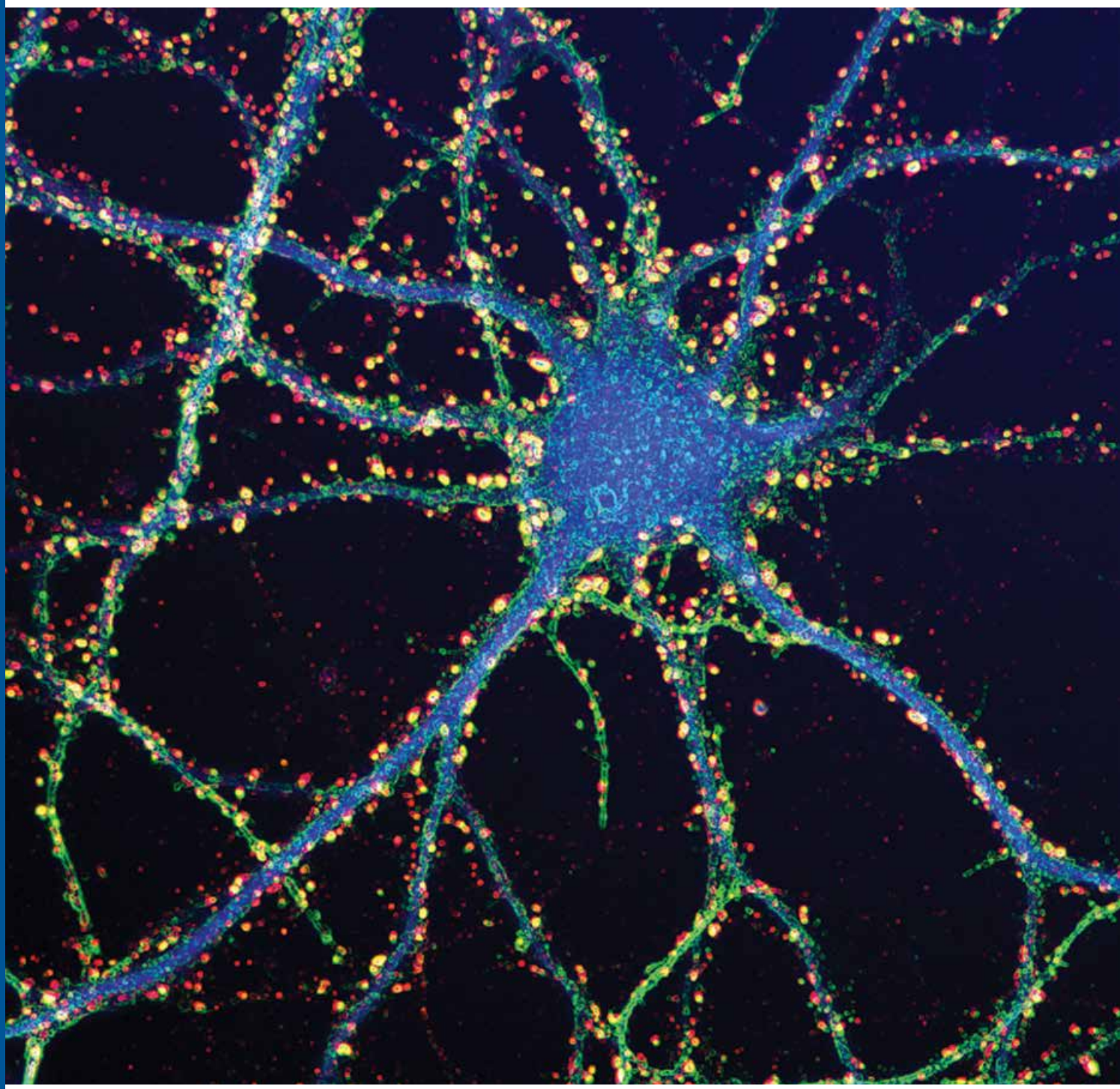
Neuroscience 2016

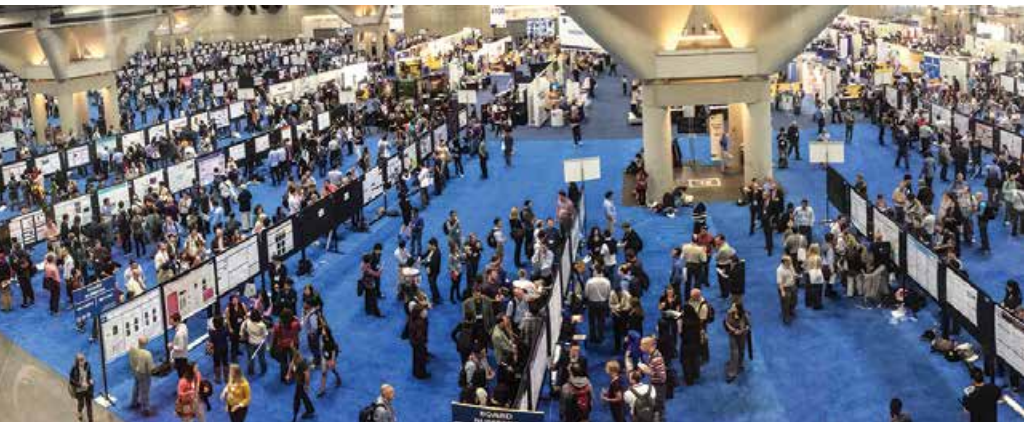
San Diego | November 12–16

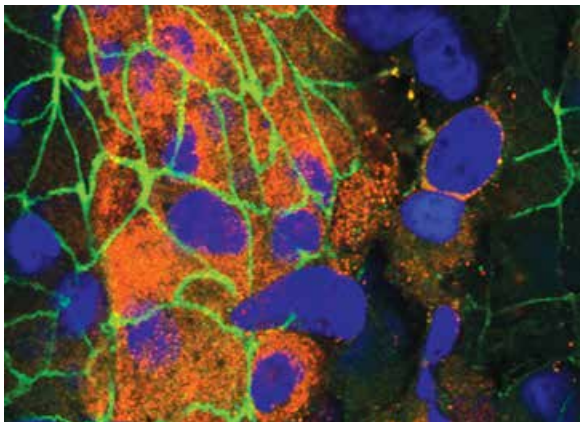
GENERAL INFORMATION

Program



Society for Neuroscience





Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics and Programming

Logistics

San Diego Convention Center: Sails Pavilion
(619) 525-6200

Programming

San Diego Convention Center: Sails Pavilion
(619) 525-6205

Volunteer Leadership Lounge

San Diego Convention Center: Room 14A
(619) 525-6235

General Information Booths

San Diego Convention Center

Front of Box Office A, (619) 525-6224
Lobby D, (619) 525-6225
Sails Pavilion, (619) 525-6226

Press Office

Press Room

San Diego Convention Center: Room 15B
(619) 525-6230

Exhibit Management

San Diego Convention Center: Lobby D
(619) 525-6240

First Aid, Hospital and Urgent Care Numbers

First Aid Station

San Diego Convention Center:
Box Office G
(619) 525-6211

Scripps Mercy Hospital

4077 Fifth Avenue
San Diego, CA 92103
(619) 294-8111

Sharp Rees – Stealy Downtown San Diego Urgent Care

300 Fir Street
San Diego, CA 92101
(858) 499-2600

Note: The themes have been updated for Neuroscience 2016

Key to Poster Floor by Themes

Theme

A. Development
B. Neural Excitability, Synapses, and Glia
C. Neurodegenerative Disorders and Injury
D. Sensory Systems
E. Motor Systems
F. Integrative Physiology and Behavior
G. Motivation and Emotion
H. Cognition
I. Techniques
J. History and Education

NOTE: Theme J Posters will be located in Hall B beginning at 1 p.m. on Saturday, November 12, and will remain posted until 5 p.m., Sunday, November 13.

Code of Conduct at SfN Events

SfN is committed to supporting discovery and scientific dialogue, and to fostering a welcoming community in which all scientists are able to contribute fully. The Society asserts that sexual harassment and other harassing behaviors have no place in a healthy scientific enterprise. We expect all attendees, media, speakers, volunteers, organizers, venue staff, guests, and exhibitors at SfN-organized events to help us ensure a safe and positive environment. At the convention center, onsite medical and security personnel are available directly or through the SfN headquarters office.

If attendees experience unwelcome or unsafe situations anywhere in the city, attendees should swiftly contact local authorities (dial 9-1-1), and additional local social services resources are listed in one convenient location at the federal website www.notalone.gov. Any official report of sexual harassment should be brought to the designated Human Resources Officer in the SfN headquarters office at each meeting convention center, or sent via email to **hrofficer@sfn.org.** The HR Officer will facilitate the completion of a report by a complainant. View the entire Code of Conduct at SfN Events statement for more information.

For more information, on SfN's policy, please go to: **sfn.org/Member-Center/Professional-Conduct/Code-of-Conduct-at-SfN-Events**

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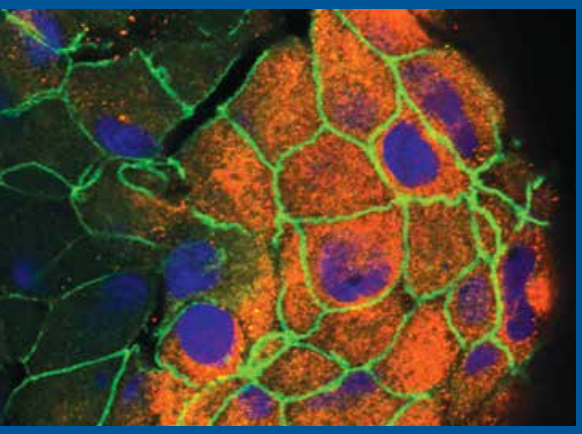
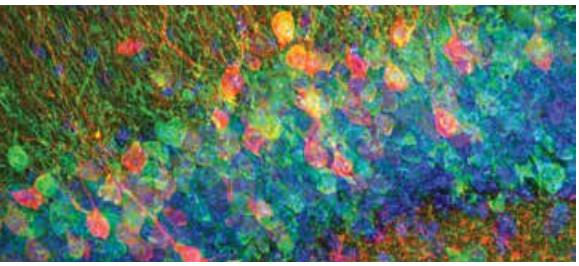


Experience the thrill of scientific discovery at the 46th annual meeting of The Society for Neuroscience.

At Neuroscience 2016, you'll experience the rich breadth of neuroscience, view innovative tools and technologies, and discuss the future of the field with colleagues from around the world.



Immerse Yourself in Neuroscience

The brain remains one of the greatest mysteries in science. Explore the vast complexity of neuroscience by attending symposia, workshops, and lectures at Neuroscience 2016. Be inspired by your colleagues' research and learn new techniques and theories that can be applied to your work.

Connecting a Diverse Field

A new friend, collaborator, or mentor may be right around the corner. Neuroscience 2016 convenes the entire field of neuroscience, connecting you with peers at various stages in their careers, in different disciplines, and from all over the world. Meet colleagues and build relationships at social events, in between sessions, or in the Exhibit Hall. Neuroscience 2016 is an unparalleled opportunity to find a new job or recruit top talent, receive unbiased professional feedback, or connect with future research partners.

Plan Your Neuroscience 2016 Experience

Is your smartphone or tablet permanently affixed to your hand? **Then check out the meeting mobile app, available for download in iTunes™, and the Google Play App Store™, and the Neuroscience Meeting Planner at sfn.org/NMP,** to plan your Neuroscience 2016 experience. Both resources allow you to browse abstracts and select sessions to attend. Turn to the meeting planner to build your itinerary, which can be synced with the app or downloaded and printed.

Dynamic posters return for 2016 — don't miss these interactive multimedia presentations. Each poster session will feature 10 dynamic posters. Visit the Neuroscience Meeting Planner or the mobile app to add these innovative posters to your schedule.

Experience the annual meeting in a new way with curated itineraries, which allow you to focus on a specific research area. Neuroscience 2016 features 14 curated itineraries, which include scientific sessions and SfN-Sponsored Socials on a broad variety of topics selected by the SfN Program Committee. Use the meeting mobile app or Neuroscience Meeting Planner to view the 14 selected topics, download the entire itinerary, or add selected sessions to your schedule.

Commitment to Environmental Responsibility

SfN is committed to minimizing its impact on the environment we share. **Free printed copies of the *Exhibit Guide* and this general information *Program* book will be provided.** Please refer to the meeting mobile app or the Neuroscience Meeting Planner for additional program information. The Neuroscience Meeting Planner Viewing Area in the San Diego Convention Center allows for easy access to the online meeting planner.

A limited number of daily books are available for purchase on-site. Visit the *Program* and *Exhibit Guide* Pick-up counter in Lobby A and Sails Pavilion for more information.

Connect Through Social Media

Share the excitement on SfN social media channels using #SfN16 on Twitter, follow @Neuroscience2016 and @SfNtweets, and like us on Facebook to receive important meeting updates and event information.

See You Next Year in Washington, DC!

Mark your calendars for Neuroscience 2017 — November 11–15, 2017, in Washington, DC.

Annual Meeting Contributors

AbbVie
Professional Development Workshops

Bernice Grafstein, PhD

Bernice Grafstein, PhD
Bernice Grafstein Award for Outstanding Accomplishments in Mentoring

Biogen
Presidential Special Lecture, Annual Meeting Mobile App

Bruker
Annual Meeting Mobile App

Burroughs Wellcome Fund
Trainee Professional Development Awards

The Dana Foundation
Science Educator Award

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Dialogues Between Neuroscience and Society Lecture, Annual Meeting Mobile App

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The Grass Foundation
Albert and Ellen Grass Lecture, Donald B. Lindsley Prize in Behavioral Neuroscience, Latin America Training Program, Challenge Grant

The Gruber Foundation
Peter and Patricia Gruber International Research Award in Neuroscience, Peter and Patricia Gruber Lecture

Houston Methodist Neurological Institute
Annual Meeting Mobile App, Charging Stations

Janssen Research & Development, LLC
Presidential Special Lecture

The Journal of Neuroscience
International Fellows, Diversity Fellows, Trainee Professional Development Awardee Poster Sessions

John Simpson, PhD

John Simpson, PhD
Trainee Professional Development Awards, Latin America Training Program Challenge Grant

The Kavli Foundation
Fred Kavli History of Neuroscience Lecture

David Kopf Instruments
David Kopf Lecture on Neuroethics

Eli Lilly and Company Foundation
Julius Axelrod Prize

Logos Biosystems, Inc.
Shuttle Buses

Lundbeck
Short Course (partial support)

MilliporeSigma
Meet-the-Expert Sessions

Nancy Rutledge Zahniser Fund

Nancy Rutledge Zahniser Fund
Nancy Rutledge Zahniser Trainee Professional Development Awards

National Institute on Drug Abuse
Professional Development Workshop

National Institute of Neurological Disorders and Stroke
Neurobiology of Disease Workshop, Neuroscience Scholars Program

National Primate Research Centers
Animals in Research Panel

The Nemko Family

The Nemko Family
Nemko Prize in Cellular or Molecular Neuroscience

Otsuka America Pharmaceutical, Inc.
Short Course (partial support)

Pfizer
Trainee Professional Development Awards

Precisionary Instruments
Neuroscience Extra!

Friends of SfN Fund and SfN Memorial Fund
Trainee Professional Development Awards

The Swartz Foundation
Swartz Prize for Theoretical and Computational Neuroscience

Thorlabs
Meet-the-Expert Session

The Trubatch Family

The Trubatch Family
Janett Rosenberg Trubatch Career Development Awards

The Waletzky Award Prize Fund and the Waletzky Family

The Waletzky Award Prize Fund and The Waletzky Family
Jacob P. Waletzky Award

Sustaining Associate Members

The Society for Neuroscience gratefully acknowledges the generous support of its Sustaining Associate Members:

Platinum	Gold	Silver	Nonprofit
Carl Zeiss Microscopy, LLC	Elsevier	Charles River	Grete Lundbeck European Brain Research Foundation
	Olympus America Inc.	Nikon Instruments Inc.	National Institute on Drug Abuse
		Sutter Instruments	

NeuroJobs

SfN's Online Career Center

Career Center

Saturday, Oct. 17–Tuesday, Oct. 20, 8 a.m.–5 p.m.
Wednesday, Oct. 21, 8 a.m.–3 p.m.

The premier resource for Neuroscience Jobs, Access tools for posting jobs, searching resumes, scheduling interviews, connecting with employers, and message services.

NeuroJobs.sfn.org

The Society for Neuroscience gratefully acknowledges the generous contributions made in the past year in memory of the following individuals through the

SfN Memorial Fund

The SfN Memorial Fund supports the Society's mission of providing professional development activities and educational resources for neuroscientists at all stages of their careers. To inquire about specific initiatives or to make a tax-deductible donation, visit SfN.org/supportsfn or e-mail development@sfn.org.

Society for Neuroscience

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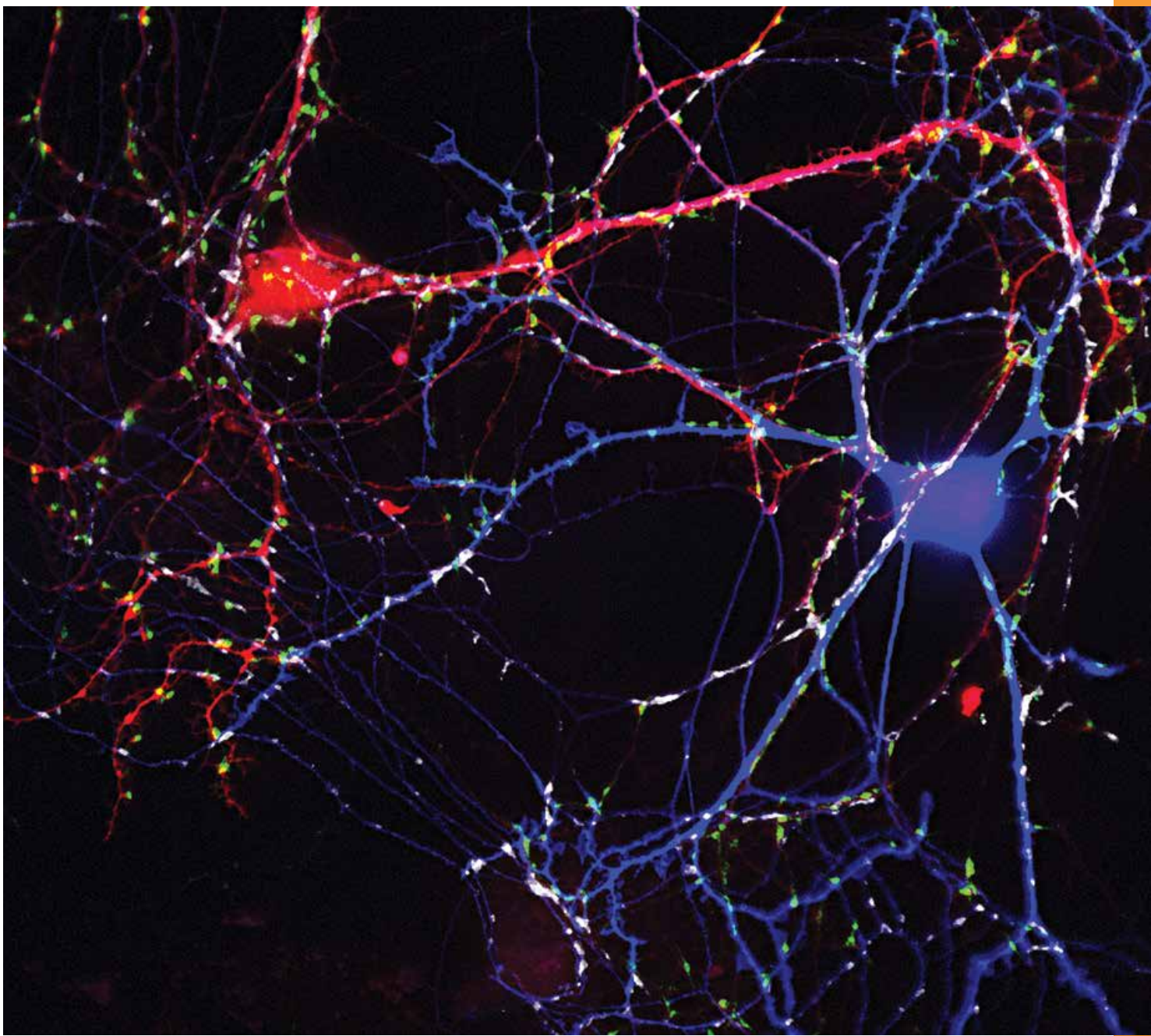
Jeffery A. Winer
Franziska Wollnik
Christi J. Wylie
Nancy Rutledge Zahniser

