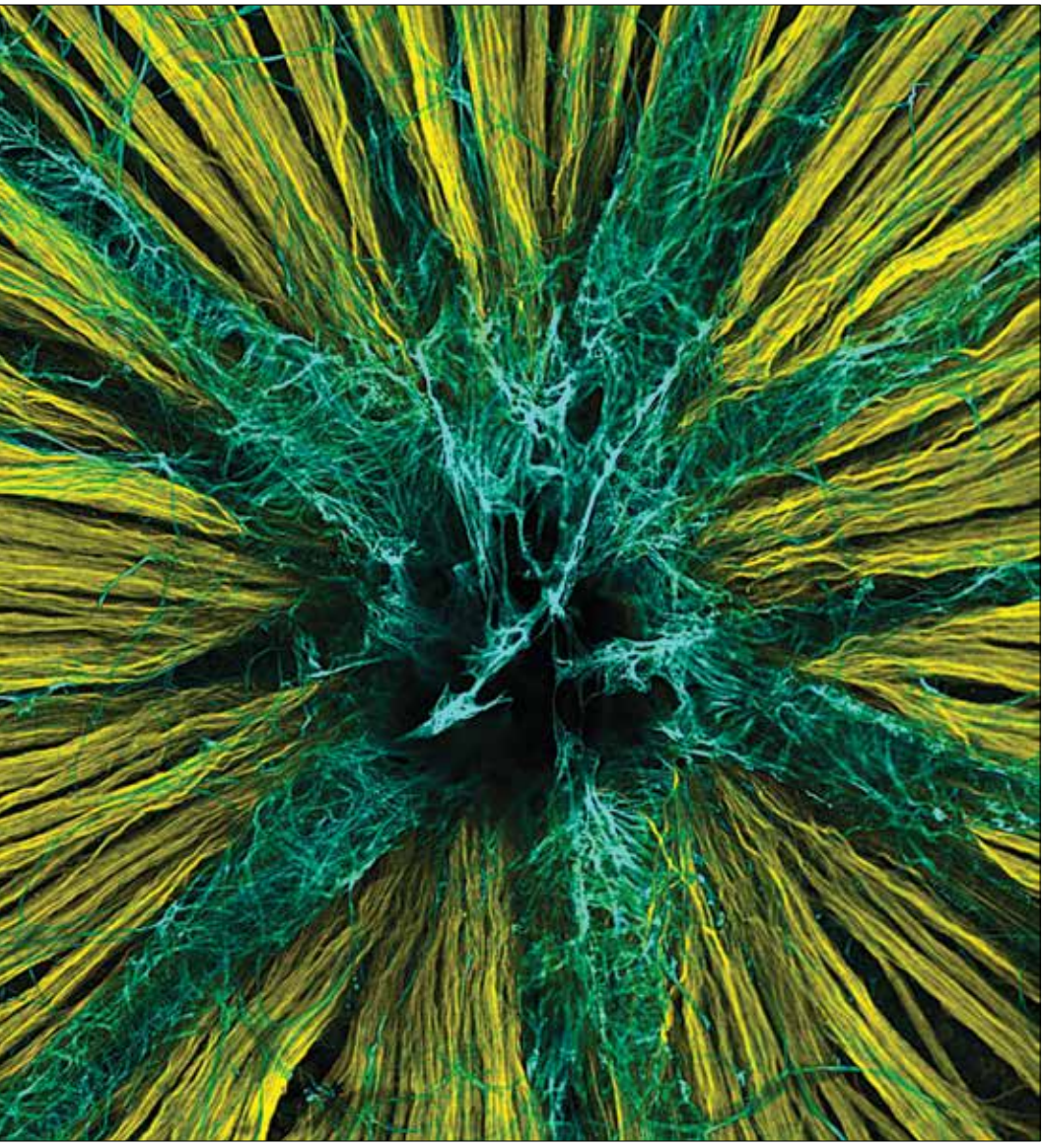
Friday to Saturday

Scientific Session Listings 1–99



NEUROSCIENCE 2014

WASHINGTON, DC | November 15–19

SfN Society for Neuroscience

Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics & Programming
Walter E. Washington Convention Center:
Room 102
Logistics: (202) 249-4100
Programming: (202) 249-4105

Volunteer Leadership Lounge
Walter E. Washington Convention Center:
Salon F, (202) 249-4096

Annual Meeting Information Booths
Walter E. Washington Convention Center
Grand Lobby, (202) 249-4124
L Street Bridge, (202) 249-4125
L Street Concourse, (202) 249-4126

Press Office

Walter E. Washington Convention Center:
Room 202A, (202) 249-4130

Exhibit Management

Walter E. Washington Convention Center:
Show Office B, (202) 249-4080

First Aid and Hospital Numbers

First Aid Room
Walter E. Washington Convention Center:
Hall A, (202) 249-3108
Hall D, (202) 249-3109

George Washington University Hospital
900 23rd Street, NW
Washington, DC 20037
(202) 715-4000

Medics USA Urgent Care Services
1700 17th Street, NW, Suite A
Washington, DC 20008
(202) 483-4400

Key to Poster Floor by Themes

The poster floor begins with Theme A in Hall C and ends with Theme H in Hall A. 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 on display in Hall A beginning at 1 p.m. on Saturday, November 15, and will remain posted until 5 p.m., Sunday, November 16. One-hour presentations will occur either Saturday afternoon or Sunday morning.

Cover Image: Confocal micrograph of a mouse retina showing retinal ganglion cell axons (yellow) exiting the optic nerve head on their way to central targets in the brain. Axons penetrate a dense plexus of astrocytes (blue) that also frame the retinal vasculature.

Nicholas J. Ward, Karen W. Ho, Wendi S. Lambert, Carl Weitlauf, and David J. Calkins, 2014, *The Journal of Neuroscience*, 28: 34(9): 3161-3170

Friday — Saturday Highlights

✍ Preregistration Required
$ Course Fee
🕮 Professional Development
Networking
Public Outreach
Online Content

Friday, Nov. 14

Neurobiology of Disease Workshop

Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits ✍ 🕮 $

Organizers: Marion S. Buckwalter, MD, PhD; Claudia M. Testa, MD, PhD

8 a.m.–5 p.m.

Walter E. Washington Convention Center: Ballroom C

Support contributed by: National Institute of Neurological Disease and Stroke (NINDS)

Short Course #1

Advances in Multineuronal Monitoring of Brain Activity ✍ 🕮 $

Organizer: Prakash Kara, PhD

8 a.m.–6 p.m.

Walter E. Washington Convention Center: Ballroom A

Short Course #2

Advances in Brain-Scale, Automated Anatomical Techniques: Neuronal Reconstruction, Tract Tracing, and Atlasing ✍ 🕮 $

Organizer: H. Sebastian Seung, PhD

8:30 a.m.–6 p.m.

Walter E. Washington Convention Center: Ballroom B

Saturday, Nov. 15

Meet-the-Expert Series 🕮 Networking

8–9:15 a.m., 9:30–10:45 a.m.

Renaissance Washington, DC

Meeting Rooms 2, 4, 5, 8, 9, 12

Partial support contributed by: Emory University/Yerkes National Primate Research Center

Careers Beyond the Bench 🕮

Organizer: Elisabeth Van Bockstaele, PhD

Panelists: Paul Calvo, PhD; Lique Coolen, PhD; Rae Nishi, PhD; Sally J. Rockey, PhD

9–11 a.m.

Walter E. Washington Convention Center: 207A

Success in Academia: Different Strategies for Different Stages 🕮

Organizer: Tracy Bale, PhD

Panelists: Margaret McCarthy, PhD; Eric Nestler, MD, PhD; Marina Picciotto, PhD; Kerry Ressler, MD, PhD; Catherine Woolley, PhD

9–11 a.m.

Walter E. Washington Convention Center: 207B

Dialogues Between Neuroscience and Society

Food for Thought: Tastes, Aromas, and Memories of Food

Bryan Voltaggio, Chef

11 a.m.–1 p.m.

Walter E. Washington Convention Center: Hall D

Support contributed by: Elsevier

Getting the Most Out of SfN: The Annual Meeting and Beyond 🕮

Organizers: David Riddle, PhD; Jeffrey Smith, PhD; Hermes Yeh, PhD

Panelists: Cara Altimus, PhD; Lori McMahon, PhD

1–2 p.m.

Walter E. Washington Convention Center: 207A

Graduate School Fair Networking

1–3 p.m.

Walter E. Washington Convention Center: Hall E

Plan to Attend

Sunday, Nov. 16

David Kopf Lecture on Neuroethics

Mind, Brain, and the Ethics of Intergroup Behavior

Mahzarin Banaji, PhD
Harvard University

11:30 a.m.–12:40 p.m.

Support contributed by: David Kopf Instruments

Peter and Patricia Gruber Lecture

Circuits and Strategies for Skilled Motor Behavior

Thomas Jessell, PhD
Columbia University, Howard Hughes Medical Institute

2:30–3:40 p.m.

Support contributed by: The Gruber Foundation

Presidential Special Lecture

The Integration of Interneurons Into Cortical Circuits: Both Nurture and Nature CME

Gordon J. Fishell, PhD
New York University Neuroscience Institute

5:15–6:25 p.m.

Friday — Saturday Highlights

Preregistration Required | Course Fee
Professional Development | Networking
Public Outreach | Online Content

Empirical Approaches to Neuroscience and Society Symposium

Improving Animal Models of Neuropsychiatric Disorders CME

Chair: Trevor W. Robbins, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom A

Symposium

Evolution of Neural Circuits: From Axon Guidance Genes to Spoken Language CME

Chair: Alain Chedotal, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom C

Symposium

C9orf72: A Repeat Disease That Underlies Dementia and Neurodegeneration CME

Chair: Jeffrey D. Rothstein, MD, PhD

Co-chair: Laura P.W. Ranum, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: 151AB

Minisymposium

Network-Mediated Encoding of Circadian Time: The Suprachiasmatic Nucleus From Genes to Neurons to Circuits and Back CME

Chair: Marco Brancaccio, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: 145B

Minisymposium

The Neural Basis of Affective Touch CME

Chair: India Morrison, PhD

Co-chair: Hakan William Olausson, MD, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom B

Minisymposium

Multimodal Investigation of Large-Scale Brain Dynamics: Combining fMRI and Intracranial EEG CME

Chair: Biyu He, PhD

Co-chair: Karim Jerbi, PhD

1:30–4 p.m.

Walter E. Washington Convention Center: 146AB

Special Lecture

Nanoscopy With Focused Light: Principles and Applications CME

Stefan W. Hell, PhD

Max Planck Institute for Biophysical Chemistry, Germany

2–3:10 p.m.

Walter E. Washington Convention Center: Hall D

Brain Awareness Campaign Event

Communicate Your Science

3–4:30 p.m.

Walter E. Washington Convention Center: Hall E

Mentor-Mentee Interaction: How to Have a Difficult Conversation

Organizers: Michael Levine, PhD; Jennifer Raymond, PhD; Cheryl Sisk, PhD

Panelist: Samantha Sutton, PhD

3–4:30 p.m.

Walter E. Washington Convention Center: 103B

Research Careers in Industry and the Private Sector

Organizer: Gretchen Snyder, PhD

Panelists: John Dunlop, PhD; Daniel Hutcheson, PhD; Carrie Jones, PhD; Robin Kleiman, PhD; Christian Mirescu, PhD

3–5 p.m.

Walter E. Washington Convention Center: 207B

NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career

Organizer: Stephen Korn, PhD

Panelists: Nancy Desmond, PhD; Michelle Jones London, PhD; Dennis Twombly, PhD; Alan Willard, PhD

3:30–5 p.m.

Walter E. Washington Convention Center: 207A

Presidential Special Lecture

The Living Record of Memory: Genes, Neurons, and Synapses CME

Kelsey C. Martin, MD, PhD

University of California, Los Angeles

5:15–6:25 p.m.

Walter E. Washington Convention Center: Hall D

Support contributed by: MedImmune

Evening Poster Sessions

Diversity Fellows, International Fellows, and Travel Award Recipients Poster Sessions

6:30–8:30 p.m.

Walter E. Washington Convention Center: Hall E

Partial support contributed by Novartis Institutes for Biomedical Research (Travel Award Recipents Poster Session)

Career Development Topics: A Networking Event

7:30–9:30 p.m.

Walter E. Washington Convention Center: Hall E

Chronological List of Saturday Sessions

Theme Descriptions

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

All posters will be presented in the Walter E. Washington Convention Center, Halls A–C. All lecture, symposium, minisymposium, and nanosymposium rooms are in the Walter E. Washington Convention Center.
Note: Theme H Posters will be on display in Hall A beginning at 1 p.m. on Saturday, Nov. 15, and will remain posted until 5 p.m. on Sunday, Nov. 16. One-hour presentation times will occur either Saturday afternoon or Sunday morning.

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
FEATURED PROGRAMS							
1		Food for Thought: Tastes, Aromas, and Memories of Food	Dialogues Between Neuroscience and Society		Hall D	11 a.m.–1 p.m.	
2	H	Improving Animal Models of Neuropsychiatric Disorders	Empirical Approaches to Neuroscience and Society Symposium		Ballroom A	1:30–4 p.m.	2.5
3	A	Evolution of Neural Circuits: From Axon Guidance Genes to Spoken Language	Symposium		Ballroom C	1:30–4 p.m.	2.5
4	C	C9orf72: A Repeat Disease That Underlies Dementia and Neurodegeneration	Symposium		Room 151AB	1:30–4 p.m.	2.5
5	B	Network-Mediated Encoding of Circadian Time: The Suprachiasmatic Nucleus (SCN) From Genes to Neurons to Circuits and Back	Minisymposium		Room 145B	1:30–4 p.m.	2.5
6	D	The Neural Basis of Affective Touch	Minisymposium		Ballroom B	1:30–4 p.m.	2.5
7	F	Multimodal Investigation of Large-Scale Brain Dynamics: Combining fMRI and Intracranial EEG	Minisymposium		Room 146AB	1:30–4 p.m.	2.5
8	G	Nanoscopy With Focused Light: Principles and Applications	Special Lecture		Hall D	2–3:10 p.m.	1.25
9		The Living Record of Memory: Genes, Neurons, and Synapses	Presidential Special Lecture		Hall D	5:15–6:25 p.m.	1.25
NANOSYMPOSIA (1–5 P.M.)							
10	C	Neurogenesis and Neurotransmission in Neurodegenerative Diseases	Nanosymposium		Room 152A	1–2:45 p.m.	
11	C	Autism Synaptic and Cellular Mechanisms	Nanosymposium		Room 144A	1–3 p.m.	
12	C	Demyelinating Disorders	Nanosymposium		Room 152B	1–4:15 p.m.	
13	C	Psychomotor Stimulant Reinforcement	Nanosymposium		Room 140A	1–3:30 p.m.	
14	D	Plasticity in the Olfactory System	Nanosymposium		Room 147A	1–3:30 p.m.	
15	D	Auditory Processing	Nanosymposium		Room 206	1–4 p.m.	
16	D	Spatial and Feature-Based Attention	Nanosymposium		Room 146C	1–4 p.m.	
17	D	Plasticity After Spinal Cord Injury	Nanosymposium		Room 143A	1–3 p.m.	
18	E	Neuroimmunology	Nanosymposium		Room 150A	1–4:15 p.m.	
19	F	Brain Wellness: Cognitive Development	Nanosymposium		Room 150B	1–3 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
20	G	Data Analysis and Statistics	Nanosymposium		Room 147B	1–4 p.m.	
THEME H POSTERS (SATURDAY 1 P.M. – SUNDAY 5 P.M.)							
21	H	History of Neuroscience	Theme H Poster	UU21–UU40	Halls A–C	1–5 p.m.	
22	H	K–12	Theme H Poster	UU41–UU62	Halls A–C	1–5 p.m.	
23	H	College Experiences	Theme H Poster	UU63–UU82	Halls A–C	1–5 p.m.	
24	H	Teaching Neuroscience: College Courses	Theme H Poster	UU83–VV17	Halls A–C	1–5 p.m.	
25	H	Graduate and Professional Education	Theme H Poster	VV18–VV36	Halls A–C	1–5 p.m.	
26	H	Public Outreach I	Theme H Poster	VV37–VV55	Halls A–C	1–5 p.m.	
27	H	Public Outreach II	Theme H Poster	VV56–VV75	Halls A–C	1–5 p.m.	
28	H	Ethical and Policy Issues	Theme H Poster	VV76–V88	Halls A–C	1–5 p.m.	
POSTERS (1–5 P.M.)							
29	A	Neural Lineage Specification and Plasticity	Poster	A1-A23	Halls A–C	1–5 p.m.	
30	A	Neuronal Differentiation	Poster	A24-A46	Halls A–C	1–5 p.m.	
31	A	Dendritic Development and Branching	Poster	A47-A64	Halls A–C	1–5 p.m.	
32	A	Mechanisms of Dendritic Growth and Branching	Poster	A65-B16	Halls A–C	1–5 p.m.	
33	A	Adolescent Drug Exposure: Alcohol and Nicotine	Poster	B17-B35	Halls A–C	1–5 p.m.	
34	B	Dopamine and Dopamine Receptor Function	Poster	B36-B60	Halls A–C	1–5 p.m.	
35	B	Opiate, Cytokines, and Other Neuropeptides	Poster	C1-C11	Halls A–C	1–5 p.m.	
36	B	Muscarinic Acetylcholine and Metabotropic Glutamate Receptors	Poster	C12-C37	Halls A–C	1–5 p.m.	
37	B	Postsynaptic Structure I	Poster	C38-C49	Halls A–C	1–5 p.m.	
38	B	Electrical Synapse and Gap Junction	Poster	C50-C57	Halls A–C	1–5 p.m.	
39	B	Signal Propagation in Neural Networks	Poster	C58-D12	Halls A–C	1–5 p.m.	
40	B	Oscillations and Synchrony	Poster	D13-D25	Halls A–C	1–5 p.m.	
41	C	Alzheimer's Disease: Tau Animal Models	Poster	D26-D46	Halls A–C	1–5 p.m.	
42	C	Beta Amyloid Toxicity	Poster	D47-D70	Halls A–C	1–5 p.m.	
43	C	Alzheimer's Disease: Proteinopathy, Non-Abeta, and Non-Tau	Poster	D71-F3	Halls A–C	1–5 p.m.	
44	C	Alzheimer's Disease: Imaging and Biomarkers	Poster	F4-H9	Halls A–C	1–5 p.m.	
45	C	Huntington's Disease Animal Models and Therapeutic Strategies	Poster	H10-J5	Halls A–C	1–5 p.m.	
46	C	Huntington's Disease Mechanisms I	Poster	J6-L12	Halls A–C	1–5 p.m.	
47	C	Dystonia Mechanisms and Model Systems	Poster	M1-N7	Halls A–C	1–5 p.m.	
48	C	Neuromuscular Diseases	Poster	N8-P1	Halls A–C	1–5 p.m.	
49	C	Epilepsy: Synapses and Ion Channels	Poster	P2-R9	Halls A–C	1–5 p.m.	
50	C	Neurological Disease: Cellular Mechanisms and Oxidative Stress	Poster	R10-S9	Halls A–C	1–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
51	C	Schizophrenia and Bipolar Disorder	Poster	S10-U11	Halls A–C	1–5 p.m.	
52	C	Schizophrenia: Mutant Models	Poster	U12-V4	Halls A–C	1–5 p.m.	
53	C	Alcohol: Neural Mechanisms and Behavior I	Poster	V5-V23	Halls A–C	1–5 p.m.	
54	C	Cocaine Reinforcement I	Poster	V24-W21	Halls A–C	1–5 p.m.	
55	C	Methamphetamine and MDMA	Poster	W22-X4	Halls A–C	1–5 p.m.	
56	C	Addiction Treatment: Translational and Clinical Studies	Poster	X5-X15	Halls A–C	1–5 p.m.	
57	C	Learning, Memory, Dependence, and Addiction	Poster	X16-Y15	Halls A–C	1–5 p.m.	
58	D	Olfaction: Central Circuits and Neurotransmitters	Poster	Y16-Y27	Halls A–C	1–5 p.m.	
59	D	Retina: Circuits and Coding	Poster	Y28-Z7	Halls A–C	1–5 p.m.	
60	D	Striate Cortex: Neural Coding	Poster	Z8-Z35	Halls A–C	1–5 p.m.	
61	D	Visual Processing: Contrast, Form, and Color	Poster	Z36-AA16	Halls A–C	1–5 p.m.	
62	D	Eye Movements: Cerebellum, Brainstem, and Muscles	Poster	AA17-BB16	Halls A–C	1–5 p.m.	
63	D	Somatosensory System	Poster	BB17-BB31	Halls A–C	1–5 p.m.	
64	D	Thalamocortical Mechanisms	Poster	BB32-CC17	Halls A–C	1–5 p.m.	
65	D	Generation of Motor Patterns	Poster	CC18-DD6	Halls A–C	1–5 p.m.	
66	D	Parkinson's Disease Models I	Poster	DD7-DD19	Halls A–C	1–5 p.m.	
67	D	Posture and Gait: Kinematics, Muscle Activity, Exercise and Fatigue, and Biomechanics I	Poster	DD20-EE6	Halls A–C	1–5 p.m.	
68	D	Posture and Gait: Aging and Stroke	Poster	EE7-EE21	Halls A–C	1–5 p.m.	
69	D	Posture and Gait: Injury and Disease	Poster	EE22-FF11	Halls A–C	1–5 p.m.	
70	D	Visuomotor Coordination	Poster	FF12-GG9	Halls A–C	1–5 p.m.	
71	D	Interlimb Coordination	Poster	GG10-HH1	Halls A–C	1–5 p.m.	
72	D	Motor Deficits	Poster	HH2-HH14	Halls A–C	1–5 p.m.	
73	D	Cortical Motor Planning	Poster	HH15-HH29	Halls A–C	1–5 p.m.	
74	D	Noninvasive Neurophysiology	Poster	HH30-II15	Halls A–C	1–5 p.m.	
75	E	Gonadotropin–Releasing Hormone and Hpg Control	Poster	II16-JJ1	Halls A–C	1–5 p.m.	
76	E	Kisspeptin and Related Systems	Poster	JJ2-JJ12	Halls A–C	1–5 p.m.	
77	E	Neural Control of Cardiovascular Function I	Poster	JJ13-JJ32	Halls A–C	1–5 p.m.	
78	E	Stress: Corticotropin-Releasing Factor	Poster	JJ33-KK7	Halls A–C	1–5 p.m.	
79	E	Stress: Genes and Epigenetics	Poster	KK8-KK18	Halls A–C	1–5 p.m.	
80	E	Adolescent Stress	Poster	KK19-LL2	Halls A–C	1–5 p.m.	
81	E	Stress Effects on Cortex and Other Brain Regions	Poster	LL3-LL20	Halls A–C	1–5 p.m.	
82	F	Human Long-Term Memory: Medial Temporal Lobe I	Poster	LL21-MM19	Halls A–C	1–5 p.m.	
83	F	Human Emotion: Perception and Expression	Poster	MM20-NN1	Halls A–C	1–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
84	F	Human Decision-Making: Perceptual Processes	Poster	NN2-NN23	Halls A–C	1–5 p.m.	
85	F	Cognitive Development	Poster	NN24-OO7	Halls A–C	1–5 p.m.	
86	F	Aging Brain	Poster	OO8-OO19	Halls A–C	1–5 p.m.	
87	F	Alzheimer's Disease: Novel Therapeutics	Poster	OO20-OO32	Halls A–C	1–5 p.m.	
88	F	Healthy Aging	Poster	PP1-PP18	Halls A–C	1–5 p.m.	
89	F	Appetitive and Incentive Learning and Memory I	Poster	PP19-QQ15	Halls A–C	1–5 p.m.	
90	F	Memory Consolidation and Reconsolidation	Poster	QQ16-RR7	Halls A–C	1–5 p.m.	
91	F	Animal Models: Anatomical Connections in Learning and Memory Circuits	Poster	RR8-RR24	Halls A–C	1–5 p.m.	
92	F	Animal Models: Impairments in Learning and Memory	Poster	RR25-RR45	Halls A–C	1–5 p.m.	
93	F	Learning and Memory: Physiology I	Poster	RR46-SS20	Halls A–C	1–5 p.m.	
94	F	Cortical and Hippocampal Circuits: Spatial Navigation I	Poster	SS21-SS50	Halls A–C	1–5 p.m.	
95	F	Motivation and Emotion: Information Processing	Poster	SS51-TT6	Halls A–C	1–5 p.m.	
96	G	Genomics, Proteomics, and Systems Biology	Poster	TT7-TT35	Halls A–C	1–5 p.m.	
97	G	Imaging Advances: Cell Biology	Poster	TT36-TT65	Halls A–C	1–5 p.m.	
98	G	Imaging Advances: Neural Ultrastructure	Poster	TT66-TT79	Halls A–C	1–5 p.m.	
99	G	Network Models and Computational Studies	Poster	TT80-UU15	Halls A–C	1–5 p.m.	
PROFESSIONAL DEVELOPMENT WORKSHOPS							
PDW01		Neurobiology of Disease Workshop: Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits	Professional Development Workshop		Ballroom C	8 a.m.–5 p.m.	
PDW02		Short Course #1: Advances in Multineuronal Monitoring of Brain Activity	Professional Development Workshop		Ballroom A	8 a.m.–6 p.m.	
PDW03		Short Course #2: Advances in Brain-Scale, Automated Anatomical Techniques: Neuronal Reconstruction, Tract Tracing, and Atlasing	Professional Development Workshop		Ballroom B	8:30 a.m.–6 p.m.	
PDW04		Meet-the-Expert: Session 1	Professional Development Workshop		Renaissance Washington, DC: Meeting Rooms 2, 4, 5, 8, 9, 12	8–9:15 a.m.	
PDW05		Careers Beyond the Bench	Professional Development Workshop		Room 207A	9–11 a.m.	
PDW06		Success in Academia: Different Strategies for Different Stages	Professional Development Workshop		Room 207B	9–11 a.m.	
PDW07		Meet-the-Expert: Session 2	Professional Development Workshop		Renaissance Washington, DC: Meeting Rooms 2, 4, 5, 8, 9	9:30–10:45 a.m.	
PDW08		Getting the Most Out of SfN: The Annual Meeting and Beyond	Professional Development Workshop		Room 207A	1–2 p.m.	
PDW09		Mentor-Mentee Interaction: How to Have a Difficult Conversation	Professional Development Workshop		Room 103B	3–4:30 p.m.	
PDW10		Research Careers in Industry and the Private Sector	Professional Development Workshop		Room 207B	3–5 p.m.	
PDW11		NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career	Professional Development Workshop		Room 207A	3:30–5 p.m.	

SESSION NUMBER	THEME	SESSION TITLE	SESSION TYPE	POSTER BOARD NUMBER	LOCATION	SESSION TIME	CME HOURS
PDW12		Career Development Topics: A Networking Event	Professional Development Workshop		Hall E	7:30–9:30 p.m.	
MEETINGS AND EVENTS							
ME01		Graduate School Fair	Meetings and Events		Hall E	1–3 p.m.	
ME02		Brain Awareness Campaign Event: Communicate Your Science	Meetings and Events		Hall E	3–4:30 p.m.	
ME03		Diversity Fellows Poster Session	Meetings and Events		Hall E	6:30–8:30 p.m.	
ME04		International Fellows Poster Session	Meetings and Events		Hall E	6:30–8:30 p.m.	
ME05		Travel Award Recipients Poster Session	Meetings and Events		Hall E	6:30–8:30 p.m.	

Dynamic Posters — Saturday PM

Saturday's dynamic poster presentations are listed below. The listing includes the locations of each dynamic poster's corresponding paper poster. All dynamic poster presentations will occur in the Walter E. Washington Convention Center, Halls A-C. Dynamic poster displays are numbered DP1–DP10 and are spread throughout the poster floor. For full dynamic poster abstracts, visit the Neuroscience Meeting Planner or annual meeting mobile app.

THEME	ABSTRACT TITLE	PRESENTER	DYNAMIC POSTER LOCATION	PAPER POSTER LOCATION	PAPER POSTER PRES. NO.
DYNAMIC POSTERS (1–5 P.M.)					
Theme A: Development	miR-125b mediated filopodial dynamics in developing dendrites	Rajashekar Iyer	DP1	B15	32.19
Theme B: Neural Excitability, Synapses, and Glia: Cellular Mechanisms	Coordination and remodeling of cortico-limbic network dynamics by dopaminergic neuronal activity	Heather Decot	DP2	B40	34.05
Theme C: Disorders of the Nervous System	Brain computer interface for communication in completely locked-in patient using near infrared spectroscopy	Ujwal Chaudhary	DP3	O5	48.10
Theme C: Disorders of the Nervous System	Optogenetically inspired deep brain stimulation reverses drug-evoked plasticity	Meaghan Creed	DP4	X7	56.03
Theme D: Sensory and Motor Systems	Characterising retinal population response with high density multielectrode arrays	Sahar Pirmoradian	DP5	Z2	59.07
Theme D: Sensory and Motor Systems	Modulation of tactile sensory responses during a sensory-triggered decision task in mouse forepaw primary motor cortex	Luc Estebanez	DP6	HH29	73.15
Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge	Connectome of the Rostral Ventrolateral Medulla Catecholaminergic (RVLM-CA) neurons of the mouse determined using a modified rabies virus	Ruth Stornetta	DP7	JJ15	77.03
Theme F: Cognition and Behavior	Mechanisms of music-induced neurophysiology — a proposed model for prescriptive listening applications in dementia patients	Linda Maguire	DP8	OO28	87.09
Theme G: Novel Methods and Technology Development	Hubs, clusters and communities of hundreds cortical neurons	Masanori Shimono	DP9	UU13	99.26
Theme H: History, Teaching, Public Awareness, and Societal Impacts in Neuroscience	25 years of the Mouse Genome Informatics resource: Integrating genetic, genomic, expression, functional and phenotypic data for the neuroscience research community	Joanne Berghout	DP10	UU37	21.17SA

Friday — Saturday Workshops, Meetings & Events

Professional Development, Advocacy, and Networking Resources

✍ Preregistration Required
$ Course Fee
📖 Professional Development
Networking
Public Outreach
Online Content

Friday, November 14

Neurobiology of Disease Workshop

Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits ✍ 📖 $ 💻

Organizers: Marion S. Buckwalter, MD, PhD; Claudia M. Testa, MD, PhD

8 a.m.–5 p.m.

Walter E. Washington Convention Center: Ballroom C

Support contributed by: National Institute of Neurological Disease and Stroke (NINDS)

From stem cells to brain-computer interfaces, stroke research is pushing the limits of neuroscience. This workshop reviews stroke research beyond the acute injury setting and explores important unanswered questions in stroke mechanisms and treatment. Sessions include a patient presentation and talks by leading experts on how multiple neuroscience disciplines are expanding our understanding of the brain's damage and recovery pathways. The workshop includes networking opportunities for students and faculty with small group discussions, lunch, and an evening reception.

Short Course #1

Advances in Multineuronal Monitoring of Brain Activity ✍ 📖 $

Organizer: Prakash Kara, PhD

8 a.m.–6 p.m.

Walter E. Washington Convention Center: Ballroom A

New tools for measuring the activity of entire neuronal populations at single-cell resolution are quickly advancing our knowledge of the macro- and micro- circuits that support mammalian behavior. For instance, genetically encoded sensors, delivered virally or transgenically, allow monitoring of spiking and synaptic activity in specific cell types while optical prisms allow simultaneous two-photon functional imaging of all layers of neocortex. Single neuron responses can now be imaged simultaneously across multiple brain areas or in a 3-D volume. Importantly, new strategies also are being devised for single neuron resolution imaging in the macaque monkey brain. Finally, state-of-the-art, multi-electrode recordings are still a gold standard to monitor neuronal populations in behaving animals.

Short Course #2

Advances in Brain-Scale, Automated Anatomical Techniques: Neuronal Reconstruction, Tract Tracing, and Atlasing ✍ 📖 $

Organizer: H. Sebastian Seung, PhD

8:30 a.m.–6 p.m.

Walter E. Washington Convention Center: Ballroom B

Computational methods are being developed to extract information from high-resolution, brain-wide images generated by light microscopy. Cytoarchitectonics is being modernized by the ability to acquire and analyze the locations of all cell bodies. Reconstruction of entire axonal and dendritic arbors is becoming possible. Information about molecular identity can be overlaid on reconstructions. Methods of transsynaptic tracing are becoming practically useful for tackling important scientific questions. Computational techniques of brain atlasing allow the alignment of all data to a common coordinate system. All of these advances are driving a renaissance of anatomy at the light microscopic level. This short course surveys emerging methods and scientific applications, as well as provides "how-to" tutorials.

Saturday, November 15

Meet-the-Expert Series 📖 💻

8–9:15 a.m., 9:30–10:45 a.m.

Renaissance Washington, DC Meeting Rooms

Experts will describe their research techniques and accomplishments in a personal context that offers participants a behind-the-scenes look at factors influencing each expert's work. The session offers an opportunity for students and postdoctoral researchers to engage the expert in an informal dialogue over breakfast. No registration is required, but seating is limited.

Workshop Fees

Short Course (Includes lunch and syllabus book)

Student member	$140
Student nonmember	$170
Postdoctoral member	$210
Postdoctoral nonmember	$255
Faculty member	$275
Faculty nonmember	$335

Neurobiology of Disease Workshop $35
(Includes breakfast, lunch, and reception)
Note: Preregistration is required for Short Courses and the Neurobiology of Disease Workshop.
Visit SfN.org to register.

Session 1, 8–9:15 a.m.

John Donoghue, PhD

From Brain to BrainGate and Back: Moving Between Basic and Applied Neuroscience

Renaissance Washington, DC: Room 5

Neuroscience research is driven by desire, both to understand how neurons and nervous systems function and to use that knowledge to better the lives of those who have, or may acquire, nervous systems disorders. Neuroscience research is driving the development of new tools that expand our ability to investigate animal models and human brains, as well as providing innovative new approaches to treat disorders and restore lost function. BrainGate, a brain-computer interface (BCI) technology, is an example of a human application of knowledge and tools that emerged from a basic neuroscience lab and enabled pilot human clinical trials of a BCI. The BrainGate system is being created to help people with paralysis gain independence and control. Donoghue will describe how the quest to understand how cortical circuits generate behavior led to the BrainGate project and how this project is opening a door to human cortical function not previously available. The path led a neurobiologist into the startup world and

back to an interdisciplinary group in an academic research program that is a fledgling model for human neuroscience.

Julie Fiez, PhD

Building a Program of Interdisciplinary Research That Bridges Neuroscience and Education

Renaissance Washington, DC: Room 4

The past 25 years have seen tremendous growth in the field of cognitive neuroscience. This growth has created the opportunity to build exciting new bridges between the fields of education, psychology, and neuroscience. This presentation will consider how both a "clinical" and an "engineering" approach to educational neuroscience can yield important advances, with supporting examples drawn from the domains of reading and math. The challenges and opportunities that come from interdisciplinary collaborations will be discussed from a personal perspective. This will include a consideration of funding agencies that support educational neuroscience research and how proposal styles and review processes differ across funding agencies.

Samer Hattar, PhD

Dogmas Are There to Be Broken: New Photoreceptors in Your Eye

Renaissance Washington, DC: Room 2

The mammalian retina has been studied for nearly a century and a half. Up until recently, rods and cones were thought to be the only photoreceptors. In this session, Hattar will highlight the evidence for the presence of the non-rod/non-cone photoreceptors starting from early studies in the late 1920s up to the point of discovery in 2002. This session addresses the skepticism surrounding the discovery of the non-rod/non-cone photoreceptors and the history on their discovery, highlighting important lessons to be learned. These non-rod/non-cone photoreceptors are now known as intrinsically photosensitive retinal ganglion cells (ipRGCs). They have wide effects on light-mediated behaviors that include circadian rhythms, sleep, and mood.

Helen Mayberg, MD

Studying Human Neuropsychiatric Disease Circuits From a Therapy Perspective

Renaissance Washington, DC: Room 8

In this session, emerging strategies to test systems-levels models of neuropsychiatric disorders will be discussed. A case-study approach will be used to illustrate the evolution of deep brain stimulation for treatment-resistant depression and the critical role of functional neuroimaging, animal models, and neuroengineering innovations to further refine this experimental intervention. Additionally, the bidirectional, translational potential of this platform for understanding both disease pathophysiology and treatment mechanisms of action will be emphasized.

Peter Strick, PhD

The Mind–Body Connection

Renaissance Washington, DC: Room 9

We have long been faced with the challenge of unraveling the complex matrix of connections that allows the "mind" (the central nervous system) to control the "body" (muscles and organs). The development of techniques for using neurotropic viruses as transneuronal tracers has made it possible to begin to map these connections in detail. Retrograde transsynaptic transport of rabies virus from single limb muscles has revealed fundamental features about the circuits for voluntary movement. Transneuronal transport of the virus from the adrenal medulla is defining the "stress and depression connectome." Transneuronal tracing of multisynaptic networks holds the promise of revealing the neural substrate for the top-down control of body function.

Feng Zhang, PhD

Editing the Genome to Understand Genetic Contributions of Disease

Renaissance Washington, DC: Room 12

From yogurt bacteria to genome editing, this discussion examines the development and applications of the Cas9 nuclease from the microbial immune system CRISPR for making a precise alteration of the mammalian genome. This new technology is enabling the generation of more realistic disease models and broadening the number of genetically-tractable organisms that can be used to study a variety of neurological processes. The Cas9 nuclease also can be modified to modulate transcription, alter epigenetic states, and track the dynamics of chromatin in living cells. The speaker also will look at the on-going challenges as well as future prospects of the technology.

Session 2, 9:30–10:45 a.m.

Rui M. Costa, DVM, PhD

The Acting Brain

Renaissance Washington, DC: Room 2

Rui Costa has been interested in animal behavior since childhood. Now, he investigates questions like how certain behaviors are transmitted between generations based on a genetic code, and how new behaviors are learned throughout life to build the unique repertoires of an individual. Costa will argue that the generation of a new behavior is one of the most important and fascinating functions of the nervous system. He will discuss the conceptual framework of the neural laboratory and how it led to asking how novel actions are generated, how they are then shaped, and why they are being performed. The session will cover if and when new tools may enable new research and concepts.

Diane Lipscombe, PhD

I Wanted to Be a Detective But Discovered Neuroscience and Limitless Unsolved Mysteries

Renaissance Washington, DC: Room 4

Support contributed by: Emory University/Yerkes National Primate Research Center

It never gets old to watch single channel currents, in real time, in a stochastic dance across the screen. The more you watch the more you see — an unquestionable truism in science and an especially apt description of the speaker's current research on cell-specific control of calcium ion channel splicing. Calcium ion channel genes have the capacity to generate

numerous isoforms. But, does each have unique function? This session reviews experimental approaches, including exon-specific targeting, asking if individual sites of alternative splicing impact behavior and if isoforms have therapeutic value.

Mark Schnitzer, PhD

Large-Scale Optical Imaging of Ensemble Neural Activity in Freely Behaving Animals

Renaissance Washington, DC: Room 5

Recently, there has been substantial progress in optical imaging studies in freely behaving rodents, allowing neuroscientists to monitor the dynamics of up to ~1,000 neurons per animal during active behavior, over extended periods of weeks. This session covers the relevant optical imaging methodologies and data analysis methods, as well as their application in a variety of brain areas to studies of large-scale neural coding, long-term memory, and disease models. The presentation also includes an overview of Schnitzer's personal path from physicist to systems neuroscientist, and how technologies started in his lab have reached commercialization.

Michal Schwartz, PhD

Breaking the Conceptual Walls Between the Brain and the Immune System: Implications for Aging and Neurodegenerative Diseases

Renaissance Washington, DC: Room 8

We were pioneers discovering that circulating immune cells support brain plasticity in health, disease, and aging. Resolution of neuroinflammation in neurodegenerative diseases necessitates inflammation-resolving cell recruitment, orchestrated by brain-specific T cells ("Protective autoimmunity"), and requires circulating macrophages. The nexus of these activities lies at the brain's choroid plexus (CP), identified by us as a selective gate for "healing" leukocyte infiltration to the CNS, offering a novel target for modifying brain aging and neurodegenerative diseases.

Kenton Swartz, PhD

Exploring Ion Channel Structures and Gating Mechanisms Using Tarantula Toxins

Renaissance Washington, DC: Room 9

Swartz's laboratory uses a growing collection of electrophysiological, molecular, and biophysical technologies to investigate the structure and operational mechanisms of voltage-activated ion channels, ATP-activated P2X receptors, and, more recently, transient receptor potential (TRP) channels. This lab has been particularly interested in isolating protein toxins from venomous organisms and using them to investigate ion channel mechanisms. The speaker will give an overview of the work done in this area, including earlier work on voltage-sensor toxins and latest results using toxins to explore gating and thermosensation in TRP channels, and discuss emerging roles of lipid membranes for these ion channels. The speaker also will share a personal perspective on the process of science and what continues to excite him about the questions his laboratory has explored over the past 15 years.

Careers Beyond the Bench

Organizer: Elisabeth Van Bockstaele, PhD

Panelists: Paul Calvo, PhD; Lique Coolen, PhD; Rae Nishi, PhD; Sally J. Rockey, PhD

9–11 a.m.

Walter E. Washington Convention Center: 207A

The Careers Beyond the Bench workshop will focus on crafting your individual career trajectory in a nonacademic setting. An emphasis will be placed on building credentials for successful job-seeking, strategies for networking, and providing tips for a smooth transition from an academic setting. Panelists will address the following topics: the importance of creating an "individual development plan" for careers outside of academia; how to talk to your advisor about a career shift, including timing and best practices; undertaking the job search, such as the value of networking; working with recruiters; or considering another degree; and the relative effectiveness of social media and face-to-face networking in making a career transition.

Success in Academia: Different Strategies for Different Stages

Organizer: Tracy Bale, PhD

Panelists: Margaret McCarthy, PhD; Eric Nestler, MD, PhD; Marina Picciotto, PhD; Kerry Ressler, MD, PhD; Catherine Woolley, PhD

9–11 a.m.

Walter E. Washington Convention Center: 207B

This lively and interactive discussion with neuroscientist leaders in academia will cover their creative and effective ways to attain success in the academic life — success being termed many different ways — including funding, publishing, teaching, personnel management, administration, time management, and, of course, work-life balance. You already know you need to work hard, but what are some tricks of the trade? How do you prioritize? Saying "yes" and saying "no" — how do you decide? Being an academic and a parent — now what? Bring your questions and the panel will try to provide some answers.

Getting the Most Out of SfN: The Annual Meeting and Beyond

Organizers: David Riddle, PhD; Jeffrey Smith, PhD; Hermes Yeh, PhD

Panelists: Cara Altimus, PhD; Lori McMahon, PhD

1–2 p.m.

Walter E. Washington Convention Center: 207A

Students, postdocs, and others new to the SfN annual meeting are invited to this session where experienced participants will share tips on how to get the most out of your annual meeting experience, both during and after Neuroscience 2014. Whether you are looking for networking strategies or simply ways to make your experience productive and enjoyable, this session will be beneficial. Representatives from the SfN Program Committee, SfN Committee on Neuroscience Departments and Programs, the Faculty for Undergraduate Neuroscience, and an institutional postdoctoral association will provide strategies for navigating the annual meeting, discuss professional development tools available during and after the meeting, suggest ways to find and use a mentor, and answer questions from session participants.

Graduate School Fair

Saturday, Nov. 15, 1–3 p.m.
Sunday, Nov. 16 — Tuesday, Nov. 18, noon–2 p.m.
Walter E. Washington Convention Center: Hall E

Meet face-to-face with student advisors, program faculty, and graduate school representatives at the third annual Graduate School Fair.

Brain Awareness Campaign Event

Communicate Your Science

3–4:30 p.m.
Walter E. Washington Convention Center: Hall E

Celebrate Brain Awareness and share your outreach achievements with Brain Awareness Week organizers from around the world. Applaud the winners of the Brain Awareness Video Contest and other education awards. Hear from Jay Giedd, principal investigator at the National Institute of Mental Health and winner of SfN's 2013 Science Educator Award, about the importance of effective science communication.

Mentor-Mentee Interaction: How to Have a Difficult Conversation

Organizers: Michael Levine, PhD; Jennifer Raymond, PhD; Cheryl Sisk, PhD
Panelist: Samantha Sutton, PhD
3–4:30 p.m.
Walter E. Washington Convention Center: 103B

The mentor/mentee relationship is a crucial component in the training of neuroscience graduate students and postdoctoral fellows. Great relationships don't "just happen." They require work and difficult conversations about pressing issues. Most mentors and mentees shy away from having difficult conversations, but in this seminar, Samantha Sutton, PhD, will teach you how to skillfully design these conversations to be positive, productive experiences. You will learn the tools to resolve issues with grace and to build strong partnerships no matter how "quirky" the other person may seem. You also will participate in role-plays in the second hour of the workshop in order to sharpen these tools. You will leave the session with a set of tangible skills on how to develop strong relationships with your mentor or mentee and other scientific colleagues, which will powerfully advance your research and career goals.

Research Careers in Industry and the Private Sector

Organizer: Gretchen Snyder, PhD
Panelists: John Dunlop, PhD; Daniel Hutcheson, PhD; Carrie Jones, PhD; Robin Kleiman, PhD; Christian Mirescu, PhD
3–5 p.m.
Walter E. Washington Convention Center: 207B

This workshop showcases competitive and exciting research careers in the commercial world including those in innovative biotech companies, large pharmaceutical firms, and in translational programs linking academic research labs to industrial drug development programs. Participants will relate their experiences as research scientists with a commercial goal. Panelists will discuss the research environment and culture in the private sector and will address job-seeking strategies, opportunities for mentoring, and achieving work-life balance.

NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career

Organizer: Stephen Korn, PhD
Panelists: Nancy Desmond, PhD; Michelle Jones London, PhD; Dennis Twombly, PhD; Alan Willard, PhD
3:30–5 p.m.
Walter E. Washington Convention Center: 207A

This workshop discusses factors that NIH staff has found to be important to the success of trainees in the realm of both training itself and grant writing. Funding opportunities and the mechanisms that contribute to successful and unsuccessful grant applications will be discussed. Brief talks will be followed by an extensive question and answer session.

Diversity Fellows Poster Session

6:30–8:30 p.m.
Walter E. Washington Convention Center: Hall E

Join a special poster session and networking event featuring participants in the Neuroscience Scholars Program and other diversity fellowship programs.

International Fellows Poster Session

6:30–8:30 p.m.
Walter E. Washington Convention Center: Hall E

Meet the next generation of leading young investigators from across the globe, including award-winning young investigators selected by the International Brain Research Organization and the Japan Neuroscience Society.

Travel Award Recipients Poster Session

6:30–8:30 p.m.
Walter E. Washington Convention Center: Hall E
Partial support contributed by: Novartis Institutes for BioMedical Research

This networking event honors award-winning posters from undergraduate and graduate students and postdoctoral fellows selected by SfN's Professional Development, Membership and Chapters, and Neuroscience Departments and Programs committees.

Career Development Topics: A Networking Event

7:30–9:30 p.m.
Walter E. Washington Convention Center: Hall E

Experienced neuroscientists will offer advice on a wide range of topics in an informal, roundtable format. Topics include work-life balance, securing grants, career transitions, careers away from the bench, choosing graduate schools and postdoctoral fellow positions, and many others. Participants from diverse backgrounds, fields, and work sectors are encouraged to attend.

Complete Session Listing

Saturday PM

DIALOGUES BETWEEN NEUROSCIENCE AND SOCIETY
Walter E. Washington Convention Center

001. Food for Thought: Tastes, Aromas, and Memories of Food

Sat. 11:00 AM - 1:00 PM - Hall D

Speaker: B. VOLTAGGIO

Support contributed by: Elsevier

From the alluring smells and colors of a prepared dish to the deep emotions surrounding the act of sharing a meal, food unites us. The rich sensory experience that takes place every time we eat is made possible by the brain, which shapes perception of taste and smell, and seals the meal to memory. Hear noted chef, restaurateur, and *Top Chef* contestant Bryan Voltaggio discuss how he strives to create culinary treasures that not only satiate but entertain and transform how his guests think about food.

EMPIRICAL APPROACHES TO NEUROSCIENCE AND SOCIETY SYMPOSIUM
Walter E. Washington Convention Center

002. Improving Animal Models of Neuropsychiatric Disorders

Sat. 1:30 PM - 4:00 PM — Ballroom A

Chair: T. W. ROBBINS

The relative lack of success of big pharma in producing new drugs for psychiatric disorders has focused attention in part on improving animal models. This symposium focuses on recent examples of innovative molecular, genetic, and behavioral approaches to animal models of schizophrenia and depression. The symposium also will provide an industrial perspective and suggest new ways of advancing collaboration and development of this field to achieve more effective translation to the clinic.

1:30 **2.01** Introduction.

1:35 **2.02** Toward improved animal models of depression. E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai.*

2:10 **2.03** ● Modelling cognitive affective biases in mood disorders. E. S. J. ROBINSON. *Univ. of Bristol.*

2:45 **2.04** CNTNAP2-associated autism: From mouse model to clinical trial. S. MARKX. *Columbia Univ.*

3:20 **2.05** ● Psychopharmacology: Lessons and prospects for drug development. H. MARSTON. *Lilly UK.*

3:55 **2.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

003. Evolution of Neural Circuits: From Axon Guidance Genes to Spoken Language — CME

Sat. 1:30 PM - 4:00 PM — Ballroom C

Chair: ● A. CHEDOTAL

How evolution has shaped the vertebrate brain and influenced the emergence of complex behaviors is a daunting question. Recent studies have revealed that developmental genes played a key role in this process. This symposium presents new insight into the transcription factors and axon guidance mechanisms that are involved in the evolution and development of the telencephalon, motor circuits, and speech, from birds to humans.

1:30 **3.01** Introduction.

1:35 **3.02** Evolution of brain pathways for song and speech. E. JARVIS. *Duke Univ. Med. Ctr.*

2:10 **3.03** Cell migration in the development and morphogenesis of forebrain circuits. S. GAREL. *Ecole Normale Supérieure.*

2:45 **3.04** Evolution and development of neocortical projection systems. N. SESTAN. *Yale Univ. Sch. Med.*

3:20 **3.05** ● Cellular and molecular mechanisms controlling the evolution of commissural projections. A. CHEDOTAL. *Inst. de la Vision.*

3:55 **3.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

004. C9orf72: A Repeat Disease That Underlies Dementia and Neurodegeneration — CME

Sat. 1:30 PM - 4:00 PM — 151AB

Chair: J. D. ROTHSTEIN
Co-Chair: L. P. RANUM

GGGGCC (G4C2) hexanucleotide repeat expansion in chromosome 9 open reading frame 72 (C9ORF72) is the most common genetic abnormality in both frontotemporal dementia (FTLD) and amyotrophic lateral sclerosis (ALS) in both inherited and sporadic forms of these diseases. This symposium covers current aspects of C9orf72 genetics, induced pluripotent cell and animal models of disease, current theories about how the mutant expansion may cause disease, and the use of models to provide therapeutic discovery tools.

1:30 **4.01** Introduction.

1:35 **4.02** Loss of function and basic biology of C9orf72. K. EGGAN. *Harvard Univ.*

2:10 **4.03** RAN translation as a pathway for ALS, dementia, and neurodegeneration. L. RANUM. *Univ. of Florida.*

2:45 **4.04** Modeling C9: RNA toxicity as revealed thru iPS cells and antisense therapy. J. ROTHSTEIN. *Johns Hopkins Univ.*

3:20 **4.05** ● ALS and C9orf72 in the genomics age: Facts, uncertainties, and the way forward. B. J. TRAYNOR. *NIH.*

3:55 **4.06** Closing Remarks.

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

MINISYMPOSIUM *Walter E. Washington Convention Center*

005. Network-Mediated Encoding of Circadian Time: The Suprachiasmatic Nucleus (SCN) From Genes to Neurons to Circuits and Back — CME

Sat. 1:30 PM - 4:00 PM — 145B

Chair: M. BRANCACCIO

Daily behavior rhythms in mammals are driven by the suprachiasmatic nucleus (SCN). This property requires cell-intrinsic, genetically encoded timing, and circuit-level synchronization of neural activity. It thus offers a unique model to study how behavior is encoded by reciprocal information flows between genes, cells, and circuits. This minisymposium shows how imaging and opto/chemogenetic approaches reveal the genetic, epigenetic, and network mechanisms that confer SCN resilience and adaptation to the environment.

1:30 **5.01** Introduction.

1:35 **5.02** Neuronal-glial coupling sustains circuit encoding of circadian time in the SCN. M. BRANCACCIO. *Med. Res. Council- Lab. of Mol. Biol.*

1:55 **5.03** Single-cell resolution fluorescence imaging of functional neuronal networks in the circadian master clock. R. ENOKI. *Hokkaido Univ.*

2:15 **5.04** Role of neuropeptidergic neurons in mammalian circadian rhythms and behavior. C. N. MAZUSKI. *Washington Univ.*

2:35 **5.05** Linking molecular, electrical, and behavioral rhythms in the brain's biological clock. J. JONES. *Vanderbilt Univ.*

2:55 **5.06** Dynamic interactions couple circadian clock neurons. J. A. EVANS. *Marquette Univ.*

3:15 **5.07** DNA methylation mediates plasticity of circadian behavior. A. AZZI. *Univ. of Zurich.*

3:35 **5.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

006. The Neural Basis of Affective Touch — CME

Sat. 1:30 PM - 4:00 PM — Ballroom B

Chair: I. MORRISON
Co-Chair: H. OLAUSSON

Affective touch, such as grooming and caressing, is a vital component of social interaction in mammalian species. This minisymposium highlights new findings from the burgeoning field of affective touch neuroscience, at levels from peripheral afferents to the social brain, in rodents and humans. It addresses key issues such as the role of low-threshold tactile mechanoreceptors (CLTMs), the relevant pathways to the cortex, and the specialization and function of these systems in a social context.

1:30 **6.01** Introduction.

1:35 **6.02** C fibres that detect massage-like stroking of hairy skin in mice. S. VRONTOU. *Caltech.*

1:55 **6.03** Mapping touch-specific circuits in the mouse spinal cord. V. E. ABRAIRA. *Harvard Med. School- HHMI.*

2:15 **6.04** ● Spinal pathways activated by CLTM fibers: role in health and disease. D. ANDREW. *Univ. Sheffield.*

2:35 **6.05** Mechanical sensibility and VGLUT3. R. SEAL. *Univ. of Pittsburgh.*

2:55 **6.06** Altered neural processing of affective touch in addiction. M. P. PAULUS. *Laureate Inst. For Brain Res.*

3:15 **6.07** Central modulation of affective touch in humans. D. ELLINGSEN. *Univ. of Gothenburg, Inst. For Neurosci. and Physiol.*

3:35 **6.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

007. Multimodal Investigation of Large-Scale Brain Dynamics: Combining fMRI and Intracranial EEG — CME

Sat. 1:30 PM - 4:00 PM — 146AB

Chair: B. HE
Co-Chair: K. JERBI

Functional neuroimaging studies can characterize large-scale brain networks with spatial precision. Yet understanding the neuronal mechanisms at play in these networks requires electrophysiological investigation. This minisymposium focuses on recent findings from human and monkey intracranial electrophysiology, exploring how brain networks mapped by fMRI are related to local and long-range neural dynamics recorded both during rest and at work.

1:30 **7.01** Introduction.

1:35 **7.02** Thalamic control of cortical dynamics. Y. B. SAALMANN. *Univ. of Wisconsin - Madison.*

1:55 **7.03** Large-scale patterns of rhythmic suppression in human cerebral cortex. C. J. HONEY. *Univ. of Toronto.*

2:15 **7.04** Cognitive electrophysiology of the human medial parietal cortex: Local and network dynamics. B. FOSTER. *Stanford Univ.*

2:35 **7.05** Intracortical recordings reveal electrophysiological correlates of resting-state BOLD connectivity. K. JERBI. *Univ. Lyon I - U1028 - UMR5292.*

2:55 **7.06** Trajectory-based processing reflected in slow cortical potentials and fMRI signals. B. HE. *NIH.*

3:15 **7.07** Multimodal imaging of spatio-temporal dynamics in language processing. T. THESEN. *New York Univ.*

3:35 **7.08** Closing Remarks.

SPECIAL LECTURE *Walter E. Washington Convention Center*

008. ● Nanoscopy With Focused Light: Principles and Applications — CME

Sat. 2:00 PM - 3:10 PM — Hall D

Speaker: S. W. HELL*, Max Planck Inst. for Biophysical Chem., Germany*

For most of the 20th century, scientists believed that lens-based light microscopy could not discern details finer than half the wavelength of light (>200 nm). In the 1990s, this barrier was overcome when it was discovered that fluorescent features can be resolved virtually down to molecular dimensions. This lecture discusses the simple, yet powerful, physical principles that allowed researchers to overcome the diffraction limit, with special emphasis on STED and RESOLFT microscopy. The lecturer will exemplify the relevance of these nanoscopy techniques to neuroscience.

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

PRESIDENTIAL SPECIAL LECTURE *Walter E. Washington Convention Center*

009. The Living Record of Memory: Genes, Neurons, and Synapses — CME

Sat. 5:15 PM - 6:25 PM — Hall D

Speaker: K. C. MARTIN*, UCLA.*

Support contributed by: MedImmune

Memory requires stimulus-induced changes in gene expression, which in turn alters synaptic connectivity and wiring in the brain. In this way, experience combines with our genome to determine who we are as individuals. This talk describes efforts to understand how experience regulates gene expression within neurons. How are stimulus-induced signals transported from distal synapses to the nucleus to alter gene expression, and how is gene expression spatially restricted to specific subcellular compartments?

NANOSYMPOSIUM

010. Neurogenesis and Neurotransmission in Neurodegenerative Diseases

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 152A

1:00 **10.01** Capturing brain connectivity in Alzheimer's disease by evolving the human connectome. G. PRASAD*; S. H. JOSHI; P. M. THOMPSON. *Imaging Genet. Ctr., UCLA.*

1:15 **10.02** The alpha7nAChR partial agonist, 5-HT3 antagonist, and APP-binding re-purposed compound tropisetron increases sAPPalpha, lowers Abeta and p-tau, and normalizes cognition in a murine Alzheimer's model. P. SPILMAN*; O. DESCAMPS; O. GOROSTIZA; K. POKSAY; J. CAMPAGNA; A. MATALIS; C. PETERS-LIBEU; R. RAO; V. JOHN; D. E. BREDESEN. *Buck Inst. For Age Res., Univ. of California.*

1:30 **10.03** Purinergic signaling mediates astrocytic hyperactivity *in vivo* in a mouse model of Alzheimer's disease. A. DELEKATE; M. FUECHTEMEIER; M. BRUECKNER; T. SCHUMACHER; A. HALLE; G. C. PETZOLD*. *German Ctr. For Neurodegenerative Dis. (DZNE), Charité, Ctr. for Advanced European Studies and Res. (Caesar).*

1:45 **10.04** Depletion of neurogenesis induces cognitive deficits in Alzheimer's disease. C. L. HOLLANDS*; R. SCHLOESSER; K. MARTINOWICH; S. KERNIE; O. LAZAROV. *The Univ. of Illinois at Chicago, Univ. of Maryland Med. Ctr., The Johns Hopkins Univ. Sch. of Med., Columbia Univ., The Univ. of Illinois at Chicago.*

2:00 **10.05** Reduced levels of presenilin-1 in adult hippocampal neural progenitor cells induces learning and memory deficits. J. A. BONDS*; Y. KUTTNER-HIRSHLER; N. BARTOLOTTI; A. GADADHAR; M. PIZZI; R. MARR; O. LAZAROV. *Univ. of Illinois, Chicago, Univ. of Illinois at Chicago, Rosalind Franklin Univ. of Med. and Sci.*

2:15 **10.06** Cyclic-AMP Response Element Binding Protein (CREB) signaling is impaired in a mouse model of Alzheimer's disease. N. BARTOLOTTI*; Y. HU; D. STORM; O. LAZAROV. *Univ. of Illinois At Chicago, Univ. of Washington.*

2:30 **10.07** Rescue of cognitive deficit with a neurogenic/ neurotrophic compound in 3xTg-AD mouse model. N. BAAZAOUI*; K. IQBAL. *New York Inst. For Basic Res., CUNY the graduate center.*

NANOSYMPOSIUM

011. Autism Synaptic and Cellular Mechanisms

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 144A

1:00 **11.01** Antagonism of metabotropic glutamate receptors reverses autistic behaviours caused by exacerbated mRNA translation initiation. A. AGUILAR VALLES*; E. MATTA CAMACHO; G. LING; K. NADER; J. LACAILLE; N. SONENBERG. *Univ. De Montreal, McGill Univ.*

1:15 **11.02** Repetitive behaviors in mice with specific deletion of Grip1/2 in Purkinje cells. R. M. MEJIAS-ESTEVEZ*; S. CHIU; R. ROSE; M. HAN; R. L. HUGANIR; T. WANG. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

1:30 **11.03** Phenotypic effects of MeCP2 deletion in cholinergic neurons. E. BALLINGER*; C. SCHAAF; D. TALMAGE; H. Y. ZOGHBI; L. ROLE. *Stony Brook Neurosci., Baylor Col. of Med., Stony Brook Univ., Howard Hughes Med. Inst., Jan and Dan Duncan Neurolog. Res. Inst. at Texas Children's Hosp., Ctr. for Nervous Syst. Disorders, Neurosciences Inst.*

1:45 **11.04** Dysregulation of hippocampal inhibition in the CNTNAP2 knockout mouse. S. JURGENSEN*; P. E. CASTILLO. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

2:00 **11.05** ● Identification of critical periods for treatment of autistic behavior in purkinje cell Tsc1 mice. P. TSAI*; Y. CHU; B. BLUDEVICH; J. MOGAVERO; W. REGEHR; M. SAHIN. *Boston Children's Hosp., Harvard Med. Sch.*

2:15 **11.06** Dissecting the roles of parvalbumin and somatostatin-positive interneurons in the pathogenesis of Rett syndrome. A. ITO-ISHIDA*; K. URE; H. Y. ZOGHBI. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst. at Texas Children's Hosp., Howard Hughes Med. Inst.*

2:30 **11.07** The autism and schizophrenia associated gene CYFIP1 is critical for the maintenance of dendritic complexity and the stability of mature spines. E. C. DAVENPORT*; M. PATHANIA; J. MUIR; D. F. SHEEHAN; G. LÓPEZ-DOMÉNECH; J. T. KITTLER. *Univ. Col. London.*

2:45 **11.08** Excitatory CA3->CA1 synapses are stronger in Mecp2 knockout mice and saturate long-term potentiation. W. LI*; L. POZZO-MILLER. *The Univ. of Alabama At Birmingham.*

NANOSYMPOSIUM

012. Demyelinating Disorders

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 152B

1:00 **12.01** Neurodegenerative consequences of episodic metabolic stress in oligodendrocytes. D. Z. RADECKI*; A. GOW. *Wayne State Univ., Wayne State Univ.*

1:15 **12.02** Effects of neuronyelitis optica autoantibody at the blood-brain barrier. Y. TAKESHITA*; B. OBERMEIER; A. COTLEUR; S. SPAMPINATO; Y. SANO; T. KANDA; R. M. RANSOHOFF. *Cleveland Clin. Fndn. Lerner Res. Inst., Yamaguchi Univ. Grad. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:30 **12.03** c-kit signals differentially regulate susceptibility to CNS disease in males and female SJL mice. A. RUSSI*; M. CAULFIELD; M. BROWN. *Northwestern Univ., Feinberg Sch. of Medicine, Northwestern Univ., Mayo Clin., Northwestern Univ.*

1:45 **12.04** Anti-heterogenous nuclear ribonuclear protein a1 antibodies contribute to neurodegeneration in multiple sclerosis. J. DOUGLAS*; L. GARDNER; M. LEVIN. *Univ. of Tennessee Hlth. Sci. Ctr., Veteran Affairs Med. Ctr., Univ. of Tennessee Hlth. Sci. Ctr., Veteran Affairs Med. Ctr.*

2:00 **12.05** Transcriptional network-based identification of functional human oligodendrocyte differentiation genes. S. U. POL*; H. SHAYYA; M. O'BARA; S. ANDREADIS; F. J. SIM. *Univ. At Buffalo, SUNY at Buffalo, SUNY at Buffalo, Univ. At Buffalo.*

2:15 **12.06** Molecular mechanisms of Canavan disease pathogenesis. M. TRAKA*; S. S. SCHERER; B. POPKO. *Univ. of Chicago, Univ. of Pennsylvania Sch. of Med.*

2:30 **12.07** Assessing remyelination in an inflammatory environment: A novel adoptive transfer cuprizone model. E. G. BAXI*; D. TOSI; L. KIRBY; J. DEBRUIN; I. GRISHKAN; A. FAIRCHILD; P. CALABRESI; A. GOCKE. *Johns Hopkins Univ.*

2:45 **12.08** Metabolomics of cerebrospinal fluid reveals differential signatures of progressive multiple sclerosis. F. MIR*; D. LEE; H. RAY; S. A. SADIQ. *TISCH MS RESEARCH CENTER OF NY.*

3:00 **12.09** Low Apolipoprotein A1 levels have profound effects on MS pathogenesis. L. A. GARDNER*; J. N. DOUGLAS; M. C. LEVIN. *Res. Service VAMC, Univ. of Tennessee Hlth. Sci. Ctr.*

3:15 **12.10** TGM6 is a potential biomarker in MS and its expression by reactive astrocytes in the murine spinal cord during EAE correlates with disease course. M. CRISTOFANILLI*; D. GRATCH; B. PAGANO; D. BATES; S. A. SADIQ. *Tisch MS Res. Ctr. of New York.*

3:30 **12.11** ● Combining magnetization transfer ratio MRI and quantitative measures of walking improves the identification of fallers in MS. N. E. FRITZ*; R. E. R. MARASIGAN; J. KELLER; C. CHIANG; C. K. JONES; A. ELOYAN; P. A. CALABRESI; K. M. ZACKOWSKI. *Kennedy Krieger Institute, Johns Hopkins Universit, Kennedy Krieger Inst., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Kennedy Krieger Institute, Johns Hopkins Univ.*

3:45 **12.12** Hypercellularity within white matter of dysmyelinated and immunodeficient shiverer mice is reversed following myelination by transplanted glial progenitor cells and that process can be monitored *in vivo* by MRI. A. ARNOLD*; J. ZHANG; A. JABLONSKA; S. SAJJA; M. JANOWSKI; P. WALCZAK. *Dept. of Radiology, Inst. For Cell Engineering, The Johns Hopkins Univ., Inst. for Cell Engineering, Johns Hopkins Univ., Polish Acad. of Sci., Mossakowski Med. Res. Centre, Polish Acad. of Sci., Univ. of Warmia and Mazury.*

4:00 **12.13** Alternatively activated macrophage signaling in CNS remyelination. J. K. HUANG*; K. PSACHOULIA; K. A. CHAMBERLAIN; S. E. NANESCU. *Georgetown Univ.*

NANOSYMPOSIUM

013. Psychomotor Stimulant Reinforcement

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 140A

1:00 **13.01** Drug-seeking behavior in ants: A new model for morphine-induced reward, self-administration, and addiction. B. V. ENTLER*; J. CANNON; M. A. SEID. *The Univ. of Scranton, The Univ. of Scranton, The Univ. of Scranton.*

1:15 **13.02** The role of phasic striatal dopamine signaling in reward seeking and motivation. K. M. WASSUM*; V. Y. GREENFIELD; A. L. COLLINS; K. E. LINKER; S. B. OSTLUND. *UCLA, Univ. California, Irvine.*

1:30 **13.03** Methamphetamine self-administration produces differential effects on the striatal expression of stress-related genes and histone deacetylases. J. L. CADET*; B. LADENHEIM; M. T. MCCOY; I. KRASNOVA. *NIH/NIDA.*

1:45 **13.04** *In vivo* opiate administration drives bidirectional and cell-type specific AMPAR plasticity the nucleus accumbens. M. C. HEARING*; J. P. JEDYNAK; S. R. EBNER; R. A. FISCHER; M. J. THOMAS. *Univ. of Minnesota, Harvard Med. School, McLean Hosp.*

2:00 **13.05** Self-administration of both ethanol and methamphetamine increases motivation for methamphetamine. P. R. KUFAHL*; S. B. TAYLOR; L. R. WATTERSON; N. E. NEMIROVSKY; B. BURROWS; M. OLIVE. *Arizona State Univ.*

2:15 **13.06** The role of αCaMKII in the establishment of cocaine's reinforcing effects. C. P. MUELLER*; A. LOURDUSAMY; M. HAVRANEK; K. MIZUNO; J. SOLATI; Y. GOLUB; T. CLARKE; H. VALLADA; R. LARANJEIRA; S. DESRIVIERES; G. H. MOLL; R. MÖSSNER; J. KORNHUBER; G. SCHUMANN; K. P. GIESE; C. FERNANDES; B. QUEDNOW; A. C. EASTON. *Dept. of Psychiatry and Psychotherapy, Univ. of Nottingham, Univ. of Zurich, King's Col. London, Friedrich-Alexander-University of Erlangen-Nuremberg, Univ. of Pennsylvania, Univ. of São Paulo Med. Sch., Federal Univ. of São Paulo, King's Col. London, Univ. of Bonn.*

2:30 **13.07** Viral-mediated transfer of DREADDs reveals a differential role of the corticostriatal pathway in cocaine-taking and cocaine-seeking behavior. K. A. KERSTETTER*; R. STEWART; J. F. NEUMAIER; S. M. FERGUSON. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington, Univ. of Washington.*

2:45 **13.08** Involvement of immune protein mhc class I in the development of cocaine self-administration. G. MURAKAMI*; H. MENG; M. EDAMURA; T. FURUKAWA; A. FUKUDA; T. IWASHITA; Y. ISHIDA; D. NAKAHARA. *Hamamatsu Univ. Sch. Med., Dept. Psychology, Hamamatsu Univ. Sch. Med., Dept. Neurophysiology, Hamamatsu Univ. Sch. Med., Dept. Regenerat. Infect. Patho. Hamamatsu Univ. Sch. Med., Dept. Psychiatry, Fac. Med. Univ. Miyazaki, Dept. Biofunctional Imaging, Med. Photonics Res. Center, Hamamatsu Univ. Sch. Med.*

3:00 **13.09** Effects of poly drug use on serotonin and dopamine pathways in fetal brain. M. E. SELZER*; G. TATEVOSIAN; N. MERABOVA; N. DARBINIAN; L. GOETZL. *Shriners Hosp. Pediatric Res. Center; Temple Univ. Sch. of Med.*

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3:15 **13.10** Functional mapping of the central actions of the powerful bath salt MDPV and its effects on resting state brain activity. M. FEBO*; K. TRAN; L. COLON-PEREZ; K. BLUM; B. A. GOLDBERGER; A. W. BRUIJNZEEL; B. SETLOW; M. S. GOLD. *Univ. of Florida.*

NANOSYMPOSIUM

014. Plasticity in the Olfactory System

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 147A

1:00 **14.01** Rapid and continuous activity-dependent plasticity of sensory input to the mouse olfactory bulb *in vivo.* C. E. CHEETHAM*; L. BELLUSCIO. *NIH/NINDS, NIH/NINDS.*

1:15 **14.02** Cortical glutamatergic and GABAergic neurons learn to encode odor signal through their coordinated plasticity. J. H. WANG*; Z. GAO; D. WANG. *The Inst. Biophysics, Inst. of Biophysics, Chinese Acad. of Sci.*

1:30 **14.03** Characterization of PSA-NCAM cells in mouse piriform cortex. M. B. ESTELLER*; A. RUBIO; R. GONZÁLEZ-MARTÍNEZ; I. FARIÑAS; J. NACHER. *Univ. of Valencia.*

1:45 **14.04** Deletion of olfactomedin 2 results in abnormal behavior and changes in the composition of the AMPAR complex in mice. A. SULTANA; N. NAKAYA; L. DONG; S. I. TOMAREV*. *Natl. Eye Institute, NIH, Natl. Eye Institute, NIH.*

2:00 **14.05** Regulated olfaction drives state-dependent plasticity in *C. elegans* behavioral prioritization. D. S. PORTMAN*; D. A. RYAN; R. M. MILLER; K. LEE; P. SENGUPTA; S. J. NEAL. *Univ. of Rochester, City Col. of New York, Brandeis Univ.*

2:15 **14.06** Odorant receptor expression in aged mice following genetically-mediated lesion. J. H. BRANN*; S. J. FIRESTEIN. *Loyola Univ. Chicago, Columbia Univ.*

2:30 **14.07** Functional mapping of glomerular inhibition in the olfactory bulb of the awake and anesthetized mouse. M. N. ECONOMO*; K. R. HANSEN; T. BOZZA; M. WACHOWIAK. *Janelia Farm Res. Campus, Univ. of Utah, Univ. of Utah, Univ. of Utah, Northwestern Univ.*

2:45 **14.08** Effects of learning and neuromodulation in a computational model of olfactory bulb and cortex. C. LINSTER*; L. DE ALMEIDA. *Cornell Univ.*

3:00 **14.09** Mice use bilateral olfactory cues and adaptive sniffing to track odor trails. P. W. JONES*; N. N. URBAN. *Carnegie Mellon Univ.*

3:15 **14.10** Combining optogenetics and two photon calcium imaging to explore the functional impact of newborn neurons in the mouse olfactory bulb. C. FOIS*; G. PRAMANIK; S. PÉRON; B. BERNINGER; A. STROH. *Johannes Gutenberg, Johannes Gutenberg.*

NANOSYMPOSIUM

015. Auditory Processing

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 206

1:00 **15.01** A non-canonical pathway from cochlea to brain detects tissue-damaging noise and mediates auditory nociception. J. GARCIA-ANOVEROS*; E. N. FLORES; T. MADATHANY; G. KUMAR; M. C. LIBERMAN; R. SEAL; R. EDWARDS; A. DUGGAN. *Northwestern Univ., Harvard Med. School, Massachusetts Eye & Ear Infirmary, UCSF.*

1:15 **15.02** Pulsed infrared radiation elicits transient changes in mitochondrial membrane potential in cultured neurons. V. LUMBRERAS; S. RAJGURU*. *Univ. of Miami, Univ. of Miami.*

1:30 **15.03** An auditory network model for spatial sound stream segregation. J. DONG*; K. SEN; H. S. COLBURN. *Boston Univ.*

1:45 **15.04** Complementary mechanisms contribute to the developmental plasticity of spatial hearing. P. E. KEATING*; J. C. DAHMEN; A. J. KING. *Univ. Oxford.*

2:00 **15.05** Neural mechanisms for preserving information about multiple sound items. V. C. CARUSO*; J. LEE; D. S. PAGES; R. ESTRADA; J. M. GROH; S. TOKDAR. *Duke Univ., Duke Univ., Univ. of Canterbury, Duke Univ., Duke Univ., Duke Univ.*

2:15 **15.06** Development of intrinsic connectivity in the central nucleus of the mouse inferior colliculus. J. J. STURM*; T. NGUYEN; K. KANDLER. *Univ. of Pittsburgh Sch. of Med., The Col. of New Jersey.*

2:30 **15.07** Scaling down of balanced excitation and inhibition by active behavioral states in auditory cortex. M. ZHOU*; F. LIANG; X. XIONG; L. LI; H. LI; Z. XIAO; H. TAO; L. ZHANG. *USC, Southern Med. Univ.*

2:45 **15.08** A critical period for auditory recipient striatum differs from primary auditory cortex. T. M. MOWERY*; V. C. KOTAK; D. H. SANES. *New York Univ.*

3:00 **15.09** Cortical inhibition regulates frequency discrimination acuity and specialization of emotional learning. M. AIZENBERG*; L. MWILAMBWE-TSHILOBO; M. GEFFEN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

3:15 **15.10** Unconsciously implanted memory in the presence of cholecystokinin retrieved in a behaviorally relevant context. Z. ZHANG*; D. LU; X. LI; X. CHEN; W. SUN; Y. GUO; G. NG; J. HE. *The Hong Kong Polytechnic Univ., City Univ. of Hong Kong, 3Guangzhou Inst. of Biomedicine and Health, Chinese Acad. of Sci., The Hong Kong Polytechnic Univ.*

3:30 **15.11** Expression of neural plasticity and attention in normal hearing is modified in tinnitus. L. E. ROBERTS*; B. T. PAUL; I. C. BRUCE; D. J. BOSNYAK. *McMaster Univ., McMaster Univ., McMaster Univ.*

3:45 **15.12** Stimulus-specific adaptation and novelty detection in a Down syndrome mouse model overexpressing Dyrk1A. D. DUQUE*; M. MARTÍNEZ DE LAGRÁN; M. DIERSSEN; M. MALMIERCA. *Inst. De Neurociencias De Castilla Y León, Uni, Ctr. for Genomic Regulation (CRG), Univ. Pompeu Fabra, Ctr. de Investigación Biomédica en Red de Enfermedades Raras, Inst. De Neurociencias De Castilla Y León, Univ. de Salamanca.*

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NANOSYMPOSIUM

016. Spatial and Feature-Based Attention

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 146C

1:00 **16.01** Distinguishing motor vs. sensory based account of evidence accumulation during perceptual decision making. T. LIU*; M. JIGO. *Michigan State Univ.*

1:15 **16.02** The impact of categorization training on visual and cognitive encoding in parietal cortex. A. SARMA*; R. KHARKAR; X. WANG; D. J. FREEDMAN. *Univ. of Chicago, New York Univ.*

1:30 **16.03** Auditory short-term memory for space but not for time recruits anterior visuotopic parietal maps. S. W. MICHALKA*; M. L. ROSEN; L. KONG; B. G. SHINN-CUNNINGHAM; D. C. SOMERS. *Boston Univ., Boston Univ., Boston Univ.*

1:45 **16.04** Interaction between spatial and feature-based attention in parietal cortex. G. IBOS*; D. J. FREEDMAN. *The Univ. of Chicago.*

2:00 **16.05** Decoding invariant visual object representations in human parietal cortex. M. VAZIRI PASHKAM*. *Harvard Univ.*

2:15 **16.06** Choice probabilities and correlations in simultaneously recorded MT and LIP neurons. J. YATES*; L. N. KATZ; I. PARK; J. W. PILLOW; A. C. HUK. *Univ. of Texas At Austin, The Univ. of Texas at Austin.*

2:30 **16.07** Attention signals based on object category selection in frontoparietal cortex. K. N. SEIDL-RATHKOPF*; J. G. KIM; M. V. PEELEN; S. KASTNER. *Psychology Department, Princeton Univ., Princeton Neurosci. Institute, Princeton Univ., Ctr. of Mind/Brain Sciences, Univ. of Trento.*

2:45 **16.08** Abstract face identity representation in human superior intra-parietal sulcus reflects perceived face identity similarity. S. JEONG*; Y. XU. *Harvard Univ.*

3:00 **16.09** Reward and uncertainty shape oculomotor behavior in non-human primates. N. DADDAOUA*; J. GOTTLIEB. *1051 Riverside Drive, Kolb Annex, Unit 87, Columbia Univ.*

3:15 **16.10** Memory-guided attention and stimulus-guided attention networks in human parietal lobe. M. L. ROSEN*; C. E. STERN; S. W. MICHALKA; K. J. DEVANEY; L. KONG; D. C. SOMERS. *Boston Univ., Boston Univ., Boston Univ.*

3:30 **16.11** Non-spatial attention selectively biases orientation tuning in human V1. S. G. WARREN*; E. S. YACOUB; G. M. GHOSE. *Univ. of Minnesota, Univ. of Minnesota.*

3:45 **16.12** Neuronal activity in the superior colliculus during a color-change task. J. P. HERMAN*; R. KRAUZLIS. *Lab. of Sensorimotor Res.*

NANOSYMPOSIUM

017. Plasticity After Spinal Cord Injury

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 143A

1:00 **17.01** The regulation of a type-4 desintegrin and metalloproteinase with thrombospondin motifs (ADAMTS-4) by tissue-type plasminogen activator (tPA) in the central nervous system. M. PRUVOST*; E. MAUBERT; S. LEMARCHANT; E. EMERY; F. DOCAGNE; D. VIVIEN. *INSERM U919 SP2U, A. I. Virtanen Inst. forMolecular Sciences, Biocenter, Dept. of Neurosurgery, Caen Univ. Hosp.*

1:15 **17.02** ● Imaged-guided, stereotactic delivery of intraspinal stimulating electrodes to restore function following spinal cord injury. P. GRAHN*; G. W. MALLORY; S. J. GOERSS; J. JEONG; D. A. LOBEL; A. J. BIEBER; K. E. BENNET; J. L. LUJAN; K. H. LEE. *Mayo Clin., Mayo Clin., Cleveland Clin. Fndn., Mayo Clin., Mayo Clin., Mayo Clin.*

1:30 **17.03** Paired motor cortex and cervical spinal cord stimulation augments corticospinal motor responses and promotes learning in the spinal cord of rats. A. M. MISHRA*; D. GUPTA; J. B. CARMEL. *Motor Recovery Laboratory, Burke Med. Res., Weill Med. Col. of Cornell Univ.*

1:45 **17.04** Similar changes in corticospinal excitability after anodal tDCS between 1 mA and 2 mA. L. M. MURRAY*; K. NOSAKA. *Hamad Med. Corp., Edith Cowan Univ.*

2:00 **17.05** ▲ Spinal cord maturation and locomotion in mice with an isolated cortex. Q. HAN*. *GHM Inst. of CNS Regeneration, Jinan Universit.*

2:15 **17.06** What do we know about the role of endothelial ETA and ETB receptors on neuropathic pain following spinal cord injury? S. FORNER*; A. C. MARTINI; E. L. DE ANDRADE; G. A. RAE. *Univ. Federal De Santa Catarina, Univ. Federal de Santa Catarina.*

2:30 **17.07** Pathological changes of the triceps Surae muscle in rats 8 weeks following a spinal cord hemisection. J. PINGEL*; J. LORENTZEN; J. WIENECKE; J. B. NIELSEN. *Univ. of Copenhagen.*

2:45 **17.08** Inducing cortico-cortical connectivity to bypass acute cortical impact injury in the rat. G. M. VAN ACKER*, III; D. GUGGENMOS; S. BARBAY; K. CRABTREE; C. DUNHAM; R. J. NUDO. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

NANOSYMPOSIUM

018. Neuroimmunology

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 150A

1:00 **18.01** Neuroinflammatory mechanisms mediating dietary fat intake: The role of the chemokine, CXCL12. K. POON*; J. R. BARSON; H. T. HO; S. F. LEIBOWITZ. *The Rockefeller Univ.*

1:15 **18.02** Immunopathology of Rasmussen encephalitis. G. C. OWENS*; K. L. ERICKSON; C. C. MALONE; M. N. HUYNH; J. W. CHANG; T. CHIRWA; H. V. VINTERS; G. W. MATHERN; C. A. KRUSE. *David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

