic study in a neuroendocrine-based mice model of anxiety/depression. M. MEKIRI*; A. M. GARDIER; D. J. DAVID; J. GUILLOUX. *UMRS1178.*

1:00 F43 **773.25** 'Sequester stress': The development of a novel animal model for life stress and a depression-like phenotype. B. L. KOPP*; C. LYONS; B. MYERS; M. B. SOLOMON; J. P. HERMAN; F. CORREA*. *Univ. of Cincinnati, Univ. of Cincinnati.*

2:00 F44 **773.26** Effect of imipramine on the peripheral th2/th1 cytokine production in the rat serum in the time-dependent sensitization paradigm. A. FARON-GÓRECKA*; M. KUśMIDER; J. SOLICH; P. PABIAN; D. ŻURAWEK; B. ZEMłA; M. DZIEDZICKA-WASYLEWSKA. *Inst. of Pharmacol. PAS.*

3:00 G1 **773.27** FosB expression in ventral hippocampus regulates behavior in the social defeat model of depression. C. MANNING*; S. COOPER; A. EAGLE; M. THIBAULT; P. GAJEWSKI; M. MAZEI-ROBISON; A. ROBISON. *Michigan State Univ.*

4:00 G2 **773.28** Pharmacological potentiation of KCNQ channel currents in midbrain dopamine neurons functions as a mechanistically distinct antidepressant. A. K. FRIEDMAN*; B. JUAREZ; S. M. KU; H. ZHANG; J. J. WALSH; D. CHAUDHURY; D. M. DIETZ; M. RIBADERNEIRA; E. WONG; R. NEVE; M. HAN. *Ichan Sch. of Med. at Mount Sinai, AstraZeneca, McGovern Inst. for Brain Research, MIT, Friedman Brain Inst.*

1:00 G3 **773.29** Bioenergetics of Desipramine: A functional proteomic study. F. FERRARI*; A. GORINI; R. F. VILLA. *Univ. of Pavia.*

2:00 G4 **773.30** Potential antidepressant effects of kappa opioid receptor agonists following social defeat stress. A. LAMAN-MAHARG*; M. Z. MCMACKIN; E. O. SANCHEZ; K. L. CAMPI; B. C. TRAINOR. *Univ. of California, Davis.*

POSTER

774. Mood Disorders: Antidepressants II

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 G5 **774.01** ▲ Further characterization of the discriminative stimulus properties of the noncompetitive N-Methyl-D-aspartate (NMDA) receptor antagonist ketamine in rats. C. M. MERRITT; A. M. JONES; J. C. CORNELISSEN; B. L. JOSEPH; K. A. WEBSTER; T. M. HILLHOUSE; J. H. PORTER*. *Virginia Commonwealth Univ., Univ. of Michigan.*

2:00 G6 **774.02** A novel class of fast-acting antidepressants: Converging evidence using genetic knockdown and two mechanistically distinct GLO1 inhibitors. K. M. MCMURRAY*; P. S. SIDHU; P. ELKIN; V. RAWAL; L. A. ARNOLD; A. A. PALMER. *Univ. of Chicago, Univ. of Wisconsin-Milwaukee, Univ. of Chicago.*

3:00 G7 **774.03** Estrogen receptor β regulation of bdnf-5-ht dual signaling: Mechanistic and therapeutic implications for menopausal depression. A. CHHIBBER*; S. K. WOODY; L. ZHAO. *Univ. of Kansas.*

4:00 G8 **774.04** Behavioral effects of single dose ketamine injection on adult rats exposed to chronic unpredictable mild stress. E. ULUPINAR*; E. POLAT; O. O. AYDIN; E. G. AYDIN. *Eskisehir Osmangazi Univ., Eskisehir Osmangazi Univ., Eskisehir Osmangazi Univ.*

1:00 G9 **774.05** ▲ Characterization of the discriminative stimulus properties noncompetitive N-Methyl-D-aspartate (NMDA) receptor antagonist ketamine in C57BL/6 mice. R. PANDEY*; C. W. KALINOWSKI; K. W. LOVELESS; K. A. WEBSTER; J. H. PORTER. *Virginia Commonwealth Univ.*

2:00 G10 **774.06** Impact of alternative RNA splicing of ERβ on ovarian hormone deficiency-induced depression and estrogen therapy effectiveness in female rats. X. HOU*; S. O. ADEOSUN; R. HILL; B. ZHENG; J. WANG. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

3:00 G11 **774.07** The effect of allopregnanolone infusion on GABAa receptor subunits mRNA expression in the prefrontal cortex of rats. M. S. NIN*; F. B. ALMEIDA; G. AGNES; H. M. T. BARROS. *UFCSPA, UFCSPA, UFCSPA.*

4:00 G12 **774.08** Treatment with high-voltage electric potential (HELP) induces tolerance to psychosomatic stress and increases cortical BDNF levels. K. YAMATO*; T. HORI; Y. NAKAJO; H. KATAOKA; J. C. TAKAHASHI; H. YANAMOTO. *Natl. Cerebral and Cardiovasc. Ctr., Hakuju Inst. for Hlth. Sci. Co. Ltd., Res. Laboratory, Rakuwa-kai Otowa Hosp., Natl. Cerebral and Cardiovasc. Ctr., Osaka Univ. Grad. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 G13 **774.09** The antidepressant-like effects of BU10119, a novel kappa opioid receptor antagonist, in the novelty-induced hypophagia task in mice. S. J. BAILEY*; A. ALMATROUDI; C. P. BAILEY; S. M. HUSBANDS. *Univ. of Bath, Univ. of Bath.*

2:00 G14 **774.10** Striatopallidal Gpr88 regulates anxiety-like behaviour and dopaminergic driven locomotion. A. MEIRSMAN*; J. BECKER; B. KIEFFER. *I.G.B.M.C., Physiologie de la Reproduction et des Comportements,, DOUGLAS INSTITUTE.*

3:00 G15 **774.11** Involvement of the agmatinergic system in the depressive-like phenotype of the CREB-regulated transcription coactivator 1 knockout mouse model of depression. E. M. MEYLAN*; L. BREUILLAUD; T. SEREDENINA; P. J. MAGISTRETTI; O. HALFON; R. LUTHI-CARTER; J. CARDINAUX. *Ctr. For Psychiatric Neurosci., Dept. of Psychiatry, Univ. Med. Ctr., EPFL, King Abdullah Univ. of Sci. and Technol., Univ. of Leicester.*

4:00 G16 **774.12** Depression-like behavior and response to chronic stress in mice lacking brain serotonin. G. MADDALONI*; S. MIGLIARINI; F. NAPOLITANO; A. USIELLO; M. PASQUALETTI. *Univ. of Pisa, Ceinge Biotecnologie Avanzate, Cnt. for Neurosci. and Cognitive Systems, Inst. Italiano di Tecnologia.*

1:00 G17 **774.13** MRI and MRS characterization of Crtc1 knockout mice limbic structures: Investigating neurobiology of mood disorders. A. CHERIX*; R. GRUETTER; H. LEI; J. CARDINAUX. *Ecole Polytechnique Fédérale De Lausanne, Ctr. for Psychiatric Neurosci., Lab. for Functional and Metabolic Imaging, Dept. of Radiology, Ctr. for Biomed. Imaging, Dept. of Radiology, Service of Child and Adolescent Psychiatry.*

2:00 G18 **774.14** Differential roles of homologous circadian proteins in plasticity and reward behavior. P. K. PAREKH*; A. OZBURN; E. FALCON; M. SIDOR; S. SPENCER; Y. HUANG; C. MCCLUNG. *Univ. of Pittsburgh, Univ. of Pittsburgh, UT Southwestern Med. Ctr.*

3:00 G19 **774.15** The histone deacetylase inhibitor SAHA improves the depressive-like behavior of CREB-regulated transcription coactivator 1-deficient mice: Possible relevance for treatment-resistant depression. J. CARDINAUX*; E. M. MEYLAN; O. HALFON; P. J. MAGISTRETTI. *Ctr. For Psychiatric Neuroscience, Dept. of Psychiatry, Dept. of Psychiatry, Univ. Med. Ctr., King Abdullah Univ. of Sci. and Technol., Brain Mind Institute, Ecole Polytechnique Fédérale de Lausanne (EPFL).*

4:00 G20 **774.16** ▲ Increased depression-like behavior in response to stress in a mouse model with mitochondrial complex I dysfunction. T. L. EMMERZAAL*; M. ROELOFS; B. GEENEN; K. SCOTT; B. GRAHAM; W. CRAIGEN; G. MING; E. MORAVA; R. RODENBURG; T. KOZICZ. *Donders Inst. For Brain, Cognition & Behaviour, Wayward Genet. Center, Tulane Univ., Dept. of Mol. and Human Genetics, Baylor Col. of Med., Radboud university medical center, Nijmegen Ctr. for Mitochondrial Disorders.*

1:00 G21 **774.17** ● Role of the microglial T cell death associated gene-8 (TDAG8) receptor in depression-like behavior. L. L. VOLLMER*; R. AHLBRAND; S. N. SCHMELTZER; R. SAH. *Univ. Of Cincinnati.*

2:00 G22 **774.18** Impaired executive function and a depressive-like phenotype in gabra5-/- mice. S. W. KEMP*; N. K. CHAN; M. MILENKOVIC; A. J. RAMSEY; E. SIBILLE; B. ORSER. *Univ. of Toronto, Univ. of Toronto.*

3:00 G23 **774.19** Evaluation of home cage social behaviors in mutant mitochondrial DNA polymerase transgenic mice. G. KURATOMI*; Y. ARIME; S. SUZUKI; K. AKIYAMA. *Dokkyo Med. Univ. Sch. of Med.*

4:00 G24 **774.20** ● Impaired hippocampal reward-related activity in the DISC1 mutant mice. Y. HAYASHI*; A. SAWA; T. HIKIDA. *Kyoto Univ. Grad. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Kyoto Univ. Grad. Sch. of Med.*

1:00 G25 **774.21** Serotonin depletion affects serotonergic neuronal circuits in adult mice. M. PRATELLI*; B. PELOSI; S. MIGLIARINI; M. PASQUALETTI. *Univ. of Pisa, Inst. of Neuroscience, UCL, Cnt. for Neurosci. and Cognitive Systems, Inst. Italiano di Tecnologia.*

2:00 G26 **774.22** Decreased somatostatin expression and behavioral abnormalities in a somatostatin-IRES-CRE mouse line. S. MOLAS*; P. GARDNER; A. TAPPER. *Univ. of Massachusetts Med. Sch.*

3:00 G27 **774.23** Enhanced adult hippocampal neurogenesis via regulation of perforant path activity: A novel treatment for stress- induced depression? S. YUN*; P. D. RIVERA; R. REYNOLDS; N. ITO; B. L. ROTH; D. M. CHETKOVICH; A. J. EISCH. *UT Southwestern Med. Ctr., Northwestern Univ., Univ. of North Carolina.*

4:00 G28 **774.24** Impaired fast-spiking interneuron function in a genetic mouse model of depression. J. SAUER*; M. STRUEBER; M. BARTOS. *Albert-Ludwigs Univ. Freiburg.*

1:00 G29 **774.25** Chronic lithium treatment rescued Akt3 KO mice depressive and anxiety-like behaviors. Y. BERGERON*; G. BUREAU; M. LAURIER-LAURIN; E. ASSELIN; G. MASSICOTTE; M. CYR. *Univ. du Quebec a Trois-Rivieres.*

POSTER

775. Antidepressants: Animal Models

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 G30 **775.01** Isoflurane anesthesia activates TrkB neurotrophin receptor signaling and produces rapid antidepressant-like effects. H. ANTILA*; D. POPOVA; J. LINDHOLM; I. YALCIN; T. RANTAMÄKI; E. CASTRÉN. *Univ. of Helsinki, Inst. of Cell. and Integrative Neurosciences.*

2:00 G31 **775.02** Co-activation of multiple serotonin receptors underlies sustained potentiation of synaptic transmission by fluoxetine in the hippocampus. A. M. VAN DYKE*; A. J. KALLARACKAL; X. CAI; S. M. THOMPSON. *Univ. of Maryland, Baltimore.*

3:00 G32 **775.03** Ursolic acid protects against depressive-like behavior induced by chronic unpredictable stress and *in vitro* corticosterone-induced reduction on cell viability. A. S. RODRIGUES*; A. B. R. HRYB; A. R. S. COLLA; N. PLATT; V. LIEBERKNECT; F. L. PAZINI; M. P. CUNHA; M. P. KASTER. *Univ. Federal de Santa Catarina.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 G33 **775.04** ● Amantadine reduces depressive behavior in rodent models of depression. J. NGUYEN*; B. BRIGHAM. *Adamas Pharmaceuticals, Inc.*

1:00 G34 **775.05** NLRP3 inflammasome is activated by psychological stress: A potential role of NLRP3 inhibitor beta-hydroxybutyrate's antidepressant effect. T. YAMANASHI*; M. IWATA; N. KAMIYA; T. YAMAUCHI; R. S. DUMAN; K. KANEKO. *Tottori Univ., Yale Univ. Sch. of Med.*

2:00 G35 **775.06** Validation of a rat model of therapy resistant major depressive disorder and investigation of resistance-associated changes of the brain-derived neurotrophic factor BDNF. W. THEILMANN; W. LÖSCHER; H. FRIELING; S. BLEICH; M. RHEIN; N. MATSUI; S. KOHTALA; C. BRANDT; T. P. RANTAMAKI*. *Univ. of Vet. Med., Univ. of Helsinki, Ctr. for Systems Neurosci., Hannover Med. Sch., Univ. Helsinki, Tokushima Bunri Univ.*

3:00 G36 **775.07** Chronic social defeat mouse assay for assessing anti-depression therapies. J. T. PUOLIVALI*; S. ALASTALO; A. NURMI; O. KONTKANEN; B. HENGERER; K. A. ALLERS. *Charles River Discovery Res. Services, Boehringer Ingelheim Pharma GmbH & Co. KG.*

4:00 G37 **775.08** ● Antidepressant actions of deep brain stimulation are augmented by dopamine reuptake inhibition. R. P. KALE*; A. Z. KOUZANI; K. WALDER; M. BERK; S. J. TYE. *Mayo Clin., Deakin Univ., Deakin Univ.*

1:00 G38 **775.09** Hypothalamic pituitary adrenal-axis hyperactivity in depression co-morbid with obesity in experimental mice. Y. KURHE*; R. MAHESH. *Birla Inst. of Technol. & Science, Pilani.*

2:00 G39 **775.10** Disturbed inhibition in the hippocampus underlying decreased sensitivity to reward in depression. K. HENNINGSEN*; U. BØLCHO; M. M. HOLM; I. VIDA; O. WIBORG. *Aarhus Univ., Aarhus Univ., Inst. of Integrative Neuroanatomy.*

3:00 G40 **775.11** ● Wistar Kyoto rats are a model of Treatment Resistant Depression sensitive to ketamine and not fluoxetine: Behavioural and molecular endpoints of pharmacological efficacy. J. PRENDERVILLE; J. ROUINE; C. MCDONNELL; G. DI CAPUA; D. J. VIRLEY*; M. BIANCHI. *Transpharmation Ireland Limited, Transpharmation Ltd.*

4:00 G41 **775.12** Evaluation of antidepressant-related assays sensitive to clinical relevant doses of ketamine. C. MOMBEREAU*; T. BRUUN; J. PRENDERVILLE; J. ROUINE; L. BADOLO; M. BIANCHI. *H. Lundbeck A/S, Transpharmation Ireland Limited, H. Lundbeck A/S.*

1:00 G42 **775.13** ● From synapses to depression and back: Plasticity of excitatory drive in cortico-mesolimbic synapses. M. D. KVARTA*; J. FISCHELL; N. HESSELGRAVE; T. LEGATES; A. VAN DYKE; S. THOMPSON. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

2:00 G43 **775.14** Effects of bacterial translocation and intestinal decontamination on the inflammatory response induced by a depression model in rats. D. MARTIN-HERNANDEZ; A. G. BRIS; K. S. MACDOWELL; A. SAYD; S. R. MAUS; B. GARCIA-BUENO; J. L. M. MADRIGAL; L. ALOU; M. L. GOMEZ-LUS; J. C. LEZA; J. R. CASO*. *Complutense Univ. of Madrid, CIBERSAM, Inst. de Investigacion Hosp. 12 de Octubre.*

3:00 G44 **775.15** Ketamine reduces prefrontal kynurenine levels in an animal model of treatment resistant depression. J. B. PRICE; L. SCHWIELER; M. FRYE; C. SELLGREN; S. ERHARDT; S. J. TYE*. *Mayo Clin., Karolinska Institutet, Mayo Clin.*

4:00 H1 **775.16** A molecular target connecting obesity and anxiety/depression. Z. T. QIN*; X. ZHOU; C. CHANG; A. HARI; A. F. R. STEWART; H. CHEN. *Univ. of Ottawa, Ottawa Hosp. Res. Inst., Univ. of Ottawa, Univ. of Ottawa Heart Inst.*

1:00 H2 **775.17** The antidepressant potential of tumor necrosis factor (TNF) alpha antagonists. K. BRYMER*; J. BOTTERILL; M. MITCHELL; H. CARUNCHO; L. KALYNCHUK. *Univ. of Saskatchewan.*

2:00 H3 **775.18** Ketamine modulates the dopamine system in zebrafish(danio rerio) larvae. S. F. ALI*; B. L. ROBINSON; M. DUMAS; E. CUEVAS; M. G. PAULE; J. KANUNGO. *Neurochemistry Lab, Div. of Neurotoxicology, Natl. Ctr. Toxicological Res/Fda.*

3:00 H4 **775.19** ▲ Behavioral interactions between nmda receptor antagonists and antidepressants in rats. J. A. TEMPLE*; K. A. TRUJILLO; A. ROCHA; T. ZAFAR. *California State Univ. San Marcos.*

POSTER

776. Mood Disorders: Antidepressant III

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 H5 **776.01** ● Lack of effects of ketamine on the mTOR pathway in rats. S. POPP; M. M. VAN GAALEN; A. BESPALOV; B. BEHL*. *AbbVie Deutschland GmbH & Co.KG, Encepharm.*

2:00 H6 **776.02** ● Different classes of antidepressants produce divergent effects in the open space swimming test in the mouse. V. CASTAGNÉ*; C. LANDEMAINE; V. LÉON. *Porsolt S.A.S.*

3:00 H7 **776.03** Sex differences in the abuse potential of low-dose ketamine. K. J. SCHOEPFER*; C. E. STRONG; S. K. SALAND; A. M. DOSSAT; F. JOHNSON; M. KABBAJ. *Florida State Univ., Florida State Univ.*

4:00 H8 **776.04** Antidepressant activity of rose oil in Wistar Kyoto rats. K. LOK*; S. LI. *Shanghai Jiao Tong Univ.*

1:00 H9 **776.05** ● Potential neurophysiological signals tracing antidepressant effects of glutamate receptor antagonists. D. NAGY*; M. STOILJKOVIC; F. MENNITI; M. HAJOS. *Yale Univ., Mnemosyne Pharmaceuticals Inc.*

2:00 H10 **776.06** Comparison of variables associated with postpartum depression in adolescent and adult women with low socioeconomic status in the southeast of Mexico. H. A. RUBIO-ZAPATA*; D. F. ESTRELLA-CASTILLO; P. AGUILAR-ALONSO; K. B. OJEDA-TORRES. *Facultad De Medicina- UADY, Facultad De Medicina- UADY, BUAP, Secretaría de Salud.*

3:00 H11 **776.07** Chronic treatment with antidepressants enhances dopamine D1 receptor signaling in the hippocampal dentate gyrus. M. KUROIWA*; T. SHUTO; N. SOTOGAKU; Y. OH; A. NISHI. *Kurume Univ. Sch. of Med., the Rockefeller Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H12 **776.08** ● Effect of the antidepressant agomelatine on the inflammatory response induced by lipopolysaccharide: A genome-wide study in the rat ventral hippocampus. A. C. ROSSETTI; M. S. PALADINI; G. RACAGNI; M. A. RIVA; A. CATTANEO; R. MOLTENI*. *Univ. of Milan, IRCCS Ctr. San Giovanni di Dio - Fatebenefratelli, Inst. of Psychiatry - King's Col. London.*

1:00 H13 **776.09** Impact of vortioxetine on spontaneous and afferent-driven spike activity recorded in the rat ventral striatum/nucleus accumbens. S. CHAKROBORTY*; E. DALE; A. L. PEHRSON; C. SANCHEZ-MORILLO; A. R. WEST. *Rosalind Franklin Univ., Lundbeck Res. USA, Inc.*

2:00 H14 **776.10** Ketamine promotes electrophysiological and biochemical alterations in the glutamatergic transmission in the dorsal raphe. N. LLAMOSAS; L. PEREZ-CABALLERO; E. BERROCOSO*; L. UGEDO; M. TORRECILLA. *Univ. of the Basque Country UPV/EHU, Univ. of Cadiz, Ctr. de Investigación Biomédica en Red de Salud Mental (CIBERSAM).*

3:00 H15 **776.11** Age-dependent effects of chronic electroconvulsive seizure (ECS) treatment. M. JAGGAR*; S. GHOSH; V. A. VAIDYA. *Tata Inst. of Fundamental Res.*

4:00 H16 **776.12** Sex differences in the reinforcing properties of intermittent, low-dose ketamine. K. N. WRIGHT*; C. E. STRONG; M. KABBAJ. *Florida State Univ.*

1:00 H17 **776.13** ● Hippocampal neurogenesis is required for some of the antidepressant- and anxiolytic-like properties of S 47445, a novel positive allosteric modulator of AMPA type glutamate receptors. J. J. P. GUILLOUX; I. MENDEZ-DAVID; A. GARDIER; L. TRITSCHLER; E. MOCAER; S. BRETIN*; D. DAVID. *Univ. Paris-Sud, Faculté de Pharmacie, Inst. De Recherches Internationales Servier.*

2:00 H18 **776.14** Combinational antidepressant effects of glutamatergic agents. J. KLINE; K. BATTANI; L. SEMKE*; V. DURIC; L. YUAN. *Des Moines Univ.*

3:00 H19 **776.15** Cell cycle regulation of the adult hippocampal progenitor cells in depression and by antidepressants. P. PATRICIO*; A. MATEUS-PINHEIRO; A. MACHADO-SANTOS; N. ALVES; M. MORAIS; J. BESSA; N. SOUSA; L. PINTO. *Life and Hlth. Sci. Res. Inst. (ICVS).*

4:00 H20 **776.16** ● Adjunctive treatment of brexpiprazole with fluoxetine can improve depression-like behaviors and dendritic changes after inflammation. M. MA; Q. REN; N. YOSHIMI; Y. OHGI; T. FUTAMURA; K. HASHIMOTO*. *Chiba Univ. Ctr. Forensic Men Hlth., Otsuka Pharmaceut. Ltd.*

1:00 H21 **776.17** Rapid sex- and hormone-dependent changes in signaling pathway activation and protein levels in the hippocampus following low-dose ketamine administration: A phosphoproteomics approach. S. K. SALAND*; R. K. SINGH; R. MERCER; T. T. LAM; K. WILCZAK; M. KABBAJ. *Florida State Univ., Florida State Univ., Col. of Medicine, Yale Univ.*

2:00 H22 **776.18** Ovarian hormones impart resilience against chronic stress and modulate the effects of fluoxetine on hippocampal plasticity. R. MAHMOUD*; S. R. WAINWRIGHT; J. A. CHAITON; S. E. LIEBLICH; L. A. M. GALEA. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

3:00 H23 **776.19** New Herbal Treatment for depression and Anxiety Disorders with minimal side-effects increase BDNF level in the hippocampus. R. DORON*; M. FRANKO; R. TOLEDANO; S. ARMOZA; M. REHAVI. *The Academic Col. Tel Aviv Jaffa/The Open Unive, The Academic Col. of Tel Aviv-Yaffo, Tel-Aviv Univ.*

4:00 H24 **776.20** Long-term treatment with fluoxetine suppresses the stress response of serotonin by up-regulating dopamine D1 receptor signaling in the hippocampal dentate gyrus. Y. KAWAHARA; T. SHUTO; Y. HANADA; H. KAWAHARA*; A. NISHI. *Kurume Univ. Sch. of Medicin, Tsurumi Univ. / Sch. of Dent.*

1:00 H25 **776.21** Ovarian hormones influence sensitivity to the antidepressant-like effect of low dose ketamine in C57BL/6 mice. A. M. DOSSAT*; K. N. WRIGHT; C. E. STRONG; M. KABBAJ. *Florida State Univ.*

2:00 H26 **776.22** Modulation of hypothalamic neurogenesis by stress and antidepressants: The relevance in energy balance regulation in depression. M. MORAIS; A. MATEUS-PINHEIRO; P. PATRÍCIO; L. PINTO; N. SOUSA; J. BESSA*. *Life and Hlth. Sci. Res. Inst. (ICVS).*

3:00 H27 **776.23** Antidepressants activate matrix metalloproteinase (MMP) in astroglial cells: Involvement in glial cell line-derived neurotrophic factor (GDNF) expression. H. ABE; K. HISAOKA*; N. KAJITANI; M. OKADA-TSUCHIOKA; K. ITAGAKI; M. MORIOKA; Y. NAKATA; M. TAKEBAYASHI. *Dept. Pharmacol. Hiroshima Univ., Div. of Psychiatry and Neuroscience, Inst. for Clin. Res., NHO Kure Med. Ctr., Dept. of Psychiatry, NHO Kure Med. Ctr.*

4:00 H28 **776.24** Adiponectin is required for PPARγ-mediated effects on depression- and anxiety-related behaviors. M. GUO*; D. ZHAO; R. DING; M. WANG; X. LU. *Binzhou Med. Univ. Hosp., Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

1:00 H29 **776.25** ● Vortioxetine increases synaptic glutamate neurotransmission without altering extrasynaptic glutamate concentrations. A. L. PEHRSON*; E. DALE; S. LEISER; C. SANCHEZ. *Lundbeck Res. USA.*

2:00 H30 **776.26** Dopamine D1 receptor activation enhances antidepressant effects of SSRI in a mouse model of depression. T. SHUTO*; M. KUROIWA; N. SOTOGAKU; A. NISHI. *Kurume Univ.*

3:00 H31 **776.27** An inverted cAMP-response element (CRE)-mediated transcriptional regulation of the human tryptophan hydroxylase-2(TPH2) gene. H. KANEKO; M. ODA; Y. NAWA; T. HIROI; T. KUMAI; R. TAKAHASHI; H. MATSUI*. *St. Marianna Univ. Grad Med., St. Marianna Univ. Grad Sch. Med., St. Marianna Univ. Grad Sch. Med., Fac Pharm Sci, Toho Univ., Dept Mol Behav Neurosci, St. Marianna Univ. Grad Sch. Med.*

4:00 H32 **776.28** ● R-ketamine: A novel rapid and long-lasting antidepressant. C. YANG; Y. SHIRAYAMA*; J. ZHANG; Q. REN; M. MA; W. YAO; C. DONG; K. HASHIMOTO. *Chiba Univ. Ctr. Forensic Men Hlth., Teikyo Univ. Chiba Med. Ctr.*

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* Indicates abstract's submitting author

POSTER

777. Alcohol and Cannabis: Effects of Exposure During Adolescence

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 H33 **777.01** ▲ Alcohol access in adolescence and early adulthood does not affect sign-tracking, but augments omission contingency learning, in rats. P. E. KALLENBERGER*; N. BRIGHT; H. FISHER; M. GREER; A. LIMOGES; A. PAJSER; C. L. PICKENS. *Kansas State Univ.*

2:00 H34 **777.02** Acute ethanol exposure in adolescent female rats alters fear conditioning in an age dependent manner. J. A. TRAVIS; K. ISHIWARI; R. SIRCAR*. *The City Col. of New York, Albert Einstein Col. of Med.*

3:00 H35 **777.03** The long-term effects of adolescent binge alcohol exposure on anxiety behavior in male Wistar rats. A. R. TORCASO*; A. ASIMES; E. PINCETI; Y. S. RAO; C. L. SHULTS; C. K. KIM; T. R. PAK. *Loyola Univ. Chicago.*

4:00 H36 **777.04** Adolescence chronic caffeine exposure increases alcohol drinking and depressive-like behavior in mice. D. J. HINTON*; Y. CHOI; A. OLIVEROS; C. A. VADNIE; S. CHOI; D. CHOI. *Mayo Clin. Col. of Med.*

1:00 H37 **777.05** Adolescent ethanol exposure, pubertal timing, and novelty seeking in adulthood. E. KIM*; L. P. SPEAR. *Binghamton Univ.*

2:00 H38 **777.06** Concurrent ethanol-nicotine intake by peri-adolescent p rats confers resistance to extinction of intravenous nicotine self-administration in adulthood. E. A. ENGLEMAN; A. M. SENTIR; M. D. WHITE; Z. A. RODD; R. A. CHAMBERS; R. L. BELL*. *Indiana Univ. Sch. of Med.*

3:00 H39 **777.07** Sex and age-dependent modulatory effects of maternal care on ethanol preference and sensitivity to ethanol-induced sedation hypnosis. D. O. POPOOLA*; N. M. CAMERON. *Binghamton Univ., State Univ. of New York.*

4:00 H40 **777.08** Voluntary exercise promotes resiliency to adolescent binge ethanol-induced reductions in adult brain serotonergic neuron markers. R. P. VETRENO*; T. J. WALTER; F. T. CREWS. *Univ. of North Carolina At Chapel Hill.*

1:00 H41 **777.09** The ontogeny of ethanol aversion. J. SAALFIELD*; L. SPEAR. *Binghamton Univ.*

2:00 H42 **777.10** Binge-like alcohol exposure during adolescence disrupts dopaminergic neurotransmission in the adult prefrontal cortex. H. TRANTHAM-DAVIDSON*; S. CENTANNI; L. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

3:00 H43 **777.11** ▲ Biomolecularmarkers of impulsivity following adolescent alcohol-induced changes to the orbitofrontal cortex. C. R. SHORT; M. S. MCMURRAY*; J. D. ROITMAN. *Univ. of Illinois At Chicago.*

4:00 H44 **777.12** Aging increases alcohol sensitivity and eliminates circadian modulation of alcohol-induced behaviors in *Drosophila* melanogaster. A. K. DENOBREGA*; L. C. LYONS. *Florida State Univ.*

1:00 H45 **777.13** Adolescent ethanol exposure leads to durable changes in HPA axis sensitivity to an immune stimulus at adulthood. A. S. VORE*; T. L. DOREMUS-FITZWATER; A. GANO; J. PANICCIA; T. DEAK. *Binghamton Univ.*

2:00 H46 **777.14** The effect of adolescent binge drinking on oxidative stress in the prefrontal cortex. W. VARGAS*; A. DAVE; H. N. RICHARDSON. *Univ. of Massachusetts-Amherst.*

3:00 H47 **777.15** Adolescent alcohol exposure suppresses the CREB signaling system in the rat amygdala during adulthood. H. ZHANG; D. KOKARE; E. J. KYZAR; T. TEPPEN; S. C. PANDEY*. *Univ. of Illinois at Chicago, Jesse Brown VA Med. Ctr., Ctr. for Alcohol Res. in Epigenetics.*

4:00 H48 **777.16** Adolescent intermittent ethanol alters oligodendrocytes and myelin in the prefrontal cortex of adult male rats. W. LIU*; F. T. CREWS. *Univ. of North Carolina-Chapel Hill.*

1:00 I1 **777.17** Disruption of early stage resting state activity as a function of alcohol consumption in nonhuman primates: An MEG study. J. R. STAPLETON-KOTLOSKI*; J. A. ROWLAND; A. T. DAVENPORT; P. M. EPPERLY; D. P. FRIEDMAN; D. W. GODWIN; J. B. DAUNAIS. *Wake Forest Univ. Sch. of Med., Wake Forest Univ. Sch. of Med., W.G. "Bill" Hefner VAMC, Wake Forest Univ. Sch. of Med.*

2:00 I2 **777.18** Withdrawn.

3:00 I3 **777.19** Onset-specific effects of regular cannabis use on brain functional systems. F. FILBEY*; V. MISHRA. *Univ. of Texas At Dallas, Advance MRI.*

4:00 I4 **777.20** Comparing effects of alcohol and marijuana: An n-back fmri study in young adults. A. BYRON-ALHASSAN; T. HATCHARD; O. MIODUSZEWSKI; A. SMITH*. *Univ. of Ottawa.*

POSTER

778. Cocaine: Cellular and Synaptic Studies

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 I5 **778.01** Extinguished environment elicits transient synaptic potentiation in the accumbens shell. D. ROBERTS-WOLFE*; C. GIPSON; A. MOTTS; A. SMITH; K. WISCHUSEN; M. SCOFIELD; P. KALIVAS. *Med. Univ. of South Carolina, Col. of Charleston.*

2:00 I6 **778.02** Elucidating the effects of atypical dopamine uptake inhibitors on the phasic release of dopamine in mice. J. KEIGHRON; A. H. NEWMAN*; G. TANDA. *NIDA-IRP.*

3:00 I7 **778.03** Beta-arrestin 1 dependent regulation of cocaine self-administration in mice. N. MITTAL*; A. MINASAYAN; T. SCHALLERT; C. J. EVANS; W. M. WALWYN. *Univ. of Texas At Austin, UCLA, Univ. of Texas at Austin.*

4:00 I8 **778.04** Examining the role of toll-like receptor 4 on nucleus accumbens synaptic physiology and drug reward behavior. D. T. KASHIMA*; B. A. GRUETER. *Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 I9 **778.05** Cell type specific dysregulation of GABAergic plasticity in the Ventral Pallidum after extinction from cocaine self administration. D. NEUHOFER*; Y. KUPCHIK; P. KALIVAS. *MUSC, The Hebrew Univ. of Jerusalem.*

2:00 I10 **778.06** Inherent individual differences in dopamine release are associated with variability in subsequent cocaine consumption. J. K. SHAW*; R. A. ESPAÑA. *Drexel Univ. Col. of Med.*

3:00 I11 **778.07** PCAF regulates the acetylation of Sigma-1 receptor chaperones. Y. YASUI*; T. SU. *NIH/NIDA, NIH.*

4:00 I12 **778.08** Synapse-specific deconstruction of endocannabinoid signaling in the nucleus accumbens shell. B. D. TURNER*; E. DELPIRE; B. GRUETER. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

1:00 I13 **778.09** Cocaine and Stress disrupt mGluR/SK inhibition on dopamine neurons of the VTA. J. PARRILLA-CARRERO*; E. POTAPENKO; A. RIEGEL. *Med. Univ. of South Carolina.*

2:00 I14 **778.10** Cocaine mediated molecular regulation of mitochondrial dynamics in nucleus accumbens projection neuron subtypes. R. CHANDRA*; C. FRANCIS; M. ENGELN; A. AMGALAN; L. JENSEN; P. KONKALMATT; A. GANCARZ; S. GOLDEN; D. DIETZ; G. TURECKI; S. RUSSO; M. LOBO. *Univ. of Maryland, Baltimore, Univ. of Maryland Sch. of Med., Univ. at Buffalo, Mount Sinai Sch. of Med., Douglas Mental Hlth. Univ. Inst. and McGill University, Montréal, Québec, Canada.*

3:00 I15 **778.11** Cocaine self-administration and cue-reinstatement disrupt Kv7 (KCNQ) channel inhibition in the prefrontal cortex. W. BUCHTA*; A. RIEGEL. *Med. Univ. of South Carolina.*

4:00 I16 **778.12** Dynamic changes in nucleus accumbens miR-495 expression across cocaine self-administration and reinstatement. R. M. BASTLE*; N. S. PENTKOWSKI; P. R. KUFAHL; N. A. PEARTREE; T. CHAUDHURY; C. D. SMITH; R. J. OLIVER; N. I. PERRONE-BIZZOZERO; J. L. NEISEWANDER. *Arizona State Univ., Arizona State Univ., Univ. of New Mexico.*

1:00 I17 **778.13** The neuronal RNA-binding protein HuD interacts with Argonaute proteins and GW182 proteins in an RNA-dependent manner relieving miRNA-mediated repression. A. S. GARDINER; M. DELL'ORCO; N. PERRONE-BIZZOZERO*. *Univ. of New Mexico HSC.*

2:00 I18 **778.14** Neuronal rna-binding protein hud regulates addiction-related target mrnas, structural plasticity, and cocaine addiction-related behaviors. R. J. OLIVER*, JR; A. S. GARDINER; J. L. BRIGMAN; A. M. ALLAN; N. I. PERRONE-BIZZOZERO. *Univ. of New Mexico HSC.*

3:00 I19 **778.15** Cadherin adhesion complexes and cocaine-mediated synaptic plasticity. A. K. GLOBA*; F. MILLS; S. LIU; C. M. COWAN; S. L. BORGLAND; A. G. PHILLIPS; S. X. BAMJI. *Univ. of British Columbia, Univ. of Calgary, Univ. of British Columbia.*

4:00 I20 **778.16** Phasic neuronal activity in the anterior cingulate cortex robustly differentiates water and cocaine cues in rhesus macaque monkeys. J. T. MORRA; E. BAEG; H. P. JEDEMA; C. W. BRADBERRY*. *Univ. of Pittsburgh Med. Ctr., Inst. for Basic Sci. at Sungkyunkwan Univ., Univ. of Pittsburgh, VA Pittsburgh Hlth. Services.*

1:00 I21 **778.17** Cocaine evokes microvesicle release by activating sigma-1 receptor and ARF6. Y. NAKAMURA*; S. TSAI; Y. LI; D. LIN; T. SU. *NIDA IRP, NIDA IRP.*

2:00 I22 **778.18** Opposite regulation of cannabinoid CB1 and CB2 receptors in the prefrontal cortex of rats treated with cocaine during early adolescence. J. GARCIA-FUSTER*; R. GARCIA-CABRERIZO. *IUNICS. Univ. of the Balearic Islands.*

3:00 I23 **778.19** Role of hevin in the neuroplasticity of cocaine addiction. V. F. VIALOU*; R. MONGRÉDIEN; A. ORRICO; A. ERDOZAIN. *INSERM.*

4:00 I24 **778.20** Enhanced sensitivity to repeated cocaine increases perineuronal net staining in the adult rat medial prefrontal cortex. M. SLAKER*; B. A. SORG. *Washington State Univ.*

1:00 I25 **778.21** Emergence of endocytosis-dependent mglur1-ltd at nucleus accumbens synapses during withdrawal from cocaine self-administration. A. F. SCHEYER*; M. E. WOLF; K. Y. TSENG. *Rosalind Franklin Univ. of Med. and Sci., Rosalind Franklin Univ., Rosalind Franklin Univ.*

POSTER

779. Amphetamines: Mechanisms of Addiction and Sensitization

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 I26 **779.01** ● Effect of naltrexone on neural response to risky decision making. P. T. KORTHUIS; L. DENNIS; R. LISOWSKI; D. SCHWARTZ; B. TREMBLAY; V. WILSON; W. F. HOFFMAN*. *Oregon Hlth. & Sci. Univ., Portland VA Med. Ctr.*

2:00 I27 **779.02** Imaging of cerebral glucose metabolism in methamphetamine dependence with and without psychosis compared to normal controls: A PET study. D. VULETIC; J. WARWICK; T. MOALOSI; J. ZEEVAART; P. DUPONT*; D. STEIN. *Univ. of Cape Town, Stellenbosch Univ., Nuclear Energy Corp. of South Africa (NECSA), KU LEUVEN.*

3:00 I28 **779.03** Differential effects of Methamphetamine and Modafinil on the mRNA levels of dopamine and glutamate receptors and voltage-gated Ca^{2+} channels in the mouse prefrontal cortex. V. BISAGNO*; B. GONZALEZ; J. CADET; E. GARCIA-RILL; F. J. URBANO. *ININFA-CONICET, ININFA-(UBA-CONICET), NIDA-NIH, UAMS, IFIBYNE (UBA-CONICET).*

4:00 I29 **779.04** Simultaneous determination of the effects of methamphetamine on GABA, glutamate and monoamines by microdialysis in the prefrontal cortex and hippocampus of rats. S. C. CHEETHAM*; H. ROWLEY; L. PINDER; R. KULKARNI; D. HEAL. *RenaSci Ltd.*

1:00 I30 **779.05** ● Changes in cortico-striatal neuroplasticity following methamphetamine. D. MISHRA*; J. PENA BRAVO; S. M. GHEE; C. R. BERINI; A. LAVIN; C. M. REICHEL. *Med. Univ. of South Carolina.*

2:00 I31 **779.06** Chronic methamphetamine exposure decreases neural activation in hypothalamic-pituitary-adrenal axis associated brain regions in a sex-specific manner. J. JACOBSKIND; D. G. ZULOAGA*. *Univ. at Albany.*

3:00 I32 **779.07** Microinjection of CART Peptide 55-102 into the nucleus accumbens blocks amphetamine-induced locomotor activity by regulating Akt-GSK3β signaling pathway. B. CHO; W. KIM; J. KIM*. *Yonsei Univ. Coll. Med., Brain Korea 21 Plus Projects for Med. Sci., Yonsei Univ. Coll Med.*

4:00 I33 **779.08** Exploration of mTOR signaling in the ventral striatum during the development of methamphetamine sensitization. S. HUANG*; L. LEE; J. CHEN. *Chang-Gung Univ.*

1:00 I34 **779.09** Genome-wide DNA hydroxymethylation patterns in the rat nucleus accumbens consequent to methamphetamine self-administration. J. L. CADET*; S. JAYANTHI; A. GODINO; I. KRASNOVA; M. T. MCCOY; B. LADENHEIM; O. TORRES; R. LEE. *NIH/NIDA, Johns Hopkins Med. Institutions.*

2:00 I35 **779.10** Efficacy of a tetanus-toxoid succinyl-methamphetamine vaccine differs between male and female mice. T. A. KOSTEN*; C. N. HAILE; K. J. WINOSKE; E. D. LYKISSA; N. NAIDU; B. M. KINSEY; R. ARORA; F. M. ORSON; T. R. KOSTEN. *Univ. of Houston, Baylor Col. of Med., The Michael E DeBakey Veteran's Affairs Med. Ctr., ExperTox, Inc., Baylor Col. of Med.*

3:00 I36 **779.11** Methamphetamine reward: Contribution of toll-like receptor 4 and proinflammatory mediators. T. J. FABISIAK*; A. L. NORTHCUTT; K. T. BROWN; M. C. WINKLER; T. A. COCHRAN; M. E. HAAS; X. WANG; J. AMAT; S. F. MAIER; K. C. RICE; R. K. BACHTELL; M. R. HUTCHINSON; L. R. WATKINS. *Univ. of Colorado, Natl. Inst. on Drug Abuse, Australian Res. Council Ctr. of Excellence for Nanoscale BioPhotonics, Univ. of Adelaide Sch. of Med. Sci.*

4:00 I37 **779.12** Alpha-synuclein elevation shapes dopamine neurotransmission via a DAT dependent mechanism. K. SAHA*; B. BUTLER; M. LIN; R. STEGER; J. COLEMAN; B. GIASSON; T. E. GOLDE; H. KHOSHBOUEI. *Univ. of Florida, Univ. of Florida.*

1:00 I38 **779.13** Preferential enhancement of MDMA-induced accumbens 5-HT over DA levels is amplified by 5-HT2C receptor antagonism. C. L. DUVAUCHELLE*; W. T. MADDOX; M. E. REVERON. *Univ. of Texas, Univ. of Texas.*

2:00 I39 **779.14** PKC-b inhibitors attenuate amphetamine and cocaine stimulated dopamine release. A. G. ZESTOS*; S. MIKELMAN; R. T. KENNEDY; M. E. GNEGY. *Univ. of Michigan, Univ. of Michigan.*

3:00 I40 **779.15** Amphetamine sensitization requires dopamine neuron glutamate cotransmission. S. MINGOTE*; N. CHUHMA; A. KALMBACH; A. SIENA; B. INBAR; H. MOORE; S. RAYPORT. *Columbia University/New York State Psychiatric Inst., Columbia University/New York State Psychiatric Inst.*

4:00 I41 **779.16** ● ▲ Phosphorylation by PKC of the GluA1 subunit of the AMPA receptor in the nucleus accumbens is required for the expression of amphetamine sensitization. V. KONDEV*; D. LI; N. BUBULA; P. VEZINA. *The Univ. of Chicago.*

1:00 I42 **779.17** Exposure to amphetamine enhances AMPA receptor phosphorylation by CaMKII without increasing cell surface expression. Q. WANG*; D. LI; N. BUBULA; M. CAMPIONI; D. S. MCGEHEE; P. VEZINA. *Univ. of Chicago, Univ. of Chicago, university of california.*

2:00 I43 **779.18** Amphetamine modulates Nurr1 and NF-kB p65 expression in the rat Ventral Tegmental Area. C. ARREDONDO*; M. P. GONZÁLEZ; M. E. ANDRÉS; K. GYSLING. *P. Catholic Univ. Chile.*

3:00 I44 **779.19** Fragment C domain of tetanus toxin mitigates methamphetamine neurotoxicity and its motor consequences in mice. L. MARTINEZ MENDIETA*; N. GRANADO; J. AGUILERA; Y. TIZABI; I. LIMÓN; R. MORATALLA. *Benemérita Univ. Autónoma De Puebla, Consejo Superior de Investigaciones Científicas (CSIC), Univ. Autònoma de Barcelona (UAB),, Howard Univ.*

4:00 I45 **779.20** Antisense-mediated downregulation of xCT reduces basal glutamate in the NA and alters post-synaptic AMPA receptor subunit expression. A. L. LACROSSE*; M. A. GORDON; B. S. JACKSON; L. A. KNACKSTEDT. *Univ. of Florida, Univ. of Florida.*

1:00 I46 **779.21** Role of the ribosomal protein S6 phosphorylation in the mouse brain. A. BIEVER*; E. PUIGHERMANAL; V. PASCOLI; O. MEYUHAS; C. LÜSCHER; E. VALJENT. *Inst. De Génomique Fonctionnelle, Univ. of Geneva, The Inst. for Med. Research–Israel-Canada.*

POSTER

780. Translational Studies of Treatments for Addiction

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 I47 **780.01** ● Predicting treatment outcome in prescription opiate dependence using functional near infrared spectroscopy (fnir). A. HUHN*; S. C. BUNCE; D. STANKOSKI; J. HARRIS; E. BIXLER; R. E. MEYER. *Penn State Col. of Med., Penn State Col. of Med.*

2:00 I48 **780.02** Functional magnetic resonance imaging measures of network connectivity related to incorrect responses predict completion of substance abuse treatment. V. R. STEELE*; E. D. CLAUS; B. C. FINK; J. M. MAURER; M. R. ARBABSHIRANI; V. RAO; V. D. CALHOUN; K. A. KIEHL. *The Mind Res. Network; Univ. of New Mexico, The Mind Res. Network, Univ. of New Mexico.*

3:00 J1 **780.03** Effects of withania somnifera dunal (indian ginseng) on morphine- and ethanol-induced motivation in rodents. E. ACQUAS*; M. ROSAS; L. SPINA; S. RUIU; A. ORRU'; A. T. PEANA; M. COLLU; F. COTTIGLIA; S. B. KASTURE. *Univ. of Cagliari, Univ. of Cagliari, Italian Natl. Res. Council, Italian Natl. Res. Council, Univ. of Sassari, Univ. of Cagliari, Univ. of Cagliari, Sanjivani_College_of_Pharmaceutical_Education_Research, Kopargaon, India.*

4:00 J2 **780.04** Dezocine and buprenorphine reduces withdrawal syndrome in a morphine dependent rat model. R. LIU*; F. WU; C. CHUN-HUA XI; X. HUANG; J. MA; W. YU; B. ROTH. *Univ. of Pennsylvania, Univ. of North Carolina Chapel Hill Med. Sch., Univ. of Pennsylvania, Eastern Hepatobiliary Hosp.*

1:00 J3 **780.05** Characterizing molecular mechanisms of adolescent cue exposure therapy in animal models of addiction and anxiety. I. ZBUKVIC*; D. GANELLA; C. BYE; C. PERRY; H. MADSEN; A. LAWRENCE; J. KIM. *The Florey Inst. of Neurosci. and Mental Hlth.*

2:00 J4 **780.06** Effect of environmental enrichment on glutamate concentrations in the hippocampus and prefrontal cortex in mice exposed to toluene. N. PAEZ-MARTINEZ*; R. SOLIS-GUILLEN; S. MONTES-LOPEZ. *Inst. Politecnico Nacional, Inst. Nacional de Psiquiatria, Inst. Nacional de Neurologia y Neurocirugia.*

3:00 J5 **780.07** Retrieval-dependent changes in craving and alcohol-memory following reappraisal in high-risk drinkers: A model for reconsolidation-based cognitive therapy? S. K. KAMBOJ*; T. HON; R. K. DAS. *Univ. Col. London.*

4:00 J6 **780.08** Preclinical studies of a passive vaccine against heroin. I. BOGEN*; A. M. S. KVELLO; J. MØRLAND; J. M. ANDERSEN. *Norwegian Inst. of Publ Hlth.*

1:00 J7 **780.09** The effects of N-Acetylcysteine on corticostriatal resting-state functional connectivity mediate nicotine withdrawal symptoms and may help prevent relapse. B. FROELIGER*; P. A. MCCONNELL; P. W. KALIVAS; K. M. GRAY. *Med. Univ. of South Carolina, Med. Univesity of South Carolina.*

2:00 J8 **780.10** Effects of LSD on the dopaminergic neurons of Ventral Tegmental Area. An *in vivo* electrophysiological study. D. DE GREGORIO*; L. POSA; S. COMAI; F. ROSSI; V. DE NOVELLIS; S. MAIONE; G. GOBBI. *Second Univ. of Naples, McGill Univ.*

3:00 J9 **780.11** Cognitive behavioral therapy normalized abnormal neural circuits at resting state in Internet gaming disorder. Y. YAO*; J. ZHANG; C. R. LI; L. LIU; L. WANG; B. LIU; S. MA; X. FANG. *Beijing Normal Univ., Beijing Normal Univ., Yale Univ. Sch. of Med., Beijing Normal Univ.*

4:00 J10 **780.12** Hormone dependent efficacy of taurine as treatment for cocaine drug use: A study of reward. K. URIBE; S. PEREZ; U. AKPARA; D. WOO; S. SINGH; M. EVELYN; K. CHAUHAN; S. AYO; F. JACQUES; M. MURITALA; S. SOYEMI; D. PETERS; A. COLE; P. DUVALSAINT; A. ELZANIE; D. HARRIS; S. MARACHERIL; K. Y. SALAS-RAMIREZ*. *The City Col. of New York, Lehman College, CUNY, Sophie Davis Sch. of Biomed. Educ.*

1:00 J11 **780.13** Putative dopamine agonist KB220Z enhances resting state brain reward circuit functional connectivity. K. BLUM; M. FEBO*; R. D. BADGAIYAN; P. D. PEREZ; L. M. COLON-PEREZ; P. K. THANOS; C. F. FERRIS; P. KULKARNI; J. GIORDANO; M. S. GOLD. *Univ. of Florida, Univ. of Minnesota, SUNY Stonybrook, Northeastern Univ., Natl. Inst. of Holistic Addiction Studies.*

2:00 J12 **780.14** Food craving in morbid obesity: Influence on biological variables and bariatric surgery outcomes. J. R. MUÑOZ-RODRÍGUEZ*; F. POLO; L. BEATO; J. MARTÍN; C. GONZÁLEZ-MARTÍN; E. SEGURA; G. CASAS; A. LEÓN; E. SALAS; L. F. ALGUACIL. *Univ. Gen. Hosp. of Ciudad Real, CEU San Pablo Univ.*

3:00 J13 **780.15** Metabolism of L-tetrahydropalmatine (L-THP) in rats and *in vitro* effects of its major metabolites on dopamine receptors. P. HUANG; I. ABDALLAH; J. LIU; W. HEDRICH; D. Y. LEE; H. HASSAN; L. LIU-CHEN*. *Temple Univ. Sch. Med., Univ. of Maryland Sch. of Pharm., McLean Hospital, Harvard Med. Sch.*

4:00 J14 **780.16** Dopamine D2 receptors as peripheral biomarkers for brain dopamine levels and as targets for modulating brain dopamine. S. C. STEFFENSEN*; E. Y. JANG; H. J. PARK; B. GARCIA; G. F. BURTON; S. H. BURNETT; J. G. LEE; C. H. YANG. *Brigham Young Univ., Daegu Haany Univ.*

1:00 J15 **780.17** ● Prefrontal cortical correlates of inhibitory control in patients with alcohol use disorders. J. D. HARRIS*; A. HUHN; E. DENEKE; H. AYAZ; R. MEYER; S. BUNCE. *Pennsylvania State Univ., Caron Treatment Centers, Drexel Univ.*

2:00 J16 **780.18** Reinforcing and neurochemical effects differentiate modafinil from methylphenidate in their interactions with cocaine. G. TANDA*; M. MEREU; T. HIRANITA; L. CHEN; J. LOPEZ; M. COGGIANO; J. QUARTERMAN; A. H. NEWMAN; J. KATZ. *NIDA, Psychobiology Section, Natl. Inst. on Drug Abuse, Medicinal Chem. Section, Natl. institute on Drug Abuse.*

POSTER

781. Hedonia, Feeding, and Addictive Drugs

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 J17 **781.01** Is high fructose corn syrup as addictive as oxycodone? A study of dual intravenous and intraoral self-administration, extinction and reinstatement in rats. M. MINHAS; F. LERI*. *Univ. Guelph.*

2:00 J18 **781.02** Effect of bupropion and naltrexone on hedonic responses in laboratory rats. A. LEVY*; S. DANIELS; A. FLYNN; R. HUDSON; T. HORMAN; A. CHISHOLM; F. LERI. *Univ. of Guelph, Univ. of Guelph.*

3:00 J19 **781.03** Exploring the anhedonic component of naltrexone precipitated high fructose corn syrup withdrawal. S. DANIELS*; P. MARSHALL; F. LERI. *Univ. of Guelph.*

4:00 J20 **781.04** The role of the central endocannabinoid system in anhedonia. D. HAYNES*; C. L. LIMEBEER; L. A. PARKER; F. LERI. *The Univ. of Guelph.*

1:00 J21 **781.05** The influence of polyunsaturated fat diets on brain membrane lipid composition, leptin responsiveness and predisposition to anhedonia. M. FERNANDES*; D. MUTCH; F. LERI. *Univ. of Guelph.*

2:00 J22 **781.06** What about the cue? Modulation of cue value in the augmentation of heroin seeking in chronically food restricted rats. F. SEDKI*; L. MAYERS; P. MARTONE; U. SHALEV. *Concordia Univ., Concordia Univ.*

3:00 J23 **781.07** Blocking D1 receptors in the nucleus accumbens core but not shell decreases the augmentation of heroin seeking induced by chronic food restriction in the rat. T. M. D'CUNHA*; D. RIZZO; G. MOURRA; M. RUSSO; F. SEDKI; U. SHALEV. *Concordia Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 J24 **781.08** Alternating access to a highly palatable diet and amphetamine sensitivity. C. F. MOORE*; V. SABINO; P. COTTONE. *Boston Univ., Boston Univ.*