SCIENTIFIC CONTENT



Program at a Glance

Friday, November 11

8 a.m.–5 p.m.	NEUROBIOLOGY OF DISEASE WORKSHOP **From Pediatric Encephalopathy to Alzheimer's: Linking Mitochondria to Neurological Diseases (p.24)** Organizers: Giovanni Manfredi, MD, PhD; Heidi McBride, PhD
8 a.m.–6 p.m.	SHORT COURSE #2 **Data Science and Data Skills for Neuroscientists (p.24)** Organizers: Alyson Fletcher, PhD; Konrad Kording, PhD
8:30 a.m.–6 p.m.	SHORT COURSE #1 **Using Single-Cell Genomics To Analyze Neurons, Glia, and Circuits (p.24)** Organizer: Steve McCarroll, PhD
1–5:30 p.m.	SHORT COURSE #3 **Record Keeping and Data Management for High-Quality Science (p.25)** Organizers: Michele Basso, PhD; Katja Brose, PhD; Horacio de la Iglesia, PhD; Sabine Kastner, MD, PhD; Rae Nishi, PhD

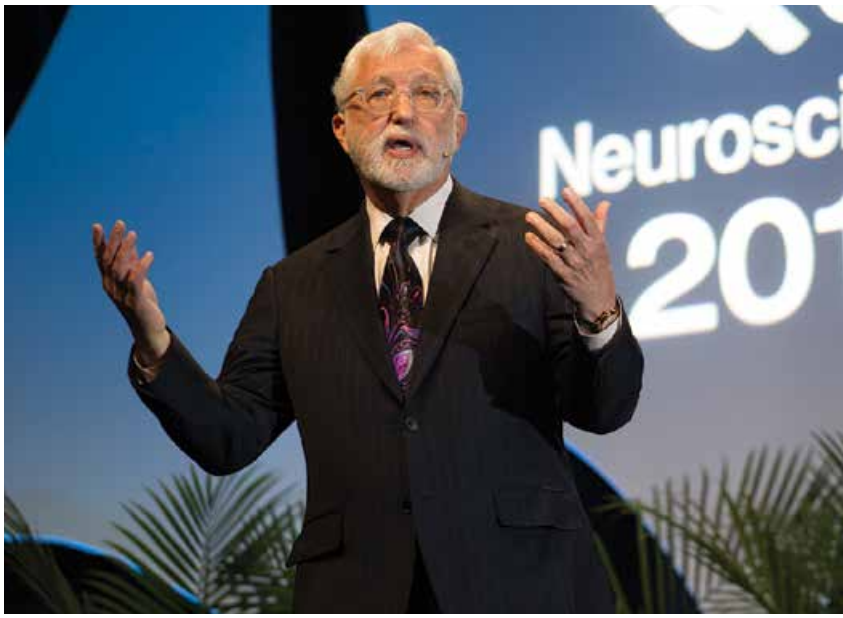
Saturday, November 12

8–9:15 a.m.	**Meet-the-Clinician-Expert (p.25)**
8–9:15 a.m.	**Meet-the-Expert Series: Session 1 (p.25)**
8 a.m.–5 p.m.	**NeuroJobs Career Center (p.27)**
9–11 a.m.	**Neuroscience Departments and Programs Workshop (p.27)** Organizer: Elisabeth Van Bockstaele, PhD
9–11 a.m.	**Success in Academia: A Focus on Strategies for Women (p.27)** Organizer: Tracy Bale, PhD
9:30–10:45 a.m.	**Meet-the-Expert Series: Session 2 (p.26)**
10–11 a.m.	**Meeting Mobile App Tutorial (p.27)**
11 a.m.–1 p.m.	DIALOGUES BETWEEN NEUROSCIENCE AND SOCIETY **Global Mental Health and Neuroscience: Challenges and Opportunities (p.13)** Speaker: Shekhar Saxena, MD
noon–2 p.m.	**Careers in Making Medicines: Translating Basic Research Into Pharmaceutical Development (p.27)** Organizer: Fiona Randall, PhD
noon–2 p.m.	**Creating, Sustaining, and Enhancing Undergraduate Neuroscience Programs (p.28)** Organizer: Janet Finlay, PhD
1–3 p.m.	**Graduate School Fair (p.28)**
1–5 p.m.	**Posters/Nanosymposia**
1:30–4 p.m.	**Symposia/Minisymposia** CME
2–3:10 p.m.	SPECIAL LECTURE **Lineage Analyses of Developing CNS Tissues** CME **(p.14)** Lecturer: Connie Cepko, PhD
3–4:30 p.m.	BRAIN AWARENESS CAMPAIGN EVENT **Sharing the Magic of Brain Awareness (p.28)** Speaker: Susana Martinez-Conde, PhD
3–5 p.m.	**Biomedical Education and Career Options for Scientists (PhD) and Physician–Scientists (MD, PhD) (p.28)** Organizer: Lique Coolen, PhD
3–5 p.m.	**NIH Funding and You: A Practical Guide to Successfully Navigating Your Research Training Career (p.28)** Organizer: Stephen Korn, PhD
5:15–6:25 p.m.	PRESIDENTIAL SPECIAL LECTURE **Tuning Auditory Circuits for Vocal Communication** CME **(p.12)** Speaker: Sarah M. N. Woolley, PhD
6:30–8:30 p.m.	**Diversity Fellows Poster Session (p.28)**
6:30–8:30 p.m.	**International Fellows Poster Session (p.28)**
6:30–8:30 p.m.	**Trainee Professional Development Awards Poster Session (p.29)**
7:30–9:30 p.m.	**Career Development Topics: A Networking Event (p.29)**

Sunday, November 13

8 a.m.–noon	**Posters/Nanosymposia**
8 a.m.–5 p.m.	**NeuroJobs Career Center (p.27)**
8:30–9:40 a.m.	SPECIAL LECTURE **Bitten: Understanding and Modulating Mosquito Attraction to Humans** CME **(p.15)** Speaker: Leslie B. Vosshall, PhD
8:30–11 a.m.	**Symposia/Minisymposia** CME

Download the meeting mobile app for up-to-date session information



9–11 a.m.	**A Guide to Publishing in Journals (p.29)** Organizer: Ross Hildrew
9–11 a.m.	**Stand Up and Be Heard: Navigating Career Communications (p.29)** Organizer: Fiona Randall, PhD
9:30 a.m.–5 p.m.	**Exhibits (p.90)**
10–11:10 a.m.	SPECIAL LECTURE **Dendritic Spines Shaping Memory and Behaviors CME (p.15)** Speaker: Haruo Kasai, MD, PhD
11:30 a.m.–12:40 p.m.	SPECIAL LECTURE **Translational Neuroepigenetic Insights of Addiction Vulnerability CME (p.15)** Speaker: Yasmin L. Hurd, PhD
11:30 a.m.–1 p.m.	CHAPTERS WORKSHOP **Utilizing Chapters to Teach Innovative Science to Broad Audiences (p.29)** Organizers: Tanea Reed, PhD; Jennifer Yates, PhD
noon–1:30 p.m.	**Successful Career Advancement Through Networking: Is It Who You Know? (p.29)** Organizers: Mark Baxter, PhD; Rebecca Shansky, PhD
noon–2 p.m.	**Graduate School Fair (p.28)**
noon–2:15 p.m.	**Path to Translation for the Inspired (p.29)** Organizers: William Mobley, MD; Hao Wang, PhD
1–2:10 p.m.	SPECIAL LECTURE **Circuits for Movement CME (p.14)** Speaker: Silvia Arber, PhD
1–3 p.m.	SOCIAL ISSUES ROUNDTABLE **Concussion: From the Players' Experience to the Future of Research (p.29)** Organizer: Candace Floyd, PhD
1–5 p.m.	**Posters/Nanosymposia**
1:30–4 p.m.	**Symposia/Minisymposia CME**
2:30–3:40 p.m.	PETER AND PATRICIA GRUBER LECTURE **Random Walk in Neurobiology (p.12)** Speaker: Mu–ming Poo, PhD
3–5 p.m.	**Meeting Expectations: NIH Review Criteria on Scientific Rigor and Reproducibility (p.30)** Organizer: Cheryl Sisk, PhD
3–5 p.m.	**Optimizing the Mentor-Trainee Relationship (p.30)** Organizer: Lique Coolen, PhD
5:15–6:25 p.m.	PRESIDENTIAL SPECIAL LECTURE **Limitations on Visual Development: Neurons and Behavior CME (p.12)** Speaker: Lynne Kiorpes, PhD
6:45–8:45 p.m.	**SfN-Sponsored Socials**

Monday, November 14

8 a.m.–noon	**Posters/Nanosymposia**
8 a.m.–5 p.m.	**NeuroJobs Career Center (p.27)**
8:30–9:40 a.m.	SPECIAL LECTURE **Quantal Release and Its Requirements CME (p.14)** Speaker: Robert Edwards, MD

CME This activity has been approved for *AMA PRA Category 1 Credit*™. For details, see page 62 and **visit SfN.org/cme**.

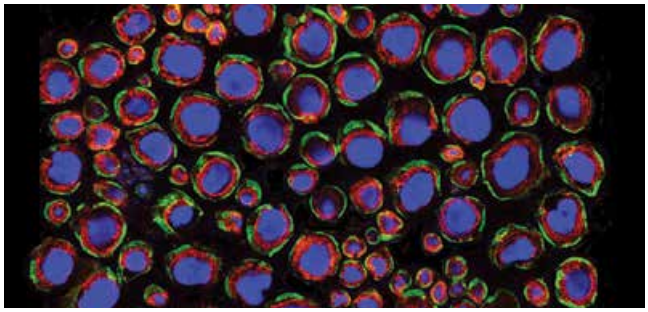
Program at a Glance

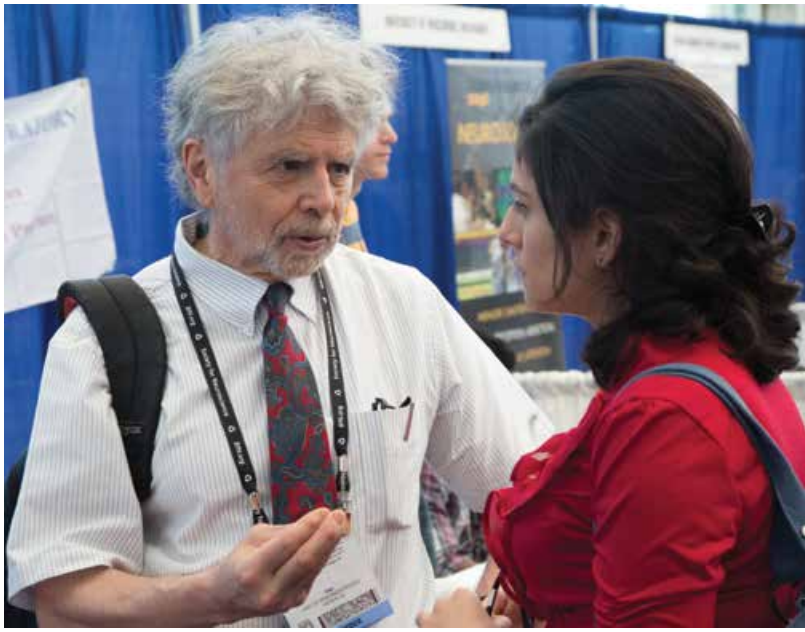
8:30–11 a.m.	CLINICAL ROUNDTABLE #1 NEW **The Subcortical Source of Inflammatory Malaise** CME **(p.30)** Organizer: Andrew H. Miller, MD
8:30–11 a.m.	**Symposia/Minisymposia** CME
9–11 a.m.	**How to Present Science Using Visual Tools (p.30)** Organizer: Scott Thompson, PhD
9–11 a.m.	**Teaching Neuroscience With Big Data (p.30)** Organizers: William Grisham, PhD; Richard Olivo, PhD
9:30 a.m.–5 p.m.	**Exhibits (p.90)**
10–11:10 a.m.	DAVID KOPF LECTURE ON NEUROETHICS **Reforming Forensic Science: Some Insights From Research on Vision and Memory (p.12)** Speaker: Thomas D. Albright, PhD
11:30 a.m.–12:40 p.m.	SPECIAL LECTURE **Understanding Mammalian Microcircuits: Let Inspiration Guide the Way** CME **(p.15)** Speaker: Jack L. Feldman, PhD
noon–2 p.m.	**Graduate School Fair (p.28)**
noon–2 p.m.	**It's a Win-Win: Effectively Engaging Undergraduates in Research (p.31)** Organizer: Donita Robinson, PhD
1–5 p.m.	**Posters/Nanosymposia**
1:30–4 p.m.	**Symposia/Minisymposia** CME
3:15–4:25 p.m.	ALBERT AND ELLEN GRASS LECTURE **Natural Products as Probes of the Pain Pathway: From Physiology to Atomic Structure** CME **(p.12)** Speaker: David J. Julius, PhD
5:15–6:25 p.m.	PRESIDENTIAL SPECIAL LECTURE **Toward Whole-Body Connectome in *Drosophila*** CME **(p.12)** Speaker: Ann-Shyn Chiang, PhD
6:45–8:45 p.m.	**SfN-Sponsored Socials**

Tuesday, November 15

8 a.m.–noon	**Posters/Nanosymposia**
8 a.m.–5 p.m.	**NeuroJobs Career Center (p.27)**
8:30–9:40 a.m.	SPECIAL LECTURE **Genetic Dissection of Sensorimotor Circuits in the Spinal Cord** CME **(p.14)** Speaker: Martyn D. Goulding, PhD
8:30–11 a.m.	CLINICAL ROUNDTABLE #2 NEW **Medications Development for Cannabis Use Disorder: CB1 Receptor Agonists, Antagonists and Signaling-Specific Inhibitors** CME **(p.31)** Organizer: Margaret Haney, PhD
8:30–11 a.m.	**Symposia/Minisymposia** CME
9:30 a.m.–5 p.m.	**Exhibits (p.90)**
10–11:10 a.m.	SPECIAL LECTURE **From Song to Synapse: Vocal Communication in Sparrows, Finches, and Mice** CME **(p.15)** Speaker: Richard D. Mooney, PhD
10 a.m.–noon	ANIMALS IN RESEARCH PANEL **How to Engage Institutions to Publicly Support Animal Research: A Top-Down Approach (p.31)** Organizer: Mar Sanchez, PhD
11:30 a.m.–12:40 p.m.	SPECIAL LECTURE **Clinical Neuroscience Lecture: Deciphering the Dynamics of the Unconscious Brain Under General Anesthesia** CME **(p.15)** Speaker: Emery N. Brown, MD, PhD
noon–2 p.m.	**Celebration of Women in Neuroscience Luncheon (p.31)** Speaker: M. Victoria Puig, PhD
noon–2 p.m.	**Graduate School Fair (p.28)**
1–2:10 p.m.	SPECIAL LECTURE **Cortical Circuits of Vision** CME **(p.14)** Speaker: Massimo Scanziani, PhD

Download the meeting mobile app for up-to-date session information





1–5 p.m.	**Posters/Nanosymposia**
1:30–4 p.m.	**Symposia/Minisymposia** CME
2:30–3:40 p.m.	FRED KAVLI HISTORY OF NEUROSCIENCE LECTURE **Sixty Years of Research on Neurotransmitter Release in the Light of Recent Results from the Calyx of Held Synapse (p.13)** Speaker: Erwin Neher, PhD
3–5 p.m.	PUBLIC ADVOCACY FORUM **Art, Music, and the Brain: How the Arts Influence Us from Youth to Maturity (p.30)** Organizer: William Martin, PhD
5:15–6:25 p.m.	PRESIDENTIAL SPECIAL LECTURE **Neurobiology of the Adolescent and Young Adult Brain Reveals Unique Strengths and Vulnerabilities: Debunking Myths** CME **(p.13)** Lecturer: Frances E. Jensen, MD
6:45–7:30 p.m.	**SfN Members' Business Meeting (p.31)**
6:45–8:45 p.m.	**SfN-Sponsored Socials**
9 p.m.–midnight	**Graduate Student Reception (p.31)**

Wednesday, November 16

8 a.m.–noon	**Posters/Nanosymposia**
8 a.m.–3 p.m.	**NeuroJobs Career Center (p.27)**
8:30–9:40 a.m.	SPECIAL LECTURE **Regulation of Neural Stem Cell Fate During Development and in the Adult** CME **(p.14)** Speaker: Yukiko Gotoh, PhD
8:30–11 a.m.	CLINICAL ROUNDTABLE #3 NEW **Critical Topics in Pain Mechanisms and Therapeutics** CME **(p.31)** Organizer: Timothy J. Brennan, MD, PhD
8:30–11 a.m.	**Symposia/Minisymposia** CME
9:30 a.m.–5 p.m.	**Exhibits (p.90)**
10–11:10 a.m.	SPECIAL LECTURE **Postdiction and Perceptual Awareness** CME **(p.14)** Lecturer: Shinsuke Shimojo, PhD
11:30 a.m.–12:40 p.m.	SPECIAL LECTURE **The Social Brain in Human Adolescence** CME **(p.15)** Lecturer: Sarah–Jayne Blakemore, PhD
1–2:10 p.m.	SPECIAL LECTURE **Capturing Immune Responses to Understand and Treat Neurodegenerative Disease** CME **(p.14)** Lecturer: Eliezer Masliah, MD
1–5 p.m.	**Posters/Nanosymposia**
1:30–4 p.m.	**Symposia/Minisymposia** CME

CME This activity has been approved for *AMA PRA Category 1 Credit*™. For details, see page 62 and **visit SfN.org/cme**.

Featured Lectures

All lectures will take place in Ballroom 20 of the San Diego Convention Center. Overflow viewing will be available in Hall A.

PRESIDENTIAL SPECIAL LECTURE

Circuits for Vocal Communication CME

Sarah M. N. Woolley, PhD

Columbia University
Support contributed by Biogen
Saturday, November 12, 5:15–6:25 p.m.

Social communication reflects the coordinated development of sensory and motor circuits around signals that convey information. The young brain, learning to communicate with hearing and voice, builds auditory and vocal motor circuits that are functionally coupled to perceive and produce similar signals. This lecture describes progress made using songbirds to understand how species' identity dictates the capacities and limits of vocal learning, how early experience shapes auditory and vocal circuits, and how species and learning combine to map auditory tuning onto vocal acoustics.

PETER AND PATRICIA GRUBER LECTURE

Random Walk in Neurobiology

Mu-ming Poo, PhD

University of California-Berkeley and Institute of Neuroscience, Chinese Academy of Science
Support contributed by The Gruber Foundation
Sunday, November 13, 2:30–3:40 p.m.

Beginning as a biophysicist studying diffusion of membrane proteins, I stumbled upon many interesting problems in cellular neurobiology, including neuronal polarization, axon guidance, synaptogenesis, and synaptic plasticity. An underlying theme in all these processes is random diffusion of proteins confined or even directed by localization mechanisms, leading to cellular topography critical for neuronal functions. As it turned out, my own career path resembled a random walk, influenced and sometimes directed by interactions with my students, postdocs, and colleagues.

PRESIDENTIAL SPECIAL LECTURE

Limitations on Visual Development: Neurons and Behavior CME

Lynne Kiorpes, PhD
New York University
Sunday, November 13, 5:15–6:25 p.m.

Vision develops over many months in primate infants. The neural mechanisms that limit visual function are not fully understood. During development, neurons in the visual cortex are more sensitive than would be expected based on visual behavior. Abnormal early experience creates a specific disorder — amblyopia — which permanently disrupts vision. Here also, the sensitivity of neurons in the visual cortex exceeds behavior. This talk will describe the neural limits on normal and abnormal postnatal visual development based on studies of the brain and behavior in human and nonhuman primates.

DAVID KOPF LECTURE ON NEUROETHICS

Reforming Forensic Science: Some Insights from Research on Vision and Memory

Thomas D. Albright, PhD
Salk Institute for Biological Studies
Support contributed by David Kopf Instruments
Monday, November 14, 10–11:10 a.m.