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1:30 **18.03** Immunogenetics in the brain and cognition: Atopy-associated IL33 rs17498196 influences frontoparietal circuity and processing speed. G. C. TAN*; Y. LU; R. HO; J. ASHBURNER; N. W. WOOD; R. S. J. FRACKOWIAK. *Inst. of Mental Hlth., Natl. Univ. of Singapore, Inst. of Neurology, Univ. Col. London, Inst. of Neurology, Univ. Col. London, Ctr. Hospitalier Universitaire Vaudois.*

1:45 **18.04** Cortical inflammation and increased pre-synaptic striatal dopamine in a nonhuman primate model of maternal immune activation. M. D. BAUMAN*; R. C. PHILLIPS; D. J. ROWLAND; D. L. KUKIS; J. L. SUTCLIFFE; S. R. CHERRY; D. G. AMARAL; P. H. PATTERSON; A. K. MCALLISTER; C. S. CARTER. *Univ. California, Davis, Univ. California, Davis, California Inst. of Technol.*

2:00 **18.05** Identifying the primary molecular target to attenuate streptozotocin-induced neuroinflammation. R. SANKOWSKI*; A. NAZEM; P. T. HUERTA; Y. AL-ABED. *Feinstein Inst. For Med. Res., Feinstein Inst. For Med. Res., Feinstein Inst. For Med. Res., Feinstein Inst. For Med. Res.*

2:15 **18.06** ● Peripheral inflammation impairs motivation through modulation of fundamental gain and loss associated prediction error signals in ventral striatum and anterior insula. N. A. HARRISON*; V. VOON; E. COOPER; M. CERCIGNANI; M. PESSIGLIONE; H. CRITCHLEY. *Univ. of Sussex, Univ. of Cambridge, Univ. of Sussex, Inst. du Cerveau et de la Moelle épinière.*

2:30 **18.07** Mold inhalation, brain inflammation, and behavioral dysfunction. C. F. HARDING*; C. L. PYTTE; K. PAGE; R. PERSAUD; R. DESTEFANO; T. ROA; E. NORMAND; M. NAGAI; E. WILLIAMS; L. BLACHORSKY. *Hunter College, CUNY, Grad. Center, CUNY, Queens College, CUNY, Hunter College, CUNY, Hunter College, CUNY.*

2:45 **18.08** Factors that impair remyelination in the aging central nervous system. K. S. RAWJI*; M. B. KEOUGH; J. WANG; M. MISHRA; V. W. YONG. *Univ. of Calgary, Hotchkiss Brain Inst.*

3:00 **18.09** Neuron and astroglia preserve microglial endotoxin tolerance through macrophage colony-stimulating factor. C. CHU*; S. WANG; Q. WANG; S. CHEN; S. CHEN; H. GAO; R. LU; J. HONG. *Neuropharm. Section, NIEHS, Dept. of Neurology, Sch. of Medicine, Kaohsiung Med. Univ., Inst. of Behavioral Med. and Dept. of Psychiatry, Natl. Cheng Kung Univ. Hospital,.*

3:15 **18.10** Angiotensin signaling as a key regulator of neuroinflammation: a role in developmental psychotic disease. L. N. HAYES*; A. SAWA. *Johns Hopkins Univ.*

3:30 **18.11** New insights into the role of T cells in autism spectrum disorder. A. J. FILIANO*; S. P. GADANI; A. HUBERTS; R. MARSH; J. KIPNIS. *Univ. of Virginia.*

3:45 **18.12** ● Unique acetyltransferase+ T cells under adrenergic control reduce macrophage cytokine release. P. S. OLOFSSON*; W. M. HANES; M. OSWALD; Y. A. LEVINE; B. E. STEINBERG; B. LU; L. K. HUDSON; V. A. PAVLOV; S. S. CHAVAN; B. DIAMOND; P. K. GREGERSEN; K. J. TRACEY. *The Feinstein Inst. For Med. Res.*

4:00 **18.13** Expression of the immune-related genes in the brain of HIV-1 transgenic rat. Z. YANG; J. CAO; T. NESIL; S. WANG; M. D. LI; S. L. CHANG*. *Seton Hall Univ., Univ. of Virginia, Seton Hall Univ.*

NANOSYMPOSIUM

019. Brain Wellness: Cognitive Development

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 150B

1:00 **19.01** Creativity and brain development: Using functional near-infrared spectroscopy to investigate the neural correlates of middle childhood “slump” in creativity. M. SAGGAR*; M. SCHREIER; J. M. BAKER; A. L. REISS. *Stanford Univ., Stanford Univ.*

1:15 **19.02** Mathematics expertise predicts structural and functional variability in the intraparietal sulcus. R. EMERSON*; V. VO; T. KURTZ; J. CANTLON. *Univ. of Rochester, UCSD, Univ. of New Mexico.*

1:30 **19.03** Compensatory mechanism involved in math fluency. Y. MA*; D. SAHA; Q. CHEN; D. WEINBERGER; H. TAN. *The Lieber Inst. For Brain Develop.*

1:45 **19.04** Obesity and being overweight is associated with hippocampal atrophy: The path through life study. N. CHERBUIN*; K. SARGENT-COX; M. FRASER; P. S. SACHDEV; K. J. ANSTEY. *Australian Natl. Univ., Univ. of New South Wales.*

2:00 **19.05** ● Utilizing magnetic repulsion to reduce forces generated at helmet-to-helmet collisions in football. R. J. COLELLO*. *Virginia Commonwealth Univ.*

2:15 **19.06** The effect of resistance training on white matter lesion progression: Proof-of-concept results from a 12-Month randomized trial. T. LIU-AMBROSE*; N. BOLANDZADEH; R. TAM; C. HSU; L. S. NAGAMATSU; E. DAO; B. BEATTIE. *Univ. of British Columbia, Ctr. for Brain Hlth., Ctr. for Hip Hlth. and Mobility, Univ. of Illinois.*

2:30 **19.07** Hippocampal structure and connectivity is linked to standardized test score improvement. A. MACKEY*; J. A. LEONARD; A. S. FINN; J. D. E. GABRIELI. *MIT.*

2:45 **19.08** Neural pattern stability in frontal-striatal system underlies the development of children’s proficiency in problem solving. S. QIN*; T. CHEN; D. GEARY; V. MENON. *Stanford Univ., Univ. of Missouri.*

NANOSYMPOSIUM

020. Data Analysis and Statistics

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, 147B

1:00 **20.01** Generation and evaluation of cortical area parcellations from functional connectivity boundary maps. E. M. GORDON*; T. O. LAUMANN; B. ADEYEMO; J. F. HUCKINS; W. M. KELLEY; S. E. PETERSEN. *Washington Univ. Sch. of Med., Dartmouth Col., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

1:15 **20.02** Functional network organization of a highly sampled individual subject. T. O. LAUMANN*; E. M. GORDON; B. ADEYEMO; A. Z. SNYDER; R. A. POLDRACK; S. E. PETERSEN. *Washington Univ. Sch. of Med., Univ. of Texas, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:30 **20.03** Adjusted Granger causality for mapping large-scale cortical connectivity with resting-state magnetoencephalography. W. TANG*; H. LIU; L. DOUW; U. T. EDEN; M. A. KRAMER; M. S. HÄMÄLÄINEN; S. M. STUFFLEBEAM. *Massachusetts Gen. Hosp., VU Univ. Med. Ctr., Boston Univ.*

1:45 **20.04** Partial correlation functional connectivity gradients for cortical parcellation: Methods and multi-modal comparisons. M. F. GLASSER*; E. C. ROBINSON; T. S. COALSON; S. M. SMITH; M. JENKINSON; C. D. HACKER; T. O. LAUMANN; D. C. VAN ESSEN. *Washington Univ. Sch. of Med., Oxford Univ., Washington Univ., Washington Univ. Sch. of Med.*

2:00 **20.05** Functional connectivity of pre-stimulus bold fMRI distinguishes hits and misses in a spatio-temporal evidence accumulation task. J. S. SHERWIN*; J. MURASKIN; P. SAJDA. *Columbia Univ., US Army Res. Lab.*

2:15 **20.06** Meta-analysis of neuroimaging data in a multivariate framework: A barycentric hellinger discriminant analysis (BAHEDA) approach. A. KRISHNAN*; S. ATZIL; D. BEATON; A. SATPUTE; L. RUZIC; T. D. WAGER; H. ABDI; L. FELDMAN BARRETT. *Univ. of Colorado Boulder, Northeastern Univ., The Univ. of Texas at Dallas.*

2:30 **20.07** Normalization effects on brain networks derived from different tractography methods for ENIGMA. L. ZHAN*; N. JAHANSHAD; E. SPROOTEN; Y. JIN; D. MCKAY; J. BLANGERO; D. GLAHN; P. THOMPSON. *UCLA Sch. of Med., Imaging Genet. Center, Inst. for Neuroimaging & Informatics, Univ. of Southern California, Yale Univ. Sch. of Med., Olin Neuropsychiatry Res. Center, Inst. of Living, Hartford Hosp., Texas Biomed. Res. Inst.*

2:45 **20.08** ● The effect of underlying structural differences on functional and resting state magnetic resonance analyses. J. DUKART*; A. BERTOLINO. *F.hoffmann-La Roche, F.Hoffmann-La Roche.*

3:00 **20.09** Building prediction models for resting state networks using support vector machines for regression. E. BAGARINAO*, JR; S. MAESAWA; M. FUJII; D. MORI; H. WATANABE; T. WAKABAYASHI; H. ISODA; G. SOBUE. *Brain and Mind Res. Center, Nagoya Univ., Dept. of Neurosurgery, Nagoya Univ. Sch. of Med., Dept. of Neurology, Nagoya Univ. Sch. of Med.*

3:15 **20.10** Reconceptualizing brain network change as shared signal dynamics. M. W. COLE*; G. YANG; J. MURRAY; G. REPOVŠ; A. ANTICEVIC. *Rutgers Univ., Yale Univ., New York Univ., Univ. of Ljubljana.*

3:30 **20.11** Mathematical validation of GFS index for EEG analysis. S. CHO; K. CHOI*; M. KIM; O. KWON; S. YEON; S. KANG; S. CHOI; Y. RYU. *Korea Inst. of Oriental Med.*

3:45 **20.12** Unsupervised identification of neural events in local field potentials. M. BESSERVE*; B. SCHOELKOPF; N. K. LOGOTHETIS. *MPI for Biol. Cybernetics, MPI for Intelligent Systems, MPI for Biol. Cybernetics.*

THEME H POSTER

021. History of Neuroscience

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 UU21 **21.01SA** ▲ Sir William Osler and the evolving neurological sciences. D. BERGERON; A. TURMEL; A. PARENT. *Psychiat & Neurosci Dept, Univ. Laval, Neurosurg. Dept, CHA.*

2:00 UU22 **21.02SA** ● Manufacturing a neural interface - a summary of the published cochlear implant manufacturing processes. R. CALIXTO. *Advanced Bionics.*

3:00 UU23 **21.03SA** An analysis of the poisons acting nervous system mentioned in The Canon of Medicine by Avicenna. Z. EBRAHIMIAN; Z. KARIMI; M. RAZA. *Shiraz Univ. of Med. Sci., Tarbiat Modares Univ., Baqiyatallah Univ. of Med. Sci.*

4:00 UU24 **21.04SA** Leonardo Da Vinci and the search for the anatomical basis of the soul. R. E. BROWN. *Dept. of Psychology and Neurosci.*

1:00 UU25 **21.05SA** Present status of pathological autopsy in the oldest psychiatric hospital in Japan, including its association with neuroscience. K. NIIZATO. *Tokyo Metropolitan Matsuzawa Hosp.*

2:00 UU26 **21.06SA** Early anesthetic theorizing: Between biology, chemistry and experimental pharmacology. M. PEROUANSKY. *Univ. Wisconsin Madison.*

3:00 UU27 **21.07SA** The Vater-Pacini corpuscle - how many times did it need to be “discovered?”. B. W. BAKKUM. *Illinois Coll Optometry.*

4:00 UU28 **21.08SA** *In vivo* pharmacological profile of S 38093, a novel inverse agonist at histamine H_3 receptors. F. PANAYI; A. SORS; L. BERT; B. MARTIN; G. ROLLIN-JEGO; R. BILLIRAS; I. CARRIE; K. ALBINET; L. DANOBER; N. ROGEZ; J. THOMAS; P. LESTAGE; L. PIRA; V. BERTAINA-ANGLADE. *Idr SERVIER, Pharmaness, Biotrial.*

1:00 UU29 **21.09SA** Camillo Golgi and the Black Reaction. N. E. KINNEY. *Southeast Missouri State Univ.*

2:00 UU30 **21.10SA** An historiographic survey of the failed queries of brain research and the search for the role of the brain in cognition and the superiority of the human brain. L. KRUGER. *UCLA Geffen Sch. of Med.*

3:00 UU31 **21.11SA** Compound 4560 RP and the Birth of Psychopharmacology. L. T. MOISA; T. J. DONAHUE; J. H. PORTER1. *Virginia Commonwealth Univ.*

4:00 UU32 **21.12SA** Phase-reversal in the oscillatory entrainment of neural interactions is a general principal of learning. Z. WILLIAMS; R. HASLINGER; M. ESCOLIA. *Harvard Med. Sch. (MGH), Harvard Med. Sch.*

1:00 UU33 **21.13SA** Revisiting William James, automata, and thoughts about ‘free will’: Entorhinal/Hippocampal and Prefrontal dynamics contributing to repetitive behavior and the possibility of new behavior. S. CURTIS. *True North, LLC.*

2:00 UU34 **21.14SA** Ubiquitin and CNS: An historical perspective. T. R. BUTT. *Progenra Inc.*

3:00 UU35 **21.15SA** Toward a richer understanding of neuronal process in aesthetic appreciation: Neuroaesthetics history. V. ESTRADA GONZALEZ. *UNAM.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 UU36 **21.16SA** The Italian Physiologist Pietro Tullio and the origin of the research on vestibular responses to sound. D. TROIANI; A. R. FETONI; P. M. PICCIOTTI; E. MANNI. *Inst. Physiol. Univ. Cattolica Sch. of Med., Inst. of Otolaryngology Catholic Unifersity of Rome, Inst. of Human Physiol. Catholic Unifersity of Rome.*

1:00 UU37 **21.17SA** 25 years of the Mouse Genome Informatics resource: Integrating genetic, genomic, expression, functional and phenotypic data for the neuroscience research community. J. BERGHOUT; C. J. BULT; J. A. BLAKE; M. RINGWALD; J. A. KADIN; J. E. RICHARDSON; J. T. EPPIG; &. THE MOUSE GENOME INFORMATICS STAFF 1989-2014. *Mouse Genome Informatics / The Jackson Lab.*

2:00 UU38 **21.18SA** ● A mexican women dedicated to the study of the brain. J. VILLEDA, SR; J. VILLEDA, SR; F. FERNÁNDEZ-VALVERDE; V. CAMPOS PEÑA. *Home, Inst. Nacional de Neurología y Neurocirugía, INSTITUTO NACIONAL DE NEUROLOGIA Y NEUROCIRUGIA.*

3:00 UU39 **21.19SA** Corrections in neuroscience: the vision of the past and the future. K. V. KHACHATRYAN, SR; K. V. KHACHATRYAN, SR; A. AYDINYAN; M. KHACHATRYAN; T. KHACHATRYAN. *Mikayelyan Surgical Inst., Mikayelyan Surgucal Inst., N1 Univ. Hosp. of the Yerevan State Med. Univ.*

4:00 UU40 **21.20SA** ▲ Is ignorance of methodological details bliss? Fundamental differences in the interpretation of Libet's 1983 experiment revealed by a large scale quantitative review of 463 citing papers. J. DREO; J. DREO; S. SKUBIC; S. KNEZ; R. PANTZAKIS; Z. PIRTOŠEK. *Lab. For Cognitive Neurosci.*

THEME H POSTER

022. K-12

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

8:00 UU41 **22.01SU** UCLA neuroscience outreach to LA schools. N. F. HARDY; D. ALEXANDER; M. DESALVO; R. ROMERO-CALDERON; C. A. GHIANI; W. GE; C. E. EVANS; J. B. WATSON; E. M. CARPENTER. *UCLA Sch. Med., UCLA Sch. Med.*

9:00 UU42 **22.02SU** Sowing the seeds of neuroscience: a new curriculum for middle school students. E. H. CHUDLER; K. STRAUS; L. COLLINS. *Ctr. For Sensorimotor Neural Engin., Univ. of Washington, Ctr. for Res. and Learning.*

10:00 UU43 **22.03SU** ● Brain camp for Brianiacs: Neuroelectrophysiology as a tool for teaching scientific process to gifted upper middle and high school students. L. G. MORRIS; J. L. PECORE; W. D. THOMPSON; S. B. FELDMAN; M. K. DEMETRIKOPOULOS. *Inst. Biomed Philosophy, Piedmont Tech. Col., Univ. of West Florida.*

11:00 UU44 **22.04SU** ▲ Biological research through independent investigations in a high school setting. J. GLEKLEN; N. KUMAR; A. HOOVER; M. FIELDS; A. PARSEGIAN. *Sidwell Friends Sch., The Mol. & Behavioral Neurosci. Inst.*

8:00 UU45 **22.05SU** Student Knowledge Gains From Neuroscience Teacher Professional Development. J. M. DUBINSKY; M. MICHLIN; M. HOELSCHER; C. ELLINGSON; G. ROEHRIG. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 UU46 **22.06SU** ● Citizen science with high school students and adults from around the world participating in analysis of synaptic transmission. R. L. COOPER; Z. R. MAJEED; C. MALLOY; D. POTTS; K. ZEIDLER-WATTERS; R. M. KRALL; D. JOHNSON; S. MAYO; G. ZWANZIG; H. ANDERSON; W. COLGAN, III; W. CHUNG; A. MEGIGHIAN; E. E. DUPONT-VERSTEEGDEN. *Univ. Kentucky, Univ. of Salahaddin, Univ. Kentucky, Univ. Kentucky, duPont Manual High Sch., Paul Laurence Dunbar High Sch., ADInstruments Inc., Korea Military Acad., Univ. of Padova, Univ. Kentucky.*

10:00 UU47 **22.07SU** Neurological Disorders in the High School Classroom: Creating both a novel biomedical curriculum and an innovative teacher mentoring program to facilitate implementation. K. F. MEIRI; K. F. MEIRI. *Tufts Univ. Sch. of Med.*

11:00 UU48 **22.08SU** Developing a neuroscience high school summer camp. J. S. SHUMSKY. *Drexel Univ. Col. of Med.*

8:00 UU49 **22.09SU** The Institute On Neuroscience (ION) summer research program for outstanding high school students and teachers. C. T. GOODE; G. DE VRIES; D. L. MANEY; K. J. FRANTZ. *Georgia State Univ., Georgia State Univ., Emory Univ., Georgia State Univ.*

9:00 UU50 **22.10SU** ▲ Divergent Thinking: Using Roth's dystopian trilogy as a neuroscience teaching tool. K. KELLY; K. VASILOFF; L. M. FREEMAN. *Mary Baldwin Col.*

10:00 UU51 **22.11SU** Muscles Alive! A novel, experiential neuroscience education outreach program for elementary, secondary, and university students. B. L. TRACY. *Colorado State Univ.*

11:00 UU52 **22.12SU** Biomedical Research Academy in Neuroscience (BRAiN): An educational model to engage middle-schoolers in stem fields. C. C. SWANWICK; C. B. FAVERO; J. HEITZ; R. HEITZ. *Ideaventions, Ursinus Col.*

8:00 UU53 **22.13SU** The 2014 International Brain Bee championship. N. MYSLINKSI; D. SEMINOWICZ. *Univ. of Maryland, Baltimore.*

9:00 UU54 **22.14SU** The american national brain bee championship 2014. N. R. MYSLINSKI; J. RO. *Univ. Maryland Sch. Dent.*

10:00 UU55 **22.15SU** Inaugural San Bernardino County brain bee. C. RAY; P. LORENZO; N. MISTRY; R. HARTMAN. *Loma Linda Univ.*

11:00 UU56 **22.16SU** ▲ Ready, set, grow: Utilizing physical exercise to teach k-12 students about an anti-obesity vaccine. A. BEARD; D. CHAPPELL; A. PLAYER; G. D. GRIFFIN. *Tuskegee Univ.*

8:00 UU57 **22.17SU** ▲ Think outside the blocks: Hands-on education in substance abuse related behavior using LEGO robotics. A. GALLUP; P. E. DICKSON; K. LONG; K. FUNKHOUSER; M. MCOSKAR; J. KADIN; E. J. CHESLER. *Mount Desert Island High Sch., The Jackson Lab.*

9:00 UU58 **22.18SU** Genes, brain, and behavior in your pet worm: an interactive, inquiry-based neuroscience workshop for K-12 students. A. J. JASINSKA. *NIDA-IRP, NIH.*

10:00 UU59 **22.19SU** Engaging students in brain awareness through hands on science. L. HARRIS; A. GONZALES; J. J. FAUST; I. SINAKEVITCH; D. P. BALUCH. *Arizona State Univ.*

11:00 UU60 **22.20SU** More than meets the eye: Introducing neuroscience through optical illusions. S. WILLIAMS; C. WEICHSELBAUM. *NIMH.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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8:00 UU61 **22.21SU** Authentic research experiences for public high school teachers and students in puerto rico: University-High school partnership. S. TORRES-RUIZ; C. OJEDA-REYES; R. BROWN; J. APONTE-RAMIREZ; J. AGOSTO-RIVERA; N. CRUZ-BERMUDEZ. *Univ. De Puerto Rico, Univ. De Puerto Rico, Univ. De Puerto Rico.*

9:00 UU62 **22.22SU** ▲ The University of New England's K-12 neuroscience outreach program. A. D'AMBRUOSO; K. SCHWARZ; A. DEAL; K. ERICKSON; E. BILSKY; M. A. BURMAN. *Univ. of New England, Univ. of New England.*

THEME H POSTER

023. College Experiences

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 UU63 **23.01SA** Nu Rho Psi, the national honor society in neuroscience. G. MICKLEY; E. P. WIERTELAK; G. COUSENS; L. J. ACHOR. *Nu Rho Psi, Macalester Col., Drew Univ., Baylor Univ.*

2:00 UU64 **23.02SA** Faculty for Undergraduate Neuroscience (FUN): Multiple mechanisms for supporting the development of undergraduate students and faculty in the neurosciences. J. S. SMITH; L. A. GABEL; N. J. SANDSTROM. *Saginaw Valley State Univ., Lafayette Col., Williams Col.*

3:00 UU65 **23.03SA** Transforming the academy with transdisciplinarity: Neuroscience as the model. K. L. HAIK; R. L. GARNS. *Northern Kentucky Univ., Northern Kentucky Univ.*

4:00 UU66 **23.04SA** Flow dynamics of classroom seating positions may predict achievement outcome in dental hygiene college students. S. HIRANO; T. FUJIMOTO; H. INOUE; K. UCHIHASHI; Y. NISHIKAWA. *Osaka Dent. Univ.*

1:00 UU67 **23.05SA** UNTRAC: A partnership between two universities to bring underrepresented minorities to neuroscience. K. LACK; M. BHAT; A. AILERU; S. SETARO; A. D. JOHNSON; W. SILVER. *Wake Forest Univ., Winston Salem State Univ.*

2:00 UU68 **23.06SA** ● Teaching resources for neuroscience content in the 2015 Medical College Admissions Test®. J. R. PRICHARD; J. PAGE. *Univ. St. Thomas, Assn. of American Med. Col.*

3:00 UU69 **23.07SA** The 25th northeast under/graduate research organization for neuroscience (NEURON) conference held at Quinnipiac University in Hamden, CT. A. J. BETZ; T. H. AHERN; C. FRYE. *Quinnipiac Univ., Univ. of Albany.*

4:00 UU70 **23.08SA** MidBrains 2013: The 7th annual undergraduate neuroscience research conference of the Midwest. S. D. DICKINSON; J. J. NEIWORTH; E. P. WIERTELAK; J. DEMAS; J. L. LOEBACH; S. MEERTS; G. M. MUIR; J. STRAND; L. WICHLINSKI; J. WOLFF. *St. Olaf Col., Carleton Col., Macalester Col., St. Olaf Col., Carleton Col.*

1:00 UU71 **23.09SA** The 26th northeast under/graduate research organization for neuroscience program at the 42nd Hunter College psychology convention. A. A. WALF; C. A. FRYE; J. YOUNG. *Rensselaer Polytechnic Institute,, Univ. Albany, Hunter Col.*

2:00 UU72 **23.10SA** Spreading the word about neuroscience education, one pdf at a time: The Journal of Undergraduate Neuroscience Education. E. P. WIERTELAK; G. DUNBAR; B. JOHNSON. *Macalester Col., Central Michigan Univ., Cornell Univ.*

3:00 UU73 **23.11SA** Choose Development! - A long-term and continuing mentoring program to increase the diversity of undergraduates entering research careers in developmental biology. I. CHOW; K. BENNETT; G. UNGUEZ. *Soc For Developmental Biol., Univ. of Missouri-Columbia, New Mexico State Univ.*

4:00 UU74 **23.12SA** A tale of two research students: A perspective on the mentoring of undergraduate research students at a predominantly undergraduate institution. V. G. MARTINEZ ACOSTA. *Univ. of the Incarnate Word.*

1:00 UU75 **23.13SA** The prevalence of brain myths among undergraduates interested in neuroscience. P. WALLISCH. *New York Univ.*

2:00 UU76 **23.14SA** Enriching critical thinking in community college students through animal research. L. A. SCHIMANSKI. *Glendale Community Col.*

3:00 UU77 **23.15SA** Research education for novice and underserved student populations: Removing traditional barriers with modern technology and pedagogy. S. FROMHERZ; K. S. RENZAGLIA; A. A. SHARP. *SIU Sch. Med., SIU.*

4:00 UU78 **23.16SA** Learning about the brain in a funny way. J. VAZQUEZ RAMIREZ; J. VAZQUEZ RAMIREZ; A. RUIZ-GARCIA; I. ROSEMBERG GARCIA; P. ZARATE GONZALEZ; D. SOLTERO DE LA ROSA; D. PAZ TREJO; H. SANCHEZ CASTILLO; K. DELGADO SALTIJERAL. *Clave Consultora Para La Ciudadania, Univ. Nacional Autonoma de Mexico, Asociación Mexicana de Psicotraumatología.*

1:00 UU79 **23.17SA** The Wicking Dementia Research and Education Centre - paving the way forward in online dementia education. A. CANTY; C. KING; A. CARR; J. KELDER; A. PRICE; A. GIBSON; T. CAREW; J. O'REILLY; C. O'MARA; J. WALLS; F. MCINERNEY; A. ROBINSON; J. VICKERS. *Univ. of Tasmania, Univ. of Tasmania, Univ. of Tasmania, Australian Catholic Univ.*

2:00 UU80 **23.18SA** Enhancing online neuroscience education. T. H. GILBERT. *Athabasca Univ.*

3:00 UU81 **23.19SA** Descriptors for cortical and social networks might be self-similar: Cortical graphs for hyperscanning and social impact of individualistic vs. collective education and therapy. A. L. GOMEZ-MOLINA; F. LOPERA, BA; A. A. RESTREPO; J. F. GOMEZ-MOLINA. *Intl. Group of Neurosci. (Col, USA member), Intl. Group of Neurosci., EAFIT Univ., Intnal Group of Neuro.*

4:00 UU82 **23.20SA** Promoting excellence in undergraduate and graduate research presentations at NEURON, a regional Faculty for Undergraduate Neuroscience conference. D. B. MCQUADE; A. A. WALF; C. A. FRYE; T. H. AHERN; A. J. BETZ. *Skidmore Col., Rensselaer Polytechnic Inst., The Univ. at Albany, Quinnipiac Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

THEME H POSTER

024. Teaching Neuroscience: College Courses

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 UU83 **24.01SA** Implementation of active pedagogies in an undergraduate neuroscience course for non-science majors. L. ROESCH; K. FRENZEL. *Emory Univ., Emory Univ.*

2:00 UU84 **24.02SA** Teaching freshmen and non-majors with primary scientific literature. D. BRASIER. *Carnegie Mellon.*

3:00 UU85 **24.03SA** Using simulations and a wiki to create a virtual laboratory for neurobiology. J. P. GILL; K. M. SHAW; L. GLAIT; H. J. CHIEL. *Case Western Reserve Univ., Case Western Reserve Univ.*

4:00 UU86 **24.04SA** BREWERS: An active learning course using beer and coffee as a mechanism to learn neuroscience. O. P. KEIFER, JR; P. MARSTELLER; K. J. RESSLER. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Yerkes Natl. Primate Res. Ctr., Emory Univ., Emory Univ., Emory Univ., Howard Hughes Med. Inst.*

1:00 UU87 **24.05SA** The value of the IMPULSE experience for non-neuroscience majors. L. JONES; E. A. ARTZ; D. E. COBB; C. D. ESTER; H. JOHNSON; A. J. ROSSI; T. K. SASSER; D. E. RUSSELL; R. A. SLEDGE; W. C. STEVENS. *Appalachian State Univ.*

2:00 UU88 **24.06SA** The tech sandbox: Learning through play. L. A. JOHNSON; J. WANDER; D. SARMA; J. VOLDMAN. *The Ctr. For Sensorimotor Neural Engin., Univ. of Washington, MIT.*

3:00 UU89 **24.07SA** Challenges and rewards of an undergraduate computational neuroscience program. S. OPRISAN. *Col. of Charleston.*

4:00 UU90 **24.08SA** Neuroscience-based research projects as engagement exercises in a summer bridge program at an HBCU. M. A. HARRINGTON; T. G. SMOLINSKI; A. LLOYD; M. VELA-SIANJINA. *Delaware State Univ., Delaware State Univ., Delaware State Univ.*

1:00 UU91 **24.09SA** Undergraduate laboratory research projects suitable for courses with a hormones and behavior module. M. T. KERCHNER; C. CER; Y. DARWISH; A. DAVIS; E. DUENAS; C. ELIADES; A. LEGARD; Z. LEPPERT; K. MCEVOY; W. MOULDEN; A. NISONGER; M. WILSON. *Washington Col.*

2:00 UU92 **24.10SA** Graduate admissions in clinical neuropsychology: the importance of undergraduate training. A. STAVNEZER; J. W. REEVES; B. T. KARAZSIA. *Col. of Wooster, Col. of Wooster, Col. of Wooster.*

3:00 VV1 **24.11SA** Neuroscience of exercise: An undergraduate course examining how physical activity influences the brain and behavior. B. LOM. *Davidson Col.*

4:00 VV2 **24.12SA** ● The effects of teratogens on gene regulation and whole cell currents: A collaborative research project utilizing Real-time q-RT-PCR, PCR arrays, and automated electrophysiology. A. J. ETTINGER; K. J. KARNAS. *Cedar Crest Col., Cedar Crest Col.*

1:00 VV3 **24.13SA** Understanding the role of neuroeconomics in an undergraduate curriculum. G. S. LOWRY; C. L. FRANSSEN; S. M. HOLLENBECK; A. FRANSSEN. *Randolph-Macon Col., Longwood Univ., James Madison Univ., Longwood Univ.*

2:00 VV4 **24.14SA** Undergraduate laboratory course in physiological psychology. H. H. LOPEZ; M. SPRING. *Skidmore Col., Skidmore Col.*

3:00 VV5 **24.15SA** Project PNEURAL: Simulating neurophysiology using physical computing. J. R. BURDO. *Boston Col.*

4:00 VV6 **24.16SA** An in class small group exercise that helps illustrate the basics of syanptic transmission and drug action at the synapse. D. S. ALBECK. *UC Denver.*

1:00 VV7 **24.17SA** Manipulating synaptic transmission in Helisoma trivolvis embryos: A laboratory exercise for undergraduate students. E. F. FIELD; K. ATKINSON-LEADBEATER. *Mount Royal Univ., Mount Royal Univ.*

2:00 VV8 **24.18SA** ▲ Neuroscience integrated into practices: Proposal for undergraduate students in teaching-learning, research on health and social awareness. R. M. AGUIAR, SR; J. H. SATO; F. E. B. PEREIRA; A. A. J. QUADROS; M. R. DA CUNHA; R. N. ISAYAMA. *UNASP, Faculdade de Medicina de Jundiaí (FMJ), UNASP.*

3:00 VV9 **24.19SA** ● Teaching university-level psychology and neuroscience in the 21st century. A. J. WINTINK. *Ctr. For Applied Neurosci.*

4:00 VV10 **24.20SA** Cross-cultural neuroscience education: Teaching neuroscience in Tibetan Buddhist monasteries. M. R. ROMANO; C. M. WORTHMAN; G. DESBORDES; B. G. DIAS; W. HASENKAMP; P. M. IUVONE; G. D. NAMGYAL; L. T. NEGI; L. A. ROESCH; T. SAMPHEL; L. H. TING. *Emory Univ., Harvard Med. Sch., Mind & Life Inst., Georgia Tech.*

1:00 VV11 **24.21SA** Incorporating MRI scans into undergraduate instruction using free web-based resources FSL, OpenfMRI, and NITRC. N. SUTHANA; W. E. GRISHAM. *UCLA, UCLA.*

2:00 VV12 **24.22SA** Use of the bean beetle, Callosobruchus maculatus, as a model system for studying circadian activity in the college classroom. T. M. REED. *Col. Mount St. Joseph.*

3:00 VV13 **24.23SA** A public speaking challenge causes undergraduates to have an acute stress response. H. VIEM; J. C. NEILL. *Long Island Univ.*

4:00 VV14 **24.24SA** Department of Anatomy at the Ege University Faculty of Medicine and the Neuroscience Society of Turkey have developed and now propose a unique teaching-learning model: A multi-mediatic neuromorphology tour from cadavers to molecules. G. O. PEKER; G. SENGUL; R. ERZURUMLU; E. ULUPINAR; S. CELIK; A. KESER; L. OZTURK. *Ege Univ. Fac. of Med., Ege Univ. Fac. of Med., Maryland Univ. Col. of Med., Osmangazi Univ.*

1:00 VV15 **24.25SA** Visualizing the morphology of *Drosophila* dendritic arborization neurons: An undergraduate laboratory exercise. S. M. WEBSTER; F. ANGGORO. *Col. of the Holy Cross, Col. of the Holy Cross.*

2:00 VV16 **24.26SA** Improving critical thinking skill and learning outcomes an undergraduate brain and behavior course using backwards design. N. STAFFEND; C. SISK; J. LIBARKIN. *Michigan State Univ., Michigan State Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 VV17 **24.27SA** ● Methods of heat sensory phenotyping: Why results of examine by QST and co2 LEP are different from diode laser QST and Nd:YAP LEP. M. I. NEMENOV; M. J. IADAROLA; D. C. YEOMANS. *Lasmed LLC, Dept. of Perioperative Med., Stanford Univ. Sch. of Med.*

THEME H POSTER

025. Graduate and Professional Education

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 VV18 **25.01SA** Positive evaluation of the importance of neuroscience education by Pharm.D students. G. M. KHAN. *Appalachian Col. of Pharm.*

2:00 VV19 **25.02SA** Brainstem 101: An Interactive iOS application for graduate and medical students. O. ZABARJADI; B. PUDER. *Touro Univ. California, Samuel Merritt Univ.*

3:00 VV20 **25.03SA** Enhancing graduate and post-doctoral training: Insights from the neural systems & behavior course at mbl in woods hole. A. A. FENTON; R. M. HARRIS; H. A. HOFMANN. *New York Univ., Univ. of Texas at Austin, Univ. of Texas at Austin.*

4:00 VV21 **25.04SA** ● From ion currents to compound action potentials with the Virtual Physiology teaching tools SimNeuron and SimNerv. H. A. BRAUN; A. TCHAPTCHET; D. HÖHL; U. THOMAS. *Univ. Marburg, Thomas Recording.*

1:00 VV22 **25.05SA** A simple logical perspective for students of neuroscience to learn, understand, and memorize major trends of mapping time (past, present, and future) in the CNS -- incline toward assigning past to future points of the real world as posterior to anterior zones of the brain? A. BISWAS. *Edinboro Univ.*

2:00 VV23 **25.06SA** An examination of publication bias in neuroimaging research of autism spectrum disorder. J. DAY; B. K. CARR; K. N. DAY; M. VASSAR. *Oklahoma State Univ. Ctr. For Hlth. Scienc.*

3:00 VV24 **25.07SA** Using network geometry to display regions of brain activity across neuroimaging studies of post-traumatic stress disorder. G. COOK; B. K. CARR; J. M. DAY; M. VASSAR. *Oklahoma State Univ. - Ctr. For Hlth. Sci.*

4:00 VV25 **25.08SA** Preparing for academic careers through the Tufts TEACRS Program. L. C. MELON; K. K. O'TOOLE; C. MOORE; M. MCVEY. *Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med.*

1:00 VV26 **25.09SA** Build your STEM career: Accelerating student degree progression and professional achievement. E. E. SERRANO. *New Mexico State Univ.*

2:00 VV27 **25.10SA** Tutorial contents on the INCF Japan Node platforms. Y. YAMAGUCHI; S. SATOH; T. IIJIMA; R. KANZAKI; T. FURUICHI; Y. SHINODA; S. KAKEI; S. MASAKI; H. WAGATSUMA; T. MIYAKAWA; K. TAKAO; H. IKENO; K. TANAKA; Y. OKAMURA-OHO; Y. OKUMURA; S. KAMAKURA; Y. ISONO; Y. MORII; S. SUENAGA; S. USUI. *NIJC, RIKEN BSI, Univ. of Electro-Communications, Tohoku Univ., Univ. of Tokyo, Tokyo Univ. of Sci., Tokyo Metropolitan Inst. of Med. Sci., ATR-Promotions, Kyusyu Inst. of Technol., Fujita Hlth. Univ., Natl. Inst. for Physiological Sci., Univ. of Hyogo, CBM Lab, RIKEN BSI, RIKEN BReNt, Toyohashi Univ. of Technol.*

3:00 VV28 **25.11SA** Examining the use of post-hoc procedures in neuroimaging research. J. REDMOND; M. VASSAR; B. K. CARR. *Oklahoma State Univ. Ctr. For Hlth. Scienc.*

4:00 VV29 **25.12SA** Using course objectives and the Learning Through Discussion Method to establish instructional validity in a small-group graduate neuroscience class. S. O. AHMAD. *St. Louis Univ.*

1:00 VV30 **25.13SA** A Social Network analysis of scientific collaborations in neuroimaging research. B. K. CARR; J. M. DAY; M. HOLZMANN; M. VASSAR. *Oklahoma State Univ. Ctr. For Hlth. Sci.*

2:00 VV31 **25.14SA** Training activities of the international neuroinformatics coordinating facility. M. LINNE; G. EGEN; G. EINEVOLL; A. KUMAR; B. RICHMOND; T. WACHTLER; M. SUNDSTRÖM; M. B. ABRAMS; D. WILLSHAW. *Tampere Univ. of Technol., Monash Univ., Norwegian Univ. of Life Sci., Bernstein Ctr. Freiburg, NIMH/NIH/DHHS, Ludwig-Maximilians-Universität München, Intl. Neuroinformatics Coordinating Facility, Karolinska Inst., Univ. of Edinburgh.*

3:00 VV32 **25.15SA** Case-based active learning as a method of introducing the neurosciences within a medical school curriculum. B. D. FISCHER; R. J. BUONO; C. C. CAGANDE; M. A. CARRAN. *Cooper Med. Sch. of Rowan Univ.*

4:00 VV33 **25.16SA** Retrieval of grey literature in neuroimaging research. K. N. DAY; H. D. MUCKELRATH; J. M. DAY; B. K. CARR; M. HOLZMANN; M. VASSAR. *Oklahoma State Univ. CHS.*

1:00 VV34 **25.17SA** The international, interdisciplinary research training program cinacs. J. ZHANG. *Univ. of Hamburg.*

2:00 VV35 **25.18SA** Integrating neuroscience into graduate education in social work. J. BLACK. *Boston Col. Grad. Sch. of Social Work.*

3:00 VV36 **25.19SA** A new model for teaching advanced neuroscientific methods to graduate students. M. EINSTEIN; S. BONANNO; C. CHING; T. HARRISON; A. M. ANDREWS. *UCLA, UCLA, Semel Inst. for Neurosci. & Human Behavior and California NanoSystems Institute, UCLA.*

THEME H POSTER

026. Public Outreach I

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

8:00 VV37 **26.01SU** The homunculus mapper: An interactive experiment for educators and outreach groups. T. WALKER; R. CORLEW; O. ZHOVNIR. *Max Planck Florida Inst. For Neurosci., Max Planck Florida Inst. for Neurosci., Max Planck Florida Inst. for Neurosci.*

9:00 VV38 **26.02SU** Outreach + advocacy = a public encouraged and equipped to advocate for basic science funding. R. CORLEW. *Max Planck Florida Inst.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

10:00 VV39 **26.03SU** Growing public awareness and enthusiasm for neuroscience locally: Outreach activities of the palm beach chapter of the society for neuroscience. S. A. SANGUINETTI; R. CORLEW; W. BOSKING; V. HOKE; K. C. DIAH; D. J. CASCIATO; C. P. JOHNSON; A. L. JACOB; N. A. BUILES; S. MARSH; J. C. SAHAGIAN; Y. CHEN; S. SWARNKAR; L. RIOS; J. LORA; L. LEE; C. DUHANEY; K. ARRIZZA. *Florida Atlantic Univ., Max Planck Florida Inst. for Neurosci., Harriet L. Wilkes Honors Col. of Florida Atlantic Univ., Max Planck Florida Inst. for Neurosci., The Scripps Res. Inst., South Florida Sci. Ctr.*

11:00 VV40 **26.04SU** A history of cognitive enhancement use makes people less desirable as employees. N. FITZ; L. CABRERA; P. REINER. *Univ. of British Columbia.*

8:00 VV41 **26.05SU** Neuromodulation of virtue circuits: Ethical considerations of modulating positive character traits via neuroplasticity. D. C. LARRIVEE; A. GINI. *Roman Catholic Diocese of Charleston Educational Outreach Office, San Camillo Forlanini Med. Ctr.*

9:00 VV42 **26.06SU** The role of the national science foundation office of the inspector general in research misconduct investigations. E. RUNKO. *Natl. Sci. Fndn.*

10:00 VV43 **26.07SU** The integration of mentorship and outreach: Creating a community of young scientists sharing neuroscience research with people across the lifespan. K. A. BENNION. *Boston Col.*

11:00 VV44 **26.08SU** 2014 regional brain awareness program in Eastern Kentucky. I. M. WHITE; J. L. HUFF; W. WHITE. *Morehead State Univ.*

8:00 VV45 **26.09SU** ● ▲ Cogsci connects: It's just brain science!. T. L. VENKATESAN, Y; D. PURVES. *Yale Univ., Duke Univ. Inst. For Brain Sci.*

9:00 VV46 **26.10SU** Graduate-led outreach initiatives: improving neuroscience literacy in children and adults. M. TAYLOR; K. L. CHRISTISON-LAGAY; I. J. PERRON; D. J. REINER; J. GOLD. *Perelman Sch. of Med., Univ. of Pennsylvania.*

10:00 VV47 **26.11SU** Bloomsburg university's 4th annual Brain Awareness Week: outreach to preschool, elementary, middle, high school, and university students in central pennsylvania. J. A. JOHNSON; L. E. GANEY; A. A. MODICA; N. C. UPDEGROVE. *Bloomsburg Univ., Bloomsburg Univ. of Pennsylvania.*

11:00 VV48 **26.12SU** The Northwestern University Brain Awareness Outreach organization shares excitement for neuroscience with the Chicago community. N. M. FREDERICK; L. K. SHANAHAN; S. HATTORI; S. R. MCIVER. *Northwestern Univ.*

8:00 VV49 **26.13SU** Utah Brain Awareness Week 2014: Brain storm. S. N. REDMON; T. DAHL; J. M. CAHOON; P. PARKER; K. CHANDLER; G. SMITH; S. LUKS-MORGAN; P. MALDONADO; J. BARRIOS; A. D. IUSO; A. TAIBI; A. HAACK; R. DORSKY; A. DAVIS. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

9:00 VV50 **26.14SU** The impact of Brain Awareness Week in southern Puerto Rico. E. A. CRUZ TORRES; O. SOLER-CEDEÑO; M. CRIADO-MARRERO; A. HERNÁNDEZ; M. COLÓN; B. VELÁZQUEZ; L. MALDONADO; G. NEGRÓN; E. RUIZ; A. TORRES; D. FONTANEZ-NUIN; R. LORENZI; J. T. PORTER. *Ponce Sch. of Med. and Hlth. Sci.*

10:00 VV51 **26.15SU** Electric muscles! interactive exhibit for Brain Awareness Week and the north carolina science festival. D. L. ROBINSON. *Univ. of North Carolina.*

11:00 VV52 **26.16SU** Using Gromphadorhina portentosa, the Giant Madagascar Hissing Cockroach, as a model organism in the neurobiology laboratory. K. G. SOSSA. *Notre Dame of Maryland Univ.*

8:00 VV53 **26.17SU** ▲ Customizing 3D printed models from MRI data: Creating educational anatomy models of neurologic disease. B. GARDINER; S. ROBISON; J. WISCO. *Brigham Young Univ., Univ. of Utah Sch. of Med.*

9:00 VV54 **26.18SU** Three years of the brain & mental health art show in Ottawa: Carleton University's Brain Awareness Week. H. A. MACKAY; V. ST-ONGE; R. GABRYS; R. MCQUAID; O. MCINNIS; N. RUSTOM; S. HUDSON; L. FRIBERG; S. KING JOHNSON; B. WARTMAN; T. PARNO; S. SYED; K. FARMER; C. RUDYK; C. SMITH; M. WELLMAN; A. ABIZAID. *Carleton Univ.*

10:00 VV55 **26.19SU** ● NW Noggin: Collaborative neuroscience outreach in Portland and Vancouver - Undergraduates, graduates, scientists, middle and high school students work together to learn about the brain. W. GRIESAR; J. LEAKE; S. HADENFELD; L. MILLER; M. MILLER; M. L. SMITH; E. TREMAINE; R. WESCOM; M. WIRTHLIN. *Washington State Univ. Vancouver, Washington State Univ. Vancouver, Portland State Univ., Oregon Hlth. & Sci. Univ., Washington State Univ. Vancouver.*

THEME H POSTER

027. Public Outreach II

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

8:00 VV56 **27.01SU** Neuroscience outreach project: Do alaskan blueberries positively affect health? C. A. FRYE; V. F. LEMBO; J. F. LEMBO; L. F. LEMBO; J. K. LEMBO. *Univ. Albany, Anne Wein Elementary Sch., Anne Wien Elementary Sch., Anne Wien Elementary Sch.*

9:00 VV57 **27.02SU** Digital Dementia: The impact of lifetime information technology use on mental functioning. M. SPITZER. *Dept. of Psychiatry, Univ. of Ulm.*

10:00 VV58 **27.03SU** Bridging two worlds: Creating a science policy seminar to generate lines of communication between scientists and policymakers. M. L. ANDERSON. *Rutgers Univ., Rutgers Univ. Neurosci.*

11:00 VV59 **27.04SU** ▲ Providing a new focus for neuroscience popularization. B. J. CORDY; J. T. MILES. *Seattle VA Puget Sound Hlth. Care Syst., The Univ. of Washington.*

8:00 VV60 **27.05SU** ● The role of the interaction between medical scientific community and public organizations of parents on rare diseases (based on materials of Rett Syndrome Association, Russia). O. V. TIMUTSA, ESQ; L. MURTAZINA. *Kazan State Med. Univ. / Assn. For Assistance To Rettsyndrome Pati, Assn. For Assistance to Rettsyndrome Patients.*

9:00 VV61 **27.06SU** Crowdsourcing the Evaluation of Journal Articles. D. A. BENDOR; S. DAVID. *UCL, Oregon Hlth. & Sci. Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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10:00 VV62 **27.07SU** Embracing autism and neurological difference at the College of William & Mary: A novel neurodiversity initiative. J. A. BURK; J. L. ZEMAN; K. A. WULF; J. E. ROBISON; C. L. DICKTER. *Col. of William & Mary, Col. of William & Mary.*

11:00 VV63 **27.08SU** Neural engineering in the classroom: Interactive workshops for high school students and teachers. S. SEEMAN; B. R. KONDILES; K. E. M. MANBECK. *Univ. of Washington.*

8:00 VV64 **27.09SU** Institute for Healthcare Improvement (IHI) Open School Online Leadership Course combined with community-based proposals for unmet needs in the clinical neurosciences: From medical student professionalism to underserved middle school students, teen depression/ suicide conferences, Alzheimer's support groups, and statewide conferences on science education, social work, elder abuse, and guardianship. P. F. ARAVICH; L. L. WELLMAN; D. A. COHEN. *Eastern Virginia Med. Sch., Eastern Virginia Med. Sch., Sentara Neurol. Specialists & Eastern Virginia Med. Sch.*

9:00 VV65 **27.10SU** Annual international conference on biologically inspired cognitive architectures. A. V. SAMSONOVICH. *George Mason Univ.*

10:00 VV66 **27.11SU** Combination therapy with hematopoietic growth factors enhances angiogenic factor and transcriptional activator in hypoxic-ischemic brain injury. J. YU; J. SEO; M. KIM; S. CHO. *Brain Korea 21 PLUS Project for Med. Science, Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Res. Inst. of Rehabil. Med.*

11:00 VV67 **27.12SU** Exploring neuroendocrine mechanisms of sexual dimorphism in early stress response. J. CAICEDO M; Z. DUENAS. *Univ. Nacional De Colombia.*

8:00 VV68 **27.13SU** The ninds repository: A public collection of biomaterials for disease modeling, gene and biomarkers discovery in neurological research. C. TARN; G. BALABURSKI; S. HEIL; K. REEVES; J. SANTANA; J. GILROY; M. SELF; C. PÉREZ; M. SUTHERLAND; K. GWINN; R. CORRIVEAU. *Coriell Inst. For Med. Res., Natl. Inst. for Neurolog. Disorders and Stroke.*

9:00 VV69 **27.14SU** Biogenesis of fatty acid ethanolamides: Structural insights. G. GARAU; P. MAGOTTI; S. PONTIS; D. PIOMELLI. *Inst. Italiano Di Tecnologia.*

10:00 VV70 **27.15SU** (Re)Habilitar- a multidisciplinary group focusing on spinal cord injury awareness in south of Brazil. A. C. MARTINI; S. D. SCHOELLER; A. R. S. GRUMANN; B. D. HORONGOZO; K. S. TRIERVEILER; D. L. DA SILVA; N. R. DRABOWSKI; E. KINOSHITA; D. LIMA; C. OLIVEIRA; S. FORNER. *UFSC, UFSC, UFSC.*

11:00 VV71 **27.16SU** Risk factors for ischemic stroke, about 442 cases. A. CHAHIDI; M. CHRAA; N. KISSANI. *Sorbonne Univ., 3- Basic & Clin. Neurosciences Res. Laboratory, UCAM, Mohamed VI Univ. hospital.*

8:00 VV72 **27.17SU** Neuroscience for sale: Scientific knowledge at a local mall. S. FORNER; A. P. R. COSTA; K. N. SOBOTA; C. H. DE PIERI; J. D. C. VAZ; G. M. GOMES; T. C. M. DE LIMA. *Univ. Federal De Santa Catarina, Univ. Federal de Santa Catarina.*

9:00 VV73 **27.18SU** ● ALD Connect, an all-inclusive consortium with the goal to eradicate X-linked adrenoleukodystrophy. G. RAYMOND; I. TSVANG; B. LENAIL; K. VAN HAREN; K. ZACKOWSKI; A. PAKER; F. EICHLER; L. JAMAL; J. BONKOWSKY; J. K. FINK; A. SALZMAN; P. AUBOURG; K. FORTIN; A. SHERMAN; A. FATEMI. *Univ. of Minnesota, Massachusetts Gen. Hosp. | Harvard Med. Sch., ALD Connect, Stanford, Kennedy Krieger Inst. / Johns Hopkins, bluebird bio, Massachusetts Gen. Hosptial | Harvard Med. Sch., Univ. of Utah, Univ. of Michigan, STOP ALD, INSERM, ALD Connect.*

10:00 VV74 **27.19SU** Expand your mind! educational outreach by florida state university neuroscience. A. M. STATHOPOULOS; S. B. OGDEN; M. J. BASISTA; M. T. ROSS; M. TABBAA; K. S. KOSHUNOV; S. TERRILL; C. L. ROBISON. *Florida State Univ., Florida State Univ.*

11:00 VV75 **27.20SU** Neuroscience contribution for perception of pain and discomfort in clinical trials. R. N. ISAYAMA; R. B. LOPES; S. M. TAGAMI; J. H. SATO; E. J. CALDEIRA; M. R. DA CUNHA. *UNASP-SP, UNIANCHIETA-Jundai, Faculdade de Medicina de Jundiaí (FMJ).*

THEME H POSTER

028. Ethical and Policy Issues

Theme H posters will be on display Sat. 1:00 PM - Sun. 5:00 PM, with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU) -- Walter E. Washington Convention Center, Hall A

1:00 VV76 **28.01SA** Promoting awareness of and access to sex and gender differences research. M. E. EDWARDS; H. NORTON; N. SCHAEFER; M. R. TENNANT; L. NOTTERPEK. *Univ. of Florida, Univ. of Florida, Univ. of Florida, McKnight Brain Inst, Univ. Florida.*

2:00 VV77 **28.02SA** Cardiac arrest and spinal cord damage. A. K. PANDEY; A. SHARMA; A. NOZARI; D. F. MURESANU; J. V. LAFUENTE; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *Senior Res. Fellow, IIT-BHU, Uppsala Univ. Hosp., Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Med. & Pharm., Univ. of Basque Country, Indian Inst. of Technology, Banaras Hindu Univ., Ever Neuro Pharma.*

3:00 VV78 **28.03SA** Leveling the playing field: Using an integrative translational neurodevelopmental model to optimize substance abuse intervention and reduce disparities. E. J. ROSE; D. FISHBEIN. *Univ. of Maryland Sch. of Med.*

4:00 VV79 **28.04SA** The liberating dimension of habit: Breaking free from the stimulus-response model. F. J. GUELL, SR; L. NÚÑEZ. *Inst. For Culture and Society, Ctr. Médico Pamplona.*

1:00 VV80 **28.05SA** Oxidative stress and co-morbidity factors are the key for brain pathology. Antioxidants are helpful in neurodegeneration. D. F. MURESANU; A. SHARMA; J. V. LAFUENTE; R. J. CASTELLANI; P. SJÖQUIST; H. MOESSLER; Z. TIAN; H. S. SHARMA. *Romanian Society For The Study Of Neuroprotection And Neuroplasticity, Uppsala Univ. Hosp., Univ. of Basque Country, Univ. of Maryland Hosp., Karolinska Institute, Karolinska Univ. Hosp., Ever Neuro Pharma, Univ. of Arkansas.*

2:00 VV81 **28.06SA** Pathologies of psychological classification: History and new directions. G. Y. RYU; A. LAM; E. OHAYON. *The Green Neurosci. Lab., The Green Neurosci. Laboratory; Neurolinx Resea.*

● Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 VV82 **28.07SA** A longitudinal study of practices and perspectives on authorship in a neuroscience graduate program. B. AGUILAR; M. FAMA; L. ULLRICH; L. MALKOVA; K. GALE; P. A. FORCELLI. *Georgetown Univ., Georgetown Univ.*

4:00 VV83 **28.08SA** Histaminergic drugs are not well considered for the treatment of Central Nervous System dysfunction. New approach and policy required. R. PATNAIK; A. SHARMA; D. F. MURESANU; J. V. LAFUENTE; H. S. SHARMA. *Indian Inst. of Technology,Banaras Hindu Univ., Uppsala Univ. Hosp., Univ. of Med. & Pharm., Univ. of Basque Country, Uppsala Univ. Hosp.*

1:00 VV84 **28.09SA** It's pleasant and heavy: Convergence of visual contents in tobacco, alcohol, and food marketing. K. R. VIACAVA; G. WEYDMANN; M. VASCONCELOS; J. JABOINSKI; R. DE ALMEIDA; L. BIZARRO. *Federal Univ. of Rio Grande Do Sul - UFRGS, Univ. do Vale do Rio dos Sinos.*

2:00 VV85 **28.10SA** ▲ Choosing animal models for biomedical neuroscience. A. LARSON; J. ROBERT. *Arizona State Univ., Arizona State Univ.*

3:00 VV86 **28.11SA** Science advocacy in the heartland. N. I. CILZ; E. MURPHY. *Univ. of North Dakota.*

4:00 VV87 **28.12SA** ▲ Biomarkers for sex and gender: A medical jurisprudence approach. S. KIMMICH. *UNIVERSITY OF CALIFORNIA, SAN DIEGO.*

1:00 VV88 **28.13SA** Innovative knowledge exchange for neuroscience and neuroethics: Using graphic recordings to build engagement at conferences. J. M. ROBILLARD; P. B. REINER; J. ILLES. *Univ. British Columb, Univ. of British Columbia.*

POSTER

029. Neural Lineage Specification and Plasticity

Theme A: Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A1 **29.01** ▲ Rhox8 expression in rodent brains. H. G. HUFFMAN; E. D. GRISLEY; J. A. MACLEAN, II; J. L. CHEATWOOD*. *SIU Sch. Med., SIU Sch. Med.*

2:00 A2 **29.02** Spatiotemporal dimorphic expression of Xlr3 genes in the developing male and female cortex. A. MCDONOUGH*; J. BERLETCH; C. DISTECHE; R. HEVNER. *Seattle Childrens Res. Inst., Univ. of Washington, Univ. of Washington.*

3:00 A3 **29.03** Stroke injury enhances neurogenesis in multiple new stem cell niches along the ventricular system at sites of high blood-brain-barrier permeability. R. LIN*; J. CAI; C. NATHAN; X. WEI; S. SCHLEIDT; R. ROSENWASSER; L. IACOVITTI. *Thomas Jefferson Univ., Thomas Jefferson Univ.*

4:00 A4 **29.04** Differences in proliferation behaviour and expression of phenotypic markers in embryonic mouse adrenal chromaffin cells and sympathetic neuroblasts. W. CHAN*; D. G. GONSALVEZ; H. M. YOUNG; E. M. SOUTHARD-SMITH; K. N. CANE; C. R. ANDERSON. *Univ. of Melbourne, Vanderbilt Univ. Sch. of Med.*

1:00 A5 **29.05** The developmental genetic basis of cortical interneuron identity - the case of chandelier cells. S. M. KELLY*; M. HE; Z. HUANG. *Cold Spring Harbor Lab., Stony Brook Univ.*

2:00 A6 **29.06** Molecular characterization of human cortical interneurons. J. L. CLOSE*; B. LEVI; V. MENON; S. ANDERSON; S. RAMANATHAN. *Allen Inst. For Brain Sci., Univ. of Pennsylvania, Harvard Univ.*

3:00 A7 **29.07** Serotonin receptor 5-HT3A in the development of autonomic and sensory innervation of the lower urinary tract. E. RITTER*; D. P. BUEHLER; H. WU; E. SOUTHARD-SMITH. *Vanderbilt Univ., Vanderbilt Brain Inst., Vanderbilt Univ., Keck Sch. of Med. of Univ. of Southern California.*

4:00 A8 **29.08** Modeling neurodevelopmental disrutpion and glioblastoma with crispr/cas9 system. F. CHEN*; A. CHE; A. BECKER; J. LOTURCO. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Bonn Med. Sch., Univ. of Connecticut.*

1:00 A9 **29.09** Primitive neural stem cells at the top of the neural stem cell hierarchy. S. YAMMINE*; R. LEEDER; D. VAN DER KOOY. *Univ. of Toronto, Univ. of Toronto.*

2:00 A10 **29.10** Dispersion of clonally related interneurons. C. MAYER*; X. H. JAGLIN; C. STREICHER; J. DIMIDSCHSTEIN; S. HIPPENMEYER; L. CEPKO; G. J. FISHELL. *NYU Neurosci. Inst., Inst. of Sci. and Technol. Austria, Harvard Med. Sch.*

3:00 A11 **29.11** The role of Gsx2 in the generation of the septum-derived olfactory bulb interneurons. S. QIN*; H. CHAPMAN; S. M. WARE; R. R. WACLAW; K. CAMPBELL. *Cincinnati Children's Hosp. Med. Ctr., Univ. of California, Davis, Indiana Univ., Cincinnati Children's Hosp. Med. Ctr.*

4:00 A12 **29.12** Netrin-1 promotes neuroblast lineage plasticity in the subventricular zone after neonatal brain injury. M. RAYMOND*; S. FOX; P. LI; V. GALLO. *Children's Natl. Med. Ctr.*

1:00 A13 **29.13** Distinct lineages for neuro- and oligodendrogliogenesis in the adult subependymal zone. F. ORTEGA*; S. GASCON; G. MASSERDOTTI; A. DESHPANDE; C. SIMON; J. FISCHER; L. DIMOU; C. LIE; T. SCHROEDER; B. BERNINGER. *Johannes Gutenberg Univ. Mainz, Dept. of Physiological Genomics, Inst. of Physiology, Ludwig-Maximilians Univ. Munich, Schillerstrasse 46, D-80336 Munich, Germany, Inst. of Stem Cell Research, Helmholtz Zentrum München, Ingolstädter Landstrasse 1, D-85764 Neuherberg, Germany, Inst. of Biochemistry, Emil Fischer Center, Univ. Erlangen-Nürnberg, Erlangen, Germany, Stem Cell Dynamics research unit, Helmholtz Zentrum München, Ingolstädter Landstrasse 1, D-85764 Neuherberg, Germany.*

2:00 A14 **29.14** Characterization of neural crest stem cells isolated from human adult bone marrow. S. WISLET*; C. COSTE; V. NEIRINCKX; B. ROGISTER; A. GOTHOT. *Univ. of Liège.*

3:00 A15 **29.15** Effects of zinc on adipose-derived mesenchymal stem cell (AD-MSCs) proliferation and differentiation. H. KIM*; B. LEE; J. KIM; B. CHOI; I. KIM; S. LEE; M. SOHN; S. SUH. *Hallym Univ., Dept. of Med. biology, Hallym Univ., Dept. of Nursing, Inha Univ.*

4:00 A16 **29.16** Characterization of a novel creert transgenic line suitable for inducible gene manipulation in cerebellar granule cells. I. T. POHLKAMP*; L. STELLER; P. MAY; T. GUENTHER; R. SCHUELE; J. HERZ; M. FROTSCHER; H. H. BOCK. *Univ. of Texas Southwestern Med. Ctr., Dept. of Mo, UTSW Med. Ctr., Albert-Ludwigs-University, Heinrich-Heine-University, Clin. for Gastroenterology, Univ. Hosp. Freiburg, Univ. Med. Ctr. Hamburg-Eppendorf, Inst. for Structural Neurobio.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 A17 **29.17** ● Time, place and significance of protein-protein interactions within the brain of intact animals. N. SHARIFAI; T. DENG; M. BOULINA; H. SAMARAJEEWA; R. PRABHAKA; S. WUCHTY; A. CHIBA*. *Univ. of Miami, Univ. of Miami, Univ. of Miami.*

2:00 A18 **29.18** Effects of cytomegalovirus infection in human neural precursor cells depend on differentiation state. H. M. GONZÁLEZ*; C. SALAZAR-ALDRETE; A. HERNÁNDEZ-SALINAS; M. JIMÉNEZ-CAPDEVILLE; D. NOYOLA; C. CASTILLO. *Facultad De Medicina, U.A.S.L.P., Facultad De Medicina, U.A.S.L.P.*

3:00 A19 **29.19** Effects of gdnf and et3 on proliferation and differentiation of postnatal neural progenitors in murine model. A. CARREON-RODRIGUEZ*; R. HARTMANN; H. HORDER; J. BELKIND-GERSON; A. M. GOLDSTEIN. *Inst. Nacional De Salud Publica, Massachusetts Gen. Hospital/ Harvard Med. Sch., Univ. of Applied Sci., Massachusetts Gen. Hospital/Harvard Med. Sch.*

4:00 A20 **29.20** Expression of cortical neuron markers in cells derived from human amniotic epithelial cells. D. AVILA-GONZALEZ; I. L. GARCIA-CASTRO; A. MOLINA-HERNANDEZ; G. GARCIA-LOPEZ; N. F. DIAZ*. *Inst. Nacional de Perinatologia, Doctorado en Ciencias Biomedicas UNAM.*

1:00 A21 **29.21** Investigation of the relationship between iPS and C2C12 cells regarding both diffusible factors and cell-cell contacts. T. SHINGEN*; T. NEDACHI; H. KAWAGUCHI. *Toyo Univ.*

2:00 A22 **29.22** Definitive multiplex biomarker identification of embryonic rat cortical neural stem cell phenotype reveals that these cells are ontogenetically restricted only to early embryonic development but can recapitulate their embryonic seminal properties both *in vitro* and *in vivo* after implantation into adult rat brain. D. MARIC*; N. POTHAYEE; Y. H. CHANG; A. SEDLOCK; K. SHARER; N. BOURAOUD; J. L. BARKER; A. KORETSKY. *NINDS/NIH.*

3:00 A23 **29.23** ● Neurotrophins and trk receptors expression in preinduced rat bone marrow stromal cells into neuron phenotype with selegiline. A. ROEINTAN*; T. TIRAIHI; A. ABDANIPOUR; T. TAHERI. *Shefa Neurosci. Res. Center,Khatam Ol Anbia, Shefa Neurosci. Res. Center,Khatam Ol Anbia Hosp., Tarbiat Modares Univ., Islamic Azad Univ.*

POSTER

030. Neuronal Differentiation

Theme A: Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A24 **30.01** Neuronal and vascular anatomy in the zebrafish brain. S. RAHMAT*; E. GILLAND; T. HEINBOCKEL. *Howard Univ.*

2:00 A25 **30.02** Development of serotonergic neurons in the larval zebrafish spinal cord. J. E. MONTGOMERY*; T. D. WIGGIN; B. CORWIN; C. LILLESAAR; L. BALLY-CUIF; M. A. MASINO. *Univ. of Minnesota, Würzburg Univ., Inst. of Neurobio. Alfred Fessard.*

3:00 A26 **30.03** Hairy and enhancer of split 6 (Hes6) gene modulates the neuroblast and astrocytes differentiation in the dentate gyrus without any influences on cell proliferation and integration into mature neurons. S. NAM*; J. KIM; J. KIM; I. HWANG; J. SEONG; Y. YOON. *Seoul Natl. Univ., Ewha Womans Univ.*

4:00 A27 **30.04** New insights in striatal development: Characterization of Znf521 in mouse and human brain. M. PARDO; N. VINH; L. MARION-POLL; J. GIRAULT; R. MARTÍN-IBÁÑEZ; A. ROSSER; J. M. CANALS*. *Fac. of Medicine, IDIBAPS, Univ. of Barcelona; Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Cardiff Sch. of Biosciences, Univ. of Cardiff, Inserm UMR-S 839; Univ. Pierre & Marie Curie, Sorbonne Universités; Inst. du Fer à Moulin, Univ. of Barcelona.*

1:00 A28 **30.05** Sox8 is required for the formation of the striatonigral pathway. 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.*

2:00 A29 **30.06** Hox genes govern the development of respiratory circuits. P. PHILIPPIDOU*; L. JEANNOTTE; J. S. DASEN. *NYU Med. Ctr., Univ. Laval.*

3:00 A30 **30.07** The role of Pitx2 in the development of spinal ventral interneurons. I. ROZANI; D. A. MANGOURA*; L. ZAGORAIOU. *Biomed Res. Found Athens Acad.*

4:00 A31 **30.08** Birthdate and SHH signaling differentially specify PV versus SST expressing cortical interneuron fates from mESCs. J. A. TYSON; A. M. MAROOF; S. A. ANDERSON*. *UPenn Sch. of Med., Harvard Stem Cell Inst., Children's Hosp. of Philadelphia/Upenn Sch. Med.*

1:00 A32 **30.09** Non-canonical Wnt signaling regulates cortical interneuron subtype specification. E. AU*; M. MCKENZIE CHANG; G. J. FISHELL. *NYU Med. Ctr., NYU Langone Med. Ctr.*

2:00 A33 **30.10** Necdin regulates RanGAP1 sumoylation during neuronal differentiation. K. FUJIWARA*; K. HASEGAWA; K. YOSHIKAWA. *Inst. For Protein Research, Osaka Univ.*

3:00 A34 **30.11** Neurog1 genetic inducible fate mapping (GIFM) reveals the existence of complex spatiotemporal cyto-architectures in the developing cerebellum. E. A. OBANA*; T. G. LUNDELL; K. J. YI; K. L. RADOMSKI; Q. ZHOU; M. L. DOUGHTY. *USUHS Program in Neurosci., USUHS Dept. of Anatomy, Physiol. and Genet.*

4:00 A35 **30.12** Prdm8 regulates the guidance molecules during neocortical development. K. MIZUTANI*; M. INOUE; M. KATO; A. HONDA; R. IWAI; Y. SHINKAI. *Doshisha Univ., Riken.*

1:00 A36 **30.13** The influence of chronic alpha1A-adrenergic receptor activation on cell survival and fate in the adult mouse dentate gyrus. K. COLLETTE*; S. SCHUCK; D. PETERSON; V. A. DOZE. *Univ. of North Dakota Sch. of Med. and Hlth. Sci., The Chicago Med. Sch. at Rosalind Franklin Univ.*

2:00 A37 **30.14** Cellular roles of Ebf1 in striatal Medium Spiny Neuron specification. A. TINTERRI*; L. LOKMANE; M. DIANA; L. DANGLOT; I. GYORY; T. GALLI; R. GROSSCHEDL; S. GAREL. *Inst. De Biologie De L'Ecole Normale Supérieure, Ecole de Neurosci. de Paris, Inst. De Biologie De L'Ecole Normale Supérieure, Inst. Jacques Monod, Max Plank Inst. of Immunobiology.*

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3:00 A38 **30.15** Brain maturation and neuron activity dynamically regulate histone variant expression. A. A. THAMBIRAJAH*; J. C. DIORIO; M. J. MEANEY. *Douglas Mental Hlth. Univ. Institute/ McGill, Ludmer Ctr. for Neuroinformatics and Mental Hlth.*

4:00 A39 **30.16** TxnRd2-mediated metabolic redox dysregulation during neuronal differentiation results in changes in mitochondrial distribution and abnormal neurite arborization. A. FERNANDEZ*; T. MAYNARD; D. MEECHAN; B. KARPINSKI-OAKLEY; M. BRIELMEIER; A. S. LAMANTIA. *The George Washington Univ., The George Washington Univ., The George Washington Univ., The George Washington Univ., Helmholtz Zentrum München - German Res. Ctr. for Envrn. Hlth.*

1:00 A40 **30.17** The tumor suppressor lkb1 regulates myelination through mitochondrial metabolism. B. DASGUPTA*. *Washington Univ.*

2:00 A41 **30.18** Dynamic myelination by mature oligodendrocytes in humans. M. YEUNG*; S. ZDUNEK; O. BERGMANN; S. BERNARD; M. SALEHPOUR; K. ALKASS; G. POSSNERT; L. BRUNDIN; H. DRUID; J. FRISEN. *Karolinska Institutet, Dept. of Cell and Mol. Biol., Inst. Camille Jordan, Univ. of Lyon, Dept. of Physics and Astronomy, Ion Physics, Uppsala Univ., Dept. of Clin. Neuroscience, Dept. of Neurosurg. and Neurology, Karolinska Institutet, Karolinska Univ. Hosp., Dept. of Forensic Medicine,Karolinska Insitutet.*

3:00 A42 **30.19** Orphan GPR110 is a target receptor for synaptamide, a potent endogenous inducer of neuronal differentiation derived from omega-3 fatty acids. J. LEE*; G. KHAREBAVA; B. HUANG; M. RASHID; S. PATNAIK; J. MARUGAN; H. KIM. *NIH.*

4:00 A43 **30.20** Altered expression on the level of miR-125b in serum from gestational diabetic women a possible biomarker for fetal central nervous system development. M. LAMADRID; M. S. CRUZ-RESÉNDIZ; N. F. DÍAZ; H. FLORES-HERRERA; G. GARCÍA-LÓPEZ; A. MOLINA*. *Inst. Nacional De Perinatología., Posgrado en Ciencias Biológicas, UNAM, Inst. Nacional De Perinatología., Inst. Nacional De Perinatología.*

1:00 A44 **30.21** Reversal of ketamine-induced neurotoxicity and cardiotoxicity in zebrafish embryos: Direct involvement of the energy metabolism pathway. J. KANUNGO*; X. GUO; E. CUEVAS; M. DUMAS; S. ALI; M. PAULE; S. LANTZ-MCPEAK. *Natl. Ctr. For Toxicological Research/Food and Drug Admin., Natl. Ctr. for Toxicological Research/Food and Drug Admin.*

2:00 A45 **30.22** Development of neurospheroid using microwell for degenerative brain diseases. J. YOU*; J. JIN; Z. CHANG; J. JEONG; K. YANG; Y. HWANG; J. PARK; S. CHO; J. KIM. *KIST, Sogang Univ., Yonsei Univ., Kyung Hee Univ., Sogang Univ.*

3:00 A46 **30.23** Formation of complex 3D neural network by neural microfiber. M. KATO-NEGISHI*; H. ONOE; S. TAKEUCHI. *The Univ. of Tokyo, Takeuchi Biohybrid Innovation Project, ERATO, JST.*

POSTER

031. Dendritic Development and Branching

Theme A: Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A47 **31.01** Activity-dependent regulation of dendritic complexity by Semaphorin3A through Farp1. L. CHEADLE*; T. BIEDERER. *Harvard Med. Sch., Yale Univ., Tufts Univ. Sch. of Med.*

2:00 A48 **31.02** Effect of CSMD3, a candidate gene of neuropsychiatric disorders, on neuronal morphology. M. TOMOHARU*; T. KOHNO; M. HATTORI. *Nagoya City Univ.*

3:00 A49 **31.03** Acute and chronic effects of transient mutant DISC1 expression in layer 2/3 mouse barrel cortex. N. R. HARDINGHAM*; G. SEATON; K. FOX. *Cardiff Univ., Cardiff Univ.*

4:00 A50 **31.04** ▲ Purkinje neuron developmental markers *in vivo* and *in vitro.* T. N. FAULL; L. M. ROBERTSON; A. R. DEMCHAK; M. E. MORRISON*. *Lycoming Col.*

1:00 A51 **31.05** Kainic acid induces alterations in dendritic spine number and motility in hippocampal neurons. T. LORTKIPANIDZE*; M. ZHVANIA; T. BIKASHVILI; N. JAPARIDZE. *Ilia State Univ., I.Beritashvili Ctr. of Exptl. Biomedicine.*

2:00 A52 **31.06** The ubiquitin E3 ligase Nedd4-1 promotes neurite growth and is regulated by PI3K/PTEN-mTORC1 signaling. H. HSIA*; R. KUMAR; R. LUCA; M. TAKEDA; J. COURCHET; J. NAKASHIMA; S. GOEBBELS; S. WU; W. AN; B. EICKHOLT; F. POLLEUX; D. ROTIN; H. WU; M. ROSSNER; C. BAGNI; J. RHEE; N. BROSE; H. KAWABE. *Max Planck Inst. of Exptl. Med., Ctr. for Human Genet. and Leuven Inst. for Neurodegenerative Dis., VIB Ctr. for the Biol. of Dis., Columbia Univ. Med. Ctr., UCLA Sch. of Med., Max Planck Inst. of Exptl. Med., MRC Ctr. for Developmental Neurobiology, King's Col. London, Inst. for Biochemistry, Charité-Universitätsmedizin, The Hosp. for Sick Children, Univ. of Rome Tor Vergata.*

3:00 A53 **31.07** Carbamylated erythropoietin promotes neurite outgrowth and neuronal spine formation in association with CBP/p300. M. CHOI*; S. LEE; S. KO; S. WANG; H. SON. *Hanyang Univ., Hanyang Univ.*

4:00 A54 **31.08** The role of sap97 in asd and scz. P. GUPTA*; L. ZHANG; J. MOJSILOVIC-PETROVIC; R. G. KALB. *Univ. of Pennsylvania Perelman Sch. of Medi, Children's Hosp. of Philadelphia, Univ. of Pennsylvania Perelman Sch. of Med.*

1:00 A55 **31.09** Cellular constituents of Nogo-A contribution to structural plasticity in the mouse cerebral cortex. C. CHEN*; A. ZEMMAR; F. VAJDA; G. CARSON; N. ISAAD; J. BOZEMAN; B. TEWS; M. SCHWAB; Y. ZUO. *Univ. of California, Santa Cruz, Brain Res. Institute, Univ. of Zurich, ETH Zurich.*

2:00 A56 **31.10** CRMP4 contributes to formation of the olfactory bulb neural circuits. A. TSUTIYA*; H. WATANABE; M. NISHIHARA; Y. GOSHIMA; R. OHTANI-KANEKO. *Toyo Univ., The Univ. of Tokyo, Yokohama City Univ.*

3:00 A57 **31.11** The role of ubiquitin ligase E3B in neural development. M. C. AMBROZKIEWICZ*; B. ALTAS; S. RIPAMONTI; A. RONNENBERG; H. EHRENREICH; J. S. RHEE; N. BROSE; H. KAWABE. *Max Planck Inst. of Exptl. Med., Max Planck Inst. of Exptl. Med.*

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4:00 A58 **31.12** Activation of AhR signaling pathway regulates dendritic growth in the developing mice. E. KIMURA*; K. KUBO; T. ENDO; W. LING; K. NAKAJIMA; M. KAKEYAMA; C. TOHYAMA. *Lab. Environ. Hlth. Sci., CDBIM, Grad. Sch. of Med., Univ. of Tokyo., Dept. of Anat., Keio Univ. Sch. of Med., Grad. Sch. of Biomed. Sci., Nagasaki Univ.*

1:00 A59 **31.13** Role of ryanodine receptor type 2 expressed by cerebellar granule cells in dendritic differentiation of Purkinje cells. M. TANAKA*; R. OHASHI; M. MIURA; N. HIRASHIMA. *Nagoya City Univ.*

2:00 A60 **31.14** ▲ Neonatal blockade of glutamatergic transmission alters the dendritic spines types on dorsal hippocampus and the learning and memory processes in the rat. C. A. PINZÓN*. *Inst. De Fisiología.*

3:00 A61 **31.15** Inhibition of Bcl-xL arrests neurite outgrowth. H. PARK*; P. LICZNERSKI; K. N. ALAVIAN; M. SHANABROUGH; E. A. JONAS. *Yale Sch. of Med.*

4:00 A62 **31.16** miR92a and 301a regulate human-specific changes in cortical development. P. GUIJARRO*; Z. QIU; P. KHAITOVICH. *PICB, Inst. of Neurosci.*

1:00 A63 **31.17** Differential regulation of the Wnt signaling pathway by gamma-protocadherin family proteins. K. MAH*; J. A. WEINER. *Univ. of Iowa.*

2:00 A64 **31.18** Comparing stochastic growth models to explore the developmental mechanisms of dendritic arbors. S. NANDA*; R. ARMAÑANZAS; R. PAREKH; S. POLAVARAM; D. N. COX; G. A. ASCOLI. *Krasnow Inst. of Advanced Study, Krasnow Inst. for Advanced Study, George Mason Univ.*

POSTER

032. Mechanisms of Dendritic Growth and Branching

Theme A: Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A65 **32.01** A novel bioinspired nanoparticle promotes neurite outgrowth and increases neural network activity in primary neuronal cultures. S. LATIFI*; F. CESCA; A. TAMAYOL; R. HABIBI; R. SABZEVARI; A. BLAU; M. LINDER; E. ARAB-TEHRANY. *IIT, Genome Quebec Innovation Ctr., Artificial Intelligence Lab, Univ. of Zurich, Univ. de Lorraine.*

2:00 A66 **32.02** ● High-resolution analysis of Semaphorin 3A effects on filopodia of developing dendrites using SLIM imaging and microfluidic environments. A. JAIN*; T. KIM; G. POPESCU; M. U. GILLETTE. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

3:00 A67 **32.03** Mitochondrial motility and function in developing neural dendrites. M. FAITS*; D. KERSCHENSTEINER. *Washington Univ. Sch. of Med.*

4:00 A68 **32.04** Interplay of non-prenylatable Rac1 and RhoA in B35 neuroblastoma cells. J. M. REDDY*; N. G. R. RAUT; D. L. HYNDS. *Texas Woman's Univ., Texas Woman's Univ.*

1:00 B1 **32.05** Dscams promote self-avoidance by masking adhesion through both MAGI-dependent and -independent mechanisms. R. W. BURGESS*; A. M. GARRETT; A. L. D. TADENEV; A. KHALIL; P. G. FUERST. *The Jackson Lab., The Univ. of Maine, Univ. of Idaho.*

2:00 B2 **32.06** The role of Sox11 in neuronal maturation in the mouse cerebral cortex. Y. HOSHIBA*; T. TODA; M. WEGNER; S. YANAGI; H. TANAKA; H. KAWASAKI. *Kanazawa Univ., Inst. for Biochemistry, Univ. of Erlangen, Sch. of Life Sciences, Tokyo Univ. of Pharm. and Life Sci.*

3:00 B3 **32.07** Modulation of dendritic differentiation by dopamine D1 receptor agonists. K. M. MONEY; G. D. STANWOOD*. *Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med.*

4:00 B4 **32.08** Regulation of dendritic morphogenesis by Miro1-dependent mitochondrial transport. N. F. HIGGS*; A. F. MACASKILL; G. LOPEZ-DOMENECH; J. T. KITTLER. *Univ. Col. London.*

1:00 B5 **32.09** Dynamic effects of CXCR4/SDF-1 in neuroblastoma neurite outgrowth. Y. S. SHAN; C. M. VAN GOLEN*. *Delaware State Univ., Delaware State Univ.*

2:00 B6 **32.10** Na+/Ca^{2+} exchanger 1 (NCX1) Involvement in neuronal differentiation through ca^{2+}-dependent Akt phosphorylation. A. SECONDO; A. ESPOSITO; R. SIRABELLA; F. BOSCIA; A. PANNACCIONE; P. MOLINARO; M. CANTILE; M. SISALLI; R. CICCONE; C. FRANCO; A. SCORZIELLO*; G. DI RENZO; L. ANNUNZIATO. *Federico II Univ. of Naples, Federico II Univ. of Naples, Univ. Naples.*

3:00 B7 **32.11** EphA7 guides dendritic morphology and synaptogenesis in cortical neurons. C. LEONARD*. *Georgetown Univ.*