1:00 J25 **781.09** ▲ Discriminative stimulus effects of naltrexone in rats with limited access to sucrose, saccharin, or water. J. L. HERRMANN; J. M. WARNER; C. C. THAI; E. M. DE ROACH*; K. A. TWAROSKI; A. J. STAUB; A. C. VIRNIG; A. S. LEVINE; D. C. JEWETT. *Univ. of Wisconsin - Eau Claire, Univ. of Minnesota.*

2:00 J26 **781.10** Influence of the ovarian cycle and estradiol in frustration stress-induced binge-like palatable food consumption in female rats with a history of food restriction. M. V. MICIONI DI BONAVENTURA*; T. A. LUTZ; A. ROMANO; C. D'ADDARIO; L. ASARIAN; C. CIFANI. *Univ. of Camerino, Sch. of Pharmacy, Pharmacol. Unit, Univ. of Zurich, Sapienza Univ. of Rome, Univ. of Teramo.*

3:00 J27 **781.11** Changes of leptin and insulin plasma levels during different phases of morphine dependence in rats. T. HAVLICKOVA; P. JERABEK; P. POTMESIL; M. SUSTKOVA*. *Charles Univ. In Prague.*

4:00 J28 **781.12** Food-cue responses in amygdalo-cortical axons are modulated by hunger state. C. R. BURGESS*; R. N. RAMESH; K. M. LEVANDOWSKI; X. WANG; M. MINNIG; M. L. ANDERMANN. *Beth Israel Deaconess Med. Ctr., Harvard Univ.*

1:00 J29 **781.13** Epigenetic regulation of adenosine A2A and dopamine D2 receptor gene transcription on compulsive food consumption. C. CIFANI*; M. V. MICIONI DI BONAVENTURA; M. PUCCI; M. GIUSEPPONI; C. LAMBERTUCCI; A. ROMANO; R. VOLPINI; M. MACCARRONE; C. D'ADDARIO. *Univ. of Camerino, Sch. of Pharm., Univ. of Teramo, Univ. of Camerino, Sapienza Univ. of Rome, Univ. of Rome, Campus Bio-Medico.*

2:00 J30 **781.14** ▲ Metabotropic glutamate receptors 2,3 modulate addiction to fat food intake in mice. A. CAMACHO*; L. MONTALVO; C. VEGA HERRERA. *Univ. Autónoma De Nuevo León.*

3:00 J31 **781.15** Binge-like eating as an addiction-like disorder: Novel findings from an operant model in rats. C. HICKS*; C. VELÁZQUEZ-SÁNCHEZ; J. W. SANTOS; K. L. SMITH; A. FERRAGUD; V. SABINO; P. COTTONE. *Boston Univ. Sch. of Med.*

POSTER

782. Monoaminergic Plasticity in Addiction

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 J32 **782.01** Nicotine-induced locomotor behavior in zebrafish larvae: Function of 5-HT2A and 5-HT2C receptors. H. SCHNEIDER*; E. M. BUENING; Y. LIU; E. E. CLOR; K. Y. CHEN; B. F. KOPECKY; N. J. SNYDER; S. OWIREDU; S. INDIA-ALDANA; R. A. MILLER; S. RAMAYADAN; C. O. HASKEN; P. SURESH; D. HUYNH. *Depauw Univ., DePauw Univ.*

2:00 J33 **782.02** Exploring a putative protein:protein interaction between the serotonin (5-HT) 5-HT2A receptor (5-HT2AR) and 5-HT2CR. C. E. MCALLISTER*; N. C. ANASTASIO; S. J. STUTZ; R. M. HARTLEY; L. H. FINK; B. FONGANG; A. KUDLICKI; S. R. GILBERTSON; Y. CHEN; H. NEELANKANTAN; C. S. WATSON; F. G. MOELLER; K. A. CUNNINGHAM. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Houston, Virginia Commonwealth Univ. Sch. of Med.*

3:00 J34 **782.03** Serotonin (5-HT) 5-HT_{2A} receptors in the medial prefrontal cortex regulate cue reactivity following prolonged forced abstinence from cocaine self-administration. H. NEELAKANTAN*; N. C. ANASTASIO; R. G. FOX; S. J. STUTZ; K. A. CUNNINGHAM. *Univ. of Texas Med. Br. Galveston, Univ. of Texas Med. Br. Galveston.*

4:00 J35 **782.04** ● Serotonin (5-HT) 5-HT_{2A} receptor (5-HT_{2A}R):5-HT_{2C}R protein interaction as a therapeutic target: Novel 5-HT_{2A}R antagonist/5-HT_{2C}R agonist heterobivalent ligands as neuroprobes. R. M. HARTLEY*; N. C. ANASTASIO; S. R. GILBERTSON; Y. CHEN; R. G. FOX; S. J. STUTZ; L. H. FINK; S. E. SWINFORD-JACKSON; C. S. WATSON; F. G. MOELLER; K. A. CUNNINGHAM. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Houston, Univ. of Texas Med. Br., Virginia Commonwealth Univ. Sch. of Med.*

1:00 J36 **782.05** ● Dynamic regulation of synaptosomal serotonin (5-HT) 5-HT_{2C} receptor (5-HT_{2C}R) expression following acute cocaine administration. S. E. SWINFORD-JACKSON*; N. C. ANASTASIO; C. A. SOTO; R. M. HARTLEY; C. S. WATSON; K. A. CUNNINGHAM. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

2:00 J37 **782.06** Individual differences in impulsive action in rats are governed by cortical N-methyl-D-aspartate receptor (NMDAR) tone. C. KREBS*; N. ANASTASIO. *UTMB.*

3:00 J38 **782.07** Activation of the corticoaccumbens circuit attenuates inherent impulsivity and binge intake of high fat food. N. C. ANASTASIO*; S. J. STUTZ; A. E. PRICE; S. M. FERGUSON; J. F. NEUMAIER; K. A. CUNNINGHAM. *Univ. Texas Med. Br., Univ. Texas Med. Br., Seattle Children's Res. Inst., Univ. of Washington Sch. of Med.*

4:00 J39 **782.08** Programming of dopaminergic neurons by neonatal sex hormone exposure: Effects on dopamine content and tyrosine hydroxylase expression in adult male rats. P. ESPINOSA; R. A. SILVA; R. RIQUELME; L. F. GONZALEZ; N. K. SANGUINETTI; F. C. VENEGAS; G. CRUZ; G. M. RENARD; P. R. MOYA; R. SOTOMAYOR-ZÁRATE*. *Univ. de Valparaiso.*

1:00 J40 **782.09** Embryonic methamphetamine exposure inhibits methamphetamine cue conditioning and reduces dopamine tissue levels in adult wild-type *C. elegans.* S. N. KATNER; E. A. ENGLEMAN; B. S. NEAL-BELIVEAU*. *Indiana Univ. Sch. of Med., IUPUI.*

2:00 J41 **782.10** Role of serotonin and dopamine neurotransmission in psychosis-like behaviors induced by toluene. M. T. RIVERA-GARCÍA*; C. LÓPEZ-RUBALCAVA; S. L. CRUZ. *Cinvestav.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 J42 **782.11** Differential effects of translin deletion on behavioral and biochemical responses to cocaine and amphetamine. X. FU; M. NIWA; D. FUKUDOME; Y. CHERN; J. CADET; A. SAWA; J. M. BARABAN*. *Johns Hopkins Univ. Sch. Med., Inst. of Biomed. Sci., Academica Sinica, NIDA IRP.*

4:00 J43 **782.12** Involvement of orexin-2 receptors within the ventral tegmental area in development of morphine sensitization induced by lateral hypothalamus stimulation in rats. Y. RAZAVI*; F. SADEGHZADEH; A. PIRASTEH; A. HAGHPARAST. *Cell. and Mol. Res. Ctr., Shahid Beheshti Univ. of Med. Sci.*

1:00 J44 **782.13** Physical and emotional stress alter voluntary morphine consumption ventral tegmental area gene expression. S. E. COOPER; M. KECHNER; M. S. MAZEI*. *Michigan State Univ., Michigan State Univ.*

2:00 J45 **782.14** Cannabinoid reward and aversion in the posterior ventral tegmental area is differentially mediated through dopamine projections to the basolateral amygdala or nucleus accumbens shell. T. AHMAD*; S. R. LAVIOLETTE. *Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 J46 **782.15** Stress acutely promotes calcium-dependent glutamatergic synaptic plasticity in the VTA via differential actions of CRF and norepinephrine. J. TOVAR-DÍAZ*; M. POMRENZE; H. MORIKAWA. *The Univ. of Texas At Austin.*

4:00 J47 **782.16** Investigation of biochemical changes induced by chronic morphine and stress in the ventral tegmental area. S. KASKA*; R. BRUNK; M. KECHNER; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

1:00 J48 **782.17** Acute morphine administration induces a partly reversible long term depression of inhibitory synaptic transmission onto dopaminergic ventral tegmental area neurons. M. E. AUTHEMENT; F. S. NUGENT*. *Uniformed Services Univ.*

2:00 K1 **782.18** Blockade of connexin-36-expressing gap junctions in the ventral tegmental area prevents opiate withdrawal aversions in opiate-dependent animals. G. MAAL-BARED*; M. PATEL; M. CHWALEK; D. VAN DER KOOY. *Univ. of Toronto.*

POSTER

783. Adolescence and Addiction

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 K2 **783.01** Failure of nicotine exposure during the peripubertal period to induce sensitization to the administration of cocaine to the adult female rat. B. A. MCMILLEN; C. T. PERRY; G. R. WOODS; H. L. WILLIAMS; D. A. TAYLOR*. *Brody Sch. Med. 6S-10, Brody Sch. Med. 6S-10.*

2:00 K3 **783.02** Inhibition of nicotine-induced expression of ΔFosB in the molecular cell layer of the hippocampus dentate gyrus by minocycline in the peripubertal rat. P. S. NAGCHOWDHURI; K. T. LANE; B. A. MCMILLEN*. *East Carolina Univ., East Carolina Univ.*

3:00 K4 **783.03** An analysis of the interaction of methylphenidate and nicotine in adolescent rats: Effects on BDNF. E. D. CUMMINS*; K. K. LEEDY; D. J. PETERSON; S. K. KIRBY; L. J. HERNANDEZ; R. W. BROWN. *East TN State Univ.*

4:00 K5 **783.04** Locus coeruleus neuronal firing directly correlates with behavioral response to acute and chronic doses of methylphenidate (ritalin) in adolescent rats. N. KHARAS; C. REYES-VASQUEZ; J. ARONOWSKI*; N. DAFNY. *Univ. of Texas Med. Sch. at Houston, Univ. Nacional Autonoma de Mexico, Univ. Texas HSC - Houston.*

1:00 K6 **783.05** Methylphenidate modulates dorsal raphe neuronal activity: Behavioral and neuronal recordings from adolescent rats. H. WHITT; C. REYES-VASQUEZ; N. KHARAS; N. DAFNY*. *Univ. Texas Med. Sch., Univ. Nacional Autonoma de Mexico.*

2:00 K7 **783.06** Medial prefrontal cortex electrophysiological and behavioral recordings following acute and chronic methylphenidate exposure in freely behaving adolescent SD rats. C. CLAUSSEN; C. CANNON; P. DASH*; N. DAFNY. *Univ. of Texas Med. Sch., Univ. Texas Med. Sch.*

3:00 K8 **783.07** Chronic adolescent exposure to THC and induced anxiety changes behaviour in adult rats. A. C. WEEKS*; M. BOUDREAULT; K. NORRIS; J. ANDREWS; N. LANDRY; C. LALONDE; B. WEEGAR; A. STILLAR; M. J. SAARI. *Nipissing Univ.*

4:00 K9 **783.08** Adolescent cannabinoid administration causes oxidative stress. S. MUKHERJEE*; T. HWANG; S. PAWAR; A. AROUMOUGAME; S. GHOSE. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

1:00 K10 **783.09** Determining the ontogeny of working memory, and the effects of cannabinoid self-administration, in adolescent rats. E. K. KIRSCHMANN*; M. W. POLLOCK; V. NAGARAJAN; M. M. TORREGROSSA. *Univ. of Pittsburgh.*

2:00 K11 **783.10** Chronic nicotine exposure during adolescence alters the rewarding properties of the cannabinoid agonist CP 55,940 in young adult male rats. A. D. HARDIN; M. J. STONE; Z. R. HARMONY; G. J. KAPLAN; C. A. CRAWFORD*. *California State Univ.*

3:00 K12 **783.11** Female adolescent morphine exposure causes transgenerational effects on metabolism. F. M. VASSOLER*; C. WYSE; A. KUBEREK; K. HUYNH; G. WIDMER; E. M. BYRNES. *Tufts Univ. Cummings Sch. of Vet. Med.*

4:00 K13 **783.12** ● Contribution of MRGPRB4-expressing sensory neurons to the socio-environmental effect on opioid dependence and reward in adolescent mice. M. BATES; M. A. EMERY; P. J. WELLMAN; S. EITAN*. *Texas A&M Univ.*

1:00 K14 **783.13** Differences between adult and adolescent rats in locomotor sensitization to codeine. T. ZAFAR*; A. ESCOBEDO; V. ESPINOZA; A. ROCHA; K. TRUJILLO. *California State Univ. San Marcos.*

2:00 K15 **783.14** ▲ Differences in ketamine-induced ultrasonic vocalizations in adult and adolescent rats: The balance between reward and aversion. R. M. ALTAMIRANO*; T. T. TOWNER; A. ESCOBEDO; K. A. TRUJILLO. *California State Univ. San Marcos.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 K16 **783.15** The potential influence of 5-httlpr genotype, gender and ecstasy use on depressive symptoms in adolescent and emerging adults. N. E. WRIGHT*; K. M. LISDAHL. *Univ. of Wisconsin - Milwaukee.*

4:00 K17 **783.16** Alcohol enhances mephedrone-induced signs of neurotoxicity and impaired neurogenesis in adolescent CD-1 mice. A. M. CIUDAD*; L. DUART; J. CAMARASA; E. ESCUBEDO; D. PUBILL. *Univ. of Barcelona.*

POSTER

784. Monoamines and Behavior: Serotonin and Histamine

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 K18 **784.01** A study of the selective 5-HT2c agonists lorcaserin and CP809101 on side-effect profile, CNS penetration and functional selectivity. G. A. HIGGINS*; L. B. SILENIEKS; A. PATRICK; I. A. M. DELANNOY; P. J. FLETCHER; L. A. PARKER; N. J. MACLUSKY; L. C. SULLIVAN; T. A. CHAVERA; K. A. BERG. *Intervivo Solutions Inc, U. Toronto, InterVivo Solutions Inc, CAMH, U. Guelph, UTHSCSA.*

2:00 K19 **784.02** Serotonin receptor 2C agonists lorcaserin and CP-809101 block cue-induced reinstatement of sugar-seeking behavior in rats. E. ALTHERR*; L. B. SILENIEKS; G. A. HIGGINS; P. J. FLETCHER; W. E. PRATT. *Wake Forest University/Dept. Psychology, InterVivo Solutions Inc, Univ. of Toronto, CAMH, Univ. of Toronto.*

3:00 K20 **784.03** The role of the 5-HT2C receptor in mediating the effects of acutely increased serotonin on incentive motivation. C. BROWNE*; P. J. FLETCHER. *Univ. of Toronto/CAMH, Ctr. for Addiction and Mental Hlth., Univ. of Toronto, Univ. of Toronto.*

4:00 K21 **784.04** Serotonin 2c receptor constitutive activity and behavior: The effect of an agonist, antagonist and inverse agonist on locomotor activity and responding for a conditioned reinforcer in mice. C. HARVEY-LEWIS*; C. J. BROWNE; G. A. HIGGINS; P. J. FLETCHER. *Ctr. for Addiction and Mental Hlth., Univ. of Toronto, Intervivo Solutions, Univ. of Toronto, Univ. of Toronto.*

1:00 K22 **784.05** ● Cognitive effects of AG-1 in the chronic low-dose (CLD) 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-treated macaque model of Parkinson's disease. E. Y. PIOLI*; S. CAMUS; J. YANG; Q. LI; A. CROSSMAN; E. BEZARD; S. HOGG. *MOTAC, Angita Pharmaceuticals B.V.*

2:00 K23 **784.06** Intrahippocampal injection of a small molecule RGS4/19 inhibitor has antidepressant-like effects in a mouse model. N. SENESE*; R. NEUBIG; J. TRAYNOR. *Univ. of Michigan, Michigan State Univ.*

3:00 K24 **784.07** ● Behavioral effects of N,N-dialkyltryptamine hallucinogens in mice. L. M. KLEIN*; M. A. GEYER; A. L. HALBERSTADT. *UC San Diego, UC San Diego.*

4:00 K25 **784.08** Sex-dependent and specie-specific effects of fluoxetine on repeated forced swimming test in rodents: Translational implications. C. LINO DE OLIVEIRA*; I. SPEZIA; L. C. THEINDL; F. B. L. CHRISTIAN; J. A. CADORE; P. R. SUMAN; K. DOMINGUES. *Univ. Federal De Santa Catarina, PPG Farmacologia, PPG Multicêntrico Ciências Fisiológicas.*

1:00 K26 **784.09** ● Antiparkinsonian effects of AG-1 in the 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-treated macaque model of Parkinson's disease. A. R. CROSSMAN*; E. Y. PIOLI; D. W. KO; Q. LI; E. BEZARD; S. HOGG. *The Univ. of Manchester, MOTAC, Angita Pharmaceuticals B.V.*

2:00 K27 **784.10** Serotonin depletion eliminates sex differences with respect to contextual fear in rat. R. PETTERSSON*; M. HAGSÄTER; E. ERIKSSON. *Pharmacol.*

POSTER

785. Monoamines and Behavior: Dopamine and Norepinephrine

Theme C: Disorders of the Nervous System

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 K28 **785.01** Role of purinergic p2x4 receptors in regulating signaling cascades and behaviors dependent upon dopamine receptor activity. S. KHOJA*; L. ASATRYAN; M. W. JAKOWEC; D. L. DAVIES. *USC, Universityof Southern California, Universityof Southern California.*

2:00 K29 **785.02** Attenuation of amphetamine-induced recovery from neglect with noradrenergic antagonists. M. J. HYLIN*; M. BRENNEMAN; J. CORWIN. *Southern Illinois Univ., Coastal Carolina Univ., Northern Illinois Univ.*

3:00 K30 **785.03** ● Preclinical telemetric electroencephalography (EEG) and *in vivo* microdialysis to study dopaminergic hyperactivity in freely moving rats. M. SHIMASAKI; C. HOYLE; P. VOEHRINGER; B. FERGER*. *Boehringer Ingelheim Pharma GmbH & Co. KG.*

4:00 K31 **785.04** High dose propranolol, a beta adrenergic blocker for the control of violence and self abuse in patients with autism spectrum disorders. E. B. LONDON*. *Inst. Bas Res.*

1:00 K32 **785.05** Not all it's cracked up to be: The human DAT coding variant Val559 eliminates cocaine-induced locomotor activation despite normal cocaine place preference conditioning. A. STEWART*; G. L. DAVIS; R. GOWRISHANKAR; P. J. GRESCH; M. K. HAHN; R. D. BLAKELY. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

2:00 K33 **785.06** Conditioning and sensitization of dopamine antagonist effects on open field activity. H. S. WIRTSHAFTER*; D. WIRTSHAFTER. *MIT, Univ. of IL at Chicago.*

3:00 K34 **785.07** Pharmacological manipulation of the dopaminergic system: An investigation of alcohol's locomotor stimulant effect in zebrafish. S. TRAN*; M. NOWICKI; A. MURALEETHARAN; D. CHATTERJEE; R. GERLAI. *Univ. of Toronto, Univ. of Toronto Mississauga.*

4:00 K35 **785.08** Possible role of the dopamine D1 receptor in the sensorimotor gating deficits induced by high-fat diet. C. WAKABAYASHI*; T. NUMAKAWA; Y. OOSHIMA; K. HATTORI; H. KUNUGI. *Natl. Ctr. of Neurol. and Psychiatry.*

1:00 K36 **785.09** Prenatal risperidone exposure enhances prepulse inhibition of acoustic startle reflex in adult male mice. Y. SU*; H. WANG; J. LI; T. SI. *Inst. of Mental Health, Peking Univ., Peking Univ. Sixth Hosp., Key Lab. of Mental Health, Ministry of Hlth. (Peking University).*

2:00 K37 **785.10** Tyrosine hydroxylase 2 is involved in the regulation of habituation in adult zebrafish. S. A. SEMENOVA*; Y. CHEN; P. A. J. PANULA. *Univ. of Helsinki.*

3:00 K38 **785.11** ● Antipsychotic medications induce sustained alterations in approach/avoidance learning. N. E. VIERLING-CLAASSEN*; A. COLLINS; D. BURKE; H. WARWICK; B. REGO; M. HILL; K. BATH; M. J. FRANK; C. I. MOORE. *Brown Univ., Brown Univ.*

4:00 K39 **785.12** The effects of acute cocaine administration on striatal monoamine levels in obesity-prone rats. P. J. VOLLBRECHT*; O. S. MABROUK; A. D. NELSON; R. T. KENNEDY; C. R. FERRARIO. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

1:00 K40 **785.13** Direct inhibition of ventral tegmental area dopamine neurons decreases reward-seeking behavior. R. VAN ZESSEN; G. VAN DER PLASSE; G. M. RAMAKERS*; G. D. STUBER; R. A. H. ADAN. *Brain Ctr. Rudolf Magnus, UMC Utrecht, Brain Ctr. Rudolf Magnus, UMC Utrecht, Univ. of North Carolina.*

2:00 K41 **785.14** Functional dissociation between rat midbrain dopamine neuron subpopulations in the regulation of locomotor activity. L. BOEKHOUDT; A. OMRANI; E. C. WIJBRANS; M. C. M. LUIJENDIJK; I. G. WOLTERINK; G. VAN DER PLASSE*; R. A. H. ADAN. *Brain Ctr. Rudolf Magnus.*

3:00 K42 **785.15** Altered mononuclear cell gene transcriptional reactivity among Methylphenidate responders with Attention Deficit and Hyperactivity Disorder. R. SEGMAN*; T. GOLTSER-DUBNER; A. MELTZER; G. BODENHEIMER; A. SHARON; R. GIESSER; L. KALMAN; A. SHALEV; L. CANETTI; E. GALILI-WEISSTUB. *Hadassah Univ. Hosp., Mol. Psychiatry Lab. - Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. center, The Herman-Danna Div. of Pediatric Psychiatry, Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. Ctr.*

4:00 L1 **785.16** ▲ Repeated toluene exposure does not increase activation of dopaminergic cells in the nigrostriatal pathway of adolescent mice. J. N. LOMBARDO*; S. E. BOWEN; M. L. TOMASZYCKI. *Wayne State Univ.*

POSTER

786. Olfaction: Olfactory Bulb

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 L2 **786.01** Deep short-axon cells regulate multi-glomerular activation patterns in the mammalian main olfactory bulb. S. D. BURTON*; G. LAROCCA; A. LIU; C. E. CHEETHAM; N. N. URBAN. *Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition, Univ. of Pittsburgh.*

2:00 L3 **786.02** Multistage information processing in the olfactory bulb: Role of microcircuits in the glomerular and mitral cells layers for disambiguation of odorant inputs. M. MIGLIORE*; F. CAVARRETTA; A. MARASCO; M. L. HINES; G. M. SHEPHERD. *Natl. Res. Council, Yale Univ., Univ. of Milan, Univ. of Naples Federico II.*

3:00 L4 **786.03** Subthreshold oscillations, synchronization, and transitions between rhythms in an olfactory model. A. KARAMCHANDANI; J. N. GRAHAM; H. MENG; H. RIECKE*. *Northwestern Univ.*

4:00 L5 **786.04** Gamma and beta oscillations in the rat olfactory bulb define a cognitive sequence in odor discrimination. D. E. FREDERICK; L. M. KAY*. *The Univ. of Chicago, The Univ. of Chicago.*

1:00 L6 **786.05** Granule cell excitability mediates gamma and beta oscillations in a model of the dendrodendritic microcircuit. B. L. OSINSKI*; L. M. KAY. *Univ. of Chicago.*

2:00 L7 **786.06** Hyperpolarization-activated currents and subthreshold resonance in granule cells of the olfactory bulb. R. HU*; K. A. FERGUSON; C. B. WHITEUS; D. H. MEIJER; R. C. ARANEDA. *Univ. of Maryland, Neurosci. and Cognitive Sci. Program, Marine Biol. Lab.*

3:00 L8 **786.07** Inhibition of granule cells by adult born neurons in the olfactory bulb. P. S. VILLAR; A. NUNEZ-PARRA; K. KRAHE; C. EBERLY; R. C. ARANEDA*. *Univ. of Maryland, Univ. of Colorado.*

4:00 L9 **786.08** OPHN1 regulates the migration of newly generated cells in the olfactory system. A. MASET; L. GALLA; C. LODOVICHI*. *Venetian Inst. of Mol. Med., Neurosci. Inst. CNR and Fondazione Ricerca.*

1:00 L10 **786.09** Distinct physiological properties of mature adult-born neurons in the olfactory bulb of awake mice. N. FOMIN; S. FINK; Y. KOVALCHUK; Y. LIANG; O. GARASCHUK*. *Univ. of Tübingen, Physiol. 2.*

2:00 L11 **786.10** Noradrenergic modulation of information processing in the male accessory olfactory bulb. W. I. DOYLE*; J. P. MEEKS. *Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr.*

3:00 L12 **786.11** Imaging olfactory bulb plasticity during olfactory experience. M. W. CHU*; T. KOMIYAMA. *UCSD.*

4:00 L13 **786.12** Neuronal mechanisms underlying mating-induced pheromonal memory in the female mouse. Y. GAO*; C. H. BUDLONG; I. G. DAVISON. *Boston Univ.*

1:00 L14 **786.13** Functional plasticity in the mouse olfactory bulb following motherhood. Y. SHLOMAI; A. VINOGRAD; D. MUKHERJEE; G. YUAN; A. CITRI; I. DAVISON; A. MIZRAHI*. *Hebrew Univ. of Jerusalem, Boston Univ.*

2:00 L15 **786.14** Ensemble plasticity of odor representation in populations of olfactory bulb output neurons. Y. YAMADA*; K. BHAUKAURALLY; I. RODRIGUEZ; A. CARLETON. *Univ. of Geneva, Univ. of Geneva.*

3:00 L16 **786.15** Plasticity of mitral cell dendritic morphology in the adult zebrafish olfactory bulb following chemical deafferentation. J. M. DICKENS*; C. A. BYRD-JACOBS. *Western Michigan Univ.*

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* Indicates abstract's submitting author

4:00 L17 **786.16** Coding of plume dynamics in the insect olfactory system. Z. N. ALDWORTH*; M. A. STOPFER. *NIH-NICHD.*

1:00 L18 **786.17** Calcium dynamics of antennal lobe local interneurons during olfactory informatiom processing. D. FUSCA*; A. PIPPOW; P. KLOPPENBURG. *Univ. of Cologne, Biocenter.*

2:00 L19 **786.18** ▲ The biogenic amine tyramine and its receptor (AmTyr1) in olfactory neuropils in the honey bee (Apis mellifera) brain. B. OBAYOMI*; I. SINAKEVITCH; B. H. SMITH. *SOLS.*

3:00 L20 **786.19** Integrate-and-fire and firing-rate models for insect olfaction. P. B. PYZZA*; G. KOVACIC; D. CAI. *Rensselaer Polytechnic Inst., Courant Inst. at New York Univ., Shanghai Jiao Tong Univ.*

4:00 L21 **786.20** ▲ Computational mechanisms in the peripheral nervous system of the predatory sea-slug Pleurobranchaea. A. DUMAN; A. X. TRAN; B. B. M. SCHAUB; M. P. FLANAGAN; B. L. KLUSAS; D. I. VALLEJO; N. DELGADO; N. M. MADEIROS; E. BARRETO; S. R. MARTINEZ; M. W. MILLER; J. W. BROWN; R. GILLETTE*. *Univ. of Illinois, Univ. Illinois, Univ. of Puerto Rico, Univ. of Illinois.*

POSTER

787. Sound Localization and Binaural Interactions

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 L22 **787.01** Proteomic analysis of chick Nucleus Laminaris reveals potential FMRP substrates. H. SAKANO*; Y. WANG; W. S. NOBLE; M. J. MACCOSS; E. W. RUBEL. *Univ. of Washington, Florida State Univ.*

2:00 L23 **787.02** Binaural frequency tuning and timing in neurons from the chinchilla medial superior olive. M. SAYLES*; P. X. JORIS. *KU Leuven.*

3:00 L24 **787.03** Coincidence detection in the medial superior olive promotes responsivity to low-frequency narrowband sounds. T. P. FRANKEN*; P. X. JORIS. *KU Leuven.*

4:00 L25 **787.04** Do non-dipole features of brainstem field potentials reveal inhibition in the medial superior olive? J. H. GOLDWYN*; M. MC LAUGHLIN; E. VERSCHOOTEN; P. X. JORIS; J. RINZEL. *Ohio State Univ., Univ. of Leuven, Univ. of Leuven, New York Univ.*

1:00 L26 **787.05** Adeno-associated viral transfection and optogenetic manipulation of auditory brainstem regions. E. MCCULLAGH*; S. MINKOWICZ; A. KLUG. *Univ. of Colorado Anschutz, Florida Gulf Coast Univ.*

2:00 L27 **787.06** Anatomical and electrophysiological properties of neural inhibition change during development and along the tonotopic axis of the mouse MNTB. O. ALBRECHT; E. SALCEDO; A. KLUG*. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med., Univ. of Colorado.*

3:00 L28 **787.07** Rate and temporal coding of dynamic ITD and amplitude modulation in the inferior colliculus may explain differences in psychophysical detection limits. N. ZUK*; B. DELGUTTE. *Massachusetts Eye and Ear Infirmary, MIT, Harvard Univ., MIT.*

4:00 L29 **787.08** Emergence of hemispheric spatial tuning in the owl's auditory forebrain. M. V. BECKERT*; J. L. PENA. *Albert Einstein Col. of Med.*

1:00 L30 **787.09** Spectro-temporal integration in sound localization as revealed by frequency-modulated tones in barn owls. L. KETTLER*; H. WAGNER. *RWTH Aachen Univ.*

2:00 L31 **787.10** Binaural contributions and cellular mechanisms underlying sound location sensitivity in the awake marmoset auditory cortex. Y. WANG*; X. WANG. *Johns Hopkins Univ.*

3:00 L32 **787.11** Temporal weighting of binaural cues in human auditory cortex: An fMRI study. N. C. HIGGINS*; S. A. MCLAUGHLIN; G. STECKER. *Vanderbilt Univ., Univ. of Washington, Vanderbilt Univ.*

4:00 L33 **787.12** The representation of sound azimuth in the auditory cortex of early blind humans. K. DEREY*; E. FORMISANO; G. VALENTE; M. ZHAN; R. KUPERS; B. DE GELDER. *Maastricht Univ., Univ. of Copenhagen.*

1:00 L34 **787.13** Improving binaural sensitivity in noise using a novel speech-processing algorithm. Y. GAI*, ESQ; L. M. KUJAN; J. G. CIANCIBELLO. *St. Louis Univ.*

2:00 L35 **787.14** ▲ A comparison of free-field and headphone based sound localization using SoLoArc: A modular and portable, audiovisual, free-field localization device with high spatial resolution. J. A. WESTERBERG*; A. R. BALHORN; R. S. TYSHYNSKY; J. L. LOEBACH. *St. Olaf Col., St. Olaf Col.*

POSTER

788. Cross-Modal Processing: Neural Circuitry and Development

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 L36 **788.01** GABAergic projections from the ventral cochlear anterior nucleus to the cochlear root neurons. N. O. BARIONI*; M. G. MARTINS; A. V. DA SILVA; R. G. NIETO; M. E. LÓPEZ GARCIA; J. C. HORTA JÚNIOR. *State Univ. of São Paulo, State Univ. of São Paulo, mUniversidade Federal do Mato Grosso do Sul, Univ. de Salamanca.*

2:00 L37 **788.02** Cortical circuits involved in skilled forelimb movements and tool use. A. MAYER DE OLIVEIRA*; R. E. BITTENCOURT-NACARRETE; J. G. FRANCA. *Federal Univ. of Rio De Janeiro, Federal Univ. of Juiz de Fora, Federal Univ. of Rio De Janeiro.*

3:00 L38 **788.03** Immature corticotectal influences initiate the development of multisensory integration in the midbrain. R. L. MILLER*; B. A. ROWLAND; B. E. STEIN. *Wake Forest Sch. of Med.*

4:00 L39 **788.04** Modulation of vertebrate sensorimotor neural circuits by the neuropeptide, arginine vasotocin. K. IWASAKI*; M. SAMAHA; W. YAU; N. PEREZ; P. SONG; J. KUWADA. *Univ. of Michigan, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 L40 **788.05** Smell's melody: Brain network involved in multisensory interactions between sounds and odors. A. GNAEDINGER*; F. OCCELLI; B. GOURÉVITCH; C. MARTIN. *Univ. Paris-Sud, IMNC, Neuro-psi.*

2:00 L41 **788.06** Anatomical pathways for short-latency multisensory integration processes in primary sensory cortices A1, S1, and V1. J. U. HENSCHKE; T. NOESSELT; H. SCHEICH; E. BUDINGER*. *Leibniz Inst. for Neurobio. Magdeburg, Otto-von-Guericke-University Magdeburg, Leibniz Inst. for Neurobio. Magdeburg, Leibniz Inst. for Neurobio. Magdeburg.*

3:00 L42 **788.07** Underestimating superadditivity in multisensory integration. B. A. ROWLAND*; A. S. DAKOS; T. R. STANFORD; B. E. STEIN. *Wake Forest Sch. of Med.*

4:00 L43 **788.08** Audiovisual integration in primate dorsolateral prefrontal cortex. A. POREMBA*; J. BIGELOW. *Univ. of Iowa.*

1:00 L44 **788.09** Acquiring the multisensory integration capability at maturity. J. XU; L. YU; B. A. ROWLAND; B. E. STEIN*. *East China Normal Univ., Wake Forest Sch. Med.*

2:00 M1 **788.10** Functional connectivity between mouse visuo-tactile area RL and cingulate cortex. S. PAPAIOANNOU; S. AN; P. MEDINI*. *Umeå Univ., Umeå Univ.*

3:00 M2 **788.11** Comparison of dendritic spine density/size of primary auditory cortical neurons from early-deaf and hearing cats. H. R. CLEMO*; S. G. LOMBER; M. A. MEREDITH. *Virginia Commonwealth U Sch. Med., Univ. Western Ontario.*

4:00 M3 **788.12** Audiovisual integration during short-term memory in primate prefrontal cortex. J. BIGELOW*; A. POREMBA. *Univ. of Iowa, Univ. of Iowa.*

1:00 M4 **788.13** A cross-modal genetic framework for the organization of sensory pathways. D. JABAUDON*; G. POUCHELON; L. FRANGEUL; L. TELLEY. *Univ. of Geneva.*

2:00 M5 **788.14** Experience dependent plasticity in adult lateral geniculate nucleus. J. L. WHITT*; H. LEE. *Johns Hopkins Univ., Mind/Brain Inst.*

3:00 M6 **788.15** Decoding grapheme-color synesthesia using multivariate pattern analysis. R. GOSAVI*; E. E. MEYERING; N. S. ROSE; E. M. HUBBARD; B. R. POSTLE. *Univ. of Wisconsin- Madison, Univ. of Wisconsin- Madison, Univ. of Wisconsin- Madison.*

4:00 M7 **788.16** Integration of multisensory inputs by single neurons in the claustrum. A. M. PACKER*; T. YUAN; N. PETTIT; S. CHUN; J. Y. N. LAU; M. HAUSSER. *Univ. Col. London.*

1:00 M8 **788.17** Neuronal responses in primary somatosensory cortex during a whisker discrimination task. T. VINHOLO; A. C. KUNICKI*; R. MOIOLI; M. I. SILVA; E. MORYA. *Inst. Santos Dumont.*

2:00 M9 **788.18** Intra-claustral connectivity in the rat measured with voltage sensitive dye imaging. A. A. ROBINSON*; M. P. WITTER. *Kavli Inst. For Systems Neurosci, CNC, NTNU.*

3:00 M10 **788.19** Effects of enucleation on the direct reciprocal corticocortical connections between the primary visual and somatosensory cortices of the mouse. I. O. MASSE*; G. BRONCHTI; D. BOIRE. *UQTR.*

4:00 M11 **788.20** Pruritic (itch) response in the nervous system of *Drosophila* melanogaster. C. JOHN*; R. K. MURPHEY; K. DAWSON-SCULLY; J. R. NAMBU. *Florida Atlantic Univ.*

1:00 M12 **788.21** Transcriptional profiles of supragranular-enriched genes predict corticocortical network architecture in the human brain. F. M. KRIENEN*; B. T. YEO; C. J. CHARVET; R. L. BUCKNER; C. C. SHERWOOD. *The George Washington Univ., Natl. Univ. of Singapore, Harvard Univ.*

2:00 M13 **788.22** Principles of ipsilateral and contralateral cortico-cortical connectivity in the mouse. A. GOULAS*; H. B. M. UYLINGS; C. C. HILGETAG. *Uke/Institute For Computat. Neurosci., Max Planck Inst. for Human Cognitive and Brain Sci., VU Univ. Med. Ctr., Boston Univ.*

3:00 M14 **788.23** Multisensory plasticity in the superior colliculus: Different rules for time and space. C. DONG*; B. E. STEIN; B. A. ROWLAND. *Wake Forest Univ. Sch. of Med.*

4:00 M15 **788.24** Multisensory functional connectivity is present in the neonate cortex. A. E. MEDINA*; C. SOURS; P. RAGHAVAN; W. FOXWORTHY; J. ZHUO; D. EL-METWALLY; M. MEREDITH; J. GILMORE; R. P. GULLAPALLI. *Univ. of Maryland, Sch. of Med., Univ. of Maryland, Sch. of Med., Univ. of Maryland, Sch. of Med., Virginia Commonwealth Univ., Univ. of North Carolina.*

POSTER

789. Architecture of Extrastriate Cortex

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 M16 **789.01** The functional development of macaque inferotemporal cortex. J. L. VINCENT*; K. SRIHASAM; M. LIVINGSTONE. *Harvard Med. Sch.*

2:00 M17 **789.02** The amygdala is causally connected to the superior temporal sulcus (STS) for dynamic face perception. D. PITCHER*; S. JAPEE; L. UNGERLEIDER. *NIH/NIMH.*

3:00 M18 **789.03** Feature derivation and facial image reconstruction from patterns of neural activation. A. NESTOR*; D. NEMRODOV; D. PLAUT; M. BEHRMANN. *Univ. of Toronto Scarborough, Carnegie Mellon Univ.*

4:00 M19 **789.04** Temporal integration windows of AF face patch neurons using naturalistic movies. B. E. RUSS*; J. DAY-COONEY; D. A. LEOPOLD. *NIMH/NIH.*

1:00 M20 **789.05** Dissociations and associations between shape and category representations in the two visual pathways. S. BRACCI*; H. OP DE BEECK. *KU Leuven.*

2:00 M21 **789.06** Beyond the core face-processing network: Intracerebral stimulation of a face-selective area in the right anterior fusiform gyrus elicits transient prosopagnosia. J. JONAS*; L. MAILLARD; H. BRISSART; B. ROSSION. *Catholic Univ. of Louvain, Univ. Hosp. of Nancy.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 M22 **789.07** Two neural pathways of face processing: An updated model. M. BERNSTEIN; J. ORON; G. YOVEL*. *Tel Aviv Univ., Tel Aviv Univ.*

4:00 M23 **789.08** Deep neural networks models predict spatio-temporal cortical dynamics of visual object recognition. A. OLIVA*; A. KHOSLA; D. PANTAZIS; A. TORRALBA; R. M. CICHY. *MIT, MIT.*

1:00 M24 **789.09** Functional correspondence between human and monkey face-selective regions in processing face configuration. Q. ZHU*; M. SPRONK; W. VANDUFFEL. *Lab. For Neuro- and Psychofysiology, K.U. Leuven, Harvard Med. Sch., Massachusetts Gen. Hosp.*

2:00 M25 **789.10** Temporal processing capacity in high-level visual cortex is domain-specific. A. STIGLIANI*; K. S. WEINER; K. GRILL-SPECTOR. *Stanford Univ.*

3:00 M26 **789.11** The functional organization of early and higher-order visual cortex in patients with lobectomy/hemispherectomy. M. BEHRMANN*; T. LIU; A. NESTOR; K. KAY; M. VIDA; J. A. PYLES; X. ZHANG; C. PATTERSON. *Carnegie Mellon Univ., Carnegie Mellon Univ., Univ. of Toronto, Washington Univ., NIH, Children's Hosp. of Pittsburgh.*

4:00 M27 **789.12** Exploring the representational structure in visual object-responsive cortex. T. A. KONKLE*; A. CARAMAZZA. *Harvard Univ., Harvard Univ.*

1:00 M28 **789.13** Spatial and temporal dynamics of face processing in the human ventral temporal cortex. V. RANGARAJAN*; B. L. FOSTER; S. GATTAS; J. PARVIZI. *Stanford Univ., Stanford Univ.*

2:00 M29 **789.14** ● Beyond Brodmann: Quantifying the functional and microstructural heterogeneity of human high-level visual cortex. K. S. WEINER*; M. BARNETT; S. LORENZ; J. CASPERS; A. STIGLIANI; K. AMUNTS; K. ZILLES; B. FISCHL; K. GRILL-SPECTOR. *Stanford Univ., Res. Ctr. Jülich, Massachusetts Gen. Hosp.*

POSTER

790. Color Vision

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 M30 **790.01** Motion-Induced color appearance shift. S. HONG*; M. KANG. *Florida Atlantic Univ., Sungkyunkwan Univ.*

2:00 M31 **790.02** Neural locus of simultaneous color contrast. A. KHACHATRYAN*; P. FUNG; C. LE'PRE; R. BACHY; Q. ZAIDI; Y. XIAO. *SUNY Downstate Med. Ctr., SUNY Optometry.*

3:00 M32 **790.03** The dynamics of color processing in humans measured with MEG. K. L. HERMANN*; D. PANTAZIS; B. R. CONWAY. *Wellesley Col., MIT.*

4:00 M33 **790.04** Color perception can be multistable as revealed by #TheDress. B. R. CONWAY*; K. L. HERMANN; R. LAFER-SOUSA. *Wellesley Col., MIT.*

1:00 M34 **790.05** Effect of the mode of color appearance upon amplitude of steady-state visual evoked potential. H. HIROSE*; Y. KOIKE. *AISIN COSMOS R&D Co.,Ltd., Tokyo Inst. of Technol.*

2:00 M35 **790.06** Differential cerebral sources of human color responses. C. W. TYLER*; L. LIKOVA. *Smith-Kettlewell Eye Res. Inst., Smith-Kettlewell Eye Res. Inst.*

3:00 M36 **790.07** Determinants of qualia of a profoundly ambiguous stimulus in the domain of color vision. P. WALLISCH*. *New York Univ.*

4:00 M37 **790.08** Color and luminance selectivity of neurons in the monkey inferior temporal cortex using high-dynamic-range display. K. KOIDA*. *EIIRIS, Toyohashi Univ. of Technol.*

1:00 M38 **790.09** Cortical representation for the categorical color perception in infants investigated by near-infrared spectroscopy. J. YANG*; S. KANAZAWA; M. K. YAMAGUCHI; I. KURIKI. *Chuo Univ., Japan Women's Univ., Res. Inst. of Electrical Communication, Tohoku Univ.*

2:00 M39 **790.10** Receptive field properties of neurons in primary visual cortex (V1) of normal and red light reared tree shrews. W. DANG; P. S. MAIRE; H. M. PETRY*. *Univ. of Louisville, Univ. Louisville.*

3:00 M40 **790.11** Linear and nonlinear cone signal combination in macaque V1. J. P. WELLER*; G. D. HORWITZ. *Univ. of Washington.*

4:00 M41 **790.12** Non-linear visual cortical activity linked to human color perception. R. M. SHAPLEY*; V. NUNEZ; P. SCHUETTE; A. HANINEVA; A. AMIR; C. VELOZ; S. WHITTICK; J. GORDON. *Ctr. for Neural Sci., Hunter Col.*

1:00 M42 **790.13** A case of enhanced color vision. R. SORRELLS*. *Pacific Northwest Univ. of Hlth. Sci.*

2:00 M43 **790.14** Spatial clustering of color-selective neurons in the striate cortex of macaque monkeys. A. KHACHATRYAN; P. FUNG; M. CRUMILLER; Y. XIAO*. *SUNY Downstate Med. Ctr., The Rockefeller Univ.*

POSTER

791. Visual Behavior in Different Species

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 M44 **791.01** Aging effects on the luminance contrast response in Humans. E. BELLOT*; E. MORO; K. KNOBLAUCH; V. COIZET; M. DOJAT. *Grenoble Inst. Des Neurosciences, CHU de Grenoble, Hôpital Michallon, Stem-cell and Brain Res. Inst. Dept. of Integrative Neurosciences.*

2:00 M45 **791.02** Fully automated training system for head-fixed mice. R. AOKI; R. NISHIYAMA; Y. GOYA; A. BENUCCI*. *RIKEN Brain Sci. Inst.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 M46 **791.03** The evaluation of visual temporal resolution in the behaving mouse. J. MITA*; S. YOKOTA; S. IKUTA; S. TAKIZAWA; Y. NOMURA; T. ARIMURA; A. AMANO; K. SHIMONOMURA; Y. SEYA; Y. TSUBO; C. KOIKE. *Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., Ritsumeikan Univ., PRESTO, Japan Sci. & Technol. Agency.*

4:00 M47 **791.04** Topological perception in behaving monkeys: I. Visual search. J. HUANG; Y. YANG; X. ZHAO; Q. ZHOU; H. ZHU; K. ZHOU; W. ZHOU*; Y. ZHOU. *Univ. of Sci. and Technol. of China, Duke Univ., Inst. of Biophysics, Chinese Acad. of Sci., Univ. of Mississippi Med. Ctr.*

1:00 M48 **791.05** Low ability to discriminate faces in common marmosets. K. NAKAMURA*; M. MIWA; R. KOBA; C. YAMAGUCHI; A. TAKEMOTO. *Primate Res. Institute, Kyoto Univ.*

2:00 N1 **791.06** Is our sensing compressed? G. KOVACIC*; V. BARRANCA; D. CAI. *Rensselaer Polytechnic Inst., New York Univ.*

3:00 N2 **791.07** The detection of contrast polarity of visual images in behaving rats. C. YEH*; S. WU. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. Col. of Med.*

4:00 N3 **791.08** Memory precision in a contrast estimation task. S. JACKSON*; W. J. MA. *New York Univ., New York Univ.*

1:00 N4 **791.09** Dynamic allocation of visual resources under change of task. P. LADDIS*; S. GEPSHTEIN; T. ALBRIGHT. *Salk Institute, VCL-A, Salk Inst.*

2:00 N5 **791.10** Mice can use second-order stimulus cues to guide visual perception. Z. KHASTKHODAEI; O. JURJUT; S. KATZNER; L. BUSSE*. *Univ. of Tuebingen, Baqiyatallah Univ. of Med. Sci.*

POSTER

792. Visual Processing: Learning, Memory, and Categorization

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 N6 **792.01** Grouped icEEG evaluation of the temporal pole during visual naming of common and proper nouns. C. M. KADIPASAOGLU*; N. TANDON. *Univ. of Texas Med. Sch. At Houston.*

2:00 N7 **792.02** Regional difference in characteristics for top-down modulation in the ventral visual stream. Y. SUNG; H. YOON; U. CHOI; S. OGAWA*. *Touhoku Fukushi Univ., Daegu Cyber Univ., Gachon Univ. of Med. and Sci.*

3:00 N8 **792.03** Activity change in the left fusiform cortex suggests learning in face detection. J. E. GOOLD*; M. MENG. *Dartmouth Col.*

4:00 N9 **792.04** Expectation about face identity biases emotion categorization: Evidence from behavioral modeling and pupillometry. M. EL ZEIN*; V. WYART; J. GREZES. *LNC/INSERM U960/ENS/PSL.*

1:00 N10 **792.05** Inter-area signal targeting translaminar processing during successful memory retrieval in macaque temporal cortex. M. TAKEDA*; K. W. KOYANO; T. HIRABAYASHI; Y. ADACHI; T. ISHII; Y. MIYASHITA. *Univ. of Tokyo Sch. of Med., Juntendo Univ., Core Res. for Evolutional Sci. and Technology, Japan Sci. and Technol. Agency.*

2:00 N11 **792.06** Neural correlates of statistical learning in the inferior-temporal cortex of rhesus monkeys. S. KUMAR*; P. KAPOSVARI; R. VOGELS. *K U Leuven.*

3:00 N12 **792.07** Electrophysiological predictors of an anticipated stimulus during visual sequence learning. M. SENOUSSI; R. VANRULLEN*; L. REDDY. *Univ. de Toulouse; UPS; Ctr. de Recherche Cerveau et Cognition, CNRS.*

4:00 N13 **792.08** Enhanced readout of early visual cortex after perceptual learning measured with fMRI. B. JANS*; V. VAN DE VEN; L. WALDORP; M. M. BEEN; I. BLOEM; K. ULUDAğ; R. GOEBEL; P. DE WEERD. *Maastricht Univ., Cognitive Neuroscience, Maastricht Univ., Fac. of Social and Behavioral Science, Univ. of Amsterdam, Psychological and Brain Science, Boston Univ., Netherlands Inst. for Neurosci., Donders Inst. for Brain, Behavior, and Cognition, Radboud Univ.*

1:00 N14 **792.09** Donepezil improves perceptual-cognitive performance of healthy young adults. M. CHAMOUN*; F. HUPPÉ-GOURGUES; I. LEGAULT; P. ROSA-NETO; J. FAUBERT; E. VAUCHER. *Univ. De Montreal, McGill Univ.*

2:00 N15 **792.10** Learning for perception and action: Motion prediction in humans and non-human primate pursuit. T. MUKHERJEE; G. ZAKHARY; W. BIALEK; L. C. OSBORNE*. *Univ. of Chicago, Princeton Univ.*

POSTER

793. Spatial and Feature-Based Attention

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 N16 **793.01** A mouse model for selective spatial attention. E. MCBRIDE*; E. CALLAWAY. *Salk Inst. for Biol. Studies.*

2:00 N17 **793.02** The impact of visual salience on noise correlations in the barn owl optic tectum. D. TOTTEN*; W. M. DEBELLO. *UC Davis.*

3:00 N18 **793.03** Effects of superior colliculus inactivation on visual attention at the fovea. R. J. KRAUZLIS*; A. R. BOGADHI; A. BOLLIMUNTA. *Natl. Eye Inst.*

4:00 N19 **793.04** Attention-related BOLD and single-unit modulation with and without superior colliculus inactivation. A. BOLLIMUNTA*; A. R. BOGADHI; D. A. LEOPOLD; R. J. KRAUZLIS. *Natl. Eye Inst., Natl. Inst. of Mental Hlth.*

1:00 N20 **793.05** Searching for a frequency based signal for attention. V. L. MOCK*; J. R. HEMBROOK-SHORT; F. BRIGGS. *Geisel Sch. of Med. At Dartmouth.*

2:00 N21 **793.06** Attentional modulation of V1 neurons depends on physiological response properties in the primate. J. R. HEMBROOK-SHORT*; V. L. MOCK; F. BRIGGS. *Geisel Sch. of Med. at Dartmouth.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 N22 **793.07** The effects of attentional field size on neuronal population responses in V1 of behaving monkeys. M. GADOT*; I. SHAMIR; H. SLOVIN. *Bar-Ilan Univ.*

4:00 N23 **793.08** Attentional modulation of V1 population responses to shapes and natural scenes. P. JENDRITZA*; A. E. LAZAR; L. KLEIN; W. SINGER. *Ernst Strüngmann Inst. (ESI) For Neurosci., Intl. Max Planck Res. Sch. for Neural Circuits, Max Planck Inst. for Brain Res., Frankfurt Inst. for Advanced Studies.*

1:00 N24 **793.09** Laminar organization of visually evoked gamma power in area V4. M. P. JADI*; A. S. NANDY; T. J. SEJNOWSKI; J. H. REYNOLDS. *Salk Inst.*

2:00 N25 **793.10** Laminar organization of attentional modulation in area V4. A. S. NANDY*; J. J. NASSI*; J. H. REYNOLDS. *Salk Inst. SNL-R.*

3:00 N26 **793.11** Graded population activity in area V4 during cued and uncued spatial attention. J. P. MAYO*; J. H. R. MAUNSELL. *Duke Univ., Univ. of Chicago.*

4:00 N27 **793.12** Implicit associations between achromatic cues and spatial attention. A. T. MARIN*; S. A. DREW. *California State University, Northridge, California State University, Northridge.*

1:00 N28 **793.13** Feature-based attention regulates long-range neural interactions in monkey area V4. R. XIA*; S. GUAN; D. SHEINBERG. *Brown Univ.*

2:00 N29 **793.14** Maintenance of spatial information modulates the correlated variability of MT neurons based on their spatial selectivity. Y. MERRIKHI*; M. PARSA; B. NOUDOOST. *Inst. For Res. In Fundamental Sci., montana state university (MSU).*

3:00 N30 **793.15** Response modulations by spatial but not by feature-based attention are correlated with reduction in bursty firing in area MST. C. XUE*; B. S. KRISHNA; S. BALONI; D. KAPING; S. TREUE. *German Primate Ctr., Universitätsklinikum Carl Gustav Carus.*

4:00 N31 **793.16** "Everything you always wanted to know about fitting tuning curves* (*But were afraid to ask)": Model-free characterization of tuned responses and of their attentional modulation. M. HELMER*; V. KOZYREV; V. STEPHAN; S. TREUE; T. GEISEL; D. BATTAGLIA. *Max-Planck-Institut F Dynamik U Selbstorganisation, Bernstein Ctr. for Computat. Neurosci., Ruhr-University, German Primate Ctr., Max Planck Inst. for Dynamics and Self-Organization, Aix-Marseille Univ.*

1:00 N32 **793.17** Feature-based attention to visual motion directions increases response and contrast gain: Evidence for tuned normalization. P. SCHWEDHELM*; B. S. KRISHNA; S. TREUE. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Univ. of Goettingen.*

2:00 N33 **793.18** Top-down attention de-correlates early visual cortex. S. KWON*; M. WATANABE; A. BARTELS. *Ctr. For Integrative Neurosci., Max Planck Inst. Biol Cybernetics.*

3:00 N34 **793.19** Attentional priority signals in human frontoparietal cortex correlate with performance in a feature-based attention task. M. JIGO*; T. LIU. *Michigan State Univ.*

4:00 N35 **793.20** Parietal theta burst TMS: Functional fractionation observed during bistable perception not evident in attention tasks. J. BRASCAMP*; G. SCHAUER; R. KANAI. *Utrecht Univ., Michigan State Univ., Univ. of Sussex.*