In its 2009 report, *Strengthening Forensic Science in the United States: A Path Forward,* the National Academy of Sciences identified a number of significant weaknesses in forensic science, which have contributed to wrongful convictions and have threatened public confidence in our criminal justice system. These problems have prompted broad calls for reform of the processes by which forensic evidence is acquired, analyzed, and interpreted. Several types of forensic analyses involve evaluation of complex visual patterns or memories of visual experiences. Advances in understanding of brain systems for visual sensation, perception, and memory can help shape forensic reform by illuminating the relevant sensory and cognitive processes, their limitations, and factors that can improve human performance in a forensic context.

ALBERT AND ELLEN GRASS LECTURE

Natural Products as Probes of the Pain Pathway: From Physiology to Atomic Structure CME

David J. Julius, PhD
University of California, San Francisco
Support contributed by The Grass Foundation
Monday, November 14, 3:15–4:25 p.m.

The study of somatosensation, nociception, and pain has undergone a revolution with the application of molecular genetic, biochemical, and biophysical methods. With these approaches, investigators have begun to identify molecules, cells, and circuits that underlie stimulus detection, perception, and maladaptive processes. Together, these studies are providing an intellectual and technical foundation for developing new classes of analgesic agents.

PRESIDENTIAL SPECIAL LECTURE

Toward Whole-Body Connectome in *Drosophila* CME

Ann-Shyn Chiang, PhD
National Tsing Hua University, Taiwan
Support contributed by Janssen Research & Development LLC
Monday, November 14, 5:15–6:25 p.m.

Our brains receive information from sensory neurons about our external environment and internal organs. To understand how the brain processes information and initiates motor outputs, scientists are constructing complete

wiring diagrams called “connectomes” that map all neural connections in the brain and body. Taking *Drosophila melanogaster* as an example, this lecture will address challenges in building whole-body connectomes and how that knowledge may help us better understand normal function and treat disease.

FRED KAVLI HISTORY OF NEUROSCIENCE LECTURE

Sixty Years of Research on Neurotransmitter Release in the Light of Recent Results from the Calyx of Held Synapse

Erwin Neher, PhD
Max Planck Institute for Biophysical Chemistry
Support contributed by The Kavli Foundation
Tuesday, November 15, 2:30–3:40 p.m.

In the 1950s, Sir Bernhard Katz and co-workers laid the foundation for our present understanding of neurotransmitter release and its short-term plasticity. Their terms “units available” (for release) and “units responding to one impulse” have been replaced with terms like vesicle pools, release probability, and quantal content. Since then, the description of certain aspects of short-term plasticity has gained considerable complexity. Research on the Calyx of Held has described this complexity including heterogeneity of vesicle pools, refractoriness of release sites, and a phenomenon called “superpriming.” Nevertheless, this talk will argue that the original Katz view is still a useful framework on which to build.

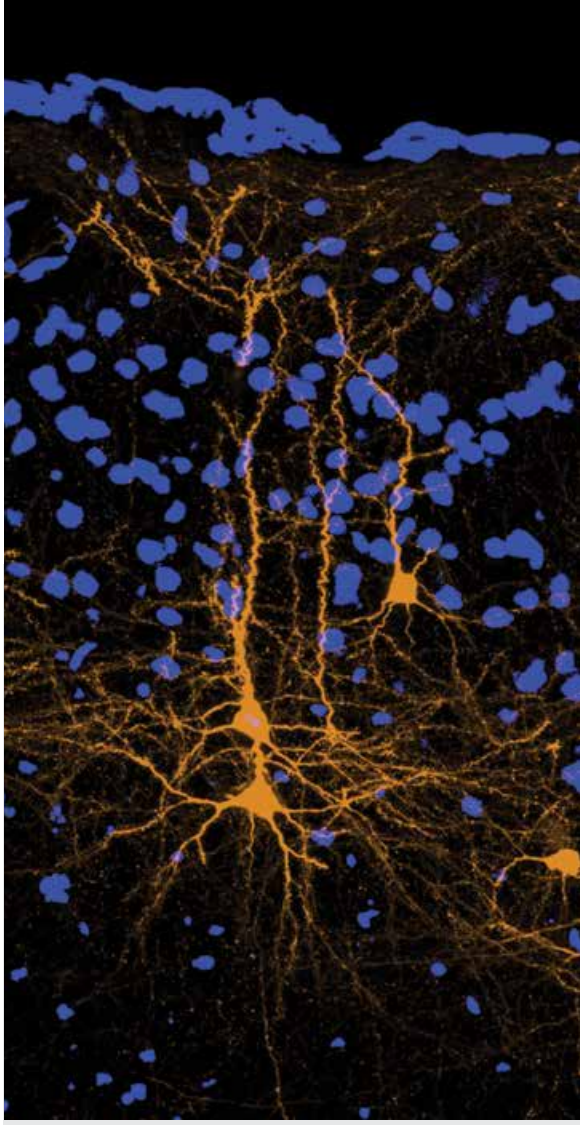
PRESIDENTIAL SPECIAL LECTURE

Neurobiology of the and Young Adult Brain Reveals Unique Strengths and Vulnerabilities: Debunking Myths CME

Frances E. Jensen, MD

Perelman School of Medicine, University of Pennsylvania
Tuesday, November 15, 5:15–6:25 p.m.

Experimental and human evidence reveal that adolescence is a paradoxical state, with enhanced synaptic plasticity yet incomplete myelination and regional connectivity. Full maturity is not reached until the third decade. Adolescent brain neuroscience impacts our understanding of patterns of onset of psychiatric illness, the long-term effects of exposure to substances of abuse and stress, and also explains their advantage in learning and memory, and why they exhibit “signature” behaviors such as impulsivity, emotional liability, altered sleep cycle, and susceptibility to addiction.



DIALOGUES BETWEEN NEUROSCIENCE AND SOCIETY

Global Mental Health and Neuroscience: Challenges and Opportunities

Shekhar Saxena, MD
World Health Organization
Support contributed by Elsevier
Saturday, November 12, 11 a.m.–1 p.m.

Global mental health is slowly but steadily coming out of the shadows. It is benefiting from advances in neuroscience, but not adequately. The potential is much greater. This lecture will present a background of the current state of mental health in the world and then focus on how a closer collaboration between mental health and neuroscience could enhance knowledge and improve population health. Examples from the areas of autism, substance dependence, psychoses, and dementia will help illustrate this potential.

CME This activity has been approved for *AMA PRA Category 1 Credit™*. For details, see page 62 and **visit SfN.org/cme**.

Special Lectures

All lectures will take place in Ballroom 20 of the San Diego Convention Center. Overflow viewing will be available in Hall A

THEME A: DEVELOPMENT

Lineage Analyses of Developing CNS Tissues CME

Connie Cepko, PhD
Harvard Medical School and Howard Hughes Medical Institute
Saturday, November 12, 2–3:10 p.m.

Lineage analyses describe the progenitor: progeny relationships in developing tissue. Lineage data can rule in, or out, particular models of how a cell achieves its fate, as well as when some of the fate-determining events occur. Lineages can be most definitively tracked using clonal methods, as afforded by retroviral infection. The interpretability of lineage data is further strengthened when mapping is done from identified types of progenitor cells. Recent studies using such methods in the retina and telencephalon will be presented.

Regulation of Neural Stem Cell Fate During Development and in the Adult CME

Yukiko Gotoh, PhD
University of Tokyo
Wednesday, November 16, 8:30–9:40 a.m.

This lecture will discuss how neocortical neural stem/progenitor cell (NPC) fate is regulated in a developmental stage-dependent manner. This lecture will also focus on the mechanisms underlying long-term maintenance of adult neural stem cells (NSCs), the differences between embryonic NPCs and adult NSCs, and the embryonic origin of adult NSCs.

THEME B: NEURAL EXCITABILITY, SYNAPSES, AND GLIA

Quantal Release and Its Requirements CME

Robert Edwards, MD
University of California, San Francisco
Monday, November 14, 8:30–9:40 a.m.

Quantal release by exocytosis requires the transport of classical neurotransmitters into secretory vesicles. Vesicular transport activity thus defines the membranes as well as the cells capable of transmitter release. However, the three families of vesicular transporters differ in ionic coupling. This lecture will discuss the biophysical properties of the transporters, the properties of secretory vesicles that influence their function, and the implications for synaptic transmission, including quantal size, non-vesicular efflux, synaptic vesicle pools and transmitter co-release.

Cortical Circuits of Vision CME

Massimo Scanziani, PhD
University of California, San Francisco
Tuesday, November 15, 1–2:10 p.m.

The diversity of neuron types and synaptic connectivity patterns in the cerebral cortex is astonishing. How this cellular and synaptic diversity contributes to cortical function is just beginning to emerge. Using the mouse visual system as an experimental model, this lecture will discuss the mechanisms by which excitatory and inhibitory interactions among distinct neuron types contribute to the most basic operations in visual cortex. This lecture will highlight how a functional and structural analysis of cortical circuits allows us to bridge the gap between system and cellular neuroscience.

THEME C: NEURODEGENERATIVE DISORDERS AND INJURY

Capturing Immune Responses to Understand and Treat Neurodegenerative Disease CME

Eliezer Masliah, MD
University of California, San Diego
Wednesday, November 16, 1–2:10 p.m.

Neurodegenerative disorders are characterized by progressive accumulation of proteins leading to cognitive impairment and movement disorders. A dysequilibrium in the rate of aggregation, clearance, and synthesis appears to play a key role. Moreover, recent studies have shown that prion-like propagation of proteins may contribute to neurodegeneration. Therefore, developing strategies to increase clearance and diminish prion-like propagation might be key to treating these disorders. Harnessing the power of the immune system by utilizing cellular and humoral immunization has been under development for the past several years. This lecture will provide a perspective on the recent progress and challenges of utilizing immunotherapy for neurodegenerative disorders.

THEME D: SENSORY SYSTEMS

Genetic Dissection of Sensorimotor Circuits in the Spinal Cord CME

Martyn D. Goulding, PhD
Salk Institute for Biological Studies
Tuesday, November 15, 8:30–9:40 a.m.

Sensorimotor circuits in the spinal cord play essential roles in somatosensation and motor control. Studies defining the genetic programs controlling spinal cord development have opened up new avenues for exploring the cellular and functional organization of these circuits. This lecture will outline our current understanding of the spinal CPG circuits that control locomotion and the dorsal horn pathways that process and transmit cutaneous somatosensory modalities, highlighting the cutting-edge genetic and behavioral approaches that are being employed to map these circuits.

Postdiction and Perceptual Awareness CME

Shinsuke Shimojo, PhD
California Institute of Technology
Wednesday, November 16, 10–11:10 a.m.

There are a few postdictive perceptual phenomena known where a stimulus presented later causally affects the percept of target presented earlier. While backward masking and apparent motion provide classical examples, the flash lag effect and its variations have stimulated theorists. The TMS-triggered scotoma and its “backward filling-in” offer a unique neurophysiological case. Findings suggest that various visual attributes are postdictively reorganized; its neural correlates (such as reentry) and implications to understand visual awareness and sense of agency will be discussed.

THEME E: MOTOR SYSTEMS

Circuits for Movement CME

Silvia Arber, PhD
Biozentrum, University of Basel and Friedrich Miescher Institute
Sunday, November 13, 1–2:10 p.m.

Movement is the behavioral output of the nervous system. Animals carry out an enormous repertoire

of distinct actions, spanning from seemingly simple repetitive tasks like walking, to more complex movements such as forelimb manipulation tasks. This lecture will focus on recent work elucidating the organization and function of neuronal circuits at the core of regulating distinct motor behaviors. It will show that dedicated circuit modules within different brainstem nuclei and their interactions in the motor system play key roles in action diversification.

Understanding Mammalian Microcircuits: Let Inspiration Guide the Way CME

Jack L. Feldman, PhD
University of California, Los Angeles
Monday, November 14,
11:30 a.m.–12:40 p.m.

More than 25 years since our discovery of the pre-Bötzinger Complex, the core of the circuit for breathing, the underlying mechanisms governing its dynamics remain elusive and are much more complex than we first thought. This lecture will address how novel emergent mechanisms, but not pacemakers, inhibition, or bursting, are likely to be critical and describe the roles the pre-BötC plays in regulation of body function, other movements, and emotion. The neural circuit controlling breathing is inimitably tractable and may inspire general strategies for elucidating other neural microcircuits.

THEME F: INTEGRATIVE PHYSIOLOGY AND BEHAVIOR

Bitten: Understanding and Modulating Mosquito Attraction to Humans CME

Leslie B. Vosshall, PhD
Rockefeller University
Sunday, November 13, 8:30–9:40 a.m.

By the act of feeding on our blood, female mosquitoes spread dangerous infectious diseases such as malaria, dengue, zika, and yellow fever to humans. We attract mosquitoes via multiple sensory cues including emitted body odor, body heat, and carbon dioxide in the breath. The mosquito perceives differences in these cues, both between and within species, to determine which animal or human to target for blood-feeding. This lecture focuses on the genes and circuits that drive this dangerous behavior and how it is modulated by the internal physiological state of the mosquito.

From Song to Synapse: Vocal Communication in Sparrows, Finches, and Mice CME

Richard D. Mooney, PhD
Duke University School of Medicine
Tuesday, November 15, 10–11:10 a.m.

The interplay between hearing and vocalization is critical to vocal communication and vocal learning. Recent research using both songbirds and mice has provided keen insights into the neural circuits and mechanisms that mediate this sensorimotor interplay. This lecture will cover recent progress in understanding how auditory experience engages and shapes motor systems to enable vocal learning, how motor systems modulate hearing during vocalization and other movements, and the neural circuitry that produces vocalizations used for social communication.

THEME G: MOTIVATION AND EMOTION

Translational Neuroepigenetic Insights of Addiction Vulnerability CME

Yasmin L. Hurd, PhD
Icahn School of Medicine at Mount Sinai
Sunday, November 13,
11:30 a.m.–12:40 p.m.

Drug addiction involves complex interaction of dynamic processes that contribute to individual vulnerability from early stages of development and during different phases of life by linking genetic factors with environmental experiences. This lecture will focus on the neurobiological insights recently gained about the molecular underpinnings of substance abuse, particularly cannabis and opiates using multidisciplinary translational approaches in humans and animal models. The work presented will illuminate epigenetic mechanisms associated with addiction risk that extend even across generations.

THEME H: COGNITION
CLINICAL NEUROSCIENCE LECTURE

Deciphering the Dynamics of the Unconscious Brain Under General Anesthesia CME

Emery N. Brown, MD, PhD
Massachusetts Institute of Technology
Tuesday, November 15,
11:30 a.m.–12:40 p.m.

General anesthesia is a drug-induced reversible coma. A primary mechanism by which anesthetics induce altered states of arousal is by producing large, structured oscillations that impair communication among brain regions. This lecture will discuss the neurophysiology of these oscillations and how they change with drug and patient age. It will show new ways to control the anesthetic state and induce rapid emergence from anesthesia. Studying mechanisms of anesthesia is a largely untapped way of studying the brain.

The Social Brain in Human Adolescence CME

Sarah-Jayne Blakemore, PhD
University College London
Wednesday, November 16,
11:30 a.m.–12:40 p.m.

Social cognitive processes involved in navigating an increasingly complex social world continue to develop throughout human adolescence. In the past 20 years, neuroscience research has shown that the human brain develops both structurally and functionally during adolescence. Areas of the social brain undergo significant reorganization during the second decade of life, which might reflect a sensitive period for adapting to the social environment.

THEME I: TECHNIQUES

Dendritic Spines Shaping Memory and Behaviors CME

Haruo Kasai, MD, PhD
Graduate School of Medicine,
University of Tokyo
Sunday, November 13, 10–11:10 a.m.

Spiny protrusions of dendrite, called dendritic spines, are the major postsynaptic sites for excitatory synaptic transmission in the brain. New studies indicate that spines act as memory elements, and do so by their structural plasticity. Such cell motility regulates functional connectivity and enables Hebbian and reinforcement learning in the cortex and basal ganglia. Motility can be spontaneous, and such fluctuations may determine memory persistence and stabilize recurrently connected networks. Spine motility connects cell biology to mental functions and disorders.

Symposia

THEME A: DEVELOPMENT

Neuronal Cytoskeleton 2.0: A Revised View of an Ancient Edifice CME

Chair: Subhojit Roy, MD, PhD
Co-Chair: Casper Hoogenraad, PhD
Sunday, November 13, 8:30–11 a.m.
San Diego Convention Center: 6F

The neuronal cytoskeleton is essential for trafficking molecules into axons and dendrites and also for maintaining the structural integrity of these elongated appendages. Recent advances in super-resolution, live imaging, and genetics have revealed a remarkable cytoskeletal organization in neurons, essentially revising canonical models. The goal of this symposium will be to inform the audience of these exciting new developments, present ongoing research, and foster cross-talk among participants.

Neuroepigenetics CME

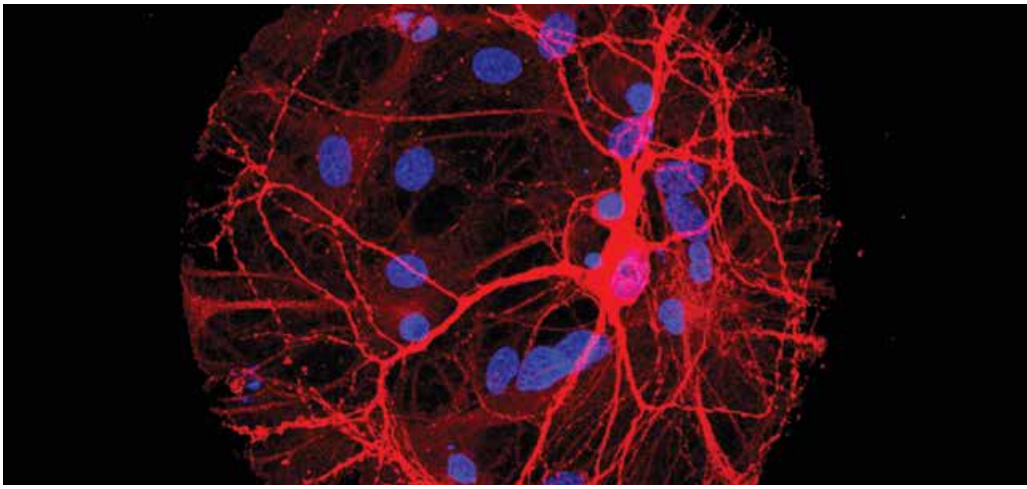
Chair: Li-Huei Tsai, PhD
Tuesday, November 15, 8:30–11 a.m.
San Diego Convention Center: 6A

The aim of this symposium is to discuss the role of epigenetic mechanisms of neuronal diversity, the plasticity of neuronal networks, and their alteration during various neurological disorders. The symposium will focus on the chromatin-based mechanism of neuronal gene expression regulation, as well as on the epigenetic foundations of memory and social behavior, and how pharmacological compounds that target specific epigenetic processes can interfere with diseases.

Making Serotonergic Neurons: From Mouse to Human CME

Chair: Jian Feng, PhD
Wednesday, November 16, 1:30–4 p.m.
San Diego Convention Center: 6F

Serotonergic neurons exert diverse actions in the brain. This symposium will highlight how knowledge on the development of mouse serotonergic neurons informs the strategies to generate human serotonergic neurons by directed differentiation of pluripotent stem cells or by transdifferentiation of fibroblasts. The ability to generate patient-specific serotonergic neurons opens up unprecedented opportunities for mechanistic studies and drug discovery in many serotonin-related brain disorders.



THEME B: NEURAL EXCITABILITY, SYNAPSES, AND GLIA

Synaptic Actin Dysregulation: A Convergent Mechanism of Mental Disorders? CME

Chair: Scott H. Soderling, PhD
Co-Chair: Zhen Yan, PhD
Saturday, November 12, 1:30–4 p.m.
San Diego Convention Center: 6B

Synaptic actin polymerization governs activity-dependent modulation of excitatory synapses. Many candidate genes for psychiatric and neurodevelopmental disorders encode regulators of signaling to the actin cytoskeleton, suggesting that its disruption is a commonly affected pathway in brain disorders. This symposium will discuss recent experimental findings that strongly support genetic evidence linking the synaptic cytoskeleton to conditions such as schizophrenia and autism spectrum disorders.

The Ultrastructural Basis of Synaptic Transmission and Plasticity CME

Chair: Kristen M. Harris, PhD
Co-Chair: Nils Brose, PhD
Wednesday. November 16, 1:30–4 p.m.
San Diego Convention Center: 6A

Since the invention of the electron microscope, the function of synapses has been illuminated by ultrastructure. Technological advances in stimulation and fixation methods, protein identification, and 3-D reconstruction provide key insights into how subcellular and molecular components mediate synaptic transmission and plasticity. This symposium will explore the ultrastructural and proteinaceous basis of synapse function and the defined plasticity states involved in learning and memory.