4:00 B8 **32.12** A chaperone protein controls the morphology of neuronal spines via filamin -A interacting protein. H. YAGI*; M. SATO; K. NOGUCHI. *Hyogo Col. of Med., Dept. of Anat. and Neuroscience, Grad. Sch. of Medicine, Osaka Univ., United Grad. Sch. of Child Development, Osaka University, Kanazawa University, Hamamatsu Univ. Sch. of Medicine, Chiba Univ. and Univ. of Fukui, Res. Ctr. for Child Mental Development, Univ. of Fukui.*

1:00 B9 **32.13** FLNA overexpression contributes to abnormal dendritic patterning in tuberous sclerosis complex. L. ZHANG*; C. M. BARTLEY; X. GONG; L. S. HSIEH; T. V. LIN; A. BORDEY. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

2:00 B10 **32.14** Activity-Dependent regulation of dendrite dynamics in developing *Drosophila* larval visual circuit. C. SHENG; J. YIN; C. LONG; D. TANG; Q. YUAN*. *NIH/NINDS.*

3:00 B11 **32.15** Regulation of dendrite and spine growth by a novel transducible protein mLLP. N. YU*; B. KAANG; H. KIM; J. SHIM; S. KIM. *Seoul Natl. Univ.*

4:00 B12 **32.16** Mutant SPT-dependent activation of ERM proteins mediates altered growth dynamics in sensory neurons: Implications for HSAN1. B. JUN*; A. CHANDRA; F. EICHLER. *MGH.*

1:00 B13 **32.17** βPix heterozygote mice ($\beta Pix^{+/-}$) exhibit reduced dendritic spine formation and also defects in social behavior. Y. KWON; T. KANG; D. KIM; D. PARK*. *Seoul Natl. Univ., KAIST.*

2:00 B14 **32.18** Exploration of two different compensatory strategies for recovery from injury in the adult cricket CNS. H. W. HORCH*; L. SAIDENBERG; M. CHONG; B. FIORILLO; J. VERGARA-BENITEZ; A. ZHANG; A. PFISTER; O. ELLERS; A. JOHNSON. *Bowdoin Col., American Museum of Natural History.*

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3:00 B15 **32.19** miR-125b mediated filopodial dynamics in developing dendrites. R. IYER*; T. KIM; G. POPESCU; M. U. GILLETTE. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

4:00 B16 **32.20** ● CREB signaling affects survival and differentiation of immature neurons. T. SANTANA*; M. COSTA. *UFRN.*

POSTER

033. Adolescent Drug Exposure: Alcohol and Nicotine

Theme A: Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B17 **33.01** Social anxiety and the dynorphin/kappa opioid system during withdrawal from repeated ethanol: Impact of age and sex. T. L. DOREMUS-FITZWATER*; E. M. TRUXELL; E. I. VARLINSKAYA. *Binghamton Univ.*

2:00 B18 **33.02** Contribution of alpha-7 nAChR tone in sustaining the gain of GABAergic transmission in the adult prefrontal cortex. D. R. THOMASES; E. FLORES-BARRERA; J. P. BRUNO; R. SCHWARCZ; K. TSENG*. *RFUMS/Chicago Med. Schl, The Ohio State Univ., Maryland Psychiatric Res. Center, Univ. of Maryland Sch. of Med.*

3:00 B19 **33.03** Adolescent, but not adult, binge ethanol exposure leads to persistent global reductions of choline acetyltransferase expressing neurons in brain. R. P. VETRENO*; M. BROADWATER; W. LIU; L. SPEAR; F. CREWS. *Univ. of North Carolina At Chapel Hill, Binghamton Univ., Univ. of North Carolina at Chapel Hill.*

4:00 B20 **33.04** Adolescent alcohol exposure decreases gabaa receptor mediated currents in the adult medial prefrontal cortex. S. CENTANNI*; H. TRANTHAM-DAVIDSON; J. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

1:00 B21 **33.05** Adolescent intermittent alcohol exposure (AIE) alters adult HPA axis responses to an alcohol challenge. S. O. LEE*; S. IM; S. BAE; J. HONG; J. VAUGHAN; C. RIVIER; E. VUONG; M. L. LOGRIP. *Salk Inst., Salk Inst., The Scripps Res. Inst.*

2:00 B22 **33.06** Adolescent nicotine exposure induces binge ethanol consumption and nAChR density increases in the reward pathway. A. R. REVITSKY*; M. J. MARKS; L. C. KLEIN. *The Pennsylvania State Univ., Univ. of Colorado Boulder.*

3:00 B23 **33.07** The interaction of nicotine and stress during adolescence on long-term impairments on a hippocampus-dependent task. E. HOLLIDAY*; S. LOGUE; T. GOULD. *Temple Univ., Temple Univ.*

4:00 B24 **33.08** ▲ Effects of adolescent caffeine consumption on anxiety behaviors, plasma corticosterone, and neural activity. J. STAFFORD; C. E. O'NEILL; R. J. NEWSOM; S. C. LEVIS; T. SCOTT; R. K. BACHTELL*. *Univ. of Colorado, Univ. of Colorado.*

1:00 B25 **33.09** Alterations in neuronal nitric oxide synthase in the hippocampus of female adolescent rats exposed to repeated ethanol administrations. I. KARPICHEV; L. MALAVE; S. CAIN; S. KRONENBERG; R. SIRCAR*. *The City Col. of New York.*

2:00 B26 **33.10** Intermittent ethanol exposure during adolescence: Effects on stress-induced social alterations in adulthood. E. I. VARLINSKAYA*; E. M. TRUXELL; L. P. SPEAR. *Binghamton Univ.*

3:00 B27 **33.11** The effect of adolescent intermittent binge ethanol on neurogenesis and oligodendrogenesis in the subventricular zone and anterior corpus callosum of adult rats. W. LIU*; F. T. CREWS. *Univ. of North Carolina-Chapel Hill.*

4:00 B28 **33.12** Adolescent binge exposure alters the adult brain response to stress. T. J. WALTER*; R. VETRENO. *Univ. of North Carolina - Chapel Hill, Univ. of North Carolina - Chapel Hill.*

1:00 B29 **33.13** Corticosterone response to the route of ethanol administration in adolescent and adult animals. J. HOFFMAN*; R. M. PHILPOT; C. L. KIRSTEIN. *Usf-Psychology, USF, USF-Psychology.*

2:00 B30 **33.14** Interaction of developmental nicotine exposure and the nicotine risk variant in the alpha 5 nicotinic subunit changes nicotine seeking in adolescent mice. H. C. O'NEILL*; C. WAGEMAN; S. R. GRADY; M. J. MARKS; J. A. STITZEL. *Inst. For Behavioral Genet. , Univ. of Colorado.*

3:00 B31 **33.15** Age differences in conditioned place preferences and taste aversions to nicotine. C. DANNENHOFFER*; L. P. SPEAR. *Binghamton Univ.*

4:00 B32 **33.16** Neuronal injury associated with prenatal exposure of wistar rats to crude extract of vernonia amygdalina (bitter leaf). W. G. BALOGUN*; A. AMIN; A. E. COBHAM; A. O. ISHOLA; W. I. ABDULMAJEED; O. B. AKINOLA. *Univ. of Ilorin, Univ. of Ilorin.*

1:00 B33 **33.17** ▲ Timing deficits are improved by nicotine pre-treatment in the neonatal quinpirole model of schizophrenia. E. M. ODINEAL; M. I. PALMATIER; E. D. CUMMINS; A. B. SHEPPARD; R. W. BROWN*. *East TN State Univ., East TN State Univ.*

2:00 B34 **33.18** Neonatal quinpirole treatment enhances nicotine self-administration in adult rats. E. CUMMINS*; E. M. ODINEAL; A. B. SHEPPARD; M. I. PALMATIER; R. W. BROWN. *East Tennessee State Univ.*

3:00 B35 **33.19** The role of the $\alpha 7$ and $\alpha 4\beta 2$ nicotinic receptors in nicotine sensitization and neural plasticity of adolescent rats neonatally treated with quinpirole. D. PETERSON*; E. D. CUMMINS; C. M. BARDO; R. W. BROWN. *East Tennessee State Univ.*

POSTER

034. Dopamine and Dopamine Receptor Function

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B36 **34.01** Low constraint-associated D4 receptor variant does not elicit differential G-protein activation. M. SANCHEZ*; N. CAI; S. FERRE; H. YANO. *NIDA/NIH, Univ. de Barcelona.*

2:00 B37 **34.02** Development of novel Gs / Golf biosensors: Gs-Golf functional selectivity in dopamine D1 receptors. H. YANO*; D. PROVASI; M. FILIZOLA; A. BONCI; S. FERRE; J. A. JAVITCH. *Natl. Inst. On Drug Abuse, Natl. Inst. of Hlth., Mount Sinai Sch. of Med., Columbia Univ., New York State Psychiatric Inst.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 B38 **34.03** Dopamine- and glutamate-containing axon terminals are segregated in distinct domains in dopamine neurons and regulated by striatal neurons. G. M. FORTIN; M. BOURQUE; Z. SANEEI; C. PACELLI; R. K. VARASCHIN; N. GIGUERE; M. BRILL; S. SINGH; P. W. WISEMAN; L. TRUDEAU*. *Univ. Montreal Fac Med., McGill Univ., Univ. Montreal Fac Med.*

4:00 B39 **34.04** Neuro-modulatory role of the D2-like dopamine auto-receptor in *C. elegans.* S. MANDALAPU*; R. FORMISANO; M. MERSHA; P. HAN; H. S. DHILLON. *Delaware State Univ.*

1:00 B40 **34.05** Coordination and remodeling of cortico-limbic network dynamics by dopaminergic neuronal activity. H. K. DECOT*; W. GAO; P. A. KANTAK; Y. J. KAO; M. DAS; J. H. JENNINGS; I. B. WITTEN; K. DEISSEROTH; Y. I. SHIH; G. D. STUBER. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Princeton Univ., Stanford Univ.*

2:00 B41 **34.06** Dopamine, MMP activity, and NMDA stimulated calcium signal in striatal neurons. Y. LI; J. G. PARTRIDGE; S. VICINI; K. CONANT*. *Georgetown Univ. and State Key Lab. of Biotherapy, West China Hospital, Sichuan Univ., Georgetown Univ., Georgetown Univ.*

3:00 B42 **34.07** Heterogeneous evoked dopamine plasticity in the rat striatum. S. H. WALTERS; A. C. MICHAEL*. *Univ. of Pittsburgh.*

4:00 B43 **34.08** Applying label-free dynamic mass redistribution technology to analyze ligand efficacy on dopamine D1 receptor signaling in living cells. N. CAI*; H. YANO; M. SANCHEZ-SOTO; X. GUITART; A. H. NEWMAN; S. FERRE. *NIDA/NIH.*

1:00 B44 **34.09** The roles of voltage-gated calcium channels (VGCCs) in the control of striatal dopamine release are variable and dynamically regulated. K. BRIMBLECOMBE*; C. GRACIE; S. J. CRAGG. *Univ. of Oxford, Univ. of Oxford.*

2:00 B45 **34.10** Physiological relevance of dopamine 2 receptor functional selectivity assessed in mice. S. M. PETERSON; D. J. URBAN; N. M. URS; O. LICHTARGE; M. G. CARON*. *Duke Univ. Med. Ctr., Baylor Col. of Med., Duke Univ. Ctr.*

3:00 B46 **34.11** Dopamine regulates CREB nuclear activity via EPAC2 in retinal cells. R. PAES-DE-CARVALHO*; C. E. NOGUEIRA; R. SOCODATO. *Fluminense Federal Univ.*

4:00 B47 **34.12** Allosteric regulation of phosphodiesterase-2 controls dopamine-induced GluA1 membrane insertion. R. S. SONG; B. MASSENBURG; S. R. NEVES*. *Mount Sinai Sch. of Med.*

1:00 B48 **34.13** Histamine H3 receptor modulation of dopamine release in mouse striatum. R. K. VARASCHIN*; L. TRUDEAU. *Univ. de Montréal, Univ. de Montréal.*

2:00 B49 **34.14** The effect of flow rate on D2 receptor modulation of dopamine release measured in brain slices with fast-scan cyclic voltammetry. M. BURRELL; J. LIPSKI*. *Univ. Auckland.*

3:00 B50 **34.15** Computational modeling suggests low striatal dopamine release probability. K. ROONEY*; L. J. WALLACE. *The Ohio State Univ.*

4:00 B51 **34.16** Hyperactivity and working memory deficits induced by prenatal nicotine exposure are associated with dopamine D1 and D4 receptor dysfunction. K. P. LEE; N. PINEDA; T. BRUNE; K. PATEL; A. GANNON; T. J. SPENCER; J. BIEDEMAN; P. G. BHIDE; J. ZHU*. *Florida State Univ. Col. of Med., Massachusetts Gen. Hospital, Harvard Med. Sch.*

1:00 B52 **34.17** ▲ Influence of dopamine d1 receptor recycling in its heteromerization with type-2α corticotropin hormone receptors. H. E. YARUR*; K. GYSLING. *PUC.*

2:00 B53 **34.18** Dopamine and serotonin alter neuronal excitability of lateral orbitofrontal cortex neurons. S. NIMITVILAI*; J. J. WOODWARD. *Med. Univ. of South Carolina.*

3:00 B54 **34.19** Calcium levels determine differential signaling of adenosine A2A-dopamine D2 receptor heteromers in striatal neurons. S. FERRE*; D. AGUINAGA; E. MORENO; A. CORTES; J. MALLOL; V. CASADO; C. LLUIS; E. CANELA; P. MCCORMICK; G. NAVARRO. *NIDA, IRP, NIH, DHHS, University Of Barcelona, University Of East Anglia.*

4:00 B55 **34.20** Computational model evidence for a complex containing DAT, VMAT, and D2 receptors and for pH regulation of dopamine leak from storage vesicles. L. J. WALLACE*; K. H. CIERNIAK; A. T. ZURLINDEN; A. D. KLAUSING. *Ohio State Univ.*

1:00 B56 **34.21** The adenosine A2A receptor-dopamine D2 receptor heterotetramer: Understanding the molecular mechanisms of caffeine. J. BONAVENTURA*; G. NAVARRO; K. AZDAD; W. REA; V. CASADÓ; M. BRUGAROLAS; E. ANGELATS; J. MALLOL; E. I. CANELA; A. CORTÉS; C. LLUÍS; N. D. VOLKOW; S. N. SCHIFFMANN; V. CASADÓ; S. FERRÉ. *NIDA/NIH, Univ. de Barcelona, Universtité Libre de Bruxelles, NIDA/NIH.*

2:00 B57 **34.22** Decreasing the availability of intracellular calcium enhances potency and efficacy of dopamine on D2 autoreceptor-mediated currents in DBA/2J mouse brain slices. A. J. AVELAR*; A. SHARPE; M. J. BECKSTEAD. *UT Hlth. Sci. Ctr. San Antonio, Univ. of the Incarnate Word.*

3:00 B58 **34.23** Dopamine-induced synaptic plasticity is mediated by molecular interaction of ghrelin and dopamine-1 receptor in hippocampal neurons. A. KERN*; R. G. SMITH. *The Scripps Res. Inst.*

4:00 B59 **34.24** Genetic predictors of *in vivo* human DOPA decarboxylase activity. D. P. EISENBERG*; J. C. MASDEU; P. D. KOHN; C. HEGARTY; B. KOLACHANA; D. R. WEINBERGER; K. F. BERMAN. *NIMH, NIH, DHHS, NIMH, NIH, DHHS, Lieber Inst. for Brain Develop.*

1:00 B60 **34.25** Age-related decrease in gene expression for conserved dopamine neurotrophic factor (CDNF) in humans. A. SIDDIQI*; K. TERPSTRA; M. SEHMBI; L. E. CUDNEY; R. B. SASSI; B. N. FREY; R. K. MISHRA. *McMaster Univ., McMaster Univ., McMaster Univ., McMaster Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

035. Opiate, Cytokines, and Other Neuropeptides

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C1 **35.01** Hypoxia induces rapid production and release of enkephalins and cytokines in mouse pheochromocytoma cells. M. J. EVINGER*; A. S. CALERO; H. H. VILLANUEVA; P. GIRI; J. F. POWERS; A. S. TISCHLER. *Stony Brook Univ., Stony Brook Univ., Tufts Univ. Sch. of Med.*

2:00 C2 **35.02** NOP-eGFP mice: Immunohitochemical characterization of the NOP-eGFP distribution in the spinal cord and DRG. A. OZAWA*; J. WU; D. MERCATELLI; G. BRUNORI; S. LOW; G. SCHERRER; B. L. KIEFFER; L. TOLL. *Torrey Pines Inst. For Mol. Studies, Stanford Univ. Sch. of Med., Douglas Institute, McGill Universit.*

3:00 C3 **35.03** Hippocalcin signaling underlying slow afterhyperpolarization in hippocampal neurons. N. I. KONONENKO*; A. DOVGAN; V. CHERKAS; T. TSUGORKA; P. BELAN. *Inst. Physiol, Key State Lab. of Mol and Cell Biol.*

4:00 C4 **35.04** A novel mechanism for stress-induced analgesia: Involvement of orexin, substance P, and mGluR5 in the periaqueductal gray. L. CHIOU*; Y. CHIU. *Natl. Taiwan University, Med. Col., Grad. institute of Pharmacol., Grad. institute of Brain and Mind Sci.*

1:00 C5 **35.05** Nuclear export of OGFr is dependent on a nuclear export signal. N. P. KREN; I. S. ZAGON; P. J. MCLAUGHLIN*. *Penn State Univ. Coll Med.*

2:00 C6 **35.06** ● Netupitant and palonosetron trigger NK_1 Receptor internalization in NG108-15 cells. C. ROJAS*; A. G. THOMAS; M. STATHIS; B. S. SLUSHER. *Johns Hopkins Sch. of Med.*

3:00 C7 **35.07** Hippocampome.org: A neuroinformatics tool for biomarker profiling. C. WHITE*; C. L. REES; D. W. WHEELER; D. J. HAMILTON; A. O. KOMENDANTOV; S. VENKADESH; G. A. ASCOLI. *George Mason Univ.*

4:00 C8 **35.08** Neuropeptide release in response to mechanical stimulation of cultured dorsal root ganglion cells. E. G. TILLMAAND*; C. A. CROUSHORE; S. S. RUBAKHIN; T. A. SAIF; J. V. SWEEDLER. *Beckman Inst. For Advanced Sci. and Technol., Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

1:00 C9 **35.09** Dopamine D3, but not D2 or D4 receptor subtypes, mediate the inhibition of the vasodepressor sensory CGRPergic outflow in pithed rats. G. MANRIQUE-MALDONADO*; A. H. ALTAMIRANO-ESPINOZA; E. RIVERA-MANCILLA; B. VILLANUEVA-CASTILLO; C. M. VILLALÓN. *Cinvestav-IPN.*

2:00 C10 **35.10** ▲ Expression and actions of AT1, AT2 and Mas receptors in the guinea pig intrinsic cardiac plexus. E. N. POWERS; K. A. LUCKETT; S. A. ROSEN; E. M. SOUTHERLAND; J. L. ARDELL; J. C. HARDWICK*. *Ithaca Col., East Tennesse State Univ.*

3:00 C11 **35.11** ▲ Adaptive changes in lampyridae illuminate evolutionary trends: A study of toxin resistance in sodium-potassium pumps. L. COBBS*; P. ANDOLFATTO. *NYULMC, Princeton Univ.*

POSTER

036. Muscarinic Acetylcholine and Metabotropic Glutamate Receptors

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C12 **36.01** Activation of M_3 muscarinic acetylcholine receptors protects against interferon-β-induced neuronal cell death. M. C. OLIANAS*; S. DEDONI; P. ONALI. *Univ. Cagliari.*

2:00 C13 **36.02** ● M4-muscarinic receptors attenuate dopamine release via production of H2O2 in direct pathway medium spiny neurons. D. J. FOSTER*; Z. XIANG; P. J. CONN. *Vanderbilt Ctr. For Neurosci. Drug Discovery.*

3:00 C14 **36.03** ● Evaluation of the therapeutic efficacy of M1 muscarinic acetylcholine receptor potentiation in chronic phencyclidine-treated mouse model of schizophrenia. A. GHOSHAL*; J. M. ROOK; J. W. DICKERSON; R. D. MORRISON; S. R. STAUFFER; C. K. JONES; J. S. DANIELS; C. M. NISWENDER; C. W. LINDSLEY; Z. XIANG; P. J. CONN. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

4:00 C15 **36.04** M1 muscarinic receptor expression levels influence the effect of positive allosteric modulators. M. NOETZEL*; J. M. ROOK; A. LAMSAL; R. D. MORRISON; C. HAN; H. P. CHO; C. M. NISWENDER; J. S. DANIELS; S. R. STAUFFER; C. W. LINDSLEY; P. J. CONN. *Vanderbilt Univ., Vanderbilt Univ.*

1:00 C16 **36.05** ● The discovery of highly selective muscarinic M1 agonists: Application of novel structure-based drug design with G protein-coupled receptors. A. BROWN*; G. BROWN; M. CONGREVE; J. DIAS; E. HURRELL; M. PICKWORTH; F. MARSHALL. *Heptares Therapeut. Ltd, Heptares Therapeut. Ltd, Heptares Therapeut. Ltd, Heptares Therapeut. Ltd.*

2:00 C17 **36.06** Novel bitopic ligands for the M_1 muscarinic acetylcholine receptor. B. J. DAVIE*; S. N. MISTRY; C. VALANT; B. CAPUANO; P. J. SCAMMELLS; A. CHRISTOPOULOS. *Monash Inst. of Pharmaceut. Sci.*

3:00 C18 **36.07** Mutations enable positive allosteric modulation by benzyl quinolone carboxylic acid (BQCA) at non-M1 muscarinic receptors. J. ELLIS*; G. J. ELMSLIE. *Penn State Univ.*

4:00 C19 **36.08** ● Development of M5 muscarinic antagonists: Interaction of GZ-002-05 with muscarinic receptor subtypes. W. S. MESSER*, JR; T. YANG; C. MITCHELL; G. ZHENG. *Univ. of Toledo, Univ. of Toledo, Univ. of Toledo, Univ. of Arkansas for Med. Sci.*

1:00 C20 **36.09** Cholinergic modulation of PKA activity. Y. CHEN*; B. SABATINI. *Harvard Med. Sch., Howard Hughes Med. Inst.*

2:00 C21 **36.10** Modulatory effects of activation of presynaptic metabotropic glutamate receptors on the inhibitory responses in thalamic relay cells in the mouse. T. LIU*; I. PETROF; S. M. SHERMAN. *Univ. of Chicago.*

3:00 C22 **36.11** mGluR2/3 influences in prefrontal cortex - potential for therapeutics. L. E. JIN*; M. WANG; Y. YANG; D. OTTENHEIMER; J. STEIN; C. D. PASPALAS; A. F. ARNSTEN. *Yale Univ., Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 C23 **36.12** ● Activation of metabotropic glutamate receptor 3 (mGlu3) is required for the induction of long-term depression in medial prefrontal cortex and fear extinction learning. A. G. WALKER*; C. J. WENTHUR; Z. XIANG; C. W. LINDSLEY; P. J. CONN. *Vanderbilt Univ. Med. Ctr.*

1:00 C24 **36.13** ▲ Sleep-deprivation induces changes in GABA-B and mGlu receptors and reduces the depressant action of agonists at the above receptors on excitatory postsynaptic potentials in rat hippocampal CA1 neurons. A. KWOK; J. HWANG; H. AZIZI; R. TADAVARTY; B. SASTRY*. *Univ. British Columbia Fac Med.*

2:00 C25 **36.14** Metabotropic glutamate group II receptors modulate presynaptic release of GABA in nociceptive thalamus. K. A. ASSERI*. *Univ. of British Columbia.*

3:00 C26 **36.15** Modulation of striatal synaptic transmission by group I metabotropic glutamate receptors. K. A. JOHNSON*; D. M. LOVINGER. *NIAAA/NIH.*

4:00 C27 **36.16** Adaptive changes in the expression of grm4 and grm5 genes in the striatum following induction of parkinsonism in mice. M. CANNELLA; M. MOTOLESE; D. BUCCI; G. MOLINARO; A. TRAFICANTE; J. MARROCCO; V. BRUNO; F. NICOLETTI; G. BATTAGLIA*. *I.R.C.C.S. Neuromed, LIA (International Associalted Laboratories), Univ. Sapienza.*

1:00 C28 **36.17** Corticostriatal metaplasticity of group I metabotropic glutamate receptors contributes to habit learning. B. GRECO; A. CAVACCINI; A. ROCCHI; M. TRUSEL; V. PAGET-BLANC; M. PENNUTO; R. TONINI*. *Ist. Italiano Di Tecnologia, NBT, Ctr. for Integrative Biol.*

2:00 C29 **36.18** Activation of metabotropic glutamate receptor 1 overcomes NMDA receptor-mediated excitotoxicity. H. A. HATHAWAY*; S. PSHENICHKIN; J. T. WROBLEWSKI. *Georgetown Univ.*

3:00 C30 **36.19** Epigenetic down-regulation of type-2 metabotropic glutamate receptors is linked to selective neuronal vulnerability following global transient brain ischemia. M. MOTOLESE; M. CANNELLA; F. MASTROIACOVO; A. GAGLIONE; B. RIOZZI; L. DI MENNA; G. BATTAGLIA; V. BRUNO; F. NICOLETTI*. *I.R.C.C.S. Neuromed, Univ. Sapienza, Univ. Sapienza, LIA (International Associalted Laboratories).*

4:00 C31 **36.20** mGlu1 receptors epigenetically restrain the expression of mGlu5 receptors in the cerebellum. S. NOTARTOMASO*; C. ZAPPULLA; G. MASCIO; M. MOTOLESE; M. CANNELLA; P. SCARSELLI; R. GRADINI; G. BATTAGLIA; V. BRUNO; F. NICOLETTI. *I.R.C.C.S. Neuromed, Univ. of Rome "Sapienza", LIA (International Associalted Laboratories).*

1:00 C32 **36.21** The role of metabotropic glutamate receptor signaling in sleep regulation in *Drosophila melanogaster*. S. LY*; N. NAIDOO; A. I. PACK. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 C33 **36.22** mGluR-dependent modulation of synaptic transmission in the lateral habenula. K. VALENTINOVA*; I. MOUTKINE; M. MAMELI. *Inst. Du Fer À Moulin, INSERM/ UPMC.*

3:00 C34 **36.23** Production of xanthurenic acid from 3-hydroxykynurenine in rat and human brain *in vitro* and *in vivo*. K. V. SATHYASAIKUMAR*; M. TARARINA; H. WU; R. SCHWARCZ. *Maryland Psychiatric Res. Center, Univ. of Maryland Sch. of Med.*

4:00 C35 **36.24** ● A photochromic allosteric modulator to control an endogenous G protein-coupled receptor with light. S. PITTOLO*; X. GÓMEZ-SANTACANA; K. ECKELT; X. ROVIRA; J. DALTON; C. GOUDET; J. PIN; A. LLOBET; J. GIRALDO; A. LLEBARIA; P. GOROSTIZA. *Inst. For Bioengineering of Catalonia (IBEC), Inst. for Advanced Chem. of Catalonia (IQAC-CSIC), Autonoma Univ. of Barcelona, CIBER-BBN, Inst. for Bioengineering of Catalonia (IBEC), CNRS, UMR-5203, Inst. de Génomique Fonctionnelle, INSERM, U661, Univ. de Montpellier 1 & 2, Autonoma Universityu of Barcelona, INSERM, U661, Bellvitge Biomed. Res. Inst. (IDIBELL),, Catalan Inst. for Res. and Advanced Studies (ICREA).*

1:00 C36 **36.25** Preso1 bidirectionally regulates group I mGluR phosphorylation. J. HU*; P. F. WORLEY; D. A. HOFFMAN. *NICHD, Johns Hopkins Univ.*

2:00 C37 **36.26** Proper localization and function of trpm1 depends on LRIT3 expression in rod depolarizing bipolar cells. R. G. GREGG*; J. NOEL; K. M. HEATH; N. HASAN; T. RAY; M. A. MCCALL. *Univ. Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville.*

POSTER

037. Postsynaptic Structure I

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C38 **37.01** Significant differences in the structure and function of excitatory synapses in the rhesus monkey lateral prefrontal versus primary visual cortex. J. I. LUEBKE*; M. MEDALLA. *Boston Univ. Sch. of Med.*

2:00 C39 **37.02** Distribution of dendritic spines and inhibitory inputs on layer 2 and layer 3 pyramidal neurons of the rhesus monkey anterior cingulate cortex. M. MEDALLA*; J. P. GILMAN; J. WANG; J. I. LUEBKE. *Boston Univ. Sch. of Med.*

3:00 C40 **37.03** Mechanisms underlying spreading depolarization-induced dendritic beading. A. B. STEFFENSEN; J. SWORD; D. CROOM; S. A. KIROV; N. MACAULAY*. *Univ. of Copenhagen, Georgia Regents Univ., Georgia Regents Univ.*

4:00 C41 **37.04** Triple miRNA Shank knockdown shows that Shank-cortactin interactions control actin dynamics to maintain flexibility of neuronal spines and synapses. H. D. MAC GILLAVRY*; J. M. KERR; N. A. FROST; T. A. BLANPIED. *Utrecht Univ., NINDS, UCSF Sch. of Med., Univ. of Maryland Sch. of Med.*

1:00 C42 **37.05** Syntaxin 4 is a postsynaptic t-SNARE required for synaptic growth and plasticity in *Drosophila.* K. P. HARRIS*; Y. AKBERGENOVA; R. W. CHO; Z. D. PICCIOLI; N. PERRIMON; J. LITTLETON. *MIT, Harvard Med. Sch.*

2:00 C43 **37.06** The cell-autonomous role of MEF2C in postnatal neocortical circuit and synapse development *in vivo.* K. E. RAJKOVICH*; K. W. LOERWALD; J. R. GIBSON; K. M. HUBER. *UT-Southwestern Med. Ctr.*

3:00 C44 **37.07** Transmembrane-agrin overexpression in the adult murine cortex and hippocampus results in decreased dendritic spine density and altered spine morphology. A. SCHICK*; S. PFEIFFER; J. SCHICK; S. KRÖGER. *LMU Dept Physiol., Helmholtz Inst.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 C45 **37.08** Functional study of the synaptic scaffold protein Shank2 and a mouse model for Autism Spectrum Disorders. A. L. PAPPAS*; R. RODRIGUIZ; W. WETSEL; R. WEINBERG; A. BEY; Y. JIANG. *Duke Univ., Univ. of North Carolina, Duke Univ.*

1:00 C46 **37.09** Extracellular phosphorylation regulates EphB trafficking and EphB-NMDAR interaction. N. XIA; K. HANAMURA*; S. I. SHEFFLER-COLLINS; M. B. DALVA. *Thomas Jefferson Univ., Thomas Jefferson Univ., Univ. of Pennsylvania Sch. of Med.*

2:00 C47 **37.10** ▲ Distinct roles of Shank family proteins in regulating glutamatergic synaptic transmission. R. SHI; P. REDMAN; Y. LIU; M. LIU; K. JONES; W. XU*. *MIT.*

3:00 C48 **37.11** S-nitrosylation of Cdk5 and its activator p35 in neuronal morphogenesis and synaptic function. P. ZHANG*; W. FU; A. FU; N. IP*. *HKUST, Mol. Neurosci. Center, HKUST, State Key Lab. of Mol. Neuroscience, HKUST.*

4:00 C49 **37.12** ● Pharmacological characterization of novel neuroactive steroid modulators of NMDA receptors. M. A. ACKLEY; G. M. BELFORT; G. MARTINEZ-BOTELLA; F. G. SALITURO; A. J. ROBICHAUD; J. J. DOHERTY*. *Sage Therapeut.*

POSTER

038. Electrical Synapse and Gap Junction

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C50 **38.01** No effect of DHA on synaptic transmission and plasticity in mice. G. N. NIKOLAJSEN*; M. J. WEST; M. S. JENSEN. *Aarhus Univ.*

2:00 C51 **38.02** Innexins function as plasmamembrane unpaired channels in native *C. elegans* touch neurons. R. SANGALETTI*; G. DAHL; L. BIANCHI. *Univ. of Miami, Miller Sch. of Med.*

3:00 C52 **38.03** ● Effects of NO-dependent signalling on electrical synaptic transmission in spinal cord neurones and HeLa cells stably expressing Cx36. A. D. WHYMENT; N. E. DALE*; D. SPANSWICK. *NeuroSolutions Ltd, Univ. Warwick, Monash Univ., Univ. of Warwick.*

4:00 C53 **38.04** Roles of electrical synapses in gamma-band activity of sensory and association cortex. B. W. CONNORS*; G. T. NESKE; A. U. SUGDEN; S. R. CRANDALL; S. J. CRUIKSHANK. *Brown Univ.*

1:00 C54 **38.05** Efficacy and modulation of spike timing at asymmetrical electrical synapses in the thalamic reticular nucleus. J. SEVETSON; J. S. HAAS*. *Lehigh Univ.*

2:00 C55 **38.06** A synaptic excitatory/inhibitory sequence mediated by voltage-gated channels and gap junctions. P. F. APOSTOLIDES; L. O. TRUSSELL*. *Oregon Hlth. Sci. Univ.*

3:00 C56 **38.07** Common and uncommon mechanisms of LTD at electrical synapses in the TRN. J. SEVETSON*; J. BRAGUE; J. HAAS. *Lehigh Univ.*

4:00 C57 **38.08** Expression profile of connexin 26, -30, -31.1, -36, -43 and -45 in mouse SN and VTA. A. HERNANDEZ SANCHEZ*; J. A. MENDEZ. *Univ. Autonoma De San Luis Potosi.*

POSTER

039. Signal Propagation in Neural Networks

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C58 **39.01** Organotypically cultured hippocampal networks emit spontaneous neuronal activity similar to *in vivo* ongoing activity. K. OKAMOTO*; T. ISHIKAWA; R. ABE; D. ISHIKAWA; C. KOBAYASHI; M. MIZUNUMA; H. NORIMOTO; N. MATSUKI; Y. IKEGAYA. *The Univ. of Tokyo, Ctr. for Information and Neural Networks.*

2:00 C59 **39.02** Non-parabolic unfolding of neuronal avalanches suggests preferred spatial pathways in cortical dynamics. S. R. MILLER*; S. YU; D. PLENZ. *Univ. of Maryland Col. Park, Natl. Inst. of Mental Hlth.*

3:00 C60 **39.03** Signal propagation in small neuron networks with memory function - Characterization and modeling. L. DEMKO*; H. DERMUTZ; C. FORRO; S. WEYDERT; T. ZAMBELLI; J. VOROS. *Lab. of Biosensors and Bioelectronics, ETH Zurich.*

4:00 C61 **39.04** Dynamic coherent structures in slow-wave activity of primate visual cortex. R. TOWNSEND*; S. SOLOMON; P. R. MARTIN; S. G. SOLOMON; P. GONG. *The Univ. of Sydney, The Univ. of Sydney, The Univ. of Sydney, Univ. Col. London.*

1:00 C62 **39.05** Dendritic calcium signaling in basket cells and its role during network activity. S. DELATTRE*; D. DIETRICH; E. A. MATTHEWS. *Dpt of Neurosurg.*

2:00 C63 **39.06** Sensorimotor function is implemented by a coordinated interplay of brief neuronal activations that traverse space and time. W. G. COON*; A. GUNDUZ; P. BRUNNER; B. PESARAN; G. SCHALK. *Wadsworth Ctr., State Univ. of New York, Albany, Univ. of Florida, Albany Med. Col., NYU, State Univ. of New York.*

3:00 C64 **39.07** Synaptic depression enables reliable sequential activity cascades in recurrent networks. M. M. BIHUN*; M. H. HENNIG. *Univ. of Edinburgh.*

4:00 C65 **39.08** Rate and size modulation of neuronal avalanches during motor and cognitive tasks in macaque monkeys. S. YU*; S. CHOU; A. R. MITZ; R. SAUNDERS; D. PLENZ. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

1:00 C66 **39.09** Selective activation of columnar neural population by lateral inhibition in a realistic model of primary motor cortex. J. IGARASHI*; J. MOREN; J. YOSHIMOTO; K. DOYA. *Okinawa Inst. of Sci. and Technol.*

2:00 C67 **39.10** Crosstalk between Nrf2 anti-oxidative signal pathway and mitochondria. J. SUN*; J. W. SIMPKINS. *Univ. of West Virginia Robert C. Byrd Hlth. Sci. Ctr.*

3:00 C68 **39.11** Inference of neural pathways in a dynamical connectome of the *C. elegans* worm. E. SHLIZERMAN*. *Univ. of Washington.*

4:00 C69 **39.12** ● Exosomes with cell signaling capabilities can be isolated from neuronal cells following *in vitro* differentiation under feeder and serum free conditions. R. L. WEBB*; H. M. REISS; E. T. JORDAN; F. GOODFELLOW; S. L. STICE. *Univ. of Georgia, Univ. of Georgia, Univ. of Georgia.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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1:00 C70 **39.13** Processing of theta input differs markedly at the individual stages of the piriform-hippocampal network. B. H. TRIEU*; E. A. KRAMAR; Y. JIA; W. WANG; C. D. COX; D. T. PHAM; C. M. GALL; G. LYNCH. *Univ. of CA - Irvine, Univ. of CA - Irvine, Univ. of CA - Irvine.*

2:00 C71 **39.14** The hippocampo-septal feedback state-dependently modulates the medial septum. L. NIKITIDOU*; E. PAPP; T. F. FREUND; V. VARGA. *Inst. of Exptl. Med.*

3:00 C72 **39.15** Signal and noise correlations in a recurrent network of neurons in culture. J. BARRAL*; T. TCHUMATCHENKO; A. REYES. *New York Univ., Max Planck Inst. for Brain Res.*

4:00 D1 **39.16** Propagation of neuronal activity by electrical field. C. QIU*; M. ZHANG; D. DURAND. *Case Western Reserve Univ.*

1:00 D2 **39.17** ▲ Electrical coupling and synchronized activity within iPSC-derived neuronal networks. M. W. TOIVONEN; Z. ZHU; X. ZENG; J. TURECEK; V. Z. HAN; J. P. WELSH*. *Seattle Children's Res. Inst., Harvard Univ.*

2:00 D3 **39.18** High-frequency oscillations in human and monkey cortex during sleep. M. LE VAN QUYEN*; L. MULLER; B. TELENCZUK; N. DEHGHANI; S. CASH; E. HALGREN; N. HATSOPOULOS; A. DESTEXHE. *Ctr. de recherche de l'ICM, INSERM UMRS 975- CNRS UMR 7225, CNRS, CNRS, Wyss Inst., Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of California, Univ. of Chicago, CNRS.*

3:00 D4 **39.19** Propagating waves from local field potentials in multi-electrode recordings in human and monkey cortex match the properties found in voltage-sensitive dye imaging. A. DESTEXHE*; L. MULLER; G. BENVENUTI; F. CHAVANE. *CNRS, CNRS, Aix Marseille Univ.*

4:00 D5 **39.20** Relations between units and LFPs inferred from multielectrode recordings in human and monkey. B. TELENCZUK*; N. DEHGHANI; M. LE VAN QUYEN; S. CASH; E. HALGREN; N. HATSOPOULOS; A. DESTEXHE. *Ctr. Natl. De La Recherche Scientifique, Wyss Inst., L'Institut du Cerveau et de la Moelle Épinière, Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of California, Univ. of Chicago.*

1:00 D6 **39.21** [Unable to Attend] Mechanisms of memory destruction in an *in vitro* model of interictal epileptiform discharges. M. R. DRANIAS*; A. M. J. VANDONGEN. *Neurosci. and Behavioral Disorders (NBD), Duke-NUS Grad. Med. Sch.*

2:00 D7 **39.22** A predictive filter for input comparison in the CA1 microcircuit. A. D. MILSTEIN*; J. C. MAGEE. *Hhmi/ Janelia Farm.*

3:00 D8 **39.23** Lipopolysaccharide-induced calcium oscillations in neonatal rat nucleus tractus solitarius (NTS) *in vitro*. M. R. CUSTER; N. OSMAN; C. G. WILSON*. *Loma Linda Univ.*

4:00 D9 **39.24** TIMP-1 modulates chemotaxis of human neural stem cells through CD63 and integrin signaling. H. SHIN; M. LEE*. *Sch. Med. Ajou Univ.*

1:00 D10 **39.25** Visualizing an emotional valence map in the limbic forebrain by TAI-FISH. H. HU*. *Inst. of Neuroscience, Chinese Acad. of Sci.*

2:00 D11 **39.26** Efficient discovery of functional brain networks in large multisubject fMRI datasets. J. R. MANNING*; R. RANGANATH; K. NORMAN; D. BLEI. *Princeton Univ., Princeton Univ.*

3:00 D12 **39.27** Emergence of consciousness as a phase transition in information percolation. D. MOWREY; D. W. ZHOU; P. TANG; Y. XU*. *Univ. Pittsburgh Sch. Med.*

POSTER

040. Oscillations and Synchrony

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D13 **40.01** Tight synchrony between fast spiking inhibitory interneurons during endogenous 20-80 Hz cortical network activity. D. B. SALKOFF*; D. MCCORMICK. *Yale Med. Sch., Yale Med. Sch.*

2:00 D14 **40.02** Loss of network functionality due to a cumulative one-cell-at-a-time deletion of constituent neurons: A simulation and modeling study of pre-Bötzinger laser ablation experiments. H. SONG*; D. LAMAR; C. DEL NEGRO. *The Col. of William and Mary, The Col. of William & Mary, The Col. of William & Mary.*

3:00 D15 **40.03** Spatiotemporal analysis of bicuculline-induced synchronous neuronal activities in rat hippocampal slices. Y. HONGO; K. OGAWA*; Y. TAKAHARA; K. TAKASU; M. HASEGAWA; G. SAKAGUCHI; Y. IKEGAYA. *SHIONOGI & CO., LTD., The Univ. of Tokyo.*

4:00 D16 **40.04** Dendritic integration in fast-spiking, parvalbumin-expressing interneurons during sharp wave-ripple activity. B. ROZSA*; C. BALÁZS; D. PÁLFI; G. F. TÚRI; A. KASZÁS; P. MAÁK; G. SZABÓ; G. SZALAY; Z. SZADAI; S. KÁLI; M. MADARÁSZ; G. KATONA. *Inst.of Exptl. Med., Pázmány Péter Catholic Univ., Columbia Univ., Budapest Univ. of Technol. and Econ.*

1:00 D17 **40.05** Low dose quinpirole affects cocaine-induced locomotion and slows down theta rhythm frequency in the rat ventral tegmental area. A. MONTEFORTE; S. KOULCHITSKY; T. BEEKEN; J. DETHIER; E. QUERTEMONT; E. BULLINGER; V. M. SEUTIN*. *Univ. Liege, Otto-von-Guericke Univ.*

2:00 D18 **40.06** Cortical membrane oscillatory activities induced by light stimulations. T. OTSUKA*; Y. KAWAGUCHI. *Natl. Inst. For Physiological Sci.*

3:00 D19 **40.07** Optogenetic activation of cholinergic neurons in the medial septum causes a scopolamine-sensitive reduction in theta power in hippocampus. S. MONDRAGON*; S. GLASGOW; S. WILLIAMS. *Douglas Mental Hlth. Univ. Institute, McGill, Montreal Neurolog. Institute, McGill Univ., Douglas Mental Hlth. Univ. Institute, McGill.*

4:00 D20 **40.08** Transient competitive amplification in cortical circuits. N. A. VASCONCELOS*; J. BOURG; K. WIMMER; A. COMPTE; J. DE LA ROCHA; A. RENART. *Champalimaud Ctr. for the Unknown, IDIBAPS.*

1:00 D21 **40.09** Early brain network alterations are correlated with β-CTF in Alzheimer's transgenic mouse model. S. MONDRAGÓN-RODRÍGUEZ; F. MANSEAU*; N. GU; R. BOYCE; S. WILLIAMS. *Douglas Mental Hlth. Univ. Inst., EBRI.*

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2:00 D22 **40.10** Estimation of optimal neuron parameters to obtain minimal variability of periods in an oscillatory hybrid network. R. M. HOOPER*; R. A. TIKIDJI-HAMBURYAN; C. C. CANAVIER; A. A. PRINZ. *Georgia Tech/Emory Univ., Louisiana State Univ. Hlth. Sci. Ctr., Louisiana State Univ. Hlth. Sci. Ctr., Emory Univ.*

3:00 D23 **40.11** Analysis of single unit and neuronal activity in the human subthalamic nucleus during reach-to-grasp movements. U. E. RAMIREZ PASOS*; M. PÖTTER-NERGER; R. REESE; F. STEIGERWALD; *. VOLKMANN. *Universitätsklinikum Würzburg, Universitätsklinikum Schleswig-Holstein, Campus Kiel.*

4:00 D24 **40.12** Phase Locking Value Analysis in active tactile discrimination task. C. SARDETO DEOLINDO*; A. C. B. KUNICKI; F. L. BRASIL; R. C. MOIOLI; M. A. L. NICOLELIS. *Edmond and Lily Safra Intl. Inst. of N, Edmond and Lily Safra Intl. Inst. of Neurosci. of Natal, Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

1:00 D25 **40.13** Effect of median raphe manipulation on the hippocampal network. A. DOMONKOS*; L. NIKITIDOU; A. SZőNYI; C. CSERÉP; D. ZELENA; G. NYIRI; T. F. FREUND; V. VARGA. *Inst. of Exptl. Medicine, Hungarian Acad. of Sci.*

POSTER

041. Alzheimer's Disease: Tau Animal Models

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D26 **41.01** ● Accumulation of A152T-variant tau causes synaptic changes and increases network excitability before leading to cognitive decline. S. MAEDA*; B. DJUKIC; R. PONNUSAMY; P. TANEJA; M. M. FINUCANE; I. LO; A. DAVIS; R. CRAFT; W. GUO; X. WANG; D. KIM; G. YU; E. MASLIAH; L. MUCKE. *Gladstone Inst, UCSF, Gladstone Inst. of Neurolog. Dis., UCSD, Gladstone Inst. of Neurolog. Dis. and UCSF.*

2:00 D27 **41.02** Longitudinal assessment of behavior and tau phosphorylation in the brainstem of P301L tau-transgenic pR5 mice. M. PATERNO; K. MORCINEK; S. ARNDT; C. KÖHLER; H. SCHRÖDER; J. GÖTZ; N. MOSER*. *Univ. of Cologne, Utrecht Univ., The Univ. of Queensland.*

3:00 D28 **41.03** Preliminary electrophysiological characterization of hippocampal CA1 neurons in a mouse model of tauopathy (P301L tau transgenic pR5 mice). K. MORCINEK*; B. DENGLER; F. NEUMAIER; T. SCHNEIDER; W. WALKOWIAK; H. SCHRÖDER; J. GÖTZ; S. HUGGENBERGER. *Univ. of Cologne, Univ. of Cologne, Univ. of Cologne, The Univ. of Queensland.*

4:00 D29 **41.04** ● Passive immunization with an anti-tau antibody in P301S mice reduces tau accumulation and improves motor deficits. K. YANAMANDRA*; H. JIANG; T. E. MAHAN; S. E. MALONEY; D. F. WOZNIAK; M. I. DIAMOND; D. M. HOLTZMAN. *Washington Univ. Sch. of Med., Hope Ctr. for Neurolog. Disorders, Knight-Alzheimer's Dis. Res. Ctr., Washington Univ. Sch. of Med.*

1:00 D30 **41.05** Memory deficits correlate with tau and spine pathology in P301S MAPT transgenic mice. H. XU*; T. W. RÖSLER; T. CARLSSON; W. H. OERTEL; G. U. HÖGLINGER. *German Ctr. for Neurodegenerative Dis., Tech. Univ. Munich, Philipps-University.*

2:00 D31 **41.06** Riluzole attenuates spatial memory deficits in a TauP301L mouse model of Alzheimer's disease. D. WEITZNER*; M. REED; H. HUNSBERGER; C. RUDY. *West Virginia Univ.*

3:00 D32 **41.07** ● Beneficial effects of anatabine in a mouse model of tauopathy. D. PARIS*; D. BEAULIEU-ABDELAHAD; G. AIT-GHEZALA; V. MATHURA; M. VERMA; A. E. ROHER; F. CRAWFORD; M. MULLAN. *Roskamp Inst., Banner Sun Hlth. Res. Inst., Rock Creek Pharmaceuticals.*

4:00 D33 **41.08** Aggrecan changes seasonally in hibernating ground squirrels: Insight into understanding Alzheimer's disease. K. B. BJUGSTAD*; A. HINDLE; S. L. MARTIN. *Univ. Colorado Denver, Univ. Colorado Denver.*

1:00 D34 **41.09** Cellular and morphological changes in hippocampus (CA1) in rats exposed to Vanadium Pentoxide. E. MONTIEL-FLORES*, SR; V. ANAYA-MARTÍNEZ; A. GUTIÉRREZ-VALDEZ; J. SÁNCHEZ-BETANCOURT; J. ESPINOSA-VILLANUEVA; M. AVILA-COSTA. *Universidad Estatal Del Valle De Ecatepec, UNAM-FES-Iztacala.*

2:00 D35 **41.10** Preventative effects of chronic treadmill exercise on cognitive and non-cognitive behaviors in P301S tau transgenic mice. O. OHIA*; S. MONTAZARI; C. VOLLERT; J. ERIKSEN. *Univ. of Houston, Univ. of Houston.*

3:00 D36 **41.11** ● Tau reduction in adulthood in a new line of conditional knockout mice is safe and reduces seizure susceptibility. Z. LI*; S. BUCKINGHAM; A. HALL; S. WILSON; E. D. ROBERSON. *Univ. of Alabama At Birmingham.*

4:00 D37 **41.12** A new reporter system of tau spreading *in vivo*: AAV-delivered human tau crosses synapses in mice. S. WEGMANN*; S. NICHOLLS; S. TAKEDA; Z. FAN; B. T. HYMAN. *Mass Gen. Hosp. / Harvard Med. Sch.*

1:00 D38 **41.13** Phosphorylated tau levels in the brains of naked mole-rats (Heterocephalus glaber) are differentially elevated based on reproductive status. C. M. DENGLER-CRISH*; G. N. WILSON; M. A. SMITH; S. D. CRISH. *Northeast Ohio Med. Univ., Kent State Univ.*

2:00 D39 **41.14** Metabolic phenotyping of Tg4510 tau transgenic mice indicates hyperactivity and circadian disruption. A. JOLY AMADO*; M. N. GORDON; D. MORGAN. *USF Hlth. Byrd Alzheimer's Inst.*

3:00 D40 **41.15** High-fat diet increases the expression and alternative splicing of tau in the brain of female mice independently from peripheral metabolic changes. M. TAKALO; A. HAAPASALO*; S. KEMPPAINEN; P. MÄKINEN; J. PIHLAJAMÄKI; H. SOININEN; M. LAAKSO; H. TANILA; M. HILTUNEN. *Univ. of Eastern Finland, Kuopio Univ. Hosp.*

4:00 D41 **41.16** Neuroinflammation and cognitive impairments in a novel transgenic mouse model expressing a rare Tau mutation A152T in progressive supranuclear palsy. A. SYDOW*; K. HOCHGRÄFE; S. KÖNEN; D. MATENIA; O. PETROVA; E. MANDELKOW. *DZNE (German Ctr. Neurodegen. Diseases), Max-Planck-Institute for Neurolog. Res. Cologne, Hamburg outstation, CAESAR Res. Ctr.*

1:00 D42 **41.17** Characterization of a novel non-human primate model of tauopathy. R. ARON BADIN*; R. CAILLIEREZ; M. COLIN; A. BEMELMANS; N. DUFOUR; S. DUJARDIN; L. PONTOIZEAU; C. LACHAUD; S. LECOURTOIS; M. GUILLERMIER; L. EYMIN; Y. BRAMOULLÉ; P. GIPCHTEIN; C. JAN; N. VAN CAMP; N. DEGLON; L. BUÉE; P. HANTRAYE. *MIRCen, CEA, Inserm UMR837 & CHR-Univ of Lille, Inserm UMR837, Lausanne Univ. Hosp. (CHUV).*

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2:00 D43 **41.18** Cell-restricted deletion of MyD88 affects tau pathology in an hTau mouse model of tauopathy. N. MAPHIS; X. LI; B. LAMB; K. BHASKAR*. *Univ. of New Mexico, Cleveland Clin., Univ. of New Mexico.*

3:00 D44 **41.19** Hypertension increases tau hyperphosphorylation and Aβ production in 3XTg-AD mice. Y. SHIH*; C. LEE; T. LIN; S. TSAI; Y. KUO. *Inst. of Basic Med. Sciences, Natl. Cheng Kung Univ., Dept. of Cell Biol. and Anatomy, Natl. Cheng Kung Univ.*

4:00 D45 **41.20** ● Reduction/delay of phenotype in Tg4510 tauopathy model following gestational doxycycline treatment and removal of helicobacter infection. D. M. BARTEN*; A. EASTON; B. SNYDER; L. B. DECARR; C. BOURIN; G. HIRSCHFELD; G. W. CADELINA; S. KEENAN; D. BRYCE; A. CACACE; C. M. CONWAY; M. K. AHLIJANIAN; N. DEVIDZE. *Bristol-Myers Squibb.*

1:00 D46 **41.21** ▲ Propagation of human tau in a mouse tau knockout model *in vivo.* E. A. MAURY*; S. WEGMANN; A. M. POOLER; B. T. HYMAN. *MIT, Massachusetts Gen. Hospital, Harvard Med. Sch., Inst. of Psychiatry, King's Col. London.*

POSTER

042. Beta Amyloid Toxicity

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D47 **42.01** Sustained oligomeric Aβ exposure decreases GLT-1 steady state levels in astrocytes without altering its transcription. J. M. ZUMKEHR*; C. HAWKINS; M. KITAZAWA. *UC Merced.*

2:00 D48 **42.02** ▲ Toxic events of beta-amyloid oligomers on cortical neurons and protective effect of beta-Estradiol: A mechanistic study. N. CALLIZOT*; M. COMBES; P. POINDRON. *Neuro-Sys.*

3:00 D49 **42.03** Aβ1-42 reduces P-glycoprotein in the blood-brain barrier through RAGE-NF-κB signaling. J. PARK*; R. PARK; S. KOOK; S. SON; S. HAN; I. MOOK-JUNG. *Seoul Natl. Univ.*

4:00 D50 **42.04** Identification of 5-methoxyflavone as a novel DNA polymerase-beta inhibitor and neuroprotective agent against beta-amyloid toxicity. S. MERLO; L. BASILE; M. SORTINO; F. NICOLETTI; S. GUCCIONE; A. G. COPANI*. *Univ. of Catania, Univ. of Catania, Univ. of Rome, Univ. of Catania.*

1:00 D51 **42.05** Agonists of sigma1-receptor, donepezil and PRE-084, rescue hippocampal long-term potentiation impaired by beta-amyloid peptide. E. I. SOLNTSEVA*; N. A. KAPAI; O. V. POPOVA. *Res. Ctr. of Neurology, Rus Acad Med. Sci.*

2:00 D52 **42.06** Mechanism of toxic effect of amyloid beta peptide on Kv1.1 channel activity. K. DEBOEUF*; M. ISLAM; M. PACE; B. HALLAHAN; J. FARLEY. *Indiana Univ., Indiana Univ., Univ. of Kentucky.*

3:00 D53 **42.07** Role of somatostatin in β-amyloid induced cytotoxicity in human brain endothelial cells. S. PAIK; R. K. SOMVANSHI; C. SINGH; S. ZOU; U. KUMAR*. *Univ. of British Columbia.*

4:00 D54 **42.08** ▲ H2o2-upregulated rage on ab-induced oxidative pathway and membrane phase changes in bend3 cells. C. EST*; H. WANG; J. LEE. *Univ. of Missouri - Columbia.*

1:00 D55 **42.09** Changes to tight junctions in the blood-brain barrier mediated by $A\beta^{25-35}$-RAGE interaction. S. M. LANTZ-MCPEAK*; E. CUEVAS; H. R. HERNANDEZ; M. G. PAULE; S. F. ALI; S. Z. IMAM. *NCTR/FDA, Univ. Autónoma de San Luis Potosí.*

2:00 D56 **42.10** Role of Adiponectin in the pathogenesis of Alzheimer's disease. U. YUN*; J. JEONG; U. YUN; Y. CHOI. *SUNGKYUNKWAN UNIVERSITY.*

3:00 D57 **42.11** Differential membrane toxicity of Aβ fragments by pore forming mechanisms. C. M. PETERS*; E. FERNÁNDEZ-PÉREZ; D. BASCUÑÁN; M. ESPINOZA; C. OPAZO; L. G. AGUAYO. *Univ. De Concepcion, Univ. of Melbourne.*

4:00 D58 **42.12** Calcium-mediated neurotoxicity of high-mass amyloid-beta assembly, amylospheroids (ASPD) to mature hippocampal neurons through activation of voltage-gated calcium channels. T. OHNISHI*; T. SASAHARA; H. KOMURA; Y. ARAI; T. NISHIYAMA; M. HOSHI. *Inst. of Biomed. Res. and Innovation, TAO Hlth. Life Pharma Co. Ltd., Kyoto Univ.*

1:00 D59 **42.13** Alzheimer's amyloid degradation by secreted lysosomal enzymes. S. SOLÉ-DOMÈNECH*; D. L. WAKEFIELD; E. CAPETILLO-ZARATE; D. CRUZ; B. A. BAIRD; F. R. MAXFIELD. *Weill Cornell Med. Col., Cornell Univ.*

2:00 D60 **42.14** Treatment of neurons with coconut oil and constituent fatty acids attenuates the effects of amyloid beta *in vitro.* K. M. MEAROW*; F. NAFAR. *Mem. Univ. Newfoundland, Mem. Univ. of Newfoundland.*

3:00 D61 **42.15** Novel microRNAs regulate specific neuronal genes important for Alzheimer's disease. N. CHOPRA*; J. M. LONG; P. T. NELSON; P. REDDY; R. VASSAR; N. H. GREIG; D. K. LAHIRI. *IUPUI, Indiana Univ. school of medicine, Indiana Univ. school of medicine, Univ. of Kentucky, Oregon Hlth. and Sci. Univ., The Feinberg Sch. of Med., Natl. institute of aging.*

4:00 D62 **42.16** Aβ-induced synaptic loss requires glutamate binding to NMDA receptors but not ion-flux. C. TACKENBERG*; J. BIRNBAUM; R. M. NITSCH. *Univ. of Zurich.*

1:00 D63 **42.17** beta-Amyloid acutely changes astrocytic energy metabolism and glucose utilisation. M. Y. ZILBERTER*; R. VALDEBENITO; A. FISAHN; F. BARROS. *Karolinska Institutet, Ctr. de Estudios Científicos, Karolinska Institutet.*

2:00 D64 **42.18** Loss of choline acetyltransferase activity caused by oxidative damage: Mechanisms and possible implications for Alzheimer's disease. L. E. SANTOS*; C. FIGUEIREDO-FREITAS; N. NUNES-TAVARES; S. T. FERREIRA; F. G. DE MELLO. *UFRJ, UFRJ.*

3:00 D65 **42.19** Centella asiatica protects against oxidative damage and mitochondrial dysfunction. N. E. GRAY*; C. J. HARRIS; A. SOUMYANATH; J. F. QUINN. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ., Portland Veteran's Affairs Med. Ctr.*

4:00 D66 **42.20** Different segments of Amyloid-β drive distinct steps of toxicity. A. K. DAS*; R. PANDIT; B. CHANDRA; B. SARKAR; M. CHANDRAKESAN; S. MAITI. *Tata Inst. Fundamental Res.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 D67 **42.21** Elevated Intracellular Adhesion Molecule (ICAM1) levels are associated with lower levels of amyloid-beta in white matter in Alzheimer's disease. E. Y. GRIFFITH; L. E. COLLINS; Y. FRANCIS; A. WIEGMAN; J. URBACH; A. LAWTON; L. S. HONIG; E. CORTES; J. VONSATTEL; P. CANOLL; J. E. GOLDMAN; A. M. BRICKMAN*. *Columbia Univ. Col. of Physicians and Surgeons, Univ. of Adelaide, Columbia Univ. Col. of Physicians and Surgeons, Columbia Univ. Col. of Physicians and Surgeons, Columbia Univiversity.*

2:00 D68 **42.22** Soluble amyloid beta levels are elevated in the white matter of Alzheimer patients, independent of cortical plaque burden. L. E. COLLINS*; Y. FRANCIS; A. WIEGMAN; E. Y. GRIFFITH; J. URBACH; A. LAWTON; L. S. HONIG; E. CORTES; J. P. VONSATTEL; P. CANOLL; J. E. GOLDMAN; A. M. BRICKMAN. *Univ. of Adelaide, Col. of Physicians and Surgeons, Columbia Univ., Col. of Physicians and Surgeons, Columbia Univ., Col. of Physicians and Surgeons, Columbia Univ.*

3:00 D69 **42.23** LRP1 activates ERK1/2 in lipid rafts in neuron-like cells. E. MANTUANO*; V. MATTEI; V. TASCIOTTI; V. MANGANELLI; S. MARTELLUCCI; F. SANTILLI; T. GAROFALO; M. SORICE; S. L. GONIAS; R. MISASI. *Univ. of California San Diego, Univ. 'Sapienza', Sabina Universitas.*

4:00 D70 **42.24** Aβ plaque formation and impaired protein quality control interact via γ secretase and result in a behavioural phenotype consistent with Alzheimer's disease. F. VAN LEEUWEN*; R. J. G. GENTIER; M. L. M. VERHEIJEN; H. W. M. STEINBUSCH; M. O. GRIMM; V. J. HAUPENTHAL; T. HARTMANN. *Maastricht Univ., Deutsches Inst. fur Demenzprevention.*

POSTER

043. Alzheimer's Disease: Proteinopathy, Non- Abeta, and Non-Tau

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D71 **43.01** Preservation of hippocampal mTOR/p62 autophagy signaling pathways in AD. E. J. MUFSON*; B. HE; M. D. IKONOMOVIC; M. NADEEM; J. WUU; S. E. PEREZ. *Rush Univ. Med. Ctr., Univ. of Pittsburgh and Geriatric Res. and Educ. Clin. Ctr., Univ. of Miami Miller Sch. of Med.*

2:00 D72 **43.02** N-acetylglucosamine polymers impede synaptic plasticity, are neurotoxic and accumulate in sporadic Alzheimer's disease Brains. G. BUSETTO*; M. FAVERO; E. TURANO; B. BONETTI. *Dep. of Neurosci, Univ. of Verona.*

3:00 E1 **43.03** Time-dependent alterations of MMP9 and ANG-2 in hippocampus of rat with chronic bilateral common carotid artery occlusion. M. KIM; C. CHUNG*; W. JEON; J. HAN. *Konkuk Univ., Korea Inst. of Oriental Med.*

4:00 E2 **43.04** Selective progranulin deficiency in neurons produces frontotemporal dementia-like deficits. A. E. ARRANT*; A. J. FILIANO; A. H. YOUNG; E. D. ROBERSON. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

1:00 E3 **43.05** Concordance between inclusions, microglia activation and disease phenotype in primary progressive aphasia with progranulin mutations and TDP-43 pathology. M. PETERSON; S. S. AHMADIAN; S. WEINTRAUB; E. J. ROGALSKI*; E. BIGIO; M. MESULAM; C. GEULA. *Northwestern Univ. Feinberg Sch. of Med.*

2:00 E4 **43.06** Role of S100B in defining pathological changes in Alzheimer's disease. H. WU*; R. NAGELE; V. VENKATARAMAN. *Dept of Cell Biology, GSBS, Rowan University-SOM, New Jersey Inst. for Successful Aging Rowan-SOM.*

3:00 E5 **43.07** The role of a splice variant of carboxypeptidase E in neurodegeneration with links to Alzheimer's disease. N. X. CAWLEY; Y. CHENG; T. YANIK; C. LIU; S. R. K. MURTHY; Y. LOH*. *NICHD, NIH, Middle East Tech. Univ., Univ. of Sydney.*

4:00 E6 **43.08** Calcineurin proteolysis is associated with astrocyte and small vessel pathology. M. PLEISS*; H. MOHMMAD ABDUL; J. L. FURMAN; R. P. GUTTMANN; E. PATEL; D. M. WILCOCK; P. T. NELSON; C. M. NORRIS. *Univ. of Kentucky, Univ. of Kentucky, Washington Univ. in St. Louis, Univ. of Kentucky, Univ. of Kentucky.*

1:00 E7 **43.09** Identification of novel calcineurin/NFAT transcriptional targets mediating Alzheimer's disease synaptic dysfunction. E. HUDRY*; J. CORRADI; A. CACACE; B. HYMAN. *MGH, Bristol-Myers Squibb, Bristol-Myers Squibb, MGH - Harvard Med. Sch.*

2:00 E8 **43.10** Hippocampal Cathepsin D and APP/Aβ processing in Alzheimer's disease. S. E. PEREZ*; B. KOVACS; S. W. SCHEFF; E. J. MUFSON. *Rush Univ. Med. Ctr., Sanders-Brown Ctr. on Aging, Univ. Kentucky.*

3:00 E9 **43.11** Abnormity of myelination in Alzheimer's disease mouse models. Y. WU*; Y. ZHANG. *Sch. of Life Science,Peking Univ., Sch. of Life Sciences,Peking Univ.*

4:00 E10 **43.12** The Ca^{2+} sensor S100A1 modulates neuroinflammation, histopathology and Akt activity in the PSAPP Alzheimer's disease mouse model. L. AFANADOR*; D. A. KEELING; Y. ZHANG; T. PRICE; A. X. ZARATE; I. LIN; K. B. DUFFY; E. A. ROLTSCH; D. B. ZIMMER. *Univ. of Maryland Sch. of Med., LSU Hlth. Sci. Ctr. Sch. of Med.*

1:00 E11 **43.13** The role of ATM in Alzheimer's disease pathogenesis. X. SHEN*; J. CHEN; K. HERRUP; K. HERRUP. *HKUST, Rutgers Univ.*

2:00 E12 **43.14** VILIP-1 protein in Alzheimer disease and frontotemporal lobar dementia postmortem brain tissue. C. M. KIRKWOOD*; M. L. MACDONALD; T. A. SCHEMPF; P. A. MURRAY; M. D. IKONOMOVIC; M. SUN; Y. DING; N. A. YATES; J. K. KOFLER; O. L. LOPEZ; R. A. SWEET. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, VA Pittsburgh Healthcare Syst., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 E13 **43.15** In the hippocampal region of Alzheimer's disease, IRS-1 pS616, a candidate biomarker of brain insulin resistance, rises first in CA1 and later in the subiculum and perirhinal cortex. A. SAMOYEDNY*; M. P. BALDASSARI; H. KAZI; L. HAN; S. E. ARNOLD; J. Q. TROJANOWSKI; D. A. BENNETT; K. TALBOT. *Cedars-Sinai Med. Ctr., Univ. of Pennsylvania, Rush Univ.*

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4:00 E14 **43.16** Cerebrocortical IRS-1 pS616, a candidate biomarker of brain insulin resistance, may be an AD biomarker. K. TALBOT*; B. M. SAGGU; S. A. RIZVI; M. A. KAHN; A. J. SAMOYEDNY; J. Q. TROJANOWSKI. *Cedars-Sinai Med. Ctr., Nassau Univ. Med. Ctr., Neurolog. Inst. of the Cleveland Clin., State Univ. of New York, Univ. of Pennsylvania.*

1:00 E15 **43.17** Mitochondria dictate the cytotoxicity of Alzheimer disease-associated aberrant ubiquitin. R. J. BRAUN*; C. SOMMER; R. J. G. GENTIER; V. I. DUMIT; C. LEIBIGER; K. PADUCH; T. EISENBERG; L. HABERNIG; G. TRAUSINGER; C. MAGNES; J. DENGJEL; F. W. VAN LEEUWEN; G. KROEMER; F. MADEO. *Univ. Bayreuth, Univ. of Graz, Univ. of Maastricht, Univ. of Freiburg, Univ. of Bayreuth, Joanneum Res. Forschungsgesellschaft, INSERM Cordeliers Res. Cancer Paris.*

2:00 F1 **43.18** Aggregation properties of the small nuclear ribonucleoprotein U1-70K in Alzheimer Disease. I. DINER; C. M. HALES; L. RABENOLD; I. BISHOF; D. DUONG; H. YI; O. LAUR; G. MARLA; L. J. JAMES; A. LEVEY; N. T. SEYFRIED*. *Emory Sch. Med., Emory Sch. Med., Emory Sch. Med., Emory Sch. Med.*

3:00 F2 **43.19** ● Differential regulation of cortical Munc18-1 splice variants in Alzheimer's disease: Correlations with the severity of cognitive decline and neuropathology in a community-based aging study. A. RAMOS-MIGUEL; C. HERCHER; C. L. BEASLEY; A. M. BARR; J. A. SCHNEIDER; D. A. BENNETT; W. G. HONER*. *Univ. of British Columbia, Univ. of British Columbia, Rush Univ. Med. Ctr., Ctr. For Complex Disorders, BCMHARI.*

4:00 F3 **43.20** Amyloid peptides associated with human dementias, Aβ42, ABri and ADan cause differential neurotoxicity in *Drosophila* brain. M. S. MARCORA*; A. C. FERNANDEZ-GAMBA; R. VIDAL; L. MORELLI; M. F. CERIANI; E. M. CASTAÑO. *Fundacion Inst. Leloir, Fundacion Inst. Leloir, Indiana Univ. Sch. of Med.*

POSTER

044. Alzheimer's Disease: Imaging and Biomarkers

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 F4 **44.01** Relaxation properties of iron-bound AD-associated proteins. R. D. ADHIKARI*; S. R. BURT; N. K. BANGERTER; R. K. WATT; H. V. VINTERS; J. J. WISCO*. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ., David Geffen Sch. of Med. at UCLA, Univ. of Utah Sch. of Med.*

2:00 F5 **44.02** Cortical and subcortical disruptions underlying memory deficits in early Alzheimer's disease and mild cognitive impairment. F. G. YANG*; M. CHIU; C. TSENG; Y. CHEN; T. CHEN; T. TSENG; J. CHEN. *Natl. Tsing Hua Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

3:00 F6 **44.03** MicroRNAs in human cerebrospinal fluid as diagnostic biomarkers for Alzheimer's disease. J. A. SAUGSTAD*; T. A. LUSARDI; C. A. HARRINGTON; J. I. PHILLIPS; B. LIND; J. A. LAPIDUS; J. F. QUINN. *Oregon Hlth. & Sci. Univ., Legacy Res. Inst., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

4:00 F7 **44.04** Phage display: the search for blood-base biomarkers in Alzheimer's disease. C. CARROLL*; E. H. KOO; Z. AN; Y. LI. *Mem. Sloan Kettering Cancer Ctr., Univ. of California at San Diego, Univ. of Texas Hlth. Sci. Ctr. at Houston, Mem. Sloan Kettering Cancer Ctr.*

1:00 F8 **44.05** ● Transferrin receptor mediated transcytosis of an antibody based radioligand for quantification of intrabrain levels of soluble amyloid-beta aggregates. D. SEHLIN*; X. T. FANG; L. M. CATO; J. FÄLTING; G. ANTONI; L. LANNFELT; S. SYVÄNEN. *Uppsala Univ., BioArctic Neurosci. AB, Uppsala Univ., Uppsala Univ. Hosp.*

2:00 F9 **44.06** ● Distribution of autoradiography signal of [18F]T807 and [3H]T807 matches with that of tau antibody AT100 in post-mortem brain tissue of Alzheimer's patients. F. GOMEZ*; Y. LIN; Q. LIANG; J. RYDER; H. WANG; G. ATTARDO; M. MINTUN; D. SKOVRONSKY. *Avid RP, Avid RP, Eli Lilly.*

3:00 F10 **44.07** Methodology for computing white matter nerve fiber orientation in human histological slices. J. J. WISCO*; A. NAZARAN; H. V. VINTERS; N. K. BANGERTER. *Brigham Young Univ., Brigham Young Univ., David Geffen Sch. of Med. at UCLA.*

4:00 F11 **44.08** The effects of physical exercise on hippocampal microvasculature in a mouse model of Alzheimer's disease. E. MALISZEWSKA-CYNA*; J. J. OORE; M. THEODORE; L. A. M. THOMASON; A. DORR; M. M. KOLETAR; J. STEINMAN; J. G. SLED; B. STEFANOVIC; I. AUBERT. *Sunnybrook Res. Inst., Univ. of Toronto, Sunnybrook Res. Inst., Hosp. for Sick Children, Univ. of Toronto.*

1:00 F12 **44.09** ▲ The spatial relationship between iron, tangles, and plaques in the subiculum. B. J. HERRINGTON*; B. BARZEE; S. BARLOW; S. ROBISON; M. HANSEN; A. SALIN; M. STONE; J. BRIDGEWATER; T. KAVAFYAN; K. STEED; M. E. STARK; H. DONG; A. W. TOGA; H. V. VINTERS; J. J. WISCO. *Brigham Young Univ., David Geffen Sch. of Med., USC, Univ. of Utah.*

2:00 G1 **44.10** Detection of soluble amyloid beta and Tau proteins in the interstitial fluid of non-human primates by *in vivo* microdialysis. A. RASSOULPOUR*; M. HEINS; G. FLIK; I. VEINBERGS; J. FOLGERING; J. SUTCLIFFE; C. SCHLUMBOHM; T. CREMERS. *Brains On-Line, LLC, Encepharm GmbH.*

3:00 G2 **44.11** ▲ Spatial correlation between iron, plaques, and tangles in the entorhinal cortex may present iron to be a potential biomarker for Alzheimer's disease using MRI. S. H. BARLOW*; M. HANSEN; A. SALIN; B. BARZEE; K. STEED; J. J. WISCO; M. STONE; J. BRIDGEWATER; T. KAVAFYAN; E. STARK; H. V. VINTERS; H. DONG; A. W. TOGA; B. J. HERRINGTON. *Brigham Young Univ., David Geffen Sch. of Med., Univ. of Utah, UCLA.*

4:00 G3 **44.12** ● *In vivo* investigation of brain glucose utilization in APP-PS1 mice: [18F]FDG micro-pet vs [14C]2-DG autoradiography. C. WINTMOLDERS; A. WALDRON; A. BOTTELEBERGS; J. KELLEY; S. STAELENS; X. LANGLOIS*. *Janssen Res. and Develop., Univ. of Antwerp.*

1:00 G4 **44.13** Toward specific Aβ oligomer aptamers. K. M. NELSON*; S. SREEVATSAN; K. H. ASHE; M. A. WALTERS. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

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2:00 G5 **44.14** The differential effect of exercise on motor cortex vasculature in a model of Alzheimer's disease. L. A. M. THOMASON; E. MALISZEWSKA-CYNA; J. STEINMAN; I. AUBERT*; J. G. SLED; B. STEFANOVIC. *Sunnybrook Res. Inst., Sunnybrook Res. Inst., Mouse Imaging Ctr.*

3:00 G6 **44.15** Functional connectivity changes associated with financial capacity impairment in prodromal and clinical Alzheimer's disease. T. A. BARTEL*; D. L. KERR; D. G. MCLAREN; D. C. MARSON. *Univ. of Alabama At Birmingham, Massachusetts Gen. Hosp. and Harvard Med. Sch.*

4:00 G7 **44.16** MR relaxometry of short-T2 tissues using 3D ultra-short echo time MRI in *ex vivo* brain with known Braak VI taopathy. A. NAZARAN*; N. BANGERTER; K. PERKINS; D. PARK; H. V. VINTERS; J. J. WISCO. *Brigham Young Univ., Brigham Young Univ., David Geffen Sch. of Med. at UCLA, Brigham Young Univ., Univ. of Utah.*

1:00 G8 **44.17** Increased rate of white matter integrity loss in Alzheimer's disease patients: A one-year follow up study from the Alzheimer's disease Neuroimaging Initiative. C. D. LEONARDO*; T. M. NIR; N. JAHANSHAD; K. M. ESCHENBURG; A. W. TOGA; C. R. JACK JR.; M. A. BERNSTEIN; M. W. WEINER; P. M. THOMPSON. *Imaging Genet. Ctr., Inst. for Nuroimaging and Informatics, Mayo Clin. and Fndn., UCSF Sch. of Med., USC, USC, USC, USC.*

2:00 G9 **44.18** *In vivo PET* imaging of Aβ plaques using 89Zr labeled Bapineuzumab in the 5xFAD mouse model. J. STEVENS*; P. MARTINEZ; A. FRANSSEN; L. DUBOIS; C. URBACH; B. BRANS; P. VISSER; D. VUGTS; G. VAN DONGEN; M. LOSEN. *Maastricht Univ., Maastro Clin., MUMC+, Maastricht Univ., VU Univ. Med. Ctr.*

3:00 G10 **44.19** Blood-brain barrier breakdown as the starting point of cerebrovascular diseases: A dynamic contrast-enhanced magnetic resonance imaging study. A. MONTAGNE*; S. BARNES; M. HALLIDAY; M. SWEENEY; A. SAGARE; A. AHUJA; M. LAW; H. CHUI; R. JACOBS; B. ZLOKOVIC. *Zilkha Neurogenetic Inst., Caltech, Keck Sch. of Med. - USC, Keck Sch. of Med. - USC.*

4:00 G11 **44.20** ● Altered task-evoked fMRI activity in preclinical Alzheimer's disease. B. A. GORDON*; T. BLAZEY; T. L. S. BENZINGER; J. C. MORRIS; A. M. FAGAN; D. M. HOLTZMAN; J. ZACKS; D. A. BALOT. *Washington Univ. In St Louis.*

1:00 G12 **44.21** Regiospecific loss of essential sphingolipids in the early stages of Alzheimer's disease. N. KAIN*; T. COUTTAS; A. DON; B. GARNER. *Univ. of New South Wales, Univ. of Wollongong.*

2:00 H1 **44.22** Classification of Alzheimer's disease using nonlinear independent component analysis. D. DUNCAN*; T. STROHMER. *Univ. of California, Davis.*

3:00 H2 **44.23** Comparison of subcortical morphometry in Alzheimer's disease and HIV positive subjects. B. S. WADE*; S. H. JOSHI; M. REUTER; E. S. DAAR; T. B. CAMPBELL; G. SCHIFITTO; E. SINGER; R. COHEN; M. S. BROWN; X. HUA; J. R. ALGER; D. F. TATE; B. A. NAVIA; P. M. THOMPSON. *UCLA, Imaging Genet. Center, Univ. of Southern California, Ahmanson-Lovelace Brain Mapping Center, Dept. of Neurology, Univ. of California at Los Angeles, Martinos Ctr. for Biomed. Imaging, Massachusetts Gen. Hosp., Los Angeles Biomed. Res. Inst. at Harbor-UCLA Med. Center, Univ. of California, Los Angeles, Univ. of Colorado Denver, Univ. of Rochester Sch. of Med., David Geffen Sch. of Med. at UCLA, Univ. of Florida Col. of Med., Dept. of Radiology, Univ. of Colorado Anschutz Med. Campus, Henry M. Jackson Fndn. for the Advancement of Military Med. Contractor, San Antonio Military Med. Ctr., Tufts Univ. Sch. of Med.*

4:00 H3 **44.24** Distinct patterns of structural brain network in mild cognitive impairment with high and low amyloid-beta burden: Graph-theoretical analysis of diffusion tensor imaging. D. LEE*; E. SEO; J. PARK; J. HAN; D. YI; B. SOHN; Y. CHOE; M. BYUN. *Seoul Natl. Univ. Hosp., Chosun Univ., Hanyang Univ., Boramae Med. Ctr.*

1:00 H4 **44.25** Investigating white matter alterations in people with Down syndrome. L. R. WILSON*; T. ANNUS; G. WILLIAMS; Y. T. HONG; T. FRYER; P. J. NESTOR; S. H. ZAMAN; A. J. HOLLAND. *Univ. of Cambridge, Univ. of Cambridge, German Ctr. for Neurodegenerative Dis.*

2:00 H5 **44.26** Mid-life precuneus hypometabolism association with traumatic brain injury history. S. SOMAN*; J. CHENG; J. KONG; J. K. FAIRCHILD; S. CHAO; L. KINOSHITA; M. M. ADAMSON; J. W. ASHFORD; A. J. FURST. *Stanford Univ. / Palo Alto VA, Palo Alto VA, Palo Alto VA, Stanford Univ. / Palo Alto VA.*

3:00 H6 **44.27** Brain and plasma neuronal pentraxin receptor levels in a transgenic APP/PS1 rat model of cerebral amyloidosis. E. TENG; T. BILOUSOVA; K. TAYLOR; R. GYLYS; S. A. FRAUTSCHY*; J. M. RINGMAN; G. M. COLE. *Greater Los Angeles VA/UCLA, UCLA, Veteran's Greater Los Angeles Healthcare Syst.*

4:00 H7 **44.28** Magnetic resonance spectroscopy (MRS) in CNS disease models. K. LEHTIMÄKI; L. TAHTIVAARA*; T. LAITINEN; T. AHTONIEMI; A. NURMI. *Charles River Discovery Res. Services Finland Ltd.*

1:00 H8 **44.29** Lymphocytes from sporadic Alzheimer's disease patients display alterations in apoptosis associated with increased p21 levels. U. WOJDA*; J. WOJSIAT; K. LASKOWSKA-KASZUB; J. KUZNICKI. *IIMCB, Nencki Inst. of Exptl. Biol.*

2:00 H9 **44.30** *In vivo* and *ex vivo* detection of lesions by MRI in an animal model of cerebral amyloid angiopathy. E. D. HEUER*; J. JACOBS; R. DU; X. ZHANG; S. WANG; O. KEIFER; A. CINTRON; J. DOOYEMA; L. C. WALKER. *Univ. of Hawaii At Hilo, Emory Univ., Emory Univ.*

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POSTER

045. Huntington's disease Animal Models and Therapeutic Strategies

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 H10 **45.01** Viral vector mediated expression of mutant huntingtin in the dorsal raphe produces neuropathology but does not induce depressive-like behaviors in wildtype mice. M. R. PITZER*; A. WARDEN; J. LUERAS; S. WEBER; J. MCBRIDE. *Univ. of Portland, Oregon Natl. Primate Res. Cntr.*

2:00 H11 **45.02** Adenosine as a biomarker of Huntington's disease. X. GUITART*; W. REA; M. ORRU; L. CELLAI; I. DETTORI; C. LLUIS; A. CORTES; V. CASADO; F. PEDATA; S. FERRE. *NIDA, IRP, Univ. of Firenze, Univ. de Barcelona, Univerity of Firenze, NIDA IRP.*

3:00 H12 **45.03** Increased p75NTR mediates hippocampal synaptic and cognitive dysfunction in Huntington´s disease. V. BRITO; A. GIRALT; L. ENRIQUEZ-BARRETO; M. PUIGDELLÍVOL; N. SUELVES; A. ZAMORA-MORATALLA; J. J. BALLESTEROS; E. D. MARTIN; N. DOMINGUEZ-ITURZA; M. MORALES; J. ALBERCH; S. GINES-PADROS*. *Med. School, Univ. of Barcelona, Inst. d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Ctr. de Investigación Biomédica de la Rioja, Inst. for Res. in Neurolog. Disabilities (IDINE), Univ. of Castilla-La Mancha.*