1:00 N36 **793.21** The impact of spatial focusing on global feature-based attention. M. V. BARTSCH*; H. STRUMPF; M. A. SCHOENFELD; J. HOPF. *Leibniz Inst. for Neurobio., Otto von Guericke Univ.*

2:00 N37 **793.22** Attention and normalization responses of area 8a of the primate dorsolateral prefrontal cortex are cell type dependent. L. DUONG*; F. PIEPER; J. MARTINEZ-TRUJILLO. *Robarts Res. Inst., Univ. Med. Ctr. Hamburg-Eppendorf, Robarts Res. Institute, Western Univ.*

POSTER

794. Sensorimotor Transformation: Behavior and Whole Animal

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 N38 **794.01** Clues about the neuronal basis of UV avoidance in larval zebrafish. D. A. GUGGIANA-NILO*; F. ENGERT. *Harvard Univ.*

2:00 N39 **794.02** Relating individual variability of behavior and neural circuitry in the optomotor response of larval zebrafish. E. A. NAUMANN*; T. W. DUNN; J. E. FITZGERALD; J. RIHEL; F. ENGERT. *Harvard, Univ. Col. London.*

3:00 N40 **794.03** Experience shapes prey capture behavior and neural representations in larval zebrafish. C. OLDFIELD*; E. CARROLL; M. CHAVEZ; C. WYART; E. ISACOFF. *UC Berkeley, UC Berkeley, ICM - UPMC, ICM.*

4:00 N41 **794.04** Light-evoked diving reflex in zebrafish larvae. B. H. BISHOP; B. C. FRESHNER; E. B. GAHTAN*. *Humboldt State Univ.*

1:00 N42 **794.05** A novel neuromodulatory circuit for short-term motor memory. T. KAWASHIMA*; C. YANG; M. B. AHRENS. *HHMI Janelia Res. Campus.*

2:00 N43 **794.06** Sensory cortical control of a visually induced arrest behavior via corticotectal projections. F. LIANG; X. R. XIONG; B. ZINGG; X. JI; L. I. ZHANG; H. TAO*. *USC Keck Sch. Med.*

3:00 N44 **794.07** Visual context and neural control of headbobs in gerbils. H. R. RODMAN*; G. KUI; K. BANDA; M. KRYSIAK. *Emory Univ., Emory Univ., Central Washington Univ.*

4:00 N45 **794.08** Effects of transcranial direct-current stimulation on the primary visual cortex excitability in alert rabbits. J. MARQUEZ-RUIZ*; C. AMMANN; T. COSTA; G. LOURENCON; I. CORDONES; A. GRUART; J. DELGADO-GARCÍA; D. VENTURA. *División de Neurociencias. Univ. Pablo de Olavide, Laboratório da Visão, Exptl. Psychology Department, Univ. of São Paulo, Neurosci. and Behavior Group, Physiol. Department, Fac. of Biology, Univ. of Seville.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 N46 **794.09** Pulvinar inactivation impairs the visually guided saccade in the blindsight monkeys. M. KINOSHITA*; R. KATO; K. ISA; K. KOBAYASHI; H. ONOE; T. ISA. *Hirosaki Univ. Sch. of Med., Natl. Inst. for Physiological Sci., Natl. Inst. for Physiological Sci., RIKEN.*

2:00 N47 **794.10** Bayesian priors created by single trials in smooth pursuit eye movements. T. DARLINGTON*; S. LISBERGER. *Duke Univ., HHMI and Duke Univ. Dept. of Neurobio.*

3:00 N48 **794.11** Congruency effect for objects and grips based on predictiveness. R. P. LIMA*; C. HEYES; G. W. HUMPHREYS. *Univ. of Oxford, Univ. of Oxford, Univ. of Oxford.*

4:00 O1 **794.12** Neck muscle sensory noise alters visual-proprioceptive integration weights due to stochastic reference frame transformations. P. ABEDI KHOOZANI*; G. BLOHM. *Queen's Univ., Queen's Univ., Canadian Action and Perception Network (CAPnet), Assn. for Canadian Neuroinformatics and Computat. Neurosci. (CNCN).*

1:00 O2 **794.13** Learning time-to-contact in ball catching without haptic information. H. KAMBARA*; N. HAMA; T. KAWASE; N. YOSHIMURA; Y. KOIKE. *Tokyo Inst. Technol.*

2:00 O3 **794.14** The significance of measurement location in human stick balancing. Y. LEONG; B. CHRISTALIN; J. W. BURDICK*; J. C. DOYLE. *Caltech, Caltech.*

POSTER

795. Visually Guided Reaching and Eye Movements

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 O4 **795.01** Auditory and proprioceptive reaching in a patient with optic ataxia. S. CORNELSEN*; M. HIMMELBACH. *Ctr. For Neurology, Hertie-Institute for Clinica, Ctr. for Neurology, Hertie-Institute for Clin. Brain Res.*

2:00 O5 **795.02** Selective attenuation of visual reafferent signals in parietal cortex during movement. P. BERNIER*; M. BÉNAZET; F. THÉNAULT; K. WHITTINGSTALL. *Univ. De Sherbrooke, Univ. De Sherbrooke.*

3:00 O6 **795.03** Video games and visuomotor-related brain activity in women. D. J. GORBET*; L. E. SERGIO. *York Univ., York Univ.*

4:00 O7 **795.04** Virtual breakfast: Reference frames for goal-directed reaching in a 3D virtual reality environment. I. SCHUETZ*; M. KLINGHAMMER; K. FIEHLER. *Justus-Liebig-University Giessen.*

1:00 O8 **795.05** Prevalence of hybrid body-hand reference frames for reaching in area PEc. V. PISERCHIA; R. BREVEGLIERI; K. HADJIDIMITRAKIS; F. BERTOZZI; C. GALLETTI; P. FATTORI*. *Univ. of Bologna, Monash Univ.*

2:00 O9 **795.06** Effect of visuo-proprioceptive realignment on motor cortex excitability. F. MUNOZ*; A. K. LYNCH; H. J. BLOCK. *Indiana Univ., Indiana Univ., Indiana Univ., Indiana Univ.*

3:00 O10 **795.07** Effects of gravitational signals on visuo-kinesthetic sensory transformations during hand movements. M. TAGLIABUE*; D. DAL CANTO; M. CASADIO; J. MCINTYRE. *Univ. Paris Descartes, CNRS, Univ. of Genoa, IKERBASQUE Sci. Fndn.*

4:00 O11 **795.08** Compensating for a visuomotor rotation in the absence of sensory prediction errors. D. E. PARVIN*; R. J. MOREHEAD; R. IVRY. *UC Berkeley, Univ. of California, Berkeley.*

1:00 O12 **795.09** Proceduralization of declarative knowledge in a motor adaptation task following prolonged training. D. M. HUBERDEAU*; J. W. KRAKAUER; A. M. HAITH. *Johns Hopkins Univ.*

2:00 O13 **795.10** Hand and Tool positions differentially affect saccadic reaction times. L. CARDINALI*; T. R. MAKIN; J. C. CULHAM. *The Brain and Mind Institute, Western Univ., Hand and Brain Lab, fMRIB, Oxford Univ., The Brain and Mind Institute, Western Univ.*

3:00 O14 **795.11** Proprioceptive weights are independent of left and right hand sensory reliabilities. L. MIKULA*; L. PISELLA; G. BLOHM; A. Z. KHAN. *Univ. De Montréal, Ctr. de Recherche en Neurosciences de Lyon, INSERM U1028, CNRS UMR 5292, Queen's Univ.*

4:00 O15 **795.12** ▲ Limb position drift indicates independent modules for planning movement vectors, and for representing limb configuration. J. R. PATTERSON*; R. SAINBURG; L. BROWN. *Penn State Univ., Penn State Univ., Penn State Col. of Med., Trent Univ.*

1:00 O16 **795.13** Idiosyncratic matching errors cannot solely be explained by sensory biases. I. A. KULING*; M. C. W. VAN DER GRAAFF; E. BRENNER; J. B. J. SMEETS. *VU Univ. Amsterdam.*

2:00 O17 **795.14** Cognitive-motor integration performance and cerebellum volume in females with post-concussion syndrome. J. HURTUBISE*; D. GORBET; L. SERGIO. *York Univ.*

3:00 O18 **795.15** Comparing three tablet-based visuomotor tasks to standard laboratory versions. C. BEDORE*; J. LIVERMORE; H. LEHMANN; L. E. BROWN. *Trent Univ.*

4:00 O19 **795.16** tDCS over somatosensory cortex alters the balance of visuo-proprioceptive weighting and realignment. Y. LIU; B. SEXTON; P. CELNIK; H. J. BLOCK*. *Indiana Univ., Johns Hopkins Sch. of Med., Indiana Univ.*

1:00 O20 **795.17** Reaching target representation in the three-dimensional peripersonal space in the medial posterior parietal cortex. P. FATTORI; A. BOSCO; R. BREVEGLIERI; K. HADJIDIMITRAKIS; C. GALLETTI*. *Univ. Bologna, Monash Univ.*

2:00 O21 **795.18** The effect of tool-vibration on unimanual reaching. L. B. BAGESTEIRO*; L. E. BROWN. *Univ. Federal do Rio Grande do Sul, Trent Univ.*

3:00 O22 **795.19** Movement planning in freely moving monkeys - the reach cage. M. BERGER*; A. GAIL. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Göttingen Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 O23 **795.20** Changes in motor cortical inhibition following a bimanual movement task. A. T. BRUNFELDT*; F. A. KAGERER. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

1:00 O24 **795.21** Adaptation of ultra-rapid visual response on human upper limb muscle during visuomotor rotation. C. GU*; J. A. PRUSZYNSKI; P. L. GRIBBLE; B. D. CORNEIL. *Univ. of Western Ontario, Brain and Mind Inst., Univ. of Western Ontario, Univ. of Western Ontario, Robarts Res. Inst.*

2:00 O25 **795.22** Varied tuning properties of single-units in human posterior parietal cortex during reach and saccade planning. J. M. WEISS*; W. M. MAGUIRE; A. P. BATISTA; J. L. COLLINGER; R. A. GAUNT. *Univ. of Pittsburgh, Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, DVA.*

3:00 O26 **795.23** Environmental constraints delay eye-hand coordination during a reaching task. J. J. MARIMAN*; B. CATALAN; P. DEL CAMPO; D. SALVATIERRA; M. REYES; P. E. MALDONADO. *Univ. De Chile, Univ. Metropolitana de Ciencias de la Educación, Biomed. Neurosci. Inst.*

4:00 O27 **795.24** Movement kinematics and brain lateralization predict intermanual transfer of visuomotor, prismatic adaptation for each individual. F. R. SARLEGNA*; A. G. RENAULT; H. LEFUMAT; C. BOURDIN; L. BRINGOUX; J. VERCHER. *CNRS and Aix-Marseille Univ.*

1:00 O28 **795.25** Long-term motor adaptation: Time is not what matters. K. VAN DER KOOIJ*; K. E. OVERVLIET; J. B. J. SMEETS. *VU Univ. Amsterdam, The Netherlands, Univ. Hamburg, VU Univ.*

2:00 O29 **795.26** Reference frames for goal-directed reaching in natural scenes: The role of task relevance and scene coherence. M. KLINGHAMMER*; G. BLOHM; K. FIEHLER. *Justus-Liebig Univ. Giessen, Queen's Univ.*

3:00 O30 **795.27** Bayesian integration of skewed distributions during sensorimotor learning. J. G. CASHABACK*; A. MOHATAREM; H. R. MCGREGOR; P. L. GRIBBLE. *Western Univ., Western Univ., Western Univ., Western Univ.*

4:00 O31 **795.28** A coordinated saccade with a reach increases reach accuracy in the absence of target foveation. Y. VÁZQUEZ ZÚNIGA*; D. J. HAWELLEK; B. PESARAN. *New York Univ.*

1:00 O32 **795.29** Eye-hand coordination in visual search. S. JANA*; A. GOPAL; A. MURTHY. *Indian Inst. of Sci., Natl. Brain Res. Ctr., Indian Inst. of Sci.*

2:00 O33 **795.30** Mirror-reversed visual feedback reduces quick somatomotor response evoked by mechanical perturbation. S. ITO*; H. GOMI. *NTT Communication Sci. Labs.*

POSTER

796. Itch

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 O34 **796.01** Acid induced itch and the roles of proton-sensing ion channels in pruritoception. S. LIN*; C. CHEN. *Inst. of Biomed. Sciences, Academia Sinica, Inst. of Biomed. Science, Academia Sinica, Taiwan Mouse Clinic-National Comprehensive Mouse Phenotyping and Drug Testing Ctr.*

2:00 O35 **796.02** Exploring the mechanisms of itch and skin inflammation of poison ivy contact dermatitis. B. LIU*; Y. TAI; S. ACHANTA; A. CACERES; M. KAELBERER; P. BONNER; S. JORDT. *Duke Univ.*

3:00 O36 **796.03** The role of itch receptors in reflex bronchoconstriction. L. HAN*; N. LIMJUNYAWONG; W. MITZNER; B. J. UNDEM; B. J. CANNING; X. DONG. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

4:00 O37 **796.04** The voltage-gated potassium channels contribute to regulation of physiological function in mrgpra3 specific itch neurons. Z. TANG*; M. TANG; G. WU; Y. GUAN; X. DONG; Z. WANG; N. YANG; H. SHI; Q. HE; G. YU; C. ZHU; Y. YANG; C. WANG; X. YUAN. *Nanjing Univ. of Chinese Med., Jishou Univ., Nanjing Univ. of Chinese Med., Johns Hopkins Univ. Schools of Med., Johns Hopkins Univ. Schools of Med.*

1:00 O38 **796.05** Neurotrophic factors selectively modulate scratching behavior and sensory neuron responses to pruritogens. M. V. VALTCHEVA*; A. M. KEANE; J. P. GOLDEN; R. W. GEREAU, IV; S. DAVIDSON. *Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

2:00 O39 **796.06** Human sensory neuron: A novel strategy for translational approaches to pain and itch. B. A. COPITS*; M. VALTCHEVA; S. DAVIDSON; R. W. GEREAU, IV. *Washington Univ. Sch. of Med., Univ. of Cincinnati Med. Ctr.*

3:00 O40 **796.07** Activation of trpv4-expressing resident cells in the skin promotes itch. J. LUO*; G. YU; J. DU; W. YU; A. QIAN; J. FENG; Y. ZHANG; P. YANG; M. MACK; S. LIU; S. YIN; J. CHENG; R. G. O'NEIL; Q. LIU; Y. XIA; B. S. KIM; S. M. CARLTON; Q. LIU; H. HU. *Washington Univ. Sch. of Med., Univ. of Texas Med. Br., Chongqing Med. Univ., Ruijin Hospital, Shanghai Jiaotong Univ., Univ. of Texas Med. Sch. at Houston, Col. of pharmacy, South-Central Univ. for Nationalities, Baylor Col. of Med., Univ. of Texas Med. Sch. at Houston, Univ. of Texas Hlth. Sci. Ctr. at Houston.*

4:00 O41 **796.08** Activation of T-type Ca^{2+} channel regulates PAR2 dependent allergic contact dermatitis. Y. KIM*; S. CHUNG. *Yonsei Univ. Col. of Med.*

1:00 O42 **796.09** A chemogenetic model for studying itch in awake mice. B. SHARIF*; X. DONG; P. A. SEGUELA. *McGill, Johns Hopkins, McGill.*

2:00 O43 **796.10** Chemogenetic sensitization of pain pathways in freely moving animals. H. ALKHANI*; P. SEGUELA. *Montreal Neurolog. Institute, Dept of Neurol. and Neurosurgery, McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 O44 **796.11** Eact, a small molecule activator of ANO1, activates TRPV1 and elicits pain- and itch-related behaviors. J. FENG; S. LIU; J. LUO; P. YANG; H. HU*. *Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

4:00 O45 **796.12** Identification of ion channels involved in compound 48/80 mediated degranulation of mast cells. B. LEE*; H. CHUN; H. KIM; J. WEE; I. CHOI; U. OH. *Seoul Natl. Univ., Sensory Res. Center, Creative Res. Initiatives, Col. of Pharmacy, Seoul Natl. Univ., Dept. of Mol. Med. and Biopharmaceutical Sciences, Grad. Sch. of Convergence Sci. and Technology, Seoul Natl. Univ.*

POSTER

797. Mechanisms of Neuropathic Pain II

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 O46 **797.01** Rolipram ameliorates chemotherapy-induced neuropathic pain in rats by decreasing inflammatory cytokines in the dorsal root ganglia. S. KIM; H. KIM; H. LEE; S. ABDI. *Univ. of Texas, MD Anderson Cancer Ctr.*

2:00 O47 **797.02** Cortical reorganization in at-level central neuropathic pain. G. H. BLUMENTHAL*; M. R. DETLOFF; B. NANDAKUMAR; K. A. MOXON. *Drexel Univ., Drexel Univ. Col. of Med.*

3:00 O48 **797.03** Molecular mechanisms of satellite glia-dependent spinal cord microglia activation in nerve injury-induced neuropathic pain. S. LEE*; H. LIM; H. LEE; K. NOH; B. YOU; J. OH; H. MOK; B. KIM; J. PARK; K. KIM. *Seoul Natl. Univ., Seoul Natl. Univ., Seoul Natl. Univ., Kyung Hee Univ., Ajou Univ.*

4:00 P1 **797.04** Coupled activation of primary sensory neurons contributes to chronic pain. Y. KIM*; K. PARK; S. JILAFU; Q. ZHENG; L. HAN; Z. LI; C. GONG; L. YOUNG; S. HE; F. ZHOU; Y. GUAN; M. CATERINA; X. DONG. *Johns Hopkins Univ. Sch. Med.*

1:00 P2 **797.05** Preemptive analgesia attenuates mechanical allodynia in rats with chronic constriction injury of infraorbital nerve. H. KIM; M. KIM; J. SON; J. JU; K. YANG; M. LEE; M. PARK; D. K. AHN*. *Dentistry, Kyungpook Univ., Dong-Eui Univ., Kyung-Woon Univ.*

2:00 P3 **797.06** Dynamic changes of CCR2+ monocyte and Cx3CR1+ microglia in a mouse model of neuropathic pain. L. LIU*; Z. HUA; H. WU; J. CHENG. *LRI, Cleveland Clin.*

3:00 P4 **797.07** Changes in DNA methylation in the rodent prefrontal cortex in chronic neuropathic pain: Effect of S-Adenosylmethionine (SAM) on pain behaviors and epigenetic process. S. GREGOIRE*; R. MASSART; M. MILLECAMPS; S. DYMOV; S. DO CARMO; A. CUELLO; M. SZYF; L. STONE. *McGill Univ., McGill Univ., McGill Univ.*

4:00 P5 **797.08** Ongoing synthesis of synaptic proteins supports synaptic remodeling and behavioral changes induced by nerve injury. J. CHOI*; J. KIM; H. KO; X. LI; C. LIM; S. SIM; J. SHIM; S. J. KANG; T. CHOI; D. PARK; J. DO; G. L. COLLINGRIDGE; C. W. TURCK; M. ZHUO; B. KAANG. *Seoul Natl. Univ., Dept. of Physiology, Fac. of Medicine, Univ. of Toronto, of Proteomics and Biomarkers, Max Planck Inst. of Psychiatry, Ctr. for Synaptic Plasticity, Sch. of Physiol. and Pharmacology, Univ. of Bristol.*

1:00 P6 **797.09** Suppression of GSKIP expression in mice enhance CCI-dependent neuropathic pain through GSK3β-mediated Drp1-associated mitochondrial dysfunction. A. CHOU*; M. HONG; Y. HONG. *Chang Gung Mem. Hosp., Dept. of Biochemistry, Fac. of Medicine, Col. of Medicine, Kaohsiung Med. University, Kaohsiung, Taiwan.*

2:00 P7 **797.10** BDNF-mediated projection-specific modulation of depression and pain: Focus on dopaminergic neurons in VTA. D. LIU*; Q. TANG; C. YIN; H. LIU; S. SONG; Y. LI; Z. PAN; H. WANG; X. HONG; Y. LIU; X. GUO; X. YANG; H. DING; H. ZHANG; J. CAO. *Xuzhou Med. Col.*

3:00 P8 **797.11** Study of the expression of neuropeptide pituitary adenylate-cyclase activating polypeptide (PACAP) in neuropathic pain mice by psychological stress. Y. SHUDO*; M. SHIMOJO; M. FUKUNAGA. *Kansai Med. Univ.*

4:00 P9 **797.12** Cancer chemotherapy-induced peripheral neuropathy phenotypic screen. B. SINGH*; E. BUTTERMORE; L. BARRETT; C. WOOLF. *Boston Children's Hosp. Harvard Med. Sch.*

1:00 P10 **797.13** Characterizing the effects of prenatal alcohol exposure on glial-immune responses during chronic neuropathic pain. J. SANCHEZ*; A. G. VANDERWALL; M. S. SUN; S. DAVIES; T. ANDERSON; J. P. NORENBERG; D. D. SAVAGE; E. D. MILLIGAN. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico.*

2:00 P11 **797.14** Alterations in layer 5 pyramidal neurons of prelimbic medial prefrontal cortex in a rat model of neuropathic pain. C. J. KELLY*; M. MARTINA. *Northwestern Univ.*

3:00 P12 **797.15** Antisense oligodeoxynucleotides CPEB suppresses neuropathic pain induced by HIV gp120 combined with ddC through ROS and CBP in Rats. T. IIDA*; S. LIU; H. YI; W. HUANG; D. LUBARSKY; S. HAO. *Univ. of Miami Dept. of Anesthesiol.*

4:00 P13 **797.16** A role for noradrenergic modulation in neuropathy-induced hyperexcitability of pyramidal neurons in the medial prefrontal cortex. S. CORDEIRO MATOS*; Z. ZHANG; G. LONGO; A. RIBEIRO-DA-SILVA; P. SEGUELA. *Montreal Neurolog. Institute, McGill Univ., Alan Edwards Ctr. for Res. on Pain, McGill Univ.*

1:00 P14 **797.17** ● The first translatable prediction biomarker of painful peripheral neuropathy. M. I. NEMENOV*; M. BACKONJA. *Lasmed LLC, Stanford Univ., Univ. of Wisconsin-Madison.*

2:00 P15 **797.18** ● Neuropathic pain behavior is reversed with epoetin alpha: A pilot study in the NeuroDigm GEL(TM) model of neuropathic pain. M. R. HANNAMAN*; D. A. FITTS; J. L. BRYANT. *NeuroDigm Corp, Univ. of Washington (ret.), Univ. Of Maryland.*

3:00 P16 **797.19** Impact of genetic reduction of NMNAT2 on chemotherapy-induced losses in cell viability *in vitro* and peripheral neuropathy *in vivo*. R. SLIVICKI*; Y. O. ALI; H. LU; A. G. HOHMANN. *Indiana Univ., Baylor Col. of Med., Indiana Univ.*

4:00 P17 **797.20** Withdrawn.

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 P18 **797.21** Pentoxifylline ameliorates chemotherapy-induced neuropathic pain in rats by decreasing inflammatory cytokines in the dorsal root ganglia. H. KIM*; S. HWANG; H. LEE; S. ABDI. *MD Anderson Cancer Ctr.*

2:00 P19 **797.22** Localization of neuropathic pain-related protein, BEGAIN in the spinal dorsal horn. T. KATANO*; M. WATANABE; M. YAMAZAKI; M. ABE; I. YAO; K. SAKIMURA; S. ITO. *Kansai Med. Univ., Hokkaido Univ. Grad. Sch. of Med., Niigata Univ., Hamamatsu Univ. Sch. of Med.*

3:00 P20 **797.23** Dendritic spine remodeling in lamina II dorsal horn sensory neurons after SCI. L. W. PAPPALARDO*; X. C. CAO; S. G. WAXMAN; A. M. TAN. *Yale Univ.*

4:00 P21 **797.24** Characterization of the neuronal circuits in the spinal superficial dorsal horn: The application of multi-electrode array and cross-correlation analysis. Y. TAKEMURA; T. ASAKAWA; T. TERASHIMA; T. TAKASUSUKI; S. YAMAGUCHI; Y. HORI*. *Dokkyo Univ. Sch. Med.*

1:00 P22 **797.25** Mitochondrial fission is involved in the HIV gp120-related neuropathic pain in rats---a preliminary study. S. LIU; H. KANDA; C. LIU; W. HUANG; D. A. LUBARSKY; S. HAO*. *Univ. Miami.*

2:00 P23 **797.26** Prolonged paclitaxel exposure modulates CGRP release induced by the activation of PKC in cultures derived from rat dorsal root ganglion. L. DARBY*; J. C. FEHRENBACHER. *Indiana Univ. Sch. of Med.*

3:00 P24 **797.27** Different types of reactive oxygen species are involved in cell type specific synaptic plasticity. A. BITTAR*; J. JUN; J. WANG; K. CHUNG; J. CHUNG. *Univ. Texas Med. Br.*

4:00 P25 **797.28** The effect of partial sciatic nerve ligation on gabaergic function in the superficial dorsal horn: Application of voltage-sensitive dye imaging system. K. KANEKO*; T. FUKUSHIMA; Y. NUMATA; T. TAKASUSUKI; S. YAMAGUCHI; Y. HORI. *Dokkyo Med. Univ., Dokkyo Med. Univ.*

1:00 P26 **797.29** Minocycline prevents establishment of sensory hypersensitivity after a median nerve crush in rats. S. SHAIKH*; P. SHORTLAND; D. A. MAHNS. *Univ. of Western Sydney.*

POSTER

798. Rhythmic Motor Patterns: Afferent and Descending Control

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 P27 **798.01** Recruitment of unimodal and multimodal neurons during sensory-induced motor pattern selection. C. J. GOLDSMITH*; W. STEIN. *Illinois State Univ.*

2:00 P28 **798.02** Topological identification of projection neurons controlling motor circuits. R. FOLLMANN*; C. J. GOLDSMITH; W. STEIN. *Illinois State Univ.*

3:00 P29 **798.03** Compartmental Hodgkin-Huxley model equations applied to the study of axonal modulation. E. ROSA*; R. FOLLMANN; W. STEIN. *Illinois State Univ., Illinois State Univ.*

4:00 P30 **798.04** Differential modulation of circuit feedback determines activity rate of a circuit input. D. M. BLITZ*. *Miami Univ.*

1:00 P31 **798.05** A circular model for song motor control in Serinus canaria. G. B. MINDLIN*; A. AMADOR; R. ALONSO; M. TREVISAN; F. GOLLER. *universidad buenos aires, UBA, U. Utah.*

2:00 P32 **798.06** Common mechanisms and specializations in force detection and control in cockroaches, stick insects and *Drosophila.* S. N. ZILL*; A. BŰSCHGES; J. SCHMITZ; D. NEFF; S. CHAUDHRY. *J.C. Edwards Sch. Med., Univ. of Cologne, Univ. of Bielefeld, Marshall Unversity.*

3:00 P33 **798.07** Central coupling between locomotion and respiration in the metamorphosing frog. D. COMBES*; L. MERLET; M. THOBY-BRISSON; D. MORIN; J. SIMMERS. *Univ. of Bordeaux, CNRS UMR 5287.*

4:00 P34 **798.08** ▲ Effects of mechanical perturbations on fictive locomotion in the lamprey. D. R. BERNALES; E. D. TYTELL*. *Boston Univ., Tufts Univ.*

1:00 P35 **798.09** Reticulospinal neurons transmitting commands for modification of spinal reflex responses to body bending during escape behaviors in lampreys. L. HSU; P. V. ZELENIN; G. N. ORLOVSKY*; T. G. DELIAGINA. *Karolinska Inst.*

2:00 P36 **798.10** The neural basis for regional body bending in zebrafish startle behavior. H. R. KATZ*; Y. LIU; M. E. HALE. *Univ. of Chicago, Vollum Inst., Univ. of Chicago.*

3:00 P37 **798.11** Activity of individual spinal neurons during locomotion initiated from brainstem and from spinal cord. P. V. ZELENIN*; P. E. MUSIENKO; O. V. GORSKII; V. F. LYALKA; Y. P. GERASIMENKO; G. N. ORLOVSKY; T. G. DELIAGINA. *Karolinska Inst., Pavlov Inst. of Physiol.*

4:00 P38 **798.12** Pre- and post-synaptic inhibitory mechanisms acting on lumber spinal cord neurons during generalized motor inhibition induced by stimulating the medullary reticular formation in the decerebrate cat. K. TAKAKUSAKI*. *Asahikawa Med. Univ.*

1:00 P39 **798.13** Phase resetting of the respiratory rhythm elicited by the activation of a distinct central pattern generator. R. MEZA-ANDRADE*; B. DE LA TORRE-VALDOVINOS; N. HUIDOBRO; P. LINARES; R. TECUANHUEY; E. MANJARREZ. *Benemérita Univ. Autónoma De Puebla, Benemérita Univ. Autónoma De Puebla.*

POSTER

799. Rhythmic Motor Patterns: Models

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 P40 **799.01** Bistability facilitates multifunctionality and improves performance in a neuromechanical model of motor pattern generation. D. LYTTLE*; J. GILL; K. SHAW; P. THOMAS; H. CHIEL. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 P41 **799.02** Preparing the periphery for a subsequent behavior: Motor neuronal activity during biting generates little force but prepares a retractor muscle to generate larger forces during swallowing in *Aplysia*. H. LU*; J. M. MCMANUS; M. J. CULLINS; H. J. CHIEL. *Case Western Res. Univ.*

3:00 P42 **799.03** A kinematic model of surface conformational changes in the *Aplysia* feeding grasper. C. E. KEHL*; D. NEUSTADTER; S. LU; H. CHIEL. *Case Western Reserve Univ., Calore Med. LTD.*

4:00 Q1 **799.04** Getting to the right solution: Sensory feedback reduces motor neuronal individuality to satisfy behavior-specific biomechanical constraints. J. P. GILL*; M. J. CULLINS; J. M. MCMANUS; H. LU; K. M. SHAW; H. J. CHIEL. *Case Western Reserve Univ., Case Western Reserve Univ.*

1:00 Q2 **799.05** Modeling the Caenorhabditis elegans locomotion network: An opportunity in connectivity. G. HASPEL*; C. O. DIEKMAN. *New Jersey Inst. of Technol., New Jersey Inst. of Technol.*

2:00 Q3 **799.06** Mechanisms of sensory feedback governing motor network dynamics in a locomotor circuit. B. CHUNG*; R. CLEWLEY; D. EDWARDS. *Georgia State Univ., Georgia State Univ.*

3:00 Q4 **799.07** A CPG driven dynamic model for the study of active tactile sensing in an insect. N. HARISCHANDRA*; T. HOINVILLE; A. F. KRAUSE; V. DÜRR. *Univ. of Bielefeld, Fac. of Biol., Cognitive Interaction Technol. Ctr. of Excellence, Univ. of Bielefeld.*

4:00 Q5 **799.08** Computer simulations of slope walking in the cat: Role of supraspinal input to extensor interneurons. A. N. KLISHKO*; S. N. MARKIN; N. A. SHEVTSOVA; M. A. LEMAY; I. A. RYBAK; B. I. PRILUTSKY. *Georgia Inst. of Technol., Drexel Univ. Col. of Med., Temple Univ.*

1:00 Q6 **799.09** A flexible dynamical architecture for neuromechanical modeling and robotic control. A. D. HORCHLER*; K. A. DALTORIO; A. KANDHARI; H. J. CHIEL; R. D. QUINN. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

2:00 Q7 **799.10** Coordination and control of hind limb stepping in a rat model. A. HUNT; N. SZCZECINSKI; E. ANDRADA; M. FISCHER; R. D. QUINN*. *Case Western Reserve Univ., Inst. of Systematic Zoology and Evolutionary Biology, Friedrich Schiller Univ. of Jena.*

3:00 Q8 **799.11** Minimalistic central pattern generator for quadrupedal locomotion. K. TUNTEVSKI*; S. YAKOVENKO. *West Virginia Univ. - Ctr. For Neurosci., WVU.*

4:00 Q9 **799.12** Analytical solution to leaky integrator model of central pattern generator for locomotion. A. SOBINOV; S. YAKOVENKO*. *West Virginia Univ., WVU Sch. of Med.*

1:00 Q10 **799.13** Sparsity and inhibition in the pre-Bötzinger complex can explain levels of synchrony and the presence of expiratory neurons. K. D. HARRIS*; T. DASHEVSKIY; E. T. SHEA-BROWN; J. RAMIREZ. *Univ. of Washington, Seattle Children's Res. Inst., Univ. of Washington.*

2:00 Q11 **799.14** Homeostatic plasticity maintains stable respiratory rhythmic activity within the pre-Bötzinger Complex. N. A. BAERTSCH*; J. M. RAMIREZ. *Seattle Children's, Seattle Children's Res. Inst.*

POSTER

800. Striatal Dopamine Neurotransmission

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 Q12 **800.01** Age-dependent effects of EEDQ on the affinity and efficacy of dopamine receptors in the caudate-putamen. A. MOHD-YUSOF; S. E. EATON; J. M. VALENTINE; D. E. HUMPHREY; A. E. GONZALEZ; C. A. CRAWFORD; S. A. MCDOUGALL*. *California State Univ.*

2:00 Q13 **800.02** Environmental enrichment enhances synaptic plasticity by internalization of striatal dopamine transporters. J. YU*; M. KIM; J. SEO; M. LEE; S. WI; S. CHO. *Rehabil. Med. Yonsei Univ. Col., Yonsei Univ.*

3:00 Q14 **800.03** Striatal dopamine transmission is weighted differently within the striosome-matrix axis by Substance P. K. R. BRIMBLECOMBE; S. J. CRAGG*. *Univ. of Oxford.*

4:00 Q15 **800.04** Dopamine receptor inactivation in the caudate-putamen and nucleus accumbens differentially affects the locomotor activity of young rats. K. RUDBERG*; A. MORAN; J. RAZO; E. MACEDO; S. E. EATON; A. MOHD-YUSOF; C. A. CRAWFORD; S. A. MCDOUGALL. *California State Univ.*

1:00 Q16 **800.05** Dorsal striatal mu opioid receptors inhibit cholinergic interneuron-driven dopamine release. B. K. ATWOOD*; Y. MATEO; D. M. LOVINGER. *NIAAA, NIAAA.*

2:00 Q17 **800.06** Conditional knockout of tyrosine hydroxylase in midbrain dopamine neurons. J. POULIN*; R. AWATRAMANI. *Northwestern Univ.*

3:00 Q18 **800.07** DHHC15-mediated palmitoylation modulates striatal dopamine levels and spontaneous locomotion. R. M. MEJIAS-ESTEVEZ*; A. ADAMCZYK; M. NIWA; I. N. KRASNOVA; G. M. THOMAS; M. HAN; J. WANG; Z. XI; R. L. HUGANIR; M. PLETNIKOV; J. L. CADET; A. SAWA; T. WANG. *Johns Hopkins Univ., Drexel Univ., NIDA, Temple Univ., Univ. of Pennsylvania.*

4:00 Q19 **800.08** Motor skill learning in rats is accompanied by phase-dependent modifications in the cAMP/PKA/DARPP-32 signaling pathway. Y. QIAN*; H. FORSSBERG; R. DIAZ HEIJTZ. *Karolinska Institutet, Karolinska Institutet.*

1:00 Q20 **800.09** Cortical and striatal induced motor tics in rats, behavioral and electrochemical studies. J. CHANG*; D. J. WOODWARD. *Neurosci Res. Inst. North Carolina.*

2:00 R1 **800.10** Modulation of basal dopamine in the nucleus accumbens following repeated low-dose ketamine exposure as measured using fast-scan controlled-adsorption voltammetry. M. A. MILLER; K. L. PARENT; M. A. BARTLETT; C. W. ATCHERLEY; D. F. HILL; T. FALK; M. L. HEIEN; S. L. COWEN*. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 R2 **800.11** A causal link between dopamine release and cue-responsivity at D2 receptors. C. A. OWESSON-WHITE*; A. M. BELLE; N. R. HERR; J. L. PEELE; P. GOWRISHANKAR; R. M. CARELLI; R. WIGHTMAN. *UNC Chapel Hill, UNC Chapel Hill.*

4:00 R3 **800.12** Methylphenidate modulates dopaminergic and glutamatergic transmission from ventral tegmental area to nucleus accumbens Shell. C. REYES-VAZQUEZ*; A. M. VAZQUEZ-ALVAREZ; B. PRIETO-GOMEZ. *Depto. De Fisiología.*

POSTER

801. Basal Ganglia: Dopamine Neuron Physiology

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 R4 **801.01** Cell-type selective encoding of spontaneous movement by dopaminergic neurons. P. D. DODSON*; J. K. DREYER; K. A. JENNINGS; R. WADE-MARTINS; S. J. CRAGG; J. P. BOLAM; P. J. MAGILL. *Univ. of Oxford, Univ. of Oxford, Univ. of Copenhagen, Univ. of Oxford.*

2:00 R5 **801.02** AMP kinase activation augments K-ATP current in rat midbrain dopamine neurons. S. W. JOHNSON*; Y. WU; A. C. MUNHALL; K. SHEN. *Portland VA Med. Ctr., Oregon Hlth. & Sci. Univ.*

3:00 R6 **801.03** T-type calcium channels control non-linear dendritic integration in vulnerable subpopulation of substantia nigra dopamine neurons. R. C. EVANS*; Z. M. KHALIQ. *NIH.*

4:00 R7 **801.04** Ionic mechanisms of the post-burst pause in dopamine neuron subpopulations. R. A. TARFA*; Z. KHALIQ. *NIH/NINDS, Brown Univ.*

1:00 R8 **801.05** Influence of timing on integration of excitatory synaptic input during tonic firing in substantia nigra dopamine neurons. T. A. HAGE*; Z. M. KHALIQ. *NINDS/NIH.*

2:00 R9 **801.06** Optogenetic stimulation of the Subthalamic nucleus modulates downstream dopaminergic neurons in the Substantia Nigra pars compacta via endocannabinoids. P. S. FREESTONE*; K. L. TODD; Y. SUN; J. LIPSKI. *Univ. of Auckland.*

3:00 R10 **801.07** Role of co-released glutamate from dorsal raphe serotonin neurons in substantia nigra. H. ZHANG*; L. CHEN; Q. QIN; L. ZHI; C. B. DIVITOA,; S. CHOI; Y. WANG; R. P. SEAL. *Dept. of Neurosci., Fudan Univ., Thomas Jefferson Univ., Univ. of Pittsburgh, Columbia Univ., Univ. of Pittsburgh.*

4:00 R11 **801.08** Model of the interaction of the axonal and somatic spike generating mechanisms in nigral dopamine neurons. C. C. CANAVIER*. *Louisiana State Univ. Hlth. Sci. Ctr.*

1:00 R12 **801.09** Cerebellar modulation of substantia nigra. S. G. KEE*; K. KHODAKHAH. *Albert Einstein Col. of Med.*

2:00 R13 **801.10** A new role for midbrain dopaminergic neurons during temporal judgments. S. SOARES; B. V. ATALLAH; T. S. GOUVÊA; T. MONTEIRO; J. J. PATON*. *Champalimaud Fundation, Champalimaud Ctr. for the Unknown, Fundacao Champalimaud PT507131827.*

POSTER

802. Systems and Behavior

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 R14 **802.01** Loss of Gad67 in neurons expressing dopamine Drd1a receptors prevents the development of l-DOPA-induced dyskinesias in a mouse model of Parkinson's disease. J. SOGHOMONIAN*; K. ZHANG; C. CHAMMAS. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

2:00 R15 **802.02** Intrinsic choice reflexes in the sensorimotor striatum. A. J. GRUBER*; R. THAPA; P. BANKS. *Univ. of Lethbridge, Univ. of Lethbridge.*

3:00 R16 **802.03** Juvenile onset of stereotypy with loss of BDNF signaling in D1R expressing striatal neurons. M. ENGELN*; R. CHANDRA; A. LA; T. FRANCIS; M. LOBO. *Univ. of Maryland, Baltimore, Univ. of Maryland, Col. Park.*

4:00 R17 **802.04** Optimizing functional MRI sequences at 7 Tesla for subcortical nuclei. B. U. FORSTMANN*; M. KEUKEN; R. TRAMPEL; G. DE HOLLANDER. *Univ. of Amsterdam, Max Planck Inst. for Human Cognitive and Brain Sci.*

1:00 R18 **802.05** Normobaric hyperoxia treatment following fluid percussion injury in striatum of mice improved locomotors activity through neuroprotection and enhancement of dopaminergic system. S. MUTHURAJU*; J. ABDULLAH; M. RAFIQUL ISLAM. *Univ. Sains Malaysia.*

2:00 R19 **802.06** Functional imaging of dopaminergic projections in dorsal striatum with single-axon resolution in behaving mice. M. HOWE*; D. A. DOMBECK. *Northwestern Univ., Northwestern Univ.*

3:00 R20 **802.07** Contributions of the globus pallidus to action selection and proactive inhibition. B. GU*; C. LU; S. BIDWELL; J. BERKE. *Univ. of Michigan.*

4:00 S1 **802.08** Expectations of reward omission selectively modulate striatal fast-spiking interneurons. A. MOHEBI*; J. R. PETTIBONE; M. A. FARRIES; J. D. BERKE. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

1:00 S2 **802.09** Neuromodulation and adaptive decision-making in frontal cortex and striatum. J. R. PETTIBONE*; A. MOHEBI; A. HAMID; J. T. WONG; R. T. KENNEDY; J. D. BERKE. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

2:00 S3 **802.10** Chemogenetic control of motor behavior in the non-human primate: DREADD-mediated silencing of the substantia nigra pars reticulata. B. L. AGUILAR*; C. ELORETTE; M. N. HUIZENGA; P. A. FORCELLI; L. MALKOVA. *Georgetown Univ.*

3:00 S4 **802.11** Inverse incentive learning on the bar test in rats following injection of haloperidol into the nucleus accumbens. L. N. SCHIMMEL*; C. DI PROSPERO; R. J. BENINGER. *Queen's Univ., Queen's Univ.*

4:00 S5 **802.12** *In vivo* study of thalamic axonal dynamics in layer 1 of mice motor cortex. O. P. JAIDAR*; C. J. ROOME; M. GARCIA-MUNOZ; Y. NAKANO; B. KUHN; G. W. ARBUTHNOTT. *Okinawa Inst. of Sci. and Technol. Grad. Univ.*

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* Indicates abstract's submitting author

1:00 S6 **802.13** Investigating activity of fast spiking interneurons in dorsolateral striatum. J. KULIK*; K. COFFEY; A. PAWLAK; M. WEST. *Rutgers Univ.*

2:00 S7 **802.14** Exploring body part sensitivity of optogenetically identified D1 and D2 receptor expressing medium spiny neurons in the dorsolateral striatum of the mouse. K. COFFEY*; M. NADER; M. WEST. *Rutgers Univ., Rutgers, Rutgers.*

3:00 S8 **802.15** Relationship between the cerebellar dentate nucleus, VA/VL and VM thalamus and motor cortex in the generation of high gamma oscillation during L-DOPA-induced dyskinesia in Parkinson's disease. C. DELAVILLE*; H. BERMUDEZ CABRERA; A. J. MCCOY; J. R. WALTERS. *NIH NINDS.*

4:00 S9 **802.16** Does the parafascicular nucleus participate in transmission of oscillatory activity in motor circuits in hemiparkinsonian rat? E. BRAZHNIK*; N. NOVIKOV; A. J. MCCOY; J. R. WALTERS. *NIH NINDS.*

1:00 S10 **802.17** Ventromedial thalamus is critical for expression of cortical narrow band high gamma oscillations but not L-DOPA-induced dyskinesia in hemiparkinsonian rats. K. B. DUPRE*; C. P. DODGE; C. DELAVILLE; E. BRAZHNIK; N. I. NOVIKOV; J. R. WALTERS. *NIH NINDS.*

2:00 S11 **802.18** Long-term effects in cortical evoked potentials in response to GPi-DBS in childhood generalized dystonia. E. ARGUELLES*; N. H. BHANPURI; M. BERTUCCO; T. D. SANGER. *USC, NorthShore Univ. HealthSystem.*

3:00 S12 **802.19** Testing the role of ventral tegmental area inputs to Area X in vocal plasticity. L. XIAO*; G. CHATTREE; T. F. ROBERTS. *Univ. of Texas Southwestern Med. Ctr.*

4:00 S13 **802.20** Effects of enriched housing on the expression of novelty-shuttling induced Fos-LIke Immunoreactivity in the cingulate cortex and basal ganglia. W. M. STRUTHERS*; S. P. MEDRANO; K. ANSELL. *Wheaton Col.*

1:00 S14 **802.21** The timing mechanism in the hundreds of milliseconds is disrupted by a D2 agonist. K. YC*; L. PRADO; H. MERCHANT. *Inst. de Neurobiologia, UNAM.*

POSTER

803. Finger and Grasp Behavior and Kinematics

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 S15 **803.01** ● Anticipatory grip force adjustments as an emerging feature of coordinated feedback control. F. CREVECOEUR*; J. THONNARD; P. LEFEVRE; S. H. SCOTT. *Univ. Catholique de Louvain, Queen's Univ.*

2:00 S16 **803.02** Texting on the go: Multi-muscle activation patterns during a dual-task performance. P. K. ACHARYA*; A. AMEDEE; J. AMEDEE; S. A. WINGES. *Louisiana State Univ.*

3:00 S17 **803.03** Sense of effort: Right and left hand sensitivity to proprioceptive feedback. Y. ACOSTA-SOJO*; B. J. MARTIN. *Univ. of Michigan.*

4:00 S18 **803.04** Task specific stability of abundant systems: Structure of variance and motor equivalence. D. J. MATTOS*; G. SCHÖNER; V. ZATSIORSKY; M. LATASH. *Penn State Univ., Rühr Univ. Bochum, The Pennsylvania State Univ.*

1:00 S19 **803.05** ▲ "Time" as a sensorimotor control problem: Performance limits of human auditory--motor entrainment. E. W. SAMSON*; R. W. NICKL; M. M. ANKARALI; N. J. COWAN. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 S20 **803.06** Pantomime hand-to-mouth movements suggest different sensory control systems mediate arm transport versus mouth shaping during feeding. J. M. KARL*; D. J. QUINLAN; K. M. STUBBS; I. Q. WHISHAW; J. C. CULHAM. *Western Univ., Univ. of Lethbridge.*

3:00 T1 **803.07** ● Arm geometric properties contribute to the non-uniform arm position sense across a horizontal workspace for both sighted and visually-impaired subjects. K. OH*; B. I. PRILUTSKY. *Georgia Inst. of Technol., Georgia Inst. of Technol.*

4:00 T2 **803.08** Neuromuscular control in Clarinetists: Does thumb-rest position matter? S. A. WINGES*; K. E. YOUNG. *Louisiana State Univ., Louisiana State Univ.*

1:00 T3 **803.09** Interlimb Asymmetries are attenuated in unsupported vs supported reaching movements. R. L. SAINBURG*; J. E. SCHAFFER. *Penn State Univ., Penn State Col. of Med., Penn State Univ.*

2:00 T4 **803.10** Modifying multi-muscle coordination by targeted assistance of hand muscles. S. LEE*; B. VERMILLION; D. KAMPER. *Catholic Univ. of America, Biomed. Eng., Illinois Inst. of Technol.*

3:00 T5 **803.11** Distinct influence of hand posture on cortical activity during human grasping. M. A. PEREZ*; J. C. ROTHWELL. *Univ. of Miami, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 T6 **803.12** Cortical contribution to different types of grip in intact humans. T. TAZOE*; M. A. PEREZ. *Univ. of Miami.*

1:00 T7 **803.13** ▲ Grip force responses after sudden and unpredictable increase in load force: The effect of load force direction. K. C. LIMA*; R. V. PEREIRA; P. B. DE FREITAS. *Univ. Cruzeiro Do Sul.*

2:00 T8 **803.14** ● Assessment of force coordination and neuromuscular quickness through an object manipulation task. M. UYGUR*; K. HABERLAND. *Rowan Univ., Rowan Univ.*

3:00 T9 **803.15** Dexterous manipulation: Learning interference induces increase in effort. Q. FU*; M. SANTELLO. *Arizona State Univ.*

4:00 T10 **803.16** Monkeys can use continuous haptic feedback to stabilize an unstable cursor. K. M. QUICK*; J. MISCHEL; P. LOUGHLIN; A. BATISTA. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition.*

1:00 T11 **803.17** ● Anthropometry of passive wrist stiffness. S. K. CHARLES*; S. D. GRIMSHAW; D. B. SEEGMILLER; A. L. PANDO; N. HOGAN; H. LEE. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ., MIT, Rehabil. Inst. of Technol., Arizona State Univ.*

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* Indicates abstract's submitting author

2:00 T12 **803.18** Sensorimotor memory biases weight perception in a grip-lift task. V. VAN POLANEN*; M. DAVARE. *KU Leuven, Univ. Col. London.*

3:00 T13 **803.19** ▲ Maturation of grip force control in older children and adolescents. W. SCHERMER; M. CAMINITA; S. H. BROWN*. *Univ. of Michigan.*

4:00 T14 **803.20** Finger tapping ability in the dominant and non-dominant hands. T. AOKI*. *Prefectural Uni of Kumamoto.*

1:00 T15 **803.21** Effects of goal-directed mirror visual feedback on cortical excitability in the untrained hemisphere. T. MANUWEERA*; M. YAROSSI; S. ADAMOVICH; E. TUNIK. *Rutgers Biomed. Hlth. Sci., New Jersey Inst. of Technol., Rutgers Biomed. Hlth. Sci. - Sch. of Hlth. Related Professions.*

2:00 T16 **803.22** Involuntary finger-thumb coupling during a pinching task. D. G. KAMPER*; C. L. JONES. *Illinois Inst. Technol., Illinois Inst. Technol.*

3:00 T17 **803.23** Synergy in a space of control variables during a finger force production task. S. AMBIKE*; D. MATTOS; V. ZATSIORSKY; M. L. LATASH. *The Pennsylvania State Univ., Univ. of Delaware.*

POSTER

804. Finger and Grasp Mechanisms

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 T18 **804.01** Proximal and distal coding of sensorimotor parameters in the control of arm movements. K. REGNERY; N. NATRAJ; K. OH; B. PRILUTSKY; L. WHEATON; J. C. MIZELLE*. *Georgia Inst. of Technol., Georgia Tech.*

2:00 T19 **804.02** Cortical EEG oscillations can predict the variability of MEP amplitudes. K. OGATA*; H. NAKAZONO; S. TOBIMATSU. *Grad Sch. Med. Sci, Kyushu Univ., Kyushu university.*

3:00 T20 **804.03** Movement intermittency: Visuomotor feedback loop or intrinsic rhythmicity? D. SUSILARADEYA*; F. GÁLAN; K. ALTER; A. JACKSON. *Newcastle Univ.*

4:00 U1 **804.04** Posterior parietal cortex informs self-action perception by integrating visual feedback about one's actions with internal movement-related cues from proprioception and forward models. M. J. ROTH; K. LAUER; M. SYNOFZIK; M. HIMMELBACH; A. LINDNER*. *Hertie Inst., IMPRS for Cognitive and Systems Neurosci.*

1:00 U2 **804.05** Modulation of 5-30 Hz EMG-EMG coherence during grip force tasks with varying precision constraints. R. TIBOLD*; S. FARMER; M. DAVARE. *Univ. Col. London Inst. of Neurol., KU Leuven.*

2:00 U3 **804.06** ● ▲ Evidence for a transition in usage of cortical and subcortical structures during the learning process of human hand movement. N. KIRKPATRICK*; J. VALENTIN; E. J. PERREAULT; C. F. HONEYCUTT. *Arizona State Univ., Rehabil. Inst. of Chicago.*

3:00 U4 **804.07** The role of movement in metacognition: The relationship between movement speed and confidence. E. PALSER*; A. FOTOPOULOU; J. KILNER. *Inst. of Neurol., UCL.*

4:00 U5 **804.08** Interactions between different regions of ventral premotor cortex and contralateral M1. K. L. BUNDAY*; S. BETTI; J. M. KILNER; R. N. LEMON; G. A. ORBAN; M. DAVARE. *Univ. Col. London, Univ. degli Studi di Parma, Univ. degli Studi di Padova, KU Leuven.*

1:00 U6 **804.09** Quantifying the perception of self-movement: Differences between the dominant and nondominant limbs. L. C. BRAY*; F. WOOD ORTIZ; E. MCKENNA; W. M. JOINER. *George Mason Univ., George Mason Univ.*

2:00 U7 **804.10** Tactile inputs distort perception of relative fingertip position. D. SHIBATA*; F. CHINELLO; D. PRATTICHIZZO; M. SANTELLO. *Univ. of New Mexico, Univ. of Siena, Inst. Italiano di Tecnologia, Arizona State Univ.*

3:00 U8 **804.11** Correlation between central EEG rhythms and fMRI-BOLD responses in the sensorimotor area during a unilateral motor task. K. UEHARA*; H. HOSHINO; Y. MIZUNO; K. KITA; L. M. LI; Y. OGATA; T. HANAKAWA. *Natl. Ctr. of Neurol. and Psychiatry, Chiba Univ., Imperial Col. London.*

4:00 U9 **804.12** Spatial variability in cortex-muscle coherence investigated with magnetoencephalography and high-density surface electromyography. H. PIITULAINEN*; A. BOTTER; M. BOURGUIGNON; V. JOUSMÄKI; R. HARI. *Aalto Univ., Politecnico di Torino.*

POSTER

805. Reach Control: Selection and Strategy

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 U10 **805.01** Spontaneous rebound in implicit sensorimotor learning can occur in the absence of sensory prediction errors. S. D. MCDOUGLE*; K. BOND; J. TAYLOR. *Princeton.*

2:00 U11 **805.02** Validation of reaching movements made in a 2D virtual environment in typically developing children. M. ROBERT*; K. SAMBASIVAN; M. F. LEVIN. *McGill Univ., Ctr. for Interdisciplinary Res. in Rehabil. of Greater Montreal, McGill Univ.*

3:00 U12 **805.03** Movement strategies used in full body reaching tasks to targets in real-world versus virtual environments. J. COST; R. PROCTOR; S. T. LEITKAM; M. E. APPLEGATE; C. R. FRANCE; J. S. THOMAS*. *Ohio Univ.*

4:00 U13 **805.04** Effects of avatar presentation and display environment on game perception and lumbar motion in virtual dodgeball. M. E. APPLEGATE*; S. T. LEITKAM; J. COST; R. PROCTOR; C. R. FRANCE; J. S. THOMAS. *Ohio Univ.*

1:00 U14 **805.05** ▲ Performance asymmetries for left and right arms in 3D vary by visual condition and spatial location. T. A. AMEDEE; V. G. DONZE; A. PRZYBYLA; J. M. HONDZINSKI*. *Louisiana State Univ., Pennsylvania State Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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2:00 U15 **805.06** Hybrid control of force and position in a sliding task. D. DE SANTIS*; C. PASQUINELLI; P. MORASSO; V. SQUERI; M. CASADIO. *Inst. Italiano Di Tecnologia, Univerista` di Genova.*

3:00 U16 **805.07** Toward identification of neural-pattern transition of limb selection using ongoing electroencephalogram. K. AMEMIYA*; J. IZAWA; J. USHIBA; R. OSU. *Dept. Biosci. and Informatics, Keio Univ., Japan Society for Promotion of Sci., Fac. of Engineering, Information and Systems, Univ. of Tsukuba, Advanced Telecommunications Res. Inst. Intl.*