THEME C: NEURODEGENERATIVE DISORDERS AND INJURY

Autophagy-Lysosomal Mechanism in Neurodegeneration CME

Chair: Zhenyu Yue, PhD
Co-Chair: Ana Maria Cuervo, MD, PhD
Saturday, November 12, 1:30–4 p.m.
San Diego Convention Center: 6A

This symposium will present recent advances in autophagy research in neurons and major neurodegenerative diseases. It will provide insight into molecular mechanisms of autophagy control, particularly on subtypes of autophagy that regulate neuronal homeostasis via the clearance of disease protein aggregates and damaged mitochondria. The session will discuss how disease mutants disrupt the autophagy-lysosomal pathway, and strategies of harnessing neuroprotection of autophagy for therapeutic development.

Microtubule and Tau-Based Therapy for Alzheimer's Disease and Other Brain Disorders CME

Chair: Illana Gozes, PhD
Co-Chair: Eckhard Mandelkow, PhD
Monday, November 14, 8:30–11 a.m.
San Diego Convention Center: 6A

The microtubule subunit, tubulin, is a major brain protein. Microtubule associated proteins like tau are key regulatory elements of neuronal and glial health. Microtubule dysfunction leads to the blockade of axonal transport, glial impairment, and synaptic dysfunction/loss, which are hallmarks of brain diseases. This symposium will focus on microtubules in different cell types for a better understanding of brain function in health and disease, and toward improved diagnostics and therapeutics.

Proteoglycans in Neural Development and Disease CME

Chair: Herbert M. Geller, PhD
Co-Chair: Jerry Silver, PhD
Tuesday, November 15, 1:30–4 p.m.
San Diego Convention Center: 6A

Proteoglycans are secreted by every cell, yet their functions in the nervous system are still mostly unexplored. Uniquely, proteoglycans signal through their sugar chains rather than their protein backbones. These chains are heterogeneous in both length and sulfation pattern. This symposium will highlight recent developments in identification of receptors and signal transduction mechanisms used by heparan sulfate and chondroitin sulfate proteoglycans, and how they are involved in development, plasticity, disease, and the injury response in the nervous system.

THEME D: SENSORY SYSTEMS

Neuroscience of Music: Novel Discoveries and Their Implications in the Understanding of Music and the Brain CME

Chair: Elizabeth Stegemöller, PhD
Co-Chair: Patricia Izbicki
Sunday, November 13, 8:30–11 a.m.
San Diego Convention Center: 6B

Recent developments in understanding the effects of music on the brain have revolutionized music therapy, musical neuroeducation, music perception, and music cognition. This symposium will highlight the neurological mechanisms and significance of music used in the clinical setting, neuroeducation, and daily experiences. Experts in the areas of neuroscience and music will speak on topics including music and neuroplasticity, music and neurochemistry, and the biology of auditory learning.

Current Topics in Chronic Pain: From Molecules to Medicine CME

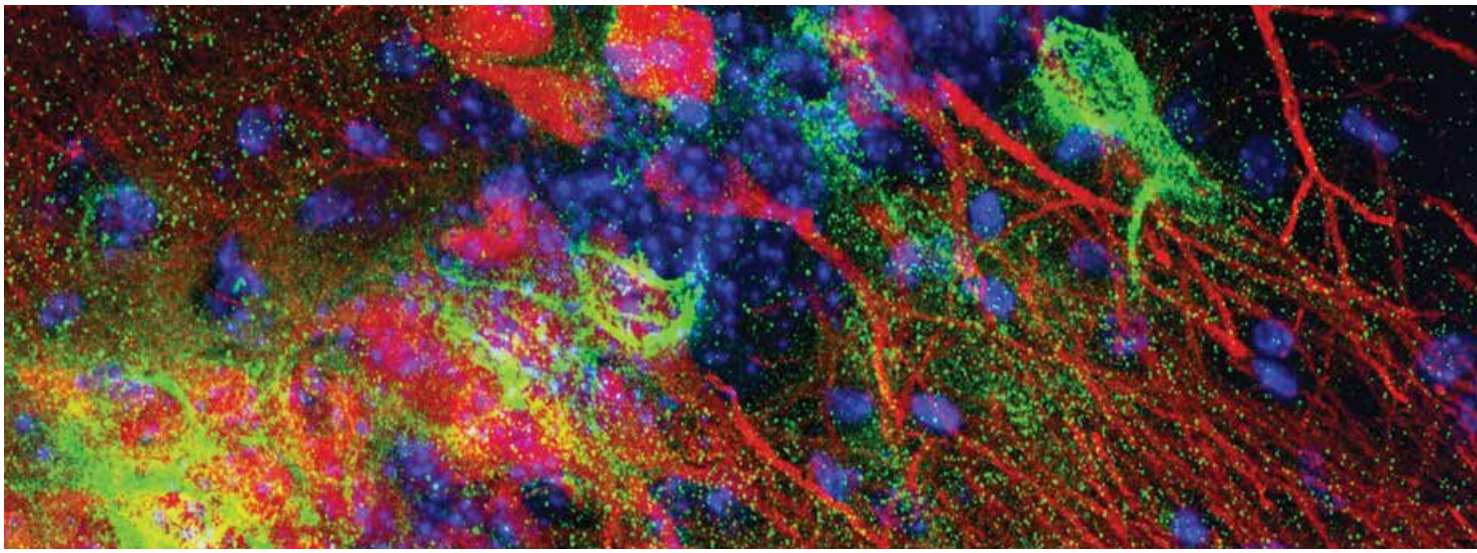
Chair: Cheryl L. Stucky, PhD
Co-Chair: Xinzhong Dong, PhD
Monday, November 14, 8:30–11 a.m.
San Diego Convention Center: 6B

Chronic pain is a persistent, debilitating condition stemming from a variety of etiologies and diseases. Over 1.5 billion people worldwide suffer from chronic pain that is only partially alleviated by current therapies and treatments. Recent studies have elucidated novel molecular and cellular players that drive chronic pain in animal models and human conditions. This symposium will review these advances and discuss their implications for the diagnosis and treatment of chronic pain patients.

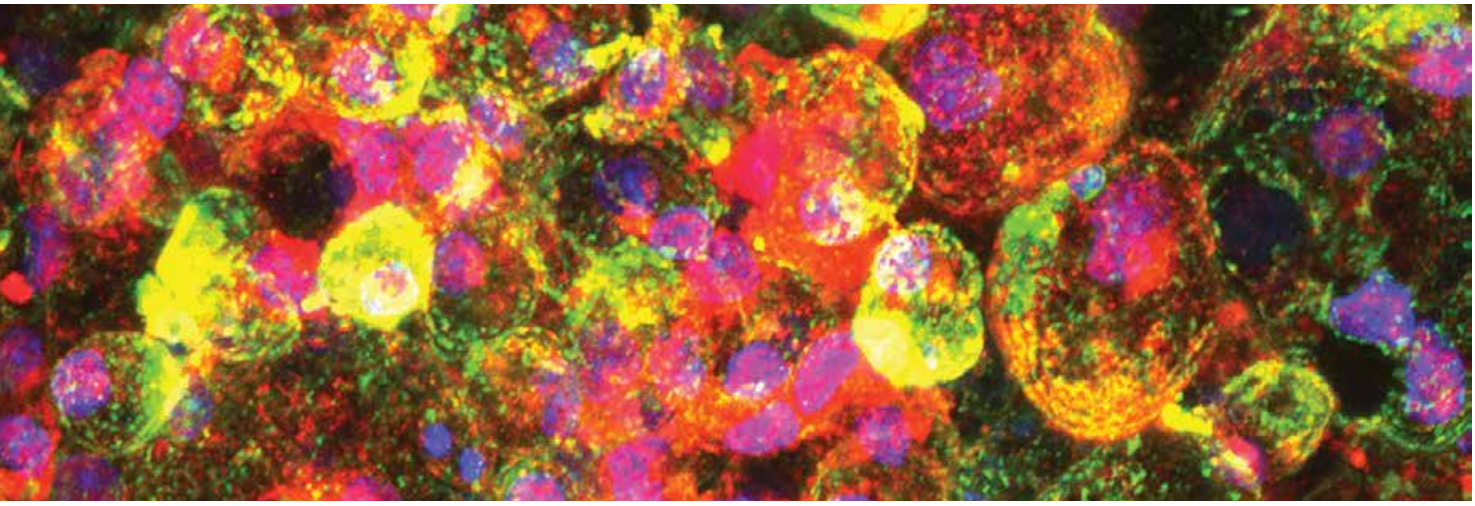
Mechanisms of Object Organization in the Visual Cortex CME

Chair: Rüdiger von der Heydt, PhD
Monday, November 14, 1:30–4 p.m.
San Diego Convention Center: 6F

How does the visual cortex organize elementary features to objects? This symposium will provide a comprehensive picture of recent findings on object-based coding at low and intermediate cortical levels (V1-V2-V4), its possible mechanisms, and its hypothetical role in vision. The session will also question where the organizing influence comes from, how its time course is relative to other stages of visual processing, and how the organizing influence relates to object individuation, awareness, recognition, and selective attention.



Symposia



THEME E: MOTOR SYSTEMS

New Developments in Understanding the Complexity of Human Speaking CME

Chair: Kristina Simonyan, MD, PhD

Sunday, November 13, 8:30–11 a.m.

San Diego Convention Center: 6A

Speech is one of the most unique features of human existence and communication. Our ability to articulate our thoughts depends critically on the integrity of the motor cortex. Long thought to be a low-order brain region, exciting work in past years is overturning this notion. In this symposium, speakers will highlight major experimental advances in speech motor control research and discuss emerging findings about the complexity of speech motor cortex organization and its large-scale networks.

Facilitation of Recovery of Motor Function After Paralysis With Non-Invasive Spinal Cord Stimulation CME

Chair: V. Reggie Edgerton, PhD

Monday, November 14, 1:30–4 p.m.

San Diego Convention Center: 6A

This symposium describes changes of the physiological state of spinal networks using noninvasive spinal cord stimulation combined with step training in an exoskeleton. The speakers will demonstrate recovery of voluntary movement, posture, and locomotor function in individuals that have been paralyzed for over one year, a time which historically has been considered beyond the critical period for motor recovery. A subject that has received these interventions will share his experiences.

Spike Timing Codes for Motor Control CME

Chair: Samuel J. Sober, PhD

Tuesday, November 15, 8:30–11 a.m.

San Diego Convention Center: 6F

Neurons emit spike trains that vary in both the rate and precise timing patterns of spikes. Whereas there is substantial evidence that sensory systems can use millisecond-scale spike timing patterns to encode information, studies of motor control have focused almost exclusively on spike rates. This session will present emerging work from a wide range of species (insects, songbirds, and mice) showing that brains can control behavior by precisely regulating spike timing patterns.

The Neural Basis of Adaptive Motor Control in the Cerebellum CME

Chair: Reza Shadmehr, PhD

Wednesday, November 16, 1:30–4 p.m.

San Diego Convention Center: 6B

The cerebellum is critical for learning to make accurate movements, yet the neural mechanisms of how it learns this adaptive control remain poorly understood. This symposium will consider this puzzle by attempting to answer three questions regarding what Purkinje cells and cells at deep cerebellar nuclei encode, what inferior olive neurons that project onto these cells encode, and how Purkinje cells learn to alter their encoding in response to error information from the inferior olive.

THEME F: INTEGRATIVE PHYSIOLOGY AND BEHAVIOR

Physical Activity Impacting Neuroplasticity in Aging and Disease CME

Chair: Giselle Petzinger, MD

Co-Chair: Sarah McEwen, PhD

Sunday, November 13, 1:30–4 p.m.

San Diego Convention Center: 6A

This symposium will present translational research investigating physical activity-induced structural and functional alterations in brain circuits and synaptic function, and potential mechanisms underlying activity-dependent plasticity in aging and disease. Effects of exercise on structure and functional connectivity of the brain and alterations in gene and protein expression important for neuroplasticity will be discussed in the context of aging, neurodegenerative disorders, and schizophrenia.

CME This activity has been approved for *AMA PRA Category 1 Credit*™. For details, see page 62 and **visit SfN.org/cme**.

Getting Down to Business: Identifying Epigenetic Mechanisms of Behaviors Within Discrete Cell Populations CME

Chair: Tracy L. Bale, PhD
Co-Chair: Paul J. Kenny, PhD
Wednesday, November 16, 8:30–11 a.m.
San Diego Convention Center: 6B

Identifying the epigenetic modifications and their impact within discrete neuronal populations is critical in understanding brain health and disease risk, including behaviors important to stress coping, addiction, and learning and memory. Expert speakers will describe their latest studies on novel epigenetic mechanisms, including miRNAs, nucleosome remodeling, and unique histone modifications, and demonstrate their role in specific behavioral outcomes.

THEME G: MOTIVATION AND EMOTION

Advances in Noninvasive Brain Stimulation Along the Space-Time Continuum CME

Chair: C. Alex Goddard, PhD
Co-Chair: Sarah H. Lisanby, MD
Monday, November 14, 1:30–4 p.m.
San Diego Convention Center: 6B

Noninvasive brain stimulation (NBS) is a key tool for probing neural circuit function and is being tested to ameliorate a host of neurological and psychiatric conditions. Recent studies suggest that specific spatial and temporal NBS parameters are critical for achieving effective modulation of intact neural circuitry. This symposium will highlight several studies that explore the importance and physiological relevance of specific spatial or temporal patterns using different forms of NBS.

The Lateral Habenula Circuitry: Reward Processing and Cognitive Control CME

Chair: Aleksandra Vicentic, PhD
Co-Chair: Bo Li, PhD
Tuesday, November 15, 8:30–11 a.m.
San Diego Convention Center: 6B

This symposium will present novel concepts from animal studies of the lateral habenula that have been recently tested with causal methods, with a goal to dissect the role of specific inputs and outputs of the LHb in processing of reward and aversion. Because dysfunctions in reward processing have been implicated in psychiatric illnesses and drug abuse, the symposium will increase our mechanistic understanding of how aberrant activity in the LHb circuits may contribute to these disorders.

Moving From Pavlovian 'Fear' Conditioning to Active Avoidance CME

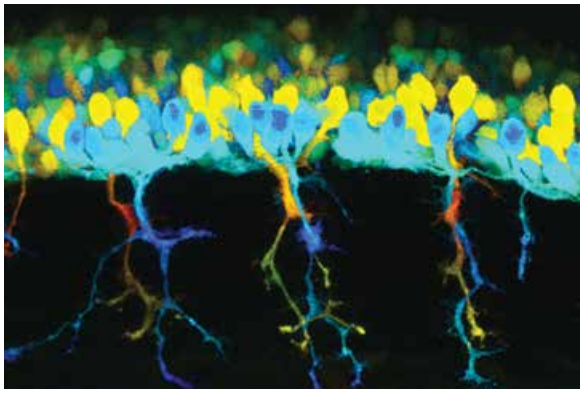
Chair: Christopher K. Cain, PhD
Co-Chair: Gregory J. Quirk, PhD
Tuesday, November 15, 1:30–4 p.m.
San Diego Convention Center: 6B

In the active avoidance paradigm (AA), subjects learn to emit actions that escape threats and prevent harm. AA research stalled in the 1970s, partly because psychologists disagreed intensely over the reinforcement mechanisms and nature of avoidance responding (operant vs. respondent). However, recent work has shed new light on the distinction between AA and fear conditioning brain circuits. This session will detail this progress and discuss the role of AA in human anxiety disorders such as obsessive-compulsive disorder.

Neural Basis of Social Rewards and Group Decisions: From Scanners to the Real World CME

Chair: Brian Knutson, PhD
Co-Chair: Jorge Moll, MD, PhD
Wendesday, November 16, 8:30–11 a.m.
San Diego Convention Center: 6A

Neuroimaging has dramatically improved our understanding of the neurobehavioral systems that support social cognition and choice. This symposium will highlight new advances, focusing on the role of reward and motivation in social perception, interpersonal communication, intergroup relations, and mass prosocial behavior. Speakers will also describe novel techniques and trends poised to extend the frontiers of neuroscience and account for social preferences and behaviors in naturalistic settings.



THEME H: COGNITION

Is the Prefrontal Cortex Special? Working Memory Across the Cortical Mantle: From Single Units to Neural Ensembles CME

Chair: Julio C. Martinez-Trujillo, MD, PhD
Co-Chair: Christos Constantinidis, PhD
Saturday, November 12, 1:30–4 p.m.
San Diego Convention Center: 6F

Working memory (WM) is one of the pillars of cognition. This symposium will offer an updated view of WM coding in primates, with emphasis in the prefrontal cortex. Experts will discuss WM coding in different brain areas of macaques, how the macaque prefrontal cortex encodes WM across the life span, how the prefrontal cortex integrates WMs from different modalities, and how to bridge WM studies in macaques and humans.

Fronto-Subthalamic Circuits for Control of Action and Cognition CME

Chair: Adam R. Aron, PhD
Monday, November 14, 8:30–11 a.m.
San Diego Convention Center: 6F

This session will report new findings about the cognitive functions and computational properties of the circuit linking frontal cortex and subthalamic nucleus (STN) of the basal ganglia. Diverse and novel technical approaches in humans are taken to record cortical and STN electrophysiology at the same time, to record single-unit human STN activity, to use 7T fMRI, and to stimulate STN optogenetically in mice. The role of the circuit is highlighted for stopping and pausing behavior and cognition.

Minisymposia

THEME A: DEVELOPMENT

Building the Cerebral Cortex: Mechanisms That Mediate Migration, Specification, and Axonal Outgrowth CME

Chair: Jill M. Weimer, PhD
Co-Chair: Jason Newbern, PhD
Sunday, November 13, 1:30–4 p.m.
San Diego Convention Center: 29D

Over the past decade, we have learned that the movement and differentiation of newly born neurons in the developing cerebral cortex are orchestrated through a close interplay between cell intrinsic signaling events and nonautonomous cues from the environment. Recent studies have uncovered novel aspects of this cellular interplay in regulating both migration and the initial stages of differentiation. In this minisymposium, the presenters will discuss several emerging key players in this process and how perturbation in these specific signaling hubs can contribute to a number of neural pediatric disorders.

Human Brain Development and Maturation: Animal Brain Mapping, Human Brain Imaging, and Computer Simulation CME

Chair: Koko Ishizuka, MD, PhD
Co-Chair: Tomomi Shimogori, PhD
Monday, November 14, 8:30–11 a.m.
San Diego Convention Center: 28A

The fundamental goal of neuroscience is to understand the human brain. With this goal in mind, comprehensive data collection and analysis have begun in each scientific area and in countries around the world. However, these datasets need to be connected to one another beyond the methodological principles to reach the final goal. This session will discuss a proposal for a symposium in which investigators from representative nation-level projects can meet and discuss how to work together for the future of neuroscience.

Current Perspectives in Autism Spectrum Disorder: From Genes to Therapy CME

Chair: M. Chiara Manzini, PhD
Co-Chair: Maria Chahrour, PhD
Tuesday, November 15, 1:30–4 p.m.
San Diego Convention Center: 6F

Autism spectrum disorder (ASD) is a constellation of neurodevelopmental presentations with genetic and nongenetic causes. Next-generation sequencing has allowed for recent strides in the genetics of ASD, while the molecular mechanisms underlying disease pathogenesis have remained elusive, thus hindering therapy development. This minisymposium will provide an overview of current ASD research, from genetic mutation and molecular pathways to sex differences, ending with strategies for drug development.

Neural Stem Cells to Cerebral Cortex: Emerging Mechanisms Regulating Progenitor Behavior and Productivity CME

Chair: Troy Ghashghaei, PhD
Co-Chair: Noelle Dwyer, PhD
Wednesday, November 16, 8:30–11 a.m.
San Diego Convention Center: 29D

Understanding the temporal and spatial regulation of neural stem cell behaviors that build the cerebral cortex is critical to treating neurodevelopmental disorders such as microcephaly and autism. This minisymposium will address how neural stem cells divide to produce different daughter types in the proper numbers and order. Distinct genetic insults impact cortical size, structure, or function differentially. The presenters will highlight emerging findings and tools that are facilitating identification of the cellular and molecular rules and logics underlying cortical development.