4:00 I1 **45.04** Neonatally transplanted human glial progenitors improves motor skills and survival of R6/2 mouse model of Huntington's disease. A. BENRAISS*; J. MAUCERI; T. J. MICHAEL; H. B. BURM; D. CHANDLER-MILITELLO; S. WANG; S. A. GOLDMAN. *Univ. of Rochester Med. Ctr.*

1:00 I2 **45.05** Expression and colocalization of somatostatin and NMDA receptor subtypes in huntington transgenic mice brain. S. PAIK; R. K. SOMVANSHI*; C. SINGH; S. ZOU; U. KUMAR. *Univ. of British Columbia.*

2:00 I3 **45.06** Role of palmitoylation in synaptic and extra-synaptic NMDAR localization in striatal neurons: Implications for Huntington's disease. R. KANG; L. A. RAYMOND*. *Univ. of British Columbia, UBC.*

3:00 I4 **45.07** Aberrant tracer coupling between striatal medium spiny neurons in a mouse model of Huntington's disease. B. KADRIU; C. ROZAS; M. A. CHACON; S. S. DELLAL*; D. S. FABER. *Albert Einstein Col. of Med.*

4:00 I5 **45.08** Inhibition of Class IIa HDACs as a therapy for Huntington's disease. O. AZIZ; C. A. LUCKHURST; D. YATES; K. L. MATTHEWS; G. CREIGHTON-GUTTERIDGE; R. WILLIAMS; D. ALLCOCK; A. F. HAUGHAN; P. BRECCIA; A. VAN DE POEL; E. STONES; H. MCNEIL; W. BLACKABY; G. MCALLISTER; I. MUNOZ-SANJUAN; C. DOMINGUEZ*; M. MAILLARD; V. BEAUMONT. *BioFocus, CHDI Managment Inc.*

1:00 I6 **45.09** Potential mechanisms of altered excitability in the striatum of a mouse model of Huntington's disease. M. A. CHACON*; C. ROZAS; D. BARTOLOME-MARTIN; Y. CAO; D. S. FABER. *Albert Einstein Col. of Med.*

2:00 I7 **45.10** Characterization of a potential novel therapeutical tool to reverse histone hypoacetylation in neuropathologies. D. M. GUIRETTI*; L. M. VALOR; A. BARCO. *Inst. de Neurociencias (UMH-CSIC).*

3:00 I8 **45.11** Mitochondrial-based neuroprotective effects of resveratrol and nicotinamide in *in vitro* and *in vivo* Huntington's disease models. L. NAIA*; T. R. ROSENSTOCK; A. OLIVEIRA; S. I. OLIVEIRA-SOUSA; G. L. CALDEIRA; M. N. LAÇO; M. R. HAYDEN; C. R. OLIVEIRA; A. C. REGO. *Ctr. For Neurosci. and Cell Biol., Fac. of Medicine, Univ. of Coimbra, Inst. for Interdisciplinary Research, Univ. of Coimbra (IIIUC), Ctr. for Mol. Med. and Therapeutics, Child and Family Res. Institute, Univ. of British Columbia.*

4:00 I9 **45.12** ▲ Transplantation of genetically altered mesenchymal stem cells over expressing human and mouse brain derived neurotrophic factor in the R6/2 transgenic mouse model of Huntington's disease. A. C. MOORE*; A. CRANE; M. LU; G. DUNBAR; J. ROSSIGNOL. *Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst., Central Michigan Univ.*

1:00 I10 **45.13** The influence of gaze on static postural control in individuals with Huntington's disease. L. COOKE*; L. MURATORI; K. BEERS; C. FISCHER; E. RABIN. *NYIT Col. of Osteo, Stony Brook Univ.*

2:00 I11 **45.14** Thioltransferases TXN1 and TXNDC10 protect against neuronal atrophy in a lentiviral mouse model of Huntington's disease. Z. LU*; L. BARROWS; J. CHEN; J. MOLINE; J. FOX. *Univ. of Wyoming, Univ. of Wyoming.*

3:00 I12 **45.15** Xyloketals protect polyQ-induced toxicity in *C. elegans.* Z. PEI*; Y. ZENG. *The First Affiliated Hospital, Sun Yat-Sen Univ.*

4:00 J1 **45.16** Modeling defects in the Huntington's disease neurovascular unit and blood-brain barrier using iPS Cells. R. G. LIM*; C. QUAN; M. CASALE; J. STOCKSDALE; A. R. KING; L. SALAZAR; S. WINOKUR; . HD IPSC CONSORTIUM; L. M. THOMPSON. *Univ. of California, Irvine, California State University, Long Beach, Consortium.*

1:00 J2 **45.17** Investigating effects of extracts of human adipose-derived stem cell in Huntington's disease. M. LEE*; W. IM. *Seoul Natl. Univ. Hosp., Seoul national university hospital.*

2:00 J3 **45.18** The treatment benefit of the Group 2 metabotropic glutamate receptor agonist LY379268 in R6/2 mice stems from a neuroprotective rather than a symptomatic effect. A. J. REINER*; Y. DENG; N. DEL MAR; H. REN; J. T. ROGERS. *The Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 J4 **45.19** The protective effect of metformin on the mutant huntingtin induced toxicity. J. JIN*; M. TAO; Q. PENG; M. JIANG; W. DUAN. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Departments of Neurosci., Program in Cell. and Mol. Med.*

4:00 J5 **45.20** ● Toward developing a panel of antisense oligonucleotide drugs targeted to single nucleotide polymorphisms enriched within mutant huntingtin genes to provide an allele-specific gene silencing treatment option for the majority of the Huntington's disease population. N. S. CARON*; A. L. SOUTHWELL; N. H. SKOTTE; C. KAY; Y. XIE; E. B. VILLANUEVA; E. PETOUKHOV; C. N. DOTY; M. R. HAYDEN. *Ctr. for Mol. Med. and Therapeut.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

046. Huntington's Disease Mechanisms I

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 J6 **46.01** Age-dependence of chloride and potassium channel dysfunction in Huntington's disease skeletal muscle. D. R. MIRANDA*; M. WONG; C. M. MCKEE; M. MENDIZABAL; R. J. TALMADGE; A. A. VOSS. *California State Polytechnic Univ.*

2:00 J7 **46.02** Huntington's disease and olfactory dysfunction: Structural abnormalities of the olfactory system and early caspase activation in the olfactory bulb are observed in HD mouse models. R. K. GRAHAM*; M. LAROCHE; M. DEMERS; M. LESSARD-BEAUDOIN; M. GARCIA-MIRALLES; C. KREIDY; S. FRANCIOSI; M. R. HAYDEN; M. A. POULADI. *Univ. of Sherbrooke, Res. Ctr. on Aging, Natl. Univ. of Singapore, Translational Lab. in Genet. Med., Ctr. for Mol. Med. and Therapeut.*

3:00 J8 **46.03** ▲ Acute exposure to Chlorpyrifos generates oxidative stress and mitochondrial dysfunction in a striatal cell model of Huntington's disease. G. A. DOMINAH; G. F. KWAKYE*. *Oberlin Col.*

4:00 J9 **46.04** Polyamine modulates mutant huntingtin toxicity. M. JIANG; J. ZHENG; S. ABADALI; Q. PENG; J. JIN; W. DUAN*. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

1:00 J10 **46.05** Epigenetic and transcriptional dysregulation in prodromal Huntington's disease. F. YILDIRIM*; C. W. NG; Z. R. CROOK; D. E. HOUSMAN; E. FRAENKEL. *MIT.*

2:00 J11 **46.06** Allele-specific modification of the mutant huntingtin gene with transcription activator-like effectors. K. FINK*; P. DENG; W. CARY; A. TORREST; S. KALOMOIRIS; C. NACEY; H. STEWART; K. POLLOCK; K. PEPPER; W. GRUENLOH; G. ANNETT; T. TEMPKIN; V. WHEELOCK; D. J. SEGAL; J. A. NOLTA. *UC Davis, Inst. For Regenerative Cures, Univ. of California, Davis, Univ. of California, Davis.*

3:00 J12 **46.07** ● Insulin-like growth factor 1 signalling in Huntington's disease. N. H. SKOTTE*; M. A. POULADI; K. HUYNH; T. T. NIELSEN; R. GRAHAM; A. NØRREMØLLE; M. R. HAYDEN. *Ctr. for Mol. Med. and Therapeut., Translational Lab. in Genet. Med., Section of Neurogenetics, Res. Ctr. on Aging.*

4:00 K1 **46.08** Regulation of mitochondrial autophagy by mutant huntingtin. J. MARGULIS*; D. M. ANDO; S. M. FINKBEINER. *Gladstone Inst. of Neurolog. Dis., Univ. of California, San Francisco.*

1:00 K2 **46.09** Differences in synaptic scaling in striatal-cortical co-cultures from wild-type and YAC128 mice. A. I. SMITH-DIJAK*; J. B. MAU; L. A. RAYMOND. *Univ. of British Columbia, Univ. of British Columbia.*

2:00 K3 **46.10** Elevated oxidative stress exacerbates neuronal atrophy via activation of AMPK-α1 in Huntington's disease. Y. CHERN*; T. JU; H. CHEN. *Inst. Biomed Sci., Inst. of Biomed. Science, Academia Sinica.*

3:00 K4 **46.11** Effects of post-translational modifications sites mutations of full-length huntingtin on neuronal toxicity. N. ARBEZ*; T. RATOVITSKI; L. NUCIFORA; J. STEWART; A. CHAUDHARY; C. ROSS. *Johns Hopkins Univ.*

4:00 K5 **46.12** Differential effect of HDAC3 on cytoplasmic and nuclear polyglutamine aggregates. T. MANO; T. SUZUKI; A. IWATA*. *Univ. Tokyo Hosp., Kyoto Pref Univ. Med., Univ. Tokyo Medicne Neurol.*

1:00 K6 **46.13** The role of complement-microglia interactions in driving synaptic loss and disease progression in Huntington's disease. D. K. WILTON; A. FROUIN; A. DAGGETT; W. YANG; B. A. STEVENS*. *Childrens Hosp. Boston, UCLA.*

2:00 K7 **46.14** Development and validation of a high throughput screen to detect small molecule modulators of mutant huntingtin protein levels in HD patient-derived cells. G. MCALLISTER; O. LAZARI; I. GOWERS; G. CREIGHTON-GUTTERIDGE; J. BATE; R. JARVIS; W. BLACKABY; I. MUNOZ-SANJUAN; R. SCHOENFELD; S. KWAK; J. A. BARD*; M. VROUWE; D. F. FISCHER; D. MACDONALD. *BioFocus, a Charles River Co., CHDI Management, Inc., CHDI Management, Inc., BioFocus, a Charles River Co.*

3:00 K8 **46.15** Mutant Huntingtin mediated repression of antioxidant gene expression is rescued by a novel Nrf2 activating agent. L. TINDALE; R. C. CUMMING*. *Univ. of Western Ontario.*

4:00 K9 **46.16** Mutant huntingtin alters Tau phosphorylation and subcellular distribution. D. BLUM*; F. HERRERA; T. MENDES; L. FRANCELLE; M. BASQUIN; H. OBRIOT; D. DEMEYER; N. SERGEANT; E. GERHARDT; E. BROUILLET; L. BUEE; T. OUTEIRO. *Inserm U837, Alzheimer & Tauopathies, IMM, CEA, Dept. of Neurodegeneration and Restorative Res.*

1:00 L1 **46.17** Elevated neonatal iron intake potentiates progression in the R6/2 mouse model of Huntington's disease. K. L. BERGGREN*; J. CHEN; J. MILLER; J. H. FOX. *Univ. of Wyoming, Univ. of Wyoming.*

2:00 L2 **46.18** Optogenetic control of parvalbumin-expressing interneurons in the R6/2 and Q175 mouse models of Huntington's disease. L. GALVAN*; C. CEPEDA; M. LEVINE. *UCLA.*

3:00 L3 **46.19** ● Comparison of phosphodiesterase 10A, dopamine receptors D1 and D2 and dopamine transporter ligand binding in the striatum of the R6/2 and BACHD mouse models of Huntington's disease. S. MILLER*; G. HILL DELLA PUPPA; J. REIDLING; L. M. THOMPSON; J. TREANOR. *Amgen Inc., Univ. of California at Irvine, Univ. of California at Irvine.*

4:00 L4 **46.20** Oligodendrocyte dysfunction in Huntington's disease. W. WEI*; B. HUANG; X. LI; S. LI. *Emory Univ., Tongji Hospital, Huazhong Univ. of Sci. and Technol.*

1:00 L5 **46.21** Differential and region-specific contributions of GABAergic interneurons in mouse models of Huntington's disease. S. M. HOLLEY*; K. N. RUDBERG; C. CEPEDA; M. S. LEVINE. *UCLA.*

2:00 L6 **46.22** Altered spontaneous synaptic currents in external globus pallidus neurons in the R6/2 mouse model of Huntington's disease. J. BARRY*; G. AKOPIAN; C. CEPEDA; M. S. LEVINE. *UCLA.*

3:00 L7 **46.23** Role of p75 neurotrophin receptor signaling in pathogenesis of Huntington's disease. A. WEHNER*; R. L. ALBIN; B. A. PIERCHALA. *Univ. of Michigan-Ann Arbor, Univ. of Michigan-Ann Arbor.*

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4:00 L8 **46.24** Electrophysiological alterations of striatal cholinergic interneurons in the R6/2 mouse model of Huntington's disease. A. PARIEVSKY; S. M. HOLLEY; P. R. JOSHI; J. Y. CHEN; C. CEPEDA*; M. S. LEVINE. *IDDRC, Semel Inst. for Neurosci. and Human Behavior, BRI, UCLA.*

1:00 L9 **46.25** Altered calcium dynamics of cortical microcircuits in the R6/2 mouse model for Huntington's disease. A. M. ESTRADA SANCHEZ*; T. INDERSMITTEN; M. HAIEM; C. CEPEDA; P. GOLSHANI; M. S. LEVINE. *UCLA, UCLA.*

2:00 L10 **46.26** Investigation of symptoms of Huntington's disease transgenic mice reveals prevalence of a high anxiety phenotype possibly due to abnormal serotonergic and noradrenergic neurotransmission. S. K. ALSELEHDAR*; E. D. ABERCROMBIE. *Rutgers, The State Univ. of NJ.*

3:00 L11 **46.27** Optogenetics reveal alterations in dopamine neurotransmission in the YAC128 mouse model of Huntington's disease. J. Y. CHEN; G. K. AKOPIAN*; C. J. WANG; L. GALVAN; V. M. ANDRÉ; C. CEPEDA; M. S. LEVINE. *UCLA, UCLA.*

4:00 L12 **46.28** ● Anti-semaphorin 4D immunotherapy ameliorates neuropathology and some cognitive impairment in the YAC128 mouse model of Huntington's disease. A. L. SOUTHWELL; S. FRANCIOSI; E. B. VILLANUEVA; Y. XIE; L. A. WINTER; J. VEERARAGHAVAN; A. JONASON; B. FELCZAK; W. ZHANG; V. KOVALIK; S. WALTL; G. HALL; M. A. POULADI; E. S. SMITH; W. J. BOWERS; M. ZAUDERER; M. R. HAYDEN*. *Univ. of Brithish Columbia, Vaccinex Inc, Natl. Univ. of Singapore.*

POSTER

047. Dystonia Mechanisms and Model Systems

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 M1 **47.01** A theoretical model for the pathogenesis of adult onset dystonia due to GNAL mutations. D. A. PETERSON*; T. J. SEJNOWSKI. *Salk Inst.*

2:00 M2 **47.02** ● ▲ Cerebellar encoding of neck input primes cortical plasticity of hand representation: The case of cervical dystonia. S. O. MEUNIER*; A. KISHORE; C. HUBSCH; T. POPA; A. RICHARD; E. ROZE; M. VIDAILHET. *INSERM, SCTIMST, APHP, ANR-10-IAIHU-06, UPMC.*

3:00 M3 **47.03** Selective alteration of striatal cholinergic function in a symptomatic mouse model of DYT1 dystonia. S. S. PAPPAS*; W. T. DAUER. *Univ. of Michigan, Univ. of Michigan.*

4:00 M4 **47.04** M1 muscarinic receptor subtype as a therapeutic target for the rescue of striatal synaptic plasticity alterations in basal ganglia disorders. M. MALTESE; G. MADEO; G. MARTELLA; T. SCHIRINZI; G. SCIAMANNA; G. PONTERIO; A. TASSONE; P. BONSI; P. J. CONN; A. PISANI*. *Fondazione Santa Lucia IRCCS, Univ. of Rome "Tor Vergata", Clinica Neurologica Univ. Tor Vergata, Vanderbilt Ctr. for Neurosci. Drug Discovery.*

1:00 M5 **47.05** Electrophysiological characterization of DYT1 dystonia mouse models. F. YOKOI*; H. CHEN; C. C. CHEETHAM; S. L. CAMPBELL; J. D. SWEATT; Y. LI. *Univ. of Florida, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

2:00 M6 **47.06** Motor phenotypes associated with Ciz1 deficiency. M. S. LEDOUX*; K. KURUVILLA; H. HONDA; J. XIAO. *Univ. of Tennessee Hlth. Sci. Ctr., Hiroshima Univ.*

3:00 M7 **47.07** Effects of nicotinic receptors on striatal dopamine efflux in a cholinergic-specific dyt1 knock-out mouse model of dystonia. C. THOMPSON*; K. ESKOW JAUNARAJS; D. STANDAERT. *Univ. of Alabama at Birmingham.*

4:00 M8 **47.08** Phenotype-specific alterations of resting-state brain activity in spasmodic dysphonia. G. BATTISTELLA*; K. SIMONYAN. *Dept. of Neurology,Mount Sinai Med. Ctr.*

1:00 M9 **47.09** Alterations of the functional interplay between striatal dopamine D2 receptor and RGS9-2 in movement disorders. P. BONSI*; G. PONTERIO; G. SCIAMANNA; A. TASSONE; G. MANDOLESI; V. VANNI; V. ZACHARIOU; E. BEZARD; A. PISANI. *Fondazione Santa Lucia, Univ. Tor Vergata, Univ. of Crete, Inst. of Neurodegenerative Dis., Fondazione Santa Lucia.*

2:00 M10 **47.10** Cross-species validation of electrophysiological abnormalities in distinct rodent models of DYT1 dystonia. G. MADEO*; G. MARTELLA; M. MALTESE; T. SCHIRINZI; G. SCIAMANNA; G. PONTERIO; A. TASSONE; G. MANDOLESI; V. VANNI; M. PIGNATELLI; R. NISTICÒ; P. BONSI; A. PISANI. *Univ. of Rome Tor Vergata, IRCCS Santa Lucia Fndn., Sapienza Univ. of Rome, Sapienza Univ. of Rome.*

3:00 M11 **47.11** Novel approaches for diagnosis and therapeutics for DOPA responsive dystonia. L. JONES*; L. GOOD; N. SHARMA; P. BHIDE; I. A. ARMATA. *Florida State Univ., Mass Gen. Hosp.*

4:00 M12 **47.12** Kinematic motion sensors objectively characterize neck movements in cervical dystonia. O. SAMOTUS*; H. VAFADAR; F. RAHIMI; J. LEE; M. JACKMAN; M. JOG. *London Hlth. Sci. Ctr., Univ. of Western.*

1:00 N1 **47.13** Focal dystonia in torsin A +/- mice after transient nerve injury. J. VOLKMANN*; I. U. ISAIAS; B. TEKIN; A. ALTTOA; D. KLEIN; T. HIGUCHI; A. REIF; C. W. IP. *Julius-Maximilians-University.*

2:00 N2 **47.14** Acetylcholine-induced calcium transients are sensitized in central neurons associated with DYT1 dystonia. S. IWABUCHI*; J. KOH; N. C. HARATA. *Univ. of Iowa.*

3:00 N3 **47.15** Neurochemical and behavioral dysfunction in a new mouse model of dopa-responsive dystonia. S. ROSE*; X. YU; H. A. JINNAH; E. J. HESS. *Emory Univ.*

4:00 N4 **47.16** Paretic and paratonic dystonia alleviated by pallidal stimulation. Y. MIYAGI*; T. OHMURA; T. SHIRAISHI; K. YAMASHIRO. *Kaizuka Hosp., Kyushu Univ., Ikeda Hosp., Okinawa Nanbu Med. Ctr.*

1:00 N5 **47.17** Pathophysiology of spasmodic dysphonia: A combined transcranial magnetic stimulation and functional magnetic resonant imaging study. T. J. KIMBERLEY*; M. CHEN; R. SCHMIDT. *Univ. of MN, Univ. of Minnesota.*

2:00 N6 **47.18** Diffusion tensor image analysis of a novel mouse model of dystonia. A. BADEA*; Y. QI; S. QIU; S. BHAGAT; N. CALAKOS. *Duke Univ. Med. Ctr., Duke Univ., Duke Univ. Med. Sch., Duke Univ. Med. Ctr.*

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3:00 N7 **47.19** Distinct oscillatory pallido-cortical networks revealed by simultaneous pallidal iEEG and MEG in patients with dystonia. W. NEUMANN; A. JHA; A. BOCK; J. HUEBL; G. SCHNEIDER; T. SANDER; V. LITVAK; A. A. KUEHN*. *Dept Neurology, Charité, Univ. Col. London, Dept Neurosurgery, Charité, Physikalisch Technische Bundesanstalt.*

POSTER

048. Neuromuscular Diseases

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 N8 **48.01** An investigation of gene expression changes in motor neurons in a mouse model of spinal muscular atrophy. C. C. PHILLIPS*; A. W. HARRIS; M. MAEDA; M. E. R. BUTCHBACH; M. A. HARRINGTON. *Delaware State Univ., Nemours Biomed. Research/Alfred I. DuPont Hosp. for Children, Nemours Biomed. Research/ Alfred I. DuPont Hosp. for Children, Delaware State Univ.*

2:00 N9 **48.02** Survival motor neuron protein expression in motor neurons alters their intrinsic excitability in spinal muscular atrophy. J. LOMBARDO*; L. KONG; C. J. SUMNER; M. A. HARRINGTON. *Delaware State Univ., The Johns Hopkins Univ.*

3:00 N10 **48.03** Therapeutic potential of heat shock protein 27 on Guillain-Barré syndrome. P. ASTHANA*; G. ZHANG; K. A. SHEIKH; C. H. E. MA. *City Univ. of Hong Kong, Univ. of Texas Med. Sch.*

4:00 N11 **48.04** Pharmacological inhibition of HDAC6 is beneficial in mutant Gars-induced CMT2 mouse model. V. BENOY; L. VAN HELLEPUTTE; C. D'YDEWALLE; Z. MO; G. BAI; P. VANDEN BERGHE; A. KOSIKOWSKI; P. VAN DAMME; S. PFAFF; W. ROBBERECHT; X. YANG; L. M. VAN DEN BOSCH*. *Lab. of Neurobiology, Vesalius Res. Center, VIB, Leuven, Belgium, Departments of Chem. Physiol. and Cell & Mol. Biology, The Scripps Res. Inst., Translational research center for Gastrointestinal Disorders (TARGID), Univ. of Leuven, Leuven, Belgium, Dept. of Medicinal Chem. and Pharmacognosy, Univ. of Illinois at Chicago, Chicago, IL, USA, Neurology, Univ. Hosp. Leuven, Leuven, Belgium, Howard Hughes Med. Inst. and Gene Expression Laboratory, The Salk Inst. for Biol. Studies, La Jolla, CA, USA.*

1:00 N12 **48.05** Generation of experimental model of myasthenia gravis with antibodies against LRP4. S. MORI*; R. TAKASHIMA; K. SHIGEMOTO. *Tokyo Metropolitan Inst. of Gerontology.*

2:00 O1 **48.06** Connexin-based hemichannels in muscular dystrophies. A possible common pathological mechanism. L. A. CEA*; P. A. CAVIEDES; J. A. BEVILACQUA; A. M. CARDENAS; A. D. MARTINEZ; J. C. SAEZ. *ICBM, Fac Medicine, Univ. of Chile, ICBM, Fac. Medicine, Univ. of Chile, CINV, Univ. of Valparaiso, Fac. of Biol. Sci., P. Catholic Univ. of Chile.*

3:00 O2 **48.07** The spectrum of deletions and duplications in the Dystrophin (dmd) gene in a cohort of patients with Duchenne Muscular Dystrophy in Sri Lanka. N. THAKUR*; A. ABEYSEKERA; J. WANIGASINGHE; V. H. W. DISSANAYAKE. *Natl. Acad. of Med. Sciences, Bir Hosp., Univ. of Colombo, Univ. of Colombo.*

4:00 O3 **48.08** A single mutation in the acetylcholine receptor delta-subunit causes distinct effects in two types of neuromuscular synapses. F. ONO*; J. PARK; T. WILLIAMS; M. MOTT; H. IKEDA; H. WEN; M. LINHOFF. *NIH-NIAAA, Oregon Hlth. and Sci. Univ.*

1:00 O4 **48.09** Astrocytes in Amyotrophic Lateral Sclerosis (ALS): A fundamental rearrangement of vascular and synaptic organization. I. LORENZINI*; J. PREMINGER; S. NATH; J. D. ROTHSTEIN. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., johns Hopkins Univ. Sch. of Med.*

2:00 O5 **48.10** Brain computer interface for communication in completely locked-in patient using near infrared spectroscopy. U. CHAUDHARY*; B. XIA; S. VESSER; G. GALLEGOS-AYALA; N. BIRBAUMER. *Univ. of Tubingen, Ospedale San Camillo.*

3:00 O6 **48.11** Mutation in the novel nuclear-encoded mitochondrial protein CHCHD10 in a family with autosomal dominant mitochondrial myopathy. F. FECTO; S. AJROUD-DRISS; K. AJROUD; I. LALANI; S. E. CALVO; V. K. MOOTHA; H. DENG; N. SIDDIQUE; A. J. TAHMOUSH; T. D. HEIMAN-PATTERSON; T. SIDDIQUE*. *Northwestern Univ. Feinberg Sch. of Med., Harvard Med. Sch., Thomas Jefferson Univ.*

4:00 O7 **48.12** Morphological changes to the structure of the neuromuscular junction in a canine model of duchenne muscular dystrophy. S. HADDIX*; Y. LEE; I. SMITH; J. N. KORNEGAY; W. THOMPSON. *Texas A&M Univ., Texas A&M Univ., Texas A&M Univ., Texas A&M Univ.*

1:00 O8 **48.13** Astrocytes isolated from transgenic Δ7 SMA mice have altered protein secretion. E. FORAN*; T. NGUYEN; P. R. LEE; C. GRUNSEICH; J. NOFZIGER; E. S. ARNOLD; B. BURNETT; K. FISCHBECK. *Natl. Inst. of Health, NINDS, Natl. Inst. of Health, NICHD, Uniformed Services Univ. of the Hlth. Sci.*

2:00 O9 **48.14** Effects of suramin on stretch-activated calcium channel protein TRPC1 and calsequestrin in the diaphragm of old mdx mice. D. O. MOREIRA*; H. SANTO NETO; M. MARQUES. *Unicamp.*

3:00 O10 **48.15** Effects of omega-3 therapy in the cardiomyopathy of the mdx mice, at later stages of the disease. A. F. MAURICIO*; J. A. PEREIRA; H. SANTO NETO; M. J. MARQUES. *UNICAMP.*

4:00 O11 **48.16** Generation and characterization of C9ORF72 Amyotrophic Lateral Sclerosis (ALS) astrocytes derived from patient fibroblasts. J. T. PHAM*; E. L. DALEY; C. J. DONNELLY; T. GENDRON; L. PETRUCELLI; R. G. SATTLER; J. D. ROTHSTEIN. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Mayo Clin., Johns Hopkins Sch. of Med.*

1:00 O12 **48.17** ● Inhibition of hematopoietic prostaglandin D synthase improves symptoms of muscular dystrophy in a mouse model of Duchenne muscular dystrophy. K. TANAKA; K. ARITAKE; M. TAYAMA; K. SHIGENO; Y. HAYASHI*; E. SASAKI; T. UTSUGI; T. SASAOKA; Y. URADE. *Taiho Pharmaceut. Co., Ltd., Osaka Biosci. Inst., Taiho Pharmaceut. Co., Ltd., Niigata Univ.*

2:00 P1 **48.18** Mbnl1; Mbnl2 conditional double knockout mice as a model for the myotonic dystrophy brain. K. LEE*; F. FERNANDEZ-GOMEZ; S. EDDARKAOUI; M. LI; J. THOMAS; D. FINN; N. HAMED; L. BUÉE; N. SERGEANT; M. SWANSON. *Chang Gung Mem. Hospital, Keelung, Univ. of Florida, Col. of Med., Jean-Pierre Aubert Res. Center, Alzheimer & Tauopathies, F-59045, Regional Univ. Hosp. of Lille.*

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POSTER

049. Epilepsy: Synapses and Ion Channels

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 P2 **49.01** Evaluations of seizures and behavior in Slack-/- mice suggest separate pathways for epilepsy and developmental delay in patients with Slack-associated epileptic encephalopathies. I. H. QURAISHI*; R. L. COUTURE; M. L. SCHWARTZ; L. K. KACZMAREK. *Yale Univ., Yale Univ., Yale Univ.*

2:00 P3 **49.02** Chronic high intensity sound stimulation inhibits Schaffer-CA1 hippocampal long-term potentiation in Wistar rats but not in those of the Wistar Audiogenic Rat (WAR) strain. A. O. CUNHA*; J. A. C. OLIVEIRA; S. S. ALMEIDA; N. GARCIA-CAIRASCO; R. M. X. LEAO. *Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo.*

3:00 P4 **49.03** Impulse response of local field potential to spikes relates activity in distant regions of the human brain. B. A. LOPOUR*; I. FRIED; D. L. RINGACH. *Univ. of California, Univ. of California, Univ. of California.*

4:00 P5 **49.04** Collagen VI modulates synaptic transmission in the hippocampus. T. RAMOS-MORENO*; A. CIFRA; L. NIKITIDOU; M. AHL; S. H. CHRISTIANSEN; C. R. GØTZSCHE; D. P. WOLDBYE; M. KOKAIA. *Wallenberg Neurosci. Center/Experimental Epilepsy Ctr., Lund University/Epilepsy Ctr., Inst. of Exptl. Med., Univ. of Copenhagen.*

1:00 P6 **49.05** ● Frequency dependent axonal block by high frequency stimulation in hippocampal CA1 region of rats. Y. YU*; Z. FENG; J. CAO; N. HU; Z. WANG. *Zhejiang Univ.*

2:00 P7 **49.06** Approaches to understanding human ion channel genetic variation and disease - an example with a KCNT1 variant and infantile epilepsy disorder. K. M. PADILLA; B. M. ANTONIO; S. C. SANTOS; Z. LIN; J. W. THEILE; M. L. CHAPMAN; S. PETROU; D. B. GOLDSTEIN; D. S. KRAFTE*. *Neusentis, Pfizer Inc, The Univ. of Melbourne, Duke Univ. Sch. of Med., Neusentis - US.*

3:00 P8 **49.07** IGF-1 promotes epileptogenesis after injury through activation of Akt-mTOR, but not MAPK(ERK), signaling. Y. SONG; K. J. STALEY; Y. BERDICHEVSKY*. *Lehigh Univ., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

4:00 P9 **49.08** Increased risk of hypoxic depolarization of the brainstem autonomic circuit in a mouse SUDEP model. I. AIBA*; J. L. NOEBELS. *Baylor Col. of Med.*

1:00 P10 **49.09** Melatonin inhibits voltage sensitive Calcium channel mediated neurotransmitter release. J. KWON; T. CHOI; E. S. DURRANCE; S. JO; K. KIM; S. CHOI*. *Seoul Natl. Univ., Kangwon Natl. Univ. Sch. of Med., Pohang Univ. of Sci. and Technol.*

2:00 P11 **49.10** Ultrastructural changes in astrocyte enwrapping and excitatory synapses in the hippocampal CA1 stratum radiatum following kainic acid induced status epilepticus. C. CLARKSON; M. GIBBONS; J. A. WHITE; K. S. WILCOX; M. E. RUBIO*. *Univ. of Pittsburgh Med. Sch., Univ. of Utah, Univ. of Utah.*

3:00 P12 **49.11** Overactive Slack channel (KCNT1) mutants lead to epilepsy by two different mechanisms. Z. ZHANG*; Q. TANG; F. ZHANG; J. XU. *Xuzhou Med. Col.*

4:00 Q1 **49.12** ▲ Neurons in the amygdala of enriched rats with acquired reflex epilepsy are activated by a sound-induced seizure. E. M. O'NEIL; M. G. RODEN; S. E. NYSTROM; H. A. HOLDEN; H. K. ANDERSON; M. C. ZRULL*. *Appalachian State Univ.*

1:00 Q2 **49.13** L-arginine restores synaptic plasticity in the visual cortex of an animal model of developmental epilepsy and dyslexia. H. MENDONÇA*; P. CAMPELLO-COSTA; K. M. JACOBS. *Fluminense Federal Univ., Univ. Federal do Rio de Janeiro, Virginia Commonwealth Univ.*

2:00 Q3 **49.14** Control of GABAergic synapses by A2A receptors during development. S. ZAPPETTINI*; S. GILISSEN; F. GOMEZ CASTRO; M. ESCLAPEZ; S. LÉVI; C. BERNARD. *Inst. De Neurosciences Des Systèmesinserm UMR11, Aix Marseille Université, INS, INSERM UMR-839, Inst. du Fer à Moulin.*

3:00 Q4 **49.15** The reduction of Nav1.6 current suppresses high potassium induced seizure-like activity in hippocampal slices. B. S. TANAKA*; A. L. GOLDIN. *UC Irvine, Univ. of California, Irvine.*

4:00 Q5 **49.16** Human gain-of-function Slack (KCNT1) potassium channel mutations increase positive cooperativity between individual Slack channels. J. KRONENGOLD*; G. E. KIM; I. QURAISHI; H. C. MARTIN; G. BARCIA; J. C. TAYLOR; L. COLLEAUX; R. NABBOUT; L. K. KACZMAREK. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Univ. of Oxford, Ctr. de Reference Epilepsies Rares, Hop. Necker- Enfants Malades, Inst. de Recherche Necker, Hôpital Necker-Enfants Malades.*

1:00 Q6 **49.17** Activation of M1 muscarinic acetylcholine receptors on parvalbumin-positive neurons contributes to pilocarpine-induced seizures. J. J. LAWRENCE*; E. DECAN; E. MARCEAU; K. STOLL; K. DEISSEROTH; F. YI. *Univ. of Montana, Univ. of Montana, Stanford Univ.*

2:00 Q7 **49.18** SCN2A mutations and epilepsy: Is there a meaning in the subthreshold range? U. B. HEDRICH*; S. MÜLLER; S. LAUXMANN; H. LERCHE. *Hertie-Institute For Clin. Brain Res.*

3:00 Q8 **49.19** Hippocampal synaptic alterations in the nonsense-mediated decay pathway after status epilepticus. C. MOONEY*; E. M. JIMENEZ-MATEOS; D. C. HENSHALL. *Royal Col. of Surgeon, Ireland.*

4:00 Q9 **49.20** De novo mutations identified in the β subunit of GABAA receptor in patients with infantile spasms (IS) and Lennox-Gastaut syndrome (LGS) by the Epi4K consortium alter GABAA receptor function. V. C. SATPUTE*; K. M. VERDIER; C. C. HERNANDEZ; N. HU; T. EPI4K INVESTIGATORS; R. L. MACDONALD. *Vanderbilt Univ., Vanderbilt Univ., Epi4K Consortium.*

1:00 R1 **49.21** The antiepileptic drug levetiracetam suppresses non-convulsive seizure activity and reduces ischemic brain damage in rats subjected to permanent middle cerebral artery occlusion. V. SBLENDORIO; O. CUOMO; V. RISPOLI; A. LEO; A. VINCIGUERRA; G. POLITI; M. TAGLIALATELA*; G. DI RENZO; M. CATALDI. *Dept. of Neuroscience, Univ. of Naples Federico II, Univ. of Catanzaro, Univ. of Naples Federico II, Univ. of Molise.*

2:00 R2 **49.22** Epileptic Scn1a mutation reduces action potential firing of pyramidal cells. E. VELAZQUEZ*; B. BOUBION; A. ESCAYG; A. GOLDIN. *Univ. of California, Irvine, Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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3:00 R3 **49.23** Measurement of neuronal population excitability based on selective activation of interneurons. P. BENQUET*; D. COSANDIER-RIMELEE; U. GERBER; O. RAINETEAU; G. DIEUSET; F. LOPES DA SILVA; F. WENDLING. *INSERM U1099 -LTSI, Univ. of Zurich, Swammerdam Inst. for Life Sci.*

4:00 R4 **49.24** ▲ Propylparaben reduces the neuronal hippocampal damage as results of pilocarpine-induced status epilepticus in rat: Correlation with the release of GABA and glutamate. C. E. SANTANA*, SR; G. VALLE-DORADO; S. OROZCO-SUAREZ; L. BRUNO-BLANCH; A. TALEVI; L. ROCHA-ARRIETA. *Ctr. of Res. and Advanced Studies of the Natl. Polytechnic Inst., Med. Res. Unit in Neurolog. Diseases. Specialty Hospital. Natl. Med. Center, Century XXI, IMSS., Medicinal Chemistry, Dept. of Biol. Sciences, Fac. of Exact Sciences, Natl. Univ. of La Plata.*

1:00 R5 **49.25** Inhibition of Nav1.6 channels reduces hyper-excitability of Subiculum neurons in epilepsy. A. NIGAM; M. K. PATEL*. *Univ. Virginia Hlth. Sys.*

2:00 R6 **49.26** Newly born neurons in dentate gyrus are functionally integrated into neuronal circuitry in mice exhibiting chronic temporal lobe epilepsy. J. LIU*; M. HU; X. CHEN; J. ZHANG; P. YANG; Y. LIU. *Xi'an Jiaotong Univ. Hlth. Sci. Ctr.*

3:00 R7 **49.27** Reduced GABAergic inhibition in the basolateral amygdala after soman exposure: pathophysiological mechanisms underlying increased anxiety. J. P. APLAND*; E. M. PRAGER; V. I. PIDOPLICHKO; V. ARONIADOU-ANDERJASKA; M. F. M. BRAGA. *USAMRICD, Uniformed Services Univ. of the Hlth. Sci.*

4:00 R8 **49.28** Early-life seizures induced synaptic metaplasticity in hippocampal CA1 neurons. H. SUN*; F. E. JENSEN. *Univ. of Pennsylvania.*

1:00 R9 **49.29** A computational model of the influence of depolarization block on initiation of seizure-like activity. C. KIM; D. Q. NYKAMP*. *Univ. of Minnesota, Univ. Minnesota.*

POSTER

050. Neurological Disease: Cellular Mechanisms and Oxidative Stress

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 R10 **50.01** GMF- deficient mice are protected against MPTP-induced dopaminergic neurotoxicity. S. ZAHEER; M. M. KHAN; R. THANGAVEL; J. NEHMAN; D. KEMPURAJ; A. ZAHEER*. *Univ. of Iowa, VAHCS.*

2:00 R11 **50.02** Comparison of glutamate- and hydrogen peroxide-induced HT22 cell death ~ Role of rapid and persistent Erk1/2 activation by oxidative stress ~. K. SATO*; Y. YAMANAKA; Y. ASAKURA; T. NEDACHI. *Toyo Univ.*

3:00 R12 **50.03** Involvement of endoplasmic reticulum stress and calcium dyshomeostasis in zinc-induced neurotoxicity. M. KAWAHARA*; D. MIZUNO. *Musashino Univ., Musashino Univ.*

4:00 S1 **50.04** The effects of partial PPARγ agonist on neuroinflammation- induced memory deficits. H. D'ANGELO*; A. CROCKETT; S. HOPP; S. ROYER; L. ADZOVIC; G. WENK. *The Ohio State Univ.*

1:00 S2 **50.05** The phosphodiesterase inhibitor ibudilast attenuates glial cell reactivity, production of proinflammatory cytokines and neuronal loss in experimental glaucoma. J. CUEVA VARGAS*; N. BELFORTE; A. DI POLO. *Univ. of Montreal Hosp. Res. Ctr.*

2:00 S3 **50.06** Influence of a postnatal peripheral immune challenge on neuroimmune response in the developing rat brain. K. L. JONES*; K. STREIFEL; L. HEUER; C. BOOSALIS; P. LEIN; J. VAN DE WATER. *Univ. of California - Davis, Univ. of California - Davis.*

3:00 S4 **50.07** ▲ Neuroinflammation and neuronal cell death in the retina and cerebral vision structures in an ocular hypertensive rat model. A. SAPIENZA*; C. ROUBEIX; C. BOUCHER; D. GODEFROY; J. DEGARDIN; F. BRIGNOLE-BAUDOUIN; W. ROSTÈNE; C. BAUDOUIN; S. MELIK-PARSADANIANTZ. *Vision Inst.*

4:00 S5 **50.08** Acid-sensing ion channels contribute to acidosis-induced neuronal injury in cerebellar slices. X. ZHA*; N. JIANG; Y. JI. *Univ. of South Alabama, Shanghai Univ.*

1:00 S6 **50.09** Early life arsenic exposure causes dopaminergic dysfunction and its reversibility in developing brain of rats. L. P. CHANDRAVANSHI*; R. SHUKLA; R. GUPTA; Y. DHURIYA; V. KHANNA. *CSIR-IITR, CSIR-IITR.*

2:00 S7 **50.10** Prenatal infection affects the neuronal architecture and cognitive function in adult mice. W. LI*; Y. CHANG; L. LEE; L. LEE. *Natl. Taiwan Univ., Natl. Taiwan Univ. Hosp., Natl. Hlth. Res. Inst., Natl. Taiwan Univ., Natl. Taiwan Univ.*

3:00 S8 **50.11** ▲ Nicotine administration induces blood-brain barrier breakdown, brain edema formation and neuronal injuries. Exacerbation by cold environment. S. SHARMA*; J. V. LAFUENTE; A. NOZARI; A. SHARMA; Z. TIAN; D. F. MURESANU. *Uppsala Univ., Univ. of Basque Country, Massachusetts Gen. Hospital, Harvard Med. Sch., Uppsala Univ. Hosp., Univ. of Arkansas, Univ. of Med. & Pharm.*

4:00 S9 **50.12** Repulsive guidance molecule-a is involved in neuronal damage induced by Th17 cells in experimental autoimmune encephalomyelitis. S. TANABE*; T. YAMASHITA. *Grad. Sch. of Med, Osaka Univ.*

POSTER

051. Schizophrenia and Bipolar Disorder

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 S10 **51.01** CB_1-dependent lack of social novelty preference in the sub-chronic PCP rat model of schizophrenia. A. SEILLIER*; A. GIUFFRIDA. *UTHSCSA.*

2:00 S11 **51.02** Assessment of chronic perampanel treatment on hyperactivity and hippocampal reactivity of GluA1 lacking mice. M. MAKSIMOVIC*; E. R. KORPI. *Inst. of Biomedicine, Yong Loo Lin Sch. of Medicine, Natl. Univ. Hlth. System, Neurobio. and Ageing Programme, Life Sci. Institute, Natl. Univ. of Singapore, and SINAPSE, Singapore Inst. for Neurotechnology.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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3:00 S12 **51.03** Serotonin receptor 2B knockout mice present an antipsychotic-sensitive schizophrenic-like phenotype. P. M. PITYCHOUTIS*; J. ADRIEN; L. MAROTEAUX. *Dept of Biol. & TREND, Univ. of Dayton, INSERM UMR-S 839, Univ. Pierre et Marie Curie, Inst. du Fer à Moulin, INSERM UMR-S 677, Neuropsychopharmacologie, Univ. Pierre et Marie Curie 06.*

4:00 T1 **51.04** Cortex-specific disruption of p90 Ribosomal S6 kinase 2 augments 5HT2A signaling *in vivo.* H. ZHU*; R. T. STRACHAN; D. J. URBAN; M. S. FARRELL; A. HANAUER; B. L. ROTH. *Univ. of North Carolina At Chapel Hill, Duke Univ., Univ. of North Carolina at Chapel Hill, Univ. of Strasbourg.*

1:00 T2 **51.05** Prenatal kynurenine treatment in mice: Effects on placental and fetal brain kynurenines. S. BEGGIATO*; K. V. SATHYASAYKUMAR; F. NOTARANGELO; F. GIORGINI; P. J. MUCHOWSKI; R. SCHWARCZ. *Maryland Psychiatric Research, Univ. of Maryl, Dept. of Genet., Univ. of Leicester,, Gladstone Inst. Neurol. Dis.*

2:00 T3 **51.06** Examinations of conditioned taste aversion and episodic memory for schizophrenia-like rats. A. C. HUANG*; F. WU; C. WU. *Fo Guang Univ.*

3:00 T4 **51.07** Reverse translation animal preparations of hippocampal glutamatergic dysfunction in schizophrenia: GluN1, plasticity changes and genetic manipulations. S. SOUTHCOTT*; M. YANAGI; J. LISTER; C. TAMMINGA. *Univ. of Texas Southwestern Med. Ctr., Kinki Univ. Sch. of Med., Yale, UT Southwestern Med. Ctr.*

4:00 T5 **51.08** Structural basis of heteromeric comunication between 5-HT2A and mGlu2 receptors and its role in schizophrenia. J. L. MORENO*; P. MIRANDA-AZPIAZU; A. GARCIA-BEA; R. DIEZ-ALARCIA; A. M. GABILONDO; J. LOPEZ-GIMENEZ; G. MILLIGAN; J. MEANA; J. GONZALEZ-MAESO. *Icahn Sch. of Med. At Mount Sinai, Dept. Pharmacology, Univ. of the Basque Country, Inst. de Biomedicina y Biotecnología de Cantabria, Mol. Pharmacol. Group, Univ. of Glasgow,.*

1:00 T6 **51.09** Prenatal kynurenine exposure alters maturation of the conditioned fear response: Normalization with an α7nAChR partial agonist. M. L. PERSHING*; D. H. LINDQUIST; A. POCIVAVSEK; K. Y. TSENG; R. SCHWARCZ; J. P. BRUNO. *The Ohio State Univ., Univ. of Maryland Sch. of Med., Rosalind Franklin Univ. of Med. and Sci.*

2:00 T7 **51.10** Acute elevations of brain kynurenic acid induce working memory deficits: Relative contributions of α7 nicotinic and NMDA receptor activity. D. PHENIS*; S. A. VUNCK; R. SCHWARCZ; J. P. BRUNO. *The Ohio State Univ., Univ. Maryland Sch. of Med.*

3:00 T8 **51.11** Rats exposed to elevated brain levels of kynurenic acid during the prenatal period exhibit an enhanced vulnerability to working memory deficits as adults. S. A. VUNCK*; D. PHENIS; K. Y. TSENG; R. SCHWARCZ; J. P. BRUNO. *The Ohio State Univ., The Chicago Med. Sch. at Rosalind Franklin Univ. of Med. and Sci., Maryland Psychiatric Res. Center, Univ. Maryland Sch. of Med.*

4:00 T9 **51.12** ▲ D-cycloserine affects pyridoxal-5-phosphate complex causing a lowering of kynurenic acid formation. H. BARAN*; B. KEPPLINGER. *Karl Landsteiner Res. Inst. Mauer, *Neurological Inst. Med. Univ. Vienna, SeneCura Neurorehabilitation Ctr.*

1:00 T10 **51.13** ● Role of 5-HT1A and 5-HT7 receptors in the sub-chronic PCP-induced executive function deficit in C57BL/6 mice. L. RAJAGOPAL*; B. W. MASSEY; E. E. MICHAEL; Y. OYAMADA; M. MIYAUCHI; M. HUANG; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med., Dainippon Sumitomo Pharma Co., Ltd.*

2:00 T11 **51.14** Acute phencyclidine-induced increase in locomotor activity, cognitive deficit and cortical and striatal glutamate and serotonin efflux is suppressed in 5-HT7 knockout mice. M. HUANG*; L. RAJAGOPAL; S. KWON; E. E. MICHAEL; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med.*

3:00 T12 **51.15** ● Effects of phencyclidine in social groups of rats: Homecage monitoring of rodent behaviour. R. R. BRETT*; B. ALLISON; J. D. ARMSTRONG; J. A. PRATT. *Univ. of Strathclyde, Actual Analytics, Univ. of Edinburgh.*

4:00 U1 **51.16** Glutamate stimulates astrocyte release of ATP: A potential mechanism for riluzole's antidepressant action. T. YAMANASHI*; M. KUSUNOSE; T. YAMAUCHI; K. T. OTA; M. IWATA; R. S. DUMAN; K. KANEKO. *Tottori Univ., Yale Univ.*

1:00 U2 **51.17** Pregnenolone sulfate normalizes schizophrenia-like behaviors in dopamine transporter knockout mice through AKT/GSK3β signaling via the NMDA pathway. Y. SZE; P. WONG; C. CHANG; X. ZHANG*. *Duke-NUS GMS Singapore.*

2:00 U3 **51.18** Behavioral and electrophysiological abnormalities in mice deficient in kynurenine 3-monooxygenase; relevance to schizophrenia. L. SCHWIELER*; A. POCIVAVSEK; X. LIU; F. GIORGINI; P. J. MUCHOWSKI; G. ENGBERG; P. SHEPARD; S. ERHARDT; R. SCHWARCZ. *Karolinska Inst., Univ. of Maryland Sch. of Med., Univ. of Leicester, Gladstone Inst., Karolinska Inst.*

3:00 U4 **51.19** Positive allosteric modulators (PAMs) of the alpha7 nicotinic receptor potentiate the mesolimbic regulation of prefrontal glutamate release: Differential effects of Type I and Type II PAMs. D. M. BORTZ*; J. D. MIKKELSEN; J. P. BRUNO. *The Ohio State Univ., Univ. Hosp. Rigshospitalet, The Ohio State Univ.*

4:00 U5 **51.20** Activation of nucleus accumbens stimulates the release of glutamate and dopamine in prefrontal cortex: Role of local nicotine receptors. V. VALENTINI*; D. M. BORTZ; V. PERRA; G. P. SERRA; G. DI CHIARA; J. P. BRUNO. *Univ. of Cagliari, The Ohio State Univ.*

1:00 U6 **51.21** MAPK signaling correlates with the antidepressant effects of ketamine. G. Z. RÉUS*; F. G VIEIRA; H. M ABELAIRA; M. MICHELS; M. B DOS SANTOS; D. D LEFFA; D. B TOMAZ; A. S CARLESSI; F. PETRONILHO; J. QUEVEDO. *The Univ. of Texas Hlth. Sci. Ctr. At H, Univ. of Southern Santa Catarina, Univ. do Sul de Santa Catarina, The Univ. of Texas Med. Sch. at Houston.*

2:00 U7 **51.22** Inhibition of DOI-induced head twitch response in male DBA/2j mice by D3 dopamine receptor selective compounds. S. A. GRIFFIN*; C. RANGEL-BARAJAS; M. MALIK; R. H. MACH; R. R. LUEDTKE. *Univ. North Texas Hlth. Sci. Ctr., Univ. North Texas Hlth. Sci. Ctr., Univ. of Pennsylvania Sch. of Med.*

3:00 U8 **51.23** In lithium treated mice β-catenin translocates to nuclei of thalamic neurons in TCF7L2-dependent manner. K. MISZTAL; N. BROZKO; A. NAGALSKI; L. SZEWCZYK; M. B. WISNIEWSKA; J. KUZNICKI*. *IIMCB, Ctr. of New Technologies, Warsaw Univ.*

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4:00 U9 **51.24** Does the bipolar disorder risk gene ankyrin 3 have a synaptic function? M. P. LEUSSIS*; O. DURAK; M. SAITO; E. M. BERRY-SCOTT; F. CALDERON DE ALDA; L. TSAI; T. L. PETRYSHEN. *Emmanuel Col., MIT, Massachusetts Gen. Hosp., The Broad Inst.*

1:00 U10 **51.25** Lithium or valproate attenuates mania-like behaviors induced by d-amphetamine via modulating PKC δ, prodynorphin, and substance P. Y. NAM*; T. TRAN; D. DANG; J. CHEONG; T. TU; E. SHIN; Q. WANG; J. HONG; H. KIM. *Chun-Ang Univ., Kangwon Natl. university, Samyook Univ., Natl. Inst. of Envrn. Hlth. Sci.*

2:00 U11 **51.26** Identification of possible bipolar 1 disorder related brain areas and lithium drug targets via iPSC derived neurons. C. D. PERNIA*; B. TOBE; A. CRAIN; A. WINQUIST; E. SNYDER. *The Sanford Burnham Med. Res. Inst.*

POSTER

052. Schizophrenia: Mutant Models

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 U12 **52.01** ● mTOR hyperactivation and behavioral deficits in a Notch1 mouse model: Implication in major mental illness, especially schizophrenia. H. JAARO-PELED*; M. A. LANDEK-SALGADO; T. CASH-PADGETT; S. LEE; H. HIYAMA; K. NI; A. SAWA. *Johns Hopkins Univ., Astellas Pharma Inc.*

2:00 U13 **52.02** ● Subchronic pharmacologic nmda receptor antagonism with MK801 activates Akt signaling pathways. S. TAKAGI; D. T. BALU; J. T. COYLE*. *McLean Hosp., tokyo medical and dental university.*

3:00 U14 **52.03** ▲ A double hit mouse model of schizophrenia: Chronic stress impairs latent inhibition in CHL1 deficient mice. J. D. OBRAY*; B. Z. YANG; B. GUERCIO; M. BUHUSI; C. V. BUHUSI. *Utah State Univ.*

4:00 U15 **52.04** The effect of lithium on the alleviation of neuromorphological and behavioral deficits in AKT-promoted P19 embryonal carcinoma cells and Akt1 mouse model of schizophrenia. C. CHANG*; D. DA; T. WANG; W. LAI. *Natl. Taiwan Univ., Natl. Taiwan Normal Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

1:00 U16 **52.05** The effects of fingolimod administration in dysbindin-1 null-mutant mice, a genetic model for cognitive deficits. D. D. BECKER-KRAIL*; A. LAVIN. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

2:00 U17 **52.06** ● Magnetic resonance imaging reveals neuroanatomical and neurochemical homologies between the serine racemase knockout mouse and schizophrenia. M. D. PUHL*; D. MINTZOPOULOS; J. E. JENSEN; T. E. GILLIS; G. T. KONOPASKE; M. J. KAUFMAN; J. T. COYLE. *Harvard Med. School, McLean Hosp.*

3:00 U18 **52.07** ● D2 and DTNBP1 genetic interaction: Relevance to schizophrenia. S. GUADAGNA*; H. HUANG; E. BORRELLI; T. BALLARD; F. PAPALEO. *Italian Inst. of Technol., Univ. of California, F. Hoffmann-La Roche Ltd.*

4:00 U19 **52.08** The involvement of Akt1 in the modulation of immune responses and behavioral consequences in Akt1 deficient mice after neonatal poly(I:C) challenge. W. WONG*; C. HUANG; W. LAI. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

1:00 U20 **52.09** Htr2a expression responds rapidly to environmental stimuli in an Egr3-dependent manner suggesting a functional link between two schizophrenia susceptibility genes. A. M. MAPLE*; X. ZHAO; D. I. ELIZALDE; A. L. GALLITANO. *Univ. of Arizona Col. of Medicine-PHX.*

2:00 U21 **52.10** ▲ A dual hit mouse model for schizophrenia: Neural correlates of stress and latent inhibition. B. M. GUERCIO*; D. O'BRAY; C. BUHUSI; M. BUHUSI. *Utah State Univ., Utah state university.*

3:00 U22 **52.11** ● Impairment of synaptic functions and local network activity in dysbindin-1 deficient mice. J. ZHAO*; J. NORDMAN; S. KOLACHANA; Z. LI. *NIMH/NIH, Thomas Jefferson High Sch. for Sci. and Technol.*

4:00 U23 **52.12** Constant light exacerbates behavioral deficits in the dysbindin-1 mutant mouse model of schizophrenia. S. BHARDWAJ*; K. STOJKOVIC; N. CERMAKIAN; L. K. SRIVASTAVA. *Douglas Mental Hlth. Univ. Institute, McGill Univ.*

1:00 U24 **52.13** Altered regulation of cAMP/PKA signaling by PDE10A and PDE4 in DISC1 mutant mice. A. NISHI*; M. KUROIWA; T. SHUTO; N. SOTOGAKU; Y. HANADA; M. MORITA; A. SAWA; T. HIKIDA. *Kurume Univ. Sch. of Med., Kyoto Univ. Grad Sch. of Med., Johns Hopkins Univ. Grad Sch. of Med.*

2:00 U25 **52.14** Social isolated DISC1 mutant mice displayed high sensitivity to chronic cocaine exposure and rolipram treatment. T. HIKIDA*; M. MORITA; M. NIWA; M. KUROIWA; A. SAWA; A. NISHI. *Kyoto Univ. Grad. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Kurume Univ. Sch. of Med.*

3:00 U26 **52.15** Targeting Hippocampus-Prefrontal cortex pathway in the Df(22q11.2)/+ mouse model of Schizophrenia. A. TRIPATHI; E. SCHENKER; M. SPEDDING; T. M. JAY*. *INSERM U894, Physiopathologie Des Maladies Psychiatriques, Univ. Paris Descartes, Inst. de Recherches Servier.*

4:00 U27 **52.16** Alterations in the E to I balance in PGC-1α deficient mice are caused by dysfunction of inhibition from perisomatic targeting interneurons in the hippocampus. A. F. BARTLEY*; Q. LI; R. M. COWELL; J. J. HABLITZ; L. E. DOBRUNZ. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

1:00 U28 **52.17** ● Vasoactive intestinal peptide receptor 2 deficient mice exhibit dopamine D1 receptor upregulation. D. R. GEHLERT*; M. MORIN. *Lilly Res. Lab.*

2:00 U29 **52.18** Deconstructing the BLOC-1 complex: Effects of pallid and dysbindin gene mutation on recognition memory. K. H. KARLSGODT*; S. SPIEGEL; A. S. JAMES; J. JENTSCH. *Feinstein Inst. for Med. Res., Thomas Jefferson Sch. of Med., Univ. of California Los Angeles.*

3:00 U30 **52.19** Using auditory steady state responses to characterize neural connectivity in mice models of schizophrenia. Y. SHAHRIARI; S. MACDONALD; Y. SUREKHA; J. CHOI; D. J. KRUSIENSKI*. *Old Dominion Univ., Korean Univ. of Sci. and Technol., Univ. of Sci. and Technol.*

4:00 U31 **52.20** Altered spatial learning in mice with a deficit in hippocampal parvalbumin-expressing GABA-ergic interneurons leads to apparent cognitive inflexibility. S. P. PASKEWITZ*; S. WEISS; B. INBAR; M. E. ROSS; H. MOORE. *New York State Psychiatric Inst., Columbia Univ., Weill Cornell Med. Col., Columbia Univ.*

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1:00 U32 **52.21** Mitochondrial deficits in fast-spiking interneurons lead to elevated anxiety, impaired sensory gating and social dysfunction. M. INAN*; M. ZHAO; M. MANUSZAK; M. V. BOBOILA; I. DINCHEVA; V. PICKEL; F. S. LEE; A. M. RAJADHYAKSHA; T. H. SCHWARTZ; P. GOLDSTEIN; G. MANFREDI. *Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col., Weill Cornell Med. Col.*

2:00 U33 **52.22** Contrasting expression patterns for immaturity and maturity marker genes in the dentate gyrus between mouse lines with 'immature dentate gyrus' and mice overexpressing glucocorticoid receptor. H. KOSHIMIZU*; H. HAGIHARA; K. TAKAO; T. MIYAKAWA. *ICMS, Fujita Hlth. Univ., CREST, JST, Ctr. for Gene. Anal. of Behav., NIPS.*

3:00 U34 **52.23** Knockout of the schizophrenia candidate gene neuregulin 3 impairs synaptic transmission and behavior. D. J. FIGUEIREDO*; C. SHEN; X. SUN; W. XIONG; L. MEI. *Georgia Regents Univ.*

4:00 U35 **52.24** Alterations in regulation of inhibition by dopamine D4 receptors in a mouse model of interneuron transcriptional dysregulation. L. BRADY*; A. F. BARTLEY; L. E. DOBRUNZ. *Univ. of Alabama At Birmingham.*

1:00 U36 **52.25** Disruption of Nrg1-ErbB4 signaling in specific GABAergic interneurons alters cortical activity and sensory processing. R. BATISTA-BRITO*; J. MOSSNER; U. KNOBLICH; J. A. CARDIN. *Yale Univ., Yale Univ.*

2:00 V1 **52.26** Interrogation of dysregulated hippocampal activity in a mouse model of psychosis. M. O. CHOHAN*; H. MOORE. *New York State Psychiatric Inst., Columbia Univ.*

3:00 V2 **52.27** Region-specific dendritic spine loss of pyramidal neurons in dopamine transporter knockout mice. Y. KASAHARA*; Y. ARIME; F. S. HALL; G. R. UHL; H. TOMITA; I. SORA. *Intl. Res. Inst. of Disaster Scien, Tohoku Univ. Grad. Sch. of Med., Dokkyo Med. Univ. Sch. of Med., Natl. Inst. on Drug Abuse, Intramural Res. Program, NIH/DHSS, Kobe Univ. Grad. Sch. of Med.*

4:00 V3 **52.28** Biochemical and physiological deficits in gabaergic signaling in a disc1 model of schizophrenia. S. N. REID; M. C. GONDRÉ-LEWIS; K. S. JONES*. *Howard Univ. Sch. of Med., Howard Univ.*

1:00 V4 **52.29** Involvement of the receptor for advanced glycation end-product (RAGE) in redox dysregulation and neuroinflammation in an animal model of schizophrenia. D. DWIR; J. CABUNGCAL; P. STEULLET; R. TIROUVANZIAM; K. Q. DO*. *Ctr. for Psychiatric Neurosci., Res. Emory Univ. Sch. of Med.*

POSTER

053. Alcohol: Neural Mechanisms and Behavior I

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 V5 **53.01** ▲ Ethanol inhibits GABA neurons in the ventral tegmental area and dopamine release in the nucleus accumbens via presynaptic α6 nicotinic receptors on GABA terminals. T. J. WOODWARD*; S. I. SHIN; J. K. MABEY; A. C. NELSON; N. D. SCHILATY; D. H. TAYLOR; J. WU; M. MCINTOSH; S. C. STEFFENSEN. *Brigham Young Univ., Barrow Neurolog. Inst., Univ. of Utah.*

2:00 V6 **53.02** Neurosteroids block the inhibitory effects of ethanol through GABA(A) receptors on dopamine terminals in the nucleus accumbens. N. SCHILATY*; D. M. HEDGES; T. D. OKELBERRY; A. W. PEREZ; S. C. STEFFENSEN. *Brigham Young Univ.*

3:00 V7 **53.03** ▲ Functional switch in GABA(A) receptors on VTA GABA neurons by chronic ethanol. A. NELSON*; T. J. WOODWARD; J. K. MABEY; S. I. SHIN; R. TING-A-KEE; H. VARGAS-PEREZ; D. VAN DER KOOY; S. C. STEFFENSEN. *Brigham Young Univ., Univ. of Toronto.*

4:00 V8 **53.04** Transcriptome analysis on ethanol-induced brain injury among primary cultures of brain cells and slices. K. SUGIMOTO*; H. TANAKA; R. KATADA; K. IGARASHI; M. YOSHIDA; H. MATSUMOTO. *Osaka Univ. Grad. Sch. of Med., Ritsumeikan Univ.*

1:00 V9 **53.05** A comparison of neuroimmune alterations produced by acute ethanol exposure in late adolescent, adult, and aged Fisher 344 rats. A. GANO*; T. L. DOREMUS-FITZWATER; T. DEAK. *Binghamton Univ.*

2:00 V10 **53.06** Activity of the striatal indirect pathway neurons alters ethanol seeking behaviors in mice. M. B. BLEGEN*; R. BOCK; M. F. ADROVER; V. A. ALVAREZ. *Natl. Inst. on Alcohol Abuse and Alcoholism.*

3:00 V11 **53.07** Alcohol and the prescription opioid analgesic, oxycodone, disrupt opioid peptide-mediated long-term depression of excitatory transmission in the dorsal striatum. B. K. ATWOOD*; D. LOVINGER. *NIAAA.*

4:00 V12 **53.08** Ethanol decreases the spontaneous firing rate of a specific subset of Globus Pallidus neurons. K. P. ABRAHAO*; D. M. LOVINGER. *NIAAA/NIH.*

1:00 V13 **53.09** Rapid adaptation of dopamine D2 receptors in brain and blood following acute ethanol administration. E. JANG*; R. J. FOLSOM; J. R. LINZEY; L. FRIEND; C. F. BURNETT; S. H. BURNETT; S. C. STEFFENSEN. *Brigham Young Univ.*

2:00 V14 **53.10** Social isolation stress affects dopamine signaling and kappa opioid receptor system in the nucleus accumbens and the basolateral amygdala. A. KARKHANIS*; J. ROSE; B. A. MCCOOL; J. L. WEINER; S. R. JONES. *Wake Forest Sch. of Med.*

3:00 V15 **53.11** CRF-R1 modulation of extracellular serotonin and dopamine in mice given intermittent access to alcohol. L. S. HWA*; E. HOLLY; A. SHIMAMOTO; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ.*

4:00 V16 **53.12** Monoamine oxidase (MAO) inhibitors and knockdown of MAO transcriptional activator, Kruppel-like Factor 11, exhibit neuroprotective effects against ethanol-induced neurotoxicity and cell death in SH-SY5Y cells. J. W. DUNCAN*; S. HARRIS; X. ZHANG; X. OU; C. A. STOCKMEIER; J. WANG. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Case Western Reserve Univ., Univ. of Mississippi Med. Ctr.*

1:00 V17 **53.13** Activity of D1R MSNs in the dorsomedial striatum is essential for voluntary alcohol consumption. J. WANG*; Y. CHENG; X. WANG. *Texas A&M Hlth. Sci. Ctr.*

2:00 V18 **53.14** The role of VTA GABA(A) receptors in maladaptive decision making and increased phasic dopamine release following chronic adolescent alcohol intake. A. G. SCHINDLER*; K. T. TSUTSUI; H. H. N. HOANG; J. J. CLARK. *Univ. of Washington.*

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3:00 V19 **53.15** Up-regulation of novel synaptic GABA-A receptor subtypes contributes to altered mIPSC kinetics and pharmacology in rat hippocampus after acute or chronic ethanol intoxication. R. W. OLSEN*; A. K. LINDEMEYER; X. M. SHAO; J. LIANG. *Geffen Sch. of Med. At UCLA, Geffen Sch. of Med. at UCLA.*

4:00 V20 **53.16** Intermittent and binge-like alcohol drinking in Gabra2 knock-in mice with benzodiazepine- or ethanol-insensitive α2 subunits. E. L. NEWMAN*; G. GUNNER; P. HUYNH; S. MOSS; U. RUDOLPH; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ., Tufts Univ. Sackler Sch. of Grad. Biomed. Sci., Harvard Med. Sch.*

1:00 V21 **53.17** Zebrafish and conditioned place preference: A translational model of drug reward. D. J. ECHEVARRIA*; A. D. COLLIER; E. M. CAMARILLO; K. M. KHAN. *Univ. Southern Mississippi, Univ. of Southern Mississippi.*

2:00 V22 **53.18** Incubation of alcohol craving is dependent on alcohol cue-activated neurons in the nucleus accumbens core. C. MONTANARI*; N. SUTO; T. KERR; D. WATRY; B. STARR; B. T. HOPE; P. P. SANNA; F. WEISS. *Scripps Res. Inst., NIDA/IRP/NIH.*

3:00 V23 **53.19** Genetic influence of Kcnn3 on extinction learning identifies a novel target for enhancing inhibitory learning of alcohol-associated cues. J. T. GASS*; L. JAMES; J. T. MCGONIGAL; P. J. MULHOLLAND. *Med. Univ. South Carolina.*

POSTER

054. Cocaine Reinforcement I

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 V24 **54.01** Synaptic activity through GluN2A-containing NMDA receptors mediates ability of BDNF-TRKB signaling to suppress cocaine-seeking in rats. B. GO*; J. F. MCGINTY. *Med. Univ. of South Carolina.*

2:00 V25 **54.02** Role of calcium-permeable AMPA receptors in the mPFC in cue-induced reinstatement of cocaine seeking. J. I. PEÑA BRAVO*; A. LAVIN. *Med. Univ. of South Carolina.*

3:00 V26 **54.03** Effects of baclofen on cue-induced cocaine-reinstatement in the rat. T. D. WOLINSKY*; C. FROGER-COLLÉAUX; C. RONDEAU; S. PAILLARD; V. CASTAGNE. *Porsolt.*

4:00 V27 **54.04** More than a replacement therapy: Amphetamine treatment reverses the behavioral and neurochemical consequences of long-access cocaine self- administration. C. SICILIANO*; E. S. CALIPARI; S. R. JONES. *Wake Forest Sch. of Med., Mount Sinai Sch. of Med.*

1:00 V28 **54.05** Inactivation of the lateral habenula reduces the anxiogenic response of both undrugged and cocaine-treated rats in the elevated plus maze. K. SHELTON*; K. BOGYO; M. B. KURLAND; T. SCHICK; S. SVED; S. JANUSONIS; A. ETTENBERG. *Univ. of California, Santa Barbara.*

2:00 V29 **54.06** Intra-ventral tegmental area infusions of the nonselective CRF receptor antagonist astressin B reduces the anxiogenic response of rats to cocaine in a runway model of drug self-administration. S. COTTEN*, III; A. K. KLEIN; M. A. BRITO; T. OHANA; B. MARGOLIN; A. WEI; A. ETTENBERG. *UC Santa Barbara.*

3:00 V30 **54.07** Episodic social defeat stress escalates dopamine release and cocaine self-administration in mice. X. HAN*; L. ALBRECHET-SOUZA; M. R. DOYLE; E. Y. ZHANG; J. F. DEBOLD; K. MICZEK. *Tufts Univ.*

4:00 V31 **54.08** Taking STEPs to reduce cocaine-seeking behavior. B. M. SIEMSEN*; M. CHATTERJEE; P. L. LOMBROSO; J. F. MCGINTY. *Med. Univ. of South Carolina, Yale Univ. Sch. of Med.*

1:00 V32 **54.09** The role of src family kinases in the suppressive effect of prefrontal cortical BDNF on cocaine seeking. S. M. BARRY*; J. F. MCGINTY. *Med. Univ. of South Carolina.*

2:00 W1 **54.10** The role of HDAC3 in the acquisition and extinction of cocaine-cue memories. Y. ALAGHBAND*; J. L. KWAPIS; M. ASTARABADI; J. D. RAYBUCK; D. P. MATHEOS; K. M. LATTAL; M. A. WOOD. *Univ. of California, Irvine, Oregeon Hlth. and Sci. Univ.*

3:00 W2 **54.11** The role of neuron specific nucleosome remodeling complex subunit BAF53b in cocaine-associated behaviors. A. WHITE*; M. A. WOOD. *UC Irvine, Univ. of California Irvine.*

4:00 W3 **54.12** A histone deacetylase 3 inhibitor enhances extinction and attenuates reinstatement of self-administration in rats. L. N. HITCHCOCK*; J. D. RAYBUCK; M. A. WOOD; K. M. LATTAL. *Oregon Hlth. & Sci. Univ., Univ. of California, Irvine.*

1:00 W4 **54.13** Bi-directional role of CRHR1 in control of dopamine signalling during cocaine relapse. R. E. BERNARDI*; L. BROCCOLI; A. C. HANSSON; J. M. DEUSSING; R. SPANAGEL. *Central Inst. of Mental Hlth., Max Planck Inst. of Psychiatry.*

2:00 W5 **54.14** One-trial cocaine-induced behavioral sensitization in preweanling rats: role of dopamine and serotonin receptor subtypes. M. J. STONE; A. MOHD-YUSOF; A. E. GONZALEZ; M. L. BECKER; J. A. MORTOLA; A. VELIZ; S. A. MCDOUGALL*. *California State Univ.*

3:00 W6 **54.15** Role of amygdalar CaMKII in cocaine-associated memory reconsolidation and extinction. M. T. RICH*; T. ABBOTT; K. STONE; L. CHUNG; C. COLANGELO; A. NAIRN; J. R. TAYLOR; M. M. TORREGROSSA. *Univ. of Pittsburgh, Yale Univ.*

4:00 W7 **54.16** Glutamatergic transmission during adolescence is critically involved in the rewarding effects of cocaine in rats: Effects of early life stress. R. M. O' CONNOR*; R. D. MOLONEY; S. VLACHOU; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Dublin City Univ., Univ. Col. Cork.*

1:00 W8 **54.17** Caffeine's neuroprotective properties against the reinforcing effects of cocaine. L. B. MALAVE*; P. A. BRODERICK. *Sophie Davis Sch. CCNY, CUNY Grad. Ctr., NYU Langone Med. Ctr.*

2:00 W9 **54.18** ▲ Arc and BDNF expression after cocaine self-administration or cue-induced reinstatement of cocaine-seeking in adolescent and adult male rats. A. WHITE; C. LI; J. F. MCGINTY; K. J. FRANTZ*. *Georgia State Univ., Temple Univ., Med. Univ. of South Carolina.*

3:00 W10 **54.19** Orexin/hypocretin in the paraventricular nucleus of the thalamus induces cocaine-seeking behavior in rats: reversal with specific orexin/hypocretin receptor antagonists. A. MATZEU*; F. WEISS; R. MARTIN-FARDON. *The Scripps Res. Inst.*

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4:00 W11 **54.20** ▲ Temporary inactivation of the paraventricular nucleus of the thalamus specifically blocks cocaine-seeking behavior: Comparison with natural reward seeking. R. MARTIN-FARDON*; F. WEISS; A. MATZEU. *The Scripps Res. Inst.*

1:00 W12 **54.21** Cocaine history sensitizes postsynaptic GABA receptors on dorsal raphe serotonin neurons in a stress-induced relapse model in rats. C. LI*; L. KIRBY. *Temple Univ. Sch. of Med.*

2:00 W13 **54.22** Excitability of mPFC pyramidal neurons was abnormally increased in Fisher F344 rats after low doses of cocaine self-administration. W. N. WAYMAN*; L. CHEN; X. HU; T. C. NAPIER. *Rush Univ., Rush Univ., Rush Univ.*

3:00 W14 **54.23** Using a rodent model of simultaneous cocaine and alcohol use to screen medications to prevent cocaine relapse. B. STENNETT*; L. KNACKSTEDT. *Univ. of Florida.*

4:00 W15 **54.24** The role of nucleus accumbens glutamate in the context-primed relapse of cocaine-seeking after abstinence. L. A. KNACKSTEDT*; M. SCHWENDT. *Univ. of Florida.*

1:00 W16 **54.25** Glucagon-like peptide-1 receptor activation in the VTA or accumbens core attenuates cocaine taking and seeking in rats. E. G. MIETLICKI-BAASE*; K. Y. IGE; D. R. OLIVOS; R. C. PIERCE; M. R. HAYES; H. D. SCHMIDT. *Univ. of Pennsylvania.*

2:00 W17 **54.26** The dorsal agranular insular cortex bidirectionally regulates drug-prime vs. cue-induced reinstatement of cocaine-seeking behavior. C. V. COSME*; R. T. LALUMIERE. *Univ. of Iowa.*

3:00 W18 **54.27** The role of nuclear histone deacetylase 5 in cocaine addiction behavior. M. B. CARREIRA*; M. TANIGUCHI; D. GUZMAN; E. B. LARSON; D. W. SELF; C. W. COWAN. *McLean Hosp., UT Southwestern Med. Ctr., Harvard Med. School, McLean Hosp., Univ. of Minnesota.*

4:00 W19 **54.28** The selective and intake-dependent plasticity in group 1 metabotropic glutamate receptor signaling following cocaine self-administration. M. GHASEMZADEH*; M. VUONCINO; P. HEASLIP; D. FABRIS; R. DIDOMINICIS; C. SZEWCZYK; C. GWINN; G. RIES; J. R. MANTSCH. *Marquette Univ.*

1:00 W20 **54.29** Sex differences in attenuation of cocaine conditioned cue reinstatement by the central oxytocin receptor agonist FE-202739. L. ZHOU*; S. M. GHEE; J. PETERS; R. E. SEE; C. M. REICHEL. *Med. Univ. of South Carolina.*

2:00 W21 **54.30** Withdrawal periods following extended access cocaine self-administration do not alter drug intake during binge or resistance to punishment. D. M. DIETZ*; D. N. ADANK; A. GANCARZ-KAUSCH. *State Univ. of New York At Buffalo.*

POSTER

055. Methamphetamine and MDMA

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 W22 **55.01** In a warm environment hyperthermia induced by 3,4-methylenedioxy-N-methylamphetamine (MDMA) is dependent on locomotion. M. V. ZARETSKAIA*; D. V. ZARETSKY; P. J. DURANT; D. E. RUSYNIAK. *IU Sch. of Med.*

2:00 W23 **55.02** Modeling orexinergic neurotransmission in temperature responses to methamphetamine. A. BEHROUZVAZIRI*; D. FU; P. TAN; Y. YOO; M. ZARETSKAIA; D. RUSYNIAK; D. V.ZARETSKY; Y. MOLKOV. *Indiana Univ. Purdue Univ. Indianapolis, Park Tudor Sch., Carmel High Sch., Indiana Univ. Purdue Univ. Indianapolis, Indiana Univ. Sch. of Med.*

3:00 W24 **55.03** Locomotion-thermoregulatory coupling in responses to methamphetamine (Meth). D. V. ZARETSKY*; M. V. ZARETSKAIA; Y. YOO; A. BEHROUZVAZIRI; D. E. RUSYNIAK; Y. MOLKOV. *Indiana Univ. Sch. of Med., IUPUI.*

4:00 W25 **55.04** Prior nicotine self-administration attenuates dopaminergic deficits induced by subsequent high-dose methamphetamine administration. M. G. BALADI*; S. M. NIELSEN; G. R. HANSON; A. E. FLECKENSTEIN. *Univ. of Utah, Univ. of Utah.*

1:00 W26 **55.05** ▲ Effects of early adolescent methamphetamine and nicotine exposure on behavior and cognition in adolescent mice. J. M. BUCK; A. SCHULTHEIS; J. A. SIEGEL*. *Sewanee: The Univ. of the South.*

2:00 W27 **55.06** Role of BDNF-TRKB signaling in depression-like behaviors in mice after withdrawal from repeated administration of methamphetamine. Q. REN*; M. MA; C. YANG; W. YAO; J. ZHANG; K. HASHIMOTO. *Chiba Univ. Ctr. Forensic Mental Hlth.*

3:00 W28 **55.07** ▲ Clobenzorex-treatment induces amphetamine-like neurotoxicity. G. S. ROJAS*; V. PALAFOX-SÁNCHEZ; G. RAMÍREZ-GARCÍA; A. PATRICIO; D. LIMÓN. *Benemerita Univ. Autonoma De Puebla.*

4:00 W29 **55.08** Age-dependent effects of nicotine pretreatment on methamphetamine-induced dopaminergic deficits: role of alpha4* and alpha6* nicotinic receptor subtypes. P. L. VIEIRA-BROCK*; L. M. MCFADDEN; S. M. NIELSEN; G. R. HANSON; A. E. FLECKENSTEIN. *Univ. of Utah, Univ. of Utah.*

1:00 W30 **55.09** Multidimensional assessment of responses to a drug-associated cue in healthy humans. L. M. MAYO*; H. DE WIT. *Univ. of Chicago.*

2:00 W31 **55.10** Ginsenoside Re attenuates methamphetamine-induced neurotoxicity by microglial inactivation via genetic inhibition of PKCδ. M. WIE*; T. L. NGUYEN; D. DANG; H. TRAN; Y. NAM; E. SHIN; S. K. KO; H. KIM. *Lab. of Vet. Toxicology, Col. of Vet. Med., Kangwon Natl. Univ.,, Neuropsychopharm. and Toxicology Program, Col. of Pharmacy, Kangwon Natl. Univ., Dept. of Oriental Med. Food & Nutrition, Semyung Univ.*

3:00 W32 **55.11** The relationship between amphetamine-induced cerebrovascular and neurotoxicity to changes in the expression of genes related to the immune system present in circulating blood. J. F. BOWYER*; N. M. CRABTREE; K. M. TRANTER; N. I. GEORGE; J. P. HANIG; R. P. SCHLEIMER. *NCTR/FDA, NCTR/FDA, NCTR/FDA, FDA/CDER, Northwestern Feinberg Sch. of Med.*

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4:00 W33 **55.12** Neurotoxic administration of methamphetamine alters microtubules within rat striatal dopaminergic axons. B. A. KILLINGER*; A. MOSZCZYNSKA. *Wayne State Univ., Wayne State Univ.*

1:00 W34 **55.13** Chronic methamphetamine accelerates pacemaking activity in the substantia nigra pars compacta. S. M. GRAVES*; J. N. GUZMAN; E. ZAMPESE; E. ILIJIC; J. H. KORDOWER; B. K. YAMAMOTO; D. J. SURMEIER. *Northwestern Univ., Rush Univ., Univ. of Toledo.*

2:00 W35 **55.14** ▲ Methamphetamine induces direct effects on microglia. J. AREDO*; K. CONANT; A. KASSARDJIAN; K. MAGUIRE-ZEISS. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

3:00 W36 **55.15** ● Super-resolution assessment of methamphetamine altered VMAT2 presynaptic terminal distribution. C. L. GERMAN*; M. V. GUDHETI; G. R. HANSON; E. M. JORGENSEN; A. E. FLECKENSTEIN. *Univ. of Utah, Vutara, Univ. of Utah, Univ. of Utah, Howard Hughes Med. Inst.*

4:00 X1 **55.16** Pathological brain hyperthermia induced by MDMA (ecstasy) in rats under conditions associated with human 'rave parties': critical role of peripheral vasoconstriction. E. A. KIYATKIN*; A. H. KIM; K. T. WAKABAYASHI; M. H. BAUMANN; Y. SHAHAM. *NIDA-IRP, NIH, DHHS.*

1:00 X2 **55.17** The role of CDCrel-1 in methamphetamine-induced impairment of VMAT2 vesicle trafficking. H. D. CHAUHAN*; A. MOSZCZYNSKA. *Eugene Applebaum Col. of Pharm. and Hlth. Sci.*

2:00 X3 **55.18** Neurotensin modulates the METH-induced striatal apoptosis through darpp32 phosphorylation, nitric oxide accumulation and glial cell activation. Q. LIU*; A. HAZAN; E. GRINMAN; J. A. ANGULO. *Hunter College, City Univ. of New York, Grad. Ctr.*