4:00 U17 **805.08** Manipulation of movement preparation time reveals a target-selection component to use dependent learning. T. J. CARROLL*; E. POH; H. ALAVI; S. RIEK; W. MARINOVIC. *The Univ. of Queensland.*

1:00 U18 **805.09** Virtual reality display influences dynamic movement patterns in gaming-based research. S. T. LEITKAM*; R. PROCTOR; J. COST; M. E. APPLEGATE; C. R. FRANCE; J. S. THOMAS. *Ohio Univ.*

2:00 U19 **805.10** Movement kinematics while choking under pressure. P. A. BUTCHER*; T. G. OSBORNE; T. G. LEE; J. A. TAYLOR. *Princeton Univ., Univ. of California, Santa Barbara.*

3:00 U20 **805.11** Explicit aiming strategies are fundamental to learning in a visuomotor adaptation task. K. BOND*; J. TAYLOR. *Princeton Univ.*

4:00 U21 **805.12** ● Improvements in visual search contribute to visuomotor learning. C. PERRY*. *Univ. of South Carolina.*

1:00 U22 **805.13** Moving Slowly is Hard for Humans. N. HOGAN*; H. MARINO; S. K. CHARLES; D. STERNAD. *MIT, Univ. of Pisa, Brigham Young Univ., Northeastern Univ.*

2:00 U23 **805.14** The subjective value of effort explains preferred movement speed. E. SUMMERSIDE*; A. AHMED. *Univ. of Colorado.*

3:00 U24 **805.15** Effort, reward, and vigor in decision-making and motor control. R. SHADMEHR*; H. J. HUANG; A. A. AHMED. *Johns Hopkins Univ., Univ. of Michigan, Univ. of Colorado.*

4:00 U25 **805.16** Predictability in the control of complex object dynamics. D. STERNAD*; I. ZUZARTE; N. HOGAN. *Northeastern Univ., Northeastern Univ., MIT.*

1:00 U26 **805.17** ▲ Exploring a more functional task for studying upper extremity motor control. C. R. HENGGE*; J. R. PIERCE; K. E. TEW; S. Y. SCHAEFER. *Utah State Univ.*

2:00 U27 **805.18** Age differences in muscle activation patterns supporting arm stabilization. L. A. MROTEK*; M. C. BENGTSON; T. STOECKMANN; C. GHEZ; R. A. SCHEIDT. *UW-Oshkosh, Marquette Univ., Columbia Univ., Northwestern Univ.*

3:00 U28 **805.19** Effort discounting in reaching favors short-duration over short-distance movements. P. D. MOREL*; P. ULBRICH; A. GAIL. *German Primate Ctr., Univ. of Göttingen, Bernstein Ctr. for Computat. Neurosci.*

4:00 U29 **805.20** ● ▲ Humans learn to compensate for altered mechanical efficiency of one limb, but fail to optimise force sharing between limbs. M. ROUTSON*; K. TUCKER; F. HUG; T. J. CARROLL. *The Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland.*

1:00 U30 **805.21** A surprising lack a chunk-based learning in an implicit serial reaction time task. M. A. SMITH*; A. E. BRENNAN; D. PRESS. *Harvard Univ., Beth Israel Deaconess Med. Ctr.*

2:00 U31 **805.22** Reward expectation increases reach vigor. A. A. AHMED*; A. NIKOOYAN; E. SUMMERSIDE; R. SHADMEHR. *Univ. Colorado, Johns Hopkins Univ.*

3:00 U32 **805.23** Measuring proprioception and spatial-motor coordination in children with somatodyspraxia. V. W. CHU*; K. KRISHNAN. *Univ. of Illinois at Chicago.*

4:00 U33 **805.24** Cortical mechanisms underlying the integration of transport and grip components for grasping. A. LE*; S. MONACO; Y. CHEN; J. D. CRAWFORD. *Univ. of Toronto Scarborough, York Univ., Univ. of Trento.*

1:00 U34 **805.25** The involvement of the wrist in hand preshaping during grasping. L. F. SCHETTINO*; S. TROUT; M. BARRETT; N. STEINBERG. *Lafayette Col.*

POSTER

806. Motor Learning: Behavior

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 U35 **806.01** The contributions of perception and prediction to changes in hand localization after visuomotor adaptation. B. M. 'T HART*; H. CLAYTON; D. Y. P. HENRIQUES. *York Univ., York Univ.*

2:00 U36 **806.02** Generalization of reinforcement based motor skill learning. N. F. BERNARDI*; M. CLARKE; D. J. OSTRY. *McGill Univ., McGill Univ., Haskins Labs.*

3:00 U37 **806.03** Is implicit learning overestimated during an explicit aiming task? K. DAY*; R. ROEMMICH; A. BASTIAN. *Johns Hopkins Univ., Kennedy Krieger Inst.*

4:00 U38 **806.04** Quantifying performance and neuromuscular admittance during manual tracking of a visual target. T. SOLIS-ESCALANTE*; R. VAN DER VLIET; Y. YANG; A. C. SCHOUTEN; F. C. T. VAN DER HELM. *Delft Univ. of Technol., Erasmus MC.*

1:00 U39 **806.05** Learning vs. minding: How subjective costs mask motor learning. C. M. HEALY*; A. A. AHMED; M. BERNIKER. *Univ. of Colorado, Univ. of Illinois.*

2:00 U40 **806.06** Identification of a motor memory that is fully retained 24h after training. A. E. BRENNAN*; M. A. SMITH. *Harvard Univ.*

3:00 U41 **806.07** Can flexibility of reaching movements be increased through training? R. M. BONGERS; I. TUITERT; M. M. SCHOEMAKER; L. J. MOUTON*. *Univ. of Groningen, Univ. Med. Ctr. Groningen, Aix-Marseille Université, Inst. des Sci. du Mouvement.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 U42 **806.08** Visuomotor adaptation generalizes partially in head- or eye-centred coordinates. E. POH*; G. WALLIS; A. DE RUGY; S. RIEK; T. J. CARROLL. *The Univ. of Queensland, Univ. de Bordeaux.*

1:00 V1 **806.09** Spatial and attention abilities are more predictive of motor learning in younger adults compared to older adults. T. J. SHELAT; M. R. BROWN; V. MYRTHIL; J. LANGAN*. *Univ. at Buffalo, Univ. at Buffalo, Univ. At Buffalo.*

2:00 V2 **806.10** Adaptation to neural noise manipulation in voluntary movement control. C. J. HASSON*; O. GELINA; G. WOO. *Northeastern Univ.*

3:00 V3 **806.11** Individual behavioral marker for identification of explicit awareness during sequential motor learning. R. LAWSON*; L. WHEATON. *Georgia Inst. of Technol.*

4:00 V4 **806.12** Robust use-dependent learning in reaching movements without error or reward feedback. A. S. BAINS; N. SCHWEIGHOFER*. *USC, Univ. So California.*

1:00 V5 **806.13** Evidence for a rapidly evolving internal estimate of environmental variability in grip force control. A. M. HADJIOSIF*; M. A. SMITH. *Harvard Univ.*

2:00 V6 **806.14** Evolution of limb kinematics during fine motor skill acquisition in rats. T. JOHN*; D. ELLENS; M. GAIDICA; S. PENG; D. LEVENTHAL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

3:00 V7 **806.15** Learning a visuomotor adaptation task without adaptation when the arm is visible. A. L. WONG*; J. A. TAYLOR; J. W. KRAKAUER. *Johns Hopkins Univ. Sch. Med., Princeton Univ., Johns Hopkins Univ. Sch. Med.*

4:00 V8 **806.16** Decision making during motor learning: Investment in learning and reward optimization. J. B. MOSKOWITZ*; D. J. GALE; D. M. WOLPERT; J. P. GALLIVAN; J. R. FLANAGAN. *Queen's Univ., Univ. of Cambridge.*

1:00 V9 **806.17** Artificial vestibular cues enable dual motor adaptation. L. P. SELEN*; J. L. RUDOLPH; W. P. MEDENDORP. *Donders Inst. for Brain, Cognition and Behavio.*

2:00 V10 **806.18** Training of the non-dominant arm leads to substantial and durable changes in performance. A. DUNN*; C. CHOPICK; R. SAINBURG. *Pennsylvania State Univ., Pennsylvania State Univ. Col. of Med.*

3:00 V11 **806.19** The role of attention in visuomotor and force field adaptation. E. REUTER*; T. J. CARROLL; J. BEDNARK; R. CUNNINGTON. *Univ. of Queensland, Univ. of Queensland, Univ. of Queensland.*

4:00 V12 **806.20** ● ▲ Time course of reach adaptation and proprioceptive recalibration during visuomotor learning. J. E. RUTTLE*; E. CRESSMAN; D. HENRIQUES. *York Univ., Univ. of Ottawa, York Univ.*

1:00 V13 **806.21** Persistence of a neural representation following repeated adaptations to and repeated deadaptations from a novel visuomotor rotation. S. BAO*; J. WANG. *Univ. of Wisconsin Milwaukee.*

2:00 V14 **806.22** Exploring the value of practice in motor adaptation. S. K. COLTMAN*; L. E. BROWN. *Trent Univ. Dept. of Psychology, Trent Univ.*

3:00 V15 **806.23** Visuomotor adaptation and deadaptation with one arm result in savings during subsequent visuomotor adaptation with the other arm. J. WANG*; A. D'AMATO. *Univ. of Wisconsin.*

4:00 V16 **806.24** Individual ability of motor imagery can determine the suitable attentional strategy under motor learning. T. SAKURADA*; M. HIRAI; E. WATANABE. *Jichi Med. Univ.*

1:00 V17 **806.25** Development of collaborative strategies in physical human-human interaction. V. THEKKEDATH CHACKOCHAN; I. TAMAGNONE; V. SANGUINETI*. *Univ. of Genoa.*

2:00 V18 **806.26** Investigating reward-based regulation of task-relevant motor variability in rats. Y. R. MIYAMOTO*; A. DHAWALE; M. A. SMITH; B. P. ÖLVECZKY. *Harvard Univ.*

3:00 V19 **806.27** The training duration influences the magnitude of motor adaptation retention, but not the magnitude of savings following a 24-hour break. K. P. NGUYEN*; L. C. BRAY; L. ALHUSSEIN; E. A. HOSSEINI; W. M. JOINER. *NIH, George Mason Univ., MIT.*

4:00 V20 **806.28** Savings requires prior history of error, not repetition of successful movements. L. LEOW*; A. DE RUGY; S. RIEK; W. MARINOVIC; T. J. CARROLL. *Sch. of Human Movement and Nutr. Sci., Univ. de Bordeaux, The Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland.*

1:00 V21 **806.29** A rapid-response-selection model of motor skill: Learning to produce low-latency responses to arbitrary visual stimuli. R. M. HARDWICK*; J. W. KRAKAUER; A. M. HAITH. *Johns Hopkins Univ.*

2:00 V22 **806.30** Interference between motor memories developed through learning with different arms. N. KUMAR*; P. K. MUTHA. *Indian Inst. of Technol. Gandhinagar.*

POSTER

807. Brain Machine Interface: Non-Invasive Approaches

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 V23 **807.01** Predicting BCI accuracy with alpha band analysis. A. W. AREF*; J. E. HUGGINS. *The Univ. of Michigan, The Univ. of Michigan.*

2:00 V24 **807.02** Silent speech recognition system using single-trial EEGs: A silent season BCI. T. ITOH*; H. YAMAGUCHI; A. YAMAGUCHI; T. YAMAZAKI; S. FUKUZUMI; T. YAMANOI. *None, NEC, HITACHI Systems, Kyushu Inst. of Tecnology, Hokkai Gakuen Univ.*

3:00 V25 **807.03** Control of a cursor in two dimensions with one single sEMG signal: Learning a novel motor skill. I. SKAVHAUG*; K. LYONS; A. NEMCHUK; S. MUROFF; S. JOSHI. *Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis.*

4:00 V26 **807.04** Control of a cursor in two dimensions with one single sEMG signal: Effects of muscle fatigue. I. SKAVHAUG; A. G. BARSZAP; S. S. JOSHI*. *Univ. of California, Davis.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 V27 **807.05** Neurophysiological correlates of mind-wandering, towards a predictive BCI. A. MARTEL*; P. DOCKREE; I. ROBERSTON. *Trinity Col. Dublin, Trinity Col. Dublin, Trinity Col. Dublin.*

2:00 V28 **807.06** Cortical incorporation of virtual legs in Spinal Cord Injured patients. R. MOIOLI; S. SHOKUR; S. GALLO; F. BRASIL; E. MORYA*; M. NICOLELIS. *Inst. Santos Dumont, AASDAP, EPFL, Duke Univ., Duke Univ.*

3:00 V29 **807.07** Inducing paraplegic patients to perceive distinct ground textures using tactile feedback generated by virtual feet. S. SHOKUR*; S. GALLO; R. MOIOLI; M. BOURI; E. MORYA; H. BLEULER; M. LAPORTA NICOLELIS. *Associacao Alberto Santos Dumont para Apoio à Pesq, Ecole Polytechnique Federal de Lausanne, IIN-ELS - Intl. Inst. For Neuroscienc, Duke Univ., Duke Ctr. for Neuroengineering.*

4:00 V30 **807.08** Twelve month of physical rehabilitation protocol integrating brain controlled locomotor training and tactile feedback for patients with chronic spinal cord injury. A. C. DONATI*; S. SHOKUR; E. MORYA; C. GITTI; P. AUGUSTO; G. DIAS; D. CAMPOS; D. YOSHIHARA; M. LAPORTA NICOLELIS. *AASDAP, Associacao de Assistencia a Crianca Deficiente (AACD), Inst. Santos Dumont, Duke Univ., Duke Ctr. for Neuroengineering.*

1:00 V31 **807.09** Walk using single leg control at BMI-driven exoskeleton. F. L. BRASIL*; S. SHOKUR; M. ALBANO DE ARATANHA; R. CIPRIANO MOIOLI; A. CORTELLI DONATI; E. MORYA; M. LAPORTA NICOLELIS. *Inst. Santos Dumont, Alberto Santos Dumont Assn. for Res. Support, Edmond and Lily Safra Intl. Inst. of Neurosci, Professor of Neurobiology, Biomed. Engineering, Psychology and Neurosci., Co-Director, Duke Ctr. for Neuroengineering.*

2:00 V32 **807.10** Closed loop brain controlled avatar training for locomotion with spinal cord injured patients. M. A. ARATANHA*; S. SHOKUR; F. LIMA BRASIL; A. CORTELLI DONATI; S. GALLO; E. MORYA; M. LAPORTA NICOLELIS. *Inst. Santos Dumont, Associacao Alberto Santos Dumont para Apoio à Pesq, Ecole Polytechnique Federal de Lausanne, Edmond and Lily Safra Intl. Inst. of Neurosci., Duke Univ., Duke Univ.*

3:00 V33 **807.11** A longitudinal evaluation of SSVEP-BMI in patients with ALS. K. TAKANO; T. KOMATSU; M. NAGAO; K. KONDO; K. KANSAKU*. *Sys Neurosci Sect, Dept of Rehab For Brain Funct, Res. Inst. Natl. Rehab Cent, Tokyo Metropolitan Neurolog. Hosp., Yoka Hosp., Brain Sci. Inspired Life Support Res. Center, The Univ. of Electro-Communications.*

4:00 V34 **807.12** Performance comparison of color and grey-white paradigms in undergraduates and older adults using the brain-computer interface. S. SPRAGUE*; D. B. RYAN; M. R. KELLICUT-JONES; T. L. STREET; E. W. SELLERS. *East Tennessee State Univ.*

1:00 V35 **807.13** Utilizing visual attention and inclination to facilitate brain-computer interface design in an amyotrophic lateral sclerosis and college age sample. D. RYAN*; M. L. MORTON; E. W. SELLERS. *East Tennessee State Univ., East Tennessee State Univ.*

2:00 V36 **807.14** ▲ P300 brain-computer interface:comparing faces and size-matched non-face stimuli. M. R. KELLICUT*; C. M. COFFMAN; D. B. RYAN; E. W. SELLERS. *East Tennessee State Univ., East Tennessee State Univ.*

3:00 V37 **807.15** How individual is low-voltage brain stimulation, rebound or entrainment? The influence of 10 Hz alternating current stimulation on the individual alpha rhythm. S. SCHMIDT*; L. HABERBOSCH; A. JOOß; A. KÖHN; M. SCHOLZ; K. OBERMAYER; S. A. BRANDT. *Vision & Motor Res. Group, Charité Universitätsmedizin - Berlin, Neural Information Processing Group, Univ. of Technol.*

4:00 V38 **807.16** The stationary brain? -adaptive, feedback controlled electric stimulation, a case study-. M. SCHOLZ*; S. SCHMIDT; L. HABERBOSCH; A. JOOß; S. A. BRANDT; K. OBERMAYER. *Univ. of Technol. Berlin, Charité-Universitätsmedizin.*

1:00 V39 **807.17** ● Quantification of target population for communication brain computer interfaces in the Netherlands. E. G. M. PELS*; E. J. AARNOUTSE; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht.*

2:00 V40 **807.18** EEG decoding of Arm reaching and hand movements. F. SHIMAN*; N. IRASTORZA-LANDA; A. SARASOLA; M. SPÜLER; N. BIRBAUMER; A. RAMOS-MURGUIALDAY. *Univ. of Tübingen, Inst. of Med. Psychology and Behavioral Neurobiology, Univ. of Tübingen, IMPRS for Cognitive and Systems Neurosci., Computer Sci. Department, Wilhelm-Schickard- Institute, Univ. of Tübingen, Ospedale San Camillo, Inst. di Ricovero e Cura a Carattere Scientifico, TECNALIA.*

3:00 V41 **807.19** Effective connectivity analysis of brain regions responsive to non-invasive vagus nerve stimulation in humans. E. FRANGOS*; B. R. KOMISARUK. *Rutgers, The State Univ. of New Jersey.*

4:00 V42 **807.20** Neurofeedback training improves decoding accuracy in MEG/SSVEF. H. ORA*; K. KANSAKU. *Res. Inst. of Natl. Rehabil. Ctr., The Univ. of Electro-Communications.*

1:00 V43 **807.21** Neural development of social cognition in the first two years of life: Early findings from a cross-sectional study. J. G. CRUZ-GARZA*; Z. R. HERNANDEZ; M. MEGJHANI; B. ABIBULLAEV; T. W. TSE; E. CADUCOY; J. L. CONTRERAS-VIDAL. *Univ. of Houston, Univ. of Houston, Univ. of Houston, Univ. of Houston.*

2:00 V44 **807.22** Deciphering brain oscillations during motor rehabilitation tasks. A. RAMOS MURGUIALDAY*; N. BIRBAUMER. *Univ. of Tubingen, Univ. of Tubingen.*

3:00 V45 **807.23** Identification of the brain activity driving the lower muscles used during locomotion. S. TAKEDA*; S. KASUGA; J. USHIBA. *Grad. Sch. of Sci. and Technol., Keio Univ., Dept. of Rehabil. Medicine, Keio Univ. Sch. of Med., Dept. of Biosci. and Informatics, Keio Univ., Fac. of Sci. and Technol.*

4:00 V46 **807.24** Amyotrophic lateral sclerosis and cognitive impairment alter optimal features for brain-computer interfaces. A. GERONIMO*; Z. SIMMONS; S. J. SCHIFF. *Penn State Univ. Col. of Med., Penn State Univ., Penn State Univ.*

1:00 V47 **807.25** Combined transcranial alternating current stimulation (tACS) and MEG: TACS-induced reduction in the auditory steady-state response. P. HYVÄRINEN*; S. D. CHOI; G. DEMARCHI; A. A. AARNISALO; N. WEISZ. *Univ. of Helsinki and Helsinki Univ. Hos, Univ. of Trento.*

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2:00 V48 **807.26** Development of an unsupervised and multiclass steady-state visual evoked potential based - BCI. K. IKEMOTO*; Y. ONO. *Meiji Univ.*

3:00 W1 **807.27** ▲ Chronic musculoskeletal pain and its effects on brain activation. B. D. EBBESEN; J. RASMUSSEN; S. GERVASIO; T. GRAVEN-NIELSEN; N. MRACHACZ-KERSTING*. *Aalborg Univ.*

POSTER

808. Neural Control of Respiratory Rhythm

Theme D: Sensory and Motor Systems

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 W2 **808.01** A novel model of respiratory rhythm generation: A mechanism by interaction of intrinsically oscillating astrocytes and neurons. Y. OKADA*; Y. OKU; T. SASAKI; C. VIVAR; S. YOKOTA; K. TAKEDA; I. FUKUSHI; I. YAZAWA; H. SOMEYA; Y. TAMURA. *Murayama Med. Ctr., Hyogo Col. of Med., The Univ. of Tokyo, Univ. of Malaga, Shimane Univ., Fujita Hlth. Univ., Toyo Univ., Showa Univ., Tokai University,, The Inst. of Statistical Mathematics.*

2:00 W3 **808.02** Neuromodulation of burst and burstlet rhythm generating mechanisms in preBötzinger complex (preBötC). X. SUN*; K. KAM; M. SHAO; J. L. FELDMAN. *Univ. California Los Angeles, Rosalind Franklin Univ.*

3:00 W4 **808.03** ● Regulation of breathing by carbon dioxide requires expression of the proton-activated receptor GPR4 in chemosensory neurons of the retrotrapezoid nucleus. N. N. KUMAR*; A. VELIC; J. SOLIZ; Y. SHI; K. LI; S. WANG; J. L. WEAVER; J. SEN; S. B. G. ABBOTT; R. M. LAZARENKO; M. LUDWIG; N. MOHEBBI; C. BETTONI; M. GASSMAN; T. SUPLY; K. SEUWEN; P. G. GUYENET; C. A. WAGNER; D. A. BAYLISS. *Univ. of Virginia, Univ. of Zurich, Univ. of Zurich, Ctr. de Recherche du CHU de Québec, Univ. of New South Wales, Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr., Novartis Inst. for Biomed. Research.*

4:00 W5 **808.04** Mixed-mode oscillations and development of population bursts in the pre-Bötzinger complex. B. BACAK*; T. KIM; J. E. RUBIN; J. C. SMITH; I. A. RYBAK. *Drexel Univ. Col. of Med., Univ. of Pittsburgh, Natl. Inst. of Hlth.*

1:00 W6 **808.05** Neuronal TRPC3/7 channels play a critical role in breathing rhythm generation *in vivo.* A. K. TRYBA*. *The Univ. of Chicago.*

2:00 W7 **808.06** Combining constellation pharmacology with molecular genetics to classify neuronal cell types within the ventral respiratory column of mouse brainstem. S. RAGHURAMAN*; A. GARCIA; R. TEICHERT; J. RAMIREZ; B. OLIVERA. *Univ. of Utah, Seattle Children's Res. Inst.*

3:00 W8 **808.07** Optogenetic studies of population-specific roles of pre-Bötzinger complex glutamatergic neurons in respiratory rhythm generation. H. KOIZUMI*; M. TARIQ; B. MOSHER; R. ZHANG; N. KOSHIYA; J. C. SMITH. *Cell. & Systems Neurobio. Sec, NINDS, NIH.*

4:00 W9 **808.08** Functional mapping of genetically-defined neuron populations in central control of respiratory physiology. J. SUN*; R. RAY. *Baylor Col. of Med.*

1:00 W10 **808.09** Medullary raphé neuron responses during central chemoreceptor perturbations and functional connectivity within the respiratory brain stem. K. E. ICEMAN; S. C. NUDING; L. S. SEGERS; B. G. LINDSEY*; K. F. MORRIS. *Univ. of South Florida Morsani Col. of Med.*

2:00 W11 **808.10** Optogenetic activation of leptin-receptor expressing NTS neurons increases respiratory motor output in mice. Z. CHANG; A. S. KOWAL; G. SEKERKOVA; K. E. MCKENNA; M. MARTINA; D. R. MCCRIMMON*. *Northwestern Univ. Feinberg Schl Med.*

3:00 W12 **808.11** Perinatal fluoxetine exposure affects the serotonergic drive of the respiratory rhythm *in vitro.* K. A. BRAVO*; J. EUGENÍN; I. LLONA. *Univ. De Santiago De Chile, Univ. de Santiago de Chile.*

4:00 W13 **808.12** Pacemaker neurons in the respiratory network of embryonic mouse. M. THOBY BRISSON*; M. CHEVALIER; N. TOPORIKOVA. *Univ. De Bordeaux, CNRS UMR 5287, Washington and Lee Univ.*

POSTER

809. Neuroinflammation: General

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 W14 **809.01** ● Warfarin increases glial inflammation in healthy adult mice. D. L. FEINSTEIN*; A. SITU; N. MARANGONI. *Univ. of Illinois Chicago.*

2:00 W15 **809.02** Temporal expression pattern of microglia/macrophage polarization after intracerebral hemorrhage. S. SUKUMARI RAMESH*; F. C. BONSACK; C. H. ALLEYNE. *Georgia Regents Univ., Georgia Regents Univ.*

3:00 W16 **809.03** PGJ2-induced Inflammation disrupts AMPA-receptor trafficking: Implications for synaptic plasticity and memory processing. J. A. AVILA*; T. JEAN-LOUIS; M. KIPROWSKA; F. CHEUNG; P. ROCKWELL; P. A. SERRANO; M. FIGUEIREDO-PEREIRA. *Hunter Col., The Grad. Center, CUNY, Hunter Col., The Grad. Center, CUNY.*

4:00 W17 **809.04** Contribution of lysophosphatidic acid receptor 2 and 3 (LPA2 and LPA3) to secondary damage following spinal cord injury in mice. E. S. NOGUEIRA*; I. FRANCOS-QUIJORNA; M. COLL-MIRÓ; J. SALLES; O. PEYRUCHAUD; J. CHUN; R. LÓPEZ-VALES. *The Res. Inst. of the McGill Univ. He, Univ. Autonoma de Barcelona, Hôpital des Enfants, INSERM, The Scripps Res. Institute, Dorris Neurosci. Ctr.*

1:00 W18 **809.05** Early life stress activates the innate immune system in the developing hippocampus. J. DELPECH; L. WEI; J. HAO; R. K. LACHER; A. KAFFMAN*. *Yale Univ.*

2:00 W19 **809.06** P75NTR mediates inflammatory responses by modulating differentiation of myeloid cells after TBI in mice. S. LEE*; N. SINGHAL; A. LIN; J. SACRAMENTO; B. CANOLLE; M. CASTEL; S. DELBARY-GOSSART; B. FERZAZ; F. BONO; J. BRESNAHAN; M. BEATTIE. *UCSF, Sanofi R&D, Evotec.*

Wed. PM

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3:00 W20 **809.07** Chronic corticosterone primes the brain response to select neuroinflammatory agents by overexpression of Toll-like receptor 2 and S100A8: A potential role for microglia. L. T. MICHALOVICZ*; A. R. LOCKER; K. A. KELLY; D. B. MILLER; J. P. O'CALLAGHAN. *CDC-NIOSH.*

4:00 W21 **809.08** Culturing adult mouse microglia. A. D. GREENHALGH*; B. W. MCCOLL; S. DAVID. *McGill Univ., The Roslin Inst. and Royal (Dick), Univ. of Edinburgh, Res. Inst. of the McGill Univ. Hlth. Ctr.*

1:00 W22 **809.09** Tonicity-responsive enhancer binding protein (TonEBP) regulates microglia activation and neuroinflammation. D. KIM*; H. KIM; B. LEE. *Univ. Ulsan.*

2:00 W23 **809.10** Distinct neuroimmune responses to different TLR agonists in brain slice cultures. J. Y. ZOU*; F. T. CREWS. *Univ. North Carolina, Chapel Hill.*

3:00 W24 **809.11** Cobalt protoporphyrin up-regulates cyclooxygenase-2 expression through a heme oxygenase independent mechanism. H. LIN*; D. LU. *China Med. Univ.*

4:00 W25 **809.12** The effects of cadmium chloride on cell viability and inflammation in human astrocytes. S. PHUAGKHAOPONG*; D. OSPONDPANT; T. KASEMSUK; P. SATHAVORASMITH; P. VIVITHANAPORN. *Mahidol Univ.*

1:00 W26 **809.13** Status epilepticus induces lasting inflammatory changes in the hippocampus. N. H. VARVEL*; M. JUCKER; R. DINGLEDINE. *Emory Univ., Hertie Inst. for Clin. Brain Res., DZNE-German Ctr. for Neurodegenerative Dis.*

2:00 W27 **809.14** Chronic intermittent hypoxia associated oxidative stress and inflammation in male rats. B. SNYDER*; B. SHELL; J. CUNNINGHAM; R. L. CUNNINGHAM. *Univ. of North Texas Hlth. Sci. Ctr., UNT Hlth. Sci. Ctr.*

3:00 W28 **809.15** The danger-associated molecular pattern HMGB1 mediates the neuroinflammatory effects of methamphetamine. M. G. FRANK*; S. ADHIKARY; J. L. SOBESKY; M. D. WEBER; L. R. WATKINS; S. F. MAIER. *Univ. of Colorado, NIH, Univ. of Colorado.*

4:00 W29 **809.16** The effect of sevoflurane in systemic inflammation-induced cognitive dysfunction. W. LEUNG*; O. T. W. NG; S. S. Y. CHENG; C. H. L. HUNG; J. M. T. CHU; R. C. C. CHANG; G. T. C. WONG. *The Univ. of Hong Kong, The Univ. of Hong Kong.*

1:00 W30 **809.17** The effect of immunosuppressive and immunomodulatory drugs in a cellular model of brain inflammation: Involvement of nitric oxide-mediated neuronal death. C. NEVEU; E. ANDRIAMBELOSON; S. WAGNER*. *NEUROFIT.*

2:00 W31 **809.18** Administration of IL-4 regulates macrophage polarization and reduces secondary tissue damage after spinal cord injury. I. FRANCOS-QUIJORNA*; A. MARTÍNEZ-MURIANA; R. LÓPEZ-VALES. *Univ. Autonoma De Barcelona.*

3:00 W32 **809.19** The critical role of proteolytic relay through cathepsins B and E in the phenotypic change of microglia/macrophage. N. JUNJUN*; Z. WU; Y. HAYASHI; C. PETERS; K. YAMAMOTO; H. QING; H. NAKANISHI. *Kyushu Univ., Albert Ludwigs Universitt Freibrug, Proteolysis Res. Laboratory, Kyushu Univ., Beijing institute of technology.*

4:00 W33 **809.20** Lentiviral overexpression of interleukin-1β in the hippocampus induces neurogenesis-associated cognitive deficits in adult male rats. C. M. HUESTON*; C. S. Ó'LÉIME; D. A. KOZAREVA; J. F. CRYAN; Y. M. NOLAN. *Univ. Col. Cork.*

1:00 W34 **809.21** Intracellular acidification during the acute phase of neuroinflammation. A. A. TYRTYSHNAIA*; A. M. KLESCHEVNIKOV; M. KHOTIMCHENKO. *Far Eastern Federal Univ., Univ. of California San Diego.*

2:00 W35 **809.22** ● Microglia activation and monocyte recruitment in LPS induced neuroinflammation in mouse brain. Q. CHEN*; V. B. CHEUNG; C. HAN; S. MIYAKE; K. TAJINDA; H. ITO. *Neuroscience, Astellas Res. Inst. of Ameri, Master of Biotech. program, Northwestern Univ.*

3:00 W36 **809.23** ● Characterization of the translocator protein (TSPO) ligand [^{3}H]PBR28 binding in BV2 microglial cell line homogenates and in rodent brain and spinal cord autoradiography. H. XIAO; J. LI*; M. MORIN; L. J. MARTIN; M. P. JOHNSON. *Lilly Res. Labs., Eli Lilly & Co.*

4:00 W37 **809.24** The Protein Phosphatase 4 complex is required for proper axotomy-induced glial immune responses. L. WINFREE*; M. A. LOGAN. *Oregon Hlth. and Sci. Univ.*

1:00 W38 **809.25** ● Functional expression of the intermediate-conductance Ca^{2+}-activated K^+ channel, $K_{Ca}3.1$, in microglia isolated from human neocortical tissue. L. V. BLOMSTER; D. STRØBÆK; C. HOUGAARD; L. PINBORG; J. D. MIKKELSEN; P. CHRISTOPHERSEN*. *Saniona, Neurobio. Res. Unit.*

2:00 W39 **809.26** Modulation of Interleukin-10 immunosuppression by Tofacitinib (CP 690,550) in the mouse microglial cell line BV-2. K. C. BRADLEY*; J. RIVARD; A. JAMES; J. DAVID; L. BRANDENBURG; N. LEE; R. FUERSTENBERG; K. BRUMBAUGH; L. LEONG; G. WEGNER; K. REAGAN. *R&D Systems, Inc.*

3:00 W40 **809.27** Pesticide-induced mitochondrial dysfunction activates nlrp3 inflammasome signaling pathway in primary murine microglia. S. SARKAR; N. PANICKER; M. NEAL; H. JIN; A. CHARLI; V. ANANTHARAM*; A. KANTHASAMY; A. KANTHASAMY. *Iowa State Univ. of Sci. & Technol., Iowa State Univ.*

4:00 W41 **809.28** Sensory ganglia of injured adult mice have augmented populations of Iba1-immunopositive macrophages in the absence of functional p75 neurotrophin receptor. L. J. SMITHSON*; M. D. KAWAJA. *Washington Univ. In St. Louis, Queen's Univ., Queen's Univ.*

1:00 W42 **809.29** ● Primary microglia isolated from neonatal mice provide a model for the study of NLRP3 inflammasome and the effect of long-term hypoxia. R. A. WICKENS*; L. VER DONCK; S. J. BAILEY; A. B. MACKENZIE. *Univ. of Bath, Janssen Pharmaceutica.*

2:00 W43 **809.30** Central nervous system injury - newly observed abscopal effect of hind-limb radiation. C. FEIOCK*; M. YAGI; A. MAIDMAN; A. RENDAHL*; S. K. HUI; D. M. SEELIG. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

3:00 W44 **809.31** Role of N-acylethanolamine acid amidase (NAAA) in (neuro)inflammation. S. PONTIS*; A. RIBEIRO; F. PALESE; N. REALINI; A. ARMIROTTI; D. PIOMELLI. *Inst. Italiano Di Tecnologia.*

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* Indicates abstract's submitting author

POSTER

810. Neuroinflammation: Cellular mechanisms

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 W45 **810.01** Kinetic analysis of the translocator protein positron emission tomography ligand [18F]GE-180 in the healthy human brain. C. L. FEENEY*; G. SCOTT; J. RAFFEL; C. COELLO; A. GOLDSTONE; G. SEARLE; R. GUNN; D. SHARP. *Imperial Col. London, Imanova Ctr. for Imaging Sci.*

2:00 W46 **810.02** Brain endothelial cell tissue nonspecific alkaline phosphatase directs immunometabolic responses at the blood-brain barrier. C. M. BROWN*; S. JUN; W. WANG; C. THORE. *West Virginia Univ. Sch. of Med., West Virginia Univ. Sch. of Med., Wake Forest Sch. of Med.*

3:00 W47 **810.03** Pivotal role of choroid plexus in TLR2-induced leukocyte infiltration to central nervous system. A. MOTTAHEDIN*; J. EK; P. SVEDIN; A. LEVERIN; P. L. SMITH; S. NAIR; H. HAGBERG; C. MALLARD. *Univ. of Gothenburg, Sahlgrenska Academy, Ins, Univ. of Gothenburg, Sahlgrenska Acad., Univ. of Gothenburg, Sahlgrenska Acad., King's Col. London, King's Hlth. Partners, St Thomas' Hosp.*

4:00 W48 **810.04** Retinal microglia and Müller glia crosstalk during BMP7 mediated gliosis. S. DHARMARAJAN*; T. MCCRAY; N. SHEIBANI; T. L. BELECKY-ADAMS. *INDIANA UNIVERSITY-PURDUE UNIVERSITY INDIANAPOLIS, UNIVERSIY OF WISCONSIN.*

1:00 X1 **810.05** Phenotypic screening to identify small-molecule inhibitor of glia-mediated neuroinflammation: Target identification and biological effects of a novel compound. G. SONG*; Y. NAM; M. JO; J. KOO; S. PARK; K. SUK. *Kyungpook Natl. Univ., Kyungpook Natl. Univ., Seoul Natl. Univ.*

2:00 X2 **810.06** The immune receptors dectin-1 and TLR2 are required for conditioning lesion-induced axon protection following spinal cord injury. C. YOON*; K. S. CARBAJAL; K. T. BALDWIN; B. M. SEGAL; R. J. GIGER. *Univ. of Michigan Sch. of Med., Univ. of Michigan Sch. of Med.*

3:00 X3 **810.07** Mitigating microglial-mediated neuroinflammation: The sur1-trpm4 channel regulates calcium-sensitive induction of inos. D. B. KURLAND*; J. A. STOKUM; V. GERZANICH; J. M. SIMARD. *Univ. of Maryland Sch. of Med.*

4:00 X4 **810.08** High-fat-diet induced obesity increases nociceptive responses and spinal glial activation. Y. GUO; J. LEI; M. LIU; K. FU*. *Ctr. for TMD & Orofacial Pain, Peking Univ. Sch. & Hosp. of Stomatology.*

1:00 X5 **810.09** Microglial inflammasome formation in obese and diabetic models. S. PUGAZHENTHI*; A. TYAGI. *Denver VA Med. Ctr., Univ. of Colorado.*

2:00 X6 **810.10** Role of exosomes in microglia communication and inflammation. J. C. UDEOCHU*; S. VILLEDA. *UCSF, Univ. of California.*

3:00 X7 **810.11** ▲ Neuronal hyperactivity disturbs ATP microgradients and triggers apoptosis/microglial phagocytosis uncoupling. O. ABIEGA; S. BECCARI; I. DIAZ-APARICIO; A. NADJAR; S. LAYÉ; Q. LEYROLLE; D. GÓMEZ-NICOLA; M. DOMERCQ; A. PÉREZ; V. SÁNCHEZ-ZAFRA; I. PARIS; J. J. DEUDERO; A. L. BREWSTER; A. E. ANDERSON; L. ZALDUMBIDE; L. GALBARRIATU; A. MARINAS; M. D. VIVANCO; C. MATUTE; M. MALETIC-SAVATIC; J. M. ENCINAS; A. SIERRA*. *Achucarro Basque Ctr. For Neurosci., Univ. Bordeaux Segalen,, Ctr. for Biol. Sciences, Univ. of Southampton, Baylor Col. of Med., Cruces Univ. Hosp., CIC BioGUNE, Ikerbasque Fndn., Univ. del País Vasco EHU/UPV.*

POSTER

811. Neuroimmunology: Behavioral Effects

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 X8 **811.01** Mast cells and maternal allergy regulate early life programming of offspring social, affective and hyperactive behavior. K. M. LENZ*; S. PLATKO; A. GALAN. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

2:00 X9 **811.02** Effects of the oxytocin agonist, carbetocin, on sickness behaviours and immune responses in male mice. J. M. DELEEMANS*; K. OSSENKOPP; M. KAVALIERS. *Western Univ.*

3:00 X10 **811.03** Reversibility of neuroinflammation and impaired hippocampal function in high fat diet-induced obesity. A. DEY*; S. HAO; A. M. STRANAHAN. *Georgia Regents Univ., Georgia Regents Univ.*

4:00 X11 **811.04** Inflammation induces changes in the reward system through a prostaglandin dependent and a prostaglandin independent mechanism. M. A. SOTOMAYOR; C. GOMEZ*; A. OCHOA; C. GOMEZ*; M. D. PÉREZ; L. A. MÉNDEZ; J. A. LÓPEZ. *Natl. Univ. Mexico, La Salle Univ., Natl. Univ. Mexico, Natl. Inst. of Psychiatry.*

1:00 X12 **811.05** Associations between polymorphisms in immune-related genes and autistic-like traits in a Swedish population. N. STRENN*; D. HOVEY; L. JONSSON; H. ANCKARSÄTER; P. LICHTENSTEIN; A. EKMAN. *Sahlgrenska Acad., Sahlgrenska Academy, Univ. of Gothenburg, Karolinska Institutet.*

2:00 X13 **811.06** Role of astrocytic GABAergic system on inflammatory cytokine-induced depressive-like behavior. H. SHIM*; H. PARK; K. KIM; D. HAHM; H. LEE; I. SHIM. *Grad. School, Col. of Korean Medicine, Kyung Hee Univ., Bringham Young Univ., Dept. of Integrative Med. and Res. Ctr. of Behavioral Medicine, Col. of Medicine, The Catholic Univ. of Korea, Acupuncture and Meridian Sci. Res. Center, Col. of Korean Medicine, Kyung Hee Univ., Korea Inst. of Oriental Med.*

3:00 X14 **811.07** T cell maternal immune activation leads to deficits in prepulse inhibition and sex-specific deficits in spatial learning in adult offspring. N. W. FOX*; H. M. DEITCH; Z. S. WITTER; A. W. KUSNECOV. *Rutgers Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 X15 **811.08** Temporal changes in LPS-induced microglial cell activation in adult and aged mice. R. A. KOHMAN*; A. M. LITTLEFIELD; S. E. SETTI; P. R. FREEMAN. *Univ. of North Carolina Wilmington.*

1:00 X16 **811.09** ● Behavioral phenotyping of male and female IL1-R1 null mutant mice reveals sex-specific impairments in the Morris Water Maze and Porsolt Forced Swim Test. J. A. JOHNSON*; S. N. RESCH; A. PEREZ; S. D. CROLL. *CUNY Grad. Ctr., Regeneron Pharmaceuticals, CUNY Queens Col.*

2:00 X17 **811.10** Increased social approach in adult mice raised under germ-free conditions: Implications for neurodevelopmental disorders. H. RAITH*; T. ARENTSEN; Y. QIAN; R. DIAZ HEIJTZ. *Karolinska Institutet.*

3:00 X18 **811.11** ▲ Lipopolysaccharide administration induces sustained sex-dependent monoaminergic neurochemical alterations in the mouse brain. J. P. SENS*; E. SCHNEIDER; E. BIRMINGHAM; J. MAUCH; A. FRANCESCHELLI; C. THELEN; P. M. PITYCHOUTIS. *Univ. of Dayton.*

4:00 X19 **811.12** Conditional elimination of p38α mitogen activated protein kinase provides evidence for a cell autonomous role of kinase signaling in SERT regulation and serotonin-linked behaviors following immune system activation. N. L. BAGANZ*; K. L. LINDLER; C. B. ZHU; J. T. SMITH; M. J. ROBSON; H. IWAMOTO; E. DENERIS; W. A. HEWLETT; R. D. BLAKELY. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Case Western Reserve Univ., Inst. for Psychiatric Neurosci., Vanderbilt Univ. Med. Ctr.*

1:00 X20 **811.13** Exercise improves postoperative cognitive decline in rats with metabolic syndrome by rectifying inflammation resolution and the microbiome. X. FENG*; S. VACAS; L. KOCH; S. BRITTON; M. MAZE. *Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of Michigan.*

2:00 X21 **811.14** Basolateral amygdala astrocyte activation via DREADDs modulates ethanol consumption. S. A. MARSHALL*; T. E. THIELE; D. T. LYSLE. *Univ. of North Carolina, Univ. of North Carolina.*

3:00 X22 **811.15** Pharmacological reinstatement of blood-brain barrier integrity prevents brain inflammation, synaptic dysfunction, and memory impairment in obese mice. S. HAO*; A. DEY; A. M. STRANAHAN. *Med. Col. of Georgia, Georgia Regents Univer, Med. Col. of Georgia, Georgia Regents Univ.*

4:00 X23 **811.16** T lymphocytes promote recovery from inflammation-induced comorbid pain and depression. G. O. LAUMET*; K. N. KRUKOWSKI; A. K. WALKER; R. DANTZER; C. J. J. HEIJNEN; A. KAVELAARS. *Univ. of Texas MD Anderson Cancer Ctr.*

1:00 X24 **811.17** The CCL2:CCR2 axis controls infiltration of inflammatory monocytes into the brain during acute picornavirus infection. R. G. LAFRANCE-COREY*; C. HOWE. *Mayo Clin.*

2:00 X25 **811.18** Effects of neonatal infection on adolescent and adult anxiety in male and female rats and the development of 'anticipatory nausea'. J. M. WARD*; C. TENK; M. KAVALIERS; K. OSSENKOPP. *Univ. of Western Ontario, Brescia Univ. Col.*

3:00 X26 **811.19** DREADD activation of hippocampal astrocytes influences contextual fear conditioning. M. E. JONES*; D. BARRUS; C. L. LEBONVILLE; L. B. COOPER; D. T. LYSLE. *Univ. of North Carolina At Chapel Hill.*

4:00 X27 **811.20** Consequences of neonatal infection on immune function and spatial learning in juvenile male and female rats. B. OSBORNE*; J. CAULFIELD; J. SCHWARZ. *Univ. of Delaware.*

1:00 X28 **811.21** A role for the LRRK2 G2019S mutation as a mediator of chronic inflammation in an immunological model of Parkinson's disease. Z. DWYER*; C. RUDYK; S. BELLEVUE; S. HAYLEY. *Carleton Univ.*

2:00 X29 **811.22** Microglial alterations within the postpartum brain. A. HAIM*; K. LENZ; B. LEUNER. *The Ohio State Univ., The Ohio State Univ.*

3:00 X30 **811.23** Repeated social defeat stress induces neuroinflammation and impairs hippocampal neurogenesis that differentially regulate mood and cognition. A. NIRAULA*; D. MCKIM; A. TARR; J. SHERIDAN; J. GODBOUT. *The Ohio State Univ.*

4:00 X31 **811.24** Prenatal antibiotic exposure alters brain development and behavior: Implications for neurodevelopmental disorders. T. B. ARENTSEN*; H. RAITH; H. FORSSBERG; R. DIAZ HEIJTZ. *Karolinska Institutet.*

1:00 X32 **811.25** Follow the TRAIL: Understanding the etiology of persistent fatigue and cognitive impairment following radiation therapy. L. FENG; K. A. MAGUIRE-ZEISS*; L. N. SALIGAN. *Natl. Inst. of Nursing Res. NIH, Georgetown Univ. Med. Ctr.*

2:00 X33 **811.26** A clinically relevant model of prenatal inflammation (intrauterine lipopolysaccharide) results in offspring hyperactivity. N. GRISSOM; S. MCKEE; T. M. REYES*. *UNIV OF PENNSYLVANIA, Univ. Pennsylvania, Sch. of Med.*

POSTER

812. Stress and Cognitive Function

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 X34 **812.01** Fit but Frazzled? Comparing the effects of chronic stress and fitness on college freshmen. M. KIM; R. R. CLOUSE; L. A. MUASAU; K. G. BAILEY; P. S. LITVAK*. *Andrews Univ., Andrews Univ.*

2:00 X35 **812.02** ▲ Reactivation of a fear memory prior to learning sex-dependently influences long-term memory. A. M. DAILEY*; C. E. CADLE; D. M. PETERS; A. E. KALCHIK; R. L. AUFDENKAMPE; C. M. BROWN; A. R. SCHARF; M. B. EARLEY; C. L. KNIPPEN; H. E. NAGLE; B. R. RORABAUGH; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

3:00 X36 **812.03** Inhibitory avoidance, but not fear conditioning, impairs spatial memory retrieval: Insight into how different forms of trauma memory processing affect new memory processing. C. R. PARK; P. R. ZOLADZ; D. M. DIAMOND*. *Univ. South Florida, VA Hosp., Ohio Northern Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 X37 **812.04** ● Effects of chronic unpredictable stress and chronic intermittent cold stress on cognitive flexibility in female rats. D. PAREDES*; J. D. SILVA; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr. San Anto.*

1:00 X38 **812.05** Permanent effects of environmental noise on working memory and astrocyte proliferation in the medial preforntal cortex. Y. RUVALCABA DELGADILLO*; T. MORALES-SALCEDO; G. YAÑEZ-DELGADILLO; P. HERNÁNDEZ; G. CHIPRÉS-TINAJERO; R. RAMOS-ZÚÑIGA; A. FERIA-VELASCO; J. GARCÍA-ESTRADA; F. JAUREGUI-HUERTA; M. LUQUÍN. *Univ. De Guadalajara, Univ. de Guadalajara, Inst. Mexicano del Seguro Social.*

2:00 X39 **812.06** Chronic stress, cognitive dysfunction and serotonin innervation to the medial prefrontal cortex from the dorsal raphe. R. NATARAJAN*; N. L. CHIAIA; N. A. NORTHROP; B. YAMAMOTO. *Univ. of Toledo.*

3:00 X40 **812.07** A novel behavior of unconditioned fear: Characterization and quantification of the K-turn. K. J. KUJAWA; M. BABCOCK*. *Montana State Univ., Montana State Univ.*

4:00 X41 **812.08** Long-term effects caused by the exposure to unpredictable chronic stress. H. SANCHEZ-CASTILLO*; P. TORRES-CARRILLO; B. ROJAS-LITA; C. MENDOZA-ROSALES; M. MIGLIARO; D. B. PAZ-TREJO; V. M. SOLIS; E. HONG. *Univ. Nacional Autonoma De Mexico. Fac Psicologia, Sociedad Iberoamericana de Neurociencia Aplicada, CINVESTAV.*

1:00 X42 **812.09** Acute restraint stress alters adult zebra finch song performance and neuronal morphology: Potential model for evaluation of neurobiological effects of developmental stress. T. L. HOLLAND*; K. SODERSTROM. *East Carolina Univ.*

2:00 X43 **812.10** Anti-stress effects and memory enhancer properties of n-3 PUFA in stressed rats. A. DAGNINO-SUBIABRE*; M. A. PÉREZ; V. PEÑALOZA-SANCHO; J. AHUMADA; M. FUENZALIDA. *Univ. of Valparaiso, Univ. de Valparaíso, Univ. de Valparaíso.*

POSTER

813. Circadian Entrainment and Phase Shift

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 X44 **813.01** ▲ The effects of wheel-running and monthly 6-hour advance on the progression of type-2 diabetes in C57Bl/6J and TallyHo/JngJ mice. J. A. SEGGIO*; J. A. HICKS; A. HATZIDIS; N. F. NASCIMENTO; K. N. CARLSON; N. L. ARRUDA; R. R. GELINEAU; I. K. MONTEIRO DE PINA; J. H. WEST. *Bridgewater State Univ.*

2:00 X45 **813.02** Effects of obesity on the entrainment of circadian rhythms to light: The role of glutamatergic system. V. P. CARMONA-ALCOCER*; D. ALCANTARA-GONZALEZ; I. DELINT-RAMÍREZ; M. DÍAZ-MUÑOZ; C. MOLINA-AGUILAR; A. NIETO-POSADAS; B. ORDAZ; F. PEÑA-ORTEGA; H. VALENTE-GODINEZ. *Washington Univ. In St Louis, Univ. Nacional Autónoma de México, Inst. de Neurobiología, Univ. Nacional Autónoma de México, Inst. de Neurobioloía, Facultad de Medicicna, UANL.*

3:00 X46 **813.03** Effect of light therapy for type 2 diabetics with poorly controlled glycemia during the winter season. H. HIRANO*; H. NISHIKAWA; M. MATSUDA. *Yamaguchi Univ. Org Univ. Edu, Yamaguchi Univ.*

4:00 X47 **813.04** Measuring the physiological cost of circadian desynchrony in mammals. A. C. WEST; D. A. BECHTOLD*. *The Univ. of Manchester, Univ. Manchester.*

1:00 X48 **813.05** Prenatal exposure to dim light at night impairs offspring delayed-type hypersensitivity reaction. Y. M. CISSE*; R. NELSON. *The Ohio State Univ. Wexner Med. Ctr.*

2:00 Y1 **813.06** ▲ Impact of shift work on attention, female estrous cycling, and cholinergic signalling in a rat model. M. B. LEVENTHAL*; R. BALACHANDRAN; A. ROBERTSON; P. EUBIG; M. MAHONEY. *Univ. of Illinois Col. of Vet. Medic.*

3:00 Y2 **813.07** Characterizing cerebellin-short, a novel circadian peptide, in the rat suprachiasmatic nucleus. J. L. CHU*; J. W. MITCHELL; M. U. GILLETTE. *Univ. Illinois Urbana-Champaign, Univ. Illinois Urbana-Champaign.*

4:00 Y3 **813.08** Intrinsically photosensitive retinal ganglion cells (ipRGCS) mediate light entrainment of peripheral clocks. P. KOFUJI*; N. PURRIER; S. MISHRA; W. C. ENGELAND. *Univ. Minnesota.*

1:00 Y4 **813.09** The adrenal clock acts as a buffer that prevents disruption of glucocorticoid rhythms by aberrant light exposure. W. C. ENGELAND*; S. MISHRA; P. KOFUJI; D. BREAULT. *Univ. Minnesota, Harvard Med. Sch.*

2:00 Y5 **813.10** Ovariectomy shortens the period and increases photic phase shift of circadian locomotor activity rhythm in the mouse Neotomodon alstoni. C. R. JUÁREZ TAPIA; M. MIRANDA-ANAYA*; A. CARMONA-CASTRO; G. MARTÍNEZ-MORALES. *Facultad De Ciencias, UNAM.*

3:00 Y6 **813.11** Simulating temperature cycles in the colony uncover chronotypes in honey bee foragers. M. A. GIANNONI GUZMAN*; J. ALEMAN-RIOS; T. GIRAY; J. L. AGOSTO-RIVERA. *Univ. of Puerto Rico Rio Piedras Campus.*

4:00 Y7 **813.12** Role of tissue-type plasminogen activator (tPA) in food anticipatory activity in mice fed one or two meals a day. A. RASTOGI*; E. M. MINTZ. *KENT STATE UNIVERSITY.*

1:00 Y8 **813.13** Investigating the role of ghrelin in food anticipatory activity of a scheduled treat. R. KHAZALL*; H. MACKAY; A. ABIZAID. *Carleton Univ.*

2:00 Y9 **813.14** Circadian restricted feeding: Effects of amphetamine sensitization and cross-sensitization. H. N. OPIOL*; S. RUTHERFORD; N. DE ZAVALIA; S. AMIR. *Ctr. For Studies In Behavioral Neurobiology, Con.*

3:00 Y10 **813.15** GIRK channels mediate the nonphotic effects of exogenous melatonin. L. M. HABLITZ*; H. E. MOLZOF; K. L. GAMBLE. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

4:00 Y11 **813.16** Using optogenetics to shift the circadian clock. M. TACKENBERG*; J. R. JONES; D. G. MCMAHON. *Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 Y12 **813.17** Redox state of the suprachiasmatic nucleus affects photic resetting in early night. M. YU*; Y. YU; J. W. MITCHELL; M. X. LU; M. U. GILLETTE. *Univ. of Illinois At Urbana Champaign, Univ. of Illinois At Urbana Champaign, Univ. of Illinois At Urbana Champaign, Univ. of Illinois Lab. High Sch.*

2:00 Y13 **813.18** Glycogen synthase kinase 3 (GSK3) regulates light signaling in the suprachiasmatic nucleus. J. R. PAUL*; S. K. TOTSCH; R. M. COWELL; K. L. GAMBLE. *Univ. of Alabama At Birmingham.*