THEME B: NEURAL EXCITABILITY, SYNAPSES, AND GLIA

Astrocytes as Active Participants in Neural Circuits: From Cells to Systems CME

Chair: Kira Poskanzer, PhD
Co-Chair: Anna V. Molofsky, MD, PhD
Sunday, November 13, 1:30–4 p.m.
San Diego Convention Center: 6B

Astrocyte-neuron interactions are essential to neural circuit assembly and function. This minisymposium will present research at the forefront of circuit neurobiology from *in vivo* and *in situ* systems. The session will explore multiple levels at which astrocytes exert highly specific control of neural circuits and discuss their relevance to brain function and disease. The session aims to describe the dynamic interplay of these two cell types and address issues that are critical to all neuroscientists.

Casting a Wide Net: Role of Perineuronal Nets in Neural Plasticity CME

Chair: Barbara A. Sorg, PhD
Monday, November 14, 1:30–4 p.m.
San Diego Convention Center: 29D

Perineuronal nets (PNN) are specialized extracellular matrices surrounding certain central nervous system (CNS) neurons that stabilize synapses during development. Removal of PNNs in adults can restore juvenile-like plasticity. At this minisymposium, speakers will describe details of the assembly and specific components of PNNs, and the role PNNs play in schizophrenia, bipolar disorder, aging, Alzheimer's disease, and in plasticity associated with memory and drugs of abuse.

Role of Tau in Neural Network Dysfunction: From Mechanisms to Therapeutics CME

Chair: Lennart Mucke, MD
Co-Chair: Jeffrey L. Noebels, MD, PhD
Tuesday, November 15, 8:30–11 a.m.
San Diego Convention Center: 29D

This minisymposium will focus on the functions of the microtubule-associated protein tau and its role in neurological diseases. Multiple neurodegenerative disorders are associated with an abnormal neuronal accumulation of tau. Recent studies suggest that tau enables network hyperexcitability in disorders as diverse as childhood epilepsy and Alzheimer's disease. The presenters will discuss potential mechanisms underlying pathogenic tau activities and novel therapeutic strategies to block them.

Mechanisms and Consequences of White Matter Plasticity CME

Chair: David Lyons, PhD
Co-Chair: Jonah R. Chan, PhD
Tuesday, November 15, 1:30–4 p.m.
San Diego Convention Center: 29D

White matter, primarily myelinated axons, comprises about half the volume of the human central nervous system. New myelin is made by oligodendrocytes throughout life, and it is now clear that this has important consequences for higher-order nervous system function. This minisymposium will highlight research that investigates how neuronal activity regulates oligodendrocyte proliferation, differentiation, and

myelination, and how this in turn affects neuronal circuitry and animal behavior.

THEME C: NEURODEGENERATIVE DISORDERS AND INJURY

Second Generation AD Mouse Models for Reproducible Preclinical Studies CME

Chair: Takaomi C. Saido, PhD
Co-Chair: Bart De Strooper, MD, PhD
Sunday, November 13, 8:30–11 a.m.
San Diego Convention Center: 28A

First-generation mouse models of AD overexpress mutant APP or APP and PS, resulting in artificial phenotypes due to overexpression of membrane proteins. This includes non-specific ER stress, perturbed axonal transport, destruction of genetic loci in host animals, and overproduction of non-Aβ APP fragments such as CTF-β, which is more toxic than Aβ. This minisymposium will introduce second-generation mouse models of AD exhibiting Aβ pathology without APP overexpression for more accurate disease studies.

Dysregulation of mRNA Localization and Translation in Genetic Disease CME

Chair: Gary J. Bassell, PhD
Co-Chair: Eric Wang, PhD
Sunday, November 13, 1:30–4 p.m.
San Diego Convention Center: 28A

This minisymposium will highlight recent discoveries on molecular mechanisms of mRNA localization and translation, the dysregulation of mRNA in genetic diseases, and therapeutic strategies. The session integrates diverse topics and mechanisms, including the roles of several mRNA binding proteins in axonal growth, synapse development, synaptic function, learning, and memory. Mechanisms of neurodevelopmental, neuropsychiatric, and neurodegenerative diseases will be discussed. Diverse approaches include use of genome-wide transcriptomics, super-resolution microscopy, animal models, human patient cells, and postmortem tissue.

Association of Alzheimer's Disease and Other Cognitive Impairments With Metabolic Syndrome: Whenceforth Causality? CME

Chair: Steven W. Barger, PhD
Co-Chair: Natalie L. Rasgon, MD, PhD
Wednesday, November 16, 8:30–11 a.m.
San Diego Convention Center: 6F

Epidemiology links Alzheimer's disease, obesity, and type 2 diabetes. Early experiments sought evidence that deposition of amyloid beta peptide (Aß) worsened in diabetes, but recent data indicate top-down effects of Aß on peripheral metabolism, especially through actions of the peptide in the hypothalamus. Data from several fronts nonetheless evinces cognitive impairment resulting from metabolic syndrome, even in development. Cognitive impacts of a potential CNS-to-periphery-to-CNS loop will be discussed.

THEME D: SENSORY SYSTEMS

New Insight Into Cold Pain: Role of Ion Channels, Modulation, and Clinical Perspectives CME

Chair: Jacques Noel, PhD
Co-Chair: Jerome Busserolles, PhD
Wednesday, November 16, 1:30–4 p.m.
San Diego Convention Center: 28A

Fifteen years after the cloning of the first cold transducer channel, the molecular mechanisms of cold transduction and cold-triggered pain perception remain elusive. Recent progress has been made in this matter, which will be exposed in this session. New results about the contribution to cold pain from a wide variety of channels such as TRPs, leaky K^+ and voltage-gated Na^+ channels, and leak K^+ channels will be presented. Their modulation and the resulting clinical perspectives will also be discussed.

THEME E: MOTOR SYSTEMS

Neuronal Circuits Driving Behavior: Invertebrates to Vertebrates CME

Chair: Sara M. Wasserman, PhD
Saturday, November 12, 1:30–4 p.m.
San Diego Convention Center: 28A

This minisymposium will focus on how neuronal circuits control complex behaviors from invertebrates to vertebrates. The latest tools being utilized to quantitatively measure behavior and physiology in behaving animals will be discussed. Also, the session will present findings across animal models that may provide molecular, circuit, and neuromodulatory targets for future studies, with the potential to develop therapeutics to benefit those suffering from a wide range of neurological disorders.

Pre-Bötzinger Complex 25 Years Later: Diverse Functions of the Breathing Rhythm Generator and Their Cellular and Molecular Origins CME

Chair: Christopher A. Del Negro, PhD
Wednesday, November 16, 8:30–4 p.m.
San Diego Convention Center: 28A

Twenty-five years after its discovery as the breathing rhythm generator, the roles of the pre-Bötzinger Complex continue to expand, now including premotor functionality, generation of sighs and gasps, as well as coordination of orofacial behaviors (e.g., whisking and sniffing). These diverse functions can be mapped to distinct specialized cells, transforming the pre-BötC to a premier center to understand the molecular and cellular bases of physiologically-significant behaviors.

THEME F: INTEGRATIVE PHYSIOLOGY AND BEHAVIOR

Visceral Autonomic Nerves as Targets for Precision Bioelectronic Medicines CME

Chair: Warren M. Grill, PhD
Co-Chair: Arun Sridhar, PhD
Saturday, November 12, 1:30–4 p.m.
San Diego Convention Center: 6E

The visceral autonomic nervous system is a largely untapped area to modulate pathophysiology. Many chronic diseases are driven by dysregulation of neural control of end organ function. Bioelectronic medicines are a new treatment modality that correct signals in peripheral nerves to reset feedback control of end organ function in disease. This session will highlight some of the new evidence that links peripheral autonomic nerves to disease and discuss neuromodulation approaches to treat these diseases.

Food for Thought: How Diet Influences Cognitive Function and Emotion CME

Chair: Sarah Spencer, PhD
Co-Chair: Ruth M. Barrientos, PhD
Sunday, November 13, 8:30–11 a.m.
San Diego Convention Center: 6E

Diet influences cognition and emotional behavior, but the neural mechanisms for these effects are not well understood. This minisymposium discusses recent work linking dietary fat intake and omega-3 dietary imbalance with inflammation in the brains of developing, adult, and aged rodents. Recent advances in understanding how microglia detect and integrate peripheral signaling patterns associated with diet and the role of dietary polyphenols in cognitive processes will also be discussed.

Minisymposia

Neurogenetic Insights Into Speech and Language From Birds and Bats CME

Chair: Sonja C. Vernes, PhD
Co-Chair: Michael M. Yartsev, PhD
Monday, November 14, 8:30–11 a.m.
San Diego Convention Center: 6E

Language and speech are core human traits. Comprehension of their neurological and genetic basis is rapidly advancing by studying relevant traits, such as vocal learning and acoustic communication in mammalian and non-mammalian models. This session will highlight these advances, with emphasis on emerging studies in songbirds and bats. The session will consider benefits of integrating findings across species to understand the neurogenetic mechanisms of vocal learning to ultimately shed light on human spoken language.

Actions of Steroids: New Neurotransmitters CME

Chair: Paul E. Micevych, PhD
Co-Chair: Lauren M. Rudolph, PhD
Tuesday, November 15, 1:30–4 p.m.
San Diego Convention Center: 28A

This minisymposium will highlight new findings of rapid steroid signaling in neurobiology and demonstrate how prevalent non-classical hormone action is across the neuraxis. While the focus will be the non-classical role of hormones in reproductive-related functions of the nervous system, steroidal involvement in non-reproductive functions such as communication and stress will be discussed, along with glucocorticoids and the interactions of estrogens and progesterone with other neurotransmitters.

Oxytocin From Rodents to Humans: How to Translate Research Into Therapeutic Applications in Psychiatry CME

Chair: Valery Grinevich, MD, PhD
Co-Chair: Alexandre Charlet, PhD
Wednesday, November 16, 8:30–11 a.m.
San Diego Convention Center: 6E

The hypothalamic neuropeptide oxytocin attracts the interest of the neuroscience community and the broader public as a prosocial substance in mammals. Recent technological advances enable researchers to decipher the precise circuits underlying these actions. This minisymposium will focus on the pathways of oxytocin signaling, which underlie its behavioral and possible therapeutic effects. Addressing the mechanisms of oxytocin action in the brain, with special attention to the benefits and pitfalls in the treatment of human patients, will be essential for further progress in research and in the clinic.

Hypocretins and Orexins: What Have We Learned in Nearly 20 Years? CME

Chair: Joshua A. Burk, PhD
Co-Chair: James R. Fadel, PhD
Wednesday, November 16, 1:30–4 p.m.
San Diego Convention Center: 29D

The discovery of hypocretins/orexins in the late 1990s spawned research that primarily focused on the role of these neuropeptides in regulating feeding and sleep. More recently, orexins have been implicated in cognitive processing and a number of neuropsychological disorders. This minisymposium will provide state-of-the-field updates about some of the original and more newly-discovered functions regulated by orexins.

THEME G: MOTIVATION AND EMOTION

Homeostasis Versus Motivation in the Battle to Control Food Intake CME

Chair: Eoin C. O'Connor, PhD
Saturday, November 12, 1:30–4 p.m.
San Diego Convention Center: 29D

Signals that regulate energy homeostasis interact closely with neural circuits of motivation to control food intake. An emerging hypothesis is that transition to maladaptive feeding behavior, as seen in anorexia or obesity, may arise from dysregulation of these interactions. This minisymposium will consider how signals that regulate homeostasis and motivation interact at cellular, synaptic, and circuit levels, and how the outcome of this battle could have relevance for feeding disorders.

Spanning the Central-Peripheral Divide: Bridging the Gap to Find Novel Strategies to Target Depression CME

Chair: Amelia J. Eisch, PhD
Co-Chair: Sanghee Yun, PhD
Sunday, November 13, 8:30–11 a.m.
San Diego Convention Center: 29D

Major depressive disorder (MDD) is among the most common of mental illnesses, yet many people prescribed antidepressants or non-pharmaceutical medications will relapse. MDD is increasingly being recognized as a disorder that spans the central-peripheral divide.

THEME H: COGNITION

Neural Mechanisms of Economic Choice CME

Chair: Benjamin Y. Hayden, PhD
Co-Chair: Erin L. Rich, MD, PhD
Sunday, November 13, 1:30–4 p.m.
San Diego Convention Center: 6F

Despite their central importance in psychology, economics, and ecology, the neural mechanisms of economic choice have long been mysterious. This timely minisymposium will highlight recent empirical and theoretical advances toward understanding the neural execution of economic choice. The speakers will focus on the role of the frontal lobe across species, particularly the orbitofrontal and ventromedial prefrontal cortex, in the mediation of economic-based decision-making processes.

Object Encoding, Semantic Representation, and Memory Formation by Single Neurons in the Human Medial Temporal Lobe CME

Chair: Florian Mormann, MD, PhD
Co-Chair: Peter N. Steinmetz, MD, PhD
Monday, November 14, 1:30–4 p.m.
San Diego Convention Center: 28A

This minisymposium will compare and contrast recent results examining object encoding, semantic representation, and memory formation by single neurons in the human medial temporal lobe. Speakers from different single-unit recording centers across the world will examine the level of sparsity present in the representations, whether they exclusively reflect semantic properties of the stimuli, and the role of these representations in memory encoding, and retrieval.

The Neural and Computational Construction of Confidence in Decision-Making CME

Chair: Megan A.K. Peters, PhD
Co-Chair: Piercesare Grimaldi, MD, PhD
Tuesday, November 15, 8:30–11 a.m.
San Diego Convention Center: 28A

Metacognition, or confidence in our decisions, is not yet well understood. Evidence for a single versus multiple loci of uncertainty representation remains equivocal; whether confidence and decision (perceptual or cognitive) depend on the same or different neuronal information is an ongoing debate. This session will bring together scientists studying confidence and uncertainty from both human and animal perspectives, spanning from computational approaches to neurobiological approaches.

THEME I: TECHNIQUES

Using Miniature Microscopes to Probe the Neural Ensemble Correlates of Innate and Learned Behaviors in Freely Moving Mice CME

Chair: Benjamin F. Grewe, PhD
Co-Chair: Jones G. Parker, PhD
Sunday, November 13, 1:30–4 p.m.
San Diego Convention Center: 6E

Advances in freely moving Ca2+ imaging techniques have empowered a detailed understanding of how defined neuronal populations encode diverse animal behaviors. However, the successful implementation of mobile calcium imaging poses challenges for many researchers, ranging from technical to analytical. Focusing on the use of miniaturized microscopes, this minisymposium will present the most recent progress in imaging neural ensembles in widely used behavioral assays and preclinical disease models.

Mesoscale Imaging of Cortical Function and Dysfunction in Mice CME

Chair: Jack Waters, PhD
Monday, November 14, 8:30–11 a.m.
San Diego Convention Center: 29D

The skulls of mice are relatively transparent, permitting relatively non-invasive optical access to the neocortex. This minisymposium presents six recent studies that have leveraged optical access and activity-dependent indicators and opsins to probe the function and dysfunction of the neocortex at the 'mesoscale' recording and modulating the activities of cortical areas in mice performing behavioral tasks.

Mammalian Nervous System Cell Types: CNS Diversity Through the Lens of Single-Cell RNA-Sequencing (RNA-Seq) CME

Chair: Bosiljka Tasic, PhD
Monday, November 14, 1:30–4 p.m.
San Diego Convention Center: 6E

The brain contains a myriad of highly specialized cells, but comprehension of the gene expression programs that produce this cell-type diversity is incomplete at best. This session highlights pioneering work from multiple groups using single-cell RNA-seq approaches to characterize cells from the developing and adult CNS in mice and humans. These studies lay the groundwork for a new taxonomy of nervous system cells and create new opportunities for investigating CNS function and development.

Multiscale Connectomics: Maps, Models, and Mechanisms CME

Chair: Alex Fornito, PhD
Co-Chair: Andrew Zalesky, PhD
Tuesday, November 15, 8:30–11 a.m.
San Diego Convention Center: 6E

Neural networks are organized over resolution scales that span several orders of magnitude. A comprehensive understanding of the brain is thus contingent on integrating information across scales. This session will present the latest findings from studies of brain connectivity at scales ranging from the micro (<1 μm) to macro (>1 mm). The session will focus on methods for network mapping, models of brain network structure and dynamics, and the molecular mechanisms that drive network organization.

Computational Ethological Approaches for Dissecting the Neural Basis of Behavior in Genetic Model Systems CME

Chair: Megan R. Carey, PhD
Co-Chair: Andre E. Brown, PhD
Tuesday, November 15, 1:30–4 p.m.
San Diego Convention Center: 6E

From simple reflexes to social decision-making, behavior is the brain's ultimate output. Recent advances in computer vision enable automated analysis of a wide range of naturalistic animal behaviors on rapid timescales. This minisymposium presents recent advances in automated behavior tracking across model organisms and systems. Talks will highlight the insights this approach provides into neural function, particularly when combined with modern tools for monitoring and manipulating neural circuits.

Nanoscale Neurocartography: Approaches and Theory for Inference and Analysis of Synaptomes and Connectomes CME

Chair: Narayanan Kasthuri, MD, PhD
Wednesday, November 16, 1:30–4 p.m.
San Diego Convention Center: 6E

Neurocartography at the resolution of individual neurons and their synapses is now possible in state-of-the-art datasets. Although much is known about individual brain cells and low-resolution cortical circuits, research to create and explore biofidelic maps of mesoscale cortical circuitry is still in its infancy. This session will provide theory and tools to help address these challenges and motivate researchers interested in this topic through both methodological and scientific progress.

Workshops, Meetings, and Events

Professional Development, Advocacy, and Networking Resources

✍ Preregistration Required $ Course Fee Networking
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FEES FOR SFN PRE-CONFERENCE SESSIONS

SfN Pre-Conference Sessions are sessions sponsored by the Society that occur prior to the official start of the annual meeting. Paid registration is required for Short Courses and the Neurobiology of Disease Workshop. To attend, add the appropriate course to your annual meeting registration.

Short Courses 1 and 2
(Includes electronic syllabus and lunch)
Student member.....$150
Student nonmember.....$225
Postdoctoral member.....$225
Postdoctoral nonmember.....$340
Faculty member.....$295
Faculty nonmember.....$445

Short Course 3
(Includes electronic syllabus)
Student member.....$100
Student nonmember.....$150
Postdoctoral member.....$150
Postdoctoral nonmember.....$225
Faculty member.....$200
Faculty nonmember.....$300

Neurobiology of Disease Workshop.....$40
(Includes breakfast, lunch, and reception)

Friday, November 11

SfN Pre-Conference Sessions

NEUROBIOLOGY OF DISEASE WORKSHOP

Support contributed by the National Institute of Neurological Disorders and Stroke of the National Institutes of Health under Award Number 5R25NS054767. The content does not necessarily represent the official views of the National Institutes of Health.

From Pediatric Encephalopathy to Alzheimer's: Linking Mitochondria to Neurological Diseases ✍ $ 📖 💻

8 a.m.–5 p.m.
San Diego Convention Center: 6A
Organizers: Giovanni Manfredi, MD, PhD; Heidi McBride, PhD
Contact: training@sfn.org

The last decade has seen an explosion in our understanding of the cell biology of mitochondria, and has provided a renewed understanding of their contribution to neurological diseases ranging from pediatric encephalomyopathies to Alzheimer's, Huntington's, and others. In this workshop, leading experts will provide a better understanding of the etiology of mitochondrial diseases, the importance of mitochondrial plasticity within brain function, the mechanisms of mitochondrial motility in neurons, the critical importance of mitochondrial contacts with other organelles for the flux of metabolites, and the mitochondrial quality control pathways that ensure cellular survival.

SHORT COURSE 2

Data Science and Data Skills for Neuroscientists ✍ $ 📖 💻

8 a.m.–6 p.m.
San Diego Convention Center: 6C
Organizers: Alyson Fletcher, PhD; Konrad Kording, PhD
Contact: training@sfn.org

Data skills and data science are moving from something that a small minority of computational scientists got excited about to central tools used by the bulk of neuroscientists. The objectives of this short course will be two-fold. First, leading experts will teach basic data skills that are useful and should be in the toolkit of virtually all neuroscientists. Second, speakers will survey the field of more advanced data science methods, to give participants an overview of which techniques to use under which circumstances. The course will be tutorial-based using technical computing software, with about half of the time spent on hands-on exercises, with data and support from experienced teaching assistants.