3:00 X4 **55.19** Cannabinoid CB1 receptor mediates dopaminergic neurotoxicity induced by methamphetamine. H. KIM*; D. DANG; T. NGUYEN; H. TRAN; Y. NAM; E. SHIN. *Kangwon Natl. Univ.*

4:00 X8 **56.04** Design, synthesis, and pharmacological characterization of selective serotonin (5-HT) 5-HT2C receptor positive allosteric modulators as potential small molecule therapeutics for psychostimulant use disorders. C. WILD*; C. DING; G. ZHANG; N. ANASTASIO; R. FOX; S. STUTZ; R. HARTLEY; K. CUNNINGHAM; J. ZHOU. *Univ. of Texas Med. Br.*

1:00 X9 **56.05** Mothers with addictions show reduced reward response to infant cues: Can oxytocin reverse this pattern? S. KIM*; U. IYENGAR; L. C. MAYES; M. N. POTENZA; H. J. V. RUTHERFORD; L. STRATHEARN. *Baylor Col. of Med., Baylor Col. of Med., Univ. Col. London, Yale Univ. Sch. of Med.*

2:00 X10 **56.06** Transcranial direct current stimulation for the reduction of alcohol cravings. D. RUDDER*; C. TESCHE; P. COULOMBE. *Univ. of New Mexico.*

3:00 X11 **56.07** "Analyzing the concentration and the effects of omega 3 on nicotine dependence". J. ZAPAROLI*; E. K. SUGAWARA; A. A. L. SOUZA; S. TUFIK; J. F. GALDURÓZ. *UNIFESP - Univ. Federal De São Paulo.*

4:00 X12 **56.08** ● Results of a double-blind, placebo-controlled study of the safety and pharmacokinetics of noribogaine administered to healthy volunteers. L. FRIEDHOFF; M. LOCKHART; F. LAM; N. HUNG; C. T. HUNG; P. GLUE*. *Demerx Inc, Univ. of Auckland, Zenith Technol. Ltd, Dunedin Sch. of Med.*

1:00 X13 **56.09** Serum exosomal microRNA-137 as biomarker for repeated cocaine exposure in mice. E. NAM; H. IM*. *Korea Inst. of Sci. & Technol.*

2:00 X14 **56.10** Chronic oral nicotine consumption does not alter circulating estradiol levels but reduces cotinine in sera and urine of female rats. S. HALDER; J. M. LYNCH; A. R. PEARCE*. *Arkansas State Univ., Arkansas State Univ., Arkansas State Univ.*

3:00 X15 **56.11** A preclinical electrophysiological biomarker of D3-receptor antagonism using the selective D3-receptor antagonist PF-04363467. C. B. PURYEAR*; D. P. NGUYEN; T. KISS; D. L. BUHL; A. MEAD. *Pfizer, Inc.*

POSTER

056. Addiction Treatment: Translational and Clinical Studies

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 X5 **56.01** ● Intravenous administration of nicotinamide adenine dinucleotide significantly reduces self report craving ratings associated with opiate and alcohol withdrawal. S. L. BROOM*; R. F. MESTAYER; E. STULLER; D. W. COOKE; J. M. CARSON; K. R. SIMONE; P. NORRIS; P. HOTARD. *William Carey Univ., Springfield Wellness Ctr., Stullerresettings, LLC, Sober MD, LLC.*

2:00 X6 **56.02** The neural correlates of reorganizing attachment in mothers with unresolved trauma. U. IYENGAR*; S. KIM; L. STRATHEARN. *Baylor Col. of Med., Univ. Col. London, Menninger.*

3:00 X7 **56.03** Optogenetically inspired deep brain stimulation reverses drug-evoked plasticity. M. CREED*; V. PASCOLI; C. LÜSCHER. *Univ. of Geneva, Univ. Hosp. of Geneva.*

POSTER

057. Learning, Memory, Dependence, and Addiction

Theme C: Disorders of the Nervous System

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 X16 **57.01** Expression of c-Fos after GABA-A receptor agonist gaboxadol in mouse brain regions: link to aversion? E. R. KORPI*; O. VEKOVISCHEVA; E. KANKURI; E. VASHCHINKINA. *Univ. of Helsinki, Dept. of Pharmacol.*

2:00 X17 **57.02** ● Cocaine-related deficits in cognitive flexibility and inhibitory response control are attenuated by the alpha-2A adrenergic agonist guanfacine in a novel nose-poke based set-shifting task in rats. P. M. CALLAHAN*; L. VANDENHUERK; A. V. TERRY, Jr. *Georgia Regents Univ., Georgia Regents Univ.*

3:00 X18 **57.03** Methamphetamine-induced inhibition of perirhinal long-term depression underlies meth-induced deficits in novel object recognition memory. M. D. SCOFIELD*; H. L. TRANTHAM-DAVIDSON; M. SCHWENDT; J. PETERS; R. E. SEE; C. M. REICHEL. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Univ. of Florida.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 X19 **57.04** Activation of perirhinal mglur5 receptors reverses recognition memory deficits resulting from long-access methamphetamine self-administration in rats. J. PETERS; M. D. SCOFIELD; H. TRANTHAM-DAVIDSON; S. M. GHEE; R. E. SEE*; C. M. REICHEL. *Med. Univ. of South Carolina.*

1:00 X20 **57.05** Relapse involving choice between a novel cue and a methamphetamine-conditioned cue relies on perirhinal cortex. J. PETERS*; M. D. SCOFIELD; S. M. GHEE; C. M. REICHEL. *Med. Univ. of South Carolina.*

2:00 X21 **57.06** Effects of environmental enrichment on memory impairment induced by toluene. N. PAEZ-MARTINEZ*; R. C. SOLIS-GUILLEN; S. MONTES. *Escuela Superior de Medicina. Inst. Politécnico Nacional, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz, Inst. Nacional de Neurología y Neurocirugía Manuel Velasco Suarez.*

3:00 X22 **57.07** Redox-based epigenetic changes via the cysteine transporter EAAT3: A novel unifying mechanism for the actions of drugs of abuse. M. S. TRIVEDI*. *Northeastern Univ.*

4:00 X23 **57.08** Amygdala-hippocampal phospholipase d (PLD) signaling: Identifying neural substrates for therapeutic disruption of cocaine-environment maladaptive long-term memories. B. KRISHNAN*. *Univ. of Texas Med. Br. At Galveston.*

1:00 X24 **57.09** Prelimbic beta-adrenergic receptor blockade during trace fear memory retrieval reduces fear and prevents reinstatement following extinction. D. MUELLER*; J. M. OTIS; M. K. FITZGERALD; J. L. BURKARD; M. A. DRAKE. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

2:00 Y1 **57.10** Inhibition of PKA signaling in the prelimbic cortex persistently disrupts retrieval of a cocaine-associated memory and prevents subsequent reinstatement. M. FITZGERALD*; J. M. OTIS; M. A. DRAKE; J. L. BURKARD; D. MUELLER. *Univ. of Wisconsin - Milwaukee.*

3:00 Y2 **57.11** Infralimbic NR2A-containing NMDA receptors are necessary for the reconsolidation of cocaine self-administration memory. M. HAFENBREIDEL*; C. RAFA TODD; J. M. OTIS; R. C. TWINING; D. MUELLER. *Univ. of Wisconsin-Milwaukee.*

4:00 Y3 **57.12** Prelimbic neuronal excitability and synaptic potentiation underlie cocaine-associated memory retrieval and are reversible during retrieval. J. M. OTIS*; M. A. DRAKE; J. L. BURKARD; D. MUELLER. *Univ. Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

1:00 Y4 **57.13** Paternal cocaine exposure elicits transgenerational learning deficits. M. E. WIMMER*; L. A. BRIAND; C. P. CRAIGE; L. A. GUERCIO; A. C. ARREOLA; H. D. SCHMIDT; R. C. PIERCE. *Univ. Pennsylvania.*

2:00 Y5 **57.14** The interaction between NMDA receptor and CaMKII in prelimbic cortex modulates extinction of cocaine self-administration. Z. ZHANG; Y. ZHANG; S. CHEN; H. SHEN*. *Natl. Inst. On Drug Dependence, Peking Univ., Guangzhou Med. Univ.*

3:00 Y6 **57.15** Short-term exposure to nicotine sensitizes the anxiety-producing effects of nicotine when later encountered. R. C. BARNET*; A. HOGENMILLER. *Col. William & Mary.*

4:00 Y7 **57.16** The role of the dentate gyrus in morphine CPP: Adult-generated neurons regulate extinction of reward learning. P. D. RIVERA*; R. K. RAGHAVAN; S. YUN; M. MCGOVERN; S. LATCHNEY; S. BIRNBAUM; A. J. EISCH. *UT Southwestern Med. Ctr.*

1:00 Y8 **57.17** The effects of β-arrestin dependent signaling pathways on alcohol dependence and memory reconsolidation. X. LIU*; Y. TAO; L. MA; B. HUANG; L. MA. *The Inst. of Brain Science, Fudan Univ.*

2:00 Y9 **57.18** ▲ Unique molecular alterations in synapses following acute cocaine and novelty exposure. V. SELVAM*; F. C. CRUZ; R. M. LEAO; B. T. HOPE. *Natinal Inst. On Drug Abuse - NIH.*

3:00 Y10 **57.19** Systemic inhibition of myosin II disrupts the storage of drug-associated memories. E. J. YOUNG*; A. M. BLOUIN; S. B. BRIGGS; G. RUMBAUGH; C. A. MILLER. *Scripps Res. Inst., Scripps Res. Inst.*

4:00 Y11 **57.20** Inoculation stress model of environmental enrichment. E. J. CROFTON*; Y. ZHANG; X. FAN; D. LI; T. A. GREEN. *Univ. of Texas Med. Br.*

1:00 Y12 **57.21** Effect of chronic misused solvent exposure on adrenergic responses in isolated perfused rat heart. N. ALVARADO GÓMEZ; G. HERRERA LÓPEZ; L. ORTEGA VARELA; D. GODÍNEZ HERNÁNDEZ; M. Y. GAUTHEREAU*. *UMSNH.*

2:00 Y13 **57.22** ▲ Comparison of conditioned place preference and progressive ratio operant conditioning to high fat/sugar foods: Correlation with nucleus accumbens c-Fos expression. G. C. LOPEZ*; M. L. NGBOKOLI; J. C. HONOHAN; R. H. MARKSON; L. CAMERON; K. S. BANTIS; E. LUNER; J. A. SCHROEDER. *Connecticut Col., Col. of William and Mary.*

3:00 Y14 **57.23** Synaptic depotentation via mGluR5 activation and AMPAR internalization in the nucleus accumbens drives cocaine-primed reinstatement. M. A. BENNEYWORTH*; A. J. ASP; M. C. HEARING; C. E. SCHMIDT; S. R. EBNER; A. E. INGEBRETSON; M. J. THOMAS. *Univ. of Minnesota.*

4:00 Y15 **57.24** ▲ Increased BDNF in hippocampus of female rats after acute administration of methylphenidate and hormonal influence. L. FREESE*; Y. BOITA; N. D. COUTO-PEREIRA; G. AGNES; M. SOUZA; H. BARROS. *Univ. Federal de Ciências Da Saúde de Porto Alegre - UFCSPA.*

POSTER

058. Olfaction: Central Circuits and Neurotransmitters

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Y16 **58.01** Integration of olfactory bulb glomeruli by the anterior olfactory nucleus. B. E. SANCHEZ*; N. E. SCHOPPA. *Ucdenver Anschutz Med. Campus.*

2:00 Y17 **58.02** Role of basal forebrain cholinergic neurons in olfactory learning. A. NUNEZ-PARRA; D. RESTREPO*. *Univ. Colorado Med. Sch.*

3:00 Y18 **58.03** Structural basis for serotonergic regulation of neural circuits in the mouse olfactory bulb. Y. SUZUKI; E. KIYOKAGE*; K. TOIDA. *Kawasaki Med. Sch.*

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4:00 Y19 **58.04** Illuminating the role of inhibitory microcircuits in higher-order olfactory processing in zebrafish. T. FRANK*; R. W. FRIEDRICH. *Friedrich Miescher Inst.*

1:00 Y20 **58.05** Modulation of amygdalar circuits important for chemosensory signal processing. L. BIGGS; M. MEREDITH*. *Florida State Univ., Florida State Univ.*

2:00 Y21 **58.06** Disinhibition mediated by VIP-interneurons in piriform cortex. A. M. LARGE; N. W. VOGLER; A. M. OSWALD*. *Univ. of Pittsburgh.*

3:00 Y22 **58.07** Characterization of postsynaptic targets of M72 odorant receptor expressing olfactory sensory neurons via local electroporation. A. LIU*; M. GERAMITA; N. N. URBAN. *Univ. of Pittsburgh, Carnegie Mellon Univ.*

4:00 Y23 **58.08** BDNF increases apical spine density of olfactory bulb granule cells *in vivo.* B. MCDOLE; C. ISGOR; K. M. GUTHRIE*. *Florida Atlantic Univ.*

1:00 Y24 **58.09** Role of oligophrenin 1 in circuit formation in the olfactory bulb of a mouse model of X-linked intellectual disability. N. REDOLFI; E. SAVOIA; I. ZAMPARO; C. LODOVICHI*. *Fondazione Ricerca Biomedica-Onlus VIMM, Dept. di Bioscienze, Neurosci. Institute-CNR.*

2:00 Y25 **58.10** Differential projection patterns of principal neurons in the olfactory cortex. C. G. LAU*; C. MAZO; J. GRIMAUD; Y. SHIMA; S. NELSON; V. N. MURTHY. *Harvard Univ., Brandeis Univ., Harvard Univ.*

3:00 Y26 **58.11** Genome-scale analysis of main and accessory olfactory bulb spatial heterogeneity. J. B. CASTRO*; T. NOTO; S. J. TRIPATHY. *Bates Col., Bates Col., Univ. of British Columbia.*

4:00 Y27 **58.12** Neocortical markers in the olfactory cortex. P. C. BRUNJES*; S. K. OSTERBERG. *Univ. Virginia.*

POSTER

059. Retina: Circuits and Coding

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Y28 **59.01** Diversity and light adaptation of parallel processing streams in the retina. J. PEARSON*; D. KERSCHENSTEINER. *Washington Univ. In St. Louis.*

2:00 Y29 **59.02** ● Blockade of pathological ganglion cell hyperactivity improves optogenetically evoked responses in a mouse model of retinitis pigmentosa. J. M. BARRETT*; L. BARCA; P. DEGENAAR; E. SERNAGOR. *Newcastle Univ., Newcastle Univ.*

3:00 Y30 **59.03** Correlations between interneuron and output neuron populations of the retina. M. D. MENZ*; S. BACCUS. *Stanford Univ.*

4:00 Y31 **59.04** A successful model for visual responses of alpha retinal ganglion cells to natural stimuli. B. KRIEGER*; M. QIAO; X. DUAN; J. R. SANES; M. MEISTER. *Caltech, Harvard Univ.*

1:00 Y32 **59.05** Exclusive cholinergic excitation of on-off ganglion cells in rat retina. S. SETHURAMANUJAM; M. M. SLAUGHTER*. *SUNY Buffalo Sch. Med., SUNY Buffalo Sch. Med.*

2:00 Z1 **59.06** Large-Scale recording of light-evoked responses in the retinal ganglion cell layer of the explanted retina: A new HD experimental platform. S. DI MARCO*; A. MACCIONE; G. HILGEN; S. PIRMORADIAN; T. NIEUS; M. HENNIG; E. SERNAGOR; L. BERDONDINI. *Inst. Italiano Di Tecnologie, Newcastle Univ., Inst. for Adaptive and Neural Computation.*

3:00 Z2 **59.07** Characterising retinal population response with high density multielectrode arrays. S. PIRMORADIAN*; G. HILGEN; O. MUTHMANN; A. MACCIONE; U. BHALLA; L. BERDONDINI; E. SERNAGOR; M. HENNIG. *Univ. of Edinburgh, Univ. of Newcastle upon Tyne, Tata Inst. of Fundamental Res., Italian Inst. of Technol.*

4:00 Z3 **59.08** Expansion-selective ganglion cells in frog retina. H. ISHIKANE*; M. MATSUZAKI. *Senshu Univ., Grad. Sch. of Letters, Senshu Univ., Ctr. for Psychological Science, Inst. for the Develop. of Social Intelligence, Senshu Univ.*

1:00 Z4 **59.09** ● Temporally modulated long-wavelength light radically slows eye growth in young tree shrews. T. J. GAWNE*; J. T. SIEGWART; A. H. WARD; T. T. NORTON. *Univ. Alabama Birmingham.*

2:00 Z5 **59.10** Signal recombination in the inner retina. N. TIEN*; J. DEMAS; D. KERSCHENSTEINER. *Washington Univ. in St. Louis, St. Olaf Col.*

3:00 Z6 **59.11** Roles of retinal circuits in innate visual behaviors of mice. M. YILMAZ*; X. DUAN; J. SANES; M. MEISTER. *Caltech, Harvard Univ.*

4:00 Z7 **59.12** ● Targeting channelrhodopsin-2 to ON-bipolar cells with vitreally administered AAV restores ON and OFF visual responses in blind mice. E. MACÉ*; R. CAPLETTE; O. MARRE; A. SENGUPTA; A. CHAFFIOL; P. BARBE; M. DESROSIERS; E. BAMBERG; B. ROSKA; J. SAHEL; S. PICAUD; J. DUEBEL; D. DALKARA. *Vision Inst., Max Planck Inst. of Biophysics, Friedrich Miescher Inst. for Biomed. Res.*

POSTER

060. Striate Cortex: Neural Coding

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z8 **60.01** Electrophysiological characterization of cortical neuron subtypes in mouse visual cortex. J. BERG*; T. JARSKY; S. SORENSEN; C. ANASTASSIOU; A. OLDRE; A. BERNARD; C. KOCH; H. ZENG. *Allen Inst. For Brain Sci.*

2:00 Z9 **60.02** Dynamics of neural activity in mouse cortex during visual behavior. D. R. OLLERENSHAW*; P. A. GROBLEWSKI; M. E. GARRETT; J. ZHUANG; J. WATERS; S. R. OLSEN. *Allen Inst. For Brain Sci.*

3:00 Z10 **60.03** On spike detection and the development of quantitative measures for spike clustering using "ground truth" data: A computational and slice electrophysiology study. C. MITELUT; S. L. GRATIY; S. DURAND; K. MIZUSEKI; K. GODFREY; C. LEE; T. BLANCHE; N. SWINDALE; C. REID; M. HAWRYLYCZ; C. KOCH; C. ANASTASSIOU*. *Univ. of British Columbia, Allen Inst. for Brain Sci.*

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4:00 Z11 **60.04** Building a biophysically detailed computational model of the layer 4 of mouse primary visual cortex. A. ARKHIPOV*; J. BERG; N. MAÇARICO DA COSTA; S. DURAND; D. FENG; T. P. FLISS; K. B. GODFREY; M. L. HINES; L. LI; A. OLDRE; S. R. OLSEN; S. A. SORENSEN; Z. ZHOU; C. A. ANASTASSIOU; A. S. SHAI; A. BERNARD; C. DANG; L. NG; H. PENG; J. W. PHILLIPS; R. C. REID; H. ZENG; S. MIHALAS; M. J. HAWRYLYCZ; C. KOCH. *Allen Inst. For Brain Sci., Yale Univ.*

1:00 Z12 **60.05** Cholinergic neurons modulate performance of a visual discrimination task in mice. B. DANSKIN*; P. A. GROBLEWSKI; D. R. OLLERENSHAW; S. R. OLSEN; J. WATERS. *Allen Inst. For Brain Sci.*

2:00 Z13 **60.06** *In vitro* single cell morphology in mouse V1 and LGN. S. A. SORENSEN*; H. PENG; J. BERG; S. SUNKIN; A. OLDRE; N. DEE; S. CALDEJON; Z. ZHOU; C. ANASTASSIOU; M. FISHER; K. JOINES; D. SANDMAN; A. M. HENRY; T. DESTA; W. WAKEMAN; C. KOCH; C. DANG; A. BERNARD; J. HOHMANN; J. W. PHILLIPS; H. ZENG. *Allen Inst.*

3:00 Z14 **60.07** Simulating *in vivo* LFPs and intracellular [Ca^{2+}] imaging data in mouse V1 using a detailed biophysical model of the cortical column. S. L. GRATIY*; A. GARNER; A. D. CHENG; S. DURAND; K. MIZUSEKI; J. BERG; S. SORENSEN; A. ARKHIPOV; M. L. HINES; A. SHAI; S. SUNKIN; J. W. PHILLIPS; H. ZENG; R. C. REID; M. HAWRYLYCZ; C. KOCH; C. A. ANASTASSIOU. *Allen Inst. for Brain Sci., Yale Univ., Caltech.*

4:00 Z15 **60.08** Characterization of cell-type specific role in circuit structure and function of mouse visual cortex *in vivo*. L. LI*; R. IYER; C. TEETER; S. DE VRIES; B. LONG; J. BERG; S. MIHALAS; L. MADISEN; H. PENG; C. KOCH; C. REID; H. ZENG. *Allen Inst. For Brain Sci.*

1:00 Z16 **60.09** The influence of long-range inputs on single-cell dendritic signaling. A. SHAI*; C. A. ANASSTASIOU; M. LARKUM; C. KOCH. *Caltech, Allen Inst. for Brain Sci., Neurocure Cluster of Excellence.*

2:00 Z17 **60.10** Spiking responses in V1 are coupled to the phase of infragranular alpha LFP. K. DOUGHERTY*; M. A. COX; D. A. LEOPOLD; A. MAIER. *Vanderbilt Univ., Natl. Inst. of Mental Hlth.*

3:00 Z18 **60.11** Microcircuitry of agranular frontal and granular occipital cortex: Testing the generality of the canonical cortical microcircuit with cross-frequency phase-amplitude coupling during resting-state. T. NINOMIYA*; K. DOUGHERTY; D. C. GODLOVE; J. D. SCHALL; A. MAIER. *Vanderbilt Univ.*

4:00 Z19 **60.12** Dynamics of cortical correlation during vision. N. WRIGHT*; T. CROCKETT; J. POBST; R. WESSEL. *Washington Univ. In St. Louis.*

1:00 Z20 **60.13** Cortical pyramidal neuron subtype classification and visual response diversity. T. CROCKETT*; N. WRIGHT; S. THORNQUIST; M. ARIEL; R. WESSEL. *Washington Univ. In St Louis, Harvard Univ., St. Louis Univ.*

2:00 Z21 **60.14** Characterization and proposed mechanisms of intermittent oscillations in cerebral cortex. M. HOSEINI*; J. POBST; W. CLAWSON; W. SHEW; R. WESSEL. *Washington Univ. In St. Louis, Univ. of Arkansas.*

3:00 Z22 **60.15** Scale-free cortical resting state activity *in vivo* at single-cell resolution. Y. KARIMIPANAH*; A. C. KWAN; Y. DAN; R. WESSEL. *Washington Univ. In St.Louis, Yale Sch. of Med., Univ. of California, Berkeley.*

4:00 Z23 **60.16** Cell-type specific differences in high and low frequency synchronization during behavior in the awake mouse. A. E. CASALE*; B. J. HANSEN; J. F. MITCHELL; J. H. REYNOLDS; E. M. CALLAWAY. *Salk Inst.*

1:00 Z24 **60.17** Locomotion-induced changes in noise correlations in mouse primary visual cortex. B. J. HANSEN*; A. E. CASALE; J. F. MITCHELL; J. H. REYNOLDS; E. M. CALLAWAY. *The Salk Inst.*

2:00 Z25 **60.18** Intermodulation between broad- and narrow-band visual stimuli in visually evoked potential. C. CHEN*. *Natl. Taiwan Univ.*

3:00 Z26 **60.19** The scaling of contrast discrimination under temporal constraints. J. R. FLYNN*; H. SHOUVAL. *Univ. of Texas, Houston, UT Med. Sch. at Houston.*

4:00 Z27 **60.20** Population encoding and decoding of visual motion in primary visual cortex from naturalistic visual scenes. G. B. STANLEY*; S. T. KELLY; J. KREMKOW; J. JIN; Y. WANG; S. J. KOMBAN; J. ALONSO. *Georgia Inst. Technol. & Emory Univ., State Univ. of New York.*

1:00 Z28 **60.21** Exploring 200-1000 Hz field potentials with microelectrodes, ecog and meg. B. F. HANDEL*; C. A. BOSMAN; T. WOMELSDORF; P. FRIES. *Ernst Strüngmann Inst. (ESI) For Neurosci. In Cooperation With Max Planck, Univ. of Amsterdam, York Univ.*

2:00 Z29 **60.22** Visual stimulation triggers temporally-structured cortical cell assemblies in awake mice. L. CARRILLO*; J. KANG MILLER; J. JACKSON; R. YUSTE. *Columbia Univ.*

3:00 Z30 **60.23** Improved perceptual performance and coding accuracy following optical stimulation of V1 populations. A. R. ANDREI*; S. POJOGA; R. JANZ; V. DRAGOI. *Univ. of Texas Hlth. Sci. Ctr. At Houston.*

4:00 Z31 **60.24** Hidden spatial selectivity of receptive fields in turtle visual cortex. J. FOURNIER*; C. M. MUELLER; G. LAURENT. *Max Planck Inst. For Brain Res.*

1:00 Z32 **60.25** Locomotion and arousal regulate activity patterns and visual encoding in V1. M. VINCK*; U. KNOBLICH; R. BATISTA-BRITO; J. CARDIN. *Yale Univ.*

2:00 Z33 **60.26** Effects of locomotion on somatostatin-expressing interneurons in mouse visual cortex. M. DIPOPPA*; A. RANSON; M. CARANDINI; K. D. HARRIS. *Univ. Col. London.*

3:00 Z34 **60.27** ● Stimulus feature selectivity for ultraviolet light in mouse primary visual cortex. Z. TAN*; W. SUN; T. CHEN; D. KIM; N. JI. *Janelia Farm Res. Campus.*

4:00 Z35 **60.28** Mapping RFs from chronically recorded low-SNR signals in monkey visual cortex. E. DREBITZ; B. SCHLEDDE; D. WEGENER; A. KREITER*. *Univ. of Bremen, Univ. Bremen, FB2.*

POSTER

061. Visual Processing: Contrast, Form, and Color

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z36 **61.01** Shift and gain of color-tuning in V4 neurons is modulated by hue distribution in natural scenes. P. RAMKUMAR*; H. L. FERNANDES; M. A. SMITH; K. P. KORDING. *Northwestern Univ., Rehabil. Inst. of Chicago and Northwestern Univ., Univ. of Pittsburgh.*

● Indicated a real or perceived conflict of interest, see page 77 for details.

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2:00 AA1 **61.02** Electrophysiological modulation in an effort to complete illusory figures. M. GIRELLI*; T. POSCOLIERO. *Univ. Verona Dept. Neurolog. and Vision Sci., Univ. Verona Dept. Neurolog. and Vision Sci.*

3:00 AA2 **61.03** Dual representations of a visual perceptual space. J. D. VICTOR*; S. M. RIZVI; M. M. CONTE. *Weill Cornell Med. Col.*

4:00 AA3 **61.04** Reference frame of the tilt aftereffect measured by Pavlovian differential conditioning. Y. NAKASHIMA*; T. IIJIMA; K. TOHYAMA; Y. SUGITA. *Dept Psychol. Waseda Univ., Lab. Nano-Neuroanatomy, Iwate Med. Univ.*

1:00 AA4 **61.05** An anisotropic gain control model replicates the orientation anisotropy of overlay masking. B. RICHARD*; A. P. JOHNSON; B. HANSEN. *Concordia Univ., Colgate Univ.*

2:00 AA5 **61.06** A hierarchical sparse-coding model of natural images explains shape tuning properties in V2 and V4. H. HOSOYA*; A. HYVÄRINEN. *ATR Inst., Univ. of Helsinki.*

3:00 AA6 **61.07** Lateral interactions in an anisotropic population code for color predict human color induction effects. C. KELLNER*; T. WACHTLER. *Ludwig-Maximilians-Universität München, Ludwig-Maximilians-Universität München, Bernstein Ctr. for Computat. Neurosci.*

4:00 AA7 **61.08** Comparison of spikes versus local field potential (LFP) and its implication on brain computer interfacing applications. S. T. KANTH*; S. RAY. *Indian Inst. of Sci.*

1:00 AA8 **61.09** Functional organization of colors, places and faces in alert macaque frontal cortex. M. C. ROMERO*; K. S. BOHON; R. LAFER-SOUSA; B. R. CONWAY. *Wellesley Col.*

2:00 AA9 **61.10** The cat's curious computation of contrast adaptation and normalization. A. J. KELLER*; N. M. DA COSTA; K. A. C. MARTIN. *Inst. of Neuroinformatics, Allen Inst. for Brain Sci.*

3:00 AA10 **61.11** Unfilled hole in the V1 representation of a pure color surface. S. ZWEIG*; R. M. SHAPLEY; H. SLOVIN. *Bar Ilan University, The Gonda Multidisciplinary Brain Res. Ctr., New York Univ.*

4:00 AA11 **61.12** Characterization of the effects of stimulus size and contrast on the initial afferent response in human primary visual cortex. N. GEBODH*; M. I. VANEGAS-ARROYAVE; A. BLANGERO; S. P. KELLY. *The City Col. of New York.*

1:00 AA12 **61.13** Human contrast sensitivity in naturalistic conditions and the effects of saccadic eye movements. O. RUIZ*; T. R. LII; M. A. PARADISO. *Salk Inst. For Biol. Studies, Brown Univ.*

2:00 AA13 **61.14** Effect of reference scheme on power and phase of the local field potential. A. BORTHAKUR*; V. SHIRHATTI; S. RAY. *Indian Inst. of Sci.*

3:00 AA14 **61.15** New insights from large-scale analysis of colored-sequence synesthesia. D. M. EAGLEMAN*. *Baylor Col. of Med.*

4:00 AA15 **61.16** Orientation anisotropies in human early visual cortex depend on contrast. R. T. MALONEY*; C. W. G. CLIFFORD. *UNSW Australia.*

1:00 AA16 **61.17** Slow activity fluctuations alter the decoding strategies of an ideal observer. X. CHEN*; M. SANAYEI; D. CHICHARRO; S. PANZERI; A. THIELE. *Newcastle Univ., Italian Inst. of Technol.*

POSTER

062. Eye Movements: Cerebellum, Brainstem, and Muscles

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 AA17 **62.01** Encoding of prediction error by complex spikes of the cerebellum. D. J. HERZFELD*; Y. KOJIMA; R. SOETEDJO; R. SHADMEHR. *Johns Hopkins Univ., Univ. of Washington, Washington Natl. Primate Ctr.*

2:00 AA18 **62.02** Mechanistic underpinnings in the primate saccadic adaptation: A cerebellar standpoint. M. NEGRELLO; G. TESTA-SILVA; M. JUNKER; A. SMILGIN; S. HONG; E. AVILA; P. ROELFSEMA; P. THIER; E. DE SCHUTTER; C. DEZEEUW*. *Erasmus MC, Netherlands Inst. for Neurosci., Hertie institute for clinical brain research, Okinawa institute for science and technology.*

3:00 AA19 **62.03** Transcranial direct current stimulation of the dorsal cerebellum affects saccadic adaptation. M. PANOUILLERES*; C. MIALL; N. JENKINSON. *Univ. of Oxford, Sch. of Psychology, Univ. of Birmingham, Nuffield Dept. of Clin. Neuroscience, Univ. of Oxford.*

4:00 AA20 **62.04** Contribution of the cerebellar dentate nucleus to the generation of anti-saccades. J. KUNIMATSU*; T. SUZUKI; M. TANAKA. *Hokkaido Univ. Sch. Med.*

1:00 AA21 **62.05** GABAergic innervation of the monkey ciliary ganglion - an electron microscopy study. M. BARNERSSOI; P. MAY; A. K. HORN-BOCHTLER*. *Inst. of Anat. and Cell Biol. I, LMU, Univ. Mississippi Med. Ctr.*

2:00 AA22 **62.06** Corollary discharge of head motor commands mediates primate gaze control and eye-head coordination. W. ZHOU*; J. HUANG; Y. XU; I. SIMPSON; W. WEI; K. KOSEK; H. ZHU. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Sch. of Life Sciences, Univ. of Sci. and Technol. of China, Univ. of Mississippi Med. Ctr.*

3:00 AA23 **62.07** Calretinin-positive neurons within the macaque oculomotor C-group may represent cell bodies of palisade endings for medial and inferior rectus muscles. K. LIENBACHER*; M. MUSTARI; S. ONO; A. K. E. HORN. *Inst. of Anat., Washington Natl. Primate Res. Center, Univ. of Washington.*

4:00 AA24 **62.08** Precise control of microsaccades by cerebellar purkinje cells. M. A. JUNKER*; D. ARNSTEIN; A. SMILGIN; P. W. DICKE; P. THIER. *Hertie Inst. For Clin. Brain Res.*

1:00 BB1 **62.09** Neurophysiological and modeling evidence that strabismus is associated with cross-axis oculomotor signals in brainstem. M. M. WALTON*; S. ONO; M. MUSTARI. *Univ. of Washington, Washington Natl. Primate Res. Ctr.*

2:00 BB2 **62.10** Activity of neurons in brainstem nucleus reticularis gigantocellularis during head-unrestrained pursuit and gaze shifts. A. PALLUS*; M. M. G. WALTON; E. G. FREEDMAN. *Univ. of Rochester Med. Ctr., Univ. of Washington.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 BB3 **62.11** Structure/function of precerebellar eye-velocity sensitive neurons in the caudal hindbrain of larval zebrafish. C. L. GROVE*; M. LEE; R. BAKER; E. AKSAY. *Physiol. and Neurosci., NYU Sch. of Med., Weill Cornell Med. Col.*

4:00 BB4 **62.12** The organization of extraocular muscle motoneuronal pools in the mouse. M. O. BOHLEN*; S. WARREN; R. BLUMER; J. F. STAHL; P. J. MAY. *Program In Neurosci., Univ. of Mississippi Med. Ctr., Med. Univ. of Vienna, Case Western Reserve Univ.*

1:00 BB5 **62.13** Independent active contractile mechanical behavior of bovine extraocular muscle(EOM) compartments. A. SHIN*; L. YOO; J. DEMER*. *UCLA / JSEI.*

2:00 BB6 **62.14** Synchrony in the macaque brainstem: Oculomotor system. A. DALE*; K. E. CULLEN. *McGill Univ.*

3:00 BB7 **62.15** High poisson ratio of contracting human superior rectus muscle indicates reverse compressibility. L. H. YOO*; R. CLARK; A. SHIN; J. L. DEMER. *UCLA.*

4:00 BB8 **62.16** Magnetic resonance imaging (MRI) demonstrates differential compartmental function in the superior oblique (SO) muscle during vertical fusional vergence (VFV). J. L. DEMER*; R. A. CLARK. *Jules Stein Eye Inst., Univ. of California Los Angeles.*

1:00 BB9 **62.17** Preferential expressions of specific nicotinic receptor subtypes are different in neurons exhibiting distinct neurotransmitter phenotypes in the medial vestibular and prepositus hypoglossi nuclei. Y. ZHANG*; Y. YANAGAWA; Y. SAITO. *Gunma Univ. Grad. Sch. of Med.*

2:00 BB10 **62.18** Activities of premotor extraocular neurons during rapid eye movement (REM) sleep. M. ESCUDERO*; L. C. CERVANTES; A. SANCHEZ-LOPEZ. *Univ. of Seville.*

3:00 BB11 **62.19** Central neural processes in mouse vestibular system. N. SHIMIZU*; S. WOOD; A. PERACHIO; R. COOK; T. MAKISHIMA. *Univ. of Texas Med. Br., Azusa Pacific Univ.*

4:00 BB12 **62.20** Connectivity underlying persistent firing in zebrafish. A. VISHWANATHAN*; K. DAIE; A. RAMIREZ; A. SHOWLER; E. AKSAY; S. SEUNG. *MIT, Weill Cornell Med. Col., Princeton Neurosci. Inst.*

1:00 BB13 **62.21** Modeling of network neuronal processing in the central vestibular nuclei. D. OGORODNIKOV*; C. C. D. SANTINA; J. N. ERON. *Mount Sinai Sch. Med., FNND LLC, Johns Hopkins Sch. of Med., 3Inst. of Higher Nervous Activity and Neurophysiol. of RAS.*

2:00 BB14 **62.22** Compartmental innervation scheme for the mammalian superior oblique (SO) and inferior oblique (IO) muscles. A. LE*; J. L. DEMER; V. POUKENS. *UCLA.*

3:00 BB15 **62.23** Decreased susceptibility to pilocarpine in Rac-GAP α-chimaerin deficient mice. A. KATOH*; E. TAKEUCHI; T. HATANAKA; E. SASAGAWA; T. IWASATO; S. ITOHARA. *Tokai Univ., Tokai Univ., Natl. Inst. of Genomics, RIKEN BSI.*

4:00 BB16 **62.24** ● Fixational-saccade related and periodic activity of the pedunculopontine tegmental nucleus neurons in behaving monkeys. Y. KOBAYASHI*; K. OKADA. *Osaka Univ., Natl. Inst. of Information and Communications Technol., Osaka Univ.*

POSTER

063. Somatosensory System

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 BB17 **63.01** Lumbosacral ganglia in female rats. N. MIRTO-AGUILAR; Y. CRUZ*. *Univ. Veracruzana, Univ. Autonoma Tlaxcala.*

2:00 BB18 **63.02** Effects of vibratory feedback on efficient muscle use during a redundant, one-dimensional myocontrol task. S. A. LIYANAGAMAGE*; M. BERTUCCO; N. H. BHANPURI; T. D. SANGER. *USC, USC, Children's Hosp. of Los Angeles.*

3:00 BB19 **63.03** Selective optogenetic activation of ChAT-Cre/channelrhodopsin-expressing primary afferents. I. A. SPEIGEL*; S. HOCHMAN. *Emory Univ.*

4:00 BB20 **63.04** Cutaneous silent period characteristics are dependent on the organization of upper limb muscles. N. R. ECKERT*; A. W. MEEK; K. SMITH; J. C. WILLIAMS; Z. A. RILEY. *Indiana Univ., Indiana Univ. Purdue Univ. Indianapolis.*

1:00 BB21 **63.05** Congenital foot deformation altered the topographic organization in the primate somatosensory system. C. LIAO*; H. QI; J. L. REED; D. J. MILLER; J. H. KAAS. *Vanderbilt Univ.*

2:00 BB22 **63.06** ● fMRI characterization of central vagal projection sites via external ear stimulation. B. R. KOMISARUK*; E. FRANGOS; N. WISE; W. BIRBANO; K. ALLEN; J. ELLRICH. *Rutgers, The State Univ. of New Jersey, Aalborg Univ.*

3:00 BB23 **63.07** Effect of cutaneous silent period on cortical output in proximal-distal muscles in the upper limb. A. W. MEEK*; N. R. ECKERT; K. SMITH; J. C. WILLIAMS; Z. A. RILEY. *Indiana Univ. Purdue Univ. Indianapolis, Indiana Univ.*

4:00 BB24 **63.08** Zona incerta regulates communication between superior colliculus and POm. G. D. WATSON*; J. B. SMITH; K. D. ALLOWAY. *Penn State Univ.*

1:00 BB25 **63.09** Analysis of proprioceptive endings in the mouse soleus muscle using a transgenic mouse model. M. J. SONNER; D. R. LADLE*. *Wright State Univ.*

2:00 BB26 **63.10** Barreloid-like structures in the ventroposterior medial subnucleus of the somatosensory thalamus in prosimian galagos. E. K. SAWYER*; C. LIAO; H. QI; P. BALARAM; D. MATROV; J. H. KAAS. *Vanderbilt Univ., Intl. Inst. of Neurosci. at Natal.*

3:00 BB27 **63.11** VGLUT1 and VGLUT2 identify driving (class 1) and modulatory (class 2) glutamatergic projections in the somatosensory system of prosimian, New World, and Old World primates. P. BALARAM*; E. K. SAWYER; J. H. KAAS. *Vanderbilt Univ.*

4:00 BB28 **63.12** The precuneus is involved in the detection of incongruency between tactile and visual texture information: A functional MRI study. R. KITADA*; A. T. SASAKI; Y. OKAMOTO; T. KOCHIYAMA; N. SADATO. *Natl. Inst. For Physiological Sci., RIKEN Ctr. for Life Sci. Technologies, Fukui Univ., ATR Brain Activity Imaging Ctr.*

1:00 BB29 **63.13** Short-term use-dependent remapping of digit topography in human primary somatosensory cortex. J. KOLASINSKI*; T. MAKIN; S. JBABDI; C. STAGG; H. JOHANSEN-BERG. *Univ. of Oxford.*

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2:00 BB30 **63.14** Transition to orgasm/ejaculation and to the refractory period in men: fMRI evidence. K. ALLEN*; N. WISE; E. FRANGOS; P. LAKSHMIN; W. BIRBANO; B. R. KOMISARUK. *Rutgers Univ.*

3:00 BB31 **63.15** Brain regional activation upon transition to self- and partner-induced orgasm in women: An fMRI analysis. N. J. WISE*; E. FRANGOS; K. ALLEN; W. BIRBANO; P. LAKSHMIN; B. R. KOMISARUK. *Rutgers Univ.*

POSTER

064. Thalamocortical Mechanisms

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 BB32 **64.01** Changes in whisking behaviour during object exploration in cortically altered mice. R. A. GRANT*; N. H. GAMBLES; T. J. PRESCOTT. *Manchester Metropolitan Univ., Univ. of Sheffield.*

2:00 BB33 **64.02** Topographical precision in the thalamocortical projection mediated by cannabinoid receptor in the developing barrel cortex. C. ITAMI; J. HUANG; H. LU; F. KIMURA*. *Fac. Med., Saitama Med. Univ., The Cain Fndn. Lab, Jan and Dan Duncan Neurolog. Res. Inst. Texas Children Hosp., Baylor Col. of Med., Grad. Sch. Med., Osaka Univ.*

3:00 CC1 **64.03** Multivariate tactile processing in children and adolescents with obsessive-compulsive disorder. B. GUCLU*; C. TANIDIR; E. CANAYAZ; B. GUNER; H. IPEK TOZ; O. UNERI; M. TOMMERDAHL. *Bogazici Univ., Bakırköy Mazhar Osman Hosp., Univ. of North Carolina at Chapel Hill.*

4:00 CC2 **64.04** Bottom-up sensory adaptation shifts the balance of thalamic burst/tonic firing. C. SHEPHARD*; C. WAIBLINGER; C. SCHWARZ; G. STANLEY. *Georgia Tech/ Emory, Werner Reichardt Ctr. for Integrative Neurosci., Hertie Inst. for Clin. Brain Research, Univ. of Tübingen.*

1:00 CC3 **64.05** Changes in sensorimotor cortex excitability caused by arm immobilization. Y. OKAMOTO*; S. YAMAMOTO; N. TAKESHITA; Y. UMEHARA; M. OSHIMA; M. MONMA; Y. KOHNO; K. NUMATA. *Ibaraki Prefectural Univ. of Hlth. Sci., Ibaraki Prefectural Univ. of Hlth. Sci. Hosp., Ibaraki Prefectural Univ. of Hlth. Sci., Jonan Hosp., Ibaraki Prefectural Univ. of Hlth. Sci., Ibaraki Prefectural Univ. of Hlth. Sci. Hosp.*

2:00 CC4 **64.06** Rapid thalamocortical signal transfer through linear dendritic integration in layer 4 cortical neurons *in vivo*. H. JIA*; Z. VARGA; B. SAKMANN; A. KONNERTH. *Inst. For Neuroscience, Tech. Univ. Munich.*

3:00 CC5 **64.07** The corticothalamic switch: controlling the thalamus with dynamic synapses. S. R. CRANDALL*; S. J. CRUIKSHANK; B. W. CONNORS. *Brown Univ.*

4:00 CC6 **64.08** Roles of GABAA and GABAB receptors in regulating thalamic activity by the zona incerta: A computational study. A. PARK*; K. HOFFMAN; A. KELLER. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore County.*

1:00 CC7 **64.09** Cortical amplification dynamics of thalamic inputs in the barrel cortex. K. COHEN-KASHI*; B. MOHAR; Y. KATZ; I. LAMPL. *Weizmann Inst. of Sci.*

2:00 CC8 **64.10** Coding of active and passive whisker touches in mouse somatosensory thalamus. A. L. SUMSER; R. A. MEASE; B. SAKMANN; A. GROH*. *Inst. For Neurosciences, TU München.*

3:00 CC9 **64.11** *In vivo* dissection of L1 inputs in the Barrel cortex. W. ZHANG*; R. BRUNO. *Columbia Univ., Columbia Univ.*

4:00 CC10 **64.12** Electrical microstimulation of hindpaw representation in rat SI cortex yields better detection probability compared to vibrotactile stimulation of the glabrous skin during operant conditioning. I. DEVECIOGLU*; B. GUCLU. *Inst. of Biomed. Engin., Bogazici Univ., Biomed. Engin. Dept., Namik Kemal Univ.*

1:00 CC11 **64.13** The role of retinoid-related orphan receptor beta in mouse primary somatosensory cortex barrel development and maintenance. T. D. LAUER*; Q. ZHANG; M. RUTLIN; S. NELSON. *Brandeis Univ., Natl. Ctr. for Behavioral Genomics, Columbia Univ.*

2:00 CC12 **64.14** Thalamo-cortical synchronization during sensory information processing in the vibrissal motor cortex in rats. A. MÚNERA*; M. NAVA-MESA; J. RAMÍREZ-LATORRE. *Univ. Nacional De Colombia, Univ. del Rosario.*

3:00 CC13 **64.15** Thalamocortical feedforward inhibition by infragranular somatostatin-containing interneurons. A. AGMON*; H. HU. *West Virginia Univ. Hlth. Sci. Ctr., West Virginia Univ.*

4:00 CC14 **64.16** Functional organization of the motor reticulothlamic input to VA/VL and CL neurons. Y. LAM*; D. RHEE; S. SHERMAN. *Univ. of Chicago, Univ. of Chicago.*

1:00 CC15 **64.17** Layer 4 in area 4: Characteristic input-output connectivity of pyramidal neurons at the layer 3/5A border in the lateral agranular region of mouse motor cortex. K. E. BORGES*; N. YAMAWAKI; B. A. SUTER; X. LI; G. M. G. SHEPHERD. *Northwestern Univ.*

2:00 CC16 **64.18** Thalamic encoding of kinematic whisker slips in the awake behaving rat. C. WAIBLINGER*; C. SCHWARZ; C. J. SHEPHARD; G. B. STANLEY. *Werner Reichardt Ctr. for Integrative Neurosci., Hertie Inst. for Clin. Brain Res., Wallace H Coulter Dept. of Biomed. Engineering, Georgia Tech. and Emory.*

3:00 CC17 **64.19** The organization of the human thalamus estimated by large network functional connectivity. B. PASCUAL; M. HOLLENBECK; J. C. MASDEU*. *Houston Methodist Hosp., NIH.*

POSTER

065. Generation of Motor Patterns

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 CC18 **65.01** Bilateral symmetries in an inherently asymmetric motor pattern. A. WENNING*; B. J. NORRIS; R. L. CALABRESE. *Emory Univ., California State Univ.*

2:00 CC19 **65.02** Do synaptic or intrinsic properties govern animal-to-animal variability in motor patterns? C. GUNAY*; D. G. LAMB; R. L. CALABRESE. *Emory Univ., Univ. of Florida.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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3:00 CC20 **65.03** How can either stimulation or inhibition of the Na+/K+ pump current decrease the period of a central pattern generator? W. H. BARNETT*; D. KUEH; R. L. CALABRESE; G. S. CYMBALYUK. *Georgia State Univ., Emory Univ.*

4:00 CC21 **65.04** Sensitivity of period to variations of maximal conductances in an HCO model. A. DOLOC-MIHU*; R. L. CALABRESE. *Emory Univ.*

1:00 CC22 **65.05** Stimulation of the Na^+/K^+ pump can accelerate rhythmic bursting in CPG neurons but requires the h-current. D. KUEH*; G. S. CYMBALYUK; R. L. CALABRESE. *Emory Univ., Georgia State Univ.*

2:00 CC23 **65.06** The effects of CsCl in the gastric and pyloric neurons in the stomatogastric ganglion of the lobster, Homarus americanus. L. ZHU*; A. I. SELVERSTON; J. AYERS. *Northeastern Univ.*

3:00 CC24 **65.07** Three different methods to identify transmitters of coordinating neurons in the crayfish swimmeret system. A. C. SCHNEIDER*; H. SEICHTER; S. NEUPERT; C. R. SMARANDACHE-WELLMANN. *Univ. of Cologne, Univ. of Cologne.*

4:00 CC25 **65.08** Modeling encoding in identified coordinating neurons. T. M. WRIGHT*, JR; M. S. GOLDMAN; B. MULLONEY. *Univ. of California, Davis.*

1:00 CC26 **65.09** Robustness of coordination to temperature perturbation in a chain of microcircuits. C. R. SMARANDACHE-WELLMANN*; F. BLUMENTHAL. *Univ. of Cologne.*

2:00 CC27 **65.10** Excitatory Hb9 interneurons involved in locomotor rhythm generation. V. R. CALDEIRA*; O. KIEHN; K. J. DOUGHERTY. *Karolinska Inst.*

3:00 CC28 **65.11** A cell-type catalog of the neurons in the stomatogastric ganglion of the Jonah crab Cancer borealis. M. GOERITZ*; T. BROOKINGS; R. Z. YANG; A. C. SUTTON; E. MARDER. *Brandeis Univ.*

4:00 CC29 **65.12** Endocannabinoids supplement a hardwired circuit to promote behavioral selection by switching between motoneuron pools in adult zebrafish. J. SONG*; K. AMPATZIS; J. AUSBORN; A. EL MANIRA. *Karolinska Inst., Karolinska Institutet.*

1:00 CC30 **65.13** Functional organization and patterning of the V0 interneurons in adult zebrafish. R. BJÖRNFORS; J. AUSBORN; A. EL MANIRA*. *Karolinska Inst.*

2:00 CC31 **65.14** Mechanisms of emergent bursting activity in small neuronal networks. J. F. CANNON*; O. BURYLKO; W. H. BARNETT; G. S. CYMBALYUK. *Georgia State Univ. Biol. Dept, Georgia State Univ.*

3:00 CC32 **65.15** The modulation of transmission in the trigeminal nuclei and jaw opening reflex responses during superior laryngeal nerve stimulation. S. SAKAI*; K. TSUJI; J. MAGARA; T. TSUJIMURA; M. INOUE. *Niigata Univ.*

4:00 CC33 **65.16** Quantitative TRP mRNA expression in single Dbx1 neurons in the preBötzinger Complex of neonatal mice. M. D. PICARDO*; C. A. DEL NEGRO. *Col. of William and Mary.*

1:00 CC34 **65.17** Quantification of morphological differences from reconstructions of multiple types of stomatogastric neurons. A. C. SUTTON*; T. BROOKINGS; M. L. GOERITZ; E. MARDER. *Brandeis Univ., Brandeis Univ.*

2:00 CC35 **65.18** Homeostatic maintenance of network synchrony: Compensatory mechanisms underlying restoration of synchronized bursting in variable motor neurons. B. J. LANE*; J. L. RANSDELL; S. S. NAIR; D. J. SCHULZ. *Univ. of Missouri - Columbia.*

3:00 CC36 **65.19** Mechanisms of network synchrony arising from variable individual motor neurons of the crustacean cardiac ganglion. S. S. NAIR*; P. SAMARTH; B. LANE; D. J. SCHULZ. *Univ. Missouri-Columbia, Univ. Missouri-Columbia.*

4:00 DD1 **65.20** Physiological recruitment of CSF-contacting neurons *in vivo*. U. L. BOEHM*; L. DJENOUNE; A. PRENDERGAST; S. NUNES-FIGUEIREDO; F. DEL BENE; C. WYART. *Inst. Du Cerveau Et De La Moelle Épinière, UPMC Univ. Paris 06, Inserm UMR 1127, CNRS UMR 7225, Muséum Natl. d'Histoire Naturelle, Inst. Curie, CNRS UMR 3215, Inserm U 934.*

1:00 DD2 **65.21** Synaptic depression influences inspiratory burst termination and post-inspiratory activity in the preBötzinger complex. A. KOTTICK*; C. A. DEL NEGRO. *Col. of William and Mary.*

2:00 DD3 **65.22** Substitution of extracellular Ca^{2+} by Sr^{2+} prolongs inspiratory burst in preBötzinger Complex (preBötC) neurons. Implications for burst termination mechanisms. C. MORGADO-VALLE*; J. FERNANDEZ-RUIZ; L. LOPEZ-MERAZ; L. BELTRAN-PARRAZAL. *Univ. Veracruzana, Univ. Nacional Autonoma de Mexico.*

3:00 DD4 **65.23** Multifunctional half-center oscillator controlling walking and paw-shake response in the cat. B. BONDY; A. N. KLISHKO; B. PRILUTSKY; G. S. CYMBALYUK*. *Georgia State Univ., Georgia Inst. of Technol.*

4:00 DD5 **65.24** Local spinal circuits dictate locomotor output in caudal stimuli-elicited startles of larval zebrafish. Y. LIU*; M. E. HALE. *Univ. of Chicago.*

1:00 DD6 **65.25** Phase maintenance requires precise matching of synaptic inputs and intrinsic properties. H. ANWAR*; F. NADIM. *NJIT, Rutgers-Newark.*

POSTER

066. Parkinson's Disease Models I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD7 **66.01** The dorsal striatum is under diurnal control; an electrophysiological study comparing time of day and the effectiveness of a D2 antagonist. A. FREDERICK*; J. BOURGET-MURRAY; C. A. CHAPMAN; S. AMIR; R. COURTEMANCHE. *Concordia Univ.*

2:00 DD8 **66.02** Functional MRI reveals paradoxical cerebral blood volume decreases in striatum during optogenetic stimulation of the striatonigral "direct" pathway. D. ALBAUGH*; G. STUBER; I. SHIH. *Univ. of North Carolina At Chapel Hill.*

3:00 DD9 **66.03** Excessive synchronization in basal ganglia-thalamocortical circuits in the hemiparkinsonian rat during bradykinesia and dyskinesia. K. B. DUPRE*; A. J. MCCOY; E. BRAZHNIK; C. DELAVILLE; A. V. CRUZ; N. NOVIKOV; C. P. DODGE; C. M. GERBER; C. HATCH; M. A. COHEN; D. S. KURUP; J. R. WALTERS. *NIH NINDS.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 DD10 **66.04** Dopaminergic modulation of 45-55 Hz low gamma power in the medial prefrontal cortex and the subthalamic nucleus in a behaving rat model of Parkinson's disease. C. DELAVILLE*; A. J. MCCOY; J. R. WALTERS. *NIH NINDS.*

1:00 DD11 **66.05** Effects of NMDA/AMPA receptor blockade on abnormal striatal neuronal activity in parkinsonian monkeys. A. SINGH*; K. BURKE; J. WHITHEAR; B. DYAVARSHETTY; S. TRAYNELIS; S. PAPA. *Yerkes Natl. Primate Res. Center, Emory University,, Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

2:00 DD12 **66.06** Detection of cannabinoid receptors CB1 and CB2 within basal ganglia output neurons in macaques. Changes following experimental parkinsonism. S. SIERRA SAN NICOLAS*; A. J. RICO; I. G. DOPESO-REYES; E. RODA; E. MARTINEZ-PINILLA; A. VAZQUEZ; J. L. LABANDEIRA-GARCIA; R. FRANCO; J. L. LANCIEGO. *Fndn. For Applied Med. Res., CiberNed, Complejo Hospitalario de Navarra, Univ. of Santiago de Compostela, CiberNed, Univ. of Barcelona, CiberNed.*

3:00 DD13 **66.07** Detection of CB1-GPR55 receptor heteromeric complexes within identified subtypes of striatal neurons in monkeys. A. J. RICO*; I. G. DOPESO-REYES; S. SIERRA-SAN NICOLAS; E. RODA; M. LANZ; D. SUCUNZA; D. PIGNATARO; E. MARTINEZ-PINILLA; R. FRANCO; J. L. LANCIEGO. *FIMA, CiberNed, Univ. of Barcelona, CiberNed.*

4:00 DD14 **66.08** Synchronized oscillatory activity in the striatum of parkinsonian monkeys. G. M. JEYARAJ*; A. SINGH; J. S. WHITHEAR; S. M. PAPA. *Emory Univ., Emory Univ.*

1:00 DD15 **66.09** Profoundly altered striatal MSN activity in Parkinson's disease patients. S. M. PAPA*; A. SINGH; K. MEWES; R. GROSS; M. DELONG. *Emory Univ., Emory Univ.*

2:00 DD16 **66.10** Phase offset of entrained cortical inputs influences selectivity in a neural model of the basal ganglia. Z. FOUNTAS*; M. SHANAHAN. *Imperial Col. London.*

3:00 DD17 **66.11** The nature of the connection between internal global pallidus and primary motor cortex in human. Z. NI*; S. KIM; N. PHIELIPP; S. GHOSH; C. GUNRAJ; A. M. LOZANO; M. HODAIE; R. CHEN. *Krembil Neurosci Ctr. and Toronto Western Resch Inst., Krembil Neurosci Ctr. and Toronto Western Resch Inst.*

4:00 DD18 **66.12** Pathway-based genome-wide association analysis of Parkinson's disease. M. ZHANG*; V. PUNGPAPONG; D. ZHANG. *Purdue Univ., Chulalongkorn Business Sch.*

1:00 DD19 **66.13** Comparison of progression rate between neural and non-neural rigidity components in Parkinson's disease. R. XIA*; D. POWELL; Z. MAO. *Univ. of St. Mary, Campbell Univ., Univ. of of Pittsburgh.*

POSTER

067. Posture and Gait: Kinematics; Muscle Activity; Exercise and Fatigue; and Biomechanics I

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD20 **67.01** A novel method for describing impaired muscle activation phasing during pedaling post-stroke. C. H. MULLENS*; D. A. BROWN. *Northwestern Univ., Univ. of Alabama Birmingham.*

2:00 DD21 **67.02** Association between anticipatory hamstrings activation, pelvic displacement and centre of pressure excursion during unilateral arm raise perturbations in standing. K. J. MILLER*; C. K. COCHRANE; T. I. IVANOVA; J. GARLAND. *Univ. of British Columbia.*

3:00 DD22 **67.03** The influence of attentional resources on the ability to generate compensatory arm reactions in young and older adults. J. LAING; C. TOKUNO*. *Brock Univ.*

4:00 DD23 **67.04** Tremor-amplitude and signal-complexity are affected by handgun aiming technique in both experienced and novice shooters. K. J. KELLERAN*; S. MORRISON; D. M. RUSSELL. *Old Dominion Univ., Old Dominion Univ.*

1:00 DD24 **67.05** Robotic pelvis perturbation during sitting astride improves balance and walking in children with cerebral palsy. M. WU*; J. KIM; D. JAEBLER-SPIRA; P. ARORA. *Northwestern Univ., Rehabil. Inst. of Chicago.*

2:00 DD25 **67.06** ▲ Quantification of gait status through an iPod wireless gyroscope application. T. J. MASTROIANNI*; R. LEMOYNE. *Cognition Engin., Northern Arizona Univ.*

3:00 DD26 **67.07** Bifurcation in lower limb muscle coordination frequency content during quiet standing reflects structure of neuromuscular control. K. G. GRUBEN*; W. L. BOEHM. *Univ. Wisconsin, Univ. of Wisconsin - Madison.*

4:00 DD27 **67.08** Expertise in balance is mediated by a shared set of muscle synergies that generalize across motor behaviors. A. B. SAWERS*; L. H. TING. *Emory Univ., Georgia Inst. of Technol.*

1:00 DD28 **67.09** Cortical responses before and after physically demanding locomotor tasks. J. R. LUKOS*; J. BRADFORD; A. RIES; K. OIE; D. FERRIS. *Army Res. Lab., Univ. of Michigan, Ann Arbor.*

2:00 DD29 **67.10** The effect of structured auditory stimulation on movement variability and associated cortical involvement. S. J. HARRISON*; M. L. HOUGH; N. STERGIOU. *Univ. of Nebraska At Omaha, Univ. of Nabraska at Omaha.*

3:00 DD30 **67.11** ▲ Assessement of centre of pressure measures on one-leg stance task in subjects with chronic low back pain. L. A. STURION*; L. D. LOPES; M. R. OLIVEIRA; T. K. COSTA; M. G. CALDERON; C. G. MACEDO; R. A. DA SILVA. *UNOPAR, UEL.*

4:00 DD31 **67.12** ▲ Effect of a sustained load on trunk during postural control measures in healthy subjects. E. R. SANTOS*; L. D. LOPES; F. B. PIRES; L. A. STURION; M. R. OLIVEIRA; C. F. AMORIM; K. P. FERNANDES; R. A. DA SILVA JR. *UNOPAR, UNICID.*

1:00 DD32 **67.13** Strategic learning neither interferes with nor substitutes for split-belt adaptive learning in walking. A. LONG*; R. ROEMMICH; A. BASTIAN. *Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 EE1 **67.14** A dual-learning paradigm can simultaneously train multiple characteristics of walking. M. STATTON*; A. TOLIVER; A. J. BASTIAN. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ. Sch. of Med.*

3:00 EE2 **67.15** Two ways to save: Different perturbation dynamics lead to savings during split-belt treadmill walking. R. T. ROEMMICH*; A. J. BASTIAN. *Kennedy Krieger Inst., Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 EE3 **67.16** Mode-dependent control of human walking and running revealed by limited transfer of adaptation across the gaits with different velocities. T. OGAWA*; N. KAWASHIMA; H. OBATA; K. KANOSUE; K. NAKAZAWA. *Fac. of Sport Sciences, Waseda Univ., Japan Society for the Promotion of Sci., Res. Institute, Natl. Rehabil. Ctr. Persons with Disabilities, The Univ. of Tokyo.*

1:00 EE4 **67.17** Contrasting two strategies accomplishing split-belt treadmill adaptation in humans. H. YOKOYAMA*; T. OGAWA; K. NAKAZAWA; N. KAWASHIMA. *The Univ. of Tokyo, Fac. of Sport Sciences, Waseda Univ., Natl. Rehabil. Ctr. for Persons with Disabilities.*

2:00 EE5 **67.18** Optimising filtering parameters for a 3D motion analysis system. J. B. SMEETS*; P. J. BEEK; S. SCHREVEN. *VU Univ. Amsterdam.*

3:00 EE6 **67.19** Analysis of the turning behavior of the African clawed toad (Xenopus laevis). R. DEAN*; R. ANDRIKANICH; A. KIFER; S. POLAND; S. SREDNIAWA; M. BARR; S. ADAMS. *Cleveland State Univ.*

POSTER

068. Posture and Gait: Aging and Stroke

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 EE7 **68.01** The impact of walking-induced fatigue on falls risk and balance in older adults. S. MORRISON*; S. R. COLBERG; H. K. PARSON; S. NEUMANN; R. HANDEL; E. VINIK; J. PAULSON; A. I. VINIK. *Old Dominion Univ., Old Dominion Univ., Eastern Virginia Med. Sch.*

2:00 EE8 **68.02** As risk of falls increases in the elderly, standing postural control shows stronger long-range correlations. T. J. RAND*; M. MUKHERJEE. *Univ. of Nebraska At Omaha.*

3:00 EE9 **68.03** Variability in grasp response and the relationship with response time to balance perturbations in older adults at high compared to low risk of falling. B. JOHNSON; R. CREATH; R. NEFF; K. P. WESTLAKE*. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore County, Univ. of Maryland Sch. of Med.*

4:00 EE10 **68.04** Effects of attentional dispersion on sensory-motor processing of anticipatory postural control during unilateral arm abduction in the elderly. C. YAGUCHI*; K. FUJIWARA. *Hokkaido Bunkyo Univ., Kanazawa Univ.*

1:00 EE11 **68.05** ▲ Management of different types of exercise for postural control in elderly: A randomized controlled trial. M. R. OLIVEIRA*; R. DA SILVA; C. SOUZA; M. GUARIDO; J. DASCAL; D. TEIXEIRA. *UNOPAR, UNOPAR, UEL.*

2:00 EE12 **68.06** ▲ Relationship between foot posture measures and force platform parameters during two balance tasks in older and young subjects. R. A. DA SILVA JR*; C. E. CARVALHO; A. W. GIL; M. R. OLIVEIRA; J. A. NASCIMENTO; D. A. A. P. OLIVEIRA. *Univ. Norte Do Paraná (UNOPAR), Univ. Norte do Paraná (UNOPAR), Univ. Norte do Paraná (UNOPAR), Univ. Norte do Paraná (UNOPAR).*

3:00 EE13 **68.07** ▲ Small movement errors during split-belt locomotor adaptation do not increase the generalization of learning to natural walking in older adults. H. M. HARKER; C. J. SOMBRIC; P. J. SPARTO; G. TORRES-OVIEDO*. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 EE14 **68.08** You only get better with age: Age predisposes one to learn new movements slower but to carryover what is learned more to novel situations. C. J. SOMBRIC*; H. M. HARKER; P. J. SPARTO; G. TORRES-OVIEDO. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 EE15 **68.09** Adaptation changes in dynamic postural control and contingent negative variation during repeated transient forward translation in the elderly. M. MAEKAWA*; K. FUJIWARA; N. KIYOTA; C. YAGUCHI. *Shujitsu Univ., Grad. Sch. of Med. Science, Kanazawa Univ., Osaka Hlth. Sci. Univ., Hokkaido Bunkyo Univ.*

2:00 EE16 **68.10** Elderly gait dynamics and the effects of environmental constraints. E. G. JAMES*. *Univ. of Massachusetts Lowell.*

3:00 EE17 **68.11** Falls-risk post-stroke: Examining contributions from paretic versus non-paretic limbs to unexpected forward gait slips. T. S. BHATT*; T. KAJROLKAR. *Univ. Illinois, Univ. of Illinois at Chicago.*

4:00 EE18 **68.12** Long-term retention of locomotor adaptation following short-term training in people with stroke. D. TAN; E. V. VASUDEVAN*. *Stony Brook Univ.*

1:00 EE19 **68.13** All Nintendo Wii Fit games are useful for rehabilitation of all patients with chronic stroke? A study based on learning principles. M. E. PIEMONTE*; C. S. MIRANDA; T. P. OLIVEIRA; J. X. M. GOUVEIA; D. B. PEREZ; A. E. TEIXEIRA; A. L. COSTA. *Univ. Sao Paulo.*

2:00 EE20 **68.14** Effects of target uncertainty during arm reaching movements in upright position in stroke individuals. S. M. FREITAS*; C. A. LIMA; A. S. BALDAN; S. R. ALOUCHE. *Univ. Cidade De Sao Paulo.*

3:00 EE21 **68.15** Using swing resistance and assistance to improve gait asymmetry in patients post stroke. S. YEN*; B. SCHMIT; M. WU. *Northeastern Univ., Marquette Univ., Rehabil. Inst. of Chicago.*

POSTER

069. Posture and Gait: Injury and Disease

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 EE22 **69.01** Reactive versus volitional balance training to prevent falls: Pilot study preliminary results. D. N. SAVIN JR*; J. BARTON; M. W. ROGERS. *Univ. Maryland Baltimore, Univ. of Maryland Baltimore, Univ. of Maryland Baltimore.*

2:00 EE23 **69.02** Does visual dependency affect standing balance in adults with Cerebral Palsy? Y. YU*; I. CHUDNOVSKAYA; S. SNELL; R. LAUER. *Temple Univ.*

3:00 EE24 **69.03** Bracing the trunk and neck alters the spatiotemporal parameters of gait. D. M. RUSSELL*; K. J. KELLERAN; S. MORRISON. *Old Dominion Univ., Old Dominion Univ.*

4:00 EE25 **69.04** Compulsory joint torque coordination interfaces for neuromuscular training and rehabilitation of human walking. W. BOEHM*; K. GRUBEN. *Univ. of Wisconsin Madison, Univ. of Wisconsin Madison.*

1:00 EE26 **69.05** Changes in postural sway as a result of sports concussion. K. S. THOMAS*; M. MAGAL. *North Carolina Wesleyan Col.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 EE27 **69.06** Modulation of the reactive-stepping response to forward-slip perturbations: Effect of central versus peripheral cues on compensatory step initiation with the paretic side. P. PATEL*; T. BHATT. *The Univ. of Illinois At Chicago, The Univ. of Illinois At Chicago.*

3:00 EE28 **69.07** Effects of a single session of French Auriculotherapy on pain intensity and postural control in individuals with low back pain: A randomized clinical trial. P. B. DE FREITAS*, JR; A. USHINOHAMA; B. P. CUNHA; L. O. P. COSTA. *Univ. Cruzeiro Do Sul, Univ. Cruzeiro do Sul, Univ. Cidade de São Paulo.*

4:00 FF1 **69.08** Mechanisms behind the transition from acute to chronic whiplash-associated disorders. P. VIDAL*; J. LECOMPTE; D. WANG; S. BLANCHO; P. LINDBERG; C. DE WAELE; J. ADRIAN; E. CHIAROVANO; B. SANDOZ; S. LAPORTE. *Cognac G, Univ. Paris Descartes - CNRS - SSA, Ecole Nationale Supérieure d'Arts et Métiers, Inst. pour la Recherche sur la Moelle épinière et l'Encéphale, CEESAR.*

1:00 FF2 **69.09** Sensory augmentation for balance control in chronic post-concussive syndrome. L. A. KING*; M. MANCINI; F. B. HORAK. *Oregon Hlth. & Sci. Univ.*

2:00 FF3 **69.10** Quantifying the relationship between step variability and dynamic instability in cerebellar ataxic gait. W. ILG*; Z. FLESZAR; C. SCHATTON; B. MUELLER; N. LUDOLPH; M. A. GIESE; M. SYNOFZIK. *Ctr. For Integrative Neurosci., Hertie Inst. for Clin. Brain Research,.*

3:00 FF4 **69.11** The influence of dual tasking on dynamic balance in patient with cerebellar ataxia. B. KANG*; J. PARK. *Korea Univ.*

4:00 FF5 **69.12** Cervical spinal cord injury model for studying locomotor dysfunction. S. K. KARADIMAS*; S. GOSGNACH; K. SATKUNEDRARAJAH; M. FEHLINGS. *Toronto Western Hospital, UHN, Univ. of Alberta.*

1:00 FF6 **69.13** Sub-concussive head impact affects multisensory processing for upright standing. J. J. JEKA*; S. HWANG; L. B. MOORE; P. AGADA; R. TIERNEY. *Temple Univ.*

2:00 FF7 **69.14** Gait characteristics of children with spastic diplegia cerebral palsy. C. W. CHAU*; K. CARROLL; M. DONAHUE; A. KRAHMER; S. VILLAREALE. *Nazareth Col.*

3:00 FF8 **69.15** The Effects of sensory information distortion by vibrational stimulus on balance control in patients with cerebellar ataxia. D. KIM*; J. PARK. *Korea Univ.*

4:00 FF9 **69.16** The Effects of Parkinson's disease on adaptation of compensatory stepping. D. S. PETERSON*; B. W. DIJKSTRA; Y. P. T. KAMSMA; F. B. HORAK. *Oregon Hlth. & Sci. Univ., Portland Veterans Affairs Med. Ctr., Univ. of Groningen.*

1:00 FF10 **69.17** Effects of locomotor retraining based on the motor learning principle on rehabilitation of gait function in patients with cerebellar disease. S. IM*; J. PARK. *Korea Univ.*

2:00 FF11 **69.18** The effect of obstacle height in stepping strategies in children with autism spectrum disorder. S. CHOI*; J. PARK. *Korea Univ.*

POSTER

070. Visuomotor Coordination

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 FF12 **70.01** The effect of visual feedback on interlimb transfer of training during a ballistic movement. A. R. BUICK*; K. L. RUDDY; M. L. RANKIN; R. G. CARSON. *Queen's Univ. Belfast, ETH, Trinity Col. Dublin.*

2:00 FF13 **70.02** Relationships between structural and functional cortical connectivity and cross education of motor function. R. G. CARSON*; K. L. RUDDY; N. WENDEROTH; D. G. WOOLLEY; A. LEEMANS. *Trinity Col. Dublin, Queen's Univ. Belfast, ETH, KU Leuven, Univ. Med. Ctr.*

3:00 FF14 **70.03** Visuomotor processing in optic tectum - A microcircuit mechanism for selection of action. A. A. KARDAMAKIS*; B. ROBERTSON; S. GRILLNER. *Karolinska Inst.*

4:00 FF15 **70.04** Size of visual error does not affect learning of cognitive strategy under mirror-reversal transformation. S. KASUGA*; M. KURATA; M. LIU; J. USHIBA. *Keio Univ., Keio Univ. Sch. of Med.*

1:00 FF16 **70.05** How visuomotor adaptation in one hand acts on kinesthetic control in the other. F. A. KAGERER*. *Michigan State Univ.*

2:00 FF17 **70.06** Performing, but not learning, a reaching task with one arm while learning the same task with the other leads to complete transfer of visuomotor adaptation across the arms. Y. LEI*; J. WANG. *Yuming Lei, Univ. of Wisconsin - Milwaukee.*

3:00 FF18 **70.07** Performing a reaching task with one arm passively while learning the same task with the other leads to substantial transfer of visuomotor adaptation across the arms. S. BAO; Y. LEI; J. WANG*. *Univ. of Wisconsin - Milwaukee, Univ. of Wisconsin.*

4:00 FF19 **70.08** Visuomotor adaptation influences perceptual decision-making. N. KUMAR; J. A. MANJALY; P. K. MUTHA*. *Indian Inst. of Technol. Gandhinagar.*

1:00 FF20 **70.09** Specificity of visuomotor adaption to movement dynamics. M. J. CROSSLEY*; J. L. FAN; R. B. IVRY. *UC Berkeley, UC Berkeley.*

2:00 FF21 **70.10** The effects of spacing practice and perturbation session on the motor memory consolidation during the acquisition of visuomotor adaptation task. Y. SONG*; J. PARK. *Korea Univ., Korea UNIV.*

3:00 FF22 **70.11** Motor behavior and associated primary motor cortex excitability differ during relearning of visuomotor gain when unlearning occurs either via washout or a period of inactivity. M. YAROSSI*; S. ADAMOVICH; J. W. KRAKAUER; E. TUNIK. *Rutgers Biomed. Hlth. Sci., New Jersey Inst. of Technol., Rutgers Biomed. Hlth. Sci., The Johns Hopkins Hosp.*

4:00 FF23 **70.12** Savings as an indicator of motor generalization for visuomotor learning. C. YIN*; K. WEI. *Peking Univ.*

1:00 FF24 **70.13** Motor and visual directional tuning after visuomotor adaptation. S. HAAR*; O. DONCHIN; I. DINSTEIN. *Ben Gurion Univ., Ben Gurion Univ., Ben Gurion Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 FF25 **70.14** Time course of motor memory consolidation in visuomotor adaptation. P. CAFFARO*; J. VILLALTA; V. DELLA-MAGGIORE. *Dept. of Physiology, Sch. of Medicine, Univ., Dept. of Physiology, Sch. of Medicine, Univ.*

3:00 FF26 **70.15** Training in native coordinates interferes anterogradely with adaptation to rotated visual feedback. J. VILLALTA*; A. STOLKINER; E. VIGNETTA; V. DELLA-MAGGIORE. *Dept. of Physiology, Buenos Aires Univ.*

4:00 FF27 **70.16** In experts, contribution of explicit and implicit processes to visuomotor adaptation is different than in novices. C. LEUKEL*; W. TAUBE; A. GOLLHOFER. *Univ. of Freiburg, Univ. of Fribourg.*

1:00 FF28 **70.17** Time course of changes in functional connectivity induced by visuomotor adaptation: A 24 h resting-state fMRI study. V. M. DELLA MAGGIORE*; J. I. VILLALTA; N. KOVACEVIC; A. R. MCINTOSH. *Univ. of Buenos Aires, Rotman Res. Inst.*

2:00 FF29 **70.18** From visuomotor to motor activity in the caudal part of the macaque superior parietal lobule: A comparison study between areas PEc and V6A. G. DAL BO*; K. HADJIDIMITRAKIS; R. BREVEGLIERI; C. GALLETTI; P. FATTORI. *Univ. of Bologna, Monash Univ.*

3:00 FF30 **70.19** Low-gain visual feedback improves reaction time in older adults. M. KWON*; Y. CHEN; A. GARNER; D. W. SOLIS; F. RACKARD; V. J. PEDIGO; B. DANCOSE-GIAMBATTISTO; C. R. SUE-WAH-SING; E. A. CHRISTOU. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

4:00 FF31 **70.20** Brain activity during gradual visuomotor adaptation. P. BÉDARD; J. N. SANES*. *Brown Univ.*

1:00 FF32 **70.21** Age-related changes in the contribution of reflexive and voluntary corrections of spatial errors in target reaching. D. KIMURA*; K. KADOTA; Y. HIRAMATSU; H. KINOSHITA. *Osaka Univ.*

2:00 GG1 **70.22** Linking vision and action in *Drosophila*. J. D. SEELIG*; R. FRANCONVILLE; V. JAYARAMAN. *Janelia Farm Res. Campus, HHMI.*

3:00 GG2 **70.23** Direct observation of ON and OFF pathways in the *Drosophila* visual system. J. STROTHER*; A. NERN; M. REISER. *Janelia Farm Res. Campus.*

4:00 GG3 **70.24** Parallel descending pathways for visually-evoked escape in *Drosophila*. M. PEEK*; S. NAMIKI; G. M. CARD. *HHMI Janelia Farm.*

1:00 GG4 **70.25** Functional investigation of a visual projection neuron in the *Drosophila* visual system. M. MORIMOTO*; M. WU; A. NERN; G. M. RUBIN; M. B. REISER. *HHMI Janelia Farm Res. Inst.*

2:00 GG5 **70.26** Neural substrates for looming detection in *Drosophila melanogaster*. C. R. VON REYN*; W. R. WILLIAMSON; P. BREADS; A. NERN; G. M. CARD. *Janelia Farm Res. Campus, HHMI.*

3:00 GG6 **70.27** Size discrimination in the retinotectal system. C. A. TRIVEDI; S. J. PREUSS; C. VOM BERG-MAURER; S. RYU; J. H. BOLLMANN*. *Max Planck Inst. for Med. Res., Max Planck Institute For Medical Research.*

4:00 GG7 **70.28** Size-filtering circuits in the retino-tectal pathway. S. J. PREUSS*; C. A. TRIVEDI; C. M. VOM BERG-MAURER; S. RYU; J. H. BOLLMANN. *Max Planck Inst. for Med. Res.*

1:00 GG8 **70.29** Distinct classes of orientation/direction-tuned 5HT3A receptor-positive interneurons in the mouse visual cortex. Y. CHEN*; V. D. J. BONFARDIN; R. A. MEASE; N. L. ROCHEFORT; H. MONYER; A. KONNERTH. *Tech. Univ. Munich, Hugh Robson Building, Univ. of Edinburgh, Interdisziplinaeres Zentrum für Neurowissenschaften, Univ. of Heidelberg.*

2:00 GG9 **70.30** Activity-control of layer 2/3 pyramidal cells by 5HT3A receptor-positive interneurons in the mouse visual cortex *in vivo.* V. D. BONFARDIN*; Y. CHEN; A. STROH; I. NELKEN; H. MONYER; A. KONNERTH. *Inst. Fur Neurowissenschaften, Inst. for Microscopic Anat. and Neurobiology,, the Edmond and Lily Safra Ctr. for Brain Sci. (ELSC), Hebrew University, Edmond J. Safra Campus, Givat Ram, Interdisziplinaeres Zentrum für Neurowissenschaften, Univ. of Heidelberg.*

POSTER

071. Interlimb Coordination

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 GG10 **71.01** ▲ Coupling of bimanual forces during independent and cooperative hand movements. T. BOYANOSKI*; M. A. PEREZ. *Univ. of Pittsburgh.*

2:00 GG11 **71.02** Object properties influence symmetry of bilateral reach to grasp movements after tetraplegia. F. J. CALABRO*; M. A. PEREZ. *Univ. of Pittsburgh.*

3:00 GG12 **71.03** Increase of interhemispheric coherence during acquisition of asymmetric bimanual movements. S. PARK*; J. COWENHOVEN; D. STERNAD. *Northeastern Univ.*

4:00 GG13 **71.04** A theoretical framework for simultaneously explaining motor learning effects in unimanual and bimanual movements. K. TAKIYAMA*. *Tamagawa Univ. / Brain Sci. Inst.*

1:00 GG14 **71.05** Age-related changes in interhemispheric communications during the preparation of bimanual movements. H. FUJIYAMA*; J. VAN SOOM; G. RENS; O. LEVIN; S. P. SWINNEN. *KU Leuven, KU Leuven.*

2:00 GG15 **71.06** Effect of single pulse transcranial magnetic stimulation of unilateral motor cortex on bimanual grip coordination: A pilot study. R. PATEL*; S. AMANO; K. OKI; B. C. CLARK; S. L. HONG. *OUHCOM.*

3:00 GG16 **71.07** Representation of bimanual reach plans in the posterior parietal cortex. E. F. MOOSHAGIAN*; C. WANG; L. H. SNYDER. *Washington Univ. Sch. of Med.*

4:00 GG17 **71.08** Reduced intracortical inhibition is associated with bimanual common and dual goal tasks. W. LIAO; S. KANTAK; J. BARTON; J. WHITALL; S. MCCOMBE WALLER*. *Univ. of Maryland, Sch. of Med., Moss Rehabil. Res. Inst., Univ. of Maryland, Baltimore.*

1:00 GG18 **71.09** Learning history of unimanual action affects bimanual coordination. A. SARAIVA*; N. HAGURA; T. KIMURA; H. GOMI; S. BESTMANN. *Inst. of Neurology, Univ. Col. London, Inst. of Cognitive Neuroscience, Univ. Col. London, Human & Information Sci.*

2:00 GG19 **71.10** Effect of the number of training contexts on motor learning transfer from bimanual to unimanual movement. T. HAYASHI*; D. NOZAKI. *The Univ. of Tokyo, Grad Sch. Educ, JSPS research fellow.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 GG20 **71.11** Dynamic dominance revealed through transcranial magnetic stimulation during bimanual isometric grip force production: a pilot study. S. AMANO*; R. PATEL; K. OKI; B. C. CLARK; S. HONG. *Ohio Univ.*

4:00 GG21 **71.12** ● Neural activity as a correlate of task difficulty in bimanual coordination. L. M. RUEDA DELGADO*; E. SOLESIO JOFRE; A. DAFFERTSHOFER; S. P. SWINNEN. *KU Leuven- Fac. of Kinesiology and Rehabil. Sci. (faber), Vrije Univ. Amsterdam.*