3:00 Y14 **813.19** Activation of the stress axis is associated with novel wheel-induced blockade of the luteinizing hormone (LH) surge in Syrian hamsters. S. J. LEGAN*; X. PENG; M. J. DUNCAN. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

4:00 Y15 **813.20** ▲ Role of the CREB-CRE signalling pathway on the crayfish Procambarus clarkii's locomotor activity rhythm entrainment. C. M. AMBRÍZ*; J. PRIETO SAGREDO. *Univ. Nacional Autónoma De México.*

1:00 Y16 **813.21** Biological rhythms in an invertebrate model marine organism, the Starlet Sea Anemone. E. L. MEYER-BERNSTEIN*; W. D. HENDRICKS; C. C. JAMES; E. E. MCPHERSON; M. R. JAMES. *Col. of Charleston, Col. of Charleston.*

2:00 Y17 **813.22** Advanced circadian phase in manic episode was returned to normal after treatment in bipolar disorder. J. MOON; C. CHO; G. SON; D. GEUM; S. CHUNG; H. KIM; S. KANG; H. YOON; L. KIM; H. LEE*. *Dept. of Biomed. Sciences, Korea Univ., Dept. of Psychiatry, Col. of Med., Dept. of Legal Medicine, Korea Univ. Col. of Med., Grad. Sch. of Medicine, Korea Univ., Dept. of Anatomy, Korea Univ. Col. of Med., Dept. of Psychiatry, Sch. of Medicine, Gachon Univ., Korea Univ. Anam Hosp.*

3:00 Y18 **813.23** Assessment of molecules involved in circadian rhythms and memory in the hippocampi of circadian rhythm disrupted rats. S. H. DEIBEL*; D. KOCHAN; J. Q. LEE; R. J. KEELEY; K. M. NIEDERMEIER; I. BARKLEY; N. S. HONG; O. KOVALCHUK; R. J. MCDONALD. *Univ. of Lethbridge, Univ. of Lethbridge.*

POSTER

814. Sleep: Regulators

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 Y19 **814.01** Time-dependent changes of deta power across NREM sleep episodes in mice. A. SUZUKI*; R. W. GREENE. *UT Southwestern Med. Ctr., Intl. Inst. for Integrative Sleep Med.*

2:00 Y20 **814.02** Effect of selective Rapid Eye Movement (REM) sleep deprivation on c-Fos immunoreactivity in the ventral respiratory column in rat. E. MUÑOZ ORTIZ*; R. DIAZ-ESCARCEGA; C. A. PEREZ-ESTUDILLO; F. GARCIA-GARCIA; L. BELTRAN-PARRAZAL; C. MORGADO-VALLE. *Doctorado En Investigaciones Cerebrales, Ctr. de Investigaciones Cerebrales, Inst. de Ciencias de la Salud.*

3:00 Y21 **814.03** Identification of a single nucleotide substitution specific to the Dreamless mutant mouse pedigree by linkage analysis and whole exome sequencing, and its genetic verification by CRISPR. T. FUJIYAMA*; C. MIYOSHI; M. SATO; T. KANDA; S. MIZUNO; S. TAKAHASHI; H. MURAMOTO; K. IWASAKI; F. ASANO; T. HONDA; A. IKKYU; M. KAKIZAKI; N. HOTTA; S. KANNO; Y. ISHIKAWA; I. MIURA; T. SUZUKI; S. WAKANA; K. VIVEK; J. S. TAKAHASHI; H. FUNATO; M. YANAGISAWA. *IIIS, The Univ. of Tsukuba, IIIS, The Univ. of Tsukuba, RIKEN, BRC, HHMI, Univ. of Texas Southwestern Med. Ctr.*

4:00 Y22 **814.04** Thalamic modulation of the cortical slow oscillation. A. OZUR*; S. CHAUVETTE; I. TIMOFEEV. *Univ. Laval.*

1:00 Y23 **814.05** Programming of sleep disturbances by peripubertal diet-induced obesity - Implication of altered serotonergic actions in the brain. M. GAZEA; A. V. PATCHEV; E. ANDERZHANOVA; E. LEIDMAA; A. PISSIOTI; C. FLACHSKAMM; O. F. X. ALMEIDA; M. KIMURA*. *Max Planck Inst. of Psychiatry.*

2:00 Y24 **814.06** ▲ Wakefulness is governed by GABA and histamine co-transmission. X. YU*; Z. YE; C. M. HOUSTON; A. Y. ZECHARIA; Y. MA; Z. ZHANG; D. S. UYGUN; S. PARKER; A. L. VYSSOTSKI; R. YUSTOS; N. P. FRANKS; S. G. BRICKLEY; W. WISDEN. *Imperial Col. London, Inst. of Neuroinformatics, Univ. of Zürich/ETH Zürich.*

3:00 Y25 **814.07** Ontogeny of activation in sleep and waking regulatory systems in the chick. M. POMPEIANO*; A. CHAN; S. LI; N. RATTENBORG; E. BALABAN; D. MARTINEZ-GONZALEZ. *McGill Univ., Max Planck Inst. for Ornithology.*

4:00 Y26 **814.08** Sleep history modulates excitatory transmission to orexin and melanin concentrating hormone neurons via glial glutamate transporter 1. C. L. BRIGGS*; K. SEMBA; M. HIRASAWA. *Dalhousie Univ., Mem. Univ.*

1:00 Y27 **814.09** Conditional knockdown of tyrosine hydroxylase in LC neurons increases REM sleep by withdrawal of inhibition from PPT neurons and prevents REM sleep-loss associated expression in rats. M. A. KHANDAY*; B. SOMARAJAN; R. MEHTA; B. N. MALLICK. *Jawaharlal Nehru Univ.*

2:00 Y28 **814.10** Cortical nNOS/NK1 neurons are regulated by adenosinergic tone. R. H. WILLIAMS*; J. VAZQUEZ-DEROSE; A. NGUYEN; T. S. KILDUFF. *SRI Intl.*

3:00 Y29 **814.11** Identification of discrete, intermingled hypocretin neuronal populations. M. IYER; M. CARTER*. *Williams Col.*

4:00 Y30 **814.12** Instantaneous and persistent arousal induced by bilateral optogenetic and pharmacogenetic excitation of HCRT neurons. J. E. HEISS*; T. S. KILDUFF; A. YAMANAKA. *SRI Intl., Res. Inst. of Envrn. Medicine, Nagoya Univ.*

1:00 Y31 **814.13** Orexin neurons suppress narcolepsy via 2 distinct efferent pathways. E. HASEGAWA*; M. YANAGISAWA; T. SAKURAI; M. MIEDA. *Kanazawa Univ., IIIS, Tukuba Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 Y32 **814.14** Role of cholinergic and GABAergic pontomesencephalic neurons in theta generation studied by optogenetic manipulation in naturally waking/sleeping head-fixed mice. Y. CISSÉ; H. TOOSSI; M. ISHIBASHI; L. MAINVILLE; A. ADAMANTIDIS; C. LEONARD; B. E. JONES*. *McGill Univ., New York Med. Col., Univ. of Bern.*

3:00 Y33 **814.15** Chronic inflammation of the preoptic-hypothalamic sleep-regulatory systems induces aging-like changes in sleep-wake organization in young rats. A. KOSTIN; M. ALAM; R. SZYMUSIAK; D. MCGINTY; N. ALAM*. *Res. Service (151A3), VAGLAHS, Dept. of Med., Dept. of Psychology.*

4:00 Y34 **814.16** Shared striatal subnetworks relevant for stress, sleep, and Huntington's disease implicate TGFβ-FOXO3 signaling. J. R. SCARPA*; P. JIANG; K. FITZPATRICK; B. LOSIC; V. D. GAO; K. HAO; K. C. SUMMA; B. ZHANG; R. ALLADA; M. H. VITATERNA; F. W. TUREK; A. KASARSKIS. *Icahn Sch. of Med. at Mount Sinai, Northwestern Univ.*

1:00 Y35 **814.17** Gene networks in mouse striatum reveal links between sleep, stress, neuropsychiatric disorders and neurodegeneration. P. JIANG*; J. R. SCARPA; K. FITZPATRICK; B. LOSIC; V. D. GAO; K. HAO; K. C. SUMMA; B. ZHANG; R. ALLADA; M. H. VITATERNA; A. KASARSKIS; F. W. TUREK. *Northwestern Univ., Icahn Sch. of Med. at Mount Sinai.*

2:00 Y36 **814.18** Optogenetic regulation of parvalbumin (PV) GABAergic neurons in thalamic reticular nucleus (TRN) in control of cortical spindle generation and its implications in schizophrenia. S. THANKACHAN*; J. M. MCNALLY; J. T. MCKENNA; F. KATSUKI; R. E. STRECKER; R. E. BROWN; R. W. MCCARLEY. *VA Boston Healthcare Syst & Harvard Med. Sch.*

3:00 Y37 **814.19** Phenotype associations in a battery of psychiatric assays, stress measurements, and sleep traits in an F2 mouse population. V. GAO*; P. JIANG; J. SCARPA; K. FITZPATRICK; K. HAO; B. LOSIC; K. SUMMA; B. ZHANG; R. ALLADA; M. VITATERNA; A. KASARSKIS; F. TUREK. *Northwestern Univ., Mt. Sinai Sch. of Med.*

4:00 Y38 **814.20** Complex sleep architecture is common to parrots, songbirds, and mammals. S. CANAVAN*; D. MARGOLIASH. *Univ. of Chicago.*

1:00 Y39 **814.21** High glycine prolongs recovery time from anesthesia. J. E. DALLMAN*; M. VENINCASA; M. STARK; Q. YAN; L. CHIYUAN; R. BINDERNAGAL; S. SLOAN; C. HIBBS; S. SYED. *Univ. of Miami, Univ. of Miami, Univ. of Miami, Stanford Univ., Florida Intl. Univ., Florida Intl. Univ.*

2:00 Y40 **814.22** ● Improved Sleep related Gene Ontologies through analysis of KOMP2 sleep phenotyping data and gene expression studies. S. JOSHI*; M. SETHI; M. STRIZ; N. COLE; J. RYAN; M. E. LHAMON; A. AGARWAL; S. J. SUKOFF RIZZO; J. M. DENEGRE; R. E. BRAUN; D. W. FARDO; K. D. DONOHUE; E. J. CHESLER; K. L. SVENSON; B. F. O'HARA. *Univ. of Kentucky, The Jackson Lab., Signal Solutions LLC, Univ. of Kentucky, Univ. of Kentucky.*

3:00 Y41 **814.23** Slow wave activity increase after acute sleep deprivation and after chronic sleep restriction. A. MARIC*; C. LUSTENBERGER; E. WERTH; J. LEEMANN; R. HUBER; C. R. BAUMANN; R. PORYAZOVA. *Univ. Hosp. Zurich, Univ. of Zurich, Univ. Children's Hosp. Zurich, Univ. of North Carolina at Chapel Hill, Univ. of Zurich.*

4:00 Y42 **814.24** Circadian regulation of perineuronal net composition. H. PANTAZOPOULOS*; E. YILDIZ; L. TURIAK; J. ZAIA; S. BERRETTA; M. ARDELT. *Harvard Med. School, McLean Hosp., Boston Univ. Sch. of Med.*

1:00 Y43 **814.25** Is schizophrenia associated with a general impairment in sleep-dependent memory consolidation? B. BARAN*; C. DEMANUELE; D. CORRELL; T. C. VUPER; B. SEICOL; R. A. FOWLER; C. CALLAHAN; E. PARR; S. DURRANT; R. STICKGOLD; D. S. MANOACH. *Harvard Med. Sch., Massachusetts Gen. Hosp., Martinos Ctr. for Biomed. Imaging, Beth Israel Deaconess Med. Ctr., Univ. of Lincoln.*

2:00 Y44 **814.26** Sleep leads to enhanced amygdala connectivity during retrieval of emotional items and the neutral contexts with which they were previously studied. K. A. BENNION*; J. D. PAYNE; E. A. KENSINGER. *Boston Col., The Univ. of Notre Dame.*

3:00 Z1 **814.27** ▲ Identification of sleep patterns in dominant and submissive crayfish. M. OSORIO-PALACIOS; K. MENDOZA-ANGELES*; G. ROLDAN; J. HERNÁNDEZ-FALCÓN. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma De México.*

4:00 Z2 **814.28** Sleep benefits memory to complete goal-relevant behavior. T. CUNNINGHAM*; A. M. CHAMBERS; J. D. PAYNE. *Univ. of Notre Dame, Univ. of Notre Dame.*

POSTER

815. Sleep: Systems

Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 Z3 **815.01** ▲ Generation of spontaneous EEG rhythms across cortical layers in humans. M. HALGREN*; I. ULBERT; J. MADSEN; W. K. DOYLE; E. HALGREN; S. S. CASH. *UCSD, Res. Ctr. for Natural Sciences, Hungarian Acad. of Sci., Boston Children's Hosp., Comprehensive Epilepsy Center, New York Univ. Sch. of Med., UCSD, Massachusetts Gen. Hosp.*

2:00 Z4 **815.02** Phase-amplitude coupling of sleep spindles and slow oscillations improves verbal memory. M. NIKNAZAR*; G. PRASHANTH; M. BAZHENOV; S. C. MEDNICK. *Univ. of California, Riverside, Univ. of California, Riverside.*

3:00 Z5 **815.03** Cortical layer 6. modulates spindle generation in thalamus. P. BARTHO*; F. MATYAS; M. CSERNAI. *Res. Ctr. For Natural Sciences, Hungarian Ac.*

4:00 Z6 **815.04** Infra-slow neural and cardiac fluctuations predict behavioral arousability during mouse NREM sleep. S. LECCI; L. M. J. FERNANDEZ; R. D. WIMMER; J. CHATTON; A. LUTHI*. *Univ. of Lausanne, NYU Sch. of Med.*

1:00 Z7 **815.05** Nonlinear dynamical features for improving computational sleep models using Delay Differential Analysis. W. LIN*; C. LAINSCSEK; G. P. KRISHNAN; M. BAZHENOV; S. MEDNICK; T. J. SEJNOWSKI. *Salk, UC San Diego, Salk Inst. for Biol. Studies, Univ. of California, Riverside, Univ. of California, Riverside.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 Z8 **815.06** Using Acoustic stimulation to increase slow-wave activity and improve memory in older adults. P. A. PAPALAMBROS*; G. SANTOSTASI; R. G. MALKANI; S. WEINTRAUB; K. A. PALLER; P. C. ZEE. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

3:00 Z9 **815.07** Weighing in on sleep: Exploring the relation between maternal sleep patterns during pregnancy and subsequent weight gain of the child. K. VIJAYAKUMAR; B. LOW; J. J. GOOLEY; Y. S. LEE; F. YAP; M. F. F. CHONG; B. BROEKMAN; A. RIFKIN-GRABOI; M. MEANEY; P. GLUCKMAN; K. KWEK; Y. S. CHONG; J. C. LIU*. *Yale-Nus, Duke-Nus, NUHS, KK Hosp., Singapore Inst. for Clin. Sci., Yale-NUS Col.*

4:00 Z10 **815.08** Spectral analysis of sleep EEG reveals new deep sleep stage with dominant frequencies below 1 Hz. J. A. ONTON*; V. VIJAYAN; C. PARK; S. KIM; T. P. COLEMAN. *Warfighter Performance, Univ. of CA San Diego, Natera, Inc, Kwangwoon Univ., Univ. CA San Diego.*

1:00 Z11 **815.09** Distribution, amplitude, incidence, co-occurrence, and propagation of human K-Complexes in focal transcortical recordings. R. A. MAK-MCCULLY*; B. Q. ROSEN; M. ROLLAND; J. REGIS; F. BARTOLOMEI; P. CHAUVEL; S. S. CASH; E. HALGREN. *UCSD MMIL, UCSD, Aix-Marseille Universite, INSERM, Inst. de Neurosciences des Systemes UMR 1106, APHM (Assistance Publique-Hopitaux de Marseille), Massachusetts Gen. Hosp. and Harvard Med. Sch.*

2:00 Z12 **815.10** Spatiotemporal evolution of the sleep spindle in human neocortex. G. PIANTONI*; E. HALGREN; S. S. CASH. *Massachusetts Gen. Hosp., Harvard Med. Sch., UCSD.*

3:00 Z13 **815.11** ▲ Sleep deprivation sex-dependently increases myocardial sensitivity to ischemic injury. A. KRIVENKO*; M. E. FRY; J. D. LAWSON; L. E. STONER; E. D. EISENMANN; B. L. JOHNSON; M. L. HEMBREE; R. M. ROSE; C. J. LOMBARDI; M. R. HUNTLEY; S. SEELEY; A. D. BUI; B. R. RORABAUGH; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

4:00 Z14 **815.12** CGRP neurons in the external lateral parabrachial nucleus regulate cortical EEG arousal to hypercapnia. S. KAUR*; J. WANG; D. KROEGER; P. FULLER; C. SAPER. *Beth Israel Deaconess Med. Ctr. and Harvard M.*

1:00 Z15 **815.13** Temporal dynamics of intrinsic activity are reorganized during slow wave sleep. A. MITRA*; A. SNYDER; E. TAGLIAZUCCHI; H. LAUFS; M. E. RAICHLE. *Washington Univ. Sch. of Med., Goethe Univ., Schleswig Holstein Univ. Hosp.*

2:00 Z16 **815.14** Nonlinear dynamical sleep spindle detection using delay differential analysis. A. L. SAMPSON*; C. LAINSCSEK; S. S. CASH; E. HALGREN; T. J. SEJNOWSKI. *Salk Inst. For Biol. Studies, UCSD, Massachusetts Gen. Hosp., Harvard Med. Sch.*

3:00 Z17 **815.15** GABA receptors on orexin and MCH neurons are differentially regulated following sleep deprivation and recovery. H. TOOSSI*; E. DEL CID-PELLITERO; B. E. JONES. *McGill Univ.*

4:00 Z18 **815.16** The large-scale spatiotemporal structure of spindle oscillations in human sleep. L. E. MULLER*; G. PIANTONI; S. S. CASH; E. HALGREN; T. J. SEJNOWSKI. *Salk Inst. For Biol. Studies, Massachusetts Gen. Hosp., Univ. of California at San Diego, Howard Hughes Med. Inst. and Salk Inst. for Biol. Studies.*

1:00 Z19 **815.17** ▲ Reduced computationally efficient model for slow wave sleep activity. N. F. RULKOV; G. P. KRISHNAN; S. CHAUVETTE; I. TIMOFEEV; M. V. BAZHENOV*. *UCSD, Univ. of California, Riverside, Univ. Laval, Univ. Laval, Univ. California, Riverside.*

2:00 Z20 **815.18** Structural connectivity between cortex and thalamus determines temporal features of sleep spindles. G. P. KRISHNAN*; M. J. CHOINSKI; L. E. MULLER; D. J. HAGLER, Jr; S. S. CASH; T. J. SEJNOWSKI; E. HALGREN; M. BAZHENOV. *Univ. of California, Riverside, Salk Inst. for Biol. Studies, La Jolla, CA, UCSD, Massachusetts Gen. Hosp. and Harvard Univ., UCSD, Univ. of California.*

3:00 Z21 **815.19** Enhanced sleep does not change light responsiveness. S. DISSEL; L. KIRSZENBLAT; J. DONLEA; M. KLOSE; R. WINSKY-SOMMERER; B. VAN SWINDEREN; P. SHAW*. *Washington Univ. Sch. of Med., The Univ. of Queensland, Univ. of Oxford, Univ. of Surrey, Washington Univ. Sch. of Med. In St. Louis.*

4:00 Z22 **815.20** Possible human sleep replay of cortical activity patterns evoked by motor sequential learning. J. EICHENLAUB*; X. WU; E. HALGREN; S. S. CASH. *Massachusetts Gen. Hospital, Harvard Med. Sc, New York Univ., Kavli Inst. for Brain and Mind, Univ. of California.*

1:00 Z23 **815.21** Behavior of noradrenergic A7 neurons during sleep and wakefulness. V. B. FENIK*; S. J. FUNG; M. H. CHASE; I. RUKHADZE. *VA GLA Healthcare Syst., WebSciences Intl.*

2:00 Z24 **815.22** ● Intracranial and EEG-based measures of sensory-evoked network dynamics in human cortex during emergence from general anesthesia. E. A. MUKAMEL*; L. D. LEWIS; G. PIANTONI; E. N. ESKANDAR; R. A. PETERFREUND; E. N. BROWN; S. S. CASH; P. L. PURDON. *Univ. of California-San Diego, Harvard Univ., Mass. Gen. Hospital; Harvard Med. Sch., Mass. Gen. Hospital; Harvard Med. Sch., Mass. Gen. Hosp., Mass. Gen. Hospital; Harvard Med. Sch., Massachussetts Inst. of Technol.*

3:00 Z25 **815.23** Understanding the mechanisms of hippocampal reactivation: From CA3 to CA1. P. MALERBA*; S. NAGL; G. P. KRISHNAN; J. FELLOUS; M. BAZHENOV. *UC Riverside, Univ. of Arizona.*

4:00 Z26 **815.24** Interactions between cortical slow oscillations and hippocampal sharp-wave ripples during slow wave sleep. P. SANDA*; P. MALERBA; G. P. KRISHNAN; M. BAZHENOV. *Univ. of California, Riverside.*

1:00 Z27 **815.25** Graph theoretical characterisation of functional connectivity changes in transitions between wakefulness and sleep: Evidence from human MEG source space. A. B. STEVNER*; G. PIANTONI; G. COLCLOUGH; A. BAKER; Y. VAN DER WERF; J. CABRAL; G. DECO; E. VAN SOMEREN; M. WOOLRICH; M. L. KRINGELBACH. *Univ. of Oxford, Aarhus Univ., Massachusetts Gen. Hosp., Univ. of Oxford, Netherlands Inst. for Neurosci., Univ. Pompeu Fabra.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 Z28 **815.26** Evidence for human memory replay in cortex: An electrocorticographical study of spatiotemporal patterns in high gamma. X. JIANG*; I. SHAMIE; S. S. CASH; T. THESEN; E. HALGREN. *UCSD, Massachusetts Gen. Hosp., New York Univ. Sch. of Med., UCSD.*

3:00 Z29 **815.27** Distinct neural and cardiac parameters define the intermediate sleep state in mouse. L. M. FERNANDEZ*; A. LUTHI. *Univ. of Lausanne.*

4:00 Z30 **815.28** ● Elevating endogenous trace amine-associated receptor 1 tone promotes wakefulness. M. D. SCHWARTZ*; S. W. BLACK; J. B. PALMERSTON; S. B. SMITH; A. HARMEIER; M. C. HOENER; S. R. MORAIRTY; T. S. KILDUFF. *SRI Intl., F. Hoffmann-La Roche, Ltd.*

1:00 Z31 **815.29** Incomplete behavioral and neurological recovery following chronic short sleep. S. C. VEASEY*; R. XIN; P. FENIK; G. ZHAN; Y. ZHU. *Univ. Pennsylvania.*

POSTER

816. Motor Learning

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 Z32 **816.01** Global connectivity changes in procedural learning and cognitive training. A. NIKOLAIDIS*; T. TALUKDAR; A. BARBEY; A. KRAMER. *Univ. of Illinois Champaign Urbana.*

2:00 Z33 **816.02** Focus of attention has differential effects upon short-latency afferent inhibition across practice. L. Y. SUZUKI; S. K. MEEHAN*. *Univ. of Michigan.*

3:00 Z34 **816.03** Cognitive processes contribute to behavioral gains during motor reconsolidation. N. F. WYMBS*; A. J. BASTIAN; P. A. CELNIK. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

4:00 Z35 **816.04** The effects of action observation on obstacle avoidance strategies in patients with chronic stroke. Y. SONG*; J. PARK. *Korea Univ., Sungkyunkwan Univ., Korea Univ.*

1:00 Z36 **816.05** Visuomotor skill learning and accompanying changes in corticospinal excitability: Causal relation or epiphenomena? L. CHRISTIANSEN*; E. BOJSEN-MØLLER; M. A. J. MADSEN; R. THOMAS; J. B. NIELSEN; J. LUNDBYE-JENSEN. *Univ. of Copenhagen, Univ. of Copenhagen.*

2:00 Z37 **816.06** Increases in cognitive effort diminishes the contextual interference effect. C. A. AIKEN; A. T. MOSS; A. W. VAN GEMMERT*. *Louisiana State Univ.*

3:00 Z38 **816.07** Contributions of finger movements to cognitive tasks. Y. ITAGUCHI*; C. YAMADA; K. FUKUZAWA. *Waseda University, Psychology Dept.*

4:00 Z39 **816.08** Primary motor cortex inhibition depresses non-motor procedural learning. E. M. WASSERMANN*; P. J. KOSHY; A. STEEL; D. BAGEAC; L. WILKINSON. *NIH/NINDS, NIH/NIMH.*

1:00 Z40 **816.09** Altered human memory modification in the presence of normal consolidation. N. CENSOR*; E. R. BUCH; K. NADER; L. G. COHEN. *Tel-Aviv Univ., NINDS, NIH, McGill Univ.*

2:00 Z41 **816.10** ● ▲ M1 activity during action observation co-varies with subsequent behavioral changes in spontaneous rate of execution. N. ARIDAN*; R. MUKAMEL. *Tel-Aviv Univ., Tel-Aviv Univ.*

3:00 Z42 **816.11** Dynamical changes of functional connectivity during implicit memory formation. B. TOTH*; Á. TAKÁCS; Z. ZAVECZ; A. KÓBOR; K. JANACSEK; D. NEMETH. *Ctr. For Natural Sciences, Hungarian Acad. of, Inst. of Psychology, Eötvös Loránd Univ., Brain Imaging Centre, Res. Ctr. for Natural Sciences, Hungarian Acad. of Sci., Dept. of Clin. Psychology and Addiction, Eötvös Loránd Univ., Institute of Cognitive Neurosci. and Psychology, Res. Ctr. for Natural Sciences, Hungarian Acad. of Sci.*

4:00 Z43 **816.12** Learning an internal representation of a deep convolutional neural network model for pose-based human action recognition. J. PARK*; Y. JANG; C. NAM; J. JUN; H. CHOI; D. KIM. *Korea Advanced Inst. of Sci. and Technol.*

1:00 Z44 **816.13** Effects of cerebellar transcranial direct current stimulation on fine motor sequencing skill. R. E. SHIMIZU*; A. D. WU; X. GUO; B. J. KNOWLTON. *UCLA Psychology Dept., UCLA Neurol. Dept.*

2:00 AA1 **816.14** ▲ Procedural memory is not uniformly intact in individuals with traumatic brain injury. S. CROOKS*; M. DUFF; N. KLOOSTER. *Univ. of Iowa.*

3:00 AA2 **816.15** Spatiotemporal discrimination and recall in neural networks with short-term synaptic plasticity. P. MILLER*; B. SHLAER. *Brandeis Univ., Brandeis Univ.*

4:00 AA3 **816.16** Caudate functional connectivity mediates the association between mindfulness and implicit learning. C. M. STILLMAN*; X. YOU; K. L. SEAMAN; E. C. RASMUSSEN; C. J. VAIDYA; R. S. TURNER; J. H. HOWARD, Jr.; D. V. HOWARD. *Georgetown Univ., Univ. of Pittsburgh, Children's Natl. Med. Ctr., Yale Univ., Georgetown Univ., Children's Natl. Med. Ctr., Georgetown Univ., The Catholic Univ. of America, Ctr. for Brain Plasticity and Recovery.*

1:00 AA4 **816.17** Neural substrates of enhanced intermanual skill transfer during online manipulation of visual feedback. O. OSSMY*; R. MUKAMEL. *Tel Aviv Univ., Tel-Aviv Univ.*

2:00 AA5 **816.18** Disambiguation in the serial reaction time task. J. L. HOELTER*; C. M. KAIVER; S. J. HELD; C. E. ECHEVESTE; A. J. GREENE. *Univ. of Wisconsin-Milwaukee.*

3:00 AA6 **816.19** Activity in superior parietal lobule during training by observation predicts subsequent performance gains. O. OSSMY; R. MUKAMEL*. *Tel-Aviv Univ.*

4:00 AA7 **816.20** Morphological changes in cortical microstructure of the brain by short-term training. Y. SUNG*; D. KANG; U. CHOI; S. OGAWA. *Kansei Fukushi Institute, Tohoku Fukushi Universit, Kansei Fukushi Institute, Tohoku Fukushi Univ., Gachon Univ. of Med. and Sci.*

1:00 AA8 **816.21** Impact of feedback valence during skill learning on dynamic and static functional connectivity. A. D. STEEL*; E. H. SILSON; C. J. STAGG; C. I. BAKER. *NIH, Oxford Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
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* Indicates abstract's submitting author

2:00 AA9 **816.22** Combining speed- and accuracy-focused training prevents offline performance improvements in sequential motor skill. S. K. SUGAWARA*; Y. H. HAMANO; N. AOKI; H. YAMAZAKI-KINDAICHI; T. YOSHIMOTO; N. SADATO. *Natl. Inst. for Physiological Sci., SOKENDAI (The Grad. Univ. for Advanced Studies).*

3:00 AA10 **816.23** Different cognitive functions determine visuomotor adaptation performance during time course of learning. A correlational approach. A. M. SIMON*; O. L. BOCK. *German Sport Univ. Cologne.*

4:00 AA11 **816.24** ▲ Mindfulness and two forms of implicit learning in healthy young adults. E. L. RABINOVICH*; C. M. STILLMAN; J. H. HOWARD, Jr.; D. V. HOWARD. *Cognitive Aging Lab., Georgetown Univ., The Catholic Univ. of America.*

1:00 AA12 **816.25** The cortico-striatal network holds the memory of the sequential motor skill during the early training stage. Y. H. HAMANO*; S. K. SUGAWARA; H. YAMAZAKI-KINDAICHI; N. AOKI; T. YOSHIMOTO; N. SADATO. *Natl. Inst. For Physiological Sci., SOKENDAI (The Grad. Univ. for Advanced Studies).*

2:00 AA13 **816.26** Different formation of muscle synergies associated with the desired motor output: Simulation study using neural network model including muscle synergies. S. HAGIO*; M. KOUZAKI. *Grad. Sch. of Human and Envrn. Studies, Kyoto Univ., Res. Fellow of the Japan Society for the Promotion of Sci.*

3:00 AA14 **816.27** Acute exercise and motor memory consolidation: The role of exercise intensity and timing. R. THOMAS*; L. K. JOHNSEN; S. S. GEERTSEN; L. CHRISTIANSEN; M. ROIG; J. LUNDBYE-JENSEN. *Univ. of Copenhagen, Univ. of Copenhagen, McGill Univ.*

4:00 AA15 **816.28** Visuomotor learning in stable versus random task environments. E. R. BUCH*; V. P. BUCH; L. G. COHEN. *NINDS, NIH.*

POSTER

817. Human Memory Processes: Encoding, Retrieval, and Consolidation

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 AA16 **817.01** Modulation of task demands suggests that semantic processing interferes with the formation of episodic associations. N. M. LONG*; M. J. KAHANA. *Univ. of Pennsylvania.*

2:00 AA17 **817.02** Neural context reinstatement during episodic memory retrieval with scalp electroencephalography. K. HEALEY*; M. J. KAHANA. *Univ. Of Pennsylvania, Univ. of Pennsylvania.*

3:00 AA18 **817.03** Investigating the neural oscillations involved in processing new "foil" semantic and phonological information. D. A. VOGELSANG*; M. GRUBER; Z. BERGSTROM; C. RANGANATH; J. SIMONS. *Psychology, UC Davis, Univ. of Kent, UC Davis, Univ. of Cambridge.*

4:00 AA19 **817.04** Early Oscillatory correlates of the problem-size effect - an event-related synchronization/ desynchronization (ERS/ERD) analysis. E. T. MULUH*; L. JOHN; E. MULUH. *9 Cumnor Court, 292 Main Road Kenilworth, Univ. of Cape Town, Cape Peninsula Univ. of Technol.*

1:00 AA20 **817.05** Memory related theta gamma coupling in human hippocampal CA1 subfield. N. TCHEMODANOV*; A. TITIZ; E. MANKIN; I. FRIED; N. A. SUTHANA. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles.*

2:00 AA21 **817.06** Hemispheric differences in short-term relational memory after unilateral temporal lobe resection for epilepsy. E. GAGNON*; A. J. RYALS; J. L. VOSS. *Northwestern Univ. Feinberg Sch. of Medicin.*

3:00 AA22 **817.07** An ECoG study of neural correlates of music listening and recall. Y. DING; Y. ZHANG; J. HUANG; W. ZHOU; Z. LIN; B. HONG; X. WANG*. *Tsinghua Univ., Johns Hopkins Univ., Tsinghua Univ., Chinese PLA Gen. Hosp., Johns Hopkins Univ. Sch. Med., Tsinghua Univ.*

4:00 AA23 **817.08** Reducing interference between overlapping memories. A. J. CHANALES*; B. A. KUHL. *New York Univ.*

1:00 AA24 **817.09** Episodic memory updating facilitated by sleep after reactivation and new learning. N. BRYANT*; L. NADEL; R. L. GOMEZ. *The Univ. of Arizona.*

2:00 AA25 **817.10** Change in effects of odor contexts over time that modify mental timeline in relation to the order of remote and recent past episodes. M. ABE*; Y. TAKI; Y. UGAWA. *Inst. of Development, Aging and Cancer, Inst. of Development, Aging and Cancer, Dept. of Neurology, Fac. of Med. Fukushima Med. Univ.*

3:00 AA26 **817.11** How does consolidation influence neural and behavioral integration? A. TOMPARY*; L. DAVACHI. *New York Univ.*

4:00 AA27 **817.12** Neural pattern similarity between encoding and retrieval correlates with memory-based visual task performance. S. OH*; K. CHUANG; C. TAN; P. HSIEH. *Singapore Bioimaging Consortium, Inst. for Infocomm Res., Duke-NUS Grad. Med. Sch.*

1:00 AA28 **817.13** Reinstating mental context with closed-loop neurofeedback. M. T. DEBETTENCOURT*; N. B. TURK-BROWNE; K. A. NORMAN. *Princeton Univ.*

2:00 AA29 **817.14** ▲ Enhancement of numerical processing by combining phase coupled transcranial alternating current stimulation and training. A. LEBEDEVA*; R. COHEN KADOSH; H. ARSLANKOÇ; M. FEURRA. *Natl. Res. Univ. Higher Sch. of Econ, Univ. of Oxford.*

3:00 AA30 **817.15** Features of sleep architecture relate to the neural representation and behavioral stability of memories. E. COWAN*; A. LIU; S. KOTHARE; O. DEVINSKY; L. DAVACHI. *Ctr. For Neural Science/ New York Univ., New York Univ., New York Univ., New York Univ.*

4:00 AA31 **817.16** Intrusions in episodic memory: Reconsolidation or interference? T. SOMMER*; A. KLINGMÜLLER; J. B. CAPLAN. *Univ. Med. Col. Hamburg Eppendorf, Univ. of Alberta.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 AA32 **817.17** Schema representations in hippocampus and medial prefrontal cortex support generalization in novel contexts. R. MOLITOR*; M. L. SCHLICHTING; M. L. MACK; K. F. GUARINO; S. MCKENZIE; H. EICHENBAUM; A. R. PRESTON. *Univ. of Texas At Austin, New York Univ., Boston Univ.*

2:00 AA33 **817.18** Examining the differential course of rule learning using a Bayesian learning approach. A. E. CHANG*; A. S. WHITEMAN; A. JOHNSON; C. E. STERN. *Boston Univ., Bethel Univ.*

3:00 AA34 **817.19** Pattern separation of systematically similar stimuli during delayed matching to sample. R. K. NAUER*; M. F. DUNNE; A. S. WHITEMAN; C. E. STERN; K. SCHON. *Boston Univ., Boston Univ., Boston Univ. Sch. of Med., Boston Univ.*

4:00 AA35 **817.20** Resolving the paradox of mixed positive and negative correlations between confidence and accuracy in memory. P. MASSET*; A. KEPECS. *Cold Spring Harbor Lab.*

1:00 AA36 **817.21** False memories are associated with the reactivation of conceptual gist-related information. E. A. WING*; B. R. GEIB; R. CABEZA. *Duke Univ., Duke Univ.*

2:00 AA37 **817.22** Output format - as well as input format - significantly influences performance in a free-recall multiple trial task. V. M. SOLIS*, SR. *Psychology Dept. Natl. Univ. of Mexico.*

POSTER

818. Human Cognition and Behavior: Attentional Networks

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 AA38 **818.01** Functional organization of the human thalamus and thalamocortical connectivity estimated by intrinsic functional connectivity. K. HWANG*; M. BERTOLERO; M. D'ESPOSITO. *Univ. of California Berkeley, Univ. of California Berkeley.*

2:00 AA39 **818.02** Dissociable functional connectivity of the frontal eye field for overt and covert shifts of attention. M. MACKIE*; T. WU; P. R. HOF; J. FAN. *The Grad. Center, The City Univ. of New Yo, Queens College, The City Univ. of New York, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

3:00 AA40 **818.03** Frontal Eye Fields TMS causes visual cortex excitability to phase-align at beta frequency. D. VENIERO*; S. MORAND; F. DUECKER; A. T. SACK; J. GROSS; G. THUT. *Univ. of Glasgow, Maastricht Univ., Maastricht Univ.*

4:00 AA41 **818.04** The effect of TMS to the frontal cortex on the relationship between arousal, attention, brain state and behaviour. V. RAZDAN; W. LEGON*; W. J. TYLER. *Virginia Tech. Carilion Sch. of Med., Univ. of Minnesota, Arizona State Univ.*

1:00 AA42 **818.05** Isolating regions involved in conflict monitoring and cognitive control: A multi-modal approach to reducing variability in regions of interest. S. A. HOLMES*; M. PETRIDES; L. M. KOSKI. *McGill Univ., McGill Univ.*

2:00 AA43 **818.06** Dissimilar spatiotemporal activation patterns for multiple attention tasks revealed by representational similarity analysis of EEG and fMRI data. V. SALMELA*; E. SALO; J. SALMI; K. ALHO. *Univ. of Helsinki, Advanced Magnetic Imaging Centre, Aalto NeuroImaging, Aalto Univ., Swedish Collegium for Advanced Study.*

3:00 AA44 **818.07** Distinct frontoparietal contributions to goal maintenance and goal directed orienting in visual search. J. M. G. VROMEN*; S. I. BECKER; R. W. REMINGTON; J. B. MATTINGLEY. *The Univ. of Queensland, The Univ. of Queensland.*

4:00 AA45 **818.08** Dissociable effects of attention and expectation during orientation discrimination. N. RUNGRATSAMEETAWEEMANA*; S. ITTHIPURIPAT; J. SERENCES. *UCSD.*

1:00 AA46 **818.09** Granger causal connectivity associated with attention network test. H. CHO*; M. KWON; J. CHOI; S. JUN. *Gwangju Inst. of Sci. and Technol. (GIST).*

2:00 AA47 **818.10** Investigating brain connectivity with simultaneous TMS-fMRI. D. RAHNEV*; J. RIDDLE; D. SHELTRAW; B. INGLIS; M. D'ESPOSITO. *UC Berkeley.*

3:00 AA48 **818.11** ▲ Source-localized EEG phase neurofeedback and its impact on brain activity - an exploratory simultaneous EEG-fMRI study. B. RAUCHMANN*; D. KEESER; V. KIRSCH; B. STAMM; P. REIDLER; T. KARALI; R. THATCHER; S. KARCH; O. POGARELL; B. ERTL-WAGNER. *Inst. of Clin. Radiology, Ludwig-Maximilians Univ., Dept. of Psychiatry and Psychotherapy, Ludwig-Maximilians Univ., Dept. of Neurology, Ludwig-Maximilians Univ., NeuroImaging Lab.*

4:00 BB1 **818.12** The effect of transcutaneous direct current stimulation (TDCS) on brain connectivity and vigilance. L. M. LI*; R. BRAGA; C. DENTON; G. SCOTT; P. HELLYER; R. LEECH; D. J. SHARP. *C3NL, C3NL.*

1:00 BB2 **818.13** Phase dependent modulation of cortical activity produced by transcranial alternating current stimulation. I. R. VIOLANTE*; L. M. LI; T. REED; D. W. CARMICHAEL; J. C. ROTHWELL; D. J. SHARP. *Imperial Col. London, UCL, UCL.*

2:00 BB3 **818.14** ● Electroencephalographic correlates of lateralized spatial attention. R. CHACKO*; A. DAITCH; N. SZRAMA; M. CORBETTA; E. C. LEUTHARDT. *Washington Univ. In St. Louis SOM, Washington Univ. In St. Louis.*

3:00 BB4 **818.15** Neural correlates of attentional benefits and costs: An fMRI study. H. C. LÜCKMANN*; F. DUECKER; V. VAN DE VEN; H. I. JACOBS; A. T. SACK. *Maastricht Univ.*

4:00 BB5 **818.16** Longitudinal modulations of cortical responses during a visual continuous performance task: Effects of practice or intensive meditation training? C. E. POWERS*; A. P. ZANESCO; K. R. WINEBERG; B. G. KING; K. A. MACLEAN; S. R. AICHELE; M. SAGGAR; D. A. BRIDWELL; T. L. JACOBS; A. WALLACE; C. D. SARON. *UC Davis Ctr. For Mind and Brain, UC Davis Ctr. For Mind and Brain, UC Davis Ctr. For Mind and Brain, Univ. of Geneva, Stanford Univ., Mind Res. Network, Santa Barbara Inst. for Consciousness Studies.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB6 **818.17** Resting EEG θ/β ratios increase reliably over the course of intensive three-month meditation retreats. A. C. SKWARA; B. G. KING; A. P. ZANESCO; C. E. POWERS; K. R. WINEBERG; M. SAGGAR; S. R. AICHELE; D. A. BRIDWELL; T. L. JACOBS; K. A. MACLEAN; B. K. SAHDRA; E. FERRER; B. A. WALLACE; C. D. SARON*. *Univ. of California At Davis, Univ. of California At Davis, Stanford Univ., Univ. of Geneva, Mind Res. Network, Australian Catholic Univ., Santa Barbara Inst. for Consciousness Studies.*

2:00 BB7 **818.18** Attention-modulated neural responses to a dynamic visual selective attention task. S. BRESSLER*; L. BONACCI; J. A. KWASA; B. SHINN-CUNNINGHAM. *Boston Univ., Boston Univ.*

3:00 BB8 **818.19** Auditory-biased and visual-biased attentional subdivisions in the cerebellum revealed by functional magnetic resonance imaging. E. J. LEVIN*; A. L. NOYCE; S. W. MICHALKA; J. A. BRISSENDEN; M. A. HALKO; D. C. SOMERS. *Boston Univ., Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr.*

4:00 BB9 **818.20** Auditory attention modulates frontal and temporal oscillatory dynamics in humans: Evidence from electrocorticography. R. VAN DER MEIJ*; A. BIDET-CAULET; J. PARVIZI; N. CRONE; E. CHANG; R. T. KNIGHT; B. VOYTEK. *Univ. of California San Diego, Univ. of Lyon 1, Univ. of California Berkeley, Univ. of California Berkeley, Stanford Neurosci. Inst., The Johns Hopkins Univ. Sch. of Med., Univ. of California San Francisco.*

1:00 BB10 **818.21** Act based on what you expect: Cue-induced expectancy modulates alpha and theta oscillations. K. A. BANGEL; H. A. SLAGTER; D. DENYS*; A. MAZAHERI. *Academic Med. Ctr. Univ. of Amsterdam, Univ. of Amsterdam, Univ. of Birmingham.*

2:00 BB11 **818.22** Influencing visual target detection with oscillatory phase-specific stimulus presentation. R. J. GOUGELET*; T. DONOGHUE; M. PIPER; A. ALTHOFF; T. P. URBACH; B. VOYTEK. *UCSD, UCSD, UCSD.*

3:00 BB12 **818.23** Oscillatory visual cortical alpha disruptions in age-related working memory impairments. T. TRAN*; N. HOFFNER; B. VOYTEK. *UCSD, UCSD, UCSD.*

4:00 BB13 **818.24** Intracranial EEG signatures of conscious visual experience. W. R. XIAO*; R. E. SMITH; G. J. TOULOUMES; C. L. HORIEN; A. RAJA; E. C. MORSE; R. E. WATSKY; S. A. WEISS; S. A. WEISS; W. C. CHEN; D. D. SPENCER; J. L. GERRARD; H. BLUMENFELD. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

1:00 BB14 **818.25** Alteration of inhibition of return in involuntary visuospatial attention in the patients with rapid-eye movement sleep behavior disorder. M. JEONG*; K. CHA; J. CHOI; J. KYONG; B. LEE; B. LYU; D. JUNG; S. KU; T. KIM; J. SUNWOO; J. BYUN; K. JUNG; K. KIM. *Yonsei Univ., Seoul Natl. Univ. Hosp.*

POSTER

819. Human Cognition: Attentional Networks

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 BB15 **819.01** The impact of unexpected salient sounds: Increase in arousal versus attentional capture. A. BIDET-CAULET*. *INSERM U1028, Lyon Neurosci. Res. Center, Brain Dynamics and Cognition Team; CRNL, INSERM U1028, CNRS UMR5292, Univ. of Lyon 1.*

2:00 BB16 **819.02** A human brain network linking arousal to awareness. D. B. FISCHER*; A. BOES; A. DEMERTZI; H. C. EVRARD; S. LAUREYS; B. EDLOW; C. B. SAPER; A. PASCUAL-LEONE; M. D. FOX; J. C. GEERLING. *Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr., Harvard Med. Sch., Harvard Med. Sch. and Massachusetts Gen. Hosp., Hôpital Pitié-Salpêtrière, Univ. and Univ. Hosp. of Liège, Ctr. for Integrative Neurosci., Max-Planck Inst. for Biol. Cybernetics, Harvard Med. Sch. and Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Harvard Med. Sch. and Beth Israel Deaconess Med. Ctr.*

3:00 BB17 **819.03** Increase in the brain's functional small-worldness with the capture of attention. D. GODWIN*; R. MAROIS. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

4:00 BB18 **819.04** Functional organization of the temporoparietal cortex. K. M. IGELSTROM*; T. W. WEBB; M. S. A. GRAZIANO. *Princeton Univ.*

1:00 BB19 **819.05** Selective reorienting response of the left hemisphere to invalid visual targets in the right side of space. F. DORICCHI*; M. SILVETTI; A. DRAGONE; S. LASAPONARA; E. MACALUSO. *Universita' Di Roma la Sapienza - Dept. Di Psicologia, Fondazione Santa Lucia IRCCS, Univ. of Ghent, Fondazione Santa Lucia IRCCS, Universita' "La Sapienza", Fondazione Santa Lucia IRCCS.*

2:00 BB20 **819.06** Visual field asymmetries reflect the retinotopic nature of parietal cortex. S. L. SHEREMATA*; G. L. MALCOLM; S. SHOMSTEIN. *Florida Atlantic Univ., Natl. Inst. of Mental Hlth., George Washington Univ.*

3:00 BB21 **819.07** Auditory and visual biases in 'multiple-demand' regions of human lateral frontal cortex. A. L. NOYCE*; S. W. MICHALKA; B. G. SHINN-CUNNINGHAM; D. C. SOMERS. *Boston Univ., Boston Univ.*

4:00 BB22 **819.08** Modulation of intracranial field potential responses during a spatial attention task reveals a functional hierarchy of processing in the human attention network. A. B. MARTIN*; L. WANG; Y. B. SAALMANN; A. SHESTYUK; N. E. CRONE; J. PARVIZI; R. T. KNIGHT; S. KASTNER. *Princeton Univ., Princeton Univ., Chinese Acad. of Sci., Univ. of Wisconsin – Madison, Univ. of California Berkeley, Univ. of California Berkeley, The Johns Hopkins Hosp., Stanford Univ. Sch. of Med., Univ. of California Berkeley.*

1:00 BB23 **819.09** Frontoparietal determinants of visuospatial attention. T. J. WILSON*; J. J. FOXE. *Albert Einstein Col. of Med.*

2:00 BB24 **819.10** Voxel-wise functional connectivity profiles support task-demand specific network motifs in multiple demand region "Inferior Frontal Junction" (IFJ). P. STIERS*; A. GOULAS. *Fac. of Psychology and Neuroscience, Maastricht Univ., Max Planck Inst. for Human Cognitive and Brain Sci.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 BB25 **819.11** Examining network connectivity associated with the Sustained Attention to Response Task. J. NAIM-FEIL*; E. MOSES; M. RUBINSON; N. LEVIT-BINNUN. *Weizmann Inst. of Sci., Sagol Ctr. for Brain & Mind.*

4:00 BB26 **819.12** DMN function, attention shifting and attention holding compared across humans and monkeys. N. S. CASPARI*; R. VANDENBERGHE; W. VANDUFFEL. *Lab. For Neuro- and Psychophysiology, Univ. Hosp., Lab. for Cognitive Neurol., Harvard Med. Sch., MGH Martinos Ctr. for Biomed. Imaging.*

POSTER

820. Cognition and Behavior: Human Working Memory

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 BB27 **820.01** Examining the effects of long-term high-intensity aerobic training on behaviors associated with the prefrontal cortex, hippocampus and striatum using electroencephalography. J. C. BASSO*; C. CROSTA; T. R. LEE; A. MCHALE; N. PAYNE; S. SHEN; N. SINGH; W. A. SUZUKI. *New York Univ.*

2:00 BB28 **820.02** Individual differences in alpha power modulation by verbal working memory load. Z. HU*; I. SAMUEL; M. DING. *Univ. of Florida.*

3:00 BB29 **820.03** Adult-like resting state network connectivity but hyperconnectivity during visual working memory task in late childhood. P. JIANG; M. TOKARIEV; E. T. ARONEN; O. SALONEN; Y. MA; V. A. VUONTELA*; S. CARLSON. *Inst. of Biomedicine, Aalto Univ. Sch. of Sci., Children's Hospital, Helsinki Univ. and Helsinki Univ. Central Hosp., Helsinki Univ. Central Hosp., Kunming Inst. of Zoology, Chinese Acad. of Sci.*

4:00 BB30 **820.04** Constructing partial representation of objects in visual working memory. J. SAIKI*; Q. LI. *Kyoto Univ., The Univ. of Tokyo.*

1:00 BB31 **820.05** Attentional modulation of the contralateral delay activity (CDA) during working memory retention. D. CISLER*; M. N. JESSO; R. PARASURAMAN; P. GREENWOOD. *George Mason Univ.*

2:00 BB32 **820.06** Characterizing frontal-medial activity in working memory with electrocorticography. E. L. JOHNSON*; S. M. SZCZEPANSKI; J. PARVIZI; J. J. LIN; R. T. KNIGHT. *Univ. of California, Berkeley, Stanford Univ., Univ. of California, Irvine.*

3:00 BB33 **820.07** Working memory for visual motion in human areas MT and MST. A. D. SHELDON*; B. KUNDU; B. ROKERS; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

4:00 BB34 **820.08** Delay-period activity of the parietal cortex depends on working memory load, not interference. M. J. STARRETT*; O. GOSSERIES; J. J. LAROCQUE; E. SAAD; N. COWAN; B. R. POSTLE. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Missouri-Columbia.*

1:00 BB35 **820.09** Modeling current density distribution for transcranial direct current stimulation: Effect of conductivity. M. S. SHERWOOD*; J. H. KANE; M. P. WEISEND. *Wright State Res. Inst., Wright State Univ., Wright State Univ.*

2:00 BB36 **820.10** A synaptic theory of limited capacity of working memory. Y. MI; M. V. TSODYKS*. *Weizmann Inst. of Sci., Beijing Normal Univ.*

3:00 BB37 **820.11** Evoked responses and alpha oscillations reflect the top-down modulation of working memory representations. S. LIM*; M. WÖSTMANN; J. OBLESER. *Max Planck Inst. for Human Cognitive and Brain Sci.*

4:00 BB38 **820.12** Working memory in mouse and man: Novel genetic variants in the formiminotransferase cyclodeaminase (FTCD) gene identified in mice and assessed in humans. K. D. SCHMIDT*; R. JANKORD; M. LIN; R. LIPSKY; R. PARASURAMAN; P. M. GREENWOOD. *The Air Force Res. Lab., George Mason Univ.*

1:00 BB39 **820.13** Features of neurodynamics of the human brain during a memory task depending on the level of emotional burnout. S. TUKAEV*; M. SYVASH. *Natl. Taras Shevchenko Univ. of Kyiv, ESC, Natl. Taras Shevchenko Univ. of Kyiv, ESC "Institute of Biology".*

2:00 BB40 **820.14** Facilitation of working memory training and transfer by prefrontal transcranial direct current stimulation (tDCS). C. PLEWNIA*; P. RUF. *Univ. of Tuebingen.*

3:00 BB41 **820.15** Distinct effects of dopamine and subthalamic nucleus stimulation in associative learning and retention in Parkinson's disease. J. VENTRE-DOMINEY*; H. MOLLION; E. BROUSSOLLE. *INSERM, Neurol. Hosp.*

4:00 BB42 **820.16** The neural correlates of working memory for temporal order information: An fMRI study. Y. CHEN*; Y. FANG; C. LIN; O. J. TZENG; H. HUANG; C. HUANG. *Academia Sinica, Buddhist Tzu Chi Gen. Hospital-Taipei Br., Inst. of Neuroscience, Natl. Yang-Ming Univ., Natl. Chiao-Tung Univ., Dept. of Applied Chinese Language and Culture, Natl. Taiwan Normal Univ., Inst. of Mol. Med. and Bioengineering, Natl. Chiao-Tung Univ.*

1:00 BB43 **820.17** Neuroplasticity in the congenitally blind: Working memory training alters large-scale interactions of visual cortex. J. M. RIMMELE*; H. GUDI; G. NOLTE; B. RÖDER; A. K. ENGEL. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Hamburg.*

2:00 BB44 **820.18** A master map of visual-spatial working memory: Meta-analysis of neuroimaging data. Y. LIANG*; C. HUANG. *Natl. Chiao-Tung University,, Natl. Chiao-Tung Univ., Natl. Chiao-Tung Univ.*

3:00 BB45 **820.19** Distractor-resistant working memory representations revealed with MEG. K. KOMEK KIRLI; K. K. SREENIVASAN*. *New York Univ. Abu Dhabi.*

4:00 BB46 **820.20** ▲ Moving dipoles analysis and it's implication during stroop task : MEG Study. S. HWANG*; W. CHANG; B. KIM; J. CHANG. *Dept. of Neurosurgery, Yonsei University, Col. of Med., Grad. Sch. of Med. Science, Yonsei Univ. Col. of Med., Brain Korea 21 PLUS Project for Med. Science, Yonsei Univ., EIT/LOFUS R&D Ctr. Intl. St. Mary's Hospital, Catholic Kwandong Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB47 **820.21** Energy drinks effects on cognitive performance as measured by auditory event-related potentials and quantitative EEG in college students. C. WALLACE; N. R. CAPRILES*. *Kentucky State Univ.*

2:00 BB48 **820.22** ▲ Dual task of working memory in action video game players: Prefrontal eeg correlation. J. C. LLAMAS*; M. L. ALMANZA-SEPÚLVEDA; M. HERNÁNDEZ-GONZÁLEZ; M. A. GUEVARA. *Inst. of Neurosci.*

3:00 BB49 **820.23** Withdrawn.