SHORT COURSE 1

Support contributed by Otsuka America Pharmaceutical, Inc. and Lundbeck (partial support)

Using Single-Cell Genomics to Analyze Neurons, Glia, and Circuits ✍ $ 📖 💻

8:30 a.m.–6 p.m.
San Diego Convention Center: 6B
Organizer: Steve McCarroll, PhD
Contact: training@sfn.org

NEW for 2016: Professional Development Workshop Tracks

Professional Development Workshops offered at Neuroscience 2016 are now categorized by tracks to help attendees quickly identify the workshops that are of the greatest interest to them.

Professional Development Workshop Tracks:

- Career Paths On and Off the Bench
- Career Skills
- Teaching Neuroscience
- Funding

Recent advances in technologies for preparing and analyzing cells, and for sequencing nucleic acids, are quickly making it possible to study the nervous system in information-rich, highly multi-dimensional ways. This rapidly-evolving field is presenting many exciting scientific opportunities — and also new challenges in computational data analysis and the integration of emerging technologies with classical research questions. In this short course, leading experts will enable neuroscientists across different specialties to apprehend these emerging technologies, to deploy them in their own research, and to define emerging research opportunities relevant to their areas of interest.

SHORT COURSE 3

Record Keeping and Data Management for High-Quality Science ✍ $ 📖 💻

1–5:30 p.m.
San Diego Convention Center: 11B
Organizers: Michele Basso, PhD; Katja Brose, PhD; Horacio de la Iglesia, PhD; Sabine Kastner, MD, PhD; Rae Nishi, PhD
Contact: training@sfn.org

Proper record keeping and data management are critical for the work we do as scientists.

Download the meeting mobile app for up-to-date session information

This course will focus on topics related to scientific record keeping and data management, including discussions of basic principles and best practices; information on responsibilities as an investigator, grantee, and author; recommendations on how to manage these responsibilities as part of collaborations; and an understanding of how funding agencies and journals address these issues when there are challenges around data integrity. Data and resource sharing as it contributes to open science and efforts to enhance data reproducibility will also be discussed. The course will feature three lectures interspersed with small group discussions to allow ample time for the examination of case studies.

Saturday, November 12

MEET-THE-CLINICIAN-EXPERT

8–9:15 a.m.
Manchester Grand Hyatt
Contact: program@sfn.org

At this year's inaugural Meet-the-Clinician-Expert session, Dennis Choi will describe his research techniques and accomplishments as a clinician-scientist. No registration is required, but seating is limited. Continental breakfast will be provided.

Dennis Choi, MD, PhD
Chasing Translation
Support contributed by MilliporeSigma
Room: Cortez Hill

Dennis Choi will outline his career travelogue, beginning with returning to a medical school as an academic neurologist, while simultaneously working full-time in a pharmaceutical company, a university, and a non-profit disease foundation. When Choi began his training 40 years ago, clinical neuroscience was predominantly focused on bedside exams and prognosis, as treatment options were limited. Much has improved since then, but many therapeutic breakthroughs for nervous system diseases still remain undiscovered. Ready for the next charge of able neuroscientists and clinician-investigators? Choi will describe his own efforts to understand and interdict mechanisms of pathological neuronal death, working with both cell cultures and humans, and share personal perspectives gained along the way.

MEET-THE-EXPERT SERIES

8–9:15 a.m., 9:30–10:45 a.m.
Manchester Grand Hyatt
Contact: training@sfn.org

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 will offer an opportunity for students and postdoctoral researchers to engage the expert in an informal dialogue over continental breakfast. No registration is required, but seating is limited.

SESSION 1: 8–9:15 A.M.

Ricardo Araneda, PhD
Following the Scents of Discovery
Support contributed by MilliporeSigma
Room: Mission Beach

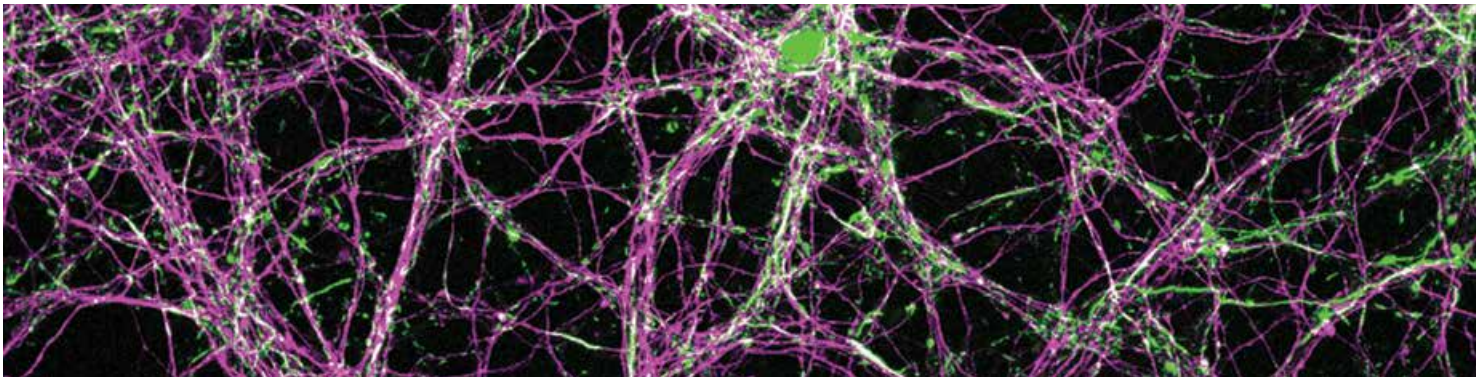
Ricardo Araneda will discuss his journey as a scientist growing up in Patagonia, Chile, and migrating north following scents of discovery. Olfaction has an inherent complexity due to vast numbers of olfactory receptors employed in odor detection, and neuronal plasticity of the network involved in processing odor signals. Araneda uses the olfactory system as a model to address two important questions in neurobiology: 1) the contribution of inhibitory components of neuronal networks to sensory processing; and 2) how the activity of these networks is regulated by neuromodulatory systems.

Michael Goldberg, MD
Single Unit Recording in Awake Monkeys: Studying the Physiology of Cognition
Room: Solana Beach

The development of the awake monkey preparation was a transformative event in neuroscience. Until midcentury, neurophysiology was done exclusively in anesthetized animals. The awake monkey revolution began with Ed Evarts at the National Institute of Mental Health (NIMH), who studied motor cortex in awake, behaving monkeys. Bob Wurtz then showed that you could use this method to study visual perception. Fifty years later the awake monkey has contributed immensely to our knowledge of the physiology of psychological topics like perception, movement, decision-making, reward, and attention. Michael Goldberg will discuss the history of the field, his personal journey, and the joys of both serendipity and strong-hypothesis science.

Russell Swerdlow, MD
Mitochondria and Bioenergetics in Alzheimer's Disease
Support contributed by MilliporeSigma
Room: Hillcrest CD

What initiates Alzheimer's disease histology changes in those with late-onset Alzheimer's is unclear. An association between advancing age, Alzheimer's histology changes, and Alzheimer's disease incidence suggests brain aging-related factors may play a role or even initiate the disease. Brain energy metabolism and mitochondrial function change with



Workshops, Meetings, and Events

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Professional Development Workshop Tracks: Career Paths On and Off the Bench · Career Skills · Teaching Neuroscience · Funding

advancing age and in Alzheimer's, leading some to propose a "mitochondrial cascade hypothesis" in which bioenergetic changes are hypothesized to initiate Alzheimer's histology and clinical decline. Russell Swerdlow will discuss how this idea has evolved over past decades, its current contributions to the Alzheimer's disease field, and how it might impact future Alzheimer's research.

Rachel Wong, PhD
The Retina: A Colorful Window to the Brain
Support contributed by Thor Labs
Room: Hillcrest AB

Rachel Wong is interested in how circuits of the vertebrate retina are assembled during development and reassembled during regeneration. To this end, the Wong lab has developed and applied structural and functional approaches to investigate the mechanisms responsible for patterning retinal circuits. Comparisons across species have also helped them to identify common or separate mechanisms that generate retinal circuits with specific functions. Wong will discuss how she became fascinated by the retina and its development and how she built a program beyond her own expertise to tackle questions of interest.

SESSION 2: 9:30–10:45 A.M.

Edward Callaway, PhD
Viral Connectomics: Tracing a Monosynaptic Path With Glycoprotein-Deleted Rabies Viruses
Support contributed by MilliporeSigma
Room: Cortez Hill

Callaway's lab showed that modified rabies viruses could genetically target neurons and selectively label direct monosynaptic inputs. Subsequent efforts have built on that demonstration to label the direct inputs to genetically targeted cell types or single neurons across the whole brain, *in vivo*. These reagents continue to be refined for neural circuit studies, allowing defined circuits to be directly linked to function through correlational and manipulative studies. Callaway will describe the development of these tools and present unpublished negative results in which his team attempted to achieve monosynaptically-restricted trans-synaptic circuit mapping through different approaches.

Patricia Janak, PhD
Getting Psych-ed for the Future of Behavioral Neuroscience
Room: Hillcrest AB

The ultimate function of the nervous system is to produce behavior. Patricia Janak will make the case that the rich history of animal behavioral research emanating from experimental psychology has been, and continues to be, invaluable for modern neuroscience. In this discussion, Janak will discuss recent studies from her lab and others that use a neural circuit dissection approach, and will suggest that a similarly sophisticated approach with respect to "behavioral dissection" is also required for a thorough understanding of neural function.

Peyman Golshani, MD, PhD
Open-Source New-Generation Miniaturized Microscopes
Room: Hillcrest CD

One of the biggest challenges in neuroscience is to understand how neural circuits process, encode, store, and retrieve information. Meeting this challenge will require methods to record the activity of intact neural networks in freely behaving animals. Peyman Golshani and colleagues develop open source next-generation wireless, multi-channel miniaturized microscopes that, when combined with genetically encoded indicators of neural activity, can image and track activity patterns of large neural-cell populations in freely moving mice. Golshani and his colleagues have developed an online environment to share their technology with the neuroscience community to accelerate the speed of neuroscience research.

Viviana Gradinaru, PhD
Toward Intact Tissue Mapping and Phenotyping With Optogenetics, Tissue Clearing, and Viral Vector Engineering
Support contributed by MilliporeSigma
Room: Solana Beach

Viviana Gradinaru's work has focused on developing and using optogenetics and tissue clearing to dissect the circuitry underlying neurological disorders such as Parkinson's. Her group is now working to understand how perturbations of neuronal network activity can permanently impact the function and even viability of comprising neurons, and ultimately change network properties and animal behavior. The Gradinaru lab also continues to develop and disseminate enabling technologies for high content anatomical and functional mapping. The informal discussion will cover these topics while also highlighting scientific and career development challenges that Gradinaru has faced.

Hongkui Zeng, PhD
Decoding Cellular Diversity in the Brain
Support contributed by MilliporeSigma
Room: Mission Beach

In this session, Hongkui Zeng will discuss her research team's experience in developing cell type-specific mouse genetic tools; in using these tools to profile single cell properties at different levels and to determine how these properties correlate with each other; and in mapping their interconnections at both anatomical and physiological levels. Zeng will highlight the features of the Allen Institute for Brain Science's large-scale databases, which

collectively provide an integrated resource to the neuroscience community to facilitate the investigation of the cellular diversity, circuit composition, and circuit function.

NEUROJOBS CAREER CENTER

Saturday, November 12–Tuesday, November 15, 8 a.m.–5 p.m.
Wednesday, November 16, 8 a.m.–3 p.m.
San Diego Convention Center: Sails Pavillion

The on-site SfN NeuroJobs Career Center connects employers with a pool of well qualified candidates seeking opportunities ranging from postdoctoral and faculty positions to neuroscience-related jobs in industry and other areas. Job seekers and employers can take advantage of interview booths and computers for posting jobs and scheduling interviews. For prices and more information on how to set up a NeuroJobs account, visit sfn.org/neurojobs. On-site payment can only be made by credit card.

NEUROSCIENCE DEPARTMENTS AND PROGRAMS WORKSHOP — TRAINING THE TRAINERS

Diverse Career Trajectories in Neuroscience: Helping Trainees Chart a Course for Success

9–11 a.m.
San Diego Convention Center: 30C
Organizer: Elisabeth Van Bockstaele, PhD
Panelists: Michael Friedlander, PhD; Walter Koroshetz, PhD; Edda Thiels, PhD
Contact: ndp@sfn.org

The Forum on Neuroscience and Nervous System Disorders of the National Academies of Sciences, Engineering, and Medicine held a workshop in October 2014 to discuss how best to develop the next generation of scientists to advance neuroscience. Results of this forum were summarized in an article published on June 1 in Neuron. In this workshop, authors of the Neuron paper will highlight: (1) how to best train and retain a talented work force to ensure a bright future for the field of neuroscience, and (2) strategies for preparing the next generation of neuroscience trainees with the skills and expertise necessary for diverse career opportunities.

Success in Academia: A Focus on Strategies for Women

9–11 a.m.
San Diego Convention Center: 31C
Organizer: Tracy Bale, PhD
Panelists: Huda Akil, PhD; Jean King, PhD; Margaret McCarthy, PhD; Catherine Woolley, PhD
Contact: mpd@sfn.org

Academia is an exciting and engaging career field but possesses special challenges that are daunting to most young scientists. As trainees and as faculty, women face unique concerns and obstacles that can be difficult to navigate. This panel of female leaders in neuroscience will share their stories, discuss their approaches to success, and offer suggestions across different stages of career development. Discussion will focus on topics specific to academic careers and success such as finding and negotiating a job, promotion and tenure, dealing with salary and space negotiations, and how to handle being the only female in the room.

Meeting Mobile App Tutorial

10–11 a.m.
San Diego Convention Center: 10
Contact: program@sfn.org

To ensure that attendees are able to take advantage of the newest features for the meeting mobile app, a free user tutorial led by the app's developers will be held. This tutorial is open to all meeting attendees.

The meeting mobile app is available in the Google Play™ App Store and on iTunes™.

Careers in Making Medicines: Translating Basic Research Into Pharmaceutical Development

noon–2 p.m.
San Diego Convention Center: 31C
Organizer: Fiona Randall, PhD
Panelists: Janet Clark, PhD; Meriem Gaval-Cruz, PhD; Susan Learned, PhD; Norimasa Miyamoto, PhD; Arash Rassoulpour, PhD
Contact: mpd@sfn.org

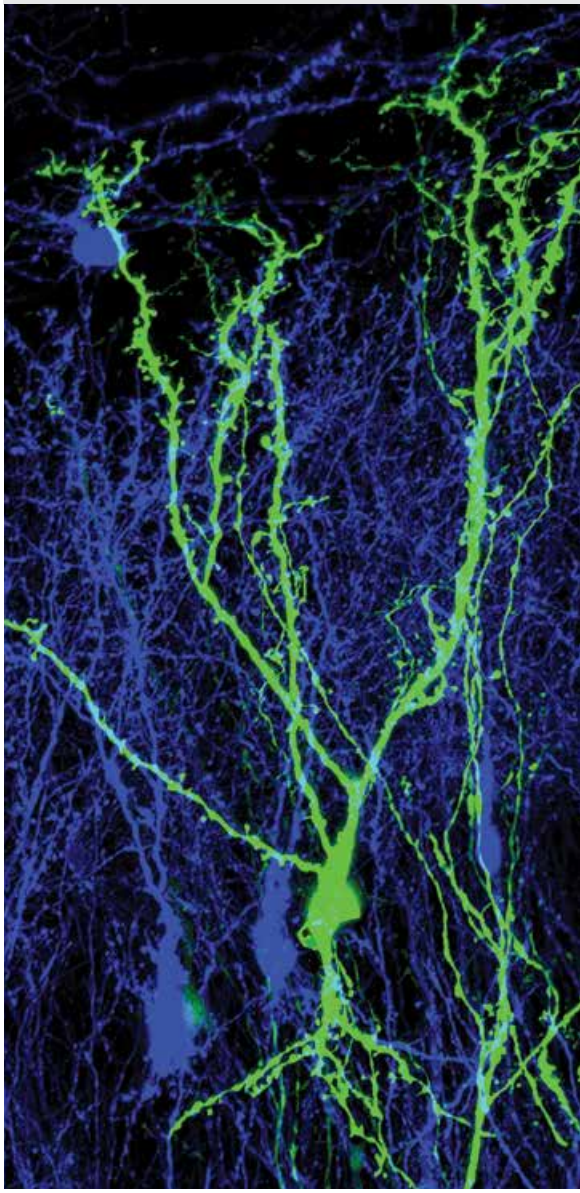
Have you ever wondered about a career outside of academia? Scientific careers in the pharmaceutical industry can offer an exciting alternative to the traditional academic career path. This workshop will outline how medicine is made in industry and will provide an overview of career opportunities within the pharmaceutical industry. Perspectives from preclinical and clinical experts will be shared, and examples of how basic and innovative biology can be turned into a drug discovery program will be showcased.

Creating, Sustaining, and Enhancing Undergraduate Neuroscience Programs

noon–2 p.m.
San Diego Convention Center: 30C

Individual Career Coaching with Marty Nemko

Whether you're still in school or a senior scientist looking toward retirement, career issues can abound: What should I do next? How do I get there? How do I deal with internal and external barriers? Dr. Marty Nemko has been a career and personal coach to over 5,000 people, including many people in neuroscience and related fields, both in academia and industry. During the conference, Dr. Nemko will be available for complimentary 15-minute coaching sessions via Skype to provide insight on how to achieve success in your career. For more information, contact **neurojobs@sfn.org.**



Workshops, Meetings, and Events

Professional Development, Advocacy, and Networking Resources

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

Professional Development Workshop Tracks: Career Paths On and Off the Bench | Career Skills | Teaching Neuroscience | Funding

Organizer: Janet Finlay, PhD
Panelists: Carlos Aizenman, PhD; Barbara Beltz, PhD; Ellen Carpenter, PhD; Barbara Lom, PhD; Alan Sved, PhD
Contact: mpd@sfn.org

It is an exciting time for undergraduate neuroscience education. To meet demand in this area, colleges and universities are increasingly exploring opportunities to create and enhance undergraduate neuroscience programs. Panelists representing a variety of academic institutions and neuroscience programs will briefly describe how undergraduate neuroscience education has been advanced at their institutions. This workshop is intended to be interactive, with an emphasis on creating a forum for audience and panelists to engage in discussion of mechanisms for creating and enhancing undergraduate neuroscience education.

Graduate School Fair

Organizer: Neuroscience Training Committee
Saturday, November 12, 1–3 p.m.
Sunday, November 13–Tuesday, November 15, noon–2 p.m.
San Diego Convention Center: Sails Pavilion
Contact: training@sfn.org

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

BRAIN AWARENESS CAMPAIGN EVENT

Sharing the Magic of Brain Awareness

3–4:30 p.m.
San Diego Convention Center: Room 16
Contact: baw@sfn.org

Celebrate brain awareness and share your outreach achievements with Brain Awareness Week organizers from around the world. Recognize award winners from the Brain Awareness Video Contest, the Faculty for Undergraduate Neuroscience, and National Science Olympiad. Also hear from Susana Martinez-Conde, Director of the Laboratory of Integrative Neuroscience at State University of New York, Executive Producer of the Best Illusion of the Year Contest, co-author of the book "Sleights of Mind," and winner of the 2014 SfN Science Educator Award.

Biomedical Education and Career Options for Scientists (PhD) and Physician-Scientists (MD, PhD)

3–5 p.m.
San Diego Convention Center: 30C
Organizer: Lique Coolen, PhD
Panelists: Sherilynn Black, PhD; John Horn, PhD; M. Kerry O'Banion, MD, PhD; Nancy Schwartz, PhD; Gregorio Valdez, PhD
Contact: mpd@sfn.org

Participants in this session will discover the wide variety of careers open to graduates of PhD and MD-PhD programs. Although many PhDs and MD-PhDs go on to become research faculty at medical schools and universities, other career pathways are available within research institutes or the pharmaceutical industry, as well as in other science-related fields. This workshop will discuss ways to prepare for such careers.

NIH Funding and You: A Practical Guide to Successfully Navigating Your Research Training Career

3–5 p.m.
San Diego Convention Center: Room 31C
Organizer: Stephen Korn, PhD
Panelists: Nancy Desmond, PhD; Mimi Ghim, PhD; Chyren Hunter, PhD; Michelle Jones-London, PhD
Contact: mpd@sfn.org

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

Diversity Fellows Poster Session

Support contributed by eNeuro *and* The Journal of Neuroscience
6:30–8:30 p.m.
San Diego Convention Center: Hall A
Contact: nsp@sfn.org
Join a special poster session and networking event featuring participants of the Neuroscience Scholars Program, ENDURE, and other diversity fellowship programs.