1:00 GG22 **71.13** Cortical EEG dynamics related to a delay in selective response execution/inhibition during bimanual Go/Stop tasks. K. YAMANAKA*. *Showa Women's Univ.*

2:00 GG23 **71.14** Can a single hemisphere control the synchronised execution of asymmetric bimanual actions? D. NOBBS; L. HAMMETT; L. BERTHOUZE; F. VARGHA-KHADEM*. *UCL Inst. Child Hlth., Univ. of Sussex, Great Ormond Street Hosp.*

3:00 GG24 **71.15** What promotes interhemspheric interaction during bilateral tasks? Evidence from intermuscular coherence. S. LEE*; H. B. NGUYEN; M. L. HARRIS-LOVE; P. S. LUM. *Catholic Univ. of America, Biomed. Eng., MedStar Natl. Rehabil. Hosp., Catholic Univ. of America, Biomed. Eng., Georgetown Univ., Catholic Univ. of America.*

4:00 GG25 **71.16** Bilateral force transients in the upper limbs following single-pulse microstimulation in the ponto-medullary reticular formation. T. J. HIRSCHAUER*; J. A. BUFORD. *Ohio State Univ., Ohio State Univ.*

1:00 GG26 **71.17** Muscle relaxation of the foot induces decrease in muscle activity of hand sustained-contraction. K. KATO*; J. WATANABE; K. KANOSUE. *Fuculty of Sport Sciences, Waseda Univ., Japan Society for Promotion of Sci. Res. Fellow, Grad. school of Sport Sci., Fac. of Sport Sci.*

2:00 GG27 **71.18** ▲ Task dependent modulation of interhemispheric inhibition. M. WISCHNEWSKI; G. KOWALSKI; S. R. BELAGAJE; C. M. BUETEFISCH*. *Emory Univ., Emory Univ.*

3:00 GG28 **71.19** Interhemispheric inhibition of corticospinal projections to wrist muscles. D. A. BOLTON*; R. J. IBEY; A. R. BUICK; R. G. CARSON. *Queens Univ. Belfast, Univ. of Waterloo, Trinity Col. Dublin.*

4:00 GG29 **71.20** Interhemispheric cortical interactions of the caudal forelimb (CFA) area with its contralateral homologue in the rat. E. SERRANO*; I. MOREAU-DEBORD; L. JEAN-CHARLES; B. TOUVYKINE; S. QUESSY; N. DANCAUSE. *Univ. De Montréal.*

1:00 GG30 **71.21** Subthreshold activation of ventral premotor cortex produces interhemispheric modulation of contralateral primary motor cortex outputs in Capuchin monkeys. S. QUESSY*; A. HAMADJIDA; M. DEA; J. DEFFEYES; N. DANCAUSE. *Univ. De Montréal.*

2:00 GG31 **71.22** Interhemispheric cortical interactions of forelimb motor areas in the rat: Modulation of the caudal forelimb area (CFA) by the contralateral rostral forelimb area (RFA). I. MOREAU-DEBORD*; E. SERRANO; B. TOUVYKINE; L. JEAN-CHARLES; S. QUESSY; N. DANCAUSE. *Univ. of Montreal.*

3:00 GG32 **71.23** ● Observation of unilateral hand movement modulates interhemispheric inhibition on primary motor cortex; a transcranial magnetic stimulation study. S. YAMAMOTO*; Y. OKAMOTO; N. TAKESHITA; Y. UMEHARA; M. OHSHIMA; M. MONMA; Y. KOHNO; K. NUMATA. *Ibaraki Prefectural Univ. of Hlth. Sci.*

4:00 GG33 **71.24** Assessment of associated reactions in pediatric and adult onset hemiplegia. R. L. HAWE*; J. P. A. DEWALD. *Northwestern Univ.*

1:00 GG34 **71.25** ● Asymmetric Walkway: Novel behavioral assay for studying asymmetric locomotion. K. TUNTEVSKI*; R. ELLISON; J. M. SHAFFER; S. YAKOVENKO. *West Virginia Univ.*

2:00 GG35 **71.26** ● Primary motor cortical neurons reflect perturbation and torque-related activity from ipsilateral limb. E. A. HEMING*; S. H. SCOTT. *Queen's Univ.*

3:00 GG36 **71.27** A preliminary multi-level neurocomputational model for overt/covert self-intended and imitated arm reaching movements. H. OH*; D. HUANG; G. E. KATZ; R. H. MILLER; J. A. REGGIA; R. J. GENTILI. *Univ. of Mayland-College Park, Univ. of Maryland-College Park, Univ. of Maryland-College Park, Univ. of Maryland-College Park, Univ. of Maryland-College Park.*

4:00 HH1 **71.28** The influence of visual feedback on the intralimb and interlimb generalization of motor adaptation. K. MURTHY*; J. FITZGERALD; W. M. JOINER. *George Mason Univ.*

POSTER

072. Motor Deficits

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH2 **72.01** Harnessing tongue movement to decrease RMSE in wrist tracking exercise using exoskeletal assistance. S. OSTADABBAS; J. KIM; D. WU; K. RICHARDS; A. J. BUTLER*; M. GHOVANLOO. *Georgia Inst. of Technol., Georgia State Univ.*

2:00 HH3 **72.02** Training-related improvement in hand force perception in older adults. K. KERN*; S. BROWN. *Univ. of Michigan, Univ. of Michigan.*

3:00 HH4 **72.03** ▲ Cognitive-motor integration in young elite athletes with a history of concussion. Y. HAMANDI; J. HURTUBISE; C. HUGHES; A. MACPHERSON; L. E. SERGIO*. *York Univ., York Univ. Sport Med. Team, Ctr. for Vision Res.*

4:00 HH5 **72.04** Quick, low-cost, and highly sensitive motor assessment using markerless motion capture. P. K. JOHNSON*; M. MCCAIN; S. K. CHARLES. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ.*

1:00 HH6 **72.05** ● The relation between attention and tic generation in Tourette syndrome. E. MISIRLISOY*; V. BRANDT; C. GANOS; J. TUBING; A. MUNCHAU; P. HAGGARD. *Inst. of Cognitive Neuroscience, UCL, Inst. of Neurogenetics, Univ. of Lübeck, Inst. of Neurology, UCL.*

2:00 HH7 **72.06** The effect of paretic ankle plantarflexion in spontaneous and voluntary joint torque coupling patterns. N. SANCHEZ*; J. P. A. DEWALD; R. LOPEZ-ROSADO. *Northwestern Univ.*

3:00 HH8 **72.07** ● Transcallosal effects of chronic below-elbow amputation: Behavior and physiology. E. CHAN*; E. BRECEDA; F. SANDBRINK; A. DROMERICK; P. LUM; S. MOHAPATRA; R. SILVA; M. HARRIS-LOVE. *Natl. Rehabil. Hosp., MedStar Hlth. Res. Inst., Washington DC Veterans Affairs Med. Ctr., Georgetown Univ., The Catholic Univ. of America.*

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4:00 HH9 **72.08** Convergence of ipsilateral pyramidal and bilateral medial brainstem pathways onto cervical spinal interneurons after unilateral pyramidal tract lesion in monkeys. B. ZAAIMI*; S. N. BAKER. *Newcastle Univ.*

1:00 HH10 **72.09** Effects of specific unilateral lesion of the primary hindlimb motor cortex on treadmill locomotion in adult rats. M. DELCOUR*; H. DELIVET-MONGRAIN; N. DANCAUSE; S. ROSSIGNOL. *Univ. De Montréal / Dept. of Neuroscienc.*

2:00 HH11 **72.10** A novel, automated test of forelimb supination in the rat provides a sensitive measure of corticospinal tract function. A. SINDHURAKAR*; B. FLYNN; E. MEYERS; D. SLOAN; R. RENNEKAR, II; J. B. CARMEL. *Burke Med. Res. Inst., Univ. of Texas at Dallas, Weill Med. Col. of Cornell Univ.*

3:00 HH12 **72.11** Locomotor adaptation in Cerebral Palsy patients is constrained by their increased performance variability. F. MAWASE*; L. SHMUELOF; S. BAR-HAIM; A. KARNIEL. *Ben-Gurion Univ.*

4:00 HH13 **72.12** Transcranial direct current stimulation and upper extremity robotic therapy improves upper extremity function in an adult with cerebral palsy: a pilot study. K. M. FRIEL*; P. LEE; D. GUPTA; A. R. P. SMORENBURG; H. KUO; D. J. EDWARDS. *Burke Med. Res. Inst., Weill Cornell Med. Col., Teachers Col. of Columbia Univ.*

1:00 HH14 **72.13** Motor cortex inactivity during a key period of development permanently alters the organization of the rubrospinal system. P. T. WILLIAMS*; D. ZUELKE; S. KIM; A. P. CHANG; J. H. MARTIN. *City Col. of CUNY.*

POSTER

073. Cortical Motor Planning

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH15 **73.01** Antagonist muscle responses during sustained isometric maximal voluntary contraction. J. L. TAYLOR*; C. J. MCNEIL; S. C. GANDEVIA; D. S. KENNEDY. *Neurosci. Res. Australia, Univ. of British Columbia.*

2:00 HH16 **73.02** Interactions between I-waves in human motor cortex. M. A. SAVISKY*; J. CIRILLO; M. A. PEREZ. *Univ. of Pittsburgh.*

3:00 HH17 **73.03** The influence of spontaneous movement tempo on motor resonance during action observation. M. BOVE*; G. LAGRAVINESE; A. BISIO; L. PERASSO; P. RUGGERI; L. AVANZINO. *Univ. of Genoa.*

4:00 HH18 **73.04** Effects of concussion on motor cortex inhibition: A one-year follow-up. A. L. YASEN*; N. R. MILLER; L. F. MAYNARD; A. D. CHRISTIE. *Univ. of Oregon.*

1:00 HH19 **73.05** Neural network model including muscle synergies constructed based on redundant motor control simulation. S. HAGIO*; M. KOUZAKI. *Grad. Sch. of Human and Envrn. Studies, Kyoto Univ., Res. Fellow of the Japan Society for the Promotion of Sci.*

2:00 HH20 **73.06** ● Is there a link between pre-synaptic inhibition and muscles mechanics? F. CREVECOEUR*; S. H. SCOTT. *Queen's Univ.*

3:00 HH21 **73.07** Common low-frequency dynamics in movement and sleep. A. JACKSON*; T. M. HALL; F. DE CARVALHO. *Newcastle Univ.*

4:00 HH22 **73.08** Distinct interneuronal networks influence excitability of the surround during movement initiation in humans. N. THIRUGNANASAMBANDAM; R. KHERA; H. WANG; S. KUKKE; M. HALLETT*. *NINDS/NIH, Univ. of Iowa Carver Col. of Med., Peking Union Med. Col. Hosp., Catholic Univ. of America, NINDS/NIH.*

1:00 HH23 **73.09** Representing the dynamic effects of neural populations in the motor system. T. D. SANGER*; S. F. GISZTER. *USC, Drexel Univ.*

2:00 HH24 **73.10** Latency of LFP beta power peak during movement preparation correlates with reaction time. L. ZEHL*; M. DENKER; S. GRÜN; A. RIEHLE; T. BROCHIER. *Jülich Res. Ctr. and JARA, RWTH Aachen Univ., RIKEN Brain Sci. Inst., CNRS – Aix Marseille Univ., Jülich Res. Ctr. and JARA.*

3:00 HH25 **73.11** Sequence generation within spatio-temporal cycles of inhibition. J. CANNON*; J. MARKOWITZ; N. KOPELL; T. GARDNER. *Boston Univ.*

4:00 HH26 **73.12** Spatiotemporal properties of current source density in the prefrontal cortices of behaving monkeys. N. KAWAGUCHI*; K. SAKAMOTO; K. YAGI; M. AOKI; H. MUSHIAKE. *Tohoku University, Sch. of Med., Tohoku Univ. Sch. of Med., Tohoku University, Res. Inst. of Electrical Communication, The Core Res. for Evolutional Sci. and Technol. Program (CREST), JST.*

1:00 HH27 **73.13** Children with autism show decreased cortical activation with praxis movements. J. B. EWEN*; B. M. LAKSHMANAN; C. NETTLES; M. HALLETT, MD; N. E. CRONE; S. H. MOSTOFSKY. *Kennedy Krieger Inst., Kennedy Krieger Inst., Kennedy Krieger Inst., NINDS/NIH, Johns Hopkins Univ. Sch. of Med.*

2:00 HH28 **73.14** Development of functional mu-rhythm from infancy through adulthood, and relations to upper/lower alpha. S. G. THORPE*; E. CANNON; N. FOX. *Univ. of Maryland Child Develop. Lab.*

3:00 HH29 **73.15** Modulation of tactile sensory responses during a sensory-triggered decision task in mouse forepaw primary motor cortex. L. ESTEBANEZ*; J. POULET. *Max Delbrück Centrum.*

POSTER

074. Noninvasive Neurophysiology

Theme D: Sensory and Motor Systems

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH30 **74.01** Analysis of electrode configurations for the decoding of knee angles from EEG signals during gait. J. M. AZORIN*; A. UBEDA; D. PLANELLES; A. COSTA; E. HORTAL; E. IAÑEZ. *Miguel Hernandez Univ. of Elche.*

2:00 HH31 **74.02** Brain communication in a completely locked-in-patient using an EEG system. K. TAKANO*; B. XIA; U. CHAUDHARY; G. GALLEGOS-AYALA; A. FURDEA; C. A. RUF; K. KANSAKU; H. FLOR; N. BIRBAUMER. *Res. Inst. Natl. Rehab Cent,, Inst. of Med. Psychology and Behavioral Neurobiology, Univ. of Tuebingen, Grad. Sch. of Neural Information Processing, Univ. of Tuebingen, Escuela Superior Politecnica del Litoral (ESPOL), Brain Sci. Inspired Life Support Res. Center, The Univ. of Electro-Communications, Central Inst. of Mental Health, Med. Fac. Mannheim, Heidelberg Univ., Ospedale San Camillo, IRCCS.*

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3:00 HH32 **74.03** Decoding of goal-directed behaviors from scalp electroencephalography (EEG) in freely behaving infants. Z. R. HERNANDEZ*; T. TSE; J. L. CONTRERAS-VIDAL. *Univ. of Houston.*

4:00 II1 **74.04** High Density Electroencephalography (EEG) correlates of pain- related changes in upper limb movements. G. MISRA*; E. OFORI; J. CHUNG; S. A. COOMBES. *Univ. of Florida.*

1:00 II2 **74.05** EEG correlates of a prospective sense of agency. N. SIDARUS*; P. HAGGARD. *Inst. of Cognitive Neuroscience, UCL.*

2:00 II3 **74.06** Three-class classification of motor imagery EEG data including “rest state” using Common Spatial Pattern. T. SHIRATORI*; H. TSUBAKIDA; A. ISHIYAMA; Y. ONO. *Waseda Univ., Meiji Univercity.*

3:00 II4 **74.07** On the potential effects of motion artifacts during decoding of lower-body movement kinematics from scalp electroencephalography (EEG). J. L. CONTRERAS-VIDAL*, Ph.D.; K. NATHAN. *Univ. of Houston.*

4:00 II5 **74.08** Simultaneous scalp EEG and multiunit recording from monkey ventral premotor cortex reveals the contribution of mirror neurons to alpha and beta desynchronization. M. BIMBI; G. COUDE*; F. FESTANTE; R. E. VANDERWERT; N. A. FOX; P. FERRARI. *Univ. Parma, Dept Neurosci., Harvard, Univ. of Maryland.*

1:00 II6 **74.09** Decoded neurofeedback training for MEG/SSVEF. H. ORA*; K. KANSAKU. *Res. Inst. of Natl. Rehabil. Ctr., The Univ. of Electro-Communications.*

2:00 II7 **74.10** The performance of a SSVEP classifier under well-lit and dim-lit room environment. K. SAEKI*; Y. ONO; K. IKEMOTO; T. YOKOYAMA; T. URANO. *Meiji Univ. C/O Prof.*

3:00 II8 **74.11** ● Changing power spectrum of SSVEP in blinking. A. FUNASE*; I. TAKUMI. *Nagoya Inst. of Technol.*

4:00 II9 **74.12** SSVEP-BCI system with an supervised classification algorithm. K. IKEMOTO*; T. URANO; K. SAEKI; Y. ONO. *Meiji Univ.*

1:00 II10 **74.13** EEG-based classification of video quality perception using steady state visual evoked potentials (SSVEP). L. ACQUALAGNA*; S. BOSSE; A. K. PORBADNIGK; G. CURIO; K. R. MÜLLER; T. WIEGAND; B. BLANKERTZ. *TU Berlin, Fraunhofer Inst. for Telecommunications, Technische Univ. Berlin, Charité*.

2:00 II11 **74.14** A monolithic portable fNIRS system with 1cm spatial resolution for functional brain imaging. J. KIM*; J. CHOI; M. CHOI; H. WON; G. HWANG; H. BAE. *KAIST, KAIST.*

3:00 II12 **74.15** ● Decoding daily behaviors from NIRS signatures by using a portable NIRS device in the daily-life environment. T. OGAWA*; P. K. GUPTA; K. YANO; J. A. ABDUR-RAHIM; H. MORIOKA; J. HIRAYAMA; S. YAMAGUCHI; A. ISHIKAWA; Y. INOUE; M. KAWANABE; S. ISHII. *ATR, ATR, Kyoto Univ., JSPS, Shimadzu Corp.*

4:00 II13 **74.16** Ultrasound modulation in frog nerve. D. W. GULICK*; B. C. TOWE. *Arizona State Univ.*

1:00 II14 **74.17** Ultrasound neuromodulation frequency dependence is not fully explained by changing sonication duration. P. P. YE*; J. BROWN; K. B. PAULY. *Stanford Univ., Stanford Univ., Stanford Univ.*

2:00 II15 **74.18** ● fMRI BOLD response in humans using transcranial focused ultrasound. J. MUELLER*; W. LEGON; W. TYLER. *Virginia Tech. Carilion Res. Inst.*

POSTER

075. Gonadotropin-Releasing Hormone and Hpg Control

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 II16 **75.01** ● At diestrus-2 muscarinic receptor type 1 (M_1R) of the left or right ovary participates in the progesterone (P_4) and 17β-estradiol (E_2) secretion on proestrus day. M. B. CRUZ*; A. FLORES; R. DOMÍNGUEZ. *Univ. Autonoma De México.*

2:00 II17 **75.02** Unraveling the cellular mechanisms triggering GnRH release. S. S. CONSTANTIN*; S. WRAY. *NINDS / NIH [C].*

3:00 II18 **75.03** Defining the neuronal network mediating impaired progesterone negative feedback in a mouse model of polycystic ovarian syndrome. A. M. MOORE; M. PRESCOTT; R. E. CAMPBELL*. *Univ. Otago, Ctr. Neuroendocrinol.*

4:00 II19 **75.04** ● Morphological and physiological interactions between GnRH3 and hypocretin/orexin neuronal systems in zebrafish. Y. ZHAO*; C. SINGH; M. LIN; D. PROBER; N. WAYNE. *UCLA, Caltech.*

1:00 II20 **75.05** Hypothalamic NPY neurons decrease their npya expression after food depletion. S. KANDA*; S. KITAHARA; Y. OKA. *Dept Biol Sci, Grad Sch. Sci, Univ. Tokyo.*

2:00 II21 **75.06** Impact of bisphenol A on the developing GnRH3 neural system and locomotor behavior in Japanese medaka. T. INAGAKI*; E. K. LEE; S. RAMAKRISHNAN. *Univ. of Puget Sound, Univ. of Puget Sound.*

3:00 II22 **75.07** Dopaminergic regulation on gonadotoropes in medaka. T. KARIGO*; Y. MOCHIZUKI; Y. OKA. *Dept Biol Sci, Grad Sch. Sci, Univ. Tokyo.*

4:00 II23 **75.08** ▲ Immunocytochemical localization of gonadotropin-releasing hormone (GnRH) neurons in the brain of the American alligator, alligator mississippiensis. K. HUANG; Y. GAO; R. TERUYAMA*. *Louisiana State Univ., Johns Hopkins Univ.*

1:00 II24 **75.09** Revealing synaptic inputs along the full extent of gonadotropin-releasing hormone (GnRH) neuron processes using an *in vivo* viral-mediated cell filling technique. S. YIP*; R. CAMPBELL. *Univ. of Otago.*

2:00 II25 **75.10** Optogenetic activation of mouse GnRH neurons *in vivo.* P. CAMPOS; B. HYLAND; A. E. HERBISON*. *Univ. of Otago.*

3:00 II26 **75.11** GnRH-(1-5)-mediated regulation of the extracellular milieu in the migration of GN11 cells. D. O. LARCO*; S. MANI; T. WU. *Uniformed Services Univ., Baylor Col. of Med.*

4:00 II27 **75.12** Estradiol and progesterone regulation of Jak/Stat signaling in hypothalamic neuronal cells. H. L. ADAMS; K. A. INTLEKOFER; S. L. PETERSEN*. *Univ. of Massachusetts, Univ. of Vermont, Univ. of Massachusetts Amherst.*

1:00 II28 **75.13** Effects of the blockade of DA1 ovarian receptors on spontaneous ovulation and steroids hormones synthesis. B. VENEGAS MENESES*; M. GARCIA; J. L. MORAN; C. MORAN; A. HANDAL; N. H. ROSAS-MURRIETA; R. DOMINGUEZ. *Benemerita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma de Puebla, FES-Z UNAM.*

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2:00 II29 **75.14** Examination of hypothalamic POMC cells in GnRH deficient mice. C. TAYLOR-BURDS*; B. POPE; S. WRAY. *NIH/NINDS.*

3:00 II30 **75.15** Environmental pollutant BPA inhibits GnRH neuronal activity. U. KLENKE*; S. WRAY. *CDNS/NINDS/NIH.*

4:00 JJ1 **75.16** Are GnRH neurons affected by prenatal exposure to the endocrine-disrupting-compound BPA? H. STONER*; U. KLENKE; S. WRAY. *NIH/NINDS.*

POSTER

076. Kisspeptin and Related Systems

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ2 **76.01** Fast glutamatergic transmission to hypothalamic kisspeptin neurons is regulated in an estrous cycle-dependent manner. L. WANG*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

2:00 JJ3 **76.02** Kisspeptin stimulates gonadotropin-releasing hormone (GnRH) release detected by fast-scan cyclic voltammetry (FSCV) via mechanisms requiring both mobilization of intracellular Ca^{2+} stores and its influx through Ca^{2+}-permeable membrane channels. K. M. GLANOWSKA*; S. M. MOENTER. *Univ. of Virginia, Univ. of Michigan.*

3:00 JJ4 **76.03** Estradiol modulates the number of GABAA receptors binding GABA at arcuate nucleus kisspeptin (KNDy) neuron synapses. R. A. DEFAZIO*; C. F. ELIAS; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 JJ5 **76.04** Membrane-initiated signaling mediates estradiol-induced kisspeptin in immortalized anterior hypothalamic kisspeptin neurons. M. A. MITTELMAN-SMITH*; P. E. MICEVYCH. *UCLA, UCLA.*

1:00 JJ6 **76.05** AVPV kisspeptin neurons mediate neuroprogesterone induction of the luteinizing hormone surge. L. K. PAASKE*; T. CHUON; P. MICEVYCH; K. SINCHAK. *California State University, Long Beach, UCLA.*

2:00 JJ7 **76.06** A Kiss-Clock times estrous cycle. D. CHASSARD*; I. BUR-PIVERT; J. MENDOZA; V. SIMONNEAUX. *INCI.*

3:00 JJ8 **76.07** Multidisciplinary analyses of gpr54-EGFP transgenic medaka reveal novel functions of the kisspeptin neuronal system. M. NAKAJO*; T. KARIGO; S. KANDA; Y. OKA. *The Univ. of Tokyo.*

4:00 JJ9 **76.08** Electrophysiological analyses of sex steroid-sensitive Kiss1 neurons in a seasonal breeder, medaka. M. HASEBE*; S. KANDA; H. SHIMADA; Y. AKAZOME; Y. OKA. *The Univ. of Tokyo, Grad. Sch. of Scienc.*

1:00 JJ10 **76.09** Kisspeptin increases the spontaneous firing rate of vasotocin (VT) neurons in the brain of medaka. Y. SHIKANO*; S. KANDA; Y. OKA. *Univ. of Tokyo; Grad. Sch. of Sci.*

2:00 JJ11 **76.10** 17-beta-Estradiol reduces the dendritic spine density of KNDy neurons in the arcuate nucleus of ovariectomized Tac2-EGFP transgenic mice. M. CHOLANIAN; S. J. KRAJEWSKI-HALL; N. T. MCMULLEN; N. E. RANCE*. *Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med.*

3:00 JJ12 **76.11** Early onset of reproductive senescence programmed by intrauterine growth restriction in the female rat is accompanied by altered KNDy cell peptide expression and hypertrophy in the arcuate nucleus of the hypothalamus. C. FERGANI*; S. INTAPAD; S. ROLLINS; M. N. LEHMAN; B. T. ALEXANDER; L. M. COOLEN. *Univ. of Mississippi, Univ. of Mississippi.*

POSTER

077. Neural Control of Cardiovascular Function I

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ13 **77.01** Glutamatergic neurotransmission of paraventricular nucleus of the hypothalamus modulates cardiovascular responses evoked by hemorrhage in rats. C. BUSNARDO*; C. C. CRESTANI; A. FASSINI; L. B. M. RESSTEL; F. M. A. CORRÊA. *Univ. of São Paulo, Sch. of Pharmaceut. Sciences, UNESP.*

2:00 JJ14 **77.02** Surface sugars in the nucleus of the solitary tract alter neuronal excitability to modify blood pressure and the baroreflex. P. BOKINIEC*; L. BOU-FARAH; S. MCMULLAN; N. H. PACKER; A. K. GOODCHILD. *Australian Sch. of Advanced Med., Macquarie Univ.*

3:00 JJ15 **77.03** Connectome of the Rostral Ventrolateral Medulla Catecholaminergic (RVLM-CA) neurons of the mouse determined using a modified rabies virus. R. L. STORNETTA*; K. E. VIAR; P. G. GUYENET. *Univ. of Virginia, Univ. of Virginia.*

4:00 JJ16 **77.04** Liver cirrhosis differentially modulates neuronal excitability in cardiac sympathetic and parasympathetic ganglia. C. LEE*; S. JEONG; K. PARK. *Brain Res. Group, Yonsei Univ. Wonju Col. of Med., Brain Res. Group, Yonsei Univ. Wonju Col. of Med.*

1:00 JJ17 **77.05** Cardiovascular autonomic function in hypertensive subjects. R. K. GOIT*; B. H. PAUDEL. *Nepalgunj Med. Col., B P Koirala Inst. of Hlth. Sci.*

2:00 JJ18 **77.06** Gender differences in the distribution of Urocortin-1 immunoreactivity in brainstem autonomic nuclei. J. CIRIELLO*; M. M. CAVERSON. *Univ. Western Ontario, Univ. Western Ontario.*

3:00 JJ19 **77.07** Sex differences in NMDA receptor trafficking in angiotensin receptor type 1A containing neurons in the mouse hypothalamus following slow-pressor angiotensin infusion. J. MARQUES LOPES*; M. LYNCH; T. VAN KEMPEN; E. M. WATERS; C. IADECOLA; V. M. PICKEL; T. A. MILNER. *Weill Cornell Med. Col., Lab. of Neuroendocrinology.*

4:00 JJ20 **77.08** Liver cirrhosis-blunted baroreflex is associated with down-regulation of voltage-gated sodium channels in aortic baroreceptor neurons. C. LEE; K. PARK; S. JEONG*. *Yonsei Univ. Wonju Col. of Med., Yonsei Univ. Wonju Col. of Med.*

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1:00 JJ21 **77.09** A stress-quantification gadget: Detrended fluctuation analysis of heartbeats, from crustacean animal models to humans. T. YAZAWA*. *Tokyo Metropolitan Univ.*

2:00 JJ22 **77.10** Central administration of nesfatin-1 reverses hypotension in hemorrhagic shock. M. S. YILMAZ*; B. ALTINBAS; C. SEVIM; G. L. ERKAN; G. GUVENC; N. GUNGOR; M. YALCIN; V. SAVCI. *Uludag Univ. Fac. of Med., Uludag Univ. Vet. Fac.*

3:00 JJ23 **77.11** Arterial pressure, baroreflex, chemoreflex and sodium excretion in rats treated with chronic infusion of aldosterone into the 4th ventricle. S. GASPARINI*; M. R. MELO; G. M. F. ANDRADE-FRANZÉ; P. J. RUCHAYA; M. BASSI; J. V. MENANI; E. COLOMBARI. *Sao Paulo State University. Dep. of Physiol. and Pathology.*

4:00 JJ24 **77.12** Stress evaluation using changes in pupillary diameter of human eyes. N. BINTI ALUWI*; Y. ONO; N. HARA. *Meiji Univ., Intl. Univ. of Hlth. and Welfare, Kanagawa Dent. Col. Yokohama Dent. and Med. Clin.*

1:00 JJ25 **77.13** Characterization of the central neurons responsible for parasympathetic regulation of choroidal blood flow in rat eye using pseudorabies virus. C. LI*; M. E. C. FITZGERALD; N. DEL MAR; S. CUTHBERTSON; M. S. LEDOUX; S. GONG; P. RYAN; A. REINER. *Univ. of Tennessee Hlth. Sci. Ctr., Christian Brothers Univ., Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr.*

2:00 JJ26 **77.14** Direct visualization of oxytocin release in the brainstem upon photoactivation of fibers originating from parvocellular neurons in the paraventricular nucleus of the hypothalamus. H. JAMESON*; R. PINOL; D. MENDELOWITZ. *George Washington Univ.*

3:00 JJ27 **77.15** ● Proton modulates axo-axonal transmission of perivascular nerves in the rat mesenteric artery. H. KAWASAKI*; S. TAKATORI; S. OZAKI; P. TANGSUCHARIT. *Departmen of Clin. Pharm., Col. of Pharmaceut. Sciences, Matsuyama Univ., Grad. Sch. of Medicine, Dent. and Pharmaceut. Sciences, Okayama Univ., Fac. of Medicine, Khon Kaen Univ.*

4:00 JJ28 **77.16** The optogenetic photoactivation of the pathway from the hypothalamic paraventricular nucleus to parasympathetic cardiac neurons in the brainstem is blunted following chronic intermittent hypoxia and hypercapnia (an animal model of obstructive sleep apnea). O. Y. DERGACHEVA*; D. MENDELOWITZ. *GW Univ.*

1:00 JJ29 **77.17** A novel approach for the analysis of respiratory sinus arrhythmia using breath phase information. S. BARREDA*; J. R. VRANISH; E. BAILEY. *Univ. of Arizona.*

2:00 JJ30 **77.18** Pharmacological analysis of the α1- and α2-adrenoceptors subtypes on the vasopressor responses induced by dihydroergotamine in pithed rats. E. RIVERA*; G. MANRIQUE-MALDONADO; A. H. ALTAMIRANO-ESPINOZA; I. RUIZ-SALINAS; B. VILLANUEVA-CASTILLO; C. M. VILLALÓN. *CINVESTAV-IPN.*

3:00 JJ31 **77.19** ▲ Effects of cold exposure on autonomic function during sleep and early-morning blood pressure surge in prehypertensives. C. HONG*; T. KUO; C. YANG. *Natl. Yang-Ming Univ.*

4:00 JJ32 **77.20** Altered endocannabinoid signaling influences baseline heart rate. C. DEAN-BERNHOFT*; C. J. HILLARD; J. L. SEAGARD; F. A. HOPP; Q. H. HOGAN. *Med. Col. of Wisconsin, Zablocki VA Med. Ct, Med. Col. of Wisconsin.*

POSTER

078. Stress: Corticotropin-Releasing Factor

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ33 **78.01** The stressed synapse: Effects of corticosterone (CORT) and corticotropin-releasing hormone (CRH) on hippocampal dendritic spines. Y. CHEN*; P. SEE; J. MOLET; X. ZHUO; T. BARAM. *Univ. Cal Irvine, Univ. Cal Irvine, Univ. Cal Irvine.*

2:00 JJ34 **78.02** ● Corticotropin-releasing hormone drives anandamide hydrolysis in the amygdala to promote anxiety. J. GRAY*; H. A. VECCHIARELLI; T. T. Y. LEE; M. MORENA; D. J. HERMANSON; A. KIM; R. J. MCLAUGHLIN; K. HASSAN; C. KUHNE; C. T. WOTJAK; J. M. DEUSSING; S. PATEL; M. N. HILL. *Hotchkiss Brain Institute, Univ. of Calgary, Mathison Ctr. for Mental Hlth. Res. & Educ., Depts of Cell Biol. & Anatomy, and Psychiatry, Univ. of Calgary, Neurosci. Dept, Univ. of Calgary, Dept of Psychology, Univ. of British Columbia, Sapienza Univ., Dept of Chemistry, Vanderbilt Univ., Douglas Hospital, McGill Univ., Max Planck Inst. of Psychiatry, Dept of Psychiatry and Mol. Physiol. & Biophysics, Vanderbilt Univ.*

3:00 JJ35 **78.03** Cannabinoid type 1 receptor co-localizes with corticotropin-releasing factor in the noradrenergic nucleus locus coeruleus. R. WYROFSKY*; B. A. S. REYES; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med.*

4:00 JJ36 **78.04** Noradrenergic activation of CRH neurons via a novel retrograde trans-neuronal-glial circuit. C. CHEN*; Z. JIANG; J. G. TASKER. *Tulane Univ.*

1:00 KK1 **78.05** Cellular substrates for interactions between delta opioid receptors and corticotropin-releasing factor in the basolateral nucleus of the amygdala. N. A. HELDT*; B. A. S. REYES; J. STERLING; E. M. UNTERWALD; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med., Temple Univ. Sch. of Med.*

2:00 KK2 **78.06** Cross-talk between orexin/hypocretin and corticotropin releasing factor systems. J. K. ACHUA; L. B. CALLAHAN; J. J. BRUDVIG; C. H. SUMMERS; P. J. RONAN*. *USD Neurosci. Group, Sioux Falls VA Healthcare Syst., Avera Res. Institute/USD Med./VA Res.*

3:00 KK3 **78.07** Localization of crf receptors using a newly-elucidated radioligand, pd-sauvagine. L. A. TAN*; M. H. PERRIN; J. M. VAUGHAN; K. A. LEWIS; C. J. DONALDSON; J. E. RIVIER; P. E. SAWCHENKO. *Salk Inst. for Biol. Studies, Salk Inst. for Biol. Studies.*

4:00 KK4 **78.08** Ketamine reduces BNST CRF levels and ethanol withdrawal-induced depressive behaviors. K. LOUDERBACK*; T. L. FETTERLY; H. H. WILSON; D. G. WINDER. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

1:00 KK5 **78.09** Basolateral Amygdala circuitry underlying modulation of stress-related behavior. M. BOMPOLAKI*; T. UNHAVANE; W. F. COLMERS; J. H. URBAN. *Rosalind Franklin Univ. of Med. and Sci., Univ. of Alberta.*

2:00 KK6 **78.10** Mapping CRF projections from the bed nucleus of the stria terminalis (BNST) using adeno-associated viral vectors in mouse and rat. J. A. DABROWSKA*; D. G. RAINNIE. *Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 KK7 **78.11** Behavioral effects of chronically elevated corticosterone in the bed nuclei of stria terminalis: Role of corticotropin releasing factor. J. D. SHEPARD*; K. KINSLEY; E. TYLER; E. GLOTFELTY. *Towson Univ.*

POSTER

079. Stress: Genes and Epigenetics

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 KK8 **79.01** Epigenetics of stress effects in hippocampus: The ehRatio on H3K27. B. S. MCEWEN*; B. BIGIO; D. ZELLI; C. NASCA. *The Rockefeller Univ., The Rockefeller Univ.*

2:00 KK9 **79.02** Stress exposure induces resistance to LAC oral antidepressant treatment in a subset of vulnerable FSL rats. A. A. MATHE*; C. NASCA; V. SOUSA; T. L. STAN; P. SVENNINGSSON; B. S. MCEWEN. *Karolinska Inst., The Rockefeller Univ.*

3:00 KK10 **79.03** mGlu2 is a key mediator in the responses to next-generation antidepressant treatments: Epigenetic mechanisms of neuronal plasticity. C. NASCA*; D. ZELLI; B. S. MCEWEN. *The Rockefeller Univ.*

4:00 KK11 **79.04** Young BDNFmet carrier mice show a positive effect to stress: Is such positive effect lost with aging? E. M. WATERS*; D. A. ZELLI; S. MAZID; B. S. MCEWEN; C. NASCA. *Rockefeller Univ.*

1:00 KK12 **79.05** Stress elicits contrasting patterns of responses in the dorsal vs ventral hippocampus. D. A. ZELLI*; B. BIGIO; S. CHATTARJI; B. S. MCEWEN; C. NASCA. *The Rockefeller Univ., The Rockefeller Univ., Natl. Ctr. for Biol. Sci.*

2:00 KK13 **79.06** MicroRNA profiles in medial prefrontal cortex and amygdala in rats resilient or vulnerable to chronic stress. R. CHEN*; S. BELTRAMI; G. KELLY; A. SENGUPTA; B. NICHOLAS; S. LUZ; W. HEYDENDAEL; S. BHATNAGAR. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania Sch. of Med.*

3:00 KK14 **79.07** Circulating blood microRNAs are biomarkers for resilience or vulnerability to the effects of chronic social stress in rats. S. BELTRAMI*; R. CHEN; G. KELLY; A. SENGUPTA; W. HEYDENDAEL; B. NICHOLAS; S. LUZ; S. BHATNAGAR. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Univ. of Pennsylvania Sch. of Med.*

4:00 KK15 **79.08** Identifying alterations in gene regulatory networks in Post-Traumatic Stress Disorder: Evidence from preclinical models. K. SMITH*; D. A. CRUZ; B. C. BINGHAM; D. A. MORILAK; D. E. WILLIAMSON. *Univ. of Texas Hlth. Sci. Ctr. San Antonio, Univ. of Texas Hlth. Sci. Ctr. San Antonio, Univ. of Texas Hlth. Sci. Ctr. San Antonio.*

1:00 KK16 **79.09** Heteromerization of wild-type P2X7R with the mood disorder-associated Gln460Arg variant alters receptor function and conveys enhanced stress vulnerability. J. M. DEUSSING*; F. APRILE-GARCIA; M. W. METZGER; N. DEDIC; S. M. WALSER; V. JAKUBCAKOVA; D. CZAMARA; M. MITKOVSKI; D. REFOJO; B. MÜLLER-MYHSOK; M. KIMURA; W. WURST; W. STÜHMER; F. HOLSBOER; E. ARZT. *Max Planck Inst. of Psychiatry, Inst. de Investigación en Biomedicina de Buenos Aires (IBioBA)-CONICET- Partner Inst. of the Max Planck Society, Max Planck Inst. of Psychiatry, Max Planck Inst. of Exptl. Med., Helmholtz Zentrum München, German Res. Ctr. for Envrn. Health, Inst. of Developmental Genet.*

2:00 KK17 **79.10** The 5-HTT genotype dependent effects of stressor controllability on dorsal raphe nucleus activation. P. SCHIPPER*; R. REINTJES; D. LOPRESTO; J. HOMBERG. *Donders Inst. For Brain, Cognition and Behavior.*

3:00 KK18 **79.11** Elevated anxiety in serotonin transporter knock in mice carrying I425V coding variant associated with obsessive compulsive disorder and tourette disorder. S. RAMAMOORTHY*; J. CROWELY; Z. DANEVA; P. MANNANGATTI; J. RAJAMANICKAM; D. L. MURPHY; L. D. JAYANTHI. *Virginia Commonwealth Univ., NIMH Intramural Res. Program.*

POSTER

080. Adolescent Stress

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 KK19 **80.01** Adolescent and female specific roles of RasGRF1 in the stress response. G. UZTURK; L. A. FEIG*. *Tufts Univ., Tufts Univ. Sch. Med.*

2:00 KK20 **80.02** Early life experience modulates the effects of unpredictable chronic mild stress during adolescence. E. K. KIRSCHMANN*; J. C. MAUNA; C. O'CONNOR; J. LU; E. C. DONNY; A. F. SVED; E. THIELS. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 KK21 **80.03** Pre-pubertal ('juvenile') stress-induced susceptibility to PTSD, which is associated with selective alterations in GABAAR alpha1 subunit in the dentate and amygdala, is rescued by juvenile but not adulthood exposure to 'Enriched Environment'. G. RICHTER-LEVIN*; Z. ARDI; A. ALBRECHT; A. RICHTER-LEVIN. *Univ. Haifa, Univ. of Haifa, Univ. of Haifa.*

4:00 KK22 **80.04** Repeated exposure to threat in adolescence increases defensive behaviors, but decreases avoidance in highly arousing test conditions. M. L. JACOBSON*; J. LIEBMAN; N. ODYNOCKI; D. AWALT, Jr.; P. PEDULLA; B. J. ANDERSON. *Stony Brook Univ.*

1:00 KK23 **80.05** Changes to tyrosine hydroxylase activity in the adult medial prefrontal cortex following adolescent social defeat. M. A. WEBER*; J. L. SCHOLL; G. L. FORSTER; K. J. RENNER; M. J. WATT. *Basic Biomedial Sciences, Univ. of South Dako, Univ. of South Dakota, Basic Biomed. Sciences, Univ. of South Dakota.*

2:00 KK24 **80.06** Adolescent experience of food restriction results in delayed enhancement of spatial learning in female rats. T. G. CHOWDHURY*; A. A. FENTON; C. AOKI. *NYU Ctr. For Neural Sci., New York Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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3:00 KK25 **80.07** Acute stress to adolescent rats reduces p-CREB in adulthood. V. M. CHIU*; B. K. YAMAMOTO. *Univ. of Toledo.*

4:00 KK26 **80.08** Social context differentially modulates neural Zif268 expression, behaviour, and endocrine function in response to acute and repeated stress in adolescent and adult male rats. T. E. HODGES*; C. M. MCCORMICK. *Brock Univ.*

1:00 KK27 **80.09** Adolescent CB1 receptor antagonism alters adult stress responsivity and emotional behaviour in male rats. T. T. LEE*; M. N. HILL; B. B. GORZALKA. *Univ. of British Columbia, Hotchkiss Brain Institute, Univ. of Calgary.*

2:00 KK28 **80.10** Programming grit: Prepubertal stress combined with social support promotes resilience even in the face of aging. K. E. MORRISON; C. N. EPPERSON*; T. L. BALE. *Univ. of Pennsylvania, Perelman Sch. of Med.*

3:00 KK29 **80.11** Developmental high-fructose diet consumption increases depressive-like and anxiety-like behavior and remodels the hypothalamic transcriptome. C. S. HARRELL*; J. BURGADO; S. D. KELLY; Z. P. JOHNSON; G. N. NEIGH. *Emory Univ.*

4:00 KK30 **80.12** Prepubertal adversity in females programs a blunted stress reactive maternal phenotype during pregnancy. K. E. MORRISON*; T. L. BALE. *Univ. of Pennsylvania.*

1:00 KK31 **80.13** ▲ Social instability stress in adolescence alters social behaviour in a food competition task. M. J. CUMMING; M. THOMPSON; C. M. MCCORMICK*. *Brock Univ., Brock Univ.*

2:00 KK32 **80.14** A critical period of vulnerability to adolescent stress: epigenetic mediators in mesocortical dopaminergic neurons. M. NIWA*; R. S. LEE; S. KANO; A. SAWA. *Johns Hopkins Univ. Sch. of Med.*

3:00 LL1 **80.15** Voluntary wheel running exercise by female adolescent rats reduces GABAergic synaptic coverage of the CA1 pyramidal cell bodies and dendrites but the same exercise maintains GABAergic synaptic coverage and increases alpha4-GABARs at spines, if also exposed to and is resilient to food restriction-stress while evoking no change to alpha1-GABARs. C. J. AOKI*; K. TATEYAMA; I. YU; J. WANG; M. HSU; G. S. WABLE; T. G. CHOWDHURY. *New York Univ.*

4:00 LL2 **80.16** Three weeks of maternal separation induced a long lasting changes in the plasticity of hippocampal neurons of offspring and mothers. G. BIGGIO*; P. P. SECCI; M. V. MELIS; M. C. MOSTALLINO. *Univ. of Cagliari, Natl. research Council.*

POSTER

081. Stress Effects on Cortex and Other Brain Regions

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

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 LL3 **81.01** Repeated social stress affects expression of hemoglobin genes in mouse prefrontal cortex. A. M. STANKIEWICZ*; J. GOSCIK; A. H. SWIERGIEL; A. MAJEWSKA; G. R. JUSZCZAK; P. LISOWSKI. *Inst. of Genet. and Animal Breeding of the Polish Acad. of Sci., Bialystok Univ. of Technol., Univ. of Gdansk, Warsaw Univ. of Life Sci., Inst. of Genet. and Animal Breeding of the Polish Acad. of Sci., Inst. of Genet. and Animal Breeding of the Polish Acad. of Sci.*

2:00 LL4 **81.02** Chronic stress induces epigenetic modification to the mPFC, OFC, and HPC of adult rats. B. E. KOLB*; A. MUHAMMAD; S. ILNYTSKYY; R. MYCHASIUK. *Univ. Lethbridge, Univ. Lethbridge, Univ. Lethbridge.*

3:00 LL5 **81.03** Prefrontal cortex pituitary adenylate cyclase-activating peptide inhibits HPA axis responses to stress. R. A. MAKINSON*; M. SMELTZER; K. LUNDGREN; R. SAKAI; K. SEROOGY; J. HERMAN. *Univ. of Cincinnati.*

4:00 LL6 **81.04** Building prefrontal functional connectivity map at cellular resolution: Application to socially isolated mice. A. Y. MOROZOV*; C. FARNAN; B. PAUDEL; W. ITO. *Virginia Tech. Carilion Res. Inst.*

1:00 LL7 **81.05** Reduced glutamate outflow from infralimbic prefrontal cortex inhibits depression-like behavior and prevents the behavioral consequences of chronic stress. B. MYERS*; J. M. MCKLVEEN; W. BEISCHEL; J. R. SCHEIMANN; R. MORANO; S. P. WILSON; M. B. SOLOMON; J. P. HERMAN. *Univ. of Cincinnati, Univ. of South Carolina.*

2:00 LL8 **81.06** BAG-1 levels alter stress-induced gene expression in the prefrontal cortex. T. G. RUBIN*; J. D. GRAY; B. S. MCEWEN. *Rockefeller Univ.*

3:00 LL9 **81.07** Acute stress-induced prefrontal cortex dysfunction is mediated by the CRH-CRHR1 system. A. URIBE*; B. SOLFRANK; G. BALSEVICH; C. DOURNES; S. SANTARELLI; M. MASSANA; D. HARBICH; A. CHEN; M. V. SCHMIDT. *Max Planck Inst. of Psychiatry.*

4:00 LL10 **81.08** Modulation of medial entorhinal cortex layer II principal cell circuitry by glucocorticoids. J. HARTNER*; L. A. SCHRADER. *Tulane Univ.*

1:00 LL11 **81.09** Stress-induced molecular and structural plasticity in the entorhinal cortex. D. R. HOMIACK*; J. A. FARUQI; A. H. MAHNKE; C. L. COMBE; F. M. INGLIS; L. A. SCHRADER. *Tulane Univ., Tulane Univ., Tulane Univ., Lousiana State Univ. Hlth. Sci. Ctr.*

2:00 LL12 **81.10** SIRT1 activity affects granule cell excitability and synaptic activity in the dentate gyrus of mouse hippocampus. D. YU*; L. A. SCHRADER. *Tulane Univ.*

3:00 LL13 **81.11** High cortisol levels are associated with atrophy of cingulate and middle frontal gyrus in healthy men and women. A. STOMBY*; C. OLSSON; A. NORDIN; L. NILSSON; R. ADOLFSSON; T. OLSSON; L. NYBERG. *Umeå Univ., Umeå Univ., Umeå Univ., Stockholm Univ., Umeå Univ., Umeå Univ.*

4:00 LL14 **81.12** The impact of chronic stress on the rat brain lipidome. T. G. OLIVEIRA*; R. B. CHAN; F. V. BRAVO; A. MIRANDA; B. ZHOU; F. MARQUES; V. PINTO; J. J. CERQUEIRA; G. DI PAOLO; N. SOUSA. *ICVS/3Bs, Univ. of Minho, Braga, Columbia Univ.*

1:00 LL15 **81.13** Locally synthesized growth hormone enhances spine density in the amygdala . B. GISABELLA*; J. YAO; K. A. GOOSENS. *MIT, McGovern Inst. for Brain Res.*

2:00 LL16 **81.14** Characterization of a novel neurotrophic-sensing mechanism of glucocorticoid actions. M. ARANGO-LIEVANO; M. J. GARABEDIAN; S. D. GINSBERG; M. V. CHAO; F. D. JEANNETEAU*. *Inst. of Functional Genomics, NYU, Nathan Kline instutite of psychiatric research, Skirball institute of Biomolecular Med. NYU.*

3:00 LL17 **81.15** Epigenetic alterations in rats with traumatic stress exposure treated with oxytocin prior to reinstatement of methamphetamine-seeking. C. L. FERLAND*; J. F. MCGINTY. *Med. Univ. of South Carolina.*

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4:00 LL18 **81.16** Effects of chronic stress on methamphetamine-stimulated behaviors and striatal dopamine release in female rats. E. M. ANDERSON*; M. MCWATERS; L. MATUSZEWICH. *Northern Illinois Univ.*

1:00 LL19 **81.17** Effect of heat acclimatization on monoaminergic neurotransmitters in the caudate putamen in rats. H. NAKAGAWA*; T. MATSUMURA; K. SUZUKI; C. NINOMIYA; S. YANAGITA; H. HASEGAWA; T. ISHIWATA. *Rikkyo Univ., Rikkyo Univ., Tokyo Univ. of Sci., Hiroshima Univ.*

2:00 LL20 **81.18** Distribution of mineralocorticoid and glucocorticoid receptor immunoreactivity in a songbird brain. M. R. HASSTEDT*; S. A. MACDOUGALL-SHACKLETON. *Univ. of Western Ontario, Univ. of Western Ontario.*

POSTER

082. Human Long-Term Memory: Medial Temporal Lobe I

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 LL21 **82.01** Memory for multiple associations in early visual cortex. S. E. BOSCH*; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

2:00 LL22 **82.02** Single-unit activity in the human medial temporal lobe during an episodic memory task and subsequent sleep. J. NIEDIEK*; T. REBER; H. GAST; J. BOSTRÖM; V. A. COENEN; C. E. ELGER; F. MORMANN. *Univ. of Bonn, Univ. of Bonn, Univ. of Freiburg.*

3:00 LL23 **82.03** The schema effect and sleep-dependent memory consolidation. N. HENNIES; M. LAMBON RALPH*; J. COUSINS; P. A. LEWIS. *Univ. of Manchester.*

4:00 LL24 **82.04** Grid cell representations in humans align to a common reference frame. T. NAVARRO SCHROEDER*; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

1:00 LL25 **82.05** Domain sensitive responses in medial temporal lobes examined with a large stimulus set. B. B. HARRY*; K. UMLA-RUNGE; K. GRAHAM; P. DOWNING. *Bangor Univ., Cardiff Univ.*

2:00 LL26 **82.06** Investigating the spatio-temporal organization of episodic memory within a virtual world. L. DEUKER*; J. BELLMUND; T. NAVARRO SCHROEDER; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

3:00 LL27 **82.07** Functional parcellation of the human entorhinal cortex. N. I. ZARAGOZA JIMENEZ*; T. NAVARRO SCHROEDER; E. VAN OORT; C. F. BECKMANN; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

4:00 LL28 **82.08** Prospective event representation in the hippocampus depends on contextual certainty and time. P. W. SMULDERS*; B. MILIVOJEVIC; S. E. BOSCH; F. P. DE LANGE; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

1:00 MM1 **82.09** Dynamic representation of multi-event narratives in the medial temporal lobe. S. H. COLLIN*; B. MILIVOJEVIC; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

2:00 MM2 **82.10** Hippocampal-prefrontal theta oscillations support memory integration in humans. A. R. BACKUS*; S. SZEBÉNYI; J. M. SCHOFFELEN; S. HANSLMAYR; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen, Univ. of Konstanz, Max Planck Inst. for Psycholinguistics, Univ. of Birmingham.*

3:00 MM3 **82.11** Brain regions supporting memory processes: using voxelwise lesion-symptom mapping to identify the neural correlates of performance on neuropsychological tests of memory. D. E. WARREN*; J. BRUSS; J. GLÄSCHER; D. TRANEL. *Carver Col. of Medicine, Univ. of Iowa, Univ. Med. Ctr. Hamburg-Eppendorf.*

4:00 MM4 **82.12** Investigating the relationship between head direction representations and spatial cognition. J. BELLMUND*; L. DEUKER; T. NAVARRO SCHROEDER; C. F. DOELLER. *Donders Institute, Radboud Univ. Nijmegen.*

1:00 MM5 **82.13** Opposing effects of negative emotion on item and associative memory are predicted by activity in amygdala and hippocampus. J. A. BISBY*; A. J. HORNER; L. D. HORLYCK; N. BURGESS. *UCL Inst. of Cognitive Neurosci., UCL Inst. of Neurol.*

2:00 MM6 **82.14** Memory formation in figure-noun association increased functional connectivity between the hippocampus and inferior frontal gyrus. K. LIANG*; Y. WANG; J. CHEN; T. CHOU. *Natl. Taiwan Univ.*

3:00 MM7 **82.15** Sleep interruptions impair learning in a virtual navigation task. Y. YANG*; K. KONISHI; R. GRUBER; V. D. BOHBOT. *McGill Univ. Douglas Hosp., Douglas Mental Hlth. Univ. Inst.*

4:00 MM8 **82.16** Pattern completion for episodic events in the human hippocampus. A. J. HORNER*; W. LIN; J. BISBY; N. BURGESS. *UCL Inst. of Cognitive Neurosci., UCL Inst. of Neurol.*

1:00 MM9 **82.17** The BDNF val66met polymorphism is associated with decreased use of landmarks and decreased fMRI activity in the hippocampus during virtual navigation. K. KONISHI*; R. JOOBER; J. BREITNER; V. D. BOHBOT. *Douglas Mental Hlth. Univ. Institute, McGill Univ., Ctr. for Studies on Prevention of Alzheimer's Dis. (StoP-AD), Douglas Mental Hlth. Univ. Inst.*

2:00 MM10 **82.18** Non-depressed older adult response learners score slightly but significantly lower than spatial leaners on a depression scale. Z. K. CHAUDHARY*; K. KONISHI; V. D. BOHBOT. *McGill Univ., Douglas Mental Hlth. Univ. Inst.*

3:00 MM11 **82.19** ▲ Luteal phase of the menstrual cycle positively correlates with use of a spatial strategy in a human virtual navigation task. S. HANAFI*; D. HUSSAIN; K. KONISHI; W. BRAKE; V. D. BOHBOT. *Douglas Mental Hlth. Univ. Inst., Concordia Univ.*

4:00 MM12 **82.20** Patients with mild cognitive impairment show increased fMRI activity in the hippocampus following a spatial memory intervention program. D. SODUMS*; K. KONISHI; V. NAIR; H. CHERTKOW; S. GAUTHIER; L. KOSKI; L. BEHRER; V. D. BOHBOT. *Douglas Mental Hlth. Univ. Inst., Jewish Gen. Hosp., The Res. Inst. of the McGill Univ. Hlth. Ctr., CRIUGM.*

1:00 MM13 **82.21** ▲ Assessing navigation performance in virtual environments on mobile devices. L. HONG; L. DAHMANI; V. D. BOHBOT; N. C. SCHMITZER-TORBERT*. *Wabash Col., Douglas Mental Hlth. Univ. Inst.*

2:00 MM14 **82.22** ▲ Higher dietary vitamin K intake is associated with increased use of the spatial strategy in healthy older adults. N. ANDRUCHOW*; K. KONISHI; B. SHATENSTEIN; V. D. BOHBOT. *Douglas Mental Hlth. Univ. Institute, Dept. of Psychiatry, McGill Uni, Douglas Mental Hlth. Univ. Inst., Inst. universitaire de gériatrie de Montréal, Univ. de Montréal.*

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▲ Indicates a high school or undergraduate student presenter.

3:00 MM15 **82.23** Navigational strategies in young and older adult Inuit hunters. V. D. BOHBOT*; I. DEMACHEVA; L. DAHMANI; E. CHACHAMOVICH. *Douglas Mental Hlth. Univ. Institute, Dept. of Psychiatry, McGill Uni, Douglas Mental Hlth. Univ. Inst., Douglas Mental Hlth. Univ. Inst., Douglas Mental Hlth. Univ. Inst.*

4:00 MM16 **82.24** Structural development of hippocampal subfields is related to statistical learning and inference. M. L. SCHLICHTING*; K. F. GUARINO; A. C. SCHAPIRO; N. B. TURK-BROWNE; A. R. PRESTON. *Univ. Texas Austin, Princeton Univ.*

1:00 MM17 **82.25** Habitual action video game playing is associated with caudate nucleus-dependent navigational strategies. G. WEWT*; B. DRISDELLE; K. KONISHI; M. DIARRA; P. JOLICOEUR; V. D. BOHBOT. *Univ. of Montreal, Univ. of Montreal, McGill Univ., Douglas Mental Hlth. Univ. Inst.*

2:00 MM18 **82.26** EEG-Theta modulation is greater in spatial learners than response learners: A scalp-EEG study in young adults tested on a virtual navigation task. T. H. FALK*; H. J. BANVILLE; S. BISHUNDAYAL; R. CASSANI; E. CHAN; A. CLERICO; L. DAHMANI; R. GUPTA; A. RATHARAJAH; N. PHILLIPS; V. D. BOHBOT. *Inst. Natl. De La Recherche Scientifique, Concordia Univ., Douglas Mental Hlth. Univ. Inst.*

3:00 MM19 **82.27** Focusing on what matters: Modulation of the human hippocampus by relational attention. N. I. CORDOVA*; M. ALY; N. B. TURK-BROWNE. *Princeton Univ.*

POSTER

083. Human Emotion: Perception and Expression

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 MM20 **83.01** Neural correlates of dynamic emotional facial expressions in infants. N. ROTEM-KOHAVI*; A. ROSE; C. G. E. HILDERMAN; T. F. OBERLANDER; N. VIRJI-BABUL. *Univ. of British Columbia, Univ. of British Columbia, Child and Family Res. Inst., Univ. of British Columbia, Pediatrics, Child and Family Res. Inst., Child and Family Res. Inst.*

2:00 MM21 **83.02** Involvement of bilateral inferior frontal gyri in emotional recognition with social context: A TMS study. Y. YAMASHITA*; H. MAESHIMA; M. ABE; M. HONDA; M. OKADA; K. OKANOYA. *Natl. Inst. of Neuroscience, Natl. Ctr. of Neurol. and Psychiatry, JST, ERATO, Okanoya Emotional Information Project, RIKEN Brain Sci. Inst., The Univ. of Tokyo, Fukushima Med. Univ., The Univ. of Tokyo.*

3:00 MM22 **83.03** ▲ Different widespread networks are activated by musical prosody: An EEG and subjective evaluation study. M. CASTRO GONZÁLEZ*; B. CORONA-DZUL; M. CORSI-CABRERA; E. FLORES-GUTIÉRREZ. *Univ. Nacional Autónoma De México, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñíz, Escuela Nacional de Música.*

4:00 MM23 **83.04** Is the cognition of emotional face expression influenced by menstrual cycle? M. YAMAZAKI*; S. SUZUKI; K. TAMURA; Y. UGAWA. *Daito Bunka Univ., Fukushima Med. Univ.*

1:00 MM24 **83.05** Common network for the processing of dynamic emotional bodies contains information to discriminate individual basic emotions. J. JASTORFF*; M. A. GIESE; M. VANDENBULCKE. *KULeuven, KULeuven, Univ. Clin. Tübingen.*

2:00 MM25 **83.06** Infants' brain responses to subliminal emotional eyes. S. JESSEN*; T. GROSSMANN. *Max Planck Inst. For Human Cognitive and Brain Sci.*

3:00 MM26 **83.07** Power spectral analysis of EEG from emotional auditory stimuli. H. LEE*; R. DU. *Chonbuk Natl. Univ., Ctr. for Advanced Image and Information Technol.*

4:00 MM27 **83.08** Decoding music-evoked emotions from brain activity. L. ROGENMOSER*; S. ELMER; L. JÄNCKE. *Univ. of Zurich.*

1:00 MM28 **83.09** Perception of happiness affected by exposure to the life histories of others. K. MOGI*. *Sony Comp Sci. Lab.*

2:00 MM29 **83.10** Intertwined affective and semantic representations of the world around us: Applying voxel-wise encoding models to studying the cortical representation of emotional natural images. S. A. ABDEL-GHAFFAR*; A. G. HUTH; D. E. STANSBURY; A. S. COWEN; S. J. BISHOP. *UC Berkeley, UC Berkeley, UC Berkeley.*

3:00 MM30 **83.11** Different empathic responses to painful expressions versus needle-pricked body parts: Evidence from behavioral and electrophysiological study. Y. SUN*; J. WANG; F. LUO. *Inst. of Psychology, Chinese Acad. of Scienc.*

4:00 MM31 **83.12** Sleep duration and fMRI measures of emotional reactivity in children. B. L. REIDY*; P. A. BRENNAN; S. B. HAMANN; C. INMAN; K. C. JOHNSON. *Emory Univ., Emory Univ. Sch. of Med.*

1:00 MM32 **83.13** Variability in human anterior insula gray matter volume predicts awareness for perithreshold backward masked fearful faces. R. TORRENCE*; J. CARLSON. *Northern Michigan Univ.*

2:00 MM33 **83.14** Individual differences in detecting changes in face identity and emotional expressions depend on two distinct mechanisms. A. L. ACHAIBOU*; S. J. BISHOP. *UC Berkeley.*

3:00 MM34 **83.15** ▲ Sustained, not habituated, activity in the human amygdala during threat-elicited attention. M. A. WEBER*; W. RIZER; K. MORROW; K. KANGAS; R. TORRENCE; J. M. CARLSON. *Northern Michigan Univ.*

4:00 MM35 **83.16** Gender and task-context modulate the LPC amplitudes related to facial preference. S. KIM*; J. KANG; S. KIM; Y. CHO. *Korea Univ., Korea Univ., Ulsan Natl. Inst. of Sci. and Technol., Korea Univ.*

1:00 MM36 **83.17** Effects of inconsistency between facial and verbal expressions on degree of trust and brain activity. S. MORIOKA*; M. OSUMI; M. OKAMOTO; M. HIYAMIZU; H. MAEOKA; Y. OKADA; A. MATSUO. *Kio Univ., Kitade Hosp.*

2:00 NN1 **83.18** ● ▲ The emotional response to social gaze is a domain specific cognitive mechanism. N. LAPOLLA*; B. BISHOP; J. CIBOTTI; S. STEDNITZ; E. GAHTAN*. *Humboldt State Univ., Humboldt State Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

POSTER

084. Human Decision-Making: Perceptual Processes

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 NN2 **84.01** Sensory evidence is predictive of certainty in perceptual decisions. G. A. BUZZELL*; D. M. ROBERTS; J. R. FEDOTA; E. P. SHAW; C. G. MCDONALD. *George Mason Univ., NIH/NIDA.*

2:00 NN3 **84.02** Transcranial direct current stimulation over ventro-medial prefrontal cortex changes human value-based decision making: A computational neurostimulation study. D. HAEMMERER*; M. KLEIN-FLÜGGE; J. BONAIUTO; M. BIKSON; S. BESTMANN. *Inst. of Cognitive Neurosci., MPI for Human Develop., Univ. Col. London, Univ. Col. London, The City Univ. of New York.*

3:00 NN4 **84.03** Predicting the behavioral impact of tDCS on perceptual decision making with computational neurostimulation. J. J. BONAIUTO*; A. DE BERKER; S. BESTMANN. *Univ. Col. London.*

4:00 NN5 **84.04** Characterizing functional brain networks associated with speed vs. accuracy emphasis in simple decision-making. A. S. WEIGARD*; S. WILSON; C. HUANG-POLLOCK. *The Pennsylvania State Univ., The Pennsylvania State Univ.*

1:00 NN6 **84.05** Cortical representations of confidence in a visual perceptual decision. L. ZIZLSPERGER*; T. SAUVIGNY; B. HÄNDEL; T. HAARMEIER. *RWTH Aachen Univ., Univ. Med. Ctr. Hamburg-Eppendorf, Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society.*

2:00 NN7 **84.06** The salience network in multisensory perception. B. LAMICHHANE*; M. DHAMALA. *Georgia State Univ., Georgia State Univ.*

3:00 NN8 **84.07** Cortical network oscillations during perceptual decision-making of visual objects. G. CHAND*; B. LAMICHHANE; M. DHAMALA. *Georgia State Univ., Georgia State Univ.*

4:00 NN9 **84.08** Prior expectations modulate hemodynamic activity before and during perceptual decisions: Evidence from diffusion modeling and fMRI. M. E. WHEELER*; K. E. DUNOVAN; J. J. TREMEL. *Georgia Inst. of Technol., Univ. of Pittsburgh.*

1:00 NN10 **84.09** Neural correlates of evidence accumulation in perceptual and memory-based decision making. M. A. BEULEN*; N. A. TAATGEN; M. K. VAN VUGT. *Univ. of Groningen.*

2:00 NN11 **84.10** Online behavioral readouts in an auditory perceptual decision making task. R. MEDINA; J. L. PARDO-VAZQUEZ; A. RENART*. *Champalimaud Ctr. for the Unknown.*

3:00 NN12 **84.11** New predictions and experimental tests of scale invariance in a diffusion decision/timing model. P. A. SIMEN*; K. Y. VLASOV; S. PAPADAKIS. *Oberlin Col.*

4:00 NN13 **84.12** Probing a model of self-consistent perceptual decision making. A. STOCKER*. *Univ. of Pennsylvania.*

1:00 NN14 **84.13** A common frontoparietal network underlying categorization and perceptual decision-making. S. SHANKAR*; A. S. KAYSER. *Ernest Gallo Clin. & Res. Ctr., Univ. of California, San Francisco.*

2:00 NN15 **84.14** Neurophysiological correlates of the incorporation of prior information into decisions under perceptual versus temporal demands. S. KELLY*; R. G. O'CONNELL. *City Col. of New York, Trinity Col. Dublin.*

3:00 NN16 **84.15** The classic P300 component indexes an accumulation-to-bound decision signal. D. M. TWOMEY*; P. R. MURPHY; S. P. KELLY; R. G. O'CONNELL; R. G. O'CONNELL. *Trinity Col. Dublin, Ireland, Leiden Univ., City Col. of the City Univ. of New York., Trinity Col. Dublin.*

4:00 NN17 **84.16** Perceptual task difficulty and inhibitory control during a Go-NoGo task: An event-related potential study. D. W. SHUCARD; R. CHIN; T. J. COVEY; J. L. SHUCARD*. *Univ. At Buffalo, Univ. At Buffalo.*

1:00 NN18 **84.17** ▲ Relating a spiking neural network model and the diffusion model of decision making to investigate neural mechanisms of speed-accuracy tradeoffs. A. UMAKANTHA*; B. A. PURCELL; T. J. PALMERI. *Vanderbilt Univ., New York Univ.*

2:00 NN19 **84.18** Learning expectations about changing environments for optimal inference. C. M. GLAZE*; J. I. GOLD. *Univ. of Pennsylvania.*

3:00 NN20 **84.19** Self-consistent inference explains bias in sequential perception. L. LUU*; A. A. STOCKER. *Univ. of Pennsylvania.*

4:00 NN21 **84.20** Role of Attention in Perceptual Decision-Making. G. TAVARES*; P. PERONA; A. RANGEL. *Caltech.*

1:00 NN22 **84.21** Differential MEG activity patterns for congruent and incongruent spatial relational judgments. N. M. SCOTT; M. SERA; A. P. GEORGOPOULOS*. *Univ. of Minnesota, Univ. of Minnesota, Univ. Minnesota.*

2:00 NN23 **84.22** Geometrical concepts in the brain: An fMRI study on figure dependency. T. CHIANG*; C. WU; D. ANSARI. *Univ. of Western Ontario, Dept. of Educational Psychology and Counselling, Brain and Mind Inst.*

POSTER

085. Cognitive Development

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 NN24 **85.01** Differential load- and performance-related brain activity during spatial working memory in preadolescent children. A. S. HUANG*; A. SMALL; A. S. LEE; D. KLEIN; H. LEUNG. *Stony Brook Univ.*

2:00 NN25 **85.02** GABA alterations in the NF1 brain: A multimodal 11C-flumazenil pet and MRS study. I. R. VIOLANTE*; M. PATRICIO; I. BERNARDINO; J. REBOLA; A. J. ABRUNHOSA; N. C. FERREIRA; M. CASTELO-BRANCO. *IBILI, Fac. of Medicine, Univ. of Coimbra, IBILI, Fac. of Medicine, Univ. of Coimbra, ICNAS, Univ. of Coimbra.*

3:00 NN26 **85.03** Influence of Perioperative Hypnotherapy on Postoperative Improvement in Cognitive Performance (HYPNOC): preliminary results of a randomized controlled clinical trial. C. A. IONESCU*; F. BORCHERS; E. WEISS-GERLACH; K. WERNECKE; C. SPIES. *Charite Berlin.*

4:00 NN27 **85.04** The development of hierarchical cognitive control and rule-guided behavior. K. UNGER*; D. AMSO; L. ACKERMAN; D. BADRE. *Brown Univ., Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

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1:00 NN28 **85.05** Age-dependent sex-specific differences in the functional neuroanatomy of word processing. O. A. OLULADE*; J. S. NEIMAN; G. F. EDEN. *Georgetown Univ. - CSL.*

2:00 NN29 **85.06** Neuro-Electrical bases during encoding and calculation phase of arithmetic Sequential: An electroencephalography investigation. E. T. MULUH*; E. MULUH; L. JOHN. *9 Cumnor Court, 292 Main Road Kenilworth, Cape Peninsula Univ. of Technol., Univ. of Cape Town.*

3:00 NN30 **85.07** Electrophysiological investigation of number and area comparison abilities in children. D. SANTANA*; R. A. ABREU-MENDOZA; N. ARIAS-TREJO; R. HARO VALENCIA. *Hosp. Gen. De Mexico, UNAM, UNAM-Hospital Gen. de México.*

4:00 NN31 **85.08** Neural substrates of numerical processing develop independent of visual experience. S. KANJLIA*; C. T. LANE; L. FEIGENSON; M. BEDNY. *Johns Hopkins Univ.*

1:00 NN32 **85.09** Different strategy for movement imitation in ASD. M. KAWASAKI*; H. KOMEDA; T. MURAI; Y. FUNABIKI. *Univ. of Tsukuba, RIKEN Brain Sci. Inst., Kyoto Univ.*

2:00 NN33 **85.10** Developmental changes of short-term special memory of children assessed in the inverted delayed response test. N. CHKHIKVISHVILI*; M. DASHNIANI; T. NANEISHVILI. *I.Beritashvili Ctr. of Exptl. Biomedcine, St.Andrew the first-called Georgian Univ. of Patriarchy of Georgia.*

3:00 NN34 **85.11** Six-year longitudinal growth-curve modeling of functional brain changes during problem solving in children. C. J. BATTISTA*; T. M. EVANS; T. J. NGOON; T. CHEN; V. MENON. *Stanford Cognitive and Systems Neurosci. Lab.*

4:00 NN35 **85.12** ● Cognitive function can be affected by the physical properties of dietary lipids in early life. A. L. SCHIPPER; L. M. BROERSEN; M. LOOS; A. J. W. SCHEURINK; G. VAN DIJK; E. M. VAN DER BEEK*. *Danone Nutricia Early Life Nutr., Advanced Med. Nutr., Sylics, Dept Neuroendocrinology, Univ. Groningen, Nutricia Reseach - Danone Nutricia Early Life Nutr.*

1:00 NN36 **85.13** Brain injury and cognitive dysfunction secondary to severe and recurrent hypoglycaemia. G. PITTS*; A. KUMARAN; J. BULLOCK; K. HUSSAIN; D. GADIAN; F. VARGHA-KHADEM. *UCL Inst. of Child health, UCL Inst. of Child Hlth., Great Ormond Street Hosp. for Children, UCL Inst. of Child Hlth.*

2:00 OO1 **85.14** Development of a pattern recognition System using an artificial neural network for the rehabilitation of children with dysgraphia. H. J. PELAYO*; J. LOPEZ-MARTINEZ; J. CASTRO-MANZANO; V. REYES-MEZA; V. ZANELLA-PALACIOS. *Mtría. Neuropsicología/Benemérita Univ. Autónoma de Puebla, Computing and Systems Engineering, UPAEP, Philosophy, UPAEP, Psychology, UPAEP.*

3:00 OO2 **85.15** Electrophysiological measures of functional connectivity and their relationship with working memory capacity in childhood. J. BARNES*; D. E. ASTLE. *MRC Cognition & Brain Sci. Unit.*

4:00 OO3 **85.16** Domain specific higher-cognitive responses in “visual” cortex of blind adults. C. LANE; S. KANJLIA; A. OMAKI; M. BEDNY*. *Johns Hopkins Univ.*

1:00 OO4 **85.17** Evidence for state-dependent high frequency power changes in human neonatal EEG. M. E. CANO*; R. KUPERMAN; K. L. ANDERSON; R. T. KNIGHT. *UC Berkeley, Children’s Hosp. and Res. Ctr. Oakland, UC Berkeley.*

2:00 OO5 **85.18** Dynamic neural network reorganization associated with improvement of prospective metacognition. C. HOSODA*; K. OKANOYA; M. HONDA; R. OSU; T. HANAKAWA. *Univ. of Tokyo, NCNP, ATR.*

3:00 OO6 **85.19** Early brain structure and later behavioral outcomes in fragile X syndrome. J. BRUNO*; A. STARK; A. A. LIGHTBODY; H. C. HAZLETT; J. PIVEN; A. L. REISS. *Stanford Univ., Univ. of North Carolina.*

4:00 OO7 **85.20** Visuospatial working memory assessed by Corsi Block Tapping Task: changes with aging. J. C. HEVIA*; M. GUEVARA; M. HERNÁNDEZ GONZÁLEZ; L. RIZO MARTÍNEZ; M. ALMANZA SEPÚLVEDA. *Univ. De Guadalajara.*

POSTER

086. Aging Brain

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO8 **86.01** Increased daily cortisol secretion and aging are associated with smaller amygdala volume. E. QUINTIN*; G. E. ENNIS; K. M. KENNEDY; J. SHIN; C. K. HERTZOG; S. D. MOFFAT. *Georgia Inst. of Technol., Univ. of Texas at Dallas.*

2:00 OO9 **86.02** Age differences and longitudinal changes on diffusion tensor imaging measures. V. K. VENKATRAMAN; C. E. GONZALEZ; B. A. LANDMAN*; J. O. GOH; S. M. RESNICK. *Natl. Inst. of Aging, Natl. Inst. of Hlth., Vanderbilt Univ., Natl. Taiwan Univ. Col. of Med.*

3:00 OO10 **86.03** Predicting age from surface-based morphometry data via support vector regression. F. LIEM*; S. MÉRILLAT; L. BEZZOLA; S. HIRSIGER; L. JANCKE. *Univ. of Zurich.*

4:00 OO11 **86.04** Absolute cellular composition of the human cerebral cortex is preserved for neurons but not for non-neuronal cells during aging. E. CASTRO-FONSECA*; C. GOMES DA SILVA; C. H. ANDRADE-MORAES; V. CARDOSO DE OLIVEIRA; A. T. ALHO; R. E. LEITE; R. E. FERRETTI-REBUSTINI; J. M. FARFEL; C. K. SUEMOTO; C. A. PASQUALUCCI; W. JACOB-FILHO; L. T. GRINBERG; R. LENT. *Inst. of Biomed. Sci., Aging Brain Study Group, Univ. of São Paulo Sch. of Nursing, Dept. of Neurol., Natl. Inst. of Translational Neurosci.*

1:00 OO12 **86.05** Profiles of age-related structural decline and stability in neuroanatomical systems supporting vocal emotion processing. C. F. LIMA*; N. LAVAN; S. EVANS; Z. AGNEW; P. SHANMUGALINGAM; J. WARREN; S. CASTRO; S. SCOTT. *UCL Inst. of Cognitive Neurosci., Univ. of Porto, Royal Holloway, Univ. of London, Sch. of Med. UCSF, Fac. of Brain Sciences, Univ. Col. London.*

2:00 OO13 **86.06** Age effects on self-reported navigation ability are mediated by regional brain volume. N. LUCENA*; T. L. S. BENZINGER; D. HEAD. *Washington Univ., Washington Univ. Sch. of Med., Washington Univ. in St. Louis.*

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3:00 OO14 **86.07** Cardiorespiratory fitness mediates the effect of age on mean cerebral blood flow in the gray matter of the visual cortex. B. ZIMMERMAN*; B. P. SUTTON; K. A. LOW; C. TAN; M. A. FLETCHER; N. SCHNEIDER-GARCES; E. L. MACLIN; G. GRATTON; M. FABIANI. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

4:00 OO15 **86.08** Differential effects of cardiovascular and motor fitness on grey matter volume. C. VOELCKER-REHAGE*; C. NIEMANN; B. GODDE. *Jacobs Univ. Bremen.*

1:00 OO16 **86.09** ● Brain responses reflecting age-related differences in perceptual experience of cosmetic cream. R. LEE; M. KANG; M. CHOI; J. BAE; J. NAM; S. KIM; Y. KIM; M. LEE; S. LEE; D. CHOI; S. KIM; C. KIM*. *Dept. of Psychology, Korea Univ., R&D Center, AMOREPACIFIC Corp.*

2:00 OO17 **86.10** Hippocampal volume is associated with verbal memory performance in older, but not younger, adults. M. F. SCHMIDT*; M. E. GRISWOLD; K. B. FREEMAN; T. H. MOSLEY. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

3:00 OO18 **86.11** Model for aging and cognitive decline. M. P. HENDERSON*. *Drexel Univ.*

4:00 OO19 **86.12** Hippocampal activation in the older brain. L. L. BEASON-HELD*; J. O. GOH; J. A. ASH; S. M. RESNICK. *NIA/NIH, Natl. Taiwan Univ. Col. of Med.*

POSTER

087. Alzheimer's Disease: Novel Therapeutics

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO20 **87.01** Meditation for improving cognitive functions in age related cognitive decline-a systematic review. G. B. PATRUDU*. *Andhra Med. Col. & King George Hosp.*

2:00 OO21 **87.02** Cerebrovascular reactivity and cardiovascular disease in older adults: Results from an fMRI breath-hold hypercapnia task. N. F. SCHWARZ*; J. D. LUKEMIRE; U. S. CLARK; H. H. RISKIN-JONES; X. XU; D. LABBE; B. E. HAWKSHEAD; S. W. LIEBEL; L. H. SWEET. *The Univ. of Georgia, Mount Sinai Sch. of Med., VA Greater Los Angeles Healthcare, Idaho State Univ., Warren Alpert Sch. of Med. of Brown Univ.*

3:00 OO22 **87.03** The influence of demographic and disease risk factors on paired associates learning in an internet recruited cohort of over 29,000 individuals. A. L. SINIARD*; I. SCHRAUWEN; J. J. CORNEVEAUX; J. PEDEN; M. N. TURK; M. D. DE BOTH; R. F. RICHHOLT; M. MUELLER; J. LANGBAUM; E. REIMAN; R. CASELLI; P. COLEMAN; C. BARNES; E. GLISKY; L. RYAN; M. J. HUENTELMAN. *Tgen, Arizona Alzheimer's Consortium, Evelyn F McKnight Brain Inst., LeaseHawk, Banner Alzheimer's Inst., Mayo Clin., Banner Sun Hlth. Res. Inst., Univ. of Arizona.*

4:00 OO23 **87.04** MindCrowd: Web-Based paired associates testing of 19,202 individuals demonstrates significant main effects of chronological age, gender, education, and Alzheimer's disease family history on performance. M. J. HUENTELMAN*; I. SCHRAUWEN; J. CORNEVEAUX; A. SINIARD; J. PEDEN; J. LANGBAUM; E. REIMAN; R. CASELLI; E. GLISKY; L. RYAN. *Translational Genomics Res. Ins, Arizona Alzheimer's Consortium, Evelyn F McKnight Brain Inst., Banner Alzheimer's Inst., Mayo Clin., Univ. of Arizona.*

1:00 OO24 **87.05** Age differences in brain response to cues that signal the value of to-be-remembered information. M. S. COHEN*; J. RISSMAN; N. A. SUTHANA; A. D. CASTEL; B. J. KNOWLTON. *UCLA, UCLA.*

2:00 OO25 **87.06** Long-term cortisol variability predicts Alzheimer's disease risk. S. D. MOFFAT*; G. E. ENNIS; Y. AN; S. M. RESNICK; L. FERRUCCI; R. J. O' BRIEN. *Georgia Inst. of Technol., Natl. Inst. on Aging, Johns Hopkins Univ.*

3:00 OO26 **87.07** The polyphenolic and f1 fractions isolated from butea frondosa ameliorates learning memory disruption in the laboratory animal models. G. A. DESHPANDE*; S. MENGI. *Bharti Vidyapeeth Deemed Univ., C.U.Shah Col. of Pharm.*

4:00 OO27 **87.08** ● A randomized, controlled trial investigating the psychopharmacological and cognitive enhancing effects of the herbal medicines Pycnogenol and Bacopa: The Australian Research Council Longevity Intervention (ARCLI). M. P. PASE; A. SCHOLEY; K. SAVAGE; K. NOLIDIN; C. STOUGH*. *Swinburne Univ. of Technol., Swinburne Univ.*

1:00 OO28 **87.09** Mechanisms of music-induced neurophysiology - a proposed model for prescriptive listening applications in dementia patients. L. E. MAGUIRE*. *Johns Hopkins Univ.*

2:00 OO29 **87.10** Novel ROCK inhibitors developed for both cognitive enhancement and blockade of pathological tau phosphorylation. M. TURK*; M. D. ADAMS; T. WANG; T. DUNCKLEY; M. J. HUENTELMAN. *Arizona State Univ., Translational Genomics Res. Inst., Arizona Alzheimer's Consortium, Evelyn F Mcknight Brain Inst. at the Univ. of Arizona, Midwestern Univ., Translational Genomics Res. Inst.*

3:00 OO30 **87.11** Gene expression profiling of human astrocytes treated with bexarotene and related compounds shows increase in neuroprotective cytokine GMCSF. R. RICHHOLT*; I. PIRAS; A. M. PERSICO; M. J. HUENTELMAN. *TGen Neurogenomics Div., Arizona Alzheimer's Consortium, Evelyn F. McKnight Brain Inst. at the Univ. of Arizona, Univ. Campus Bio-Medico.*