4:00 BB50 **820.24** Intracranial oscillatory activity in patients performing an object-in-place scene memory task. J. J. YOUNG*; A. FAZL; L. V. MARCUSE; M. C. FIELDS; M. G. BAXTER. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai.*

1:00 BB51 **820.25** Title:Study of working memory capacity by cerebral blood flow changes : Study using reading span test. K. TAKI*; T. HIROYASU. *Doshisha Univ.*

2:00 BB52 **820.26** The contralateral delay measures spatial working memory and is altered with encoding strategy. L. RABBITT*; M. S. PETERSON; C. G. MCDONALD. *George Mason Univ.*

3:00 BB53 **820.27** Neural correlates of signal detection parameters for working memory. T. KARPOUZIAN*; H. BREITER; J. REILLY. *Northwestern Univ. Feinberg Sch. of Med.*

4:00 BB54 **820.28** A whole report approach improves assessment of item precision in visual working memory. B. PETERS*; B. RAHM; C. BARNES; J. KAISER; C. BLEDOWSKI. *Goethe-University, Univ. Med. Ctr.*

1:00 BB55 **820.29** Distractor resistance for precise visual working memory. E. S. LORENC*; K. K. SREENIVASAN; D. E. NEE; A. R. E. VANDENBROUCKE; M. D'ESPOSITO. *UC Berkeley, New York Univ. Abu Dhabi.*

2:00 BB56 **820.30** The neural correlates of unattended working memory representations. A. R. VANDENBROUCKE*; E. S. LORENC; D. E. NEE; F. P. DE LANGE; M. D'ESPOSITO. *Univ. of California, Berkeley, Donders Inst. for Brain, Cognition and Behavior.*

POSTER

821. Individual Differences

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 BB57 **821.01** Relationship between large-scale cortical networks estimated by structural covariance and resting-state functional connectivity MRI. E. DUPRE*; N. SPRENG. *Cornell Univ.*

2:00 BB58 **821.02** Function follows form: Relating brain anatomy and physiology to cognition and psychology. C. KERR*; R. M. STUART; K. F. TURNER. *Univ. of Sydney, State Univ. of New York Downstate Med. Ctr., Westmead Hosp., Univ. of Copenhagen, Univ. of Chicago.*

3:00 BB59 **821.03** The relationship between individual difference factors and brain activity varies across tasks and brain regions. B. O. TURNER*; M. B. MILLER. *Univ. of California, Santa Barbara.*

4:00 BB60 **821.04** ▲ A polygenic risk profile for schizophrenia is associated with intrinsic connectivity of the dorsolateral prefrontal cortex and general cognitive ability. J. MILLER*; M. SCULT; Q. CHEN; D. WEINBERGER; A. HARIRI. *Duke Univ., Duke Univ., Lieber Inst. for Brain Develop.*

1:00 BB61 **821.05** ▲ Verbal ability and inner speech qualities. T. M. MILEWSKI*; A. GESHEVA; R. ANTONAWICH; J. T. CANNON; P. T. ORR. *Univ. of Scranton, Univ. of Scranton.*

2:00 BB62 **821.06** ● Dissociable effects of different strains of cannabis on the human brain's major resting-state networks. M. B. WALL*; R. A. POPE; T. FREEMAN; C. MOKRYSZ; C. HINDOCHA; W. LAWN; M. BLOOMFIELD; A. MOSS; D. J. NUTT; H. V. CURRAN. *Imanova Ctr. for Imaging Sci., Univ. Col. London, Imperial Col. London, Univ. Col. London, Imperial Col. London.*

3:00 BB63 **821.07** ▲ Years of use of marijuana and episodes of consumption during the last month reduce efficiency in procedural learning. U. CABALLERO SÁNCHEZ*; T. V. ROMÁN-LÓPEZ; H. I. GUILLERMO-MONTIEL; C. B. ROSAS-ESCOBAR; E. I. ORTEGA-MORA; J. A. GONZÁLEZ-BARRIOS; O. PROSPERO-GARCÍA; A. E. RUIZ-CONTRERAS. *Univ. Nacional Autónoma De México, Lab. de Medicina Genómica, Hosp. regional 1° de Octubre, ISSSTE, Lab. de Cannabinoides, Dpto. de Fisiología, Fac. de Medicina.*

4:00 BB64 **821.08** ▲ Genetic variation of the cannabinoid receptor 1 is associated with the distraction vulnerability in marijuana users and non-users. C. B. ROSAS ESCOBAR*; U. CABALLERO-SÁNCHEZ; E. I. ORTEGA-MORA; H. I. GUILLERMO-MONTIEL; T. V. ROMÁN-LÓPEZ; J. A. GONZÁLEZ-BARRIOS; O. PROSPÉRO-GARCÍA; A. E. RUIZ-CONTRERAS. *LAB. NEUROGENOMICA COGNITIVA, Lab. de Medicina Genómica, Hosp. Regional 1° de Octubre, ISSSTE., Lab. de Cannabinoides, Depto. Fisiología,Facultad de Medicina UNAM.*

1:00 BB65 **821.09** Genetic variation of the cannabinoid receptor 1 is associated with accuracy differences in working memory maintenance in marijuana users. T. V. ROMÁN-LÓPEZ*; E. I. ORTEGA-MORA; C. B. ROSAS-ESCOBAR; U. CABALLERO-SÁNCHEZ; H. I. GUILLERMO-MONTIEL; J. A. GONZÁLEZ-BARRIOS; O. PROSPÉRO-GARCÍA; A. E. RUIZ-CONTRERAS. *Lab. Neurogenomica Cognitiva, Fac. Psicologia, UNAM, Lab. de Medicina Genómica, Hosp. Regional 1° de Octubre, ISSSTE, Lab. de Canabinoides, Depto. Fisiología, Fac. Medicina, UNAM.*

2:00 BB66 **821.10** Interaction of rs2180619 of the CNR1 gene, sex and marijuana use in executive attention. E. I. ORTEGA MORA*; C. B. ROSAS-ESCOBAR; U. CABALLERO-SÁNCHEZ; T. V. ROMÁN-LÓPEZ; H. I. GUILLERMO-MONTIEL; J. A. GONZALEZ-BARRIOS; O. PROSPERO-GARCIA; A. E. RUIZ-CONTRERAS. *Univ. Nacional Autónoma De México; Fac. Psi, Fac. Psicologia, Univ. Nacional Autónoma México,, Hosp. Regional 1° de Octubre, ISSSTE., Fac. Medicina, Univ. Nacional Autónoma México.*

3:00 BB67 **821.11** Fractional anisotropy in the left uncinate fasciculus and the inferior cingulum differentially predict memory and executive functions in older adults. M. B. SCHMIT*; K. KAWA; A. STICKEL; L. RYAN. *Univ. of Arizona.*

4:00 BB68 **821.12** Exploring the neurocognitive mechanisms underlying trigger failures in the stop-signal paradigm. W. BOEKEL*; D. MATZKE; A. HEATHCOTE; B. U. FORSTMANN. *Univ. of Amsterdam, Univ. of Tasmania.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB69 **821.13** Fronto-parietal networks activation reflects varying attentional demands during dual-task. G. KWON*; S. LIM; M. KIM; H. KWON; Y. LEE; K. KIM; E. LEE; M. SUH. *IBS, Sungkyunkwan Univ., SAIHST, Sungkyunkwan Univ., Korea Res. Inst. of Standards and Sci., Univ. of Sci. and Technol., Sungkyunkwan Univ., Sungkyunkwan Univ., Sungkyunkwan Univ.*

2:00 BB70 **821.14** Functional and anatomical dissociation of interhemispheric transfer in human sensory systems. E. GENC*; P. FRIEDRICH; S. OCKLENBURG; O. GÜNTÜRKÜN. *Ruhr Univ. Bochum.*

3:00 BB71 **821.15** The effect of hemispheric asymmetry and handedness on p300 responses. P. CHUA*; M. TAN; Y. YANG; F. TEY. *DSO Natl. Labs., ST Engin.*

4:00 BB72 **821.16** ▲ Distinct patterns of interactions between resting state networks are related to different facets of Theory of Mind. N. T. GALLAGHER*; A. RIGON; M. M. SWIFT; M. C. DUFF; M. W. VOSS. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

1:00 BB73 **821.17** Amygdala and insula response to social and non-social affective scenes in women with different trauma types. O. KLESHCHOVA*; S. A. YOON; M. R. WEIERICH. *The Grad. Center, City Univ. of New York, Hunter College, City Univ. of New York.*

2:00 BB74 **821.18** ● Culture traits affect our perceptual processing to social cues. Y. LEE*; P. HO; H. LIU; P. SHIH; H. HUANG; C. HUANG; C. WU. *Natl. Taiwan Univ., Dept. of Biol. Sci. and Technology, Natl. Chiao-Tung Univ., Inst. of Mol. Med. and Bioengineering, Natl. Chiao-Tung Univ., Dept. of Imaging Physics, Univ. of Texas MD Anderson Cancer Ctr., Dept. of Applied Chinese Language and Culture, Natl. Taiwan Normal Univ., Dept. of Psychiatry, Natl. Taiwan Univ. Hosp. & Col. of Med.*

3:00 BB75 **821.19** Culture-related differences in the contextual processing of visual scene: An fMRI study. P. HO*; Y. LEE; H. LIU; D. TSENG; Y. CHANG; R. DOOLE; C. WU; H. HUANG; C. HUANG. *Natl. Chiao Tung Univ., Natl. Chiao-Tung Univ., Col. of Medicine, Natl. Taiwan Univ., Univ. of Texas MD Anderson Cancer Ctr., Natl. Taiwan Univ. Hosp. & Col. of Med., Natl. Taiwan Normal Univ.*

4:00 BB76 **821.20** ▲ Neural responses to masked and unmasked threat faces in children at risk for anxiety. A. D. GILMORE*; B. C. TABER-THOMAS; E. AUDAY; X. FU; K. E. PEREZ-EDGAR. *Pennsylvania State Univ.*

1:00 BB77 **821.21** Intrinsic functional connectivity correlates of frontal EEG asymmetry and risk for anxiety. B. C. TABER-THOMAS*; P. GALINSKY; A. GILMORE; N. THAI; S. MORALES; K. E. PEREZ-EDGAR. *Pennsylvania State Univ.*

2:00 BB78 **821.22** Breakfast consumption and mental rotations performance. P. T. ORR*; J. L. BACHMAN. *Univ. of Scranton, Univ. of Scranton, Univ. of Scranton.*

POSTER

822. Behavioral Training and Social Cognition

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 BB79 **822.01** Social company modulates conditioned disgust in male rats. N. BOULET*; C. J. CLOUTIER-DUKE; M. KAVALIERS; P. OSSENKOPP. *Western Univ.*

2:00 BB80 **822.02** Patterns of oxytocin receptor expression in the rodent central nervous system. M. MITRE*; B. MARLIN; S. NORDEN; E. MORINA; C. AOKI; R. FROEMKE; M. CHAO. *NYU Sch. of Med., NYU Sch. of Med., New York Univ. Sch. of Med., NYU Ctr. for Neural Sci., New York Univ. Sch. of Med., new York Univ. Sch. of Med.*

3:00 BB81 **822.03** Study of post-pubertal social behaviors in males and females coming from maternal hypothyroidism: A link for neurodevelopmental aspects in autism-related conditions? C. A. PENATTI*; J. C. SILVA; M. O. RIBEIRO; G. GIANNOCCO. *UNINOVE - Univ. Nove De Julho, UNINOVE - Univ. Nove De Julho, Mackenzie Presbyterian Univ., UNIFESP - Federal Univ. of São Paulo.*

4:00 BB82 **822.04** Social involvement modulates the response to novel and adverse life events in mice. A. LEVINE*; S. GRULEAU; L. COLNAGHI. *Columbia Univ., CAMH.*

1:00 BB83 **822.05** Oxytocin neuromodulation of pyramidal cells in CA2. N. N. TIRKO*; M. MITRE; B. J. MARLIN; R. C. FROEMKE; M. V. CHAO; R. W. TSIEN. *NYU Sch. of Med., NYU Sch. of Med.*

2:00 BB84 **822.06** Oxytocin in the bed nucleus of the stria terminalis and central amygdala regulates social behavior in sex-specific ways in rats. K. M. DUMAIS*; A. G. ALONSO; T. C. GILLESPIE; D. CHO; R. BREDEWOLD; A. VEENEMA. *Boston Col.*

3:00 BB85 **822.07** 16p11.2 deletion mice display cognitive deficits in touchscreen learning and novelty recognition tasks. M. YANG*; F. C. LEWIS; G. M. FOLEY; M. S. SARVI; J. N. CRAWLEY. *UC Davis Sch. of Med., UC Davis Sch. of Med.*

4:00 BB86 **822.08** GWAS of foraging behavior in *Drosophila* melanogaster. Q. YANG*; W. CHI; Y. G. LEE; W. DU; C. KEMKEMER; S. A. TURKSON; M. LONG; X. ZHUANG. *The Univ. of Chicago, The Univ. of Chicago, The Univ. of Chicago, Wayne State Univ.*

1:00 BB87 **822.09** Differentially expressed glutamate and dopamine receptors in two sister species of wild birds with widely divergent cognitive abilities. J. AUDET*; L. KAYELLO; S. DUCATEZ; E. D. JARVIS; L. A. O'CONNELL; L. LEFEBVRE. *McGill Univ., Duke Univ. and Howard Hughes Med. Inst., Harvard Univ.*

2:00 BB88 **822.10** ▲ Extinction of spatial navigation in the Morris water task: The effect of brief reminders. T. DONALDSON*; C. M. MAGCALAS; D. BARTO; K. G. AKERS; D. A. HAMILTON. *Univ. of New Mexico, Wayne State Univ.*

3:00 BB89 **822.11** Development in a novel maze-task device for macaques to explore the neural mechanisms underlying motor skill learning. R. YASUKOCHI; K. INOUE; M. TAKADA*. *Primate Res. Institute, Kyoto Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 BB90 **822.12** Operant conditioning in neuroscience: Testing beyond motor and sensory deficits. M. M. ANDREWS*; S. PERUZZARO; J. ROSSIGNOL; G. DUNBAR; M. REILLY. *Central Michigan Univ., Field Neurosciences Inst., Central Michigan Univ., Central Michigan Univ.*

POSTER

823. Learning and Memory: Neurotransmitter-Receptor Systems

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 BB91 **823.01** Effects of combined adenosine A2A and dopaminergic receptor antagonism on within-session concurrent discrimination learning. B. A. CORGIAT*; A. PISCAPELLO; M. GORSICH; A. GARCIA; M. MISHKIN; J. TURCHI. *NIMH/NIH.*

2:00 BB92 **823.02** ● Dopamine D3 receptor antagonism contributes to the reversal of PCP-induced NOR deficit by blonanserin and induces cortical dopamine and acetylcholine efflux. M. MIYAUCHI*; M. HUANG; S. KWON; N. M. NEUGEBAUER; L. RAJAGOPAL; Y. OYAMADA; H. Y. MELTZER. *Northwestern Univ.*

3:00 BB93 **823.03** Haloperidol injected in thalamic reticular nucleus induces cognitive deficits evaluated in Morris maze in rat. E. C. CHUC-MEZA*; D. MORALES-MARTÍNEZ; G. AVILA-VELARDE. *Natl. Sch. Biolog Sci. IPN.*

4:00 CC1 **823.04** ● RP5063 reverses and prevents sub-chronic phencyclidine-induced declarative memory deficits and increased dopamine efflux in the prefrontal cortex region in C57BL/6J mice. S. KWON*; L. RAJAGOPAL; M. HUANG; E. E. MICHAEL; H. Y. MELTZER. *Northwestern Univ.*

1:00 CC2 **823.05** Effects of the NMDA receptor antagonists CPP and Ro 25-6981 on performance of the trial-unique, delayed nonmatching-to-location (TUNL) task in rats. D. A. DAVIES*; J. L. HURTUBISE; J. G. HOWLAND. *Univ. of Saskatchewan.*

2:00 CC3 **823.06** ● ▲ Comparison of pan- and NR2B-selective NMDA receptor antagonists on locomotor and exploratory behavior, spatial memory acquisition and c-fos expression in rats. L. M. FLEMING; L. S. WATSON; M. S. JOHNSON; L. R. CORRUBIA; N. M. SIGNOR; H. G. CHMURA; F. S. MENNITI; R. E. GRAHN*. *Connecticut Col., Mnemosyne Pharmaceuticals.*

3:00 CC4 **823.07** ▲ Bumetanide demonstrates amelioration of learning and memory deficits induced by ketamine administration in a neonatal rat model. R. STEVENS*; S. KOKANE; B. BUTLER; A. WOMACK; Q. LIN. *Univ. of Texas At Arlington, Univ. of Texas At Arlington.*

4:00 CC5 **823.08** A generalized multisensory binding impairment in ketamine-treated rats: Reversal by α4β2 nicotinic receptor stimulation of the GABAergic system within the orbitofrontal cortex. J. M. CLOKE*; S. DE LISIO; A. DRUMM; K. BARTON; B. D. WINTERS. *Univ. of Guelph.*

1:00 CC6 **823.09** Synergistic interaction of NMDA and muscarinic receptors in simple response learning. I. M. WHITE*; Z. ABBOTT; W. WHITE. *Morehead State Univ.*

2:00 CC7 **823.10** An intra-amygdala injection of the GABAA agonist, muscimol, prevents fear-induced underestimation of duration. T. KAMADA*; T. HATA. *Doshisha Univ.*

3:00 CC8 **823.11** ● Distribution of 5-HT_6 receptor mRNA in the rat brain and effects of the 5-HT_6 antagonist idalopirdine on extracellular levels of neurotransmitters and neuronal oscillations. A. MORK*; G. SMAGIN; L. HELBOE; K. F. HERRIK; M. A. FORASTER; D. SONG; D. P. BUDAC; H. ARMANDI; I. E. M. DE JONG. *H. Lundbeck A/S, Lundbeck Res. USA.*

4:00 CC9 **823.12** ● Serotonin (5-HT)7 receptor antagonists reduces cortical and striatal glutamate efflux and reverses cognitive impairment induced by phencyclidine. M. HUANG*; L. RAJAGOPAL; S. KWON; E. E. MICHAEL; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med.*

1:00 CC10 **823.13** The selective serotonin (5-HT)7R antagonist, SB269970 prevents and reverses declarative memory deficits produced by sub-chronic phencyclidine in mice and normalizes hippocampal long-term potentiation. L. RAJAGOPAL*; H. FERNANDES; M. HUANG; A. CONTRACTOR; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med., Norhtwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ.*

2:00 CC11 **823.14** ▲ Differential hippocampal expression of 5htr1a in conditioned suppression of fear memory. C. R. ZAMBERLAM; L. MORAES; J. M. CERUTTI; S. M. CERUTTI*. *Univ. Federal De Sao Paulo.*

3:00 CC12 **823.15** Brain functions and dysfunctions: Memory, serotonin and neural markers. A. MENESES*. *Cinvestav - IPN.*

4:00 CC13 **823.16** ● SUVN-I1411030, muscarinic (M1) acetylcholine receptor- positive allosteric modulator (PAM) for the treatment of age associated cognitive impairment. R. ABRAHAM*; R. SUBRAMANIAN; R. BABU MEDAPATI; R. VENKATESHWARLU; S. YATHAVAKILLA; S. IRUPANNANAVAR; R. CHOWDARY; V. UTHUKAM; B. DEVARAPALLI; S. PANDEY; A. SHINDE; V. TIRIVEEDHI; V. REBALLI; R. NIROGI. *Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci.*

1:00 CC14 **823.17** ● Improvement in translatable touchscreen tests of memory and attention with an M1 muscarinic positive allosteric modulator in rhesus monkeys. H. S. LANGE*; C. E. CANNON; J. DROTT; S. D. KUDUK; J. M. USLANER. *Merck Res. Labs., Merck Res. Labs.*

2:00 CC15 **823.18** Scopolamine creates dose-dependent memory rather than sensorimotor impairment of latent learning in the water maze. J. J. IZYGON*; D. M. NGHIEM; M. M. HENCEROTH-CHOMIAK; D. J. MCGHIEY; R. TIJERINAR; M. F. MERIANO; P. GOYARZU; J. L. HAVENS; D. H. MALIN. *Univ. of Houston Clear Lake.*

3:00 CC16 **823.19** Memory reconsolidation and scopolamine-induced amnesia modulated by guineensine in BALB/c mice. I. C. REYNOSO-MORENO*; A. N. ROSAS-ESCAREÑO; C. R. GUZMAN-PEREZ; M. E. FLORES-SOTO; J. M. VIVEROS-PAREDES. *Univ. De Guadalajara (CUCEI), Ctr. de Investigacion Biomedica de Occidente.*

4:00 CC17 **823.20** Evaluating putative deficit models in a hippocampal-dependent assay sensitive to task manipulations, aging and pharmacology. R. GRAF*; J. L. LONGO; Z. HUGHES. *Pfizer Inc., Northeastern Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 CC18 **823.21** Blocking α7 nicotinic acetylcholine receptors improves specifically memory acquisition. N. P. VAN GOETHEM*; E. FEDELE; D. PUZZO; C. REBOSIO; W. GULISANO; A. PALMERI; L. P. WENNOGLE; Y. PENG; H. W. M. STEINBUSCH; J. PRICKAERTS. *Maastricht Univ., Univ. of Genoa, Univ. of Catania, Intra-Cellular Therapies, Inc.*

2:00 CC19 **823.22** Effects of amnestic drugs on memory capacity in the rodent odor span task. M. MATHEWS; D. PANOZ-BROWN; A. PRICHARD; S. HESS; K. GOBENCIONG; J. COFFMAN; J. GALIZIO*. *Univ. North Carolina.*

3:00 CC20 **823.23** Methamphetamine-induced changes to monoamine neurotransmission and allocentric learning and memory in barren-housed adult rats. A. GUTIERREZ*; S. A. JABLONSKI; R. M. AMOS-KROOHS; A. A. BRAUN; M. T. WILLIAMS; C. V. VORHEES. *Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Univ. of Wisconsin-Madison.*

4:00 CC21 **823.24** GPR55 modulates procedural memory. B. A. MARICHAL-CANCINO*; A. SÁNCHEZ-FUENTES; M. MÉNDEZ-DÍAZ; A. E. RUIZ-CONTRERAS; Ó. PROSPÉRO-GARCÍA. *Lab. De Cannabinoides, Fac. De Medicina, UNAM, Lab. de Neurogenómica Cognitiva, Facultad de Psicología, UNAM.*

1:00 CC22 **823.25** ● Increased learning rate in a visual discrimination and reversal learning task by chronic GPR6-antagonist treatment. H. S. LINDGREN*; P. HJØRRINGGAARD LARSEN; I. VESTERGAARD KLEWE. *H.Lundbeck A/S.*

POSTER

824. Fear Memory: Neural Circuits

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 CC23 **824.01** Prelimbic cortex hyperactivation during fear memory consolidation or reconsolidation induces maladaptive behaviors outcomes in rats. A. C. VANVOSSEN*; C. A. J. STERN; M. A. M. PORTES; L. J. BERTOGLIO. *Univ. Federal De Santa Catarina.*

2:00 CC24 **824.02** Effects of optogenetic stimulation of the rat lateral and ventrolateral periaqueductal gray on fear behaviour and fear learning. N. ASSAREH*; G. P. MCNALLY. *Univ. of New South Wales.*

3:00 CC25 **824.03** Neural correlates of fear in rats foraging for food and encountering a 'predatory' threat. E. KIM*; M. KONG; S. PARK; M. PARK; S. J. Y. MIZUMORI; J. CHO; J. J. KIM. *Univ. of Washington, Korea Inst. of Sci. and Technol., Korea Univ. of Sci. & Technol., Univ. of Washington.*

4:00 CC26 **824.04** Stimulus-specific enhanced contextual fear learning following lateral fluid percussion experimental traumatic brain injury. A. N. HOFFMAN*; J. LAM; Y. CAI; C. C. GIZA; D. A. HOVDA; M. S. FANSELOW. *UCLA, UCLA.*

1:00 CC27 **824.05** Differential involvement of cortical areas in associative memory formation and retrieval in three versions of cued fear conditioning task in mice. O. I. IVASHKINA*; K. TOROPOVA; M. ROSHCHINA; T. KUNITSYNA; N. VOROBYEVA; K. ANOKHIN. *NRC Kurchatov Institute, NBICS-Center, Inst. of Higher Nervous Activity and Neurophysiol., Anokhin Inst. of Normal Physiol., Moscow Inst. of Physics and Technol.*

2:00 CC28 **824.06** Activity-dependent structural plasticity after fear conditioning in amygdala and auditory cortex pyramidal neurons. T. GRUENE*; K. FLICK; S. RENDALL; J. GRAY; R. SHANSKY. *Northeastern Univ., Harvard Med. Sch.*

3:00 CC29 **824.07** Amygdala is essential for hippocampal place cells to encode a distance gradient of fear in foraging rats. M. KONG*; E. KIM; M. PARK; S. PARK; J. CHO; J. J. KIM. *Univ. of Washington, Korea Inst. of Sci. and Technol., Korea Univ. of Sci. and Technol., Program in Neurobio. & Behavior.*

4:00 CC30 **824.08** Fear conditioning using a two-tone discrimination paradigm: Potential use for chronic stress investigations. J. M. JUDD*; K. J. NISHIMURA; C. R. ARNETT; F. SANABRIA; C. D. CONRAD. *Arizona State Univ.*

1:00 CC31 **824.09** The indirect pathway from entorhinal cortex to CA3 should be used during recall of hippocampal conjunctive representations. F. B. KRASNE*; M. S. FANSELOW; J. D. CUSHMAN. *UCLA, UCLA, UCLA.*

2:00 CC32 **824.10** Modulating innate fear based on visual stimulus by a novel subcortical pathway in mice. N. LIU*; P. WEI; X. LIU; Y. TANG; Y. LIU; Z. ZHOU; L. WANG. *Shenzhen Inst. of Advanced Technology, Chines.*

3:00 CC33 **824.11** Dissociation of the medial and lateral habenula in the expression of unconditioned defensive behavior. B. A. PELLMAN*; E. KIM; Y. RAO; J. J. KIM. *Univ. of Washington, Univ. of Washington.*

4:00 CC34 **824.12** Behavioral, neuroanatomical, neuroendocrine and neurochemical features of the expression phase of fear conditioning to a light-CS. A. R. OLIVEIRA*; A. E. REIMER; L. ALBRECHET-SOUZA; F. M. C. V. REIS; M. C. CARVALHO; M. L. BRANDÃO. *Univ. Federal de São Carlos, INeC, Univ. de São Paulo, Univ. Federal do Rio Grande do Sul.*

1:00 CC35 **824.13** Chemogenetic inhibition of the ventromedial prefrontal cortex increases fear generalization and impairs fear extinction. Z. T. PENNINGTON*; J. Z. AVERSHAL; A. S. ANDERSON; M. S. FANSELOW. *UCLA.*

POSTER

825. Decision Making: Neuropharmacology

Theme F: Cognition and Behavior

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 CC36 **825.01** Serotonin, affective biases and prefrontal control. H. E. DEN OUDEN*; D. E. M. GEURTS; K. SCHMIDT; N. D. DAW; R. COOLS. *Radboud Univ., Radboud Univ., Oxford Univ., New York Univ.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 CC37 **825.02** Opioidergic modulation of cost-benefit decision making of AA rats in rat Casino-model. V. OINIO*; P. BÄCKSTRÖM; J. UHARI-VÄÄNÄNEN; A. RAASMAJA; K. KIIANMAA; P. PIEPPONEN. *Univ. of Helsinki, Natl. institute for health and welfare.*

3:00 CC38 **825.03** Content analysis of dreams induced by an alleged oneirogenic plant: Calea zacatechichi. A. ROSALES-LAGARDE*; L. MAYAGOITIA; J. GONZÁLEZ; J. DÍAZ. *CONACYT-UAEH, Inst. Nacional de Psiquiatría Ramón de la Fuente, Univ. Autónoma del Estado de Morelos, Univ. Nacional Autónoma de México.*

4:00 CC39 **825.04** Role of serotonin in the motivational control of behavior: A pharmacological challenge in humans. N. BORDERIES*; R. LEBOUC; F. MEYNIEL; J. CORVOL; F. VINCKIER; M. PESSIGLIONE. *Brain and Spine Inst., Neurospin.*

1:00 CC40 **825.05** Should I stay or should I go? Individual differences in effects of methylphenidate on the affective biasing of instrumental action. J. C. SWART*; J. L. COOK; M. I. FROBÖSE; S. J. FALLON; D. E. M. GEURTS; R. COOLS; H. E. M. DEN OUDEN. *Radboud Univ., City Univ. London, Univ. of Oxford, Radboud Univ. Med. Ctr.*

2:00 CC41 **825.06** The effects of stress on effort-based decision making: Evidence from one model. E. E. HART*; A. STOLYAROVA; T. R. MINOR; A. IZQUIERDO. *UCLA.*

3:00 CC42 **825.07** Methylphenidate alters decision making about cognitive control. M. I. FROBOSE*; J. C. SWART; J. L. COOK; D. E. M. GEURTS; S. J. FALLON; H. E. M. DEN OUDEN; R. COOLS. *Radboud Univ. Nijmegen, City Univ. London, Univ. of Oxford, Radboud Univ. Med. Ctr.*

4:00 CC43 **825.08** ● Action initiation shapes mesolimbic dopamine encoding of future rewards. E. C. J. SYED; L. L. GRIMA; P. J. MAGILL; P. BROWN; M. E. WALTON*. *Univ. of Oxford, Univ. of Oxford, Univ. of Oxford.*

1:00 CC44 **825.09** Phasic dopamine release in the nucleus accumbens shell encodes the individual difference in impulsive decision making. X. XIE*; L. WILSON; B. GUZIK; C. LEE; L. QI; K. BLANTON; L. SOMBERS. *North Carolina State Univ.*

2:00 CC45 **825.10** Evaluating the role of striatal dopamine D2, glutamate mGluR5, and adenosine A2a receptor interactions in a rat model of risky decision-making. C. M. GOBIN; C. A. ORSINI; B. SETLOW; M. SCHWENDT*. *Univ. of Florida, Univ. of Florida.*

POSTER

826. Technology Development: DNA and Protein Imaging

Theme G: Novel Methods and Technology Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 CC46 **826.01** ▲ Silver-graphene dots as nanoscale imaging probes for correlative optical and electron microscopy. C. SANTIAGO-ROBLES+; K. HABIBA+; I. I. TORRES-VAZQUEZ+; N. MARTINEZ-RIVERA; J. L. SERRANO-VELEZ; V. I. MAKAROV; G. MORELL; B. R. WEINER; R. D. POWELL; V. JOSHI; E. ROSA-MOLINAR*. *Univ. Puerto Rico-Rio Piedras, Univ. of Puerto Rico-Rio Piedras, Univ. of Puerto Rico-Rio Piedras, Univ. of Puerto Rico-Rio Piedras, Nanoprobes Inc., Marine Biol. Lab.*

2:00 CC47 **826.02** Refer to Saturday PM Dynamic Poster presentation DP01.02.

3:00 CC48 **826.03** Visualization of myelin during development using black gold two. R. A. DEYO*; M. D. ALLEN; K. J. NELSON. *Winona State Univ., Winona State Univ.*

4:00 CC49 **826.04** Coherent quantum control in fluorescent dyes and caged neurotransmitter compounds by femtosecond pulse shaping. E. D. ARK*; S. YOU; H. TU; S. A. BOPPART. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

1:00 CC50 **826.05** Zinpyr-1 in flash frozen tissue can be used to show increased Zn fluorescence in the dentate gyrus and CA3 region of the hippocampus. S. L. LIPPI*; D. D. CERRI; J. M. FLINN. *George Mason Univ.*

2:00 CC51 **826.06** Degeneration and normal neuron staining method to aid in quantitative analysis. B. TIPTON*; C. J. ZURHELLEN; H. T. YORK; J. A. BAUN; R. C. SWITZER, III. *Neurosci. Associates.*

3:00 CC52 **826.07** Development of novel sensors for autophagosome. Y. LEE; Y. JUN; J. LEE; D. JANG*. *Hannam Univ., Kyungpook Natl. Univ., Kyungpook Natl. Univ.*

4:00 CC53 **826.08** Infrared diffraction phase microscopy for nanoscale imaging of live brain slices. E. MIN*; S. KIM; L. MA; W. JUNG; Y. WANG; G. POPESCU; C. BEST-POPESCU. *Univ. of Illinois at Urbana-Champaign, Ulsan Natl. Inst. of Sci. and Technol., Zhejiang Normal Univ., Ctr. for Soft and Living Matter, Inst. of Basic Sci.*

1:00 CC54 **826.09** ● A DNA based method for highly multiplexed and super-resolution imaging of neurons. Y. WANG*; S. S. AGASTI; N. DONOGHUE; R. JUNGMANN; P. YIN. *Harvard Wyss Inst., Program of Biol. and Biomed. Science, Harvard Med. Sch., Max Plank Inst. of Biochem. and LMU.*

2:00 CC55 **826.10** ● Multiplexed immunofluorescence imaging and analysis of post-mortem human brain sections for the study of molecular phenotypes and neuropathological features. D. MEYER*; E. BAS; X. CHEN; D. V. DYLOV; Q. LI; C. LOWES; S. KAANUMALLE; M. E. MARINO; E. MCDONOUGH; A. SANTAMARIA-PANG; W. W. SEELEY; P. R. HOF. *GE Global Res., Univ. of California, San Francisco, Icahn Sch. of Med. at Mount Sinai.*

3:00 CC56 **826.11** Supernova systems enable high intensity single-cell labeling and labeled cell-specific gene-manipulation. W. LUO*; H. MIZUNO; R. IWATA; S. NAKAZAWA; T. IWASATO. *Natl. Inst. of Genet., Grad. Univ. for Advanced Studies (SOKENDAI).*

4:00 CC57 **826.12** Combined structured-illumination with localization-based super-resolution microscopy. H. LI; X. JIN; Y. LIANG; S. LI; G. WEN; H. JIA*. *Suzhou Inst. of Biomed. Engin. and Technol.*

1:00 CC58 **826.13** Wedge-based approach for simultaneous multichannel microscopy. S. H. CHUNG; C. V. GABEL*. *Boston Univ. Sch. of Med., Physical Sci. Inc, Boston Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

827. Tracing and Imaging Methods

Theme G: Novel Methods and Technology Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 CC59 **827.01** Single neuron reconstruction using oblique plane tomography. A. NARASIMHAN*; K. UMADEVI VENKATARAJU; J. TUCCIARONE; Z. J. HUANG; D. F. ALBEANU; P. OSTEN. *Cold Spring Harbor Lab.*

2:00 CC60 **827.02** ● Enhancing robustness of sectioning and imaging in knife-edge scanning microscopy. Y. CHOE*; D. E. MILLER; R. S. SHAH; W. ZHANG; J. YOO; D. MAYERICH; J. KWON; J. KEYSER; L. C. ABBOTT. *Texas A&M Univ., Univ. of Houston, Kettering Univ.*

3:00 CC61 **827.03** Internet enabled robotic microscope powered by knife-edge scanning microscopy. S. RAGHAVAN; Y. CHOE; D. MAYERICH; T. HUFFMAN; M. GOODMAN; C. DANIEL; J. KWON*. *Kettering Univ., Texas A&M Univ., Univ. of Houston, 3Scan.*

4:00 CC62 **827.04** Labeling and mapping memory traces in intact mouse brains of control and disease states. I. PAVLOVA*; S. C. SHIPLEY; R. HEN; C. A. DENNY. *Columbia Univ., Res. Fndn. for Mental Hygiene, Inc., Columbia Univ.*

1:00 CC63 **827.05** Rabies virus vector with improved transgene expression level for transsynaptic tracing. Y. SOTA*; S. OHARA; S. SATO; K. ITO; K. TSUTSUI; T. IIJIMA. *Div.Sys Neurosci., Grad Sch.Life Sci.,Tohoku Univ.*

2:00 CC64 **827.06** Differential collateral patterns of sensory corticofugal projection neurons revealed by target-specific AAV2/1-mediated retrograde tagging. B. ZINGG*; L. MESIK; X. JI; H. TAO; L. ZHANG. *USC, Zilkha Neurogenetic Institute, USC.*

3:00 CC65 **827.07** Novel strategy for studying the circuit organization of globus pallidus in cell type and projection specific manner. V. LILASCHAROEN; S. SHIN; D. KNOWLAND; B. LIM*. *UCSD.*

4:00 CC66 **827.08** Using the G-deficient recombinant rabies virus to study multi-synaptic fronto-cerebellar circuitry. P. A. ZAMUDIO-BULCOCK*; J. J. WOODWARD. *Med. Univ. of South Carolina.*

1:00 CC67 **827.09** Facilitating the adoption of oxygen partial pressure imaging with two-photon microscopy. S. SAKADZIC*; T. V. ESIPOVA; S. A. VINOGRADOV; D. A. BOAS. *Massachusetts Gen. Hosp., Univ. of Pennsylvania.*

2:00 CC68 **827.10** Trans-cellular activation of transcription for visualization of neural circuits. J. BONKOWSKY*; J. GAO; M. KEEFE; T. STEVENSON. *Univ. of Utah Sch. of Med.*

3:00 CC69 **827.11** Mapping of posterior cerebellum to thalamic and neocortical targets using herpesvirus-based anterograde tracers and large-scale tissue clearing. T. J. PISANO; T. K. WEIGEL; E. A. ENGEL; S. DEIVASIGAMANI; L. A. LYNCH; L. W. ENQUIST; S. S. WANG*. *Princeton Univ., Princeton Univ.*

4:00 CC70 **827.12** *In vitro* patterning of neural circuits at single cell resolution via optical tweezers. B. POLAT*; S. BAY; G. OZTURK. *Istanbul Medipol Univ., Gebze Tech. Univ.*

1:00 CC71 **827.13** Long-term stability and flexibility in behaviorally relevant neural circuit dynamics. A. K. DHAWALE*; R. PODDAR; E. KOPELOWITZ; V. NORMAND; B. P. ÖLVECZKY. *Harvard Univ., École Normale Supérieure.*

2:00 CC72 **827.14** Dexterous robotic manipulation of alert adult fruit flies for high-content experimentation. J. SAVALL*; E. HO; C. HUANG; J. R. MAXEY; M. J. SCHNITZER. *Stanford Univ., Stanford Univ., Universiti Teknologi Petronas, Stanford Univ.*

3:00 CC73 **827.15** How to build a powerful, flexible, and user-friendly light sheet microscope. C. J. GREER*; T. HOLY. *Washington Univ. In St. Louis, Washington Univ. in St. Louis.*

POSTER

828. Technology Development: Magnetic Resonance Imaging and Positron Emission Tomography

Theme G: Novel Methods and Technology Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 CC74 **828.01** High-throughput screening and receptor binding reveal enzyme and GPCR targets as binding sites for a new PET tracer - D-deprenyl. A. A. LESNIAK; M. AARNIO; A. JONSSON; T. NORBERG; F. J. NYBERG*; T. GORDH. *Uppsala Univ., Uppsala Univ. Hosp.*

2:00 CC75 **828.02** Maximization of brain manganese uptake for PET/MRI in neurological applications. C. M. LEWIS*; S. A. GRAVES; R. HERNANDEZ; I. SMIT-OISTAD; R. J. NICKLES; M. E. MEYERAND; M. SUZUKI. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

3:00 CC76 **828.03** ● Development of a PET tracer that targets amyloid β oligomers (AβOs). K. L. VIOLA*; T. CHANG; E. N. CLINE; E. CHUNG; M. DYKSTRA; B. MERRIFIELD; A. PECK; A. L. QIN; C. VALDEZ; H. J. WEISS; L. R. ZIESKE; W. L. KLEIN. *Northwestern Univ., Van Andel Res. Inst., Van Andel Res. Inst., Illinois Math & Sci. Acad., Singulex, Inc., Northwestern Univ.*

4:00 CC77 **828.04** *In vivo* magnetic resonance imaging of neurotransmitter reuptake. A. HAI*; L. X. CAI; T. LEE; V. S. LELYVELD; A. P. JASANOFF. *MIT.*

1:00 CC78 **828.05** Cobalt zinc ferrite nanoparticles - a suitable tool for magnetic cell labeling. P. JENDELOVA*; B. NOVOTNA; K. TURNOVCOVA; M. VEVERKA; P. ZVATORA; V. HERYNEK; Y. BAGRYANTSEVA; E. SYKOVA. *Inst. of Exptl. Medicine, ASCR, Inst. of Physics, ASCR,, Inst. for Clin. and Exptl. Med.*

2:00 DD1 **828.06** 4-D wearable photoacoustic tomography for non-invasive imaging of cerebral hemodynamics in behaving rats. J. TANG*; J. ZHOU; P. CARNEY; H. JIANG. *Univ. of Florida, Univ. of Florida.*

3:00 DD2 **828.07** Quantitative tissue analysis with infrared imaging technology. S. EATON*; E. CUMYN; D. KING; R. KLINE; S. CARPANINI; J. DE POZO; R. BARRON; T. M. WISHART. *Univ. of Edinburgh, Roslin Institute, Univ. of Edinburgh, Royal (Dick) Sch. of Vet. Studies, Euan MacDonald Ctr. for Motor Neurone Dis. Res.*

Wed. PM

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 DD3 **828.08** Atlas of forgotten dimensions: Creating a metallome for epilepsy and beyond. E. L. OHAYON*; A. LAM. *Neurolinx Res. Inst., Univ. of Toronto Epilepsy Res. Program.*

1:00 DD4 **828.09** A small-molecule approach to the detection of aromatase activity in gonadal and non-gonadal tissues. D. S. MCCARTHY*; L. REMAGE-HEALEY; J. J. CHAMBERS. *Univ. of Massachusetts, Univ. of Massachusetts, Univ. of Massachusetts.*

2:00 DD5 **828.10** Visualizing neurite ultrastructure by electron cryotomography of cultured neurons. M. T. SWULIUS*; S. WEAVER; G. JENSEN. *Caltech.*

3:00 DD6 **828.11** A novel miniature multimodal imaging system to simultaneously monitor and measure brain ion fluxes, blood flow and oxygenation during seizure-like events in non-anesthetized freely behaving rats. M. A. JEFFREY*; D. RINGUETTE; I. SIGAL; R. GAD; P. CARLEN; O. LEVI. *Toronto Western Res. Inst., Inst. of Biomaterials and Biomed. Engin.*

4:00 DD7 **828.12** Do trace metals levels differ in cases of refractory epilepsy? Insights from synchrotron x-ray fluorescence studies of human resected tissue. A. LAM*; S. WEBB; B. D. KOCAR; T. A. VALIANTE; P. L. CARLEN; E. L. OHAYON. *Neurolinx Res. Inst., Univ. of Toronto Epilepsy Res. Program, Univ. of Toronto, Stanford Synchrotron Radiation Lightsource, Toronto Western Res. Inst.*

POSTER

829. Data Analysis: Human and Networks

Theme G: Novel Methods and Technology Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 DD8 **829.01** ● Is the direction of Granger causal influence the same as the direction of information flow? P. VENKATESH*; P. GROVER. *Carnegie Mellon Univ.*

2:00 DD9 **829.02** Calibration of extracellular spike models of monosynaptic dynamics using intracellular recordings. J. PLATKIEWICZ*; D. F. ENGLISH; E. STARK; P. P. QUILICHINI; G. BUZSÁKI; A. AMARASINGHAM. *The City Col. of New York, The City Univ. of New York, New York Univ., Tel Aviv Univ., Tel Aviv Univ., Aix Marseille Univ.*

3:00 DD10 **829.03** Reliability of multi-site functional connectivity. S. M. NOBLE*; D. SCHEINOST; R. T. CONSTABLE; T. D. CANNON. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

4:00 DD11 **829.04** A novel re-referencing method for ERP based brain-computer interfaces. M. KIM*. *UNIST.*

1:00 DD12 **829.05** Experimental validation of hierarchical Bayesian diffuse optical tomography algorithm for human brain function studies. O. YAMASHITA*; T. SHIMOKAWA; R. AISU; T. AMITA; Y. INOUE; M. SATO. *ATR, Nara Inst. of Sci. and Technol., Shimadzu Corp.*

2:00 DD13 **829.06** Performance of an adaptive interictal spike detection algorithm. S. MEISENHELTER*; P. C. HORAK; A. CONNOLLY; B. JOBST. *Geisel Sch. of Med. At Dartmouth, Geisel Sch. of Med. at Dartmouth.*

3:00 DD14 **829.07** Understanding the impact of drugs of abuse and behavioral training using novel peptidomic assays. B. SOUTHEY*; X. CHEN; P. A. MORRIS; A. E. MAKI; P. E. GOLD; S. L. RODRIGUEZ ZAS; J. V. SWEEDLER. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Syracuse Univ., Univ. of Illinois At Urbana-Champaign.*

4:00 DD15 **829.08** Dynamic estimation of human brain's receptive fields with confidence intervals. S. AKRAM*; J. Z. SIMON; B. BABADI. *Univ. of Maryland.*

1:00 DD16 **829.09** Resting state fMRI identification of communicating sub-regions in the human medial temporal lobe. R. SANCHEZ ROMERO*; J. D. RAMSEY; J. C. LIANG; C. GLYMOUR. *Carnegie Mellon Univ., Univ. of Toronto.*

2:00 DD17 **829.10** 3-D tract-based regression analysis of white matter abnormalities in Alzheimer's disease. Y. JIN*; C. HUANG; D. SHEN; H. ZHU; P. M. THOMPSON. *Univ. of North Carolina at Chapel Hill, USC, Univ. of North Carolina at Chapel Hill.*

3:00 DD18 **829.11** Methods to remove motion artifact in resting state multi-echo fMRI data. J. D. POWER*; M. PLITT; P. KUNDU; P. BANDETTINI; A. MARTIN. *Natl. Inst. For Mental Hlth., NIMH, Mount Sinai Hosp.*

4:00 DD19 **829.12** ● Scalable human EEG: Task-motivated alignment of volitional behaviors reduces variability and enables population neurophysiology. T. A. NICK*; L. M. BERMAN; A. Z. BARNEHAMA. *DAQRI.*

1:00 DD20 **829.13** Predicting quality of life and functional independency after stroke using supervised machine learning. M. BRANSCHEIDT; B. ZENKO; J. CERNY; A. R. LUFT*; C. GLOBAS. *Univ. Zurich, Jozef Stefan Inst., Univ. of Zurich.*

2:00 DD21 **829.14** Explicit modelling of the hemodynamic response in linking cognitive computational models to fMRI data. G. DE HOLLANDER*; S. D. BROWN; B. U. FORSTMANN. *Univ. of Amsterdam, Univ. of Newcastle, Univ. of Amsterdam.*

3:00 DD22 **829.15** Automatic sulcal labeling and quantitative pattern analysis in the fetuses with brain malformations. K. IM*; A. GUIMARAES; Y. KIM; B. GAGOSKI; C. ROLLINS; E. YANG; P. GRANT. *Children's Hosp. Boston, Harvard Med. Sch., Faculdade de Medicina da USP, Children's Hosp. Boston, Children's Hosp. Boston.*

4:00 DD23 **829.16** ● Quantitative analysis of sleep neural dynamics. M. J. PRERAU*; M. T. BIANCHI; P. L. PURDON. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

1:00 DD24 **829.17** Reciprocal couplings and their modes in eye contact. R. LEE*. *Princeton Univ.*

2:00 DD25 **829.18** Mapping subcortical shape heritability to empower genetic association studies. B. GUTMAN*; N. JAHANSHAD; P. K. DOUGLAS; P. M. THOMPSON. *IGC - Univ. of Southern California, USC, Univ. California Los Angeles.*

3:00 DD26 **829.19** Distributed anatomical substrates identified by pattern classification predict cortical excitability and inhibition. E. DAYAN*; V. LÓPEZ-ALONSO; S. LIEW; L. G. COHEN. *NINDS/NIH, Univ. of A Coruña, USC, NIH.*

• Indicated a real or perceived conflict of interest, see page 161 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 DD27 **829.20** Correlation between bold activation and centrality in fmri connectivity when listening to music. C. KARMONIK*; J. ANDERSON; A. BRANDT; F. BROOKS; J. FRAZIER. *Houston Methodist Res. Inst., Houston Methodist Hosp., Shepard Sch. of Music.*

1:00 DD28 **829.21** ● Acceptable values of similarity coefficients in neuroanatomical labeling of MRI. A. J. WORTH*; J. A. TOURVILLE. *Neuromorphometrics, Inc., Boston Univ.*

2:00 DD29 **829.22** Real-time activity recognition graphical front-end display with semi-supervised labeling assistance. I. RABKINA*; L. L. NOGUEIRA; M. V. ALBERT. *Loyola Univ. Chicago.*

3:00 DD30 **829.23** Crosscorrelation analysis of prewhitened human connectome resting-state fMRI data: Interhemispheric effects in pre- and post-central areas. P. S. CHRISTOVA*; A. P. GEORGOPOULOS. *Univ. Minnesota.*

4:00 DD31 **829.24** An automated tool for parcellating human visual cortex in individual subjects based on functional imaging data. N. C. BENSON*; K. KAY; J. WINAWER. *New York Univ., Washington Univ.*

1:00 DD32 **829.25** Intrinsic connectivity between auditory and motor networks: Is it associated with sensory suppression during overt speaking? V. G. VAN DE VEN*; L. WALDORP; I. CHRISTOFFELS; J. VAN DEN BOSCH; A. WALTHER; M. J. NAUMER. *Fac. of Psychology and Neuroscience, Maastricht Univ., Univ. of Amsterdam, Ctr. of Expertise for Vocational Educ., Univ. of Washington, Cognition and Brain Sci. Unit, Goethe Univ.*

POSTER

830. Data Analysis: Human

Theme G: Novel Methods and Technology Development

Wed. 1:00 PM – *McCormick Place*, Hall A

1:00 DD33 **830.01** Constructing the macaque connectome *in vivo* using diffusion weighted imaging: A comparison with tracer studies. K. SHEN*; A. GOULAS; J. GATI; R. MENON; A. R. MCINTOSH; S. EVERLING. *Rotman Res. Inst., Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Western Ontario.*

2:00 DD34 **830.02** Mixed effects for large datasets. D. M. NIELSON*; P. B. SEDERBERG. *Ohio State Univ., Ohio State Univ.*

3:00 DD35 **830.03** Man vs. machine: Improving physical activity tracking in the presence of deceptive human behavior. S. SAEB*; K. KORDING; D. MOHR. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

4:00 DD36 **830.04** ● The integrated pain quantification index (IPQI): A novel multi-domain index for measuring pain. J. A. SHETAKE*; S. LIN; N. MEKELBOBROV; J. NORTH; L. KAPURAL; M. WALLACE; E. GRIGSBY. *Boston Scientific Neuromodulation, Boston Scientific Neuromodulation, Carolinas Pain Inst. and Ctr. for Clin. Res., Ctr. for Pain Medicine, Univ. of California, San Diego, Napa Pain Inst.*

1:00 DD37 **830.05** ● Skellify: A machine learning tool for classifying depression using DTI-based white matter skeletons. J. BENOIT; M. BROWN; A. GREENSHAW; S. DURSUN; R. RAMASUBBU*. *Univ. of Alberta, Univ. of Calgary, Hotchkiss Brain Inst.*

2:00 DD38 **830.06** Reproducibility and sensitivity analysis of MEG source current estimation. Y. TAKEDA*; D. LI; N. HIROE; M. SATO; O. YAMASHITA. *ATR Neural Information Analysis Labs.*

3:00 DD39 **830.07** Multi-connection pattern analysis (MCPA): Multivariate discriminant analysis of functional connectivity between neural populations. Y. LI*; A. S. GHUMAN. *Carnegie Mellon Univ., Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh.*

4:00 DD40 **830.08** Magnetoencephalography analysis in the human connectome project (HCP). G. MICHALAREAS*; F. DI POMPEO; J. SCHOFFELEN; R. OOSTENVELD; S. DELLA PENNA; L. LARSON-PRIOR; L. MARZETTI; F. DE PASQUALE; M. KELSEY; A. BABAJANI-FEREMI; F. PRIOR; P. FRIES; V. PIZZELLA; G. ROMANI; M. CORBETTA; A. Z. SNYDER. *Ernst Strüngmann Inst. (ESI) For Neurosci., Univ. G. D'Annunzio, Max Planck Inst. for Psycholinguistics, Radboud Univ. Nijmegen, Univ. G. D'Annunzio, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., The Univ. of Tennessee, Washington Univ. Sch. of Med.*

1:00 DD41 **830.09** Assessing the influence of color scales on data interpretation in neuroimaging - a comparative empirical study. M. CHRISTEN*; P. BRUGGER; S. I. FABRIKANT. *Univ. of Zurich, Univ. Hosp. Zurich, Univ. of Zurich.*

2:00 DD42 **830.10** ▲ Asymmetry of neuronal migration pathways in developing human fetal brains. Y. MIYAZAKI*; J. W. SONG; E. TAKAHASHI. *Sch. of Medicine, Chiba Univ., Yale Univ. Sch. of Med., Boston Children's Hospital, Harvard Med. Sch.*

3:00 DD43 **830.11** Brain transfer for the analysis of cortical data. H. LOMBAERT; M. J. ARCARO; S. KASTNER*; N. AYACHE. *Inria Sophia-Antipolis, Princeton Univ., Dept Psychol.*

4:00 DD44 **830.12** Task-induced edge density as a marker for dynamic network formation in fMRI. G. LOHMANN*; J. STELZER; T. BUSCHMANN; V. ZUBER; D. MARGULIES; A. BARTELS; K. SCHEFFLER. *Eberhard-Karls-Universitaet, Max-Planck-Institute for Biol. Cybernetics, Fraunhofer Inst. for Cell Therapy and Immunol., Univ. of Oslo, Max-Planck-Institute for Human Cognitive and Brain Sci., Ctr. for Integrative Neurosci., Eberhard-Karls Univ.*

1:00 DD45 **830.13** Heartbeat evokes electrical potential in human insular and cingulate cortex. H. PARK*; O. BLANKE. *École Polytechnique Fédérale De Lausanne.*

2:00 DD46 **830.14** Estimating whole brain connectivity dynamics using spectral clustering. I. CRIBBEN*. *Alberta Sch. of Business.*

3:00 DD47 **830.15** Some overlooked properties of cross-validated classification and the implications for hypothesis testing in life science data. H. JAMALABADI*; S. ALIZADEH; M. SCHÖNAUER; C. LEIBOLD; S. GAIS. *Univ. of Tuebingen, Univ. of Tuebingen, Ludwig-Maximilians-Universität München, Ludwig-Maximilians-Universität München, Ludwig-Maximilians-Universität München.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 DD48 **830.16** Revised minimum variance beamformer weights for functional brain imaging data analysis. A. MOISEEV; S. M. DOESBURG; R. E. GRUNAU; U. RIBARY*. *Behavioral and Cognitive Neurosci. Inst. (BCNI), Dept. of Diagnos. Imaging, Hosp. for Sick Children, Neurosci. & Mental Hlth. Program, Hosp. for Sick Children Res. Inst., Dept. of Med. Imaging, Univ. of Toronto, Dept. of Psychology, Univ. of Toronto, Dept. of Pediatrics, Univ. of British Columbia (UBC), Developmental Neurosciences and Child Health, Child and Family Res. Inst., Simon Fraser Univ. (SFU), Dept. of Pediatrics and Psychiatry, Univ. of British Columbia (UBC), Child and Family Res. Inst. (CFRI), BC Children's Hosp., Brain Res. Center, Ctr. for Brain Hlth. (UBC).*

1:00 DD49 **830.17** Towards a complete volumetric assessment of the human memory circuit: Segmentation of medial temporal lobe, and subicular cortices on high-resolution 3T images. R. S. AMARAL*, JR; J. WINTERBURN; J. PRUESSNER; M. CHAKRAVARTY. *Douglas Mental Hlth. Univ. Inst., McGill Univ., Univ. of Toronto, McGill Univ., McGill Univ., McGill Univ.*

2:00 DD50 **830.18** Decoding continuous EEG signals during sleep using an ensemble of support vector machines. S. ALIZADEH*; M. SCHÖNAUER; H. JAMALABADI; S. GAIS. *Univ. of Tuebingen, Univ. of Tuebingen, Ludwig-Maximilians-Universität München, Ludwig-Maximilians-Universität München.*

3:00 DD51 **830.19** SumLog and order statistics for group-fMRI analysis. S. PAMILO*; M. SEPPÄ. *Aalto Universtiy.*

4:00 DD52 **830.20** Reconstruction of target velocity for overt/covert visual pursuit by using cortical currents estimated from MEG data. K. MORISHIGE*; N. HIROE; M. SATO; M. KAWATO. *Toyama Prefectural Univ., ATR Neural Information Analysis Labs., ATR Brain Information Communication Res. Lab. Group.*

1:00 DD53 **830.21** Visualization of bicoherence for real-time signal processing and its practical application. K. CHOI*; J. KIM; S. CHO; M. KIM; Y. SHIN; O. KWON; S. KANG; S. YEON; Y. RYU. *Korea Inst. of Oriental Med.*

2:00 DD54 **830.22** Decoding cognitive states with a hidden Markov model. A. FLOREN*; B. NAYLOR; R. MIIKKULAINEN; D. RESS. *Univ. of Texas at Austin, Baylor Col. of Med.*

3:00 DD55 **830.23** Mapping dorsal and ventral caudate in humans. H. HUANG*; N. SCHWAB; J. JONES; J. TANNER; C. PRICE; M. DING. *Univ. of Florida, Univ. of Florida.*

4:00 DD56 **830.24** Attenuation correction of PET data in hybrid MR/PET scanners: Performance of CT-based versus template-based approaches. E. ROTA KOPS; H. HAUTZEL*; G. ANTOCH; C. LERCHE; H. MÜLLER; N. J. SHAH. *Forschungszentrum Jülich, Forschungszentrum Jülich & HHU Düsseldorf, Med., Heinrich-Heine-University Düsseldorf, Med. Fac., Düsseldorf, Heinrich-Heine-University Düsseldorf, Med. Fac.*

1:00 DD57 **830.25** Information theory reveals neural correlates of predictions - a magnetoencephalography study. A. BRODSKI*; I. ÖZDEMIR; G. PAASCH; J. LIZIER; M. WIBRAL. *Goethe Univ., The Univ. of Sydney.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

Conflict of Interest Statements

The following presenters, signified by a dot (•) in the program, indicated a real or perceived conflict of interest. Presenters listed without a dot in the program had no financial relationships to disclose.