International Fellows Poster Session

Support contributed by eNeuro *and* The Journal of Neuroscience
6:30–8:30 p.m.
San Diego Convention Center: Hall A
Contact: globalaffairs@sfn.org

Meet the next generation of leading young investigators from the Latin American Training Program and award winners selected by the International Brain Research Organization and the Japan Neuroscience Society.

Trainee Professional Development Awards Poster Session

Support contributed by eNeuro *and* The Journal of Neuroscience
6:30–8:30 p.m.
San Diego Convention Center: Hall A
Contact: awards@sfn.org

This networking event will honor award-winning posters from undergraduate and graduate students and postdoctoral fellows.

Career Development Topics: A Networking Event

7:30–9:30 p.m.
San Diego Convention Center: Hall A
Contact: mpd@sfn.org

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, etc. Participants from diverse backgrounds, fields, and work sectors are encouraged to attend.

Sunday, November 13

A Guide to Publishing in Journals

9–11 a.m.
San Diego Convention Center: 31C
Organizer: Ross Hildrew
Panelists: Bruno Frenguelli, PhD; Juan Lerma, PhD; Kaia Motter, PhD; Marina Picciotto, PhD
Contact: mpd@sfn.org

Journals exist to disseminate new research findings and the latest new thinking to scholarly and professional communities worldwide. This workshop will present a rare opportunity to gain insights into journal publishing from the editors and publishers of Elsevier journals such as *Neuroscience*, *Brain Research*, *Neuropharmacology, and JNeurosci*. Topics will include: how to write and review a paper, new publishing initiatives, and publishing ethics.

Stand Up and Be Heard: Navigating Career Communications

9–11 a.m.
San Diego Convention Center: 30C
Organizer: Fiona Randall, PhD
Panelists: Janet Clark, PhD; Amicia Elliot, PhD; Mara Dierssen, MD, PhD; Paul McGonigle, PhD; Elisabeth Van Bockstaele, PhD
Contact: mpd@sfn.org

There may be times in your career when you have something to say but lack the confidence or the skill to say what you think with clarity and grace. Speaking contrary to the opinions of others, raising an innovative or controversial idea, or otherwise challenging the status quo can take a lot of courage. Difficult discussions are par for the course in your career, but good communication and negotiation skills can help you overcome a wide range of challenges. This workshop will provide insight into best practices for interpreting a job offer, asking for what you want, and bringing colleagues around to your way of thinking. The fears that often prevent people (especially women) from speaking up will also be addressed.

CHAPTERS WORKSHOP

Utilizing Chapters to Teach Innovative Science to Broad Audiences

11:30 a.m.–1 p.m.
San Diego Convention Center: 11B
Organizers: Tanea Reed, PhD; Jennifer Yates, PhD; Lisa Zuccarelli, PhD
Contact: chapters@sfn.org

The 2016 Chapters Workshop will focus on creating scientific educational opportunities for both the general public and neuroscientists, when the topic may be a new discipline. Case studies showing best practices for organizing these courses, as well as tips for teaching the public about innovative science, will be presented. Attendees will gain a clear understanding for how to build these educational experiences for their chapter members and communities-at-large.

Successful Career Advancement Through Networking: Is It Who You Know?

noon–1:30 p.m.
San Diego Convention Center: 31C
Organizers: Mark Baxter, PhD; Rebecca Shansky, PhD
Panelists: Michael Drew, PhD; Bita Moghaddam, PhD; Richard Prather, PhD; Natalie Tronson, PhD
Contact: mpd@sfn.org

Networking can have a powerful effect on a scientist's career trajectory. The organizers and speakers will present tips and advice for successful networking, as well as vignettes from their own careers about where networking has been key to their success. Different venues for networking (conferences, social media, intradepartmental, etc.) will be highlighted, and discussion time will allow workshop participants to learn from each other's networking successes (and failures).

Path to Translation for the Inspired

noon–2:15 p.m.
San Diego Convention Center: 30C
Organizers: William Mobley, MD; Hao Wang, PhD
Panelists: Roberta Diaz Brinton, PhD; Justin Fallon, PhD; Paul Kenny, PhD; Lorenzo Leggio, MD, PhD; Qi-Ying Liu, MD; Frank Longo, MD, PhD; Suzana Petanceska, PhD; Amir Tamiz, PhD; Lois Winsky, PhD
Contact: mpd@sfn.org

The objective of this workshop is to inspire all participants who are interested in translational research, to share valuable experiences and lessons learned, and to inform about resources available for translational research. During the workshop, panelists will begin by sharing what is key to their success in translational research from bench to bedside. Afterward, NIH staff will discuss current resources and funding opportunities available to enable translational research in areas related to neuroscience. Throughout the workshop, participation from the audience will be encouraged. NIH staff and panelists will be available at the end of the workshop for networking and additional discussions.

SOCIAL ISSUES ROUNDTABLE

Concussion: From the Players' Experience to the Future of Research

1–3 p.m.
San Diego Convention Center: 10
Organizer: Candace Floyd, PhD
Panelists: Lisa Brenner, PhD; Kevin Drake; Harvey Levin, PhD; Robert Stern, MD
Contact: advocacy@sfn.org

Mild traumatic brain injury, particularly that associated with contact sports and military service has gained public awareness as a health concern. This roundtable will explore the complex issues of concussion and multiple impacts to the brain from diagnosis to long-term consequences.

Meeting Expectations: NIH Review Criteria on Scientific Rigor and Reproducibility

Supported by the National Institute On Drug Abuse of the National Institutes of Health under Award Number 5R25DA041326. The content does not necessarily represent the official views of the National Institutes of Health.

3–5 p.m.
San Diego Convention Center: 31C
Organizer: Cheryl Sisk, PhD
Panelists: Anita Bandrowski, PhD; Emanuel DiCicco-Bloom, MD; Margaret McCarthy, PhD; Richard Nakamura, PhD
Contact: training@sfn.org

In January 2016, NIH introduced new review criteria concerning Scientific Rigor and Reproducibility that affect virtually all research grant applications. Applicants must now specifically address: 1) the scientific premise of the proposed research; 2) how the proposed research is designed to ensure scientific rigor and reproducibility; 3) consideration of relevant biological variables; and 4) the authentication of key biological and chemical resources. In this workshop, representatives from NIH and the scientific community will offer knowledgeable

Workshops, Meetings, and Events

Professional Development, Advocacy, and Networking Resources

Preregistration Required $ Course Fee Networking
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Professional Development Workshop Tracks: Career Paths On and Off the Bench Career Skills Teaching Neuroscience Funding

and practical advice to help both novice and experienced grant applicants navigate the requirements of this new policy.

Optimizing the Mentor-Trainee Relationship

3–5 p.m.
San Diego Convention Center: 30C
Organizer: Lique Coolen, PhD
Panelists: Stephen Korn, PhD; Jennifer Swann, PhD
Contact: training@sfn.org

Navigating a productive and professional relationship between mentor and mentee is not always easy. There may be times when the mentors' and mentees' training goals or needs differ significantly, and training plans need to be adjusted. This workshop will provide information and discussion for best practices in fostering a productive and professional relationship between mentor and trainee. The workshop will address issues and best practices from the perspectives of both mentor and mentee, related to all stages of training.

Monday, November 14

CLINICAL ROUNDTABLE #1

The Subcortical Source of Inflammatory Malaise CME

8:30–11 a.m.
San Diego Convention Center: 11B
Organizer: Andrew H. Miller, MD
Panelists: Robert Dantzer, PhD; John D. Salamone, PhD; Michael Treadway, PhD
Contact: program@sfn.org

Data indicate that the impact of inflammation on behavior may be mediated by effects of inflammatory cytokines on ventral striatal reward circuits and mesolimbic dopamine pathways leading to anhedonia, a prominent symptom in multiple psychiatric disorders. This roundtable will explore the role of inflammation in reward in studies on laboratory animals and humans using effort-based reward paradigms, *in vivo* microdialysis and pharmacologic manipulation of dopamine and resting state and task-based neuroimaging strategies.

How to Present Science Using Visual Tools

Support contributed by AbbVie
9–11 a.m.
San Diego Convention Center: 30C
Organizer: Scott Thompson, PhD
Panelists: Frederic Bertley, PhD; Noah Hutton; Lora Likova, PhD; Karen Schloss, PhD
Contact: mpd@sfn.org

It is important to present science in a way that is visually appealing to audiences. This workshop will feature speakers with experience developing science videos, animations, graphics, and tools that engage audiences. The session will explore the significance of using compelling visuals to communicate science, and discuss available tools. Speakers will share tips on how to present science in a more visually compelling way. The workshop's goal is to inform the neuroscience community about the benefits of sharing information in a way that peaks the interest of scientists and laypersons.

Teaching Neuroscience With Big Data

Partial support contributed by AbbVie
9–11 a.m.
San Diego Convention Center: 31C
Organizers: William Grisham, PhD; Richard Olivo, PhD
Panelists: Joshua Brumberg, PhD; Terri Gilbert, PhD; William Gray Roncal; Linda Lanyon, PhD; Russell Poldrack, PhD; Robert Williams, PhD
Contact: mpd@sfn.org

Neuroscience has entered the realm of big data with "neuroinformatics," the study of the brain and nervous system using massive datasets. Although many of these data collections began as closed repositories of research data, a number of them are now open for use in teaching. The workshop will introduce four examples of neuroscience "big data" collections, and demonstrate how these open datasets have been used to teach students. The collections are the Allen Brain Atlas, the Mouse Brain Library and Gene Network, the Open Connectome Project, and Open fMRI. The workshop will conclude by discussing general resources and curricula for teaching "neuroinformatics," which is a new and developing area of expertise for most faculty.

It's a Win-Win: Effectively Engaging Undergraduates in Research

noon–2 p.m.
San Diego Convention Center: 30C
Organizer: Donita Robinson, PhD
Panelists: Claudio Da Cunha, PhD; Shelly Dickinson, PhD; Rueben Gonzales, PhD; Dorothy Kozlowski, PhD; Hewlet McFarlane, PhD; Matthew Palmatier, PhD
Contact: mpd@sfn.org

Undergraduate students can be vital to your research team. Are you integrating them effectively? Undergraduates on your team are a win-win: students get lab experience, their graduate and postdoctoral mentors learn supervisory skills, and you advance your research agenda. We'll cover topics such as recruiting the right student, engaging undergrads as researchers, setting realistic expectations, maximizing a summer student, and enhancing the undergraduate research experience using available resources.

Tuesday, November 15

CLINICAL ROUNDTABLE #2

Medications Development for Cannabis Use Disorder: CB1 Receptor Agonists, Antagonists and Signaling-Specific Inhibitors CME

8:30–11 a.m.
San Diego Convention Center: 11B
Organizer: Margaret Haney, PhD
Panelists: Jack Bergman, PhD; Zuzana Justinova, MD, PhD; Pier Vincenzo Piazza, MD, PhD
Contact: program@sfn.org

Treatment outcome for cannabis use disorder is poor and limited by a lack of efficacious medications. This symposium will discuss the latest preclinical and clinical studies testing potential treatment medications targeting the cannabinoid receptor (CB1) for the treatment of CUD. Specifically, the effects of CB1 agonists, inverse agonists, orthosteric antagonists, signaling-specific inhibitors and endocannabinoid enzyme inhibitors in models of drug discrimination, self-administration, withdrawal and reinstatement will be described.

ANIMALS IN RESEARCH PANEL

Support contributed by National Primate Research Centers

How to Engage Institutions to Publicly Support Animal Research: A Top-Down Approach

10 a.m.–noon
San Diego Convention Center: 10
Organizer: Mar Sanchez, PhD
Panelists: James David Jentsch, PhD; Kirk Leech; John Morrison, PhD; Carrie D. Wolinetz, PhD
Contact: advocacy@sfn.org

Worldwide, researchers are engaging the public to increase the understanding and need for animals in research. However, scientists need research institutions to facilitate greater openness about animal research conducted on campus and to reject the fear of attracting negative attention. This panel will discuss the proven benefits of positive institutional public communication and openness, as well as strategies to engage our institutions to publicly support animal research.

Celebration of Women in Neuroscience Luncheon

noon–2 p.m.
Hilton San Diego Bayfront: Sapphire AB
Contact: cwin@sfn.org

The annual luncheon honors women leaders in neuroscience. Maria Victoria Puig, PhD will deliver a keynote address focused on navigating cultural boundaries. A roundtable group discussion on a topic related to women in neuroscience will follow. Space is limited. Registration is required. For more information, visit **sfn.org/cwinrsvp.**

PUBLIC ADVOCACY FORUM

Art, Music, and the Brain: How the Arts Influence Us From Youth to Maturity

3–5 p.m.
San Diego Convention Center: 10
Organizer: William Martin, PhD
Panelists: Kenneth Elpus, PhD; Ping Ho; Nina Kraus, PhD; Daniel Levitin, PhD
Contact: advocacy@sfn.org

Everyone knows that art can be profoundly moving: visual arts can influence mood and a symphony orchestra can relay emotion better than words. Recent studies in the field of neuroscience illustrate the importance of creativity across our life spans. Whether it's ballet lessons before kindergarten, band practice in college, or music therapy following a stroke, this panel will explore how and why the arts influence us so deeply and how we can use creativity to be healthier and more productive throughout our lives.

SfN Members' Business Meeting

6:45–7:30 p.m.
San Diego Convention Center: 3
Contact: info@sfn.org

Join us at the Members' Business Meeting!
Take advantage of this opportunity to share your thoughts and suggestions with the Society's leadership, learn more about SfN's latest accomplishments, and how to get involved in SfN committees, and enjoy light refreshments while networking with your peers. The business meeting is open to all SfN members.

Graduate Student Reception

9 p.m.–midnight
Hilton San Diego Bayfront: Sapphire Ballroom
Contact: meetings@sfn.org

A reception will be held for graduate students and postdoctoral trainees. No invitation is required.

Wednesday, November 16

CLINICAL ROUNDTABLE #3

Critical Topics in Pain Mechanisms and Therapeutics CME

8:30–11 a.m.
San Diego Convention Center: 11B
Organizer: Timothy J. Brennan, MD, PhD
Panelists: A. Vania V. Apkarian, PhD; Patrick M. Dougherty, PhD; Sinyoung Kang, MD, PhD; Emeran A. Mayer, MD
Contact: program@sfn.org

In this roundtable, we will discuss the strengths and limitations of animal models using postoperative pain and chemotherapy-induced neuropathy as examples. Because several acute pain conditions can lead to chronic pain, neuroimaging has been used to understand the processes involved in the development of chronic pain. Because the chronic pain condition is associated with complex psychosocial comorbidities, the use of neuroimaging to understand these comorbidities in patients with chronic visceral pain will be examined.

SfN-Sponsored Socials

All SfN-Sponsored Socials will be held in the Marriott Marquis San Diego Marina.

These events are open to all registered annual meeting attendees.

Sunday, November 13, 6:45–8:45 p.m.

Cajal Club Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Christopher Walsh, MD, PhD
Co-Chair: Arturo Alvarez-Buylla, PhD
Guests: K. Baldwin; M.J. McConnell
Marriott Grand Ballroom 8

Informal socializing with presentations of a few awards to neuroscientists at senior, mid, and early career stages. This will be followed by two short, informal presentations on the question of genomic variability and instability in neurons by Kristin Baldwin and Michael McConnell, two leading scientists in this area. An interactive discussion will follow.

Cell Death and Cell Stress Social

PURELY SOCIAL

Chair: Santosh D'Mello, PhD
Co-Chair: Shirley ShiDu Yan, MD
Guests: L. Dugan; W.J. Friedman; L. Greene; S.J. Hewett; D. Merry; D. Praticò; R.R. Ratan; E. M. Sigurdsson; E. Thomas; K. Tieu; C.M. Troy; L.-H Tsai; W.E. Van Nostrand; B.L. Wolozin
Marriott Grand Ballroom 11

"Dying" to have a good time after a tiring day at talks and posters? Come have a drink and relax at this Cell Death Social. Reunite with old friends and make new ones. Mingle with top researchers and special guests with a common interest in cell death mechanisms. Everyone is welcome!

Clinical Neuroscience Social

PURELY SOCIAL

Chair: Samuel E. Gandy, MD, PhD
Co-Chair: Stella M. Papa, MD
Rancho Santa Fe 1 and 2

Invitations are extended to investigators at all levels and in all fields related to clinical neurosciences. Students, postdoctoral fellows, clinical fellows, faculty, administration, and NIH staff are all encouraged to attend. Colleagues, mentors, and mentees have an opportunity to re-engage in a relaxed setting during the annual meeting.

Cognitive Neuroscience Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Daniela Schiller, PhD
Co-Chair: Paula L. Croxson, PhD
Marriott Grand Ballroom 12

"The Art of Storytelling"
This year's Cognitive Neuroscience Social will celebrate the art of storytelling, featuring true stories by scientists sharing their unique perspective on science. Everyone has a story to tell, whether it's about starting out in science, a challenge, an exciting discovery or an epic failure. Come listen to — and be inspired by — the stories of four scientists who are also storytellers: Wendy Suzuki, Stuart Firestein, Rebecca Brachmann, and André Fenton. Join us for drinks and snacks, and share your own stories with your colleagues.

Faculty for Undergraduate Neuroscience Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Lisa Gabel, PhD
Guests: L.A. Chase; A.J. Stavnezer
Marriott Grand Ballroom 5, 6, and 7

Socialize and exchange ideas with others interested in undergraduate neuroscience research and education. Undergraduates will present their research. Faculty for Undergraduate Neuroscience (FUN) Student Travel Awards and Educator of the Year Awards will also be presented. See the FUN website (funfaculty.org) for travel award information, and register for poster presentations at the FUN Social.

Hearing and Balance Social

PURELY SOCIAL

Chairs: Eike Budinger, PhD; Lisa V. Goodrich, PhD
Guests: M. Brosch; B. Englitz; T. Hackett; P. Kanold; S.G. Lomber; D.H. Sanes
Marriott Grand Ballroom 10

If you are interested in any topic related to the auditory and vestibular system, join us for a purely social evening. Come have a drink, meet your colleagues and old friends, and make new ones. Postdoctoral fellows and students are especially welcome.

Itch Social

PURELY SOCIAL

Chair: Earl E. Carstens, PhD
Torrey Pines 1 and 2

"Scratching the Itch"
This purely social event brings together neuroscientists with a common interest in itch research. The itch is the least understood of the somatic senses, but recent work has identified novel transduction molecules, spinal circuitry, ascending pathways, and a matrix of brain areas active during itch. The aim of this inaugural Itch Social is to provide an opportunity for researchers to meet old and new colleagues with a common interest in itch and pain, and to network and learn about other itch-related organizations and funding opportunities.

Neuroethology/Invertebrate Neurobiology Social

PURELY SOCIAL

Chair: Wolfgang Stein, PhD
Co-Chair: Carola Staedele
Presidio 1 and 2

This is a social gathering to celebrate neuroethology and the role of the nervous system in producing behavior. All members of the neuroscience community are welcome — in particular those who work on the neural basis of natural behaviors. Come by to meet old friends and make new ones. Postdocs and students are encouraged to drop in for socializing and networking.

Neuroinformatics Social

PURELY SOCIAL

Chair: Georgio A. Ascoli, PhD
Guests: A.-S. Chiang, P.P. Mitra, J.L. Olds, O. Sporns, A.W. Toga, A.S. Tolias, J. Kim, J.T. Vogelstein, D.C. Van Essen, H. Zeng
Marriott Grand Ballroom 13

A WEB OF INTERCONNECTING CONNECTOMES! Interested in macro-, meso-, or micro-connectivity? Synaptomes and projectomes might not be scale-free networks, but it's still a small-world: from electron microscopy to resting state fMRI, neuroinformatics can help! Join us for a pleasant

evening to find and recommend the latest resources, tools, datasets, and standards. Don't miss this opportunity to network with connectomics leaders, connect with network experts, and start new collaborations!

Pain Neuroscience Social

PURELY SOCIAL

Chair: Steve Davidson, PhD
Co-Chair: Michael P. Jankowski, PhD
Torrey Pines 3

Join fellow pain neuroscientists in a relaxing setting to wind down from the meeting events of the day. This is a purely social gathering for all neuroscientists interested in pain research and a meeting place for networking opportunities for early career investigators and scientists at all levels.