4:00 OO31 **87.12** Noncoding and micro RNAs associated with KCl-induced neuronal depolarization. M. DE BOTH*; A. SINIARD; J. CORNEVEAUX; H. ZHANG; J. COLEMAN; M. HUENTELMAN. *Translational Genomics Res. Inst. (TGen), Evelyn F McKnight Brain Inst. at the Univ. of Arizona, Arizona Alzheimer's Consortium, Univ. of Florida.*

1:00 OO32 **87.13** Integrated approaches for analyzing u1-70k cleavage in Alzheimer's disease. B. BAI*; P. CHEN; C. M. HALES; Z. WU; V. PAGALA; A. A. HIGH; A. I. LEVEY; J. J. LAH; J. PENG. *St. Jude Children's Res. Hosp., Emory Univ.*

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POSTER

088. Healthy Aging

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP1 **88.01** Chronic life stress predicts decreased white matter volume in the prefrontal cortex among healthy older adults. G. L. MORENO*; J. BRUSS; N. L. DENBURG. *Univ. of Iowa.*

2:00 PP2 **88.02** Elderly with high aerobic fitness maintain executive function predominantly by recruiting the primary hemisphere in the prefrontal cortex: A neuroimaging study with fNIRS. K. HYODO*; I. DAN; K. SUWABE; K. BYUN; G. OCHI; H. SOYA. *Tsukuba Univ., Chuo Univ.*

3:00 PP3 **88.03** The effects of fitness on subcortical brain anatomy and cognition across the life span. M. A. FLETCHER*; K. A. LOW; C. TAN; T. KONG; B. ZIMMERMAN; N. SCHNEIDER-GARCES; K. E. MATHEWSON; C. R. BURTON; B. P. SUTTON; A. M. CHIARELLI; E. MACLIN; G. GRATTON; M. FABIANI. *Beckman Institute, Univ. of Illinois, Dept. of Psychology, Univ. of Alberta.*

4:00 PP4 **88.04** ▲ Adult age differences in "online" learning from positive and negative probabilistic feedback. R. B. SOJITRA*; J. R. SIMON; M. A. GLUCK. *Gluck Lab. (Rutgers University).*

1:00 PP5 **88.05** Cognitive performance in healthy elderly subjects with excess of electroencephalographic theta activity. S. A. CASTRO-CHAVIRA*; T. FERNÁNDEZ; C. ALATORRE; S. SÁNCHEZ MOGUEL; M. RINCÓN; T. HARMONY; J. SANDOVAL; M. ESPINO. *Neurobiol Inst. UNAM, Univ. Autónoma de Querétaro, Ctr. Estatal de Salud Mental, Secretaría de Salud del Estado de Querétaro.*

2:00 PP6 **88.06** Impaired learning in multidimensional environments in healthy human aging. R. DANIEL*; A. RADULESCU; Y. NIV. *Princeton Univ., Princeton Univ.*

3:00 PP7 **88.07** Emotional recognition memory for faces and words in healthy young and older adults. C. SUMIDA*; L. J. ROTBLATT; S. N. GLUHM; D. M. SCHIEHSER; J. V. FILOTEO; P. E. GILBERT. *San Diego State Univ., Univ. of California San Diego, Veterans Admin. San Diego Healthcare Syst., San Diego State University/University of California San Diego Joint Doctoral Program in Clin. Psychology.*

4:00 PP8 **88.08** Effects of brain iron concentration on neural activity and memory performance in normal aging. G. KALPOUZOS*; B. GARZÓN; R. SITNIKOV; C. HEILAND; J. PERSSON; L. BÄCKMAN. *Aging Res. Center, Karolinska Inst., MRI Res. Center, Clin. Neuroscience, Karolinska Inst.*

1:00 PP9 **88.09** Long-term memory guided attention in healthy ageing. G. SALVATO*; E. Z. PATAI; A. C. NOBRE. *Univ. of Pavia, Univ. of Oxford.*

2:00 PP10 **88.10** Investigating the neural correlates of spatial and temporal context memory across the adult lifespan. E. ANKUDOWICH*; D. KWON; D. MAILLET; S. PASVANIS; A. SWIERKOT; L. WALLACE; M. N. RAJAH. *McGill Univ., Douglas Mental Hlth. Univ. Inst.*

3:00 PP11 **88.11** ● Effects of cognitive reserve and the BDNF Val66Met polymorphism on episodic memory, working memory, executive function and language processing in healthy older adults. J. C. VICKERS*; D. WARD; K. STUART; N. SAUNDERS; M. SUMMERS. *Univ. of Tasmania, Univ. of Tasmania.*

4:00 PP12 **88.12** Correlates of brain anatomy and cardiac function in healthy aging and atherosclerosis in mice. P. POULIOT*; P. AVTI; C. BOWEN; A. CASTONGUAY; M. TABATABEI; M. MOEINI; É. THORIN; F. LESAGE. *Ecole Polytechnique de Montréal, Montreal Heart Inst., Dalhousie Univ., Univ. de Montréal.*

1:00 PP13 **88.13** Relationships between longitudinal changes in functional brain activation, white matter integrity and cognitive performance in healthy older adults. J. G. HAKUN*; Z. ZHU; N. JOHNSON; B. T. GOLD. *Univ. of Kentucky.*

2:00 PP14 **88.14** White-matter integrity and cognitive flexibility in normal aging. D. RINKER*; C. FENNEMA-NOTESTINE; M. S. PANIZZON; D. J. HAGLER; C. FRANZ; P. M. THOMPSON; A. M. DALE; W. S. KREMEN. *Univ. of Southern California, USC, UCSD, UCSD.*

3:00 PP15 **88.15** The operation of control devices in old age: A new approach to assess motor and cognitive performance during realistic working scenarios. M. DALECKI*; F. STEINBERG; M. KALICINSKI; O. BOCK. *York Univ., Johannes Guttenberg-University, German Sport Univ.*

4:00 PP16 **88.16** Effects of aging on mnemonic discrimination of emotional information. S. L. LEAL*; M. A. YASSA. *Johns Hopkins Univ., Univ. of California, Irvine.*

1:00 PP17 **88.17** Risk and pathological factors associated with aging in a sample of Panamanians over 64 years old. A. E. VILLARREAL*; S. GRAJALES; G. B. BRITTON; -. PANAMA AGING RESEARCH INITIATIVE. *INDICASAT AIP, Acharya Nagarjuna Univ., PARI.*

2:00 PP18 **88.18** Dietary macronutrient composition is differentially associated with gray matter volumes of cortical and limbic regions in young and older adults. S. YUAN*; Y. TU; P. WANG; J. O. S. GOH. *Grad. Inst. of Brain and Mind Science, Col. of Med., Grad. Inst. of Brain and Mind Science, Nati Taiwan Univ. Col. of Med., Neurobio. and Cognitive Sci. Center, Natl. Taiwan Univ., Dept. of Psychology, Natl. Taiwan Univ.*

POSTER

089. Appetitive and Incentive Learning and Memory I

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP19 **89.01** Locus coeruleus optoICSS: A role for selective noradrenergic activation in reinforcement. K. SCHMIDT*; C. KOLLER; E. VAZEY; I. WITTEN; C. BASS; G. ASTON-JONES; K. DEISSEROTH; D. WEINSHENKER. *Emory Univ., Med. Univ. of South Carolina, Princeton, Univ. at Buffalo, Stanford.*

2:00 PP20 **89.02** The role of BLA rapid glutamate signaling in value-based decision-making. M. MALVAEZ*; A. M. YORITA; L. FENG; H. G. MONBOUQUETTE; K. M. WASSUM. *UCLA, UCLA, Brain Res. Institute, UCLA.*

3:00 PP21 **89.03** ● NMDA receptor regulation of prediction error in mice: Relevance for psychosis. C. A. GIANESSI*; S. L. QUICK; P. R. CORLETT; J. R. TAYLOR. *Yale Interdepartmental Neurosci. Program, Yale Univ.*

4:00 PP22 **89.04** Neural correlates of contingency in appetitive Pavlovian conditioning. H. NASSER*; J. AVILA; K. GILROY; P. SERRANO; A. R. DELAMATER. *City Univ. of New York, Hunter College-CUNY, Brooklyn College-CUNY, Brooklyn College-CUNY.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 PP23 **89.05** Effects of delta-opioid receptor accumulation and internalisation in the nucleus accumbens shell on cue-guided choice. A. K. MORSE*; V. LAURENT; J. BERTRAN-GONZALEZ; B. BALLEINE. *Univ. of Sydney, Clem Jones Ctr. for Ageing Dementia Research, Queensland Brain Institute, The Univ. of Queensland.*

2:00 PP24 **89.06** The role of d1 and d2 receptors in incentive value attribution. J. J. CHOW*; M. DARNA; J. S. BECKMANN. *Univ. of Kentucky, Univ. of Kentucky.*

3:00 QQ1 **89.07** Differential regulation of cue-induced incentive motivation by muscarinic and nicotinic acetylcholine receptors within the nucleus accumbens core. A. L. COLLINS*; I. XU; S. B. OSTLUND; K. M. WASSUM. *UCLA, UCI.*

4:00 QQ2 **89.08** The effects of increased dopaminergic transmission on cognitive bias in mice. R. A. CLIBURN*; K. M. LOHR; T. S. GUILLOT; G. W. MILLER. *Emory Univ.*

1:00 QQ3 **89.09** The reinforcement magnitude of flavored stimulus interferes with omission effects in rats. J. O. BUENO*; D. M. JUDICE-DAHER; H. G. DELIBERATO. *Univ. São Paulo.*

2:00 QQ4 **89.10** Differential involvement of dopaminergic and beta-adrenergic receptors in the medial prefrontal cortex in latent inhibition of conditioned taste aversion after chronic consumption of sugar. S. CAYNAS*; G. RODRÍGUEZ-GARCÍA; M. I. MIRANDA. *Univ. Nacional Autonoma de Mexico - Inst. de Neurobiologia.*

3:00 QQ5 **89.11** Sex differences in conditioned orienting behavior and related phenotypes. S. M. LEWIS; M. E. OLSHAVSKY; E. S. SMITH; H. J. LEE*. *Univ. of Texas at Austin, Univ. Texas, Austin.*

4:00 QQ6 **89.12** Inhibiting ventral pallidum with DREADDs impairs sign-tracking in rats. S. E. CHANG*; T. P. TODD; D. J. BUCCI; K. S. SMITH. *Dartmouth Col.*

1:00 QQ7 **89.13** Decoding frontostriatal network activity during occasion setting. J. L. SHOBE*; L. D. CLAAR; K. I. BAKHURIN; S. C. MASMANIDIS. *UCLA, UCLA.*

2:00 QQ8 **89.14** Signaling prediction for size versus value of rewards in rodent orbitofrontal cortex during Pavlovian unblocking. N. LOPATINA*; M. A. MCDANNALD; B. F. SADACCA; G. SCHOENBAUM. *Univ. of Maryland Sch. of Med., Natl. Inst. on Drug Abuse, Intramural Res. Program.*

3:00 QQ9 **89.15** Selective loss of the rat nigral DA neurons needed for approach response to appetitive, but not aversive, stimuli and those needed for aversive, but not appetitive associative learning. C. DA CUNHA*; B. F. C. DE LIMA; A. GÓMEZ-A; S. L. BOSCHEN; J. K. BARBIERO; A. M. FIORENZA; D. L. ROBINSON; C. D. BLAHA. *Univ. Federal do Parana, Univ. of North Carolina, Univ. of Memphis.*

4:00 QQ10 **89.16** Effects of phenotype and exercise on diet preference in a rat model. H. JOHNS*; K. PARKER; M. MCCABE; F. BOOTH; M. J. WILL. *Univ. of Missouri, Univ. of Minnesota, Univ. of Vermont.*

1:00 QQ11 **89.17** Effects of thiamine-deficiency on flavor consumption after flavor-thiamine pairings. D. KLAKOTSKAIA; R. RICHARDSON; M. MCCABE; E. WOODALL; C. WEINSTEIN; T. SCHACHTMAN*. *Univ. of Missouri, Univ. of Missouri.*

2:00 QQ12 **89.18** Chronic ketamine pretreatment enhances the effects of pramipexole on contrafreeloading for water in rats. C. SCHEPISI*; S. DORONZIO; P. NENCINI. *Dept. of Physiol. and Pharmacology, Sapienza Univ.*

3:00 QQ13 **89.19** Inbred mouse genetics approach yields novel genetic and genomic determinants of variation in appetitive reward-driven instrumental learning and motivation. A. S. JAMES*; B. M. SAFAIE; A. BAUTISTA; A. J. LUSIS; J. D. JENTSCH. *UCLA.*

4:00 QQ14 **89.20** Isoflurane/nitrous oxide anesthesia during the first week of life can cause long-lasting cognitive deficits in rhesus monkeys. M. G. PAULE*. *FDA's Natl. Ctr. For Toxicological Res.*

1:00 QQ15 **89.21** OpenMaze: A new resource for open source hardware and software for rodent behavioral neuroscience. C. O. LACEFIELD; C. RODGERS*; R. M. BRUNO. *Columbia Univ. Med. Ctr.*

POSTER

090. Memory Consolidation and Reconsolidation

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 QQ16 **90.01** Learning and memory impairment in HIV-1-transgenic (Tg)26 mice: Potential regulation by Toll-Like receptors. S. MOIDUNNY*; M. A. BENNEYWORTH; T. MACHEDA; S. METZGER; U. SHARMA; J. MEINTS; M. J. THOMAS; S. ROY. *University of Minnesota.*

2:00 QQ17 **90.02** Sex differences in molecular mechanisms underlying consolidation of memory. A. A. SCHMELING*; I. C. SPEIRS; E. J. DONZIS; L. M. TURNBULL; N. C. TRONSON. *Univ. of Michigan.*

3:00 QQ18 **90.03** Single and double alternation in the adult female C57BL/6 mouse: Non-knockout versus estrogen receptor knockout. J. D. ROWAN*; M. K. MCCARTY; A. BAJRACHARYA; H. BOETTGER-TONG. *Wesleyan Coll, Wesleyan Col., Wesleyan Col., Wesleyan Col.*

4:00 QQ19 **90.04** Dissociation of mechanisms underlying context fear conditioning and inhibitory avoidance. L. M. TURNBULL; I. C. SPEIRS; A. A. SCHMELING; N. NEVÁREZ; E. J. DONZIS; D. M. DUBOIS; N. C. TRONSON*. *Univ. of Michigan.*

1:00 QQ20 **90.05** HDAC3 in the dorsal hippocampus negatively regulates long-term memory consolidation for context fear. J. L. KWAPIS*; Y. ALAGHBAND; D. P. MATHEOS; R. M. BARRETT; A. SYLVAIN; A. E. CARL; M. A. WOOD. *Univ. of California, Irvine.*

2:00 QQ21 **90.06** Subdomain 2 of the neuron-specific chromatin remodeling subunit BAF53b is required for synaptic plasticity and memory. A. VOGEL-CIERNIA*; D. P. MATHEOS; E. KRAMAR; B. TRIEU; C. COX; C. MAGNAN; M. ZELLER; A. TRAN; A. LOPEZ; K. SAKATA; S. AZZAWI; R. DANG; R. BARRETT; P. BALDI; G. LYNCH; M. WOOD. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Oregon Hlth. and Sci. Univ.*

3:00 QQ22 **90.07** Bi-directional pharmacogenetic manipulation of the CA1 using DREADDs leads to modulation in object location memory, but not object recognition memory. A. J. LOPEZ*; A. O. WHITE; A. VOGEL-CIERNIA; M. A. WOOD. *Univ. of California, Irvine.*

4:00 QQ23 **90.08** Molecular mechanisms of spatial working memory and reference memory in the hippocampus: A western blot analysis. N. FRAIZE*; M. HAMIEH; M. JOSEF; M. TOURET; P. SALIN; G. MALLERET. *Nicolas Fraize, Ctr. de Recherche en Neurosciences de Lyon.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 QQ24 **90.09** Spatial learning capabilities and mitochondrial function in creatine-supplemented mice. W. M. SNOW; C. CADONIC; S. K. ROY CHOWDHURY; E. THOMSON; S. ALASHMALI; E. PLATT; M. SUH; P. FERNYHOUGH; B. C. ALBENSI*. *Univ. of Manitoba, St. Boniface Hosp. Res., Univ. of Manitoba, Univ. of Manitoba.*

2:00 QQ25 **90.10** Reelin supplementation rescues synaptic plasticity and cognitive deficits in a mouse model for Angelman syndrome. W. HETHORN*; S. L. BLANKENSHIP; E. J. WEEBER. *Univ. of South Florida.*

3:00 QQ26 **90.11** Role of neurobeachin in fear memory reconsolidation. B. LEE*; T. CHO; E. BANG; A. PAYDAR; S. LEE; W. YANG; H. SHIN. *Inst. For Basic Sci.*

4:00 QQ27 **90.12** Space radiation improves pattern separation in older mice without influencing gross hippocampal function. M. J. LUCERO*; R. L. REDFIELD; N. ITO; G. PALCHIK; D. R. RICHARDSON; R. P. REYNOLDS; S. MUKHERJEE; H. SHIH; P. D. RIVERA; S. G. BIRNBAUM; B. P. C. CHEN; A. J. EISCH. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

1:00 QQ28 **90.13** Sparse encoding of a memory of a meal in the dorsal hippocampus as revealed with Arc expression. M. B. PARENT*; Y. O. HENDERSON; A. VAZDARJANOVA. *Georgia State Univ., Charlie Norwood VA Med. Ctr.*

2:00 QQ29 **90.14** Post-retrieval hippocampal infusions of HDACi enhance spatial memory reconsolidation. I. BALDERAS*; G. CHAVEZ-MARCHETTA; A. AGOITIA-POLO; C. M. GOMEZ; A. DIAZ-GONZALEZ; F. BERMUDEZ-RATTONI. *IFC-UNAM.*

3:00 QQ30 **90.15** ● PDE11A4, a phosphodiesterase enriched in the ventral hippocampus, is required for consolidation of social memories and normal social approach behaviors. M. P. KELLY*; S. HEGDE. *Univ. of South Carolina Sch. of Med.*

4:00 QQ31 **90.16** Memory traces and their underlying mechanisms during the infantile amnesia period. A. TRAVAGLIA*; R. BISAZ; C. M. ALBERINI. *New York Univ.*

1:00 QQ32 **90.17** Insulin-like growth factor 2 prevents memory decay associated with normal aging. S. A. JOHNSON*; C. M. ALBERINI. *New York Univ.*

2:00 QQ33 **90.18** β-adrenergic receptors and memory consolidation: the role of astrocytic mechanisms. V. GAO*; A. SUZUKI; S. LENGACHER; P. J. MAGISTRETTI; C. M. ALBERINI. *New York Univ., Icahn Sch. of Med. at Mount Sinai, Univ. of Toyama, École polytechnique fédérale de Lausanne.*

3:00 QQ34 **90.19** A critical role for the hippocampus-prelimbic/infralimbic cortex-amygdala circuit in retrieval-mediated memory strengthening. X. YE*; C. INDA; N. HUMALA; C. M. ALBERINI. *New York Univ., Mem. Sloan-Ketterring Cancer Ctr.*

4:00 QQ35 **90.20** Cell specific knockout of Disabled-1 reveals novel approach to examine the role of the Reelin signaling pathway on synaptic plasticity and learning and memory. A. L. LUSSIER*; J. H. TROTTER; H. L. MAHONEY; G. D'ARCANGELO; E. J. WEEBER. *Univ. of South Florida, Rutgers, the State Univ. of New Jersey.*

1:00 QQ36 **90.21** The role of protein synthesis and protein degradation in the amygdala during fear extinction. E. K. ROTONDO*; N. C. FERRARA; F. J. HELMSTETTER. *Univ. of Wisconsin- Milwaukee.*

2:00 RR1 **90.22** Activity dependent proteolysis in the amygdala modulates protein synthesis in the amygdala and dorsal hippocampus during consolidation of fear conditioning. D. S. REIS*; M. SEHGAL; F. J. HELMSTETTER. *Univ. of Wisconsin - Milwaukee.*

3:00 RR2 **90.23** ERK-mTOR interactions in the lateral, basolateral, and central amygdala during fear memory consolidation. N. FERRARA*; M. R. GILMARTIN; D. S. REIS; J. L. LEE; F. J. HELMSTETTER. *Univ. of Wisconsin--Milwaukee, Marquette Univ.*

4:00 RR3 **90.24** Hippocampal protein degradation is required for context memory formation. P. K. CULLEN*; N. C. FERRARA; B. CALLIF; F. J. HELMSTETTER. *Univ. of Wisconsin, Milwaukee.*

1:00 RR4 **90.25** Stathmin-dependent changes in microtubule stability are critical for memory formation. G. P. SHUMYATSKY*; S. UCHIDA; G. MARTEL; A. PAVLOWSKY; S. TAKIZAWA; C. HEVI; Y. WATANABE; E. KANDEL; J. ALARCON. *Rutgers Univ., State Univ. of New York, Yamaguchi Univ., Columbia University, HHMI, Kavli Inst. for Brain Sci.*

2:00 RR5 **90.26** A new mechanism of translational control of hippocampal mGluR-dependent long-term depression and object-place learning. G. VIANA DI PRISCO*; W. HUANG; S. BUFFINGTON; C. HSU; P. BONNEN; A. PLACZEK; C. SIDRAUSKI; K. KRNJEVIC; R. J. KAUFMAN; P. WALTER; M. COSTA-MATTIOLI. *Baylor Col. Med., Univ. of California San Francisco, McGill Univ., Sanford-Burnham Med. Res. Inst.*

3:00 RR6 **90.27** Inhibiting histone deacetylation overrides the erasure of long-term memory caused by inhibition of PKM in *Aplysia.* D. CAI*; K. PEARCE; S. CHEN; J. PARK; D. L. GLANZMAN. *Univ. California LA, David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

4:00 RR7 **90.28** Reinstatement of long-term memory after its apparent erasure by inhibition of PKM or blockade of reconsolidation in *Aplysia.* K. PEARCE; D. CAI; S. CHEN; R. CHOE; R. SINGH; M. KIMBROUGH; K. SARMIENTO; X. ZHAO; T. DEHGHANI; D. L. GLANZMAN*. *Univ. California LA, Univ. California LA, UCLA, David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

POSTER

091. Animal Models: Anatomical Connections in Learning and Memory Circuits

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR8 **91.01** A subpopulation of cortical fast spiking parvalbumin interneurons surrounded by perineuronal net (PNN) expresses various metallopeptidases including Adamts8, Adamts15 and Neprilysin. Their possible importance in plasticity and long-term memory. J. P. ROSSIER*; A. URBAN; A. SAVOYE; A. BERNARD; M. HAWRYLYCZ; E. LEIN. *Optogenetics and Brain Imaging, CPN INSERM U894, Allen Inst. for Brain Res.*

2:00 RR9 **91.02** Direct examination of how supramammillary activity alters neurotransmission in hippocampal area CA2/CA3a. V. ROBERT; V. CHEVALEYRE; R. A. PISKOROWSKI*. *Ecole Normal Superior, Univ. Paris Descartes, Univ. Paris Descartes, Univ. Paris Descartes.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 RR10 **91.03** Comparison of VTA and SN ascending projections to the Hippocampal Formation in the monkey (Macaca fascicularis). An anterograde tracer study. R. INSAUSTI*; D. HERNÁNDEZ; M. UBERO; M. LEGIDOS; M. ARROYO; M. MARCOS; E. ARTACHO; M. IÑIGUEZ DE ONZOÑO; M. MUÑOZ; H. EVRARD; N. LOGOTHETIS. *Univ. of Castilla-La Mancha, Univ. of Castilla-La Mancha, Univ. of Castilla-la Mancha, Max Planck Inst.*

4:00 RR11 **91.04** Re-emergence of cholinergic/nestin cells in the medial septum/diagonal band after exercise. J. M. HALL*; L. M. SAVAGE; C. D. ALVARADO. *Binghamton Univ.*

1:00 RR12 **91.05** A new fMRI compatible set-up to study perception and memory of odors in anesthetized and awake rats. C. CHWIESKO*; B. BOULAT; D. WIEDERMANN; M. HOEHN; M. SAUVAGE. *Ruhr-Universität Bochum, Mercator Res. Group, Ruhr-Univerity Bochum, Max-Planck- Inst. for neurological research, Mercator Res. Group, Ruhr-University Bochum.*

2:00 RR13 **91.06** Organization and neuroanatomy of the Cetartiodactyl hippocampus: an examination of 18 species. N. PATZKE*; K. Æ. KARLSSON; A. N. ALAGAILI; O. B. MOHAMMED; N. C. BENNETT; P. R. MANGER. *Univ. Federal Do Rio De Janeiro, Univ. of the Witwatersrand, Reykjavik Univ., King Saud Univ., Univ. of Pretoria.*

3:00 RR14 **91.07** Anatomical Biomarkers of Learning in a murine model. S. KULASON; D. TWARD; K. NG; Y. ZHANG; J. ZHANG; J. W. KRAKAUER; J. T. RATNANATHER*; R. O'BRIEN; M. MILLER. *Johns Hopkins Univ.*

4:00 RR15 **91.08** Tracking value in an uncertain environment: Contrasting functional roles of primate mediodorsal thalamus and perirhinal cortex during learning. A. S. MITCHELL*; S. CHAKRABORTY; M. J. BUCKLEY; M. E. WALTON. *Oxford Univ., Imperial Col.*

1:00 RR16 **91.09** Differences in network activation patterns may underlie learning enhancement with spaced training. C. A. KARSTEN*; C. D. COX; K. WANG; G. LYNCH; C. M. GALL. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine.*

2:00 RR17 **91.10** Differential contribution of the medial and lateral entorhinal cortices, the perirhinal and postrhinal cortices and the hippocampal subfields to familiarity. A. MALET-KARAS*; N. NAKAMURA; T. KITSUKAWA; M. SAUVAGE. *Ruhr Univ. Bochum, Osaka university.*

3:00 RR18 **91.11** Topographical and functional innervation of non-canonical back-projection from the subiculum to hippocampal CA1. Y. SUN*; T. IKRAR; A. J. LÓPEZ; X. XU. *Univ. of California, Irvine.*

4:00 RR19 **91.12** Topographical organization of multisynaptic inputs to the hippocampus: Dual transsynaptic tracing with rabies virus vector in the rat. S. OHARA*; S. SATO; K. TSUTSUI; M. P. WITTER; T. IIJIMA. *Tohoku Univ. Grad Sch. Life Sci., Kavli Inst. for Sys Neurosci and Cen for Neural Comp, NTNU.*

1:00 RR20 **91.13** Anatomical pathways for auditory memory II: Information from rostral superior temporal gyrus to dorsolateral temporal pole and medial temporal cortex. M. MUNOZ*; R. INSAUSTI; A. MOHEDANO-MORIANO; M. MISHKIN; R. C. SAUNDERS. *Univ. of Castilla-La Mancha Sch. of Med., Natl. Inst. of Mental Hlth.*

2:00 RR21 **91.14** The nucleus reuniens and perirhinal cortex are critical to memory for sequences of events. C. R. QUIRK*; T. A. ALLEN; N. J. FORTIN. *Univ. of California Irvine, Univ. of California, Irvine.*

3:00 RR22 **91.15** Island cells control temporal association memory. T. KITAMURA*; M. PIGNATELLI; J. SUH; K. KOHARA; A. YOSHIKI; K. ABE; S. TONEGAWA. *MIT, RIKEN BioResource Ctr.*

4:00 RR23 **91.16** Nucleus incertus and hippocampal prefrontal cortical pathway - a stress responsive circuit in rats. G. S. DAWE*; Y. WU; W. TAN; J. KUMAR; U. FAROOQ; N. RAHADI; R. RAJKUMAR. *Natl. Univ. Singapore.*

1:00 RR24 **91.17** Catecholamine release from the locus coeruleus to the dorsal hippocampus mediates the selective attention underlying spatial learning and memory. K. A. KEMPADOO*; E. R. KANDEL. *Columbia Univ.*

POSTER

092. Animal Models: Impairments in Learning and Memory

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR25 **92.01** A high-fat diet impairs hippocampal-dependent learning but spares hippocampal-independent learning. E. M. STOUFFER*; E. E. WARNINGER; P. N. MICHENER. *Bloomsburg Univ. of PA.*

2:00 RR26 **92.02** Impaired hippocampal place cell stability and local field potential characteristics in a mouse model of Fragile X mental retardation. T. ARBAB*; C. A. BOSMAN; R. WILLEMSEN; F. P. BATTAGLIA; C. M. A. PENNARTZ. *Univ. of Amsterdam, Erasmus Med. Ctr., Radboud Univ.*

3:00 RR27 **92.03** NMDA antagonist MK-801 leaves latent inhibition intact in rats. A. S. ADAMS; J. A. WILLNER*; A. G. ADAMS. *Radford Univ., Radford Univ.*

4:00 RR28 **92.04** LLTP stimulation causes long term depression in conditional neuronal Deaf1 knockout mouse hippocampus. A. GHOSH*; S. RAJAMANICKAM; P. JENSIK; M. COLLARD; G. ROSE. *Southern Illinois Univ. Carbondale, Southern Illinois Univ. Carbondale.*

1:00 RR29 **92.05** Delay dependent effect of Nucleus Reuiens/Rhomboid inactivation on working memory performance. D. M. LAYFIELD*; M. PATEL; H. L. HALLOCK; A. GRIFFIN. *Univ. of Delaware.*

2:00 RR30 **92.06** Rodents with lesions of the medial prefrontal cortex path integrate normally despite working memory deficits. M. SAPIURKA*; A. OCAMPO; L. R. SQUIRE; R. E. CLARK. *UCSD, VAMCSD, UCSD, UCSD.*

3:00 RR31 **92.07** ▲ Frustration-based anxiety and magnitude of reward-based pattern separation. R. P. KESNER*. *Univ. Utah.*

4:00 RR32 **92.08** Externalilty in obesity: A hippocampal-dependent phenomenon. C. H. SAMPLE; J. MAK; P. MACIVER; L. E. JARRARD*; T. L. DAVIDSON. *American Univ., Washington & Lee Univ.*

1:00 RR33 **92.09** Role of FosB/JunD transcription factors in male pathological aggressive behavior in mice. H. ALEYASIN*; S. A. GOLDEN; M. E. FLANIGAN; M. L. PFAU; G. E. HODES; M. HESHMATI; S. J. RUSSO. *Mount Sinai Sch. of Med., Icahn Sch. of Med. at Mount Sinai.*

2:00 RR34 **92.10** ● *In vivo* MRI studies of structural changes in mouse brain following forced treadmill training. B. D. ADDISON*; A. C. EVANS; B. J. BEDELL. *McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

3:00 RR35 **92.11** Retrograde ventral hippocampal lesions after visual discrimination training impair context-specific conditioned inhibition. R. J. BALOG*; D. BENIS; N. S. HONG; J. TROW; S. H. DEIBEL; R. J. MCDONALD. *Univ. of Lethbridge, Canadian Ctr. For Beha, Univ. of Lethbridge.*

4:00 RR36 **92.12** Behavioral phenotypes differ depending on background mouse strain. A. STAVNEZER*. *Col. of Wooster.*

1:00 RR37 **92.13** Adult behavioral consequences of prenatal nanomaterial exposure. E. B. ENGLER-CHIURAZZI*; J. J. STALNAKER; X. REN; H. HU; S. N. SARKAR; S. JUN; D. D. QUINTANA; P. A. STAPLETON; T. R. NURKIEWICZ; C. M; J. YI; J. W. SIMPKINS. *West Virginia Univ., West Virginia Univ.*

2:00 RR38 **92.14** ▲ The lateral entorhinal cortex exhibits a highly selective code that integrates physical and relational aspects of sensory stimuli. M. PILKIW*; N. INSEL; Y. CUI; S. SARKAR; M. MORRISSEY; K. TAKEHARA-NISHIUCHI. *Univ. of Toronto, Univ. of Toronto, Med. Col. of Soochow Univ.*

3:00 RR39 **92.15** Cholinergic, but not NMDA, receptors in the lateral entorhinal cortex mediate acquisition in trace eyeblink conditioning. K. TAKEHARA-NISHIUCHI*; X. YU; T. GIRITHARAN; L. TRAN; R. BAKIR; M. D. MORRISSEY; S. N. TANNINEN. *Univ. Toronto.*

4:00 RR40 **92.16** The overexpression of mutated tau in the entorhinal cortex: Its effects on local neurons, cortical theta oscillations, and memory. S. E. TANNINEN*; M. D. MORRISSEY; R. L. KLEIN; K. TAKEHARA-NISHIUCHI. *Univ. of Toronto, Louisiana State Univ. Hlth. Shreveport.*

1:00 RR41 **92.17** Role of the vasopressin 1b receptor in rodent aggressive behavior and synaptic plasticity in hippocampal area CA2. S. YOUNG*; J. H. PAGANI; M. ZHAO; Z. CUI; S. K. WILLIAMS AVRAM; D. A. CARUANA; S. M. DUDEK. *NIMH, NIH, DHHS, NIEHS, NIH, DHHS, Keele Univ.*

2:00 RR42 **92.18** Episodic-like memory is rapidly compromised by a high-fat diet in C57Bl/6 mice and is associated with markers of hippocampal neuronal damage identified by proteomics. F. H. MCLEAN*; R. F. LANGSTON; F. M. CAMPBELL; A. LORENZO-ARRIBAS; L. M. WILLIAMS. *RINH, Univ. of Aberdeen, Univ. of Dundee, Univ. of Aberdeen.*

3:00 RR43 **92.19** Antagonizing dorsal hippocampal dopamine D1-type receptors with SCH23390 affects social learning and social interactions but not food intake in male and female mice. R. MATTA*; A. N. TIESSEN; M. M. KIVLENIEKS; A. M. MEERSSEMAN; Y. O. ADJEI-AFRIYIE; E. CHOLERIS. *Univ. of Guelph.*

4:00 RR44 **92.20** Neurostructural analysis of the hippocampal dentate gyrus neurons in the intraventricularly streptozotocin-injected rats. A. S. SHINGO*; S. KITO; T. MURASE. *Okinaka Mem. Inst. For Med. Res., Chigasaki Tokushu-kai Clin.*

1:00 RR45 **92.21** Damage to the retrosplenial cortex impairs context discrimination. J. S. ADELMAN; S. ROBINSON*. *Oberlin Col.*

POSTER

093. Learning and Memory: Physiology I

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR46 **93.01** Real-time decoding of hippocampal replay events. D. F. LIU*; X. DENG; M. KARLSSON; U. EDEN; L. FRANK. *UCSF, Boston Univ., UCSF, Boston Univ.*

2:00 RR47 **93.02** Neurons in the primate nucleus basalis signal error during associative learning. C. MARTINEZ-RUBIO*; O. J. AHMED; D. SIERRA-MERCADO; E. N. ESKANDAR. *Massachusetts Gen. Hosp., Univ. Puerto Rico Sch. of Med.*

3:00 RR48 **93.03** Amygdalar NMDAr and AMPAr activity on aversive memory retrieval: neurochemical modulation in the insular cortex. D. OSORIO-GÓMEZ*; K. R. GUZMAN-RAMOS; A. LUYEN DIAZ; F. BERMUDEZ-RATTONI. *Inst. de Fisiologia Celular, UNAM, Univ. Autonoma Metropolitana.*

4:00 RR49 **93.04** Neuronal oscillations in the rat hippocampus during object-in-location recognition memory. J. B. TRIMPER*; C. R. GALLOWAY; M. G. FARINA; N. A. HERNANDEZ; J. R. MANNS. *Emory Univ., Emory Univ., Georgia State Univ.*

1:00 RR50 **93.05** Brain structural changes through long-term learning of tool use supported by sustained motivation for tool use in adult non-human primates. A. IRIKI*; Y. YAMAZAKI; K. HIKISHIMA; M. SAIKI; M. INADA; E. SASAKI; R. LEMON; C. PRICE; H. OKANO. *RIKEN Brain Sci. Inst., Keio Univ., Keio Univ., Central Inst. for Exptl. Animals, UCL Inst. of Neurol., Univ. Col. London, RIKEN Brain Sci. Inst.*

2:00 SS1 **93.06** Coordinated awake reactivation of behaviorally related hippocampal-prefrontal ensembles. S. P. JADHAV*; G. ROTHSCHILD; D. K. ROUMIS; I. GROSSRUBATSCHER; L. M. FRANK. *Univ. of California San Francisco (UCSF).*

3:00 SS2 **93.07** Inhibition of de novo synthesis of plasmalogens in the mice hippocampus results in the memory loss associated with the reduction of BDNF. T. KATAFUCHI*; S. M. HOSSAIN; S. Y. M. AHMED; K. MIAKE. *Dept Integr Physiol, Grad Sch. Med. Sci, Kyushu Univ., Kyushu Univ., Ctr. Res. Inst. Marudai Food Co.*

4:00 SS3 **93.08** Mangosteen fruit hull extract improves memory and affects brain acetylcholinesterase activities in normal aged rats. R. SRISAWAT*; W. TONGJAROENBUANGAM; N. NONTAMART. *Suranaree Univ. of Technol., Fac. of Medicine, Mahasarakham Univ.*

1:00 SS4 **93.09** Novel exploration of positional or directional spatial cues induces Arc mRNA expression in distinct hippocampal subfields. D. MANAHAN-VAUGHAN*; V. ALIANE. *Ruhr Univ. Bochum, Med. Faculty,, Ruhr Univ. Bochum.*

2:00 SS5 **93.10** Protein malnutrition and caloric restriction during the lactation period affects NPY distribution in the rat hippocampus. P. L. GUEDES DA SILVA*; A. C. B. BARBOSA; M. L. M. ROCHA; P. C. BARRADAS; F. TENORIO. *UERJ.*

3:00 SS6 **93.11** Memory-enhancing intra-amygdalar clenbuterol enhances intrinsic excitability of CA1 pyramidal neurons during consolidation. E. S. LOVITZ; M. CHAVEZ; D. PROCH; L. T. THOMPSON*. *Univ. of Texas At Dallas.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

4:00 SS7 **93.12** Modulation of cellular properties by environmental enrichment that may underlie learning enhancement and seizure prevention. M. J. VALERO-ARACAMA*; M. M. SAUVAGE; M. YOSHIDA. *Ruhr Univ. Bochum, Ruhr Univ. Bochum.*

1:00 SS8 **93.13** Cardiac change-based fear index and its application for measuring fear memory consolidation. F. ZHAO*; J. LIU; W. WEI; Z. YANG; W. CAI; J. Z. TSIEN. *Georgia Regents Univ., Banna Biomed. Res. Inst.; Xi-Shuang-BAn-Na Prefecture, China; BBDI, Shanghai Key, Lab of Crime Scene Evidence, Shanghai, China.*

2:00 SS9 **93.14** Consumption of high-energy diets induces cognitive impairment, neuroinflammation, and neurovascular damage. S. L. HARGRAVE*; T. L. DAVIDSON; W. ZHENG; K. P. KINZIG. *Purdue Univ., American Univ., Purdue Univ., Purdue Univ.*

3:00 SS10 **93.15** The relationship between pupil diameter and neuronal activity in multiple brain areas. S. JOSHI*; Y. LI; R. M. KALWANI; J. I. GOLD. *Univ. of Pennsylvania, Temple Univ.*

4:00 SS11 **93.16** Corticostriatal plasticity with T-maze learning corresponds to the practiced turn direction and training stage, with corresponding changes in MSN excitability and dendritic remodeling. S. L. HAWES*; R. C. EVANS; B. A. UNRUH; E. A. BENKERT; F. GILLANI; N. J. ZHU; K. T. BLACKWELL. *George Mason Univ., NIH, George Mason Univ., George Mason Univ., George Mason Univ.*

1:00 SS12 **93.17** An active hippocampal network not driven by ripples. K. KAY*; M. SOSA; J. E. CHUNG; M. P. KARLSSON; I. GROSSRUBATSCHER; L. M. FRANK. *UCSF.*

2:00 SS13 **93.18** Grid cells reflect the locus of attention, even in the absence of movement. N. WILMING; P. KÖNIG; E. A. BUFFALO*. *Univ. of Osnabrück, Univ. of Washington, Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Washington.*

3:00 SS14 **93.19** Contribution of the different hippocampal synapses to classical eyeblink conditioning in mice and rabbits. J. DELGADO-GARCIA*; R. SÁNCHEZ-CAMPUSANO; A. CARRETERO-GUILLÉN; A. GRUART. *Pablo Olavide Univ., Univ. Pablo de Olavide.*

4:00 SS15 **93.20** Memory ontogeny in the juvenile rat. S. A. LYON*; R. F. LANGSTON. *Univ. of Dundee.*

1:00 SS16 **93.21** Polymer probes allow long lasting, high-density recordings in awake, freely behaving animals. J. E. CHUNG*; D. F. LIU; I. GROSSRUBATSCHER; V. M. TOLOSA; K. G. SHAH; A. C. TOOKER; S. H. FELIX; S. S. PANNU; L. M. FRANK. *Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, Lawrence Livermore Natl. Lab.*

2:00 SS17 **93.22** Dopaminergic modulation of lateral amygdala neuronal activity: Differential influences of D1 and D2 receptor activation on thalamic and cortical afferent inputs. C. CHANG*; A. A. GRACE. *Univ. of Pittsburgh.*

3:00 SS18 **93.23** Hippocampal-cortical dynamics underlying distributed memory representations. G. ROTHSCHILD*; L. Y. TIAN; I. GROSSRUBATSCHER; L. M. FRANK. *UCSF.*

4:00 SS19 **93.24** Endogenous levels of Lipoxin A4, a cannabinoid allosteric enhancer, impact learning and memory in mice. L. M. LEO*; C. A. CANETTI; O. B. AMARAL; F. A. BOZZA; F. A. PAMPLONA. *Inst. Oswaldo Cruz, FIOCRUZ, D'Or Inst. for Res. and Education, IDOR, Univ. Federal do Rio de Janeiro, UFRJ.*

1:00 SS20 **93.25** Transmitters involved in the action of neuromedin S on passive avoidance learning in rats. G. TELEGDY*, SR. *Univ. of Szeged,Department of Pathophysiology.*

POSTER

094. Cortical and Hippocampal Circuits: Spatial Navigation I

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS21 **94.01** ● Grid cells require experience with local boundaries during development. I. U. KRUGE*; T. WAAGA; T. WERNLE; E. I. MOSER; M. MOSER. *NTNU, Kavli Inst. For Systems Neurosci.*

2:00 SS22 **94.02** A neural circuit for goal-directed spatial coding. H. T. ITO*; S. ZHANG; M. P. WITTER; E. I. MOSER; M. MOSER. *NTNU.*

3:00 SS23 **94.03** Grid cells in non-planar environments. H. YAMAHACHI*; M. MOSER; E. I. MOSER. *Kavli Inst. for Systems Neuroscience, CNC, NTNU.*

4:00 SS24 **94.04** Speed cells in the medial entorhinal cortex. E. KROPFF CAUSA*; J. E. CARMICHAEL; E. I. MOSER; M. MOSER. *Leloir Inst. - IIBBA - CONICET, Kavli Inst. For Systems Neurosci. and Ctr. For Neural Computation, NTNU, Univ. of Waterloo.*

1:00 SS25 **94.05** Grid cell orientation is constrained by environmental geometry. T. STENSOLA; H. STENSOLA; M. HAGGLUND*; M. MOSER; E. I. MOSER. *Kavli Institute, CNC.*

2:00 SS26 **94.06** ● Interhemispheric connections between left and right medial entorhinal cortices. K. ZHENG*; Ø. W. SIMONSEN; M. P. WITTER. *Kavli Inst/Cnc, NTNU.*

3:00 SS27 **94.07** Grid cells interact with local boundaries. M. HÄGGLUND; T. STENSOLA; H. STENSOLA; M. MOSER; E. I. MOSER*. *Kavli Inst. Systems Neurosci.*

4:00 SS28 **94.08** Graph analysis of the rat (para) hippocampal connectome. N. M. VAN STRIEN*; F. Z. M. BINICEWICZ; W. J. WADMAN; M. P. WITTER; M. P. VAN DEN HEUVEL; N. L. M. CAPPAERT. *NTNU, Univ. of Amsterdam, Univ. Med. Ctr. Utrecht.*

1:00 SS29 **94.09** Sensory representation in lateral entorhinal cortex. A. TSAO*; P. ZMARZ; G. KELLER; M. MOSER; M. HÜBENER; E. I. MOSER; T. BONHOEFFER. *NTNU, Max Planck Inst. for Neurobio., FMI.*

2:00 SS30 **94.10** Grid representation for merged space. T. WERNLE*; E. I. MOSER; M. MOSER. *Kavli Institute/CNC The Fac. of Medicine, NTNU, Kavli Inst. / CNC The Fac. of Medicine, NTNU.*

3:00 SS31 **94.11** Modular organization of gamma oscillations in medial entorhinal cortex. K. M. IGARASHI*; H. STENSOLA; T. STENSOLA; M. MOSER; E. I. MOSER. *Kavli Inst. for Systems Neuroscience, NTNU.*

4:00 SS32 **94.12** 2-photon imaging of the medial entorhinal cortex in mice performing a virtual reality navigation task. F. DONATO*; A. TSAO; M. MOSER; E. I. MOSER; T. BONHOEFFER. *Kavli Inst. For Systems Neurosci., Max Planck Inst. of Neurobio.*

● Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 SS33 **94.13** Towards a functional identification of stellate cells in medial entorhinal cortex layer II. D. C. ROWLAND*; E. R. SKYTØEN; C. G. KENTROS; M. MOSER; E. I. MOSER. *NTNU.*

2:00 SS34 **94.14** ▲ Head direction cells before the time of eye opening in rat pups. T. L. BJERKNES*; R. F. LANGSTON; I. U. KRUGE; E. I. MOSER; M. MOSER. *Kavli Inst. for Systems Neuroscience, NTNU, Univ. of Dundee.*

3:00 SS35 **94.15** Reduced rate remapping in hippocampal subregion CA2. L. LU*; K. M. IGARASHI; M. P. WITTER; M. MOSER; E. I. MOSER. *Kavli Inst. For Systems Neurosci. and Ctr. For Neural Computation, NTNU.*

4:00 SS36 **94.16** Retrosplenial cortex and Hippocampus share modulation of firing activity by allocentric space and the Hippocampal theta rhythm. A. ALEXANDER*; B. LA; S. A. COHANTZ; M. NGUYEN; D. A. NITZ. *UCSD.*

1:00 SS37 **94.17** Positional mapping of route space in the medial precentral cortex and superior colliculus. J. M. OLSON*; D. A. NITZ. *UCSD.*

2:00 SS38 **94.18** Tracking vertical movements and vertical space in the posterior parietal cortex. L. E. SHELLEY*; A. S. ALEXANDER; B. LA; D. A. NITZ. *UCSD.*

3:00 SS39 **94.19** No movement-related oscillations in the entorhinal-hippocampal system of behaving bats despite low-frequency cellular resonance. T. ELIAV; M. GEVA-SAGIV; M. YARTSEV; A. FINKELSTEIN; A. RUBIN; L. LAS; N. ULANOVSKY*. *Weizmann Inst. of Sci., Hebrew Univ. of Jerusalem.*

4:00 SS40 **94.20** Switching sensory modalities elicits remapping and sharpening of 3-D spatial codes in the hippocampus of flying bats. M. GEVA-SAGIV*; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci., Hebrew Univ.*

1:00 SS41 **94.21** Neural-network model of 3D head-direction tuning in bats. A. RUBIN*; N. ULANOVSKY; M. TSODYKS. *Weizmann Inst. of Sci.*

2:00 SS42 **94.22** 3-D grid cells in flying bats. G. GINOSAR; A. FINKELSTEIN; L. LAS*; N. ULANOVSKY. *Weizmann Inst. of Sci.*

3:00 SS43 **94.23** 3D head direction cells in bats on a vertical ring and in flight. A. FINKELSTEIN*; D. DERDIKMAN; A. RUBIN; J. N. FOERSTER; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci., Rappaport Fac. of Medicine, Technion – Israel Inst. of Technol.*

4:00 SS44 **94.24** Hippocampal motifs: Intact phase precession in the absence of spatial selectivity. Z. M. AGHAJAN*; L. ACHARYA; J. CUSHMAN; J. MOORE; C. VUONG; M. MEHTA. *UCLA.*

1:00 SS45 **94.25** Mechanisms of persistent activity and persistent inactivity *in vivo.* S. BERBERICH*; J. M. MCFARLAND; T. T. G. HAHN; M. R. MEHTA. *Central Inst. of Mental Hlth., Dept. of Biol. and Program in Neurosci. and Cognitive Sci., W. M. Keck Ctr. for Neurophysics, Dept. of Physics and Astronomy, Brain Res. Inst., Integrative Ctr. for Learning and Memory, Dept. of Neurology, Dept. of Neurobio.*

2:00 SS46 **94.26** Variability of hippocampal place fields on one dimensional tracks in real world and virtual reality. K. SAFARYAN; P. RAVASSARD; A. KEES; M. R. MEHTA*. *Univ. of California at Los Angeles (UCLA), UCLA.*

3:00 SS47 **94.27** Impaired spatial selectivity in two-dimensional virtual reality. L. ACHARYA*; Z. M.AGHAJAN; J. CUSHMAN; C. VUONG; J. MOORE; M. MEHTA. *UCLA.*

4:00 SS48 **94.28** Behavioral modulation of neocortical dendritic spikes in freely behaving rats. J. J. MOORE*; M. R. MEHTA. *UCLA.*

1:00 SS49 **94.29** Head direction cell activity in the dorsal striatum and medial precentral cortex requires intact anterodorsal thalamic nuclei. M. L. MEHLMAN*; S. S. WINTER; J. S. TAUBE. *Dartmouth Col.*

2:00 SS50 **94.30** Anterior thalamus inactivation disrupts grid cell firing in the entorhinal cortex. S. S. WINTER*; B. J. CLARK; J. S. TAUBE. *Dartmouth Col., Univ. of New Mexico.*

POSTER

095. Motivation and Emotion: Information Processing

Theme F: Cognition and Behavior

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS51 **95.01** Do orbitofrontal cortex neurons encode relative value during free gaze? V. B. MCGINTY*; A. RANGEL; W. T. NEWSOME. *Stanford Univ., Caltech, Caltech, Howard Hughes Med. Inst.*

2:00 SS52 **95.02** Local administration of FAUC 213 in the thalamic reticular nucleus of rat reduces anxiety. M. GARCIA-RAMIREZ*; G. AVILA; E. CHUC-MEZA; J. ACEVES. *ENCB-IPN, Cinvestav Zacatenco.*

3:00 SS53 **95.03** The Neural Genesis of a Joke. O. AMIR; I. BIEDERMAN*. *USC.*

4:00 SS54 **95.04** Serotonergic innervation of the basal, central, medial, and cortical nuclei of the amygdala. S. B. LINLEY*; W. B. HOOVER, III; R. P. VERTES. *Florida Atlantic Univ., Max Planck Florida Inst. for Neurosci.*

1:00 SS55 **95.05** Lesions of the ventral midline thalamus impair reversal learning using an odor texture discrimination task in the rat. R. P. VERTES*; M. M. GALLO; R. J. ELLIS; P. PINEDO; B. N. CLARK; S. B. LINLEY. *FAU/Ctr Complex Systems, Florida Atlantic Univ.*

2:00 SS56 **95.06** Anatomical investigation of projections from the noradrenergic nucleus locus coeruleus to the mediodorsal thalamic nucleus in the rat. E. W. PROUTY*; B. DUFFY; D. J. CHANDLER; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Univ. of Pennsylvania.*

3:00 SS57 **95.07** GABAergic regulation of the centromedian thalamus and control of cortical gamma band oscillations in the mouse. R. E. BROWN*; J. T. MCKENNA; C. YANG; L. CHEN; M. GAMBLE; A. HULVERSON; P. WOOD; J. G. MCCOY; B. KIM; J. H. CHOI. *VA BHS & Harvard Med. Sch., Stonehill Col., Korea Inst. of Sci. and Technol.*

4:00 SS58 **95.08** Cognitive and neural processing of facial size and valence in comorbid depression and obesity. T. Y. PAN*; A. C. DEMARCO; R. ATCHLEY; L. E. MARTIN; C. R. SAVAGE. *Univ. of Kansas, Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

1:00 SS59 **95.09** Thalamic encoding of dynamic audiovisual signals in the actively foraging mouse. R. S. WILLIAMSON*; K. E. HANCOCK; B. E. SHINN-CUNNINGHAM; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Boston Univ., Massachusetts Eye and Ear Infirmary, Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

2:00 SS60 **95.10** A developmental examination of face emotion labeling. A. H. OAKES*; J. L. WIGGINS; N. E. ADLEMAN; P. KIM; M. A. BROTMAN; E. LEIBENLUFT. *NIH, The Catholic Univ. of America, Univ. of Denver.*

3:00 SS61 **95.11** Erotic visual stimulation increases cortical eeg correlations in young men during performance of the tower of hanoi task. C. AMEZCUA*; M. RUIZ-DÍAZ; M. HERNÁNDEZ-GONZÁLEZ; M. GUEVARA; A. SANZ-MARTIN. *Univ. De Guadalajara.*

4:00 SS62 **95.12** Modulation of structures putatively involved in anxiety, memory, pain and aversion - the ventral hippocampus, raphe nuclei, periaqueductal gray area and lateral habenula - by the nucleus incertus. U. FAROOQ*; R. RAJKUMAR; G. S. DAWE. *Natl. Univ. of Singapore.*

1:00 SS63 **95.13** Alpha asymmetry study in undergraduate health sciences students with hazardous alcohol consumption, but not alcohol dependence, in southeastern Mexico. L. NUÑEZ-JARAMILLO*; P. VEGA-PERERA; J. V. REYES-LÓPEZ; L. RAMÍREZ-LUGO; W. V. HERRERA-MORALES; E. SANTIAGO-RODRÍGUEZ. *División De Ciencias De La Salud. Univ. De Quintana Roo, Inst. Nacional de Psiquiatría., Inst. de Fisiología Celular. UNAM, Neuroclin: Diagnóstico, Tratamiento e Investigación Neurológica, S.C.*

2:00 SS64 **95.14** Functional connectivity between subthalamic nucleus and orbito-frontal cortex during vocal emotion decoding. J. PÉRON*; S. FRÜHHOLZ; D. GRANDJEAN. *Fac. of Psychology, Swiss Ctr. for Affective Sci.*

3:00 SS65 **95.15** ▲ Differences in quantitative EEG activity between normative database from Cuban population and age and gender matched health sciences undergraduate students in southeastern Mexico. P. VEGA*; L. NÚÑEZ-JARAMILLO; J. V. REYES-LÓPEZ; L. RAMÍREZ-LUGO; W. V. HERRERA-MORALES; E. SANTIAGO-RODRÍGUEZ. *Univ. of Quintana Roo, Inst. Nacional de Psiquiatría, Inst. de Fisiología Celular. UNAM, Neuroclin: Diagnóstico, Tratamiento e Investigación Neurológica, S.C.*

4:00 SS66 **95.16** Using information theory to quantify behavioral phenotypes in free-ranging rhesus macaques. J. GARIEPY*; J. SUNDARARAJAN; S. MADLON-KAY; E. DU; D. L. XIE; L. J. N. BRENT; M. L. PLATT. *Duke Univ., Duke Univ., Duke Univ.*

1:00 SS67 **95.17** ▲ Differences in facial affect processing between deaf signers and normal hearing non-signers. A. V. GONZALEZ; C. C. MORALES; J. I. RAMIREZ; S. SARKISSIANS; J. P. ABARA; S. KANG*. *California State Univ.*

2:00 SS68 **95.18** Damage to the macaque anterior cingulate cortex impedes decision-making and eliminates social preference. E. BLISS-MOREAU*; G. MOADAB; D. AMARAL. *Univ. California, Davis.*

3:00 TT1 **95.19** Adolescent development of interoceptive pathways mediating response focused emotion regulation. D. LI*; N. L. ZUCKER; P. A. KRAGEL; V. E. COVINGTON; K. S. LABAR. *Duke Univ.*

4:00 TT2 **95.20** Effects of emotional words on inhibitory control in adolescents. J. RAMOS-LOYO*; E. S. MARTÍNEZ-VELÁZQUEZ; L. M. SÁNCHEZ-LOYO; A. A. GONZALEZ-GARRIDO. *Univ. de Guadalajara.*

1:00 TT3 **95.21** Dynamic pupillary response to tonic and phasic patterns of Locus Coeruleus activity. Y. LIU*; E. LI; Q. WANG. *Columbia Univ.*

2:00 TT4 **95.22** Emotional contexts exert a differential effect on the inhibition of a prepotent response in men and women that refer high and low behavioral regulation. L. Á. LLAMAS*, SR; J. RAMOS-LOYO; A. GONZÁLEZ-GARRIDO; J. HERNÁNDEZ-VILLALOBOS. *Inst. De Neurociencias.*

3:00 TT5 **95.23** Brainstem stimulation increases functional connectivity of basal forebrain-paralimbic network in isoflurane-anesthetized rats. S. PILLAY*; X. LIU; P. BARACSKAY; A. G. HUDETZ. *Med. Col. of Wisconsin, Eötvös Loránd Univ.*

4:00 TT6 **95.24** ● Deletion of phospholipase C beta1 in thalamic reticular nucleus lead to spontaneous absence seizures in mice. B. CHANG*; K. KIM; S. LEE; K. KIM; E. CHEONG; H. SHIN. *Korea Inst. of Sci. and Technol., Yonsei university, institute for basic science, Korea Inst. of Sci. and Technol.*

POSTER

096. Genomics, Proteomics, and Systems Biology

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT7 **96.01** A genome-wide association study of neonatal brain volumes. K. XIA; S. JHA; F. ZOU; H. ZHU; P. SULLIVAN; M. STYNER; J. H. GILMORE; R. C. KNICKMEYER*. *Univ. North Carolina, Univ. North Carolina.*

2:00 TT8 **96.02** Whole proteome analysis of peripheral nerve injury via Mass Spectrometry. A. S. YEKKIRALA*; H. CHEN; K. HEMPEL; J. A. STEEN; C. J. WOOLF. *Harvard Med. School/children's Hosp. Boston.*

3:00 TT9 **96.03** Single-cell transcriptomic analysis identifies molecularly distinct subclasses of excitatory and inhibitory neurons in mouse visual cortex. V. MENON*; B. TASIC; T. NGUYEN; C. LEE; T. KIM; N. SHAPOVALOVA; B. LEVI; J. GOLDY; D. BERTAGNOLLI; S. PARRY; K. SMITH; S. M. SUNKIN; M. HAWRYLYCZ; H. ZENG. *Allen Inst. For Brain Sci.*

4:00 TT10 **96.04** ● Brainpix - Rodent brain region-specific RNA bank. A. ZAVALA; Z. MA; L. C. KUDO*; S. KARSTEN. *NeuroInDx, Inc.*

1:00 TT11 **96.05** Protein Microarray Characterization of the S-Nitrosoproteome. Y. LEE; H. KANG; Y. LEE*; J. JEONG; M. GHASEMI; S. CHO; S. PARK; V. DAWSON; T. DAWSON. *Samsung Advanced Inst. of Technol. (SAIT), Ajou Univ. Sch. of Med., Johns Hopkins Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Samsung Advanced Inst. of Technol. (SAIT).*

2:00 TT12 **96.06** A fast and simple preparation method for whole-genome bisulfite sequencing library preparation from ultra-low DNA input. X. SUN; K. GIANG; T. CHUNG; L. CUI*; X. JIA. *Zymo Res. Corp, Zymo Res. Corp.*

3:00 TT13 **96.07** D-amino acid-containing peptides in the mammalian nervous system. H. TAI*; I. LIVNAT; E. T. JANSSON; S. S. RUBAKHIN; J. V. SWEEDLER. *Univ. of Illinois at Urbana-Champaign.*

4:00 TT14 **96.08** Discovery of D-amino acid containing peptides in rodent islets of Langerhans. E. T. JANSSON; I. LIVNAT; H. TAI; E. V. ROMANOVA; S. S. RUBAKHIN; J. V. SWEEDLER*. *Univ. Illinois.*

• Indicated a real or perceived conflict of interest, see page 77 for details.

▲ Indicates a high school or undergraduate student presenter.

1:00 TT15 **96.09** Genetics of hippocampal gene expression in Diversity Outbred mice. E. J. CHESLER*; N. RAGHUPATHY; R. F. ROBLEDO; D. M. GATTI; S. C. MUNGER; C. PHILLIPS; J. NDUKUM; T. WILCOX; J. GRABER; M. HIBBS; G. A. CHURCHILL; M. LANGSTON. *The Jackson Lab., The Univ. of Tennessee.*

2:00 TT16 **96.10** Gene network strategy to elucidate the complexity of brain trauma and related neurological disorders. Z. YING*; Q. MENG; R. AGRAWAL; X. YANG; F. GOMEZ-PINILLA. *UCLA.*

3:00 TT17 **96.11** ▲ Application of translational profiling method for the molecular characterization of post-ischemic inflammatory response. H. BOUTEJ*; L. BÉLAND; M. LALANCETTE-HÉBERT; J. KRIZ. *CRIUSMQ, Le Ctr. De Recherche De L'Institut Univ.*

4:00 TT18 **96.12** High-throughput functional analysis of human brain enhancers. A. R. PFENNING*; M. HEMBERG; T. A. NGUYEN; M. FRIESE; M. KELLIS; J. M. GRAY. *MIT, Boston Children's Hospital, Boston, Harvard Med. Sch.*

1:00 TT19 **96.13** Transcriptome tomography: Mapping genes onto 3D brain structures. Y. OKAMURA-OHO*; K. SHIMOKAWA; S. NAKAMURA; Y. TSUJIMURA; M. NISHIMURA; S. TAKEMOTO; M. MORITA; T. IJIRI; T. TAWARA; H. YOKOTA. *RIKEN Ctr. For Advanced Photonics, Brain Res. Network (BReNt), Tohoku Med. Megabank Organization, Tohoku Univ.*

2:00 TT20 **96.14** ● Compartmentalization and collaboration in neuroblastoma tyrosine kinase signaling networks. M. L. GRIMES*; J. PALACIOS-MORENO; A. GUO; M. STOKES; M. J. COMB; E. KUEHN. *Univ. of Montana, Univ. of Montana, Cell Signaling Technology, Inc., Johns Hopkins Univ. Sch. of Med.*

3:00 TT21 **96.15** Genetic analysis of RNF213 c.14576G>A variant in various phenotypes of intracranial major artery stenosis/occlusion. S. MIYAWAKI*; H. IMAI; M. SHIMIZU; S. YAGI; H. ONO; A. MUKASA; H. NAKATOMI; T. SHIMIZU; N. SAITO. *Fac. of Medicine, The Univ. of Tokyo, Kanto Neurosurgical Hosp.*

4:00 TT22 **96.16** Using Single-cell RNA-seq to classify retinal cell types. Y. PENG*; Q. MU; X. ZHANG; A. K. SHALEK; B. HAAS; H. PARK; A. REGEV; J. R. SANES. *Harvard Univ., Harvard Univ., Harvard Univ., Harvard Univ., Broad Inst. of MIT and Harvard, Howard Hughes Med. Institute, MIT.*

1:00 TT23 **96.17** Down-regulation as the dominant hippocampal gene expression profile with voluntary resistance wheel running by DNA microarray analysis. M. LEE*; R. RAKWAL; J. SHIBATO; K. INOUE; H. SOYA. *Univ. of Tsukuba, Res. Fellow of the Japan Society for Promotion of Sci., Organization for Educational Initiatives.*

2:00 TT24 **96.18** Examining the serine/threonine kinome in complex mental illness. J. L. MCGUIRE*; S. MARWAHA; A. A. FUNK; E. A. CAREY; J. H. HAMMOND; V. HAROUTUNIAN; H. R. EGHBALNIA; R. E. MCCULLUMSMITH. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Alabama, Birmingham, Mount Sinai Sch. of Med.*

3:00 TT25 **96.19** Identification of cell type-specific gene expression using genome-wide databases. H. KIM; B. KANG; M. KIM; T. JEONG; J. KIM*; D. HWANG. *Pohang Univ. of Sci. & Technol. (POSTECH), Daegu Gyeongbuk Inst. of Sci. and Technol. (DGIST), Pohang Univ. of Sci. & Technol. (POSTECH).*

4:00 TT26 **96.20** ● Noninvasive region- and cell-specific RNA acquisition from fixed and fresh frozen brain tissues using KuiqpicK. S. L. KARSTEN*; A. ZAVALA; Z. MA; L. C. KUDO. *NeuroInDx, Inc.*

1:00 TT27 **96.21** Characterization of post-synpatic density protein enrichment using targeted quantitative mass spectrometry methods. F. SAKAUE*; C. M. COLANGELO; L. M. CHUNG; T. B. ABBOTT; R. R. KITCHEN; A. C. NAIRN. *Yale Univ., Yale Univ., Yale Univ.*

2:00 TT28 **96.22** Genomics and brain pathophysiology: Omega-3 fatty acid reprograms gene networks in the brain underlying the behavioral consequences of metabolic syndrome. F. GOMEZ-PINILLA*; Q. MENG; R. AGRAWAL; Z. YING; X. YANG. *UCLA.*

3:00 TT29 **96.23** Antigen and peptide microarrays reveal autoantibody targets in vaccine-induced narcolepsy. A. HÄGGMARK*; A. ZANDIAN; B. FORSSTRÖM; T. OLSSON; M. PARTINEN; M. UHLÉN; J. M. SCHWENK; P. NILSSON. *SciLifeLab, KTH - Royal Inst. of Technol., Dept. of clinical neurosciences, Ctr. for molecular medicine, Karolinska Hosp., Dept. of Vaccines and Immune Protection, Natl. Inst. for Hlth. and Welfare.*

4:00 TT30 **96.24** RNA-sequencing implicates HMGN1 and HMGN2 in the modulation of transcriptional profiles of prefrontal cortex and hippocampus in mice. P. LISOWSKI*; S. ZHANG; T. DENG; T. FURUSAWA; M. BUSTIN. *Dept. Mol. Biol., Inst. Genet. & Animal Breeding, Polish. Acad. Sci., Natl. Cancer Inst.*

1:00 TT31 **96.25** Molecular analysis of retinal neuronal mitochondria: Genome copy number and heteroplasmy. D. R. MASSER*; D. STANFORD; B. WRONOWSKI; W. M. FREEMAN. *The Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr.*

2:00 TT32 **96.26** Three-dimensional (3-D) behavior analysis for mice using the commercial depth sensor. A. TOYODA*; T. GOTO; T. OKAYAMA. *Ibaraki Univ.*

3:00 TT33 **96.27** The calcium-activated chloride channel ANO2 as an autoimmunity target in multiple sclerosis. P. NILSSON*; B. AYOGLU; A. HÄGGMARK; J. M. SCHWENK; M. UHLÉN; N. MITSIOS; J. MULDER; L. ALFREDSSON; I. SKELTON KOCKUM; M. KHADEMI; T. OLSSON. *KTH - Royal Inst. of Technol., KTH - Royal Inst. of Technol., Karolinska Institutet, Karolinska Institutet.*

4:00 TT34 **96.28** Screening gene variants for disruption of microRNA binding activity and application to optic nerve degeneration in glaucoma. A. N. DUBINSKY*; A. R. LA SPADA; T. GAASTERLAND. *UC San Diego, UCSD.*

1:00 TT35 **96.29** Transcriptional profiling of *Drosophila* optic lobe neurons. K. KAPURALIN*; M. WERNET; C. DESPLAN; A. DEL VALLE RODRIGUEZ. *New York Univ. Abu Dhabi, New York Univ.*

POSTER

097. Imaging Advances: Cell Biology

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT36 **97.01** Label-free 3D imaging of live neurons. G. POPESCU*; T. KIM; C. LIU; M. U. GILLETTE. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

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2:00 TT37 **97.02** Imaging Applications to Study Cells *in vivo* and *in vitro.* T. HUHTALA; V. JANKOVIC; T. LAITINEN*; K. LEHTIMÄKI; U. HERZBERG; A. NURMI. *Charles River Discovery Res. Services Finland, Celgene Cell. Therapeut.*

3:00 TT38 **97.03** Exposures to cholinesterase inhibitors leads to persistent impairments of axonal transport *in vitro.* J. GAO*; J. MAGRANE; C. HERNANDEZ; A. TERRY. *Georgia Regents Univ., Weill Med. Col. of Cornell Univ.*

4:00 TT39 **97.04** Repeated exposures to cholinesterase inhibitors leads to persistent impairments of axonal transport *in vivo.* C. M. HERNANDEZ*; W. D. BECK; S. X. NAUGHTON; I. PODDAR; B. ADAM; N. YANASAK; C. MIDDLETON; A. V. TERRY, Jr. *Georgia Regents Univ., Georgia Regents Univ., Georgia Regents Univ.*

1:00 TT40 **97.05** A multicompartment microfluidic culture system for extended long-term fluidic isolation and study of axonal neurobiology. T. SARMA*; H. H. CAICEDO; G. PIGINO; S. BRADY. *Univ. Illinois Chicago.*

2:00 TT41 **97.06** Riesz transform-assisted differential interference contrast imaging: Application to three-dimensional kinematic analysis of the growth cone motility. A. TAMADA*; M. IGARASHI. *Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Ctr. for Transdisciplinary Research, Niigata Univ., PRESTO, Japan Sci. and Technol. Agency.*

3:00 TT42 **97.07** ● Gfp+ human stem cell derived neurons amenable to high content neurite outgrowth assays. J. LE; S. L. STICE*. *ArunA Biomed. Inc., Univ. Georgia.*

4:00 TT43 **97.08** Live imaging of the axon initial segment. A. S. DUMITRESCU*; M. P. MEYER; M. S. GRUBB. *Kings Col. London.*

1:00 TT44 **97.09** Thermal noise driven bio-nanomachine distinguishes between apoptotic and necrotic cell engulfment by macrophages. V. V. DIDENKO*; C. L. MINCHEW. *Baylor Col. of Med.*

2:00 TT45 **97.10** Neuronal phagocytosis in SH-SY5Y cell culture and in rat brain. V. WALLACE*; L. FORTUNO; J. HINKLE; B. WARREN; R. MADANGOPAL; M. HENDERSON; B. HARVEY; B. HOPE. *NIH/NIDA.*

3:00 TT46 **97.11** Minimally disruptive quantification of endogenous calcium binding using fluorescent lifetime imaging (FLIM). E. A. MATTHEWS*; D. DIETRICH. *Univ. Clin. Bonn.*

4:00 TT47 **97.12** Improving signal dynamics of fluorescent protein voltage sensors by optimizing FRET interactions. U. SUNG*; M. ALLAHVERDIZADEH; L. JIN; T. HUGHES; L. B. COHEN; B. J. BAKER. *Korea Inst. of Sci. and Technol., Yale Univ., Montana State Univ.*

1:00 TT48 **97.13** The discovery of a novel conopeptide that is active in the mammalian nervous system from the worm-hunting Conus virgo. S. S. ESPINO*; J. IMPERIAL; M. AGUILAR; J. GAJEWIAK; M. WATKINS; R. TEICHERT; B. OLIVERA. *Dept. of Biology, Univ. of Utah, Univ. of Utah, Univ. Nacional Autonoma de Mexico, Univ. of Utah.*

2:00 TT49 **97.14** Live-cell imaging of individual endocytosis of AMPA receptor around postsynaptic membrane. S. FUJII*; H. TANAKA; T. HIRANO. *Dept. Biophys.,Grad. Sch. Sci. Kyoto Univ.*

3:00 TT50 **97.15** Simultaneous voltage-sensitive dye (VSD) imaging of both surfaces of leech ganglia. A. STOWASSER*; D. A. WAGENAAR. *Univ. of Cincinnati.*

4:00 TT51 **97.16** Bongoori is a genetically-encoded fluorescent protein voltage sensor that resolves action potentials at 60 hz in neurons. H. PIAO; B. KANG; D. RAJAKUMAR; A. JUNG; B. J. BAKER*. *Korea Inst. of Sci. and Technol., Col. of Life Sci. and Biotechnology, Korea Univ.*

1:00 TT52 **97.17** *In vivo* quantification of amygdala subnuclei using 4.7t fast spin echo imaging. A. AGHAMOHAMMADI SERESHKI*; F. OLSEN; N. V. MALYKHIN. *Univ. of Alebrta.*

2:00 TT53 **97.18** Lensed fiber optic stimulator for single neuron. J. LEE*; J. JANG; H. KIM; N. JEON; W. JUNG. *Ulsan Inst. of Sci. and Technol., Seoul Natl. Univ.*

3:00 TT54 **97.19** All-optical manipulation and recording of neural circuit activity *in vivo.* A. M. PACKER*; H. W. DALGLEISH; M. HAUSSER. *Univ. Col. London.*

4:00 TT55 **97.20** *In vivo* optical and electrophysiological simultaneous recordings of auditory responses in mouse's inferior colliculus using a micro-endoscope. H. YASHIRO*; I. NAKAHARA; K. I. KOBAYASI; K. FUNABIKI; H. RIQUIMAROUX. *Doshisha Univ., Kyoto Univ., Osaka Biosci. Inst., Doshisha Univ., Doshisha Univ.*

1:00 TT56 **97.21** Simultaneous Imaging of EB3 and ATP reveals the mechanism of cell shape control in HeLa cells. R. SUZUKI*; K. HOTTA; K. OKA. *Keio Univ.*

2:00 TT57 **97.22** Functional consequences of Na,K-ATPase topology in dendritic spines revealed by superresolution microscopy and 3D finite element modelling. H. B. BRISMAR*; T. LIEBMANN; O. MANNEBERG; A. APERIA; H. BLOM. *KTH, Royal Inst. of Technol., Karolinska Institutet, Sci. for Life Lab.*

3:00 TT58 **97.23** Microprobe synchrotron X-ray fluorescence shows spatial distribution of copper, iron, and zinc in rat hippocampus. K. BOGGS*; A. LANZIROTTI; J. FLINN. *George Mason Univ., Univ. of Chicago.*

4:00 TT59 **97.24** Identifying the intracellular zinc stores. Q. LU; H. HARAGOPAL; Y. V. LI*. *Ohio Univ., Ohio Univ., Ohio Univ.*

1:00 TT60 **97.25** ● Synthesis and initial *in vivo* evaluation of [125I]iodoASEM, a radioligand for the α7 nicotinic acetylcholine receptor. R. MEASE; Y. GAO; T. TRAN; K. KELLAR; D. WONG; R. DANNALS; M. POMPER*; A. HORTI. *Johns Hopkins Univ., Georgetown Univ.*

2:00 TT61 **97.26** Characterization of [3H]LS-3-134, a novel arylamide phenylpiperazine D3 dopamine receptor selective radioligand. R. R. LUEDTKE*, Ph.D.; C. RANGEL-BARAJAS; M. MALIK; M. TAYLOR; K. A. NEVE; R. H. MACH. *Univ. North Texas Hlth. Sci. Cter, Oregon Hlth. & Sci. Univ., Univ. of Pennsylvania Sch. of Med.*

3:00 TT62 **97.27** Segmented analysis of astrocytic restructuring induced by chronic hypoxia in the adult mouse cortex. H. MAEDA; M. NITTA; T. SUGASHI; H. KAWAGUCHI; H. TAKUWA; H. ITO; I. KANNO; K. MASAMOTO*. *Univ. Electro-Communications, Natl. Inst. of Radiological Sci.*

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4:00 TT63 **97.28** Combining molecular genetics with constellation pharmacology to identify neuronal cell types. R. W. TEICHERT*; Y. ZHENG; D. D. GINTY; B. M. OLIVERA. *Univ. of Utah, Harvard Med. Sch., Harvard Med. Sch. and Howard Hughes Med. Inst.*

1:00 TT64 **97.29** Generation of a transgenic rat for Cre-dependent expression of the infrared fluorescent protein (iRFP) in neurons. H. A. BALDWIN*; C. T. RICHIE; L. V. FORTUNO; D. B. HOWARD; Y. ZHANG; M. A. VERDECIA; L. R. WHITAKER; J. J. HINKLE; J. C. SMITH; J. M. PICKEL; B. T. HOPE; B. K. HARVEY. *NIMH IRP.*

2:00 TT65 **97.30** *In vivo* imaging of CREB phosphorylation using a novel transgenic mouse line expressing bioluminescence probes. T. ISHIMOTO*; H. MANO; H. MORI. *Univ. of Toyama.*

POSTER

098. Imaging Advances: Neural Ultrastructure

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT66 **98.01** Resin-free electron microscopy of nervous tissue: Preserved cytokeleton and immunogold labeling in a 3D ultrastructural landscape. V. VENKATARAMANI; H. HORSTMANN; T. KUNER*. *Heidelberg Univ.*

2:00 TT67 **98.02** ● 3D isotropic reconstruction of biological samples through cycles of physical and virtual sectioning in electron microscopy. B. H. LICH*; F. BOUGHORBEL; P. POTOCEK; R. VAN DEN BOOGAARD; L. HEKKING; E. KORKMAZ; P. CERNOHORSKY; M. HOVORKA; M. LANGHORST. *FEI Electron Optics BV, FEI Brno, FEI Munich.*

3:00 TT68 **98.03** Compatibility of long-range fluorescent tracers with locally dense 3D electron microscopy reconstruction. A. EMENARI*; C. HICKS; K. L. BRIGGMAN. *NIH.*

4:00 TT69 **98.04** ● Automated segmentation of nervous tissue from densely stained serial blockface electron microscopy data. M. BERNING*; M. HELMSTAEDTER. *Max Planck Inst. of Neurobio.*

1:00 TT70 **98.05** ● Project Brainflight: Scaling connectomic reconstruction via lay-audience targeted image analysis. E. DOW*; Y. BUCKLEY; M. BERNING; T. BOCKLISCH; D. BRÄUNLEIN; T. HEROLD; N. RZEPKA; T. WERKMEISTER; M. HELMSTAEDTER. *The Rockefeller Univ., Max Planck Inst. of Neurobio., Scalable Minds Inc.*

2:00 TT71 **98.06** Large volume en bloc EM staining for high resolution connectomics. Y. HUA*; M. HELMSTAEDTER. *Max-planck-Institute of Neurobio.*

3:00 TT72 **98.07** Automated synapse detection in large-scale serial block-face electron microcopy data. B. STAFFLER*; P. VAN DER SMAGT; M. HELMSTAEDTER. *MPI of Neurobio., TUM.*

4:00 TT73 **98.08** Towards whole-mouse-brain serial block-face electron microscopy. S. MIKULA*; W. DENK. *Max-Planck Inst. For Med. Res.*

1:00 TT74 **98.09** ● Toward connectomic analysis of the zebra finch song system. J. KORNFELD*; F. SVARA; M. PICARDO; M. STETNER; G. KOSCHE; S. BENEZRA; M. S. FEE; M. LONG; W. DENK. *Max Planck Inst. For Med. Res., New York Univ., MIT.*

2:00 TT75 **98.10** A correlative light and electron microscopy approach for reconstructing syringeal motor neuron circuits in a songbird. T. TEMPLIER*; R. H. R. HAHNLOSER. *Univ. of Zurich and ETH Zurich, Neurosci. Ctr. Zurich.*

3:00 TT76 **98.11** Combined whole-brain optical and electron microscopic imaging in the larval zebrafish. D. G. C. HILDEBRAND*; G. S. PLUMMER; R. PORTUGUES; I. H. BIANCO; T. M. QUAN; W. JEONG; J. W. LICHTMAN; F. ENGERT. *Harvard Univ., Ulsan Natl. Inst. of Sci. and Technol.*

4:00 TT77 **98.12** ● Microtubules imaged in three dimensions by electron microscopy without averaging. A. FERA*; T. S. REESE; M. VALE DE SOUSA; B. M. RIBEIRO; D. L. SACKETT. *Univ. Federal De Brasilia Unb, NIH, Univ. Federal De Brasilia Unb, NIH.*

1:00 TT78 **98.13** Light and electron microscopic detection of GPCR heteromeric complexes in the macaque basal ganglia using the *in situ* proximity ligation assay. J. L. LANCIEGO*; I. G. DOPESO-REYES; A. J. RICO; S. SIERRA-SAN NICOLAS; E. RODA; M. LANZ; D. PIGNATARO; D. SUCUNZA; D. FARRE; R. FRANCO. *FIMA, CiberNed, FIMA, Univ. of Barcelona, CiberNed.*

2:00 TT79 **98.14** A new laser mediated traumatic optic neuropathy model. G. C. MUNGUBA*; R. K. LEE. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med.*

POSTER

099. Network Models and Computational Studies

Theme G: Novel Methods and Technology Development

Sat. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT80 **99.01** Exact firing rate equations for all-to-all connected networks of quadratic integrate-and-fire neurons. A. C. ROXIN*; D. PAZÓ; E. MONTBRIÓ. *Ctr. De Recerca Matemàtica, Inst. de física de cantabria (CSIC-UC), Univ. Pompeu Fabra.*

2:00 TT81 **99.02** Emergence of spatially localized slow activity in structured leaky-integrate- and-fire networks. Y. N. BILLEH*; M. T. SCHAUB; C. A. ANASTASSIOU; M. BARAHONA; C. KOCH. *Caltech, Imperial Col. London, Allen Inst. for Brain Sci.*

3:00 TT82 **99.03** Feedback connections stabilize propagation of synchronous spiking in cortical neural networks. S. MOLDAKARIMOV*; M. BAZHENOV; T. J. SEJNOWSKI. *UCSD, Univ. of California, Riverside, Salk Inst.*

4:00 TT83 **99.04** Breaking asynchrony in balanced networks with spatially dependent recurrent connections. R. ROSENBAUM*; J. E. RUBIN; B. DOIRON. *Univ. of Pittsburgh, Univ. of Notre Dame.*

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1:00 TT84 **99.05** Gene-Matched Network: A micro-circuit model constructed by combinatorial matching of neuronal diverse attributes. T. KITSUKAWA*; T. YAGI. *Osaka Univ.*

2:00 TT85 **99.06** A computational study on irregular, self-sustained activity states in cortical network models. A. C. ROQUE*; P. TOMOV; R. F. O. PENA; M. ZAKS. *Univ. de Sao Paulo, Humboldt Univ. of Berlin.*

3:00 TT86 **99.07** How STDP shapes the microcircuit structure of neuronal networks. G. K. OCKER*; A. LITWIN-KUMAR; B. DOIRON. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 TT87 **99.08** Non-random network structure of recurrent networks with STDP and potentiation decay. A. J. MILLER*; D. Z. JIN. *Bridgewater Col., Penn State Univ.*

1:00 TT88 **99.09** Modeling spike timing dependent plasticity in large cortical networks of biologically realistic neurons with GENESIS 2.4. D. BEEMAN*; H. CORNELIS. *Univ. Colorado Boulder, Neurospaces Develop. GCV.*

2:00 TT89 **99.10** Using stimulation to reveal structure-function relationships in dynamic brain networks. S. E. FELDT MULDOON*; J. M. VETTEL; D. S. BASSETT. *Univ. of Pennsylvania, US Army Res. Lab.*

3:00 TT90 **99.11** Spike rate dynamics of coupled adaptive model neurons. J. LADENBAUER*; M. AUGUSTIN; K. OBERMAYER. *Technische Univ. Berlin, Bernstein Ctr. for Computat. Neurosci.*

4:00 TT91 **99.12** Learning linear dynamical systems in spiking networks. R. BOURDOUKAN*; S. DENÈVE. *Ecole Normale Supérieure.*

1:00 TT92 **99.13** Feedforward supervised learning for deep neural networks with sparse dynamics. T. SHINOZAKI*; Y. NARUSE. *NICT.*

2:00 UU1 **99.14** Learning higher-order structure of correlated input by excitatory and inhibitory spike-timing-dependent plasticity. N. HIRATANI; T. FUKAI*. *Univ. of Tokyo, JSPS, RIKEN BSI, CREST, JST.*

3:00 UU2 **99.15** Autaptic connections shift network excitability and bursting. L. K. WILES*; D. S. BASSETT; D. F. MEANEY. *Univ. of Pennsylvania.*

4:00 UU3 **99.16** A new reduction method for setting synaptic weights of conductance-based neurons with slow and/or fast receptors to simulate behavior in a spiking neural network. P. M. DAYE; L. M. OPTICAN*. *Inst. du Cerveau et de la Moelle épinière, Natl. Eye Inst.*

1:00 UU4 **99.17** Learning in recurrent networks with the Neural Marketplace algorithm. S. N. LEWIS; P. YGER; K. D. HARRIS*. *Univ. Col. London, Inst. de la Vision.*

2:00 UU5 **99.18** Dynamics of recurrent networks with multiple inhibitory subpopulations. A. LITWIN-KUMAR*; R. ROSENBAUM; B. DOIRON. *Carnegie Mellon Univ., Univ. of Pittsburgh.*

3:00 UU6 **99.19** Irregular and uncorrelated activity can arise as a natural consequence of synaptic inhibition. J. E. RUBIN*; C. O. DIEKMAN; D. TERMAN. *Univ. of Pittsburgh, New Jersey Inst. of Technol., The Ohio State Univ.*

4:00 UU7 **99.20** ● An energy efficient neuron model with excitatory and inhibitory inputs. J. XING*; T. BERGER; T. J. SEJNOWSKI. *Univ. of Virginia, Salk Inst. for Biol. Studies.*

1:00 UU8 **99.21** System size resonance in a Fitzhugh-Nagumo artificial neural network. J. A. TAPIA*; E. MANJARREZ. *Benemérita Univ. Autónoma de Puebla, Escuela de Biología - BUAP.*

2:00 UU9 **99.22** Dynamics of large networks of excitatory and inhibitory units with sparse, partially symmetric couplings. D. MARTÍ*; N. BRUNEL; S. OSTOJIC. *Group For Neural Theory, DEC, INSERM, Univ. of Chicago, CNRS.*

3:00 UU10 **99.23** Temporal expectation in chaotic balanced networks. A. P. PONZI*; J. R. WICKENS. *OIST.*

4:00 UU11 **99.24** A modified kinetic Inverse Ising method for the inference of synaptic spatial structure and characteristic times. P. DEL GIUDICE*; C. CAPONE; C. FILOSA; G. GIGANTE; F. RICCI TERSENGHI. *Italian Natl. Inst. of Hlth., Italian Natl. Inst. of Hlth., Univ. of Rome Sapienza, Italian Natl. Inst. of health and Mperience.*

1:00 UU12 **99.25** Context-driven generation of virtual dendritic morphologies enables complete population-level construction and analysis. C. SCHNEIDER*; H. CUNTZ; I. SOLTESZ. *Univ. of California, Irvine, Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society, Inst. of Clin. Neuroanatomy, Goethe Univ. Frankfurt.*

2:00 UU13 **99.26** Hubs, clusters and communities of hundreds cortical neurons. M. SHIMONO*; J. M. BEGGS. *Indiana Univ.*

3:00 UU14 **99.27** Network structure generates priors for internal probabilistic model. N. HIRATANI*; T. FUKAI. *RIKEN Brain Sci. Inst., Univ. of Tokyo.*

4:00 UU15 **99.28** Modeling neural-metabolic homeostatic coupling in burst suppression. S. LIU; S. CHING*. *Washington Univ. In St. Louis, Washington Univ. in St. Louis.*

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▲ Indicates a high school or undergraduate student presenter.