PRESENTATION NUMBER	STATEMENT
DP09.06	**M.E. Lhamon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions, LLC. **A. Agarwal:** A. Employment/Salary (full or part-time); Signal Solutions, LLC. **K.D. Donohue:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions, LLC. **B.F. O'Hara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions, LLC.
DP09.07	**J.P. Culver:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cephalogics LLC.
643.04	**M.J. Seiler:** Other; Ocular Transplantation LLC (KY); patents # 5,941,250; # 6,159,218; # 8,057,483.
649.12	**S. Luquín:** A. Employment/Salary (full or part-time); Universidad de Guadalajara. **L. Jave-Suárez:** A. Employment/Salary (full or part-time); Instituto Mexicano del Seguro Social.
650.09	**C. Hofstetter:** A. Employment/Salary (full or part-time); University of Washington.
651.01	**S.J. Gray:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asklepios Biopharma.
651.04	**G. Papiani:** A. Employment/Salary (full or part-time); Oligomerix, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oligomerix, Inc. **P. Lopez:** A. Employment/Salary (full or part-time); Oligomerix, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oligomerix, Inc. **D. Romero:** A. Employment/Salary (full or part-time); Oligomerix, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oligomerix, Inc. **P. Krishnamurthy:** A. Employment/Salary (full or part-time); Oligomerix, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oligomerix, Inc. **E.J. Davidowitz:** A. Employment/Salary (full or part-time); Oligomerix, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oligomerix, Inc. **J.G. Moe:** A. Employment/Salary (full or part-time); Oligomerix, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oligomerix, Inc.
651.08	**D. Liu:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Editas Medicine.
651.09	**B.K. Kaspar:** Other; Avexis.
651.12	**I. Eleftheriadou:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); N Mazarakis and I Eleftheriadou are named inventors on a submitted UK patent no: 1308772.1. **N.D. Mazarakis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); named inventor on a submitted UK patent no: 1308772.1.
651.13	**O. Adolfsson:** A. Employment/Salary (full or part-time); AC Immune SA. **F. Capotosti:** A. Employment/Salary (full or part-time); AC Immune SA. **N. Sreenivasachary:** A. Employment/Salary (full or part-time); AC Immune SA. **J. Molette:** A. Employment/Salary (full or part-time); AC Immune SA. **E. Gabellieri:** A. Employment/Salary (full or part-time); AC Immune SA. **Y. Varisco:** A. Employment/Salary (full or part-time); AC Immune SA. **H. Kroth:** A. Employment/Salary (full or part-time); AC Immune SA. **D.T. Hickman:** A. Employment/Salary (full or part-time); AC Immune SA. **W. Froestl:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Pfeifer:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Muhs:** A. Employment/Salary (full or part-time); AC Immune SA.
653.14	**J. Schmahmann:** F. Consulting Fees (e.g., advisory boards); Dr. Schmahmann serves as a consultant to Takeda Pharmaceuticals. **A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Dr. Pascual-Leone serves on the scientific advisory boards for Nexstim, Neuronix, Starlab Neuroscience, Neuroelectrics, and Neosync; and is listed as an inventor on several issued and pending patents.
654.09	**C.A. Winstanley:** F. Consulting Fees (e.g., advisory boards); Shire. **L. Clark:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; British Columbia Lottery Corporation. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); British Columbia Lottery Corporation. F. Consulting Fees (e.g., advisory boards); Cambridge Cognition.
655.02	**Y.A. Levine:** A. Employment/Salary (full or part-time); SetPoint Medical Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SetPoint Medical Inc. **A. Drake:** A. Employment/Salary (full or part-time); SetPoint Medical Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SetPoint Medical Inc. **A. Caravaca:** A. Employment/Salary (full or part-time); Setpoint Medical Corp. **M. Faltys:** A. Employment/Salary (full or part-time); SetPoint Medical Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SetPoint Medical Inc. **R. Zitnik:** A. Employment/Salary (full or part-time); SetPoint Medical Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SetPoint Medical Inc.
655.05	**Y.A. Levine:** A. Employment/Salary (full or part-time); SetPoint Medical, Inc.
656.04	**L.H. van den Berg:** F. Consulting Fees (e.g., advisory boards); travel grants and consultancy fees from Baxter; on scientific advisory boards for Prinses Beatrix Spierfonds, Thierry Latran Foundation, Cytokinetics and Biogen Idec.
658.09	**J. Shi:** A. Employment/Salary (full or part-time); Stephen M. Massa, Department of Neurology, San Francisco VA Medical Center and University of California. **S.M. Massa:** A. Employment/Salary (full or part-time); Stephen M. Massa, Department of Neurology, San Francisco VA Medical Center and University of California.
664.08	**V. Longo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; VDL have equity interest in L-Nutra, a company that develops medical food.
665.01	**H. Fukui:** A. Employment/Salary (full or part-time); Evotec AG. **H. Von Der Kammer:** A. Employment/Salary (full or part-time); Evotec AG. **I. Neagoe:** A. Employment/Salary (full or part-time); Evotec AG. **Y. Lu:** A. Employment/Salary (full or part-time); Genentech. **D. He:** A. Employment/Salary (full or part-time); Genentech. **R. Francis:** A. Employment/Salary (full or part-time); Genentech. **J. Chen:** A. Employment/Salary (full or part-time); Genentech.

PRESENTATION NUMBER	STATEMENT
	P. Reynen: A. Employment/Salary (full or part-time); Genentech. **M. Alaoui-Ismaili:** A. Employment/Salary (full or part-time); Genentech.
665.06	**S. Shin:** A. Employment/Salary (full or part-time); Thermofisher scientifics. **M. Derr:** A. Employment/Salary (full or part-time); Thermofisher scientifics. **Y. Yan:** A. Employment/Salary (full or part-time); Thermofisher scientifics. **L. Sangenario:** A. Employment/Salary (full or part-time); Thermofisher scientifics. **K. Vedvik:** A. Employment/Salary (full or part-time); Thermofisher scientifics. **A. Hannay:** A. Employment/Salary (full or part-time); Thermofisher scientifics. **D. Kuninger:** A. Employment/Salary (full or part-time); Thermofisher scienfics.
665.29	**T. Estrada-Hernandez:** A. Employment/Salary (full or part-time); 3) California Stem Cell, Inc., Irvine CA (since acquired by NeoStem, Inc.). **S. Kayser:** A. Employment/Salary (full or part-time); 3) California Stem Cell, Inc., Irvine CA (since acquired by NeoStem, Inc.). **G. Mistor:** A. Employment/Salary (full or part-time); 3) California Stem Cell, Inc., Irvine CA (since acquired by NeoStem, Inc.). **H.S. Keirstead:** A. Employment/Salary (full or part-time); 3) California Stem Cell, Inc., Irvine CA (since acquired by NeoStem, Inc.).
667.08	**G.B. Wells:** A. Employment/Salary (full or part-time); Texas A&M University. **A.M. Galvan:** A. Employment/Salary (full or part-time); Texas A&M University. **A.M. Person:** A. Employment/Salary (full or part-time); Texas A&M University.
668.07	**D.C. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen Sàrl. **S. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen Sàrl. **T. Schaer:** A. Employment/Salary (full or part-time); HiQScreen Sàrl. **F. Marger:** A. Employment/Salary (full or part-time); HiQScreen Sàrl.
668.09	**J.D. Mikkelsen:** F. Consulting Fees (e.g., advisory boards); Advisory board member and part time consultant for Bionomics Ltd. **M.S. Thomsen:** F. Consulting Fees (e.g., advisory boards); Part time consultant for Bionomics Ltd.
668.10	**M.S. Thomsen:** F. Consulting Fees (e.g., advisory boards); Part time consultant for Bionomics Ltd. **J.D. Mikkelsen:** F. Consulting Fees (e.g., advisory boards); Advisory board member and part time consultant for Bionomics Ltd.
669.02	**A. Vincent:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Royalties and payments for antibody tests. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patents for antibody tests, but no patent for glycine receptor antibody tests.
669.05	**J. Simard:** A. Employment/Salary (full or part-time); Amgen Inc. **K. Michelsen:** A. Employment/Salary (full or part-time); Amgen Inc. **B. Grubinska:** A. Employment/Salary (full or part-time); Amgen, Inc. **Y. Wang:** A. Employment/Salary (full or part-time); Amgen.com. **B. Hall:** A. Employment/Salary (full or part-time); Amgen Inc. **P. Shaffer:** A. Employment/Salary (full or part-time); Amgen Inc. **J. Gingras:** A. Employment/Salary (full or part-time); Amgen Inc.
672.17	**D.A. Lewis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; D.A.L. currently receives investigator-initiated research support from Pfizer. F. Consulting Fees (e.g., advisory boards); In 2012–2014 served as a consultant in the areas of target identification and validation and new compound development.
672.18	**S. Gee:** A. Employment/Salary (full or part-time); Pfizer.
673.03	**D. Brunner:** A. Employment/Salary (full or part-time); PsychoGenics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics. **T. Hanania:** A. Employment/Salary (full or part-time); PsychoGenics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics. **M. Mazzella:** A. Employment/Salary (full or part-time); PsychoGenics. **H. Hain:** A. Employment/Salary (full or part-time); PsychoGenics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics. **E. Sabath:** A. Employment/Salary (full or part-time); PsychoGenics. **V. Alexandrov:** A. Employment/Salary (full or part-time); PsychoGenics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics. **J. Berger:** A. Employment/Salary (full or part-time); PsychoGenics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PsychoGenics. **P. Kabitzke:** A. Employment/Salary (full or part-time); PsychoGenics. **K. Cox:** A. Employment/Salary (full or part-time); psychogenics. **M. Windisch:** A. Employment/Salary (full or part-time); psychogenics.
673.10	**H. Borghys:** A. Employment/Salary (full or part-time); Janssen. **D. Dhuyvetter:** A. Employment/Salary (full or part-time); Janssen. **B. Van Broeck:** A. Employment/Salary (full or part-time); Janssen. **J. Araujo:** A. Employment/Salary (full or part-time); InterVivo. **M. Brooks:** A. Employment/Salary (full or part-time); InterVivo.
673.11	**L. Pulford:** A. Employment/Salary (full or part-time); Alzheimer's Research UK.
673.16	**M. Loos:** A. Employment/Salary (full or part-time); Sylics (Synaptologics BV). **E. Remmelink:** A. Employment/Salary (full or part-time); Sylics (Synaptologics BV). **B. Lubbers:** A. Employment/Salary (full or part-time); Sylics (Synaptologics BV). **M. Verhage:** F. Consulting Fees (e.g., advisory boards); Sylics (Synaptologics BV). **A.B. Smit:** F. Consulting Fees (e.g., advisory boards); Sylics (Synaptologics BV).
675.03	**S. Garson:** A. Employment/Salary (full or part-time); Merck & Co. **A. Gotter:** A. Employment/Salary (full or part-time); Merck & Co. **J. Stevens:** A. Employment/Salary (full or part-time); Merck & Co. **S. Fox:** A. Employment/Salary (full or part-time); Merck & Co. **P.L. Tannenbaum:** A. Employment/Salary (full or part-time); Merck & Co. **A. Savitz:** A. Employment/Salary (full or part-time); Merck & Co. **L.S. Lubbers:** A. Employment/Salary (full or part-time); Merck & Co. **M.H. Pausch:** A. Employment/Salary (full or part-time); Merck & Co. **D.C. Beshore:** A. Employment/Salary (full or part-time); Merck & Co. **J.M. Uslaner:** A. Employment/Salary (full or part-time); Merck & Co. **C.J. Winrow:** A. Employment/Salary (full or part-time); Merck & Co. **Z. Wu:** A. Employment/Salary (full or part-time); Merck & Co.
675.07	**S.J. Baker:** A. Employment/Salary (full or part-time); AbbVie Labs full-time employee. **G. Fox:** A. Employment/Salary (full or part-time); AbbVie Labs full-time employee. **K. Drescher:** A. Employment/Salary (full or part-time); AbbVie Labs full-time employee. **J. Beaver:** A. Employment/Salary (full or part-time); AbbVie Labs full-time employee. **A.M. Basso:** A. Employment/Salary (full or part-time); AbbVie Labs full-time employee.
675.08	**P.H. Kuo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Educational and investigator initiated grants from General Electric Healthcare. F. Consulting Fees (e.g., advisory boards); General Electric Healthcare, Molecular Neuroimaging Institute and Navidea. **G. Zubal:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual Property Rights for ADER system.
675.10	**P. Veselcic:** A. Employment/Salary (full or part-time); AbbVie Germany GmbH & Co KG. **Y. Mordashova:** A. Employment/Salary (full or part-time); AbbVie Germany GmbH & Co KG. **K.M. Wicke:** A. Employment/Salary (full or part-time); AbbVie Germany GmbH & Co KG. E. Ownership

PRESENTATION NUMBER	STATEMENT
	Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AbbVie Germany GmbH & Co KG.
675.15	**P. Cary:** A. Employment/Salary (full or part-time); University of Wisconsin-Madison.
676.18	**M. Karelson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor of patent which is owned by GeneCode Ltd. Other; GeneCode Ltd. and University of Helsinki have a research agreement. **M. Saarma:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Project funding: Industry-Academia Partnerships and Pathways (IAPP)-Marie Curie Actions, Project funding: Parkinson´s UK. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor of the patent which is owned by GeneCode Ltd. Other; GeneCode Ltd. and University of Helsinki have a research agreement.
676.21	**A. Nguyen:** A. Employment/Salary (full or part-time); Texas Biomedical Device Center. **A. Ruiz:** A. Employment/Salary (full or part-time); Texas Biomedical Device Center. **M. Kilgard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Microtransponder. **R. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vulintus, LLC.
676.27	**A. Ramirez-Zamora:** F. Consulting Fees (e.g., advisory boards); TEVA neuroscience. **E. Molho:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Merz Pharmaceuticals, CHDI, Kyowa Hakko Kirin Pharma, US World Meds, Auspex Pharmaceuticals, Acadia Pharmaceuticals. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); US World Meds. F. Consulting Fees (e.g., advisory boards); US World Meds, Merz Pharmaceuticals, Lundbeck. **J.G. Pilitsis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific, Medtronic, St. Jude, NIH. F. Consulting Fees (e.g., advisory boards); Boston Scientific, Medtronic, St. Jude.
677.02	**A. Roy:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; MJ FOX Foundation for Parkinson's Research RRIA.
677.06	**E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac neuroscience. **L. Cerf:** A. Employment/Salary (full or part-time); Fluofarma. **F. Ichas:** A. Employment/Salary (full or part-time); Fluofarma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Fluofarma.
678.23	**T. Malik:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Higher Education Commission, Goverment of Pakistan.
679.04	**J.D. Dougherty:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TRAP licensing.
679.20	**Z. Saccomano:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NYU Challenge Grant. **E.C. Azmitia:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NYU Challenge Grant.
680.05	**S. Nair:** A. Employment/Salary (full or part-time); SDSU employed part time. **M.M. Berkebile:** A. Employment/Salary (full or part-time); SDSU part time employment. **C.P. Chen:** A. Employment/Salary (full or part-time); San Diego State University: Part time Employee. **R.A. Müller:** A. Employment/Salary (full or part-time); San Diego State University: Full time.
681.12	**P.A. Caviedes:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent portection for CNh and CTb cell lines.
682.12	**K.S. O'Shea:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Genetech, Inc.
683.07	**B.T. Klassen:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic, Boston Scientific.
683.09	**L. Blomert:** Other; Deceased.
683.20	**B. Franke:** F. Consulting Fees (e.g., advisory boards); Speeker fee from Merz. **J.K. Buitelaar:** F. Consulting Fees (e.g., advisory boards); Janssen Cilag BV, Eli Lilly, Shire, Lundbeck, Roche, Servier.
683.21	**S. Faraone:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Receives royalties from books published by Guilford press and Oxford press. F. Consulting Fees (e.g., advisory boards); Has received consultancy income and/or research support from Akili interactive labs, Alcobra, VAYA pharma and SynapDx. **J. Buitelaar:** F. Consulting Fees (e.g., advisory boards); J. K. Buitelaar has been consultant to/member of advisory boardof and/or speaker for Janssen Cilag BV, Eli Lilly, Bristol-Myer Squibb,Shering Plough, UCB, Shire, Novartis and Servier.
683.29	**G.V. Simpson:** A. Employment/Salary (full or part-time); Think Now, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Think Now, Inc. **S.R. O'Connell:** A. Employment/Salary (full or part-time); Think Now, Inc. **S.L.M. Noah:** A. Employment/Salary (full or part-time); Think Now, Inc.
685.16	**P. Dickson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biomarin, Shire, PTC. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Biomarin. F. Consulting Fees (e.g., advisory boards); Isis Pharmaceuticsls.
686.09	**G. Levay:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **C. Csolle:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **R. Kedves:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **K. Saghy:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **K. Kordas:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **A. Varga:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **T. Spisak:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **D. Gajari:** A. Employment/Salary (full or part-time); Gedeon Richter Plc. **V. Roman:** A. Employment/Salary (full or part-time); Gedeon Richter Plc.

PRESENTATION NUMBER	STATEMENT
686.23	**A. Forsingdal:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **K. Fejgin:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **V. Nielsen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **J. Nielsen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
687.08	**K.B. Baker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IntElect Medical, ATI, Cardionomics. **A.G. Machado:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IntElect Medical, ATI, Cardionomics.
687.18	**Y. Ikeda-Matsuo:** A. Employment/Salary (full or part-time); Kitazato University. **R. Koyama:** A. Employment/Salary (full or part-time); Univ of Tokyo. **Y. Ikegaya:** A. Employment/Salary (full or part-time); Univ of Tokyo.
687.23	**A.G. Machado:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Enspire, Boston Scientific, ATI, Functional Neuromodulation, Cardionomics.
688.13	**C.A. Winstanley:** F. Consulting Fees (e.g., advisory boards); Shire - Advisory Board.
688.14	**C.A. Winstanley:** F. Consulting Fees (e.g., advisory boards); Shire - Advisory Board.
689.06	**J. Francis:** A. Employment/Salary (full or part-time); Charles River. **D.F. Fischer:** A. Employment/Salary (full or part-time); Charles River, MD Anderson Cancer Center. **G. Smith:** A. Employment/Salary (full or part-time); Charles River. **G. McAllister:** A. Employment/Salary (full or part-time); Charles River. **W.J. Ray:** A. Employment/Salary (full or part-time); MD Anderson Cancer Center. **M. Geck Do:** A. Employment/Salary (full or part-time); MD Anderson Cancer Center. **D. Venkitaramani:** A. Employment/Salary (full or part-time); MD Anderson Cancer Center.
690.15	**F. Atif:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A US patent (# US 8,435,972 B2) was issued to FA and DGS on May 7, 2013 for the use of PROG and compositions related thereto for the treatment of neurogenic tumors. **D.G. Stein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A US patent (# US 8,435,972 B2) was issued to FA and DGS on May 7, 2013 for the use of PROG and compositions related thereto for the treatment of neurogenic tumors.
692.28	**P. Maria Isabel:** A. Employment/Salary (full or part-time); Universidad de Guadalajara.
692.29	**S.J. Benbow:** A. Employment/Salary (full or part-time); EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. **B.M. Cook:** A. Employment/Salary (full or part-time); EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. **K.M. Wozniak:** A. Employment/Salary (full or part-time); EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. **B.S. Slusher:** A. Employment/Salary (full or part-time); EISAI inc. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. F. Consulting Fees (e.g., advisory boards); EISAI Inc. **B.A. Littlefield:** A. Employment/Salary (full or part-time); EISAI Inc. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); EISAI Inc. **L. Wilson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. **S. Feinstein:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc. **M. Jordan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EISAI Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); EISAI Inc.
693.19	**D.J. Clauw:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cerephex, Pfizer, Inc., Forest Laboratories. F. Consulting Fees (e.g., advisory boards); Tonix, Theravance, Cerephex, Pfizer, Inc., Abbott Pharmaceutical Products Division, Samumed, Merck and Company, Inc., Lilly, Eli, and Company, UCB, Johnson & Johnson, Zynerba, Forest Laboratories, Purdue Pharma. **S.E. Harte:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cerephex, Forest Laboratories, Merck. F. Consulting Fees (e.g., advisory boards); Pfizer, Inc., Analgesic Solutions, Regeneron, deCode Genetics. **R.E. Harris:** F. Consulting Fees (e.g., advisory boards); Pfizer, Inc.
693.24	**A. Latremoliere:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity stake in Quartet Medicine. **N. Andrews:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity stake in Quartet Medicine. **K. Gorska:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity stake in Quartet Medicine. **K. Johnsson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity stake in Quartet Medicine. **M. Costigan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity stake in Quartet Medicine. **C.J. Woolf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); equity stake in Quartet Medicine.
696.07	**R. Crist:** A. Employment/Salary (full or part-time); University of Pennsylvania. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute on Drug Abuse. **G.A. Doyle:** A. Employment/Salary (full or part-time); University of Pennsylvania. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute on Drug Abuse. **E.C. Nelson:** A. Employment/Salary (full or part-time); Washington University. **W.H. Berrettini:** A. Employment/Salary (full or part-time); University of Pennsylvania. B. Contracted Research/Research Grant

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	(principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute on Drug Abuse, National Institute of Mental Health.
700.02	**A. Papanikolaou:** A. Employment/Salary (full or part-time); Baylor College of Medicine.
701.04	**S. Miller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SMM is co-inventor on a University of Queensland patent. There are currently no commercial activities.
702.02	**F. Medeiros:** F. Consulting Fees (e.g., advisory boards); Allergan Inc, Carl Zeiss Meditec Inc, Novartis. Other; Alcon Laboratories Inc, Bausch & Lomb, Carl Zeiss Meditec Inc, Heidelberg Engineering Inc, Merck Inc, National Eye Institute, Reichert Inc, Sensimed, Topcon Inc.
702.13	**M. Tyler:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced NeuroRehabilitation LLC, Madison, WI, Helius Medical Technologies, Newtown, PA. F. Consulting Fees (e.g., advisory boards); Advanced NeuroRehabilitation LLC, Madison, WI, Helius Medical Technologies, Newtown, PA. **K. Kaczmarek:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Helius Medical Technologies, Newtown, PA, Advanced NeuroRehabilitation LLC, Madison, WI. F. Consulting Fees (e.g., advisory boards); Helius Medical Technologies, Newtown, PA, Advanced NeuroRehabilitation LLC, Madison, WI. **Y. Danilov:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced NeuroRehabilitation LLC, Madison, WI, Helius Medical Technologies, Newtown, PA. F. Consulting Fees (e.g., advisory boards); Advanced NeuroRehabilitation LLC, Madison, WI, Helius Medical Technologies, Newtown, PA.
703.08	**M.I. Nemenov:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lasmed LLC, Mountain View, CA, United States.
704.01	**R.S. Breese:** A. Employment/Salary (full or part-time); Full time, Regeneron Pharmaceuticals, Inc. **Y. Bai:** A. Employment/Salary (full or part-time); Full Time, Regeneron Pharmaceuticals, Inc. **W. Fury:** A. Employment/Salary (full or part-time); Full time, Regeneron Pharmaceuticals, Inc. **Y. Wei:** A. Employment/Salary (full or part-time); Full time, Regeneron Pharmaceuticals, Inc. **M. Ni:** A. Employment/Salary (full or part-time); Full time, Regeneron Pharmaceuticals. **C. Adler:** A. Employment/Salary (full or part-time); full time, Regeneron Pharmaceuticals, Inc. **C. Lin:** A. Employment/Salary (full or part-time); full time, Regeneron Pharmaceuticals, Inc. **A.J. Murphy:** A. Employment/Salary (full or part-time); Full time, Regeneron Pharmaceuticals, Inc. **L.E. Macdonald:** A. Employment/Salary (full or part-time); full time, Regeneron Pharmaceuticals Inc. **N. Alessandri-Haber:** A. Employment/Salary (full or part-time); full time, Regeneron Pharmaceuticals, Inc.
704.14	**T. Hirai:** A. Employment/Salary (full or part-time); Uehara Memoria Foundation Postdoctoral Fellowship for Research Abroad.
705.02	**Y. Darbaky:** A. Employment/Salary (full or part-time); ANS Biotech. **L. Diop:** A. Employment/Salary (full or part-time); ANS Biotech.
705.09	**M. Bhowmick:** A. Employment/Salary (full or part-time); Organix Inc. **A. Mahadevan:** A. Employment/Salary (full or part-time); Organix Inc.
705.12	**Y. Shidahara:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc. **S. Nemoto:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc. **Y. Awaga:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc. **M. Takashima:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc. **A. Hama:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc. **A. Matsuda:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc. **H. Takamatsu:** A. Employment/Salary (full or part-time); Hamamatsu Pharma Research, Inc.
705.14	**H. Funahashi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grants-in-Aid for Scientific Research 26870451.
705.18	**M.P. Johnson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M.A. Muhlhauser:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **E.S. Nisenbaum:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **R.M.A. Simmons:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **B.M. Forster:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **K.L. Knopp:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **L. Yang:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **D. Morrow:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **D. Li:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J.D. Kennedy:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **S. Swanson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J.A. Monn:** A. Employment/Salary (full or part-time); Eli Lilly and Company.
706.04	**J. Aman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Office of Research and Policy, College of Education & Human Development, University of Minnesota. **L. Cappello:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – Serial No. 62/136,065. **L. Masia:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – Serial No. 62/136,065. **J. Konczak:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – Serial No. 62/136,065.
706.05	**J. Aman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; University of Minnesota, College of Education and Human Development, Office of Research & Policy. **L. Cappello:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – US Serial No. 62/136,065. **L. Masia:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ; US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – US Serial No. 62/136,065. **J. Konczak:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – US Serial No. 62/136,065.

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706.07	**L. Cappello:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – Serial No. 62/136,065. **L. Masia:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING AND TRAINING WRIST JOINT PROPRIOCEPTIVE FUNCTION – Serial No. 62/136,065. **J. Konczak:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent or license related to the work being reported is held by the authors L.C., L.M. and J.K. without direct corporate involvement at this time; US Patent 62136065 SYSTEMS AND METHODS FOR ASSESSING.
707.08	**J.M. Brooks:** A. Employment/Salary (full or part-time); Pfizer.
708.05	**J.F. Atherton:** A. Employment/Salary (full or part-time); Northwestern University. **E. McIver:** A. Employment/Salary (full or part-time); Northwestern University. **V. Beaumont:** A. Employment/Salary (full or part-time); CHDI Foundation. **D.J. Surmeier:** A. Employment/Salary (full or part-time); Northwestern University. **M.D. Bevan:** A. Employment/Salary (full or part-time); Northwestern University.
711.09	**M. Dietrich:** A. Employment/Salary (full or part-time); University of Missouri. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); American Speech-Language-Hearing Association (ASHA) Advancing Academic-Research Careers (AARC) Award. **E.J. Hunter:** A. Employment/Salary (full or part-time); Michigan State University. **S.H. Frey:** A. Employment/Salary (full or part-time); Washington University.
712.20	**A. Sindhurakar:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Acorda Therapeutics. **J. Iaci:** A. Employment/Salary (full or part-time); Acorda Therapeutics. **T. Parry:** A. Employment/Salary (full or part-time); Acorda Therapeutics. **J.B. Carmel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Acorda Therapeutics.
712.26	**M.P. Kilgard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Consultant for MicroTransponder. **R.L. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Owner of Vulintus, Inc.
714.02	**R. Johnson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock holder. **C. Berka:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); owner, stock holder.
717.04	**W. Lai:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; the Ministry of Science and Technology, National Taiwan University.
717.10	**M. Sansone:** Other; Contributed equally to this work. **M. Stendardi:** Other; Contributed equally to this work.
721.05	**M. Osumi:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Michihiro. **S. Morioka:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Shu.
723.08	**D.J. Heal:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Shire Development, PA, USA.
723.09	**S.P. Vickers:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Shire Development, PA, USA.
723.13	**R.B. Garcia:** A. Employment/Salary (full or part-time); UNAM, FACULTAD DE QUIMICA. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; INSTITUTO NACIONAL DE CIENCIAS MEDICAS Y NUTRICIÓN. **A.E. Gómez-Martínez:** A. Employment/Salary (full or part-time); UNAM, FACULTAD DE QUIMICA. **S.L. Morimoto-Martínez:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; INSTITUTO NACIONAL DE CIENCIAS MEDICAS Y NUTRICIÓN “SALVADOR ZUBIRAN”.
724.23	**A.I. Geller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AIG has equity in Alkermes.
726.04	**A.J. Eisch:** A. Employment/Salary (full or part-time); Ut Southwestern Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NASA, NIH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIH, NASA.
728.03	**J.T. Coyle:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A patent owned by Massachusetts General Hospital for the use of D-serine as a treatment for serious mental illness could yield royalties for J.T.C. F. Consulting Fees (e.g., advisory boards); J.T.C. has served as a consultant for EnVivo, and Abbvie in the last 2 years.
729.09	**M. Schnitzer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Mark J. Schnitzer is a co-founder of and scientific consultant to Inscopix Inc., the company that manufacturers the integrated microscope.
729.11	**J. Wilson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Study designed to test technology. **H. Steenland:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Study designed to test equipment.
732.08	**H. Yamaura:** A. Employment/Salary (full or part-time); National Institute for Physiological Sciences. **M. Haruta:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **M. Motoyama:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **Y. Ohta:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **H. Takehara:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **T. Noda:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **K. Sasagawa:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **T. Tokuda:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **Y. Yoshimura:** A. Employment/Salary (full or part-time);

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	National Institute for Physiological Sciences. **J. Ohta:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology.
732.11	**M. Haruta:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **H. Takehara:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **Y. Ohta:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **M. Motoyama:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **H. Takehara:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **T. Noda:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **K. Sasagawa:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **T. Tokuda:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology. **J. Ohta:** A. Employment/Salary (full or part-time); Nara Institute of Science and Technology.
732.14	**E.M. Hillman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent issued on technology. **M.B. Bouchard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); inventor on issued patent.
732.18	**S. Gulati:** A. Employment/Salary (full or part-time); Inscopix. **V. Cao:** A. Employment/Salary (full or part-time); Inscopix. **P. Joshi:** A. Employment/Salary (full or part-time); Inscopix. **S.L. Otte:** A. Employment/Salary (full or part-time); Inscopix.
732.24	**L. B. Cohen:** A. Employment/Salary (full or part-time); Center for Functional Connectomics, Korea Institute of Science & Technology, Seoul, Korea.
732.26	**S. Martinka:** A. Employment/Salary (full or part-time); MontanaMolecular. **T.E. Hughes:** A. Employment/Salary (full or part-time); Montana Molecular. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Montana Molecular. **P. Tewson:** A. Employment/ Salary (full or part-time); MontanaMolecular. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MontanaMolecular.
733.06	**M.H. Tuszynski:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ACORDA.
734.02	**B.A. Madruga:** A. Employment/Salary (full or part-time); UCLA. **K. Arisaka:** A. Employment/Salary (full or part-time); UCLA.
735.02	**S.J. Smith:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); has an founder's interest in Aratome LLC, which commercializes Array Tomography.
735.07	**S. Tappan:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **M.A.A. Karim:** A. Employment/ Salary (full or part-time); MBF Bioscience (full-time). **D. Hoppes:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **N. Roussel:** A. Employment/ Salary (full or part-time); MBF Bioscience (full-time). **P.J. Angstman:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). **J.R. Glaser:** A. Employment/Salary (full or part-time); MBF Bioscience (full-time). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MBF Bioscience - MicroBrightField, Inc.
735.08	**P.R. Mouton:** A. Employment/Salary (full or part-time); Stereology Resource Center. **P.A. Phoulady:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of South Florida. **L.O. Hall:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of South Florida. **D. Goldgof:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); University of South Florida.
735.15	**B.H. Lich:** A. Employment/Salary (full or part-time); FEI Electron Optics BV. **F. Boughorbel:** A. Employment/Salary (full or part-time); FEI Electron Optics BV. **P. Potocek:** A. Employment/Salary (full or part-time); FEI Electron Optics BV. **E. Korkmaz:** A. Employment/Salary (full or part-time); FEI Electron Optics BV. **M. Langhorst:** A. Employment/ Salary (full or part-time); FEI Munich.
736.14	**B.E. Deverman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); California Institute of Technology.
747.04	**C. Brandt:** A. Employment/Salary (full or part-time); Newcastle University. **M. Dasilva:** A. Employment/Salary (full or part-time); The University of Manchester. **A. Thiele:** A. Employment/Salary (full or part-time); Newcastle University.
749.01	**E.L. Sabban:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stressout Inc.
749.06	**A. Gotter:** A. Employment/Salary (full or part-time); Merck & Co. **C. Winrow:** A. Employment/Salary (full or part-time); Merck & Co. **S. Bhatnagar:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Merck & Co.
749.11	**S.F. Lisboa:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Post-doctoral fellowship (FAPESP -2014/22226-0).
751.09	**T.W. Robbins:** F. Consulting Fees (e.g., advisory boards); Cambridge Cognition (CANTAB), Lilly, Lundbeck, Osuka, Teva and Shire Pharmaceuticals, GSK. Other; Springer, Elsevier.
751.13	**M. Bikson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CUNY has patents on brain stimulation with MB as inventor. MB is co-founder of Soterix Medical Inc.
752.03	**S. Sances:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Emulate Therapeutics. **C. Lucchesi:** A. Employment/Salary (full or part-time); Emulate Thereputics. **S.J. Kerns:** A. Employment/Salary (full or part-time); Emulate Thereputics. **C. Hinojosa:** A. Employment/Salary (full or part-time); Emulate Thereputics. **G. Hamilton:** A. Employment/Salary (full or part-time); Emulate Thereputics.
752.11	**H. Cheng:** A. Employment/Salary (full or part-time); Taipei Veterans General Hospital.
759.06	**D. Zecevic:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); RedShirtImaging LLC.
759.09	**G. Katona:** A. Employment/Salary (full or part-time); Femtonics Ltd. **B. Rozsa:** A. Employment/Salary (full or part-time); Femtonics Ltd.
760.04	**A. Pielka:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **A. Voss:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH. **C. Ehnert:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **K. Jügelt:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **O.H. Schroeder:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH. **B.M. Bader:** A. Employment/Salary (full or part-time); NeuroProof GmbH.

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760.11	**S.-. Dariani Saeed:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); receip of drugs.
761.07	**H. Lee:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); This research was supported by a grant from the Korea Research Institute of Bioscience and Biotechnology (KRIBB) Research Initiative Program (KGM4611512).
761.11	**S. Daripelli:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **K. Mudigonda:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **G. Ayyanki:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Kamuju:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Ponnamaneni:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **A. Manoharan:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD.
761.17	**R.V. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **K. Mudigonda:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **K. Penta:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **D. Ajjala:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Palacharla:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **V. Goyal:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **S. Pandey:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **R. Kambhampati:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD. **A. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD.
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762.03	**J. Clarke:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **C. Viel:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **C. Treleaven:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **H. Park:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **J. Dodge:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **S. Cheng:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **L. Shihabuddin:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co. **S. Sardi:** A. Employment/Salary (full or part-time); Genzyme, a Sanofi Co.
762.05	**A. Kritzinger:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boehringer Ingelheim Pharma GmbH & Co KG. **T. Ciossek:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **B. Ferger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **S. Kochanek:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boehringer Ingelheim Pharma GmbH & Co KG.
762.10	**C. Lo Bianco:** A. Employment/Salary (full or part-time); Merck Serono Institute, Neurodegenerative Disease Department, Geneva, Switzerland, Current position: Diagnostic Development Services, Covance Central Laboratory Services, Geneva, Switzerland.
762.13	**D. Andersson:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **M. Ronild:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **J. Fullerton Støier:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
762.26	**P. Winlow:** A. Employment/Salary (full or part-time); UCB Biopharma sprl. **S. Dremier:** A. Employment/Salary (full or part-time); UCB Biopharma sprl. **A. Noguiera da Costa:** A. Employment/Salary (full or part-time); UCB Biopharma sprl.
763.04	**P. Plas:** A. Employment/Salary (full or part-time); IPSEN, service de Neurologie Hopital de Hautepierre 1 Avenue Molière 67000 Strasbourg, Fonctions Cérébrales et Neuromodulation, Institut des Neurosciences de Grenoble - Inserm U.836-UJF-CEA-CHU, CHU de Nantes, INSERM CIC_0004, Nantes, France, Service de Neurologie, CHU de Lyon, Lyon, France, INSERM, NS-Park network and CIC_9302, CHU de Toulouse, Toulouse, France, DNA and cell bank, ICM CNRS UMR 7225, Inserm U1127, UPMC-P6 UMRS 1127. **C. Rousselie:** A. Employment/Salary (full or part-time); Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS_1127 and CIC_1422, CNRS UMR_7225, AP-HP, ICM, DNA and Cell Bank, CHU Pitié-Salpêtrière, Paris, France. **F. Bonello:** A. Employment/Salary (full or part-time); Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS_1127 and CIC_1422, CNRS UMR_7225, AP-HP, ICM, DNA and Cell Bank, CHU Pitié-Salpêtrière, Paris, France. **K. Tahiri:** A. Employment/Salary (full or part-time); Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS_1127 and CIC_1422, CNRS UMR_7225, AP-HP, ICM, DNA and Cell Bank, CHU Pitié-Salpêtrière, Paris, France. **S. Rolland:** A. Employment/Salary (full or part-time); IPSEN. **F. Schmidlin:** A. Employment/Salary (full or part-time); IPSEN. **B. Spinnewyn:** A. Employment/Salary (full or part-time); IPSEN. **C. Tranchant:** A. Employment/Salary (full or part-time); service de Neurologie Hopital de Hautepierre 1 Avenue Molière 67000 Strasbourg ; et Fédération de Médecine Translationnelle, Faculté de médecine , Strasbourg. **M. Anheim:** A. Employment/Salary (full or part-time); service de Neurologie Hopital de Hautepierre 1 Avenue Molière 67000 Strasbourg et Fédération de Médecine Translationnelle, Faculté de médecine, Strasbourg. **P. Krack:** A. Employment/Salary (full or part-time); Fonctions Cérébrales et Neuromodulation, Institut des Neurosciences de Grenoble - Inserm U.836-UJF-CEA-CHU. **A. Castrioto:** A. Employment/Salary (full or part-time); Fonctions Cérébrales et Neuromodulation Institut des Neurosciences de Grenoble - Inserm U.836-UJF-CEA-CHU. **P. Damier:** A. Employment/Salary (full or part-time); CHU de Nantes, INSERM CIC_0004, Nantes, France. **S. Le Dily:** A. Employment/Salary (full or part-time); CHU de Nantes, INSERM CIC_0004, Nantes, France. **T. Danaila:** A. Employment/Salary (full or part-time); Service de Neurologie, CHU de Lyon, Lyon, France. **I. Roullet-Solignac:** A. Employment/Salary (full or part-time); Service de Neurologie, CHU de Lyon, Lyon, France. **V. Chaigneau:** A. Employment/Salary (full or part-time); INSERM, NS-Park network and CIC_9302, CHU de Toulouse, Toulouse, France. **O. Rascol:** A. Employment/Salary (full or part-time); INSERM, NS-Park network and CIC_9302, CHU de Toulouse, Toulouse, Franc. **S. Forlani:** A. Employment/Salary (full or part-time); Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS_1127 and CIC_1422, CNRS UMR_7225, AP-HP, ICM, DNA and Cell Bank, CHU Pitié-Salpêtrière, Paris, France. **A. Brice:** A. Employment/Salary (full or part-time); Sorbonne Universités, UPMC Univ Paris 06, INSERM UMRS_1127 and CIC_1422,

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763.09	**H. Abdelmotilib:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer neuroscience and pain research unit. **J.P. Daher:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer neuroscience and pain research unit. **X. Hu:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer neuroscience and pain research unit. **P. Galatsis:** A. Employment/Salary (full or part-time); Pfizer neuroscience and pain research unit. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer neuroscience and pain research unit. **W.D. Hirst:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer neuroscience and pain research unit. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer neuroscience and pain research unit. **A.B. West:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer neuroscience and pain research unit.
763.12	**B. Spinnewyn:** A. Employment/Salary (full or part-time); IPSEN INNOVATION. **C. Berthet:** A. Employment/ Salary (full or part-time); Oncodesign. **G. Mautino:** A. Employment/Salary (full or part-time); IPSEN. **O. Lavergne:** A. Employment/Salary (full or part-time); IPSEN. **P. Blom:** A. Employment/Salary (full or part-time); Oncodesign. **J. Hoflack:** A. Employment/Salary (full or part-time); Oncodesign.
763.19	**A. Abeliovich:** Other; Alector Pharmaceuticals.
764.07	**D. Soulet:** A. Employment/Salary (full or part-time); FRQ-S. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CIHR.
764.11	**B. Ferger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG.
765.05	**M.I. Naseer:** A. Employment/Salary (full or part-time); King Abdulaziz University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; This project was supported by NSTIP strategic technologies program in the Kingdom of Saudi Arabia- Project No. (12-BIO3059-03). The authors also, acknowledge with thanks Science and Technology Unit, Deanship of Scientific Research (DSR), under Grant no. (HiCi/1432/6-1) King Abdulaziz University for their technical and financial support.
766.06	**B.G. Frenguelli:** Other; Bruno G. Frenguelli is a Non-Executive Director of Sarissa Biomedical, the company that manufactures adenosine sensors and from which the sensors were purchased.
766.07	**D.C. Millard:** A. Employment/Salary (full or part-time); Axion Biosystems, Inc. **A.M. Nicolini:** A. Employment/ Salary (full or part-time); Axion Biosystems, Inc. **C.A. Arrowood:** A. Employment/Salary (full or part-time); Axion Biosystems, Inc. **J.D. Ross:** A. Employment/Salary (full or part-time); Axion Biosystems, Inc.
766.24	**S.F. Traynelis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeurOp Inc (SFT). F. Consulting Fees (e.g., advisory boards); NeurOp Inc, Janssen (SFT).
767.04	**S.M. Poulose:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Walnut Commission. **D.F. Bielinski:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Walnut Commission. **N. Thangthaeng:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Walnut Commission. **B. Shukitt-Hale:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Walnut Commission.
767.05	**M.G. Miller:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Strawberry Commission. **N. Thangthaeng:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Strawberry Commission. **B. Shukitt-Hale:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); California Strawberry Commission.
767.13	**E.L. Adams:** A. Employment/Salary (full or part-time); Quincy Bioscience. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CalciGenix. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CalciGenix. **V.L. Ehlers:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CalciGenix. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CalciGenix. **N.B. Fettinger:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CalciGenix. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CalciGenix. **S.C. Michels:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CalciGenix. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CalciGenix. **J.R. Moyer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CalciGenix. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CalciGenix.
768.04	**C. Best-Popescu:** A. Employment/Salary (full or part-time); Department of Bioengineering.
769.03	**J. Albert:** A. Employment/Salary (full or part-time); IntelliSyn. **S. Johnstone:** A. Employment/Salary (full or part-time); IntelliSyn.
770.06	**D.C. Harrison:** A. Employment/Salary (full or part-time); Takeda. **K. Brackenborough:** A. Employment/Salary (full or part-time); Takeda. **J. Robertson:** A. Employment/ Salary (full or part-time); Takeda. **M. Hill:** A. Employment/ Salary (full or part-time); Takeda. **P. Goetghebeur:** A. Employment/Salary (full or part-time); Takeda. **J. Lawrence:** A. Employment/Salary (full or part-time);

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770.07	**H. Noguchi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CREST, JST. **M. Otsuka I.:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CREST, JST. **K. Igarashi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CREST, JST. **M. Namihira:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CREST, JST. **K. Nakashima:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CREST, JST.
770.25	**M.A. Geyer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Abbott, Dart, Lundbeck, Neurocrine, Omeros, Otsuka, Sunovion.
771.27	**M. Venzi:** A. Employment/Salary (full or part-time); AstraZeneca. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; INSENS network Marie Curie FP7-PEOPLE-2013-ITN IN-SENS network. **N. Brandon:** A. Employment/Salary (full or part-time); AstraZeneca. **E. Åberg:** A. Employment/Salary (full or part-time); AstraZeneca.
772.05	**V.J. Brown:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Eli Lilly. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eli Lilly.
772.10	**D.B. Horton:** A. Employment/Salary (full or part-time); Pfizer, Inc. **K. Dlugolenski:** A. Employment/Salary (full or part-time); Pfizer, Inc. **N.C. Stratman:** A. Employment/Salary (full or part-time); Pfizer, Inc. **C.J. Schmidt:** A. Employment/Salary (full or part-time); Pfizer, Inc. **T.A. Chappie:** A. Employment/Salary (full or part-time); Pfizer, Inc.
772.11	**M.E. Schmidt:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **A.L. Gross:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **R.A. Kroes:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **J.S. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. F. Consulting Fees (e.g., advisory boards); Naurex, Inc.
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772.14	**J.R. Moskal:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founder of Naurex Inc., has founder's shares of stock and receives financial compensation as a consultant. **P.K. Stanton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Receives stock in Naurex Inc. F. Consulting Fees (e.g., advisory boards); Receives financial compensation as a consultant to Naurex Inc.
772.15	**P.P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Solutions LLC. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Solutions LLC.
772.16	**H.Y. Meltzer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research grant. F. Consulting Fees (e.g., advisory boards); Consultant. **J.S. Burgdorf:** A. Employment/Salary (full or part-time); Employee. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stockowner. **J.R. Moskal:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex employee and stock owner.
772.17	**A.L. Gross:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **M.E. Schmidt:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **R.A. Kroes:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **J.S. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. F. Consulting Fees (e.g., advisory boards); Naurex, Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc.
772.19	**J. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. F. Consulting Fees (e.g., advisory boards); Naurex, Inc. **X. Zhang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Naurex, Inc. **A. Gross:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **R.A. Kroes:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **P.K. Stanton:** F. Consulting Fees (e.g., advisory boards); Naurex, Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc.
772.20	**N. Ghoreishi-Haack:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/

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	patent holder, excluding diversified mutual funds); Naurex Inc. **J. Burgdof:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Naurex Inc. F. Consulting Fees (e.g., advisory boards); Naurex Inc. **R.M. Burch:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Naurex Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex Inc.
772.21	**R.A. Kroes:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **J.S. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Naurex, Inc. F. Consulting Fees (e.g., advisory boards); Naurex, Inc. **A.L. Gross:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **M.A. Khan:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **X. Zhang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Naurex, Inc. **R.M. Burch:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. **P.K. Stanton:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc. F. Consulting Fees (e.g., advisory boards); Naurex, Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Naurex, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex, Inc.
772.22	**J.S. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Naurex Inc. F. Consulting Fees (e.g., advisory boards); Naurex Inc. **R.A. Kroes:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Naurex Inc. **X.L. Zhang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Naurex Inc. **A.L. Gross:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex Inc. **R.M. Burch:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Naurex Inc. **P.K. Stanton:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex Inc. F. Consulting Fees (e.g., advisory boards); Naurex Inc. **M.A. Khan:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Naurex Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Naurex Inc.
773.03	**M. Rasenick:** A. Employment/Salary (full or part-time); UIC, VA. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Veterans Administration, NIH, Eli Lilly. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pax Neuroscience. F. Consulting Fees (e.g., advisory boards); Pfizer.
773.06	**M. Rasenick:** A. Employment/Salary (full or part-time); UIC, VA. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; VA, NIH, Eli Lilly. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lundbeck. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Pax Neuroscience. F. Consulting Fees (e.g., advisory boards); Pfizer.
773.07	**K. Takahama:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; TAISHO PHARMACEUTICAL CO., LTD.
773.08	**N. Wray:** A. Employment/Salary (full or part-time); UIC, VA. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; VA, NIH, Eli Lilly. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PAX Neuroscience. F. Consulting Fees (e.g., advisory boards); Pfizer. **J. Schappi:** A. Employment/ Salary (full or part-time); UIC, VA. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; VA, NIH, Eli Lilly. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lundbeck. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PAX Neuroscience. F. Consulting Fees (e.g., advisory boards); Pfizer. **M. Rasenick:** A. Employment/Salary (full or part-time); UIC, VA. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; VA, NIH, Eli Lilly. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lundbeck. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); PAX Neuroscience. F. Consulting Fees (e.g., advisory boards); Pfizer.
773.11	**M.M. Rasenick:** A. Employment/Salary (full or part-time); University of Illinois at Chicago, VA Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Veteran's Administration, NIH, Eli Lilly. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lundbeck. E. Ownership Interest (stock, stock options, royalty, receipt

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	of intellectual property rights/patent holder, excluding diversified mutual funds); Pax Neuroscience. F. Consulting Fees (e.g., advisory boards); Pfizer.
773.13	**M. Banasr:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; This work was supported by the Institut de Recherches Internationales SERVIER, Suresnes, France. **C. Gabriel:** A. Employment/Salary (full or part-time); IRIS. **E. Mocaer:** A. Employment/Salary (full or part-time); IRIS.
773.23	**P.M. Pitychoutis:** A. Employment/Salary (full or part-time); Employed at the University of Dayton.
773.24	**M. Mekiri:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ANR (National Agency of Research).
774.17	**R. Sah:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Consultant for Ono Pharmaceuticals, Japan.
774.20	**Y. Hayashi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Takeda Pharmaceutical Company Limited. **T. Hikida:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Takeda Pharmaceutical Company Limited.
775.04	**J. Nguyen:** A. Employment/Salary (full or part-time); Adamas Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Adamas Pharmaceuticals. **B. Brigham:** A. Employment/Salary (full or part-time); Adamas Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Adamas Pharmaceuticals.
775.08	**M. Berk:** Other; NHMRC Senior Principal Research Fellowship 1059660.
775.11	**J. Prenderville:** A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. **J. Rouine:** A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. **C. McDonnell:** A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. **G. Di Capua:** A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. **D.J. Virley:** A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. **M. Bianchi:** A. Employment/Salary (full or part-time); Transpharmation Ireland Limited.
775.13	**M.D. Kvarta:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asulon Therapeutics Inc. **A. Van Dyke:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asulon Therapeutics Inc.
776.01	**S. Popp:** A. Employment/Salary (full or part-time); AbbVie. **M.M. van Gaalen:** A. Employment/Salary (full or part-time); Encepharm. **A. Bespalov:** A. Employment/Salary (full or part-time); AbbVie. **B. Behl:** A. Employment/Salary (full or part-time); AbbVie.
776.02	**V. Castagné:** A. Employment/Salary (full or part-time); Porsolt SAS.
776.05	**D. Nagy:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mnemosyne Pharmaceuticals Inc. **M. Stoiljkovic:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mnemosyne Pharmaceuticals Inc. **F. Menniti:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mnemosyne Pharmaceuticals Inc., Providence, RI. **M. Hajos:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mnemosyne Pharmaceuticals Inc.
776.08	**G. Racagni:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Servier, Janssen, Otsuka. **M.A. Riva:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Servier, Eli Lilly, Lundbeck, Sumitomo Dainippom Pharma Co. Ltd and Sunovion.
776.13	**J.J.P. Guilloux:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Institut de Recherches Internationales Servier. **I. Mendez-David:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Institut de Recherches Internationales Servier. **A. Gardier:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Institut de Recherches Internationales Servier. **L. Tritschler:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Institut de Recherches Internationales Servier. **S. Bretin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Institut de Recherches Internationales Servier. **D. David:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Institut de Recherches Internationales Servier.
776.16	**N. Yoshimi:** A. Employment/Salary (full or part-time); Otsuka Pharmaceutical Ltd. **Y. Ohgi:** A. Employment/Salary (full or part-time); Otsuka Pharmaceutical Ltd. **T. Futamura:** A. Employment/Salary (full or part-time); Otsuka Pharmaceutical Ltd.
776.25	**A.L. Pehrson:** A. Employment/Salary (full or part-time); Lundbeck Research USA, Inc. **E. Dale:** A. Employment/Salary (full or part-time); Lundbeck Research USA, Inc. **S. Leiser:** A. Employment/Salary (full or part-time); Lundbeck Research USA, Inc. **C. Sanchez:** A. Employment/Salary (full or part-time); Lundbeck Research USA, Inc.
776.28	**K. Hashimoto:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; The grant from