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.

ABSTRACT NUMBER	STATEMENT
2.03	**E.S.J. Robinson:** 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; Medical Research Council, Biotechnology and Biological Sciences Research Council, Wellcome Trust, Pfizer, MSD, Eli Lilly.
2.05	**H. Marston**: A. Employment/Salary (full or part-time); Eli Lilly and Company.
3	**A. Chedotal:** 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; Sanofi.
3.05	**A. Chedotal:** 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; Sasnofi.
4.05	**B.J. Traynor:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Merck, Muscular Dystrophy Association, Center for Disease Control and Prevention, Italian Football Federation (FIGC). Other; I have a patent pending on the clinical testing and therapeutic intervention for the hexanucleotide repeat expansion of C9ORF72.
6.04	**D. Andrew:** 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; AstraZeneca.
8	**S.W. Hell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Significant shares of Abberior GmbH producing fluorophores, and of Abberior Instruments GmbH, producing microscopes for superresolution.
11.05	**M. Sahin:** 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; Novartis Inc.
12.11	**P.A. Calabresi:** F. Consulting Fees (e.g., advisory boards); Vaccinex, Vertex, Abbott, MedImmune, Prothena.
17.02	**J.L. Lujan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Boston Scientific.
18.06	**N.A. Harrison:** A. Employment/Salary (full or part-time); Brighton & Sussex Medical School. 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; Wellcome Trust Intermediate Clinical Fellowship. **V. Voon:** A. Employment/Salary (full or part-time); University of Cambridge. 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; Wellcome Trust Intermediate Clinical Fellowship. **E. Cooper:** A. Employment/Salary (full or part-time); Brighton & Sussex Medical School. **M. Cercignani:** A. Employment/Salary (full or part-time); Brighton & Sussex Medical School.
18.12	**Y.A. Levine:** A. Employment/Salary (full or part-time); SetPoint Medical, Inc.
19.05	**R.J. Colello:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); provisional patent holder.
20.08	**J. Dukart:** A. Employment/Salary (full or part-time); F.Hoffmann-La Roche, Basel, Switzerland. **A. Bertolino:** A. Employment/Salary (full or part-time); F.Hoffmann-La Roche, Basel, Switzerland.
21.02SA	**R. Calixto:** A. Employment/Salary (full or part-time); Advanced Bionics.
21.18SA	**F. Fernández-Valverde:** Other; Research. **V. Campos peña:** Other; Research.
22.03SU	**M.K. Demetrikopoulos:** A. Employment/Salary (full or part-time); Institute for Biomedical Philosophy.
22.06SU	**W. Colgan:** A. Employment/Salary (full or part-time); ADInstruments Inc.
23.06SA	**J.R. Prichard:** F. Consulting Fees (e.g., advisory boards); Association of American Medical Colleges. **J. Page:** A. Employment/Salary (full or part-time); Association of American Medical Colleges.
24.12SA	**A.J. Ettinger:** A. Employment/Salary (full or part-time); Cedar Crest College. **K.J. Karnas:** A. Employment/Salary (full or part-time); Cedar Crest College.
24.19SA	**A.J. Wintink:** A. Employment/Salary (full or part-time); Centre for Applied Neuroscience, University of Toronto, Ryerson University.
24.27SA	**M.I. Nemenov:** A. Employment/Salary (full or part-time); Lasmed LLC.
25.04SA	**H.A. Braun:** Other; ThomasRecording, BM&T. **D. Höhl:** Other; ThomasRecording. **U. Thomas:** Other; Thomas Recording.
26.09SU	**T.L. Venkatesan:** Other; CEO of CogSci Connects, a social venture.
26.19SU	**W. Griesar:** A. Employment/Salary (full or part-time); Portland State University, Washington State University Vancouver.
27.05SU	**L. Murtazina:** Other; specialist - translator.
27.18SU	**A. Paker:** A. Employment/Salary (full or part-time); bluebird bio.
29.17	**A. Chiba:** A. Employment/Salary (full or part-time); University of Miami.
29.23	**A. Roeintan:** A. Employment/Salary (full or part-time); full. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Shefa Neuroscience Research center, Khatam Ol Anbia Hospital.
32.20	**M. Costa:** 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; UFRN.
35.06	**B.S. Slusher:** Other; Helsinn Healthcare.
36.02	**P.J. Conn:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Astra Zeneca, Bristol Meyer Squibb.
36.03	**S.R. Stauffer:** Other; Astrazeneca and BMS. **C.K. Jones:** Other; Astrazeneca and BMS. **J.S. Daniels:** Other; Astrazeneca and BMS. **C.M. Niswender:** Other; Astrazeneca and BMS. **C.W. Lindsley:** Other; Astrazeneca and BMS. **P.J. Conn:** Other; Astrazeneca and BMS.
36.05	**A. Brown:** A. Employment/Salary (full or part-time); Heptares Therapeutics Limited. **G. Brown:** A. Employment/Salary (full or part-time); Heptares Therapeutics Limited. **M. Congreve:** A. Employment/Salary (full or part-time); Heptares Therapeutics Limited. **J. Dias:** A. Employment/Salary (full or part-time); Heptares Therapeutics Limited. **E. Hurrell:** A. Employment/Salary (full or part-time); Heptares Therapeutics Limited. **M. Pickworth:** A. Employment/

ABSTRACT NUMBER	STATEMENT
	Salary (full or part-time); Heptares Therapeutics Limited. **F. Marshall:** A. Employment/Salary (full or part-time); Heptares Therapeutics Limited.
36.08	**W.S. Messer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Messer holds patents for muscarinic receptor ligands.
36.12	**C.W. Lindsley:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); AstraZeneca, Bristol-Myers Squib. **P.J. Conn:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); AstraZeneca, Bristol-Myers Squib.
36.24	**S. Pittolo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent application holder. **X. Gómez-Santacana:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent application holder. **A. Llebaria:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent application holder. **P. Gorostiza:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent application holder.
37.12	**M.A. Ackley:** A. Employment/Salary (full or part-time); Sage Therapeutics. **G.M. Belfort:** A. Employment/Salary (full or part-time); Sage Therapeutics. **G. Martinez-Botella:** A. Employment/Salary (full or part-time); Sage Therapeutics. **F.G. Salituro:** A. Employment/Salary (full or part-time); Sage Therapeutics. **A.J. Robichaud:** A. Employment/Salary (full or part-time); Sage Therapeutics. **J.J. Doherty:** A. Employment/Salary (full or part-time); Sage Therapeutics.
38.03	**A.D. Whyment:** A. Employment/Salary (full or part-time); NeuroSolutions Ltd. **D. Spanswick:** A. Employment/Salary (full or part-time); NeuroSolutions Ltd.
39.12	**S.L. Stice:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aruna Biomedical.
41.01	**L. Mucke:** 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; Bristol-Myers Squibb.
41.04	**D.M. Holtzman:** 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; Grant to Washington University from C2N Diagnostics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DMH is a co-founder of C2N Diagnostics and on the scientific advisory board.
41.07	**M. Mullan:** A. Employment/Salary (full or part-time); Rock Creek Pharmaceuticals.
41.11	**E.D. Roberson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property.
41.20	**D.M. Barten:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **A. Easton:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **B. Snyder:** A. Employment/Salary (full or part-time); Bradley.Snyder@bms.com. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bradley.Snyder@bms.com. **L.B. DeCarr:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **C. Bourin:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **G. Hirschfeld:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **G.W. Cadelina:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **S. Keenan:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **D. Bryce:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. **A. Cacace:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **C.M. Conway:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **M.K. Ahlijanian:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb. **N. Devidze:** A. Employment/Salary (full or part-time); Bristol-Myers Squibb. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol-Myers Squibb.
43.19	**A.M. Barr:** F. Consulting Fees (e.g., advisory boards); Hoffmann La Roche. Other; BMS Canada. **W.G. Honer:** F. Consulting Fees (e.g., advisory boards); MDH Consulting, In Silico, Lundbeck, Hoffmann La Roche.
44.05	**J. Fälting:** A. Employment/Salary (full or part-time); BioArctic Neuroscience AB. **L. Lannfelt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioArctic Neuroscience AB.
44.06	**F. Gomez:** A. Employment/Salary (full or part-time); Avid RP. **Y. Lin:** A. Employment/Salary (full or part-time); Avid RP. **Q. Liang:** A. Employment/Salary (full or part-time); Avid RP. **J. Ryder:** A. Employment/Salary (full or part-time); Eli Lilly. **H. Wang:** A. Employment/Salary (full or part-time); Eli Lilly. **G. Attardo:** A. Employment/Salary (full or part-time); Avid RP. **M. Mintun:** A. Employment/Salary (full or part-time); Avid RP. **D. Skovronsky:** A. Employment/Salary (full or part-time); Avid RP.
44.12	**C. Wintmolders:** A. Employment/Salary (full or part-time); Janssen Research and Development. **A. Waldron:** 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; Janssen Research and Development. **A. Bottelebergs:** A. Employment/Salary (full or part-time); Janssen Research and Development. **J. Kelley:** A. Employment/Salary (full or part-time); Janssen Research and Development. **S. Staelens:** 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; Janssen Research and Development. **X. Langlois:** A. Employment/Salary (full or part-time); Janssen Research and Development.
44.20	**T.L.S. Benzinger:** B. Contracted Research/Research

ABSTRACT NUMBER	STATEMENT
	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; Collaborative grants with Avid Radiopharmaceuticals. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Collaborative grants with Avid Radiopharmaceuticals. **J.C. Morris:** 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; participating in clinical trials of antidementia drugs sponsored by the following companies: Janssen Immunotherapy, and Pfizer and Avid Radiopharmaceuticals. F. Consulting Fees (e.g., advisory boards); has served as a consultant for Lilly USA. **A.M. Fagan:** Other; advisory boards of IBL International and Roche.
45.20	**M.R. Hayden:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd.
46.07	**M.R. Hayden:** A. Employment/Salary (full or part-time); TEVA Pharmaceuticals.
46.19	**S. Miller:** A. Employment/Salary (full or part-time); Amgen Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **G. Hill della Puppa:** A. Employment/Salary (full or part-time); Amgen Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc. **J. Reidling:** A. Employment/Salary (full or part-time); University of California at Irvine. **L.M. Thompson:** A. Employment/Salary (full or part-time); University of California at Irvine. **J. Treanor:** A. Employment/Salary (full or part-time); Amgen Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amgen Inc.
46.28	**L.A. Winter:** A. Employment/Salary (full or part-time); Vaccinex Inc. **J. Veeraraghavan:** A. Employment/Salary (full or part-time); Vaccinex Inc. **A. Jonason:** A. Employment/Salary (full or part-time); Vaccinex Inc. **E.S. Smith:** A. Employment/Salary (full or part-time); Vaccinex Inc. **W.J. Bowers:** A. Employment/Salary (full or part-time); Vaccinex Inc. **M. Zauderer:** A. Employment/Salary (full or part-time); Vaccinex Inc. **M.R. Hayden:** A. Employment/Salary (full or part-time); Teva Pharmaceuticals.
47.02	**S.O. Meunier:** A. Employment/Salary (full or part-time); INSERM. **A. Kishore:** A. Employment/Salary (full or part-time); SCTIMST. **C. Hubsch:** A. Employment/Salary (full or part-time); APHP. **T. Popa:** A. Employment/Salary (full or part-time); ANR-10-IAIHU-06. **E. Roze:** A. Employment/Salary (full or part-time); APHP. **M. Vidailhet:** A. Employment/Salary (full or part-time); APHP.
48.17	**K. Tanaka:** A. Employment/Salary (full or part-time); Taiho Pharmaceutical Co., Ltd. **M. Tayama:** A. Employment/Salary (full or part-time); Taiho Pharmaceutical Co., Ltd. **K. Shigeno:** A. Employment/Salary (full or part-time); Taiho Pharmaceutical Co., Ltd. **Y. Hayashi:** A. Employment/Salary (full or part-time); Taiho Pharmaceutical Co., Ltd. **E. Sasaki:** A. Employment/Salary (full or part-time); Taiho Pharmaceutical Co., Ltd. **T. Utsugi:** A. Employment/Salary (full or part-time); Taiho Pharmaceutical Co., Ltd.
49.05	**Y. Yu:** 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; Zhejiang University.
51.13	**Y. Oyamada:** A. Employment/Salary (full or part-time); Dainippon Sumitomo. **M. Miyauchi:** A. Employment/Salary (full or part-time); Dainippon Sumitomo. **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; Dainippon Sumitomo. F. Consulting Fees (e.g., advisory boards); Dainippon Sumitomo.
51.15	**R.R. Brett:** 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; Actual Analytics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Actual Analytics. **B. Allison:** A. Employment/Salary (full or part-time); Actual Analytics. **J.D. Armstrong:** A. Employment/Salary (full or part-time); Actual Analytics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Actual Analytics. **J.A. Pratt:** 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; Actual Analytics. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Actual Analytics.
52.01	**H. Hiyama:** A. Employment/Salary (full or part-time); Astellas Pharma Inc. **K. Ni:** A. Employment/Salary (full or part-time); Astellas Pharma Inc. **A. Sawa:** 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; Astellas Pharma Inc.
52.02	**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 Dr. Coyle. F. Consulting Fees (e.g., advisory boards); served as a consultant for EnVivo, and Abbvie in the last 2 years.
52.06	**M.J. Kaufman:** 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; NARSAD, PhotoThera, Inc., Michael J. Fox Foundation for Parkinson's Research, Air Products and Chemicals, Inc. **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 MGH for the use of D-serine to treat serious mental illness could yield royalties. F. Consulting Fees (e.g., advisory boards); Abbott, Jansen Pharmaceutical, Puretech, En Vivo.
52.07	**S. Guadagna:** 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; F. Hoffmann-La Roche Ltd. **T. Ballard:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **F. Papaleo:** 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; F. Hoffmann-La Roche Ltd.
52.11	**J. Zhao:** A. Employment/Salary (full or part-time); NIMH/NIH.
52.17	**D.R. Gehlert:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M. Morin:** A. Employment/Salary (full or part-time); Eli Lilly and Company.
55.15	**M.V. Gudheti:** A. Employment/Salary (full or part-time); Vutara.
56.01	**S.L. Broom:** F. Consulting Fees (e.g., advisory boards); Springfield Wellness Center. **J.M. Carson:** A. Employment/Salary (full or part-time); Springfield Wellness Center. **K.R. Simone:** A. Employment/Salary (full or part-time); Springfield Wellness Center. **P. Norris:** A. Employment/Salary (full or part-time); Springfield Wellness Center.

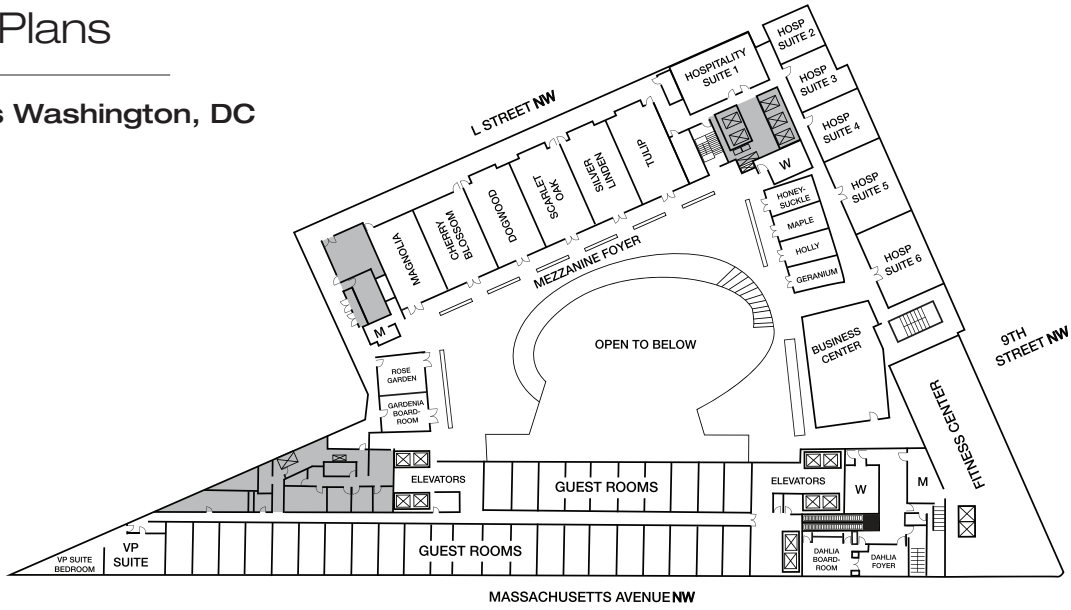
ABSTRACT NUMBER	STATEMENT
	P. Hotard: A. Employment/Salary (full or part-time); Springfield Wellness Center.
56.08	**L. Friedhoff:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Employee of Demerx Inc. **M. Lockhart:** 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; Sponsored by Demerx Inc. **F. Lam:** 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; Employee of Zenith Technology Ltd. **N. Hung:** 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; Employee of Zenith Technology Ltd. **C.T. Hung:** 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; Employee of Zenith Technology Ltd. **P. Glue:** 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; Sponsored by Demerx Inc.
57.02	**A.V. Terry:** 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 grant.
59.02	**P. Degenaar:** Other; Spin-out company, OptoNeuro, with interest in retinal prosthesis.
59.09	**T.J. Gawne:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IP rights are being applied for. **J.T. Siegwart:** Other; IP rights have been applied for. **A.H. Ward:** Other; IP rights have been applied for. **T.T. Norton:** Other; IP rights have been applied for.
59.12	**B. Roska:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GenSights Biologics. **J. Sahel:** F. Consulting Fees (e.g., advisory boards); GenSight Biologics, Pixium Vision, Sanofi Fovea. **S. Picaud:** F. Consulting Fees (e.g., advisory boards); GenSight Biologics, Pixium Vision. **D. Dalkara:** F. Consulting Fees (e.g., advisory boards); GenSight Biologics.
60.27	**Z. Tan:** A. Employment/Salary (full or part-time); Janelia Farm Research Campus, Howard Hughes Medical Institute.
62.24	**Y. Kobayashi:** A. Employment/Salary (full or part-time); Osaka University. **K. Okada:** A. Employment/Salary (full or part-time); Osaka University.
63.06	**B.R. Komisaruk:** 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; Cerbomed GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Cerbomed GmbH. F. Consulting Fees (e.g., advisory boards); Cerbomed GmbH. **E. Frangos:** F. Consulting Fees (e.g., advisory boards); Cerbomed GmbH. **J. Ellrich:** A. Employment/Salary (full or part-time); Cerbomed GmbH.
71.12	**L.M. Rueda Delgado:** A. Employment/Salary (full or part-time); PhD student in KU Leuven. **E. Solesio Jofre:** A. Employment/Salary (full or part-time); Post-doc in KU Leuven. **A. Daffertshofer:** A. Employment/Salary (full or part-time); Professor at VU University Amsterdam.
	S.P. Swinnen: A. Employment/Salary (full or part-time); Professor at KU Leuven.
71.23	**S. Yamamoto:** 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; Sasakawa Scientific Research Grant from The Japan Science Society (26-630).
71.25	**R. Ellison:** A. Employment/Salary (full or part-time); Neural Engineering Laboratory, Biomedical Research Center - West Virginia University. **J.M. Shaffer:** A. Employment/Salary (full or part-time); Neural Engineering Laboratory, Biomedical Research Center - West Virginia University.
71.26	**S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies.
72.05	**C. Ganos:** 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; Actelion, Ipsen, Pharm Allergan, Merz Pharmaceuticals. **A. Munchau:** 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; Pharm Allergan, Ipsen, Merz Pharmaceuticals, Actelion.
72.07	**E. Chan:** A. Employment/Salary (full or part-time); MedStar Health Research Inst.
73.06	**F. Crevecoeur:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Queen's University. **S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Queen's University.
74.11	**A. Funase:** A. Employment/Salary (full or part-time); Nagoya Institute of Technology. **I. Takumi:** A. Employment/Salary (full or part-time); Nagoya Institute of Technology.
74.15&tab;	**The Disclosure Block has exceeded its maximum limit. Please call Tech support at (217) 398-1792 for more information.**
74.18	**W. Tyler:** A. Employment/Salary (full or part-time); Thync Inc.
75.01	**M.B. Cruz:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CONACyT (Grant 81898) and DGAPA-PAPIIT (IN-220014-3). **A. Flores:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CONACyT (Grant 81898) and DGAPA-PAPIIT (IN-220014-3). **R. Domínguez:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CONACyT (Grant 81898) and DGAPA-PAPIIT (IN-220014-3).
75.04	**Y. Zhao:** A. Employment/Salary (full or part-time); ucla.
77.15	**H. Kawasaki:** 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; Smoking Research foundation.
78.02	**M.N. Hill:** F. Consulting Fees (e.g., advisory boards); MN Hill is a scientific consultant for Pfizer.
83.18	**E. Gahtan*:** A. Employment/Salary (full or part-time); Humboldt State University.
85.12	**A.L. Schipper:** A. Employment/Salary (full or part-time); Nutricia Research. **L.M. Broersen:** A. Employment/Salary (full or part-time); Nutricia Research. **M. Loos:** A. Employment/Salary (full or part-time); Synaptologics BV. **E.M. Van Der Beek:** A. Employment/Salary (full or part-time); Nutricia Research.
86.09	**M. Choi:** A. Employment/Salary (full or part-time); AMOREPACIFIC Corp. **J. Bae:** A. Employment/Salary (full or part-time); AMOREPACIFIC Corp. **D. Choi:** A. Employment/Salary (full or part-time); AMOREPACIFIC

ABSTRACT NUMBER	STATEMENT
	Corp. **S. Kim:** A. Employment/Salary (full or part-time); AMOREPACIFIC Corp. **C. Kim:** 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; AMOREPACIFIC Corp.
87.08	**C. Stough:** 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; Flordis, Horphag, Blackmores.
88.11	**M. Summers:** F. Consulting Fees (e.g., advisory boards); Eli Lily (Australia) Pty Ltd, Novotech Pty Ltd.
89.03	**P.R. Corlett:** 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, Pfizer.
90.15	**M.P. Kelly:** F. Consulting Fees (e.g., advisory boards); Asubio, Inc; Deallus.
92.10	**A.C. Evans:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective Inc. **B.J. Bedell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biospective Inc.
94.01	**I.U. Kruge:** A. Employment/Salary (full or part-time); NTNU, Kavli Institute for Systems Neuroscience. **T. Waaga:** A. Employment/Salary (full or part-time); NTNU, Kavli Institute for Systems Neuroscience. **T. Wernle:** A. Employment/ Salary (full or part-time); NTNU, Kavli Institute for Systems Neuroscience. **E.I. Moser:** A. Employment/Salary (full or part-time); NTNU, Kavli Institute for Systems Neuroscience. **M. Moser:** A. Employment/Salary (full or part-time); NTNU, Kavli Institute for Systems Neuroscience.
94.06	**K. Zheng:** A. Employment/Salary (full or part-time); 1Kavli Institute for Systems Neuroscience and the Centre for Neural Computation, NTNU, Trondheim, Norway.
95.24	**K. Kim:** A. Employment/Salary (full or part-time); institute for basic scence. **S. Lee:** A. Employment/Salary (full or part-time); institute for basic scence. **E. Cheong:** A. Employment/Salary (full or part-time); Yonsei University.
96.04	**A. Zavala:** A. Employment/Salary (full or part-time); Employment/Salary. **Z. Ma:** A. Employment/Salary (full or part-time); Employment/Salary. **L.C. Kudo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest. **S. Karsten:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest.
96.14	**A. Guo:** A. Employment/Salary (full or part-time); Cell Signaling Technology, Inc. **M. Stokes:** A. Employment/ Salary (full or part-time); Cell Signaling Technology, Inc. **M.J. Comb:** A. Employment/Salary (full or part-time); Cell Signaling Technology, Inc.
96.20	**S.L. Karsten:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest. **A. Zavala:** A. Employment/Salary (full or part-time); Employment/Salary. **Z. Ma:** A. Employment/Salary (full or part-time); Employment/Salary. **L.C. Kudo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ownership Interest.
97.07	**J. Le:** A. Employment/Salary (full or part-time); Employee-ArunA Biomedical 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; NSF SBIR Grant IIP-1248820. **S.L. Stice:** A. Employment/Salary (full or part-time); ArunA Biomedical 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; NSF SBIR IIP-1248820.
97.25	**R. Mease:** A. Employment/Salary (full or part-time); Johns Hopkins University. **T. Tran:** A. Employment/Salary (full or part-time); Georgetown University. **K. Kellar:** A. Employment/Salary (full or part-time); Georgetown University. **D. Wong:** A. Employment/Salary (full or part-time); Johns Hopkins University. **R. Dannals:** A. Employment/Salary (full or part-time); Johns Hopkins University. **M. Pomper:** A. Employment/Salary (full or part-time); Johns Hopkins University. **A. Horti:** A. Employment/ Salary (full or part-time); Johns Hopkins University.
98.02	**B.H. Lich:** A. Employment/Salary (full or part-time); FEI Electron Optics. **F. Boughorbel:** A. Employment/ Salary (full or part-time); FEI Electron Optics. **P. Potocek:** A. Employment/Salary (full or part-time); FEI Electron Optics. **R. van den Boogaard:** A. Employment/Salary (full or part-time); FEI Electron Optics. **L. Hekking:** A. Employment/Salary (full or part-time); FEI Electron Optics. **E. Korkmaz:** A. Employment/Salary (full or part-time); FEI Electron Optics. **P. Cernohorsky:** A. Employment/Salary (full or part-time); FEI Electron Optics. **M. Hovorka:** A. Employment/Salary (full or part-time); FEI Electron Optics. **M. Langhorst:** A. Employment/Salary (full or part-time); FEI Electron Optics.
98.04	**M. Berning:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology. **M. Helmstaedter:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology.
98.05	**E. Dow:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology. **Y. Buckley:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology. **M. Berning:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology. **T. Bocklisch:** 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; Max Planck Institute of Neurobiology. **D. Bräunlein:** 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; Max Planck Institute of Neurobiology. **T. Herold:** 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; Max Planck Institute of Neurobiology. **N. Rzepka:** 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; Max Planck Institute of Neurobiology. **T. Werkmeister:** 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; Max Planck Institute of Neurobiology. **M. Helmstaedter:** A. Employment/Salary (full or part-time); Max Planck Institute of Neurobiology.
98.09	**W. Denk:** Other; License income from SBEM / Gatan Inc.
98.12	**A. Fera:** A. Employment/Salary (full or part-time); Universidade Federal de Brasilia, Brazil. **T.S. Reese:** A. Employment/Salary (full or part-time); National Institutes of Health. **M. Vale de Sousa:** A. Employment/Salary (full or part-time); Universidade Federal de Brasilia, Brazil. **B.M. Ribeiro:** A. Employment/Salary (full or part-time); Universidade Federal de Brasilia, Brazil. **D.L. Sackett:** A. Employment/Salary (full or part-time); Eunice Kennedy Shriver National Institute of Child Health and Human Development.
99.20	**T. Berger:** 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; US National Science Foundation under Grant No. CCF-1162449.

Hotel Floor Plans

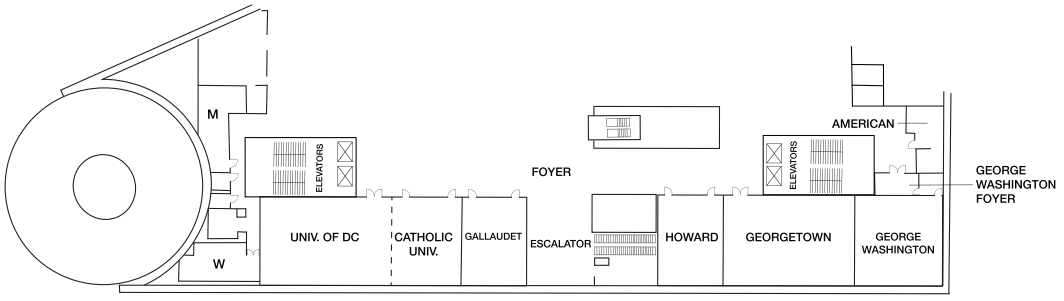
Marriott Marquis Washington, DC

Mezzanine Level



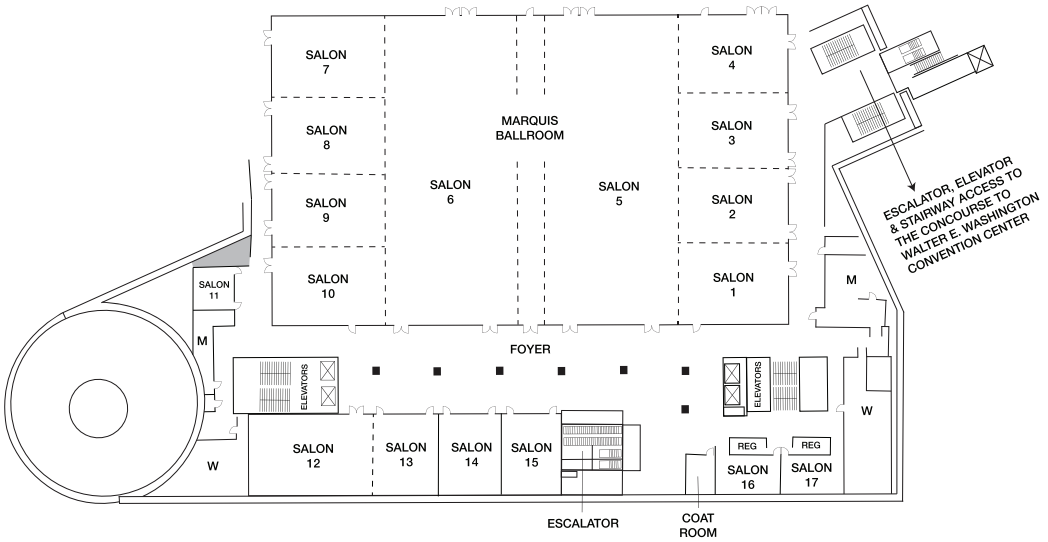
Marriott Marquis Washington, DC

Meeting Level 1



Marriott Marquis Washington, DC

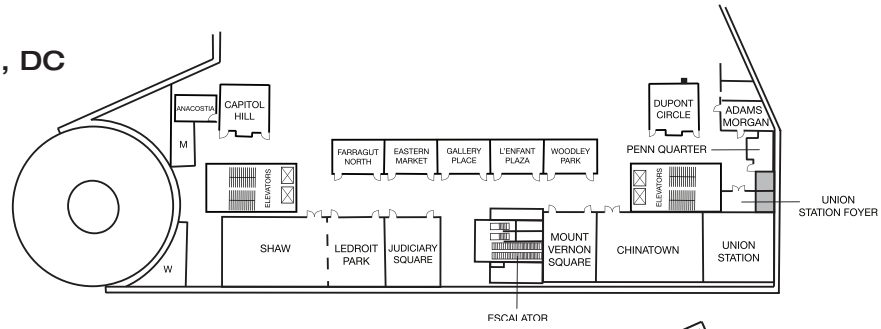
Meeting Level 2



Hotel Floor Plans

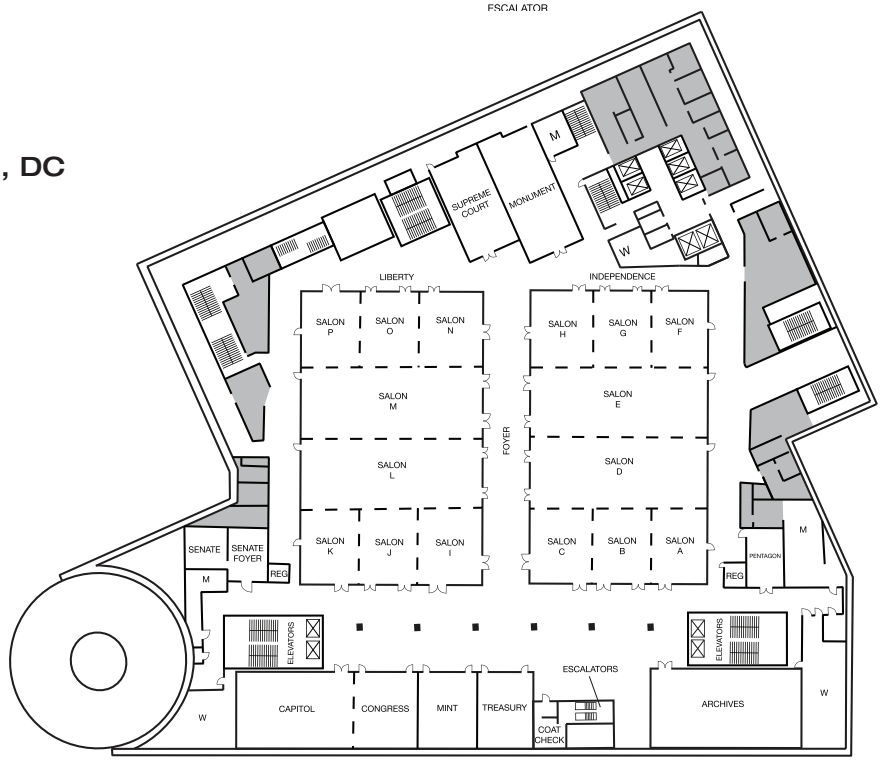
Marriott Marquis Washington, DC

Meeting Level 3



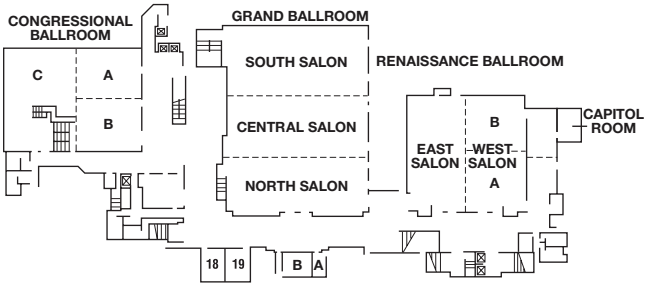
Marriott Marquis Washington, DC

Meeting Level 4



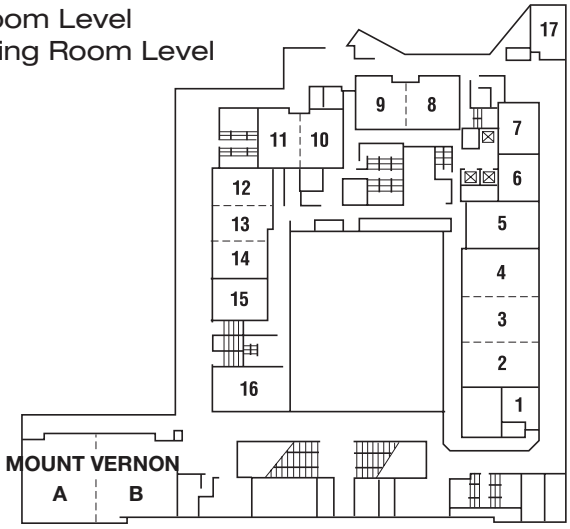
Renaissance Washington, DC Downtown Hotel

Ballroom Level



Renaissance Washington, DC Downtown Hotel

Ballroom Level
Meeting Room Level

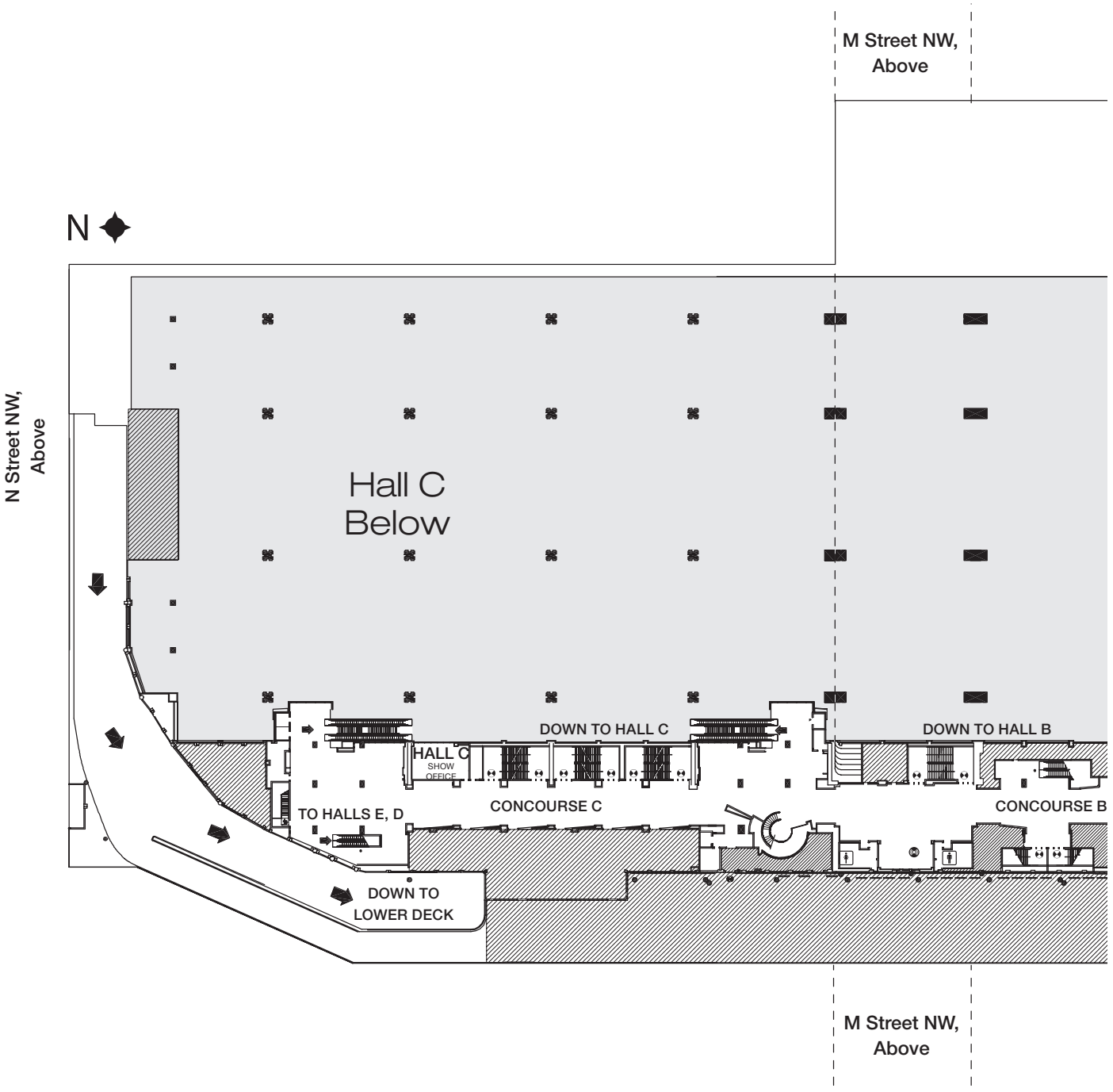


Convention Center Floor Plans

Concourse Level

Access to Exhibit Halls A–C

Show Offices A–C

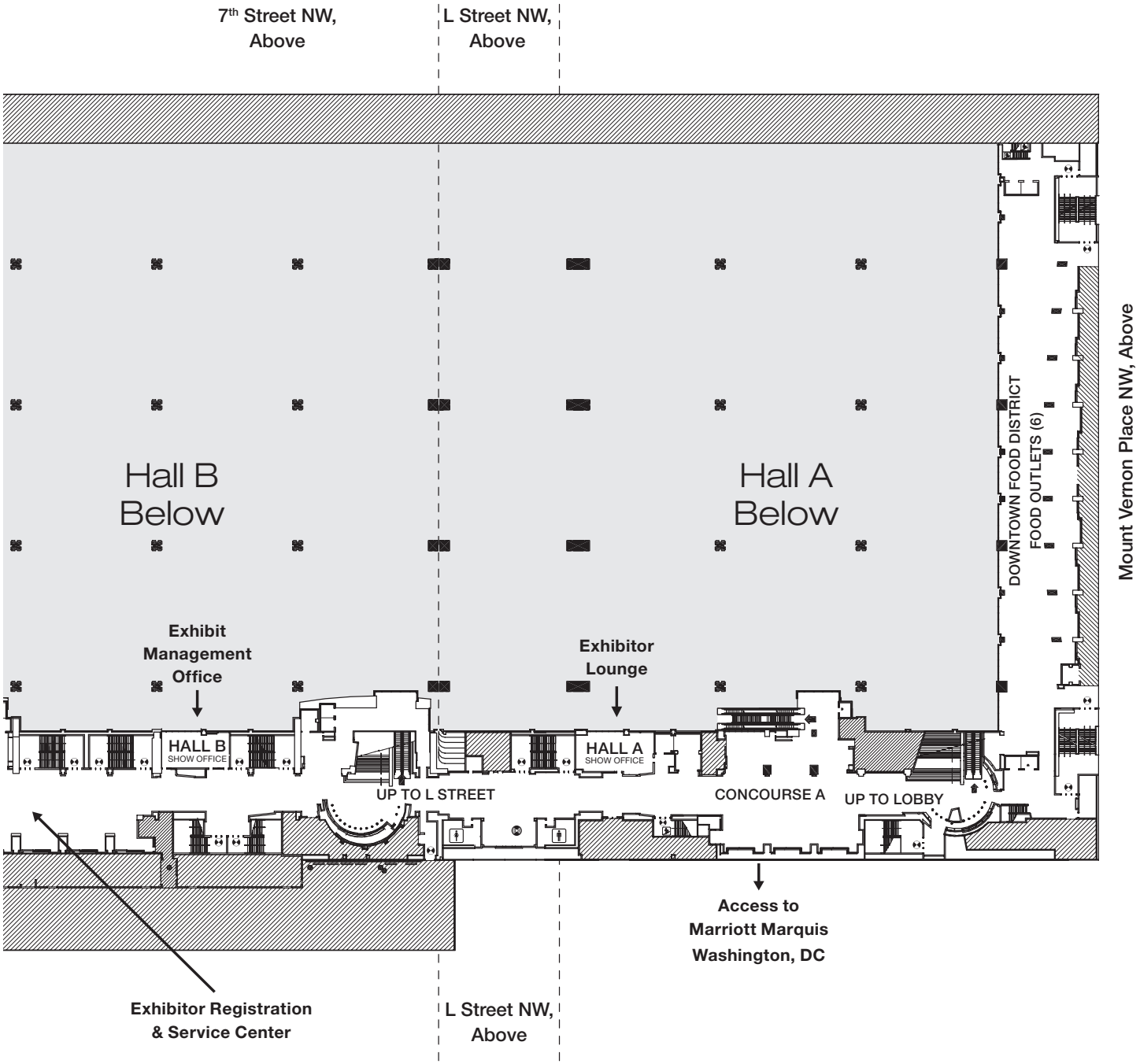


Convention Center Floor Plans

Concourse Level

Access to Exhibit Halls A–C

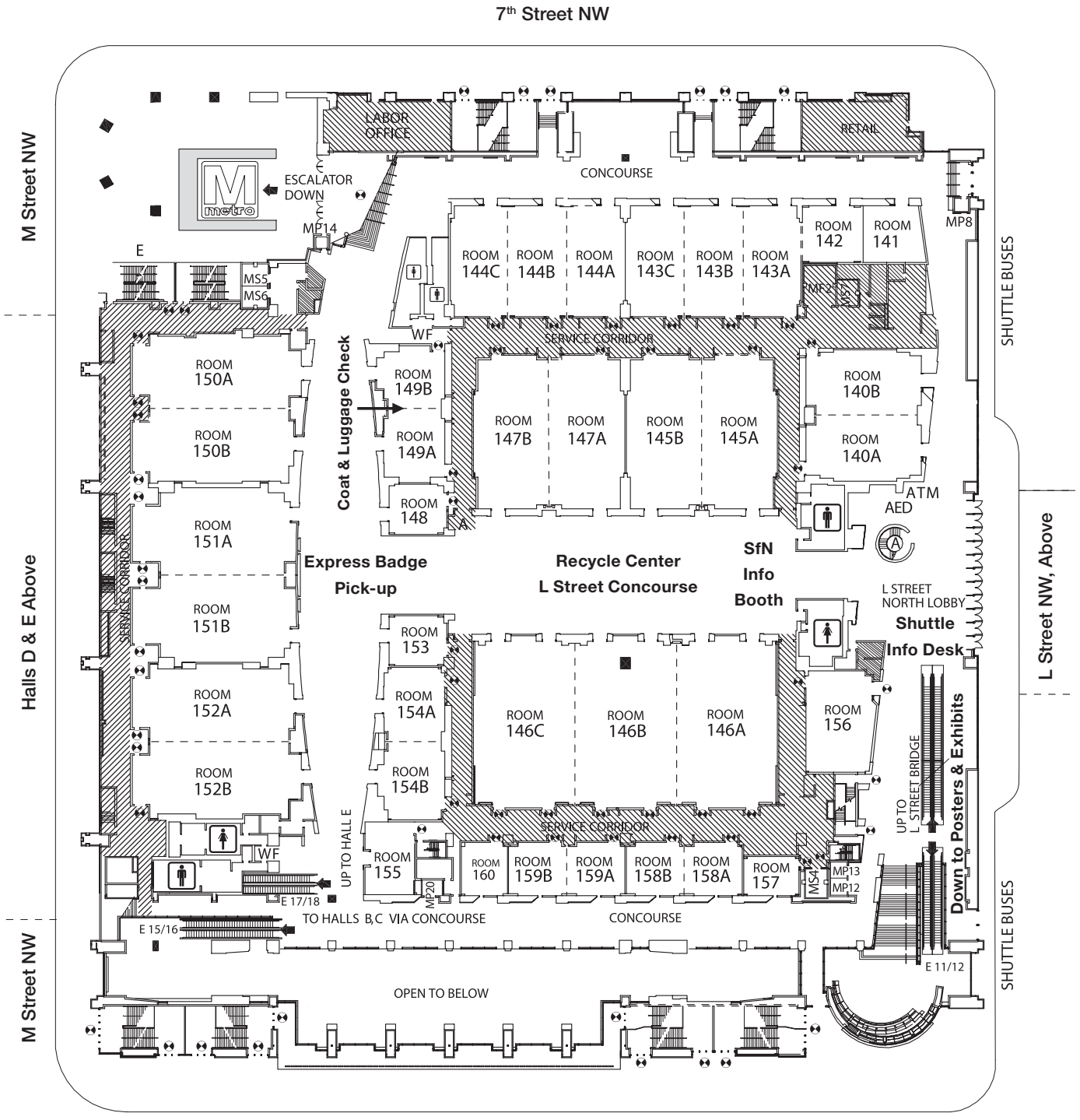
Show Offices A–C



Convention Center Floor Plans

Lobby Level/Level 1

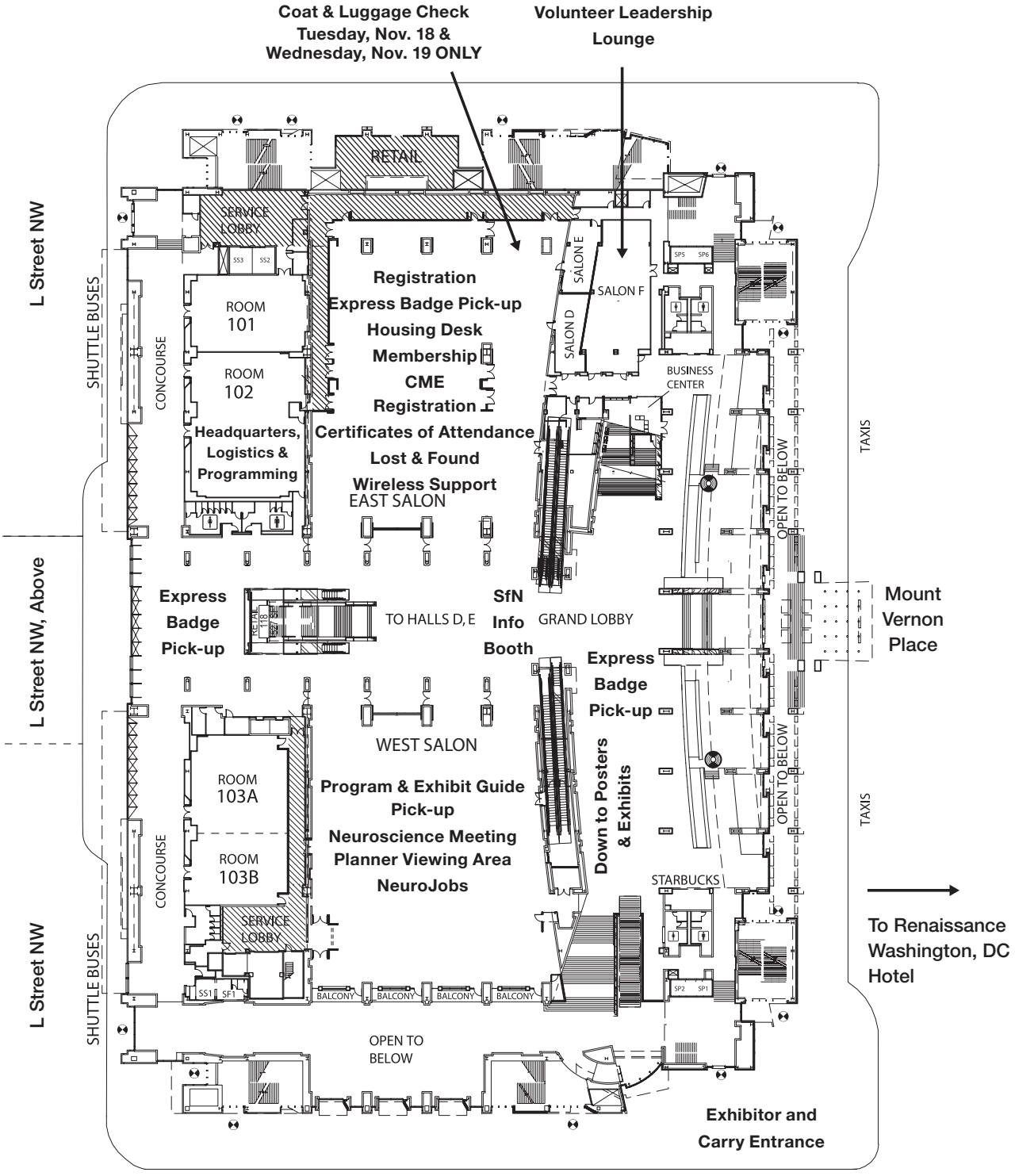
Meeting Rooms 101-103 & 150-160



Convention Center Floor Plans

Lobby Level/Level 1

Meeting Rooms 101-103 & 150-160

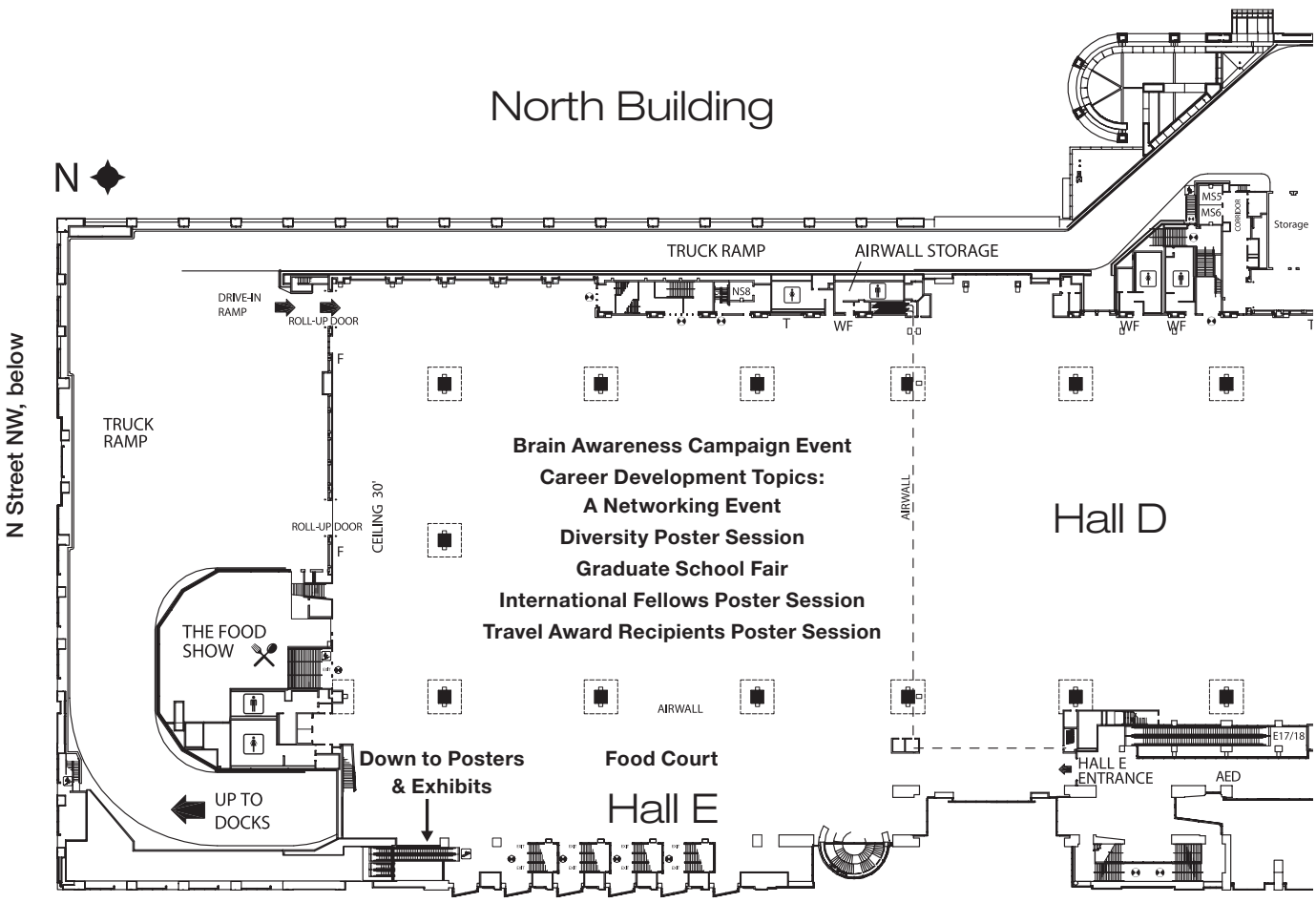


Convention Center Floor Plans

Level 2

Halls D &E

Meeting Rooms 201-210

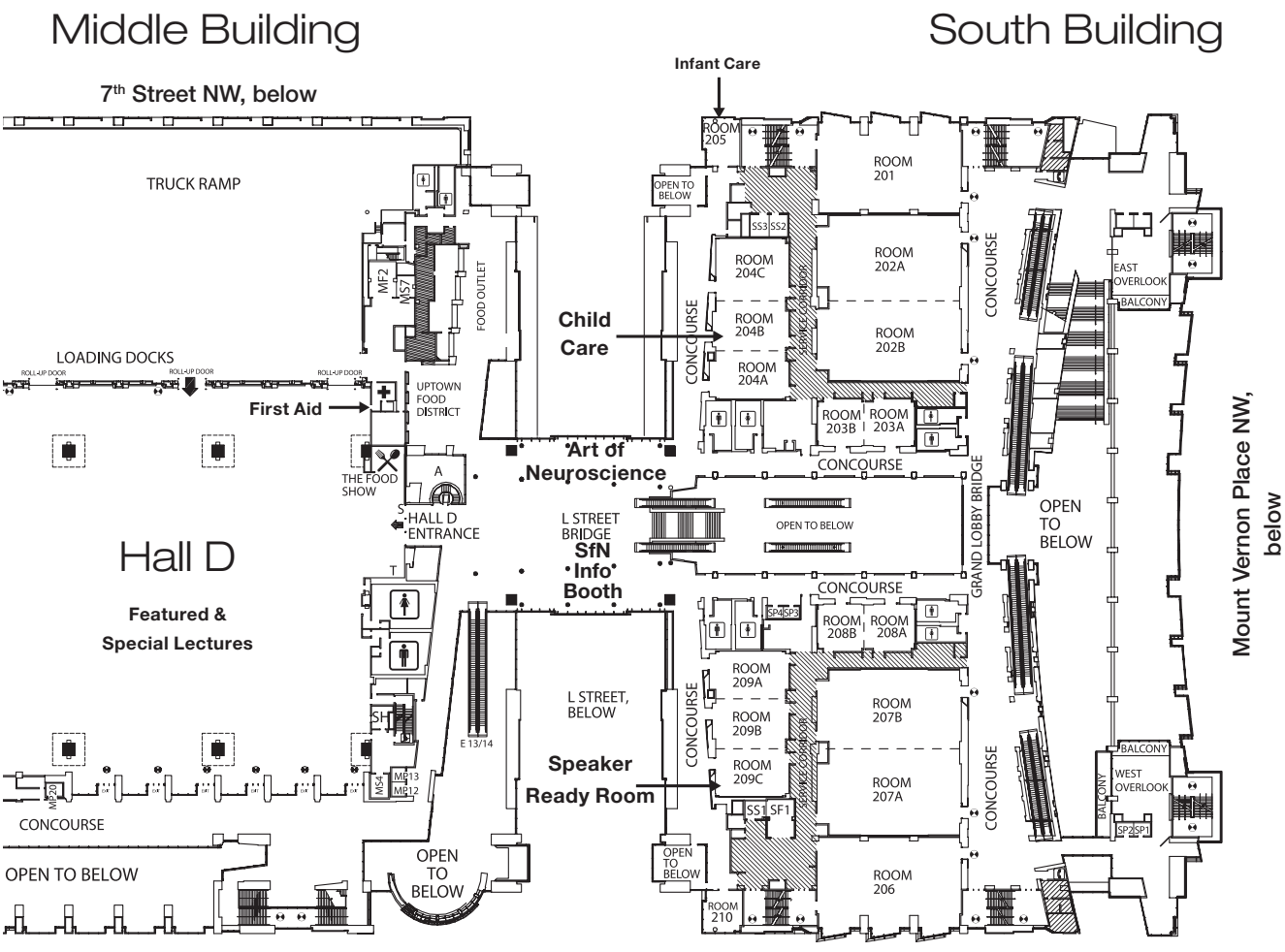


Convention Center Floor Plans

Level 2

Halls D &E

Meeting Rooms 201-210

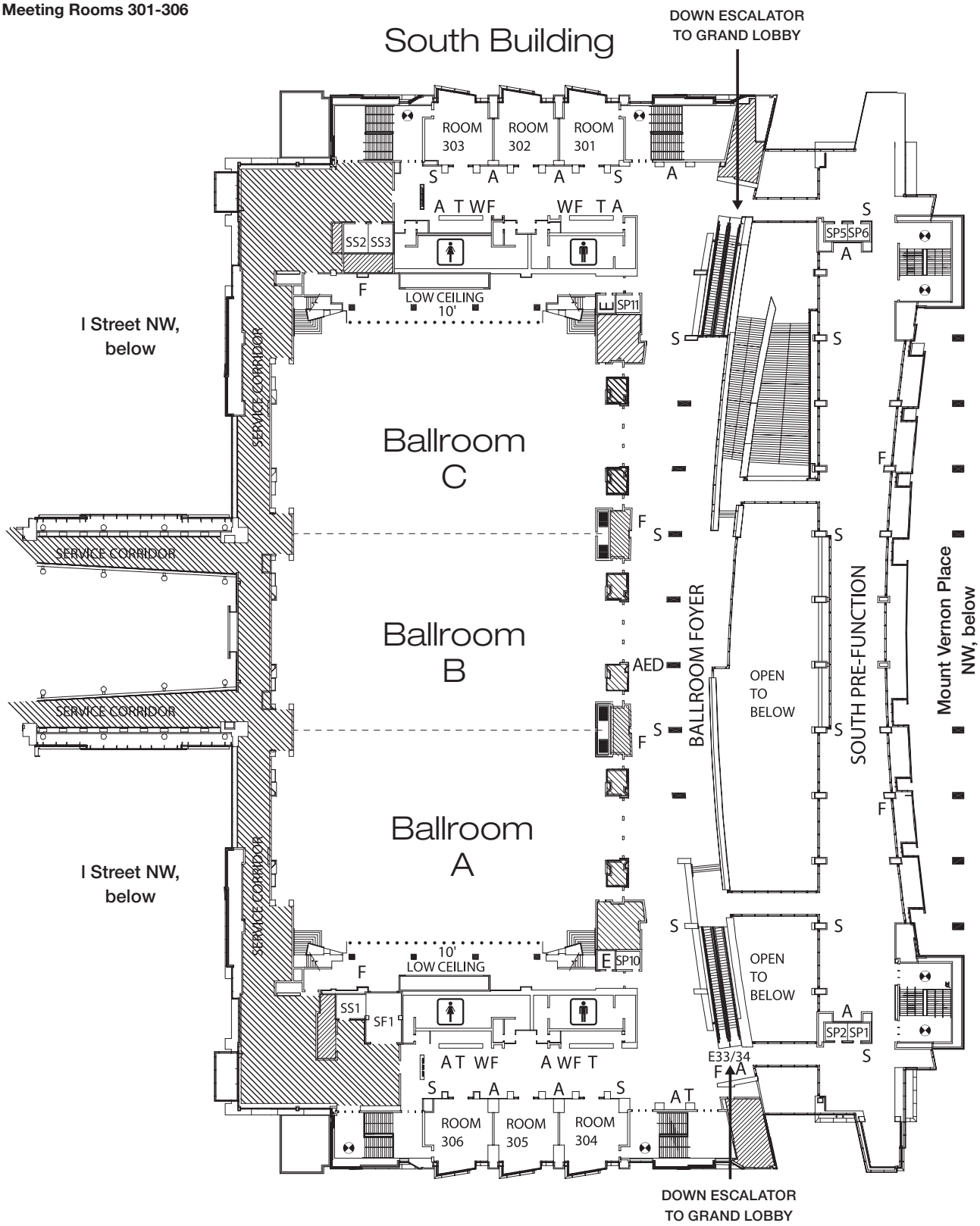


Convention Center Floor Plans

Level 3

Ballrooms A-C

Meeting Rooms 301-306



Neuroscience 2014 — Exhibits and Poster Sessions

Walter E. Washington Convention Center: Halls A–C

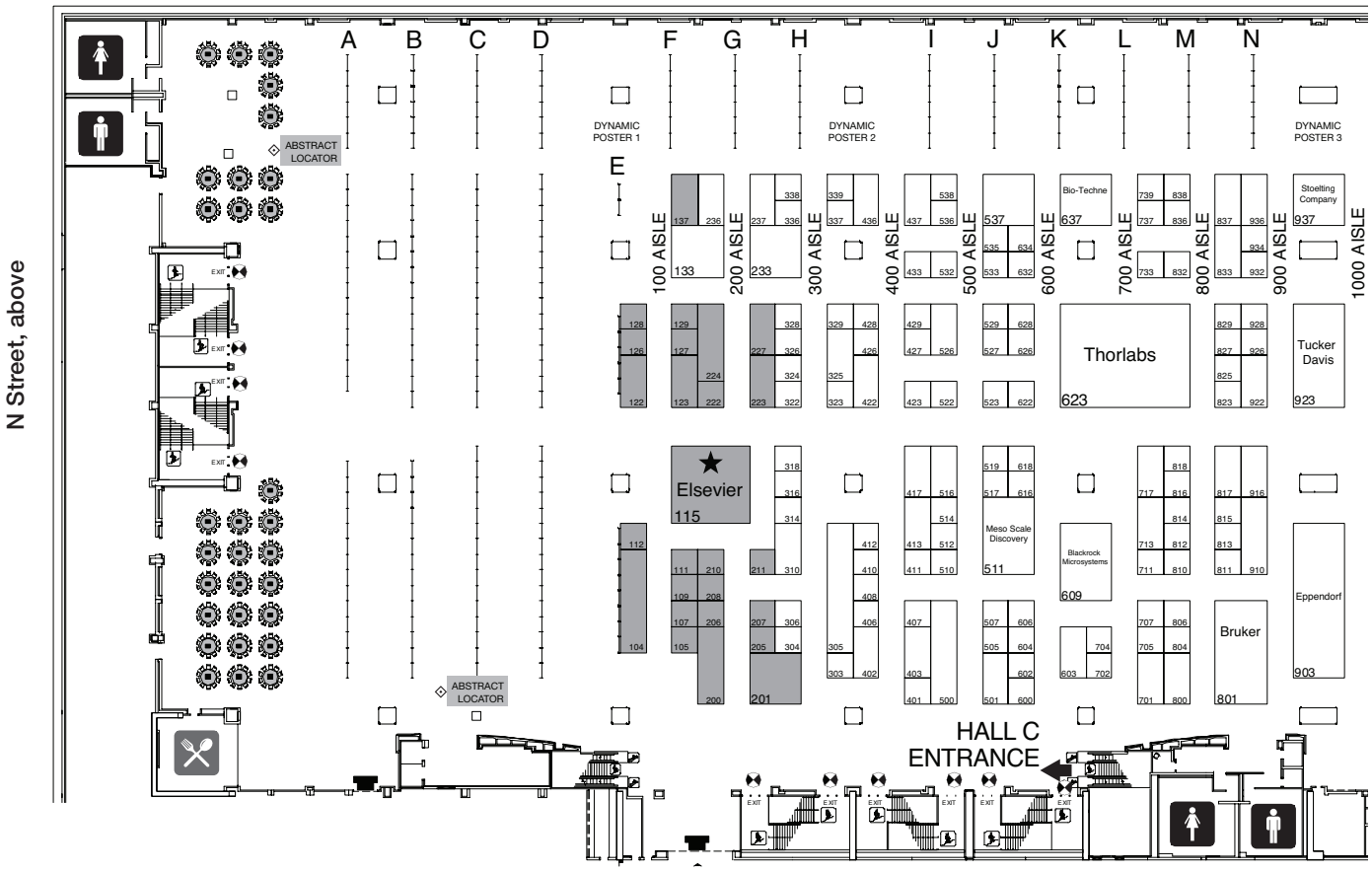
Meeting Dates: November 15–19
Exhibit Dates: November 16–19

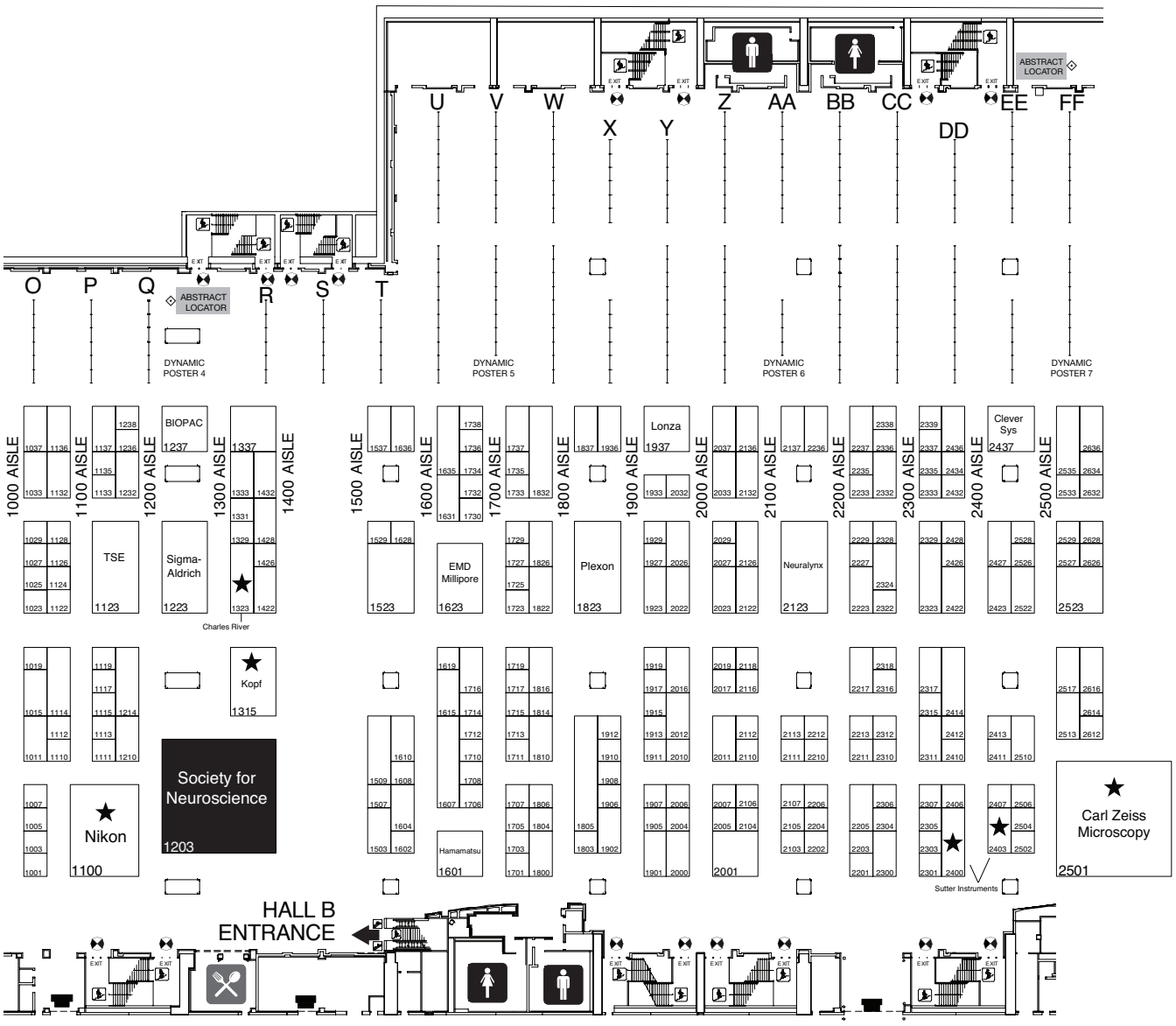
Hall entrances open at noon on Saturday, Nov. 15 and at 7 a.m. on Sunday, Nov. 16 to Wednesday, Nov. 19 for poster presenter setup.

Poster sessions are open for all attendees at 1 p.m. on Saturday, Nov. 15 and 8 a.m. Sunday, Nov. 16 to Wednesday, Nov. 19.

KEY

- Institutions
- Publishers
- Nonprofits
- ★ Sustaining Associate Members
- Abstract Locators
- SfN Booth
- First Aid Station
- Seating Area
- Concession Areas
- Restrooms
- Emergency Exit




U V W X Y Z AA BB CC DD EE FF
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DYNAMIC POSTER 4
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Society for Neuroscience 1203
Nikon 1100
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2001
Carl Zeiss Microscopy 2501
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HALL B ENTRANCE

KEY

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- Publishers
- Nonprofits
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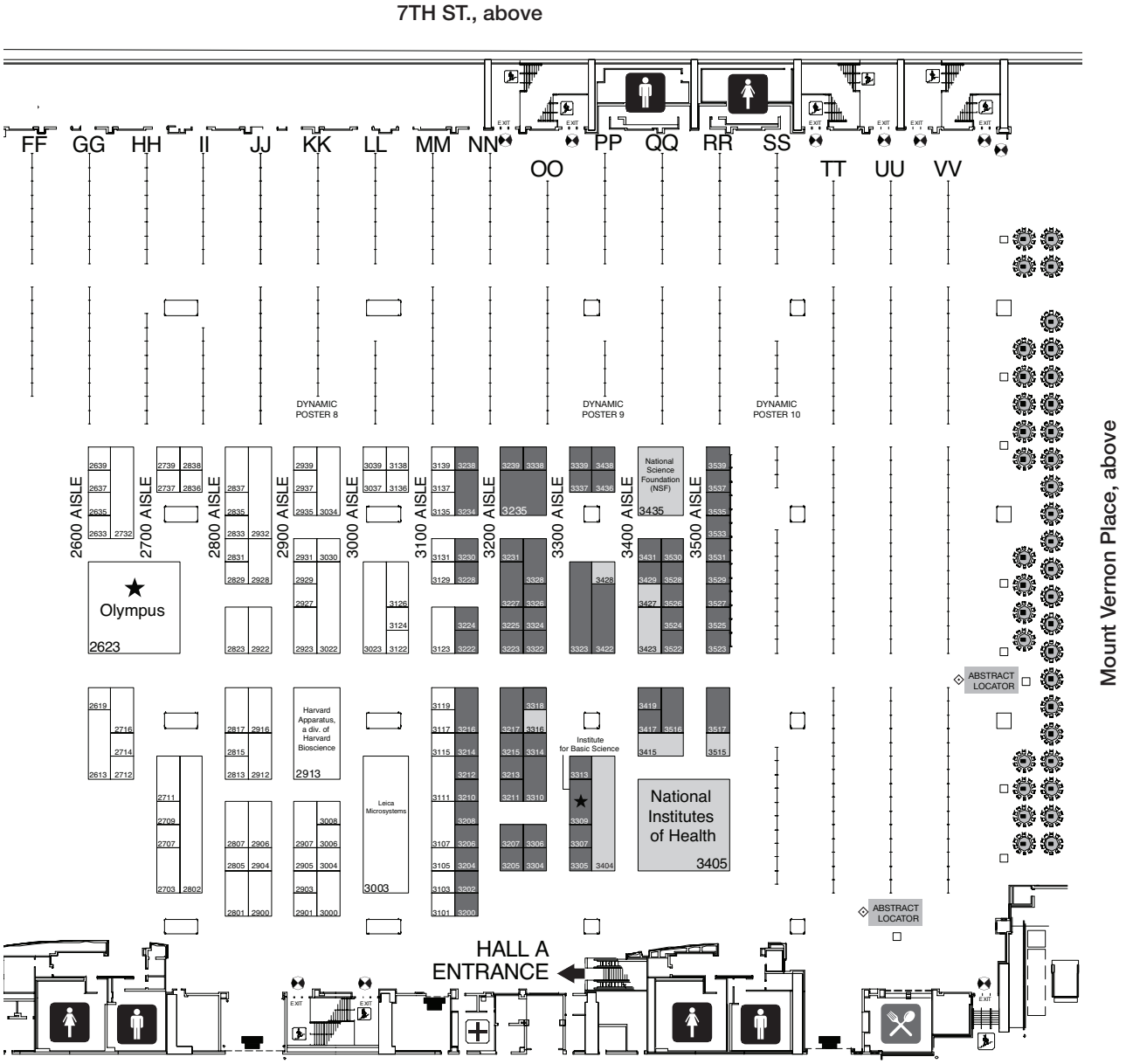

Notes

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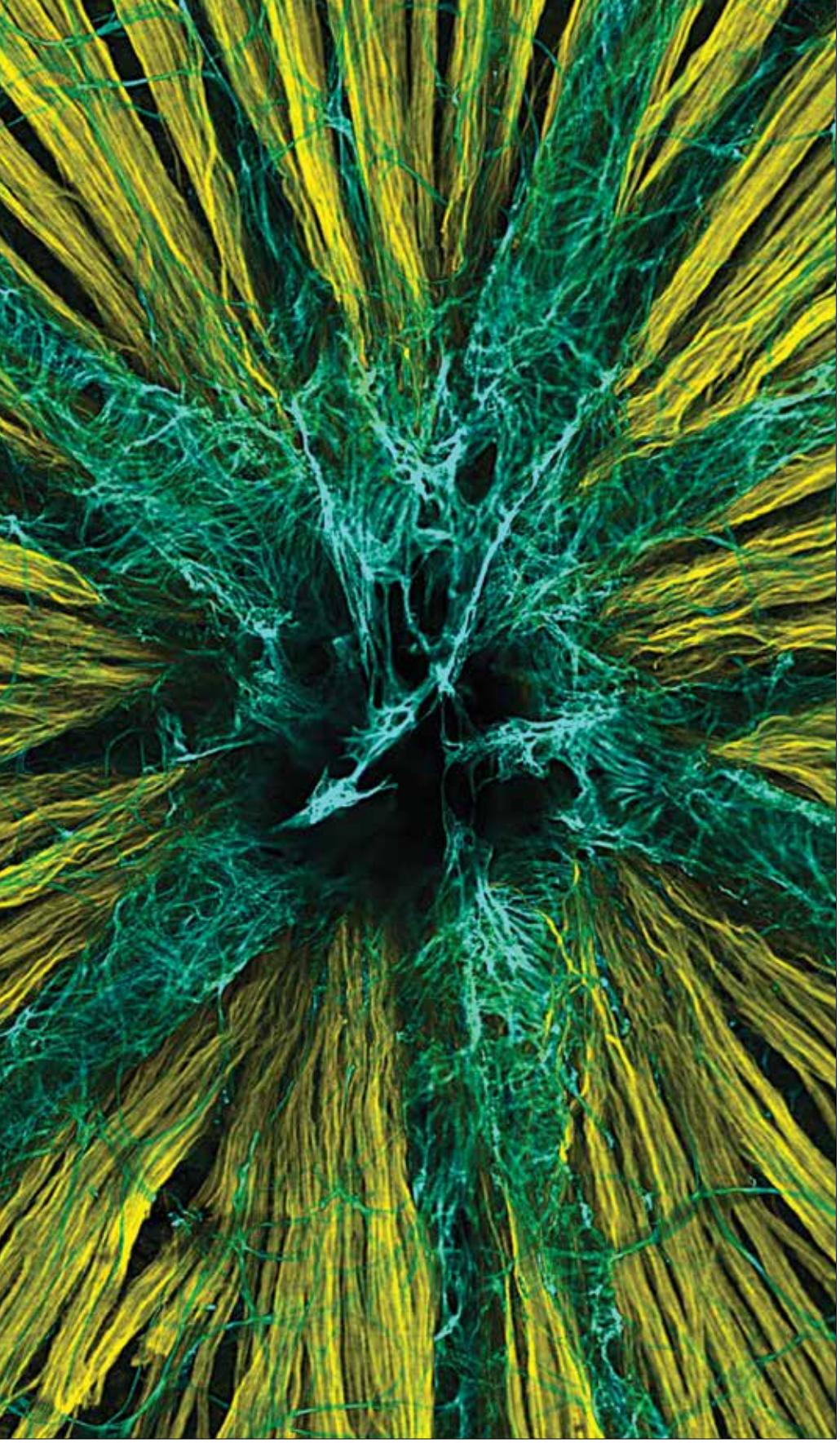
Neuroscience
2015

October **17–21**



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2014

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