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	Grants-in-Aid for Scientific Research on Innovative Areas of The Ministry of Education, Culture, Sports, Science and Technology, Japan (to K.H., Grant number: 24116006). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Hashimoto submitted the patent application on the use of R-ketamine in the treatment of psychiatric diseases.
779.01	**W.F. Hoffman:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Alkermes.
779.05	**D. Mishra:** A. Employment/Salary (full or part-time); NIH DA033049. **J. Pena Bravo:** A. Employment/Salary (full or part-time); DA728823.
779.16	**P. Vezina:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH grant R01 DA09397.
780.01	**S.C. Bunce:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); fNIR Devices LLC.
780.17	**H. Ayaz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest. **S. Bunce:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest.
782.04	**K.A. Cunningham:** Other; Consultant for Arena Pharmaceuticals.
782.05	**K.A. Cunningham:** Other; Dr. Cunningham is a consultant for Arena Pharmaceuticals.
783.12	**P.J. Wellman:** A. Employment/Salary (full or part-time); Texas A&M Univ. **S. Eitan:** A. Employment/Salary (full or part-time); Texas A&M Univ.
784.05	**E.Y. Pioli:** A. Employment/Salary (full or part-time); Motac. **S. Camus:** A. Employment/Salary (full or part-time); Motac. **J. Yang:** A. Employment/Salary (full or part-time); Motac. **Q. Li:** A. Employment/Salary (full or part-time); Motac. **A. Crossman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac. **E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac. **S. Hogg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Angita Pharmaceuticals B.V. F. Consulting Fees (e.g., advisory boards); Angita Pharmaceuticals B.V.
784.07	**M.A. Geyer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIDA, NIMH, U.S. Veteran's Administration VISN 22 Mental Illness Research, Education, and Clinical Center. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Abbott, Dart, Lundbeck, Neurocrine, Omeros, Otsuka, Sunovion. **A.L. Halberstadt:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH, Brain & Behavior Research Foundation, Roche, L-3 Communications.
784.09	**A.R. Crossman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac. **E.Y. Pioli:** A. Employment/Salary (full or part-time); Motac. **D.W. Ko:** A. Employment/Salary (full or part-time); Motac. **Q. Li:** A. Employment/Salary (full or part-time); Motac. **E. Bezard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Motac. **S. Hogg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Angita Pharmaceuticals B.V. F. Consulting Fees (e.g., advisory boards); Angita Pharmaceuticals B.V.
785.03	**M. Shimasaki:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **C. Hoyle:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **P. Voehringer:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **B. Ferger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG.
785.11	**A. Collins:** F. Consulting Fees (e.g., advisory boards); F Hoffman La Roche. **M.J. Frank:** F. Consulting Fees (e.g., advisory boards); F Hoffman La Roche.
789.14	**B. Fischl:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CorticoMetrics.
797.17	**M.I. Nemenov:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); LasMed LLC.
797.18	**M.R. Hannaman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroDigm Corp.
803.01	**S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies, Kingston, Canada.
803.07	**K. Oh:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Science Foundation. **B.I. Prilutsky:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Science Foundation.
803.14	**M. Uygur:** A. Employment/Salary (full or part-time); Rowan University.
803.17	**N. Hogan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Interactive Motion Technologies.
804.06	**N. Kirkpatrick:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; R00 HD073240. **E.J. Perreault:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; R01 NS053813. **C.F. Honeycutt:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; R00 HD073240.
805.12	**C. Perry:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ASPIRE 11530-13-33191.
805.20	**M. Routson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even

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	if those funds come to an institution.; Australian Research Council (FT120100391). **T.J. Carroll:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Australian Research Council (FT120100391).
806.20	**D. Henriques:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NSERC.
807.17	**E.G.M. Pels:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe. **E.J. Aarnoutse:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Funded by the Dutch Technology foundation STW with co-funding from Medtronic Europe.
808.03	**M. Ludwig:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Knockout mice -Novartis, patent WO 2008/071771A2, patent WO 2004/1183A1. **T. Suply:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent WO 2004/1183A1, patent WO 2008/071771A2. **K. Seuwen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent WO 2004/1183A1, patent WO 2008/071771A2.
809.01	**D.L. Feinstein:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Boehringer Ingelheim.
809.22	**Q. Chen:** A. Employment/Salary (full or part-time); Q, Chenis a full-time employee in Astellas Research Institute of America, a subsidy of Astellas Pharma. **V.B. Cheung:** A. Employment/Salary (full or part-time); V. Cheung works as internship in Astellas Research Institute of America. **C. Han:** A. Employment/Salary (full or part-time); C. Han works as a internship in Astellas Research Institute of America. **S. Miyake:** A. Employment/Salary (full or part-time); S. Miyake is a full-time employee in Astellas Research institute of America, a subsidy of Astellas Pharma. **K. Tajinda:** A. Employment/Salary (full or part-time); K. Tajinda is a full-time employee in Astellas Research Institute of America, a subsidy of Astellas Pharma. **H. Ito:** A. Employment/Salary (full or part-time); H. Ito is a full-time employee in Astellas Research Institute of America, a subsidy of Astellas Pharma.
809.23	**H. Xiao:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J. Li:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M. Morin:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **L.J. Martin:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M.P. Johnson:** A. Employment/Salary (full or part-time); Eli Lilly and Company.
809.25	**L.V. Blomster:** A. Employment/Salary (full or part-time); Linda V. Blomster. **D. Strøbæk:** A. Employment/Salary (full or part-time); Dorte Strøbæk. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dorte Strøbæk. **C. Hougaard:** A. Employment/Salary (full or part-time); Charlotte Hougaard. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Charlotte Hougaard. **P. Christophersen:** A. Employment/Salary (full or part-time); Palle Christophersen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Palle Christophersen.
809.29	**R.A. Wickens:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica. **L. Ver Donck:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica.
811.09	**S.D. Croll:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals.
812.04	**D.A. Morilak:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); Lundbeck A/S.
814.22	**M.E. Lhamon:** A. Employment/Salary (full or part-time); Signal Solutions LLC. **A. Agarwal:** A. Employment/Salary (full or part-time); Signal Solutions LLC. **K.D. Donohue:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal solutions LLC. **B.F. O'Hara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions LLC.
815.22	**E.A. Mukamel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder. **L.D. Lewis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder. **E.N. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Masimo Corporation. F. Consulting Fees (e.g., advisory boards); Masimo Corporation. **P.L. Purdon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Masimo Corporation. F. Consulting Fees (e.g., advisory boards); Masimo Corporation.
815.28	**M.D. Schwartz:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); F. Hoffmann-La Roche, Ltd. **A. Harmeier:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Ltd. **M.C. Hoener:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche, Ltd. **T.S. Kilduff:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); F. Hoffmann-La Roche, Ltd.
816.10	**N. Aridan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; The study was supported by the I-CORE Program of the Planning and Budgeting Committee and The Israel Science Foundation (grant No. 51/11), Human Frontiers Science Project Organization (HFSPO) (CDA0007. **R. Mukamel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; by the I-CORE Program of the Planning and Budgeting Committee and The Israel Science Foundation (grant No. 51/11), Human Frontiers Science Project Organization (HFSPO) (CDA00078/2011-C) and Israel Sci.
818.14	**E.C. Leuthardt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurolutions.
821.06	**M.B. Wall:** A. Employment/Salary (full or part-time); Imanova Limited.
821.18	**Y. Lee:** A. Employment/Salary (full or part-time); MOST103-2420-H-009-006-MY2.
823.02	**M. Miyauchi:** A. Employment/Salary (full or part-time); Sumitomo Dainippon Pharma Co., Ltd. B. Contracted Research/Research Grant (principal investigator for a drug

PRESENTATION NUMBER	STATEMENT
	study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Sumitomo Dainippon Pharma Co., Ltd. **Y. Oyamada:** A. Employment/Salary (full or part-time); Sumitomo Dainippon Pharma Co., Ltd. **H.Y. Meltzer:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Sumitomo Dainippon Pharma Co., Ltd., Sunovion, Janssen, Novartis, ACADIA, Ferrosan, Roche, Takeda, Pfizer, Eli Lilly, EnVivo, Reviva, Alkermes, Astellas, Jazz, Solvay, SureGene, Bristol Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ACADIA, SureGene, Astra Zeneca. F. Consulting Fees (e.g., advisory boards); Lundbeck, Teva.
823.04	**H.Y. Meltzer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research Grant. F. Consulting Fees (e.g., advisory boards); Consultant.
823.06	**F.S. Menniti:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Mnemosyne Pharmaceuticals. **R.E. Grahn:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Mnemosyne Pharmaceuticals.
823.11	**A. Mork:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **G. Smagin:** A. Employment/Salary (full or part-time); H. Lundbeck USA. **L. Helboe:** A. Employment/ Salary (full or part-time); H. Lundbeck A/S. **K.F. Herrik:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **M.A. Foraster:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **D. Song:** A. Employment/Salary (full or part-time); H. Lundbeck USA. **D.P. Budac:** A. Employment/ Salary (full or part-time); H. Lundbeck USA. **H. Armandi:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **I.E.M. de Jong:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
823.12	**H.Y. Meltzer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research grant. F. Consulting Fees (e.g., advisory boards); Consultant.
823.16	**R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Subramanian:** A. Employment/ Salary (full or part-time); Suven Life Sciences. **R. Babu Medapati:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Venkateshwarlu:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Yathavakilla:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Irupannanavar:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Chowdary:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Uthukam:** A. Employment/Salary (full or part-time); Suven Life Sciences. **B. Devarapalli:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Pandey:** A. Employment/Salary (full or part-time); Suven Life Sciences. **A. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Tiriveedhi:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Reballi:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences.
823.17	**H.S. Lange:** A. Employment/Salary (full or part-time); Merck Research Laboratories. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Laboratories. **C.E. Cannon:** A. Employment/Salary (full or part-time); Merck Research Laboratories. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Laboratories. **J. Drott:** A. Employment/Salary (full or part-time); Merck Research Laboratories. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Laboratories. **S.D. Kuduk:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Laboratories. **J.M. Uslaner:** A. Employment/Salary (full or part-time); Merck Research Laboratories. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck Research Laboratories.
823.25	**H.S. Lindgren:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **P. Hjørringgaard Larsen:** A. Employment/ Salary (full or part-time); H. Lundbeck A/S. **I. Vestergaard Klewe:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
825.08	**M.E. Walton:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lilly UK.
826.09	**Y. Wang:** A. Employment/Salary (full or part-time); Harvard University.
826.10	**D. Meyer:** A. Employment/Salary (full or part-time); General Electric Company. **E. Bas:** A. Employment/Salary (full or part-time); General Electric Company. **X. Chen:** A. Employment/Salary (full or part-time); General Electric Company. **D.V. Dylov:** A. Employment/Salary (full or part-time); General Electric Company. **Q. Li:** A. Employment/ Salary (full or part-time); General Electric Company. **C. Lowes:** A. Employment/Salary (full or part-time); General Electric Company. **S. Kaanumalle:** A. Employment/Salary (full or part-time); General Electric Company. **M.E. Marino:** A. Employment/Salary (full or part-time); General Electric Company. **E. McDonough:** A. Employment/Salary (full or part-time); General Electric Company. **A. Santamaria-Pang:** A. Employment/Salary (full or part-time); General Electric Company. **W.W. Seeley:** F. Consulting Fees (e.g., advisory boards); Biogen-Idec.
827.02	**D.E. Miller:** A. Employment/Salary (full or part-time); Capsher Technology. **R.S. Shah:** A. Employment/Salary (full or part-time); FactSet. **W. Zhang:** A. Employment/ Salary (full or part-time); Amazon.
828.03	**W.L. Klein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acumen Pharmaceuticals, Inc.
829.01	**P. Venkatesh:** A. Employment/Salary (full or part-time); Carnegie Mellon University, Department of Electrical and Computer Engineering. Other; Dean's Tuition Fellowship. **P. Grover:** A. Employment/Salary (full or part-time); Carnegie Mellon University, Department of Electrical and Computer Engineering. Other; CMU startup.
829.12	**T.A. Nick:** A. Employment/Salary (full or part-time); DAQRI. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DAQRI. **L.M. Berman:** A. Employment/Salary (full or part-time); DAQRI. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DAQRI. **A.Z. Barnehama:** A. Employment/Salary (full or part-time); DAQRI. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DAQRI.
829.16	**M.T. Bianchi:** A. Employment/Salary (full or part-time); The Milton Foundation, The Center for Integration of Medicine and Innovative Technology. F. Consulting Fees (e.g., advisory boards); GrandRounds, Foramis, Servier.
829.21	**A.J. Worth:** A. Employment/Salary (full or part-time); Neuromorphometrics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuromorphometrics, Inc. **J.A. Tourville:** F. Consulting Fees (e.g., advisory boards); Neuromorphometrics, Inc.

PRESENTATION NUMBER	STATEMENT
830.04	**J.A. Shetake:** A. Employment/Salary (full or part-time); Boston Scientific Neuromodulation. **S. Lin:** A. Employment/Salary (full or part-time); Boston Scientific Neuromodulation. **N. MekelBobrov:** A. Employment/Salary (full or part-time); Boston Scientific Neuromodulation. **J. North:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific Neuromodulation. **L. Kapural:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific Neuromodulation. **M. Wallace:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific Neuromodulation. **E. Grigsby:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Boston Scientific Neuromodulation.
830.05	**R. Ramasubbu:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Astra-Zeneca.

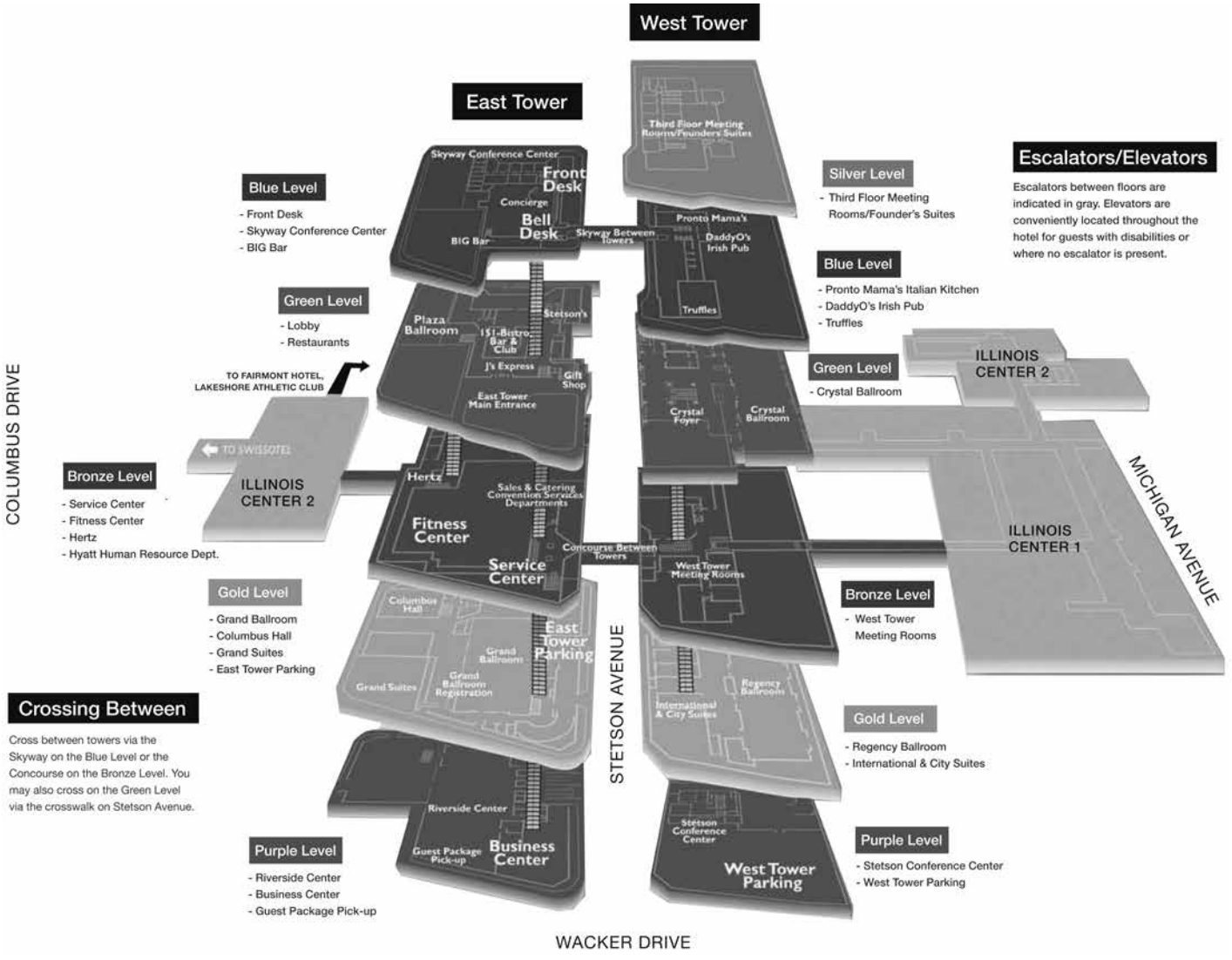
PRESENTATION NUMBER	STATEMENT

Hotel Floor Plans

HYATT REGENCY CHICAGO DOWNTOWN

(not connected to McCormick Place)

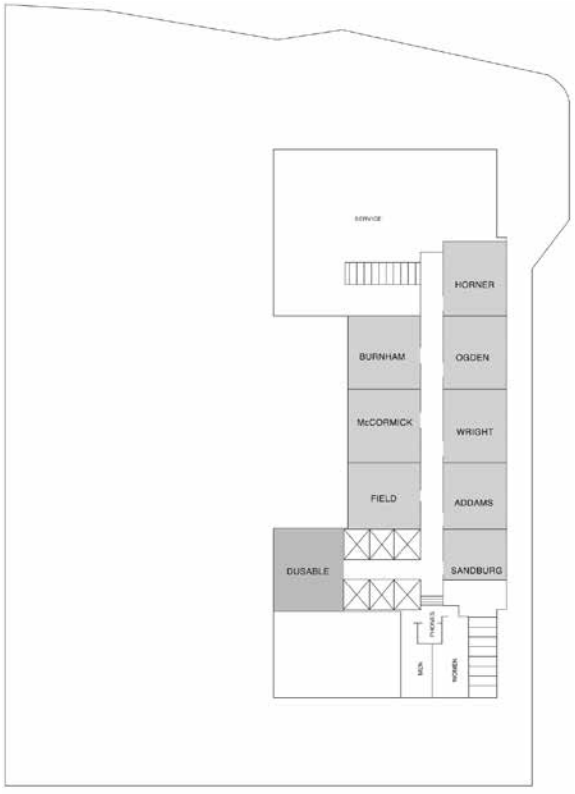
151 E. Wacker Drive
Chicago, IL 60601



HYATT REGENCY CHICAGO DOWNTOWN

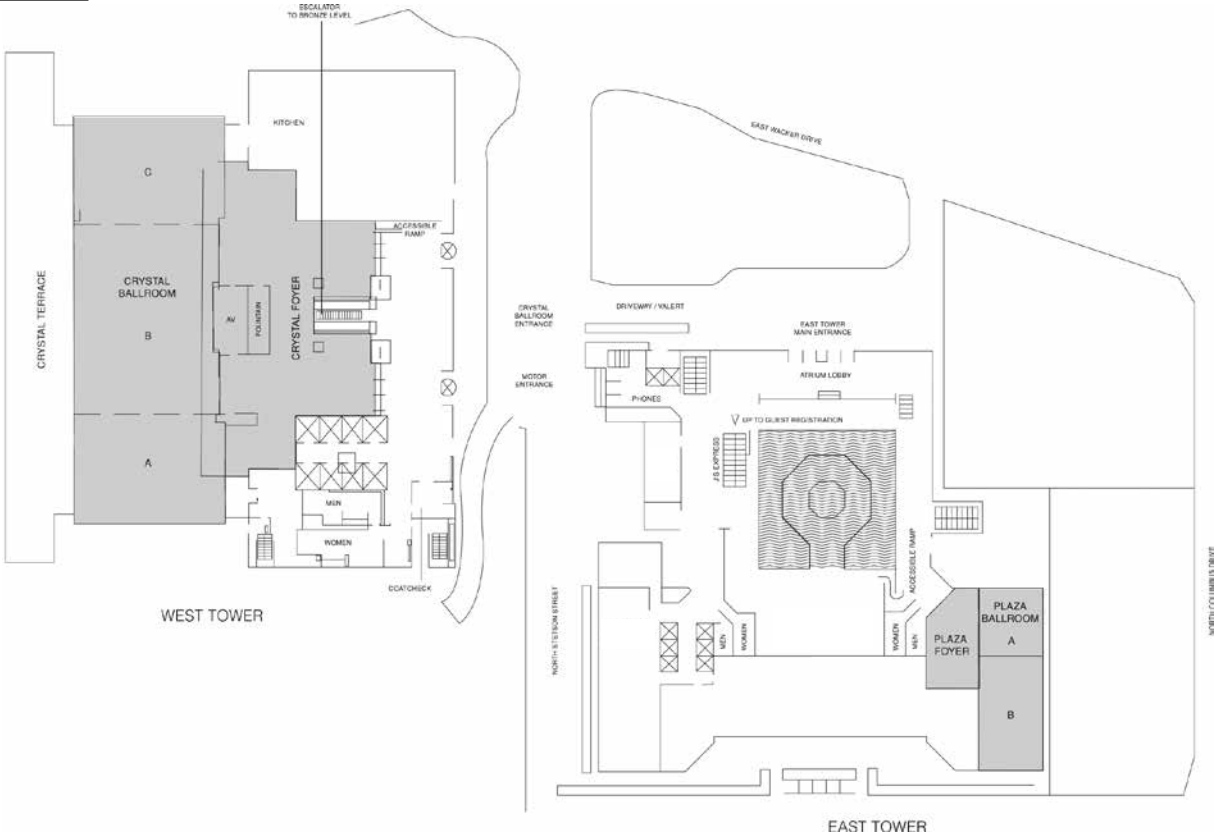
(continued)

SILVER LEVEL



WEST TOWER

GREEN LEVEL

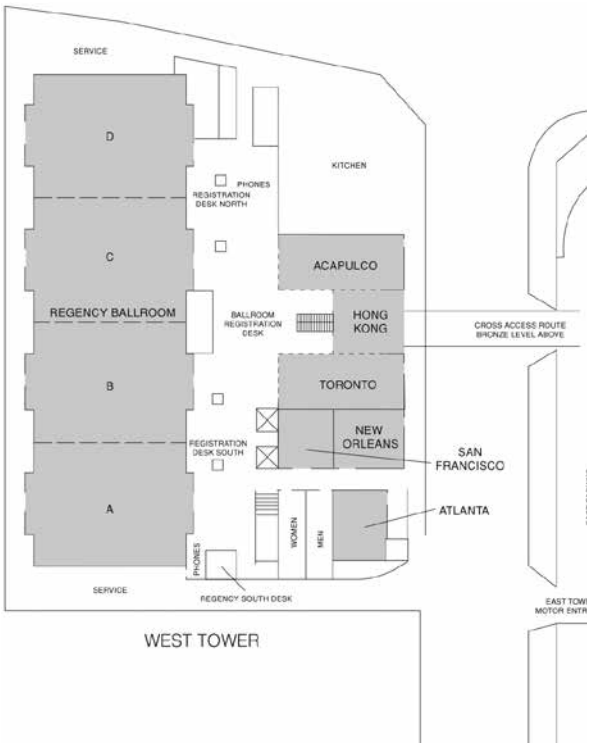


HYATT REGENCY CHICAGO DOWNTOWN

(continued)

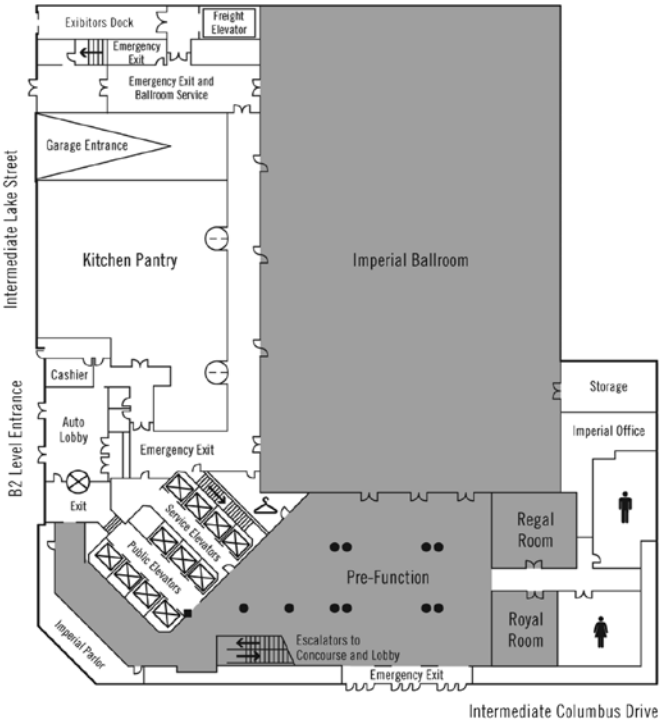
BRONZE LEVEL

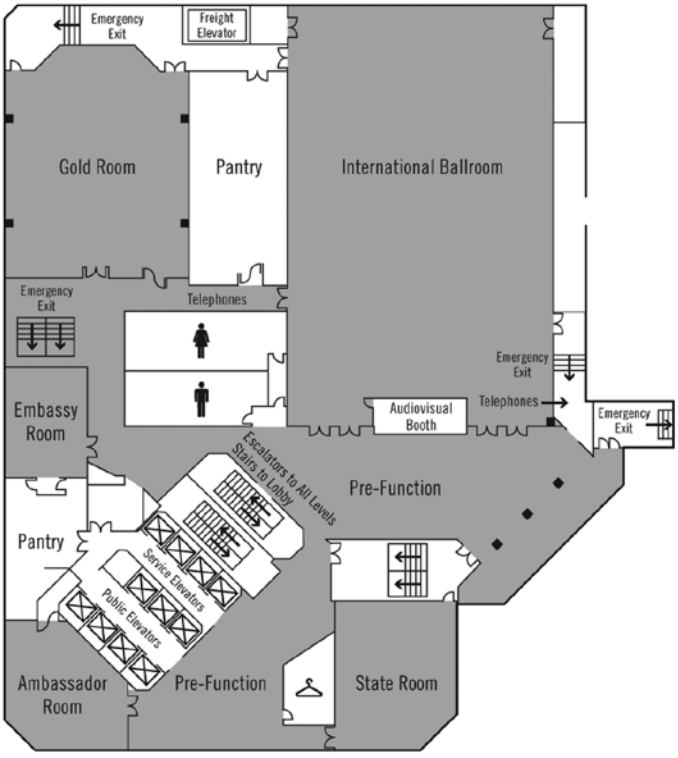
GOLD LEVEL

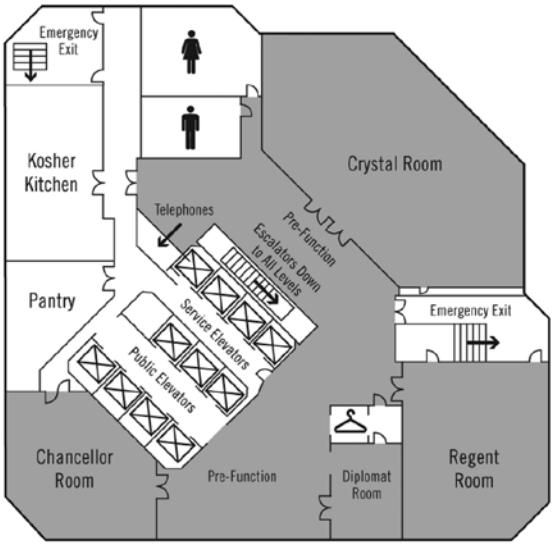


FAIRMONT CHICAGO, MILLENNIUM PARK

200 N. Columbus Drive
Chicago, IL 60601



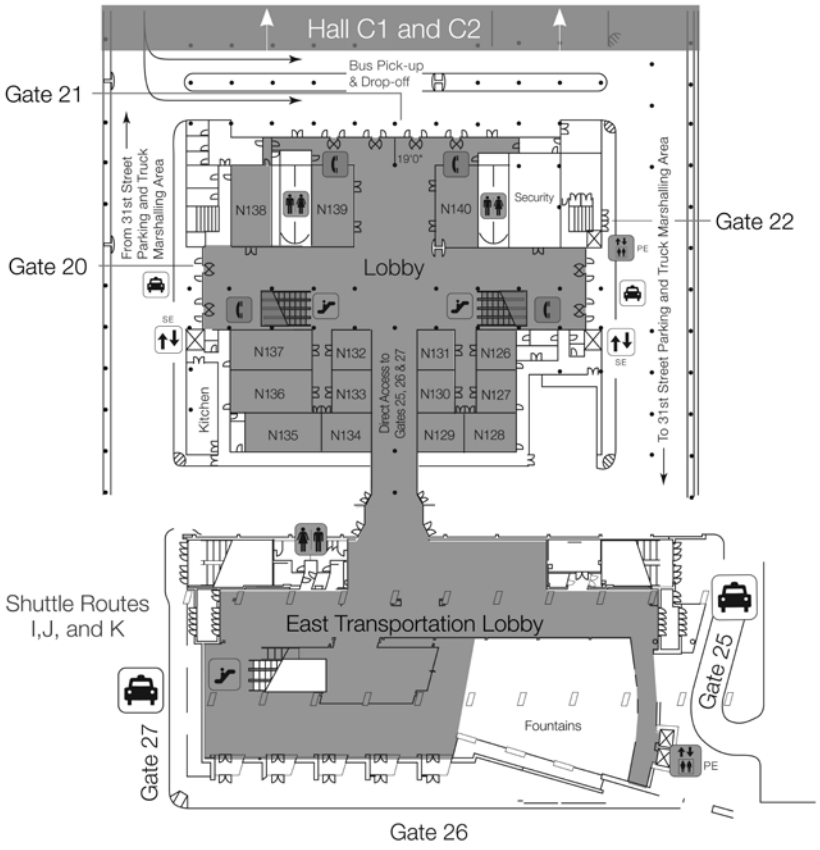




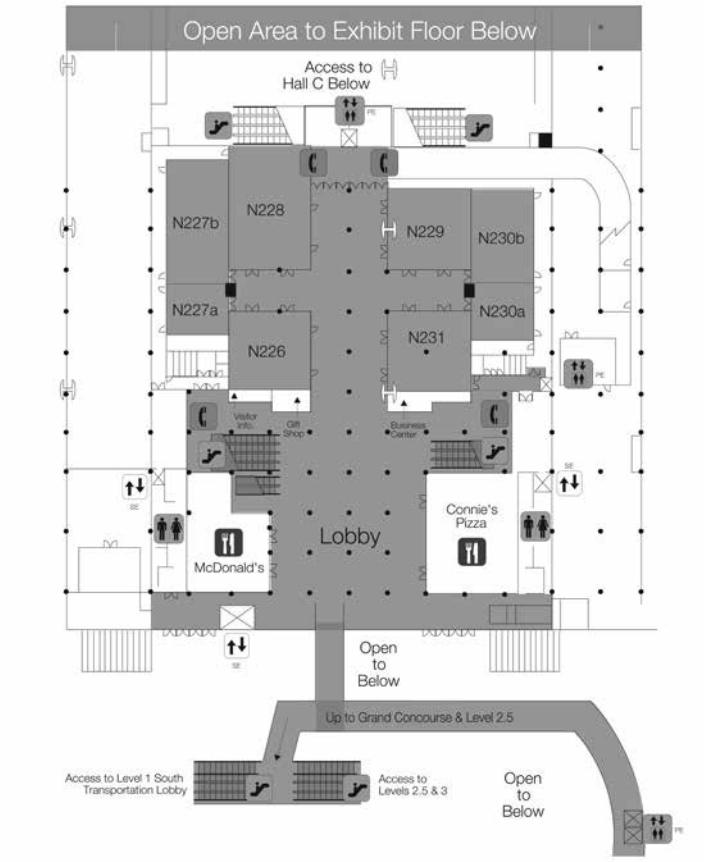
McCORMICK PLACE

2301 S. Martin Luther King Drive
Chicago, IL 60616

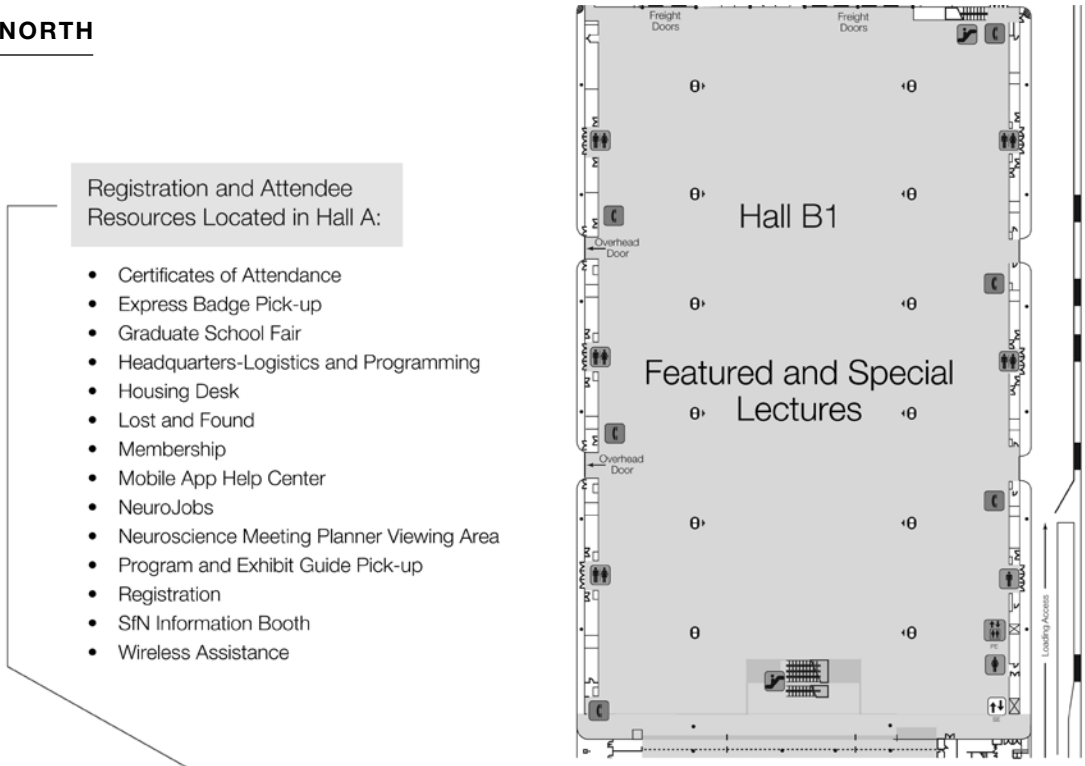
LEVEL 1 NORTH



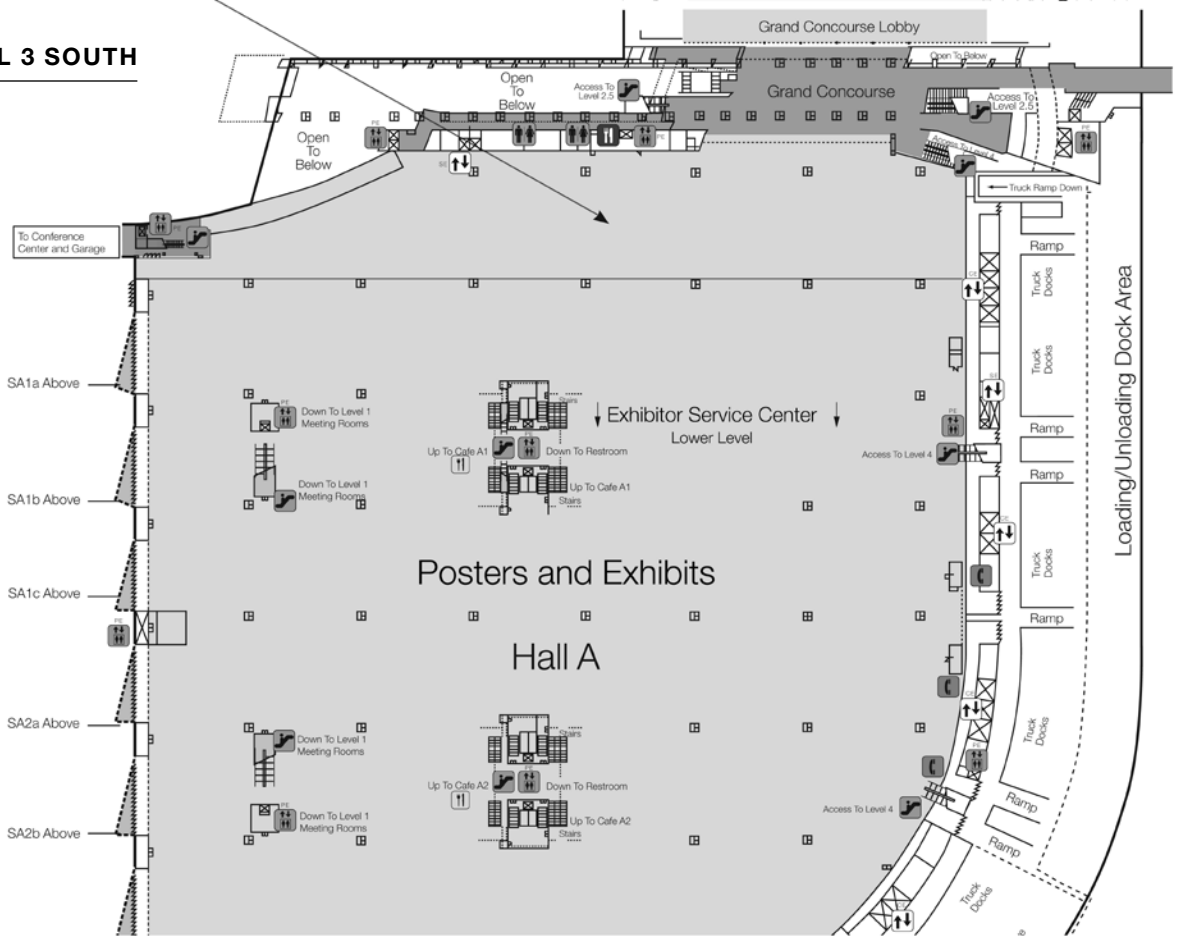
LEVEL 2 NORTH



LEVEL 3 NORTH



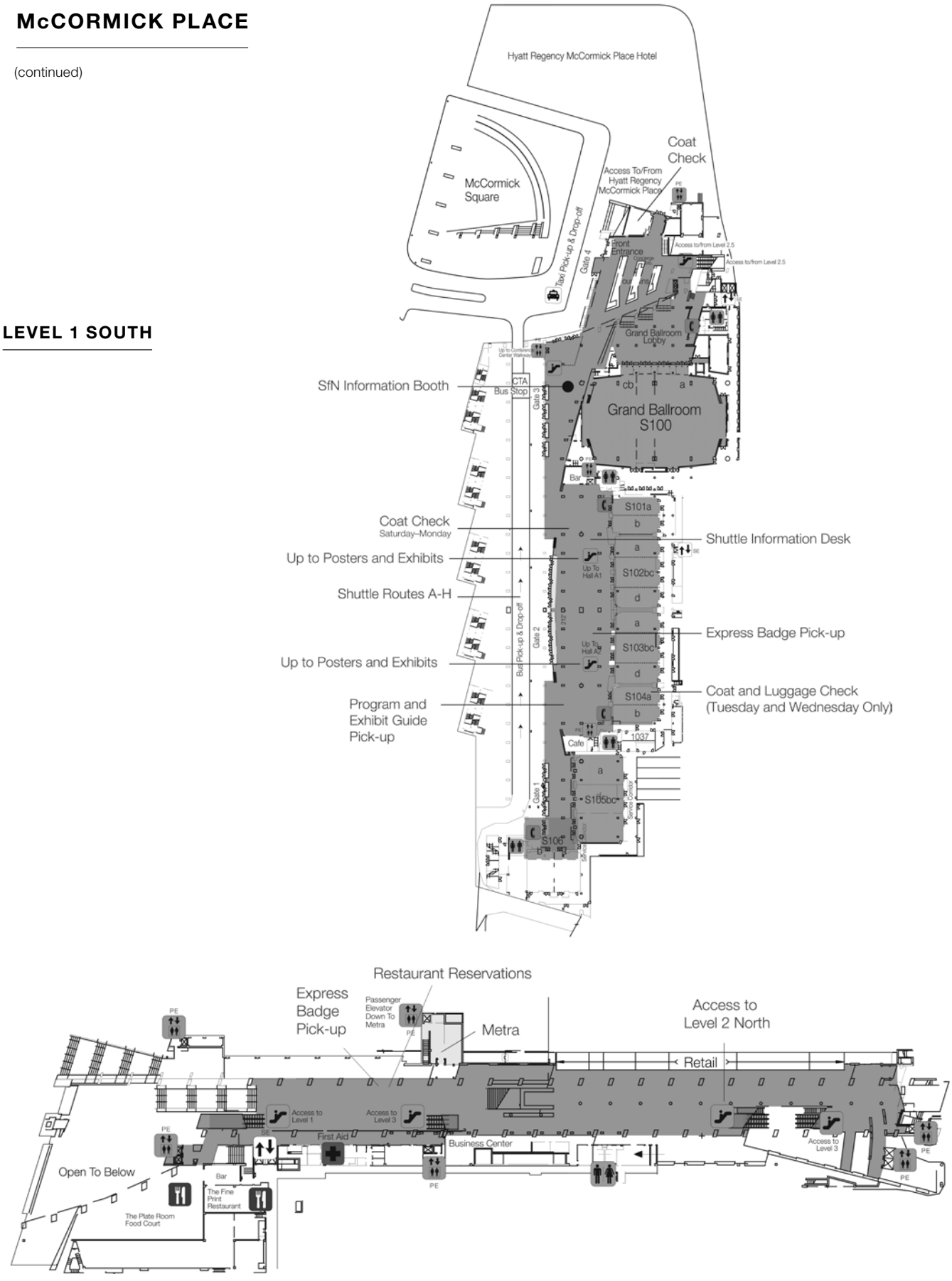
LEVEL 3 SOUTH



McCORMICK PLACE

(continued)

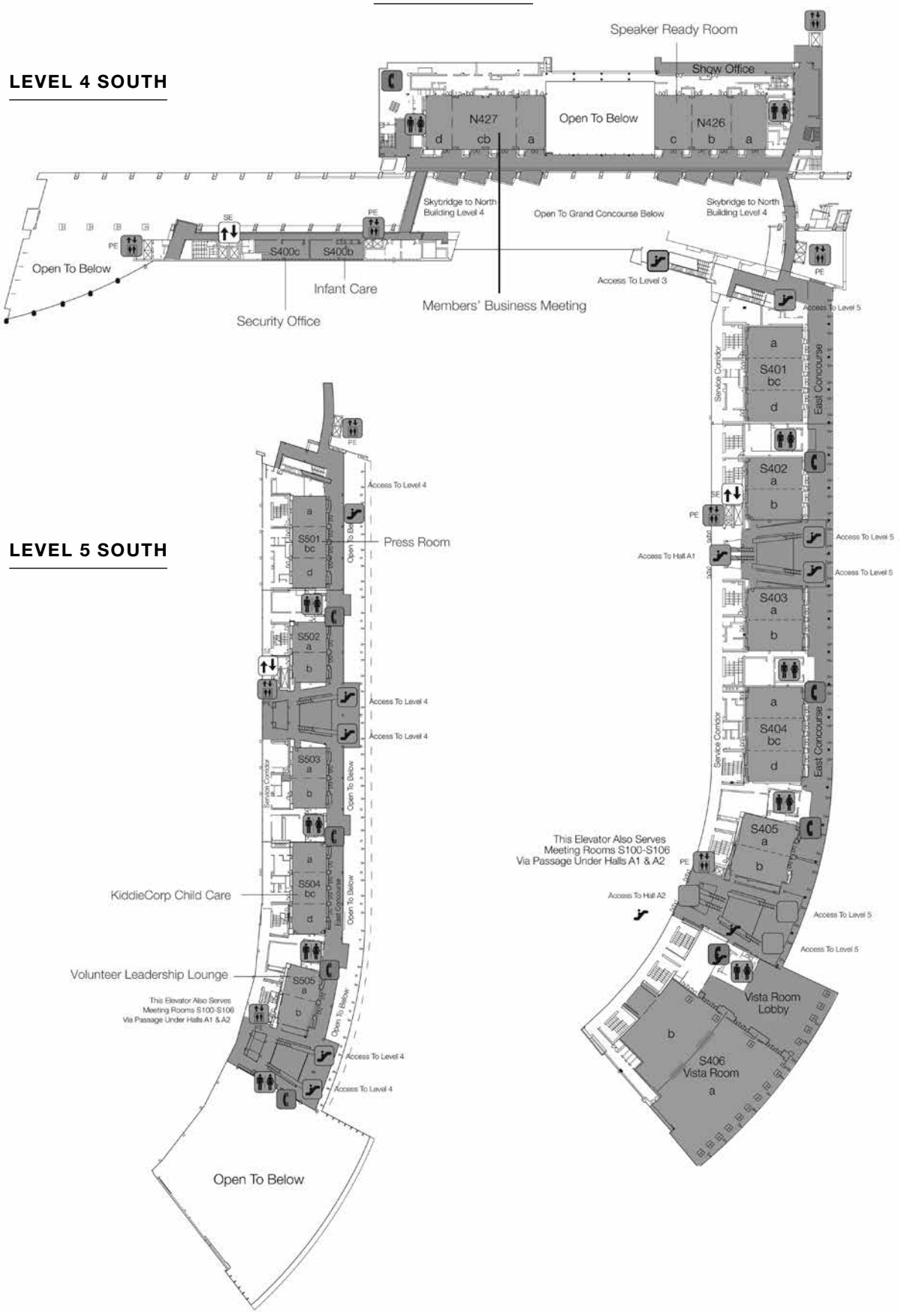
LEVEL 1 SOUTH



LEVEL 4 NORTH

LEVEL 4 SOUTH

LEVEL 5 SOUTH



Neuroscience 2015

Exhibits and Poster Sessions

McCormick Place, South Building

Meeting Dates: Oct. 17–21

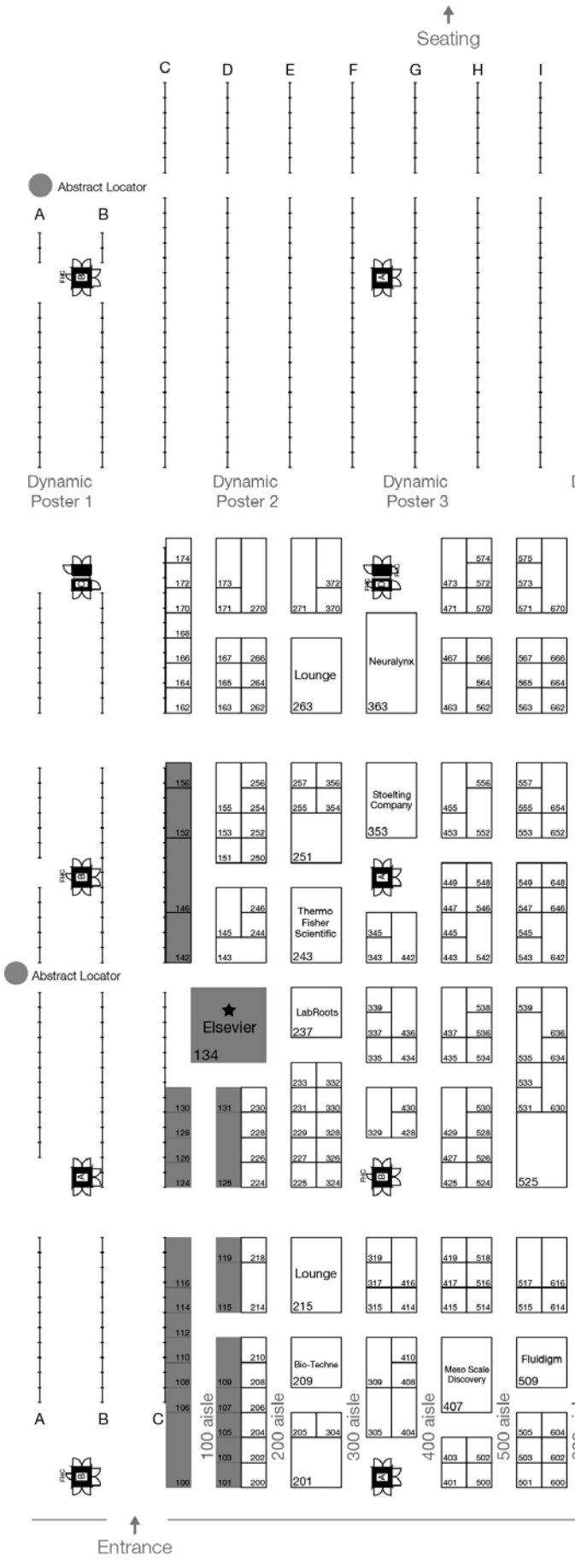
Exhibit Dates: Oct. 18–21

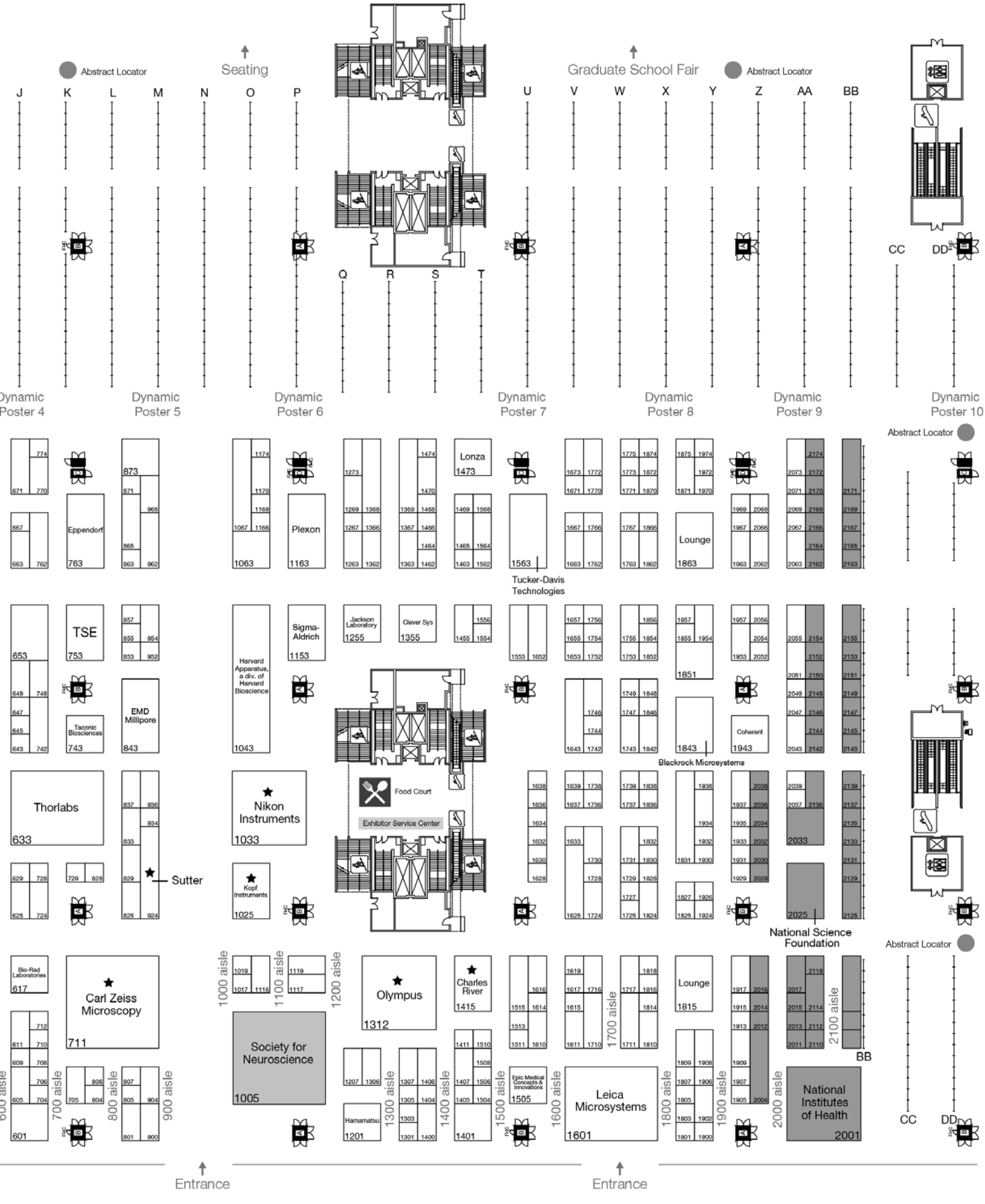
Note: Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday.

Floor plans subject to change.

For current floor plan, visit SfN.org/exhibits.

- Publisher's Row
- Nonprofit / Institutes
- SfN
- Exhibitor Service Center
- ★ Sustaining Associate Members
- Food Court
- Abstract Locator
- Column / Fire Hydrant (FHC)




Abstract Locator
Seating
Graduate School Fair
Abstract Locator
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U V W X Y Z AA BB
Q R S T
CC DD
Dynamic Poster 4
Dynamic Poster 5
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Plexon 1163
Lonza 1473
Lounge 1863
1563
Tucker-Davis Technologies
TSE 753
Sigma-Aldrich 1153
Jackson Laboratory 1255
Clever Sys 1355
Harvard Apparatus, a div. of Harvard Bioscience 1043
Taconic Biosciences 743
EMD Millipore 843
1851
Coherent 1943
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Thorlabs 633
Nikon Instruments 1033
Food Court
Exhibitor Service Center
Sutter
Kopf Instruments 1025
2033
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Carl Zeiss Microscopy 711
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1100 aisle
1200 aisle
Olympus 1312
Charles River 1415
1700 aisle
Lounge 1815
2100 aisle
BB
Society for Neuroscience 1005
Epic Medical Concepts & Innovations 1505
Leica Microsystems 1601
National Institutes of Health 2001
600 aisle
700 aisle
800 aisle
900 aisle
1300 aisle
1400 aisle
1500 aisle
1600 aisle
1800 aisle
1900 aisle
2000 aisle
Hamamatsu 1201
601
1401
CC DD
Entrance
Entrance

Neuroscience 2016

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NOVEMBER 12–16

Society for Neuroscience