Spinal Cord Injury Social

PURELY SOCIAL

Chair: Carlos B. Mantilla, MD, PhD
Marriott Grand Ballroom 1 and 2

Join us for the annual Spinal Cord Injury Social. Get ready for an evening of informal socializing along with an exciting game of trivia. Put on your thinking caps! Get those young and old neurons firing while networking with colleagues from around the world. Awards to well-informed participants will be presented. Students, fellows, and neuroscientists at all career stages are invited. Join your colleagues in a relaxed and social atmosphere.

Monday, November 14, 6:45–8:45 p.m.

Alzheimer's and Related Dementias Social

PURELY SOCIAL

Chair: Brian C. Kraemer, PhD
Marriott Grand Ballroom 12

This is a social event to catch up with other dementia researchers, network, and unwind.

Behavioral Neuroendocrinology Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Elizabeth Adkins-Regan, PhD
Marriott Grand Ballroom 11

Come meet and speak with friendly colleagues interested in hormones, brain, and behavior. Whether you are new to the field or a seasoned veteran, this is a fun opportunity to socialize with others who share your interest. This is a social occasion at which the winners of the Society for Behavioral Neuroendocrinology's 2016 Daniel S. Lehrman, Frank A. Beach and W. C. Young Awards will be announced.

Developmental Neurobiology Social

PURELY SOCIAL

Chair: Rajeshwar Awatramani, PhD
Co-Chair: Shubha P. Tole, PhD
Guests: L. Cancedda; T. Shimogori
Marriott Grand Ballroom 10

This social is for scientists interested in the development of the nervous system, including neurogenesis, migration, neuron fate determination, and establishment of circuitry. We will also host three short talks on "Cool New Techniques in Molecular and Developmental Neuroscience," and play a fun trivia game.

Hippocampus Social

PURELY SOCIAL

Chair: Charan Ranganath, PhD
Guests: T. Abel, E.A. Buffalo, R.D. Burwell, G. Buzsaki, H.B. Eichenbaum, P.W. Frankland, J.J. Knierim, M.-B. Moser, E.A. Murray, A.R. Preston, C.E.L. Stark, B.J. Wiltgen, M.P. Witter
Rancho Santa Fe 1 and 2

Time and Place or a Memory Space? GPS or BIC? Come together and battle it out over drinks and a Hippocampo-centric soundtrack. To enter your favorite song for the playlist, tweet @CharanRanganath and use hashtag #HippSocial2016

Ingestive Social

PURELY SOCIAL

Chair: Patricia S. Grigson, PhD
Torrey Pines 1 and 2

A social bringing together faculty and student scientists interested in the study of ingestive behavior.

Music Social

PURELY SOCIAL

Chair: William J. Pearce, PhD
Co-Chair: Joseph C. LaManna, PhD
Bayside Pavilion

Join us for an evening of music provided by SfN member musicians. All musical types, from rock to country to opera, are welcome, with emphasis on variety and enthusiasm. Accompaniment is available given at least two weeks, advance notice. The program fills quickly and there are no walk-ons, so contact us as soon as possible to get a place on the program; each performance is typically allotted 10 minutes. Please join us for another casual, informal and fun evening of neuroscientists enjoying music.

Neural Control of Autonomic and Respiratory Function Social

PURELY SOCIAL

Chair: Gary C. Sieck, PhD
Marriott Grand Ballroom 13

This social provides an opportunity for investigators in the broad area of neural control of autonomic and respiratory function to get together, socialize and discuss current research. It provides an excellent opportunity for trainees and young investigators to network with more established investigators in the field.

Psychopharmacology Social

PURELY SOCIAL

Chair: Jared W. Young, PhD
Co-Chair: Stan B. Floresco, PhD
Guests: A. Abi-Dargham; T.J. Bussey; J.T. Coyle; J. Neill; M. Picciotto; J.D. Salamone; B. Setlow; Y. Shaham; N.R. Swerdlow; R.J. Valentino
Marriott Grand Ballroom 5

"Your Brain on Drugs"
Come join another Stan and Jared Psychopharm party exploring your brain on drugs. This social will be both salubrious and stimulating. There are some crack Psychopharms-By-Day attending – to find out who their alter-egos are by night, you will have to attend! So come dial down those inhibitions, turn socializing up to 11, relax, and "network" with both senior and junior researchers with our psychopharmacologically-inspired playlist. All are welcome!

Vision Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Franco Pestilli, PhD
Co-Chair: Sam Ling, PhD
Guests: J.L. Gardner
Marriott Grand Ballroom 8

In addition to providing small snacks and cash bar, this event will organize a series of short presentations and trivia questions. Leaders in the field of vision science will be invited to moderate groups of participants. Vision social participants will be invited to join a group to discuss and prepare answers to trivia questions, which will be provided by the organizers. Questions will cover the history of vision science, neuroscience, and current topics.

SfN-Sponsored Socials

Tuesday, November 15, 6:45–8:45 p.m.

Computational Neuroscience Social

PURELY SOCIAL

Chair: Timothy O'Leary, PhD
Co-Chair: Gabrielle Jacqueline Gutierrez, PhD
Guests: S. Druckmann; A.L. Fairhall; K. Harris; A. Hermundstad; P. E. Latham; K. Miller; J.W. Pillow; T.O. Sharpee; M. Stern; M. van Rossum; X.-J. Wang
Marriott Grand Ballroom 8

This SfN social welcomes all attendees, particularly experimentalists and newcomers to the field. This is a purely social/networking event in a relaxed venue for people to chat, have a drink with friends and colleagues, and meet leading computational and theoretical neuroscientists. As in previous years, we will have a number of special guests; we particularly encourage senior researchers to mingle with students, postdocs, and newcomers.

Epilepsy Social

PURELY SOCIAL

Chair: Mark Beenhakker, PhD
Guests: T.Z. Baram; C. Bernard; P. Buckmaster B.W. Connors; I. Mody; P. Golshani; C.R. Houser;
Marriott Grand Ballroom 12

Epilepsy research is a dynamic and diverse field. Meet and hang out with some of the field's pioneers, as well as junior investigators who are moving the field in exciting new directions. Representatives from NIH, Citizens United for Research in Epilepsy, and other funding agencies will also be in attendance. Everyone with an interest in epilepsy is invited. Whether you are an undergraduate or coined the phrase "seizures beget seizures," come enjoy a few hours of fun conversation and networking.

Eye Movement and Vestibular System Social

PURELY SOCIAL

Chair: Neeraj J. Gandhi, PhD
Presidio 1 and 2

Has stimulus overload at SfN taken you over the threshold yet? Come relax at the oculomotor and vestibular systems social, and tell your colleagues about the science that has you spinning dizzy. It's a no-brainer!

Neuroendocrinology Social

PURELY SOCIAL

Chair: Jaclyn M. Schwarz, PhD
Co-Chair: Kathryn M. Lenz, PhD
Marriott Grand Ballroom 5

"Drawing on Your Experiences with Hormones" Are you interested in the topics of sex, love, stress, rhythm, food, and drink? Who isn't? Come enjoy an evening with your friends in the field of neuroendocrinology. Trainees are especially encouraged to drop in for socialization and networking. The evening will feature a lively game of neuroendocrine pictionary that you can play with your friends. Do you think you could draw a picture of lordosis or maybe the PVN? Winners will receive coveted prizes and short term bragging rights.

Neuroethics Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Judy Illes, PhD
Co-Chair: Julie M. Robillard, PhD
Guest: M.J. Farah, PhD
Marriott Grand Ballroom 13

It's been said that film provides a window and mirror to our dreams, hopes, and fears; modern film presents the possibilities and problems of current and future brain science. Join neuroethics experts such as Judy Illes, Martha Farah, Julie Robiilard, and James Giordano, colleagues, and friends for a social evening of brief film screenings and engaging discussion about contemporary neuroethical topics, issues, meanings, and effects as depicted in and by modern film and other media.

Neuron-Glia Interactions Social

SOCIAL WITH BRIEF PRESENTATION

Chair: Bruce R. Ranson, PhD
Guests: A. Araque, R.D. Fields, H.O. Kettenmann, A. Nishiyama
Marriott Grand Ballroom 11

The social will begin with a brief panel discussion. Specifically, the panel of glial experts will address the question: What's the next 'Big Thing' in glial research. Bruce Ransom will lead a discussion with the panel and audience. Bring your best 2–3 minute-long definition of a particular glial cell (no images allowed but be poetic). The audience will choose the winner who will receive a priceless glial token. All are welcome to attend! Meet the field's current and future leaders!

Optogenetics Social

PURELY SOCIAL

Chair: Jeremiah Y. Cohen, PhD
Marriott Grand Ballroom 10

Join us for an informal social for those interested in using photons and genetic manipulations to study the nervous system. We hope to have strong interactions between junior and senior scientists.

Sensorimotor Social

PURELY SOCIAL

Chair: Brett W. Fling, PhD
Guests: L. Cohen; R. Ivry; F.B. Horak; R. Seidler; K. Zackowski
Torrey Pines 2 and 3

A social event to connect with old friends and make new ones within the broad field of sensorimotor control. Activities to test your sensorimotor control and balance will be available.

Songbird Social

PURELY SOCIAL

Chair: C. Daniel Meliza, PhD
Rancho Santa Fe 3

You don't need a neocortex to be social! This is a gathering for people interested in songbirds (and other avians).

Synapses and Excitatory Amino Acids Social

PURELY SOCIAL

Chair: Kasper B. Hansen, PhD
Guests: P.E. Castillo; J.S. Diamond; C.J. McBain; S.F. Traynelis; K.M. Zito
Rancho Santa Fe 1 and 2

Come by this exciting social and mingle with your fellow neuroscientists. If you are looking for an opportunity to discuss interesting concepts in synapses and excitatory amino acids and/or are simply looking to relax with a drink, this social is for you. Students, postdocs, junior, and senior researchers are all welcome to attend!

Satellite Events and Non-SfN Socials

Full descriptions and the latest details on these satellite events and socials not sponsored by SfN are available online at SfN.org/satellites. These events are also available in the Neuroscience Meeting Planner (NMP), which is accessible on-site or at SfN.org/nmp, and in the meeting mobile app, available for download on Apple, Android, and Kindle mobile devices.

SPONSOR CATEGORY KEY	
1	Commercial
2	University/Nonprofit
3	Individual

TITLE	TIME	MORE INFORMATION	FACILITY	ROOM	KEY
WEDNESDAY, NOVEMBER 9					
Alzheimer's Fast Track Workshop**	7 a.m.–7 p.m.	dcampbell@brightfocus.org	The Dana on Mission Bay		2
49th Annual International Society for Developmental Psychobiology Meeting**	8 a.m.–9 p.m.	besuther@fiu.edu	Catamaran Resort Hotel and Spa		2
THURSDAY, NOVEMBER 10					
Alzheimer's Fast Track Workshop**	7 a.m.–7 p.m.	dcampbell@brightfocus.org	The Dana on Mission Bay		2
11th Brain Research Conference, 4th RNA Metabolism in Neurological Disease**	8 a.m.–6 p.m.	c.mole@elsevier.com	Paradise Point Resort and Spa		1
49th Annual International Society for Developmental Psychobiology Meeting**	8 a.m.–9 p.m.	besuther@fiu.edu	Catamaran Resort Hotel and Spa		2
American Society of Neurorehabilitation**	8 a.m.–7 p.m.	info@asnr.com	Marriott Mission Valley San Diego		2
Barrels XXIX**	8 a.m.–10 p.m.	regonline.com/barrels29	Univ. of Southern California, Los Angeles		2
Cell Symposia: Big Questions in Neuroscience**	8 a.m.–6 p.m.	cell-symposia-neuroscience.com/	Paradise Point Resort and Spa		3
J.B. Johnston Club for Evolutionary Neuroscience**	7 a.m.–7:30 p.m.	abbutler@gmu.edu	Horton Grand Hotel		3
IEEE Workshop on Advanced NeuroTechnologies for Brain Initiatives: Challenges and Opportunities**	8:15 a.m.–6 p.m.	http://brain.ieee.org/news/antbi/	Sheraton San Diego Hotel and Marina		2
26th Neuropharmacology Conference: Ionotropic Glutamate Receptors**	8:30a.m.–7:30p.m.	f.watson@elsevier.com	Paradise Point Resort and Spa		1
International Neuroethics Society Public Program: Tomorrow's World — A Discussion of Emerging Technologies **	5–7 p.m.	kgraham@neuroethicssociety.org	San Diego Central Library	Shiley Suite 330 Park Blvd.	2
15th Annual Molecular and Cellular Cognition Society Poster Session **	6:30–9:30 p.m.	tsaiasst@mit.edu	Westin San Diego Gaslamp Quarter	910 Broadway Circle, San Diego Ballroom	2
FRIDAY, NOVEMBER 11					
3D CNS Disease Modeling Workshop	7 a.m.–6 p.m.	https://meetings.ninds.nih.gov/meetings/3DCNSDiseaseModeling/	Manchester Grand Hyatt San Diego	Coronado Ballroom	2
Alzheimer's Fast Track Workshop**	7 a.m.–5 p.m.	dcampbell@brightfocus.org	The Dana on Mission Bay		2
11th Brain Research Conference, 4th RNA Metabolism in Neurological Disease**	8 a.m.–6 p.m.	c.mole@elsevier.com	Paradise Point Resort and Spa		1
49th Annual International Society for Developmental Psychobiology Meeting**	8 a.m.–5 p.m.	besuther@fiu.edu	Catamaran Resort Hotel and Spa		2
Advances and Perspectives in Auditory Neuroscience (APAN)	8 a.m.–5 p.m.	Liz_Romanski@URMC.Rochester.edu	Wyndham San Diego Bayside		3
American Society of Neurorehabilitation**	8 a.m.–5:30 p.m.	info@asnr.com	Marriott Mission Valley San Diego		2
Barrels XXIX**	8 a.m.–5 p.m.	regonline.com/barrels29	Univ. of Southern California, Los Angeles		2
Cell Symposia: Big Questions in Neuroscience**	8 a.m.–6 p.m.	cell-symposia-neuroscience.com/	Paradise Point Resort and Spa		3
Frontiers in Addiction Research: 2016 Joint NIDA-NIAAA Mini-Convention	8 a.m.–6 p.m.	rsorense@nida.nih.gov	San Diego Convention Center	7	2
IEEE Workshop on Advanced NeuroTechnologies for Brain Initiatives: Challenges and Opportunities**	8 a.m.–12 p.m.	http://brain.ieee.org/news/antbi/	Sheraton San Diego Hotel and Marina		2
J.B. Johnston Club for Evolutionary Neuroscience**	7 a.m.–7:30 p.m.	abbutler@gmu.edu	Horton Grand Hotel		3
Society for Social Neuroscience (S4SN) 2016 Annual Meeting	8 a.m.–7:30 p.m.	kbosch@taramillerevents.com	Marriott Marquis San Diego Marina	Marina Ballroom G	2
Spinal Cord Plasticity in Motor Control	8 a.m.–5 p.m.	http://academicdepartments.musc.edu/ncnm4r/sfn/index.html	Marriott Marquis San Diego Marina	Marina Ballroom E	2
26th Neuropharmacology Conference: Ionotropic Glutamate Receptors**	8:30 a.m.–7:30 p.m.	f.watson@elsevier.com	Paradise Point Resort and Spa		1

** multiday event

TITLE	TIME	MORE INFORMATION	FACILITY	ROOM	KEY
International Neuroethics Society Annual Meeting**	8:45 a.m.–7 p.m.	kgraham@neuroethicssociety.org	Westin Gaslamp Quarter Hotel	San Diego Ballroom (4th Fl.) 910 Broadway Circle	2
15th Annual Molecular and Cellular Cognition Society Symposium**	9 a.m.–5 p.m.	tsaiasst@mit.edu	San Diego Convention Center	28	2
Society for the Neuroscience of Creativity	9 a.m.–1 p.m.	beversdorfd@health.missouri.edu	Manchester Grand Hyatt San Diego	Hillcrest AB	2
Using NEURON to Model Cells and Networks	9 a.m.–5 p.m.	ted.carnevale@yale.edu	http://www.neuron.yale.edu/neuron/courses		2
Human Brain Project Collaborative Neuroscience and Enabling Infrastructure	1–5 p.m.	jeffrey.muller@epfl.ch	Manchester Grand Hyatt San Diego	Cortez Hill ABC	2
Advances in Motor Control and Motor Learning	1–7 p.m.	mas@seas.harvard.edu	Marriott Marquis San Diego Marina	Marina Ballroom F	2
49th Annual International Society for Developmental Psychobiology Reception **	7–9 p.m.	besuther@fiu.edu	Hilton San Diego Bayfront	Cobalt 501	2
SATURDAY, NOVEMBER 12					
Low Dose, Brain Dedicated PET	7–10:30 a.m.	jblewis@hsc.wvu.edu	San Diego Convention Center	2	2
Using the Neuroscience Gateway Portal (NSG) for Parallel Simulations	9–10:30 a.m.	ted.carnevale@yale.edu	http://www.nsgportal.org/workshop.html		2
Publishing Your Research with Impact	8:30–10:30 a.m.	kornstein@wiley.com	San Diego Convention Center	4	1
Blindfold Chess Exhibition	6:30–10 p.m.	jennifer@blindfoldking.com	Marriott Marquis San Diego Marina	Torrey Pines	3
Chinese Neuroscientists Social	6:30–9 p.m.	yzhu@childrensnational.org	Manchester Grand Hyatt San Diego	Harbor Ballroom DEF	2
Friends of Case Western Reserve University and Cleveland Clinic Social	6:30–8:30 p.m.	cmiller@hb.edu	Hilton San Diego Bayfront	204B	2
g.tec's Brain-Computer Interface Workshop for Control, Assessment and Rehabilitation	6:30–9:30 p.m.	guger@gtec.at	San Diego Convention Center	4	1
The FENS-Kavli Network of Excellence Social	7:30–9:30 p.m.	manuel.mameli@inserm.fr	Hilton San Diego Bayfront	Aqua Salon EF	3
SUNDAY, NOVEMBER 13					
Arab Neuroscientists Social	6:30–9 p.m.	yasmine@arabneuroscientists.org	San Diego Convention Center	26B	3
ASPET's Neuropharmacology Division Social	6:30–8 p.m.	1mwwood@gmail.com	Hilton San Diego Bayfront	Aqua Salon EF	2
Ernst Strüngmann Forum Social	6:30–9:30 p.m.	lupp@esforum.de	Marriott Marquis San Diego Marina	Temecula	2
Evelyn F. McKnight Brain Research Foundation Poster Reception	6:30–8:30 p.m.	http://uab.edu/medicine/neurobiology/research/mcknight-brain-institute	Hilton San Diego Bayfront	Indigo Ballroom ABEF	2
International Behavioral Neuroscience Society Social	6:30–8:30 p.m.	ibns@ibnsconnect.org	Manchester Grand Hyatt San Diego	Cortez Hill A–C	2
Iranian Neuroscientists Community Annual Social Event	6:30–8:30 p.m.	mkiaei@uams.edu	Hilton San Diego Bayfront	Aqua 300	3
Middle-Eastern Neuroscientists Social	6:30–9:30 p.m.	nelly.alia-klein@mssm.edu	Marriott Marquis San Diego Marina	La Costa	3
Neuroimmunology Social	6:30–8:30 p.m.	sbilbo@mgh.harvard.edu	Marriott Marquis San Diego Marina	Bayside Pavilion	3
Parkinson's Disease Social	6:30–10 p.m.	bvernaleo@pdf.org	Hilton San Diego Bayfront	Indigo 206	2
PWN — Breaking Barriers for Young Women in Science	6:30–8:30 p.m.	cmiller@scripps.edu	Marriott Marquis San Diego Marina	Cardiff/Carlsbad	2
RecoveriX and MindBEAGLE Workshop: Motor Recovery Neurotechnology and Consciousness Assessment	6:30–9:30 p.m.	guger@gtec.at	San Diego Convention Center	2	1
Rutgers Brain Health Institute Reception	6:30–10 p.m.	kuzhikev@njms.rutgers.edu	Hilton San Diego Bayfront	Indigo 204B	2
Systems Neurobiology Approaches to Psychiatric Disease	6:30–8 p.m.	Larry.Hardy@Sunovion.com	Manchester Grand Hyatt San Diego	Mission Beach A–C	3
Targeting Alpha-Synuclein as a Disease Modifying Treatment for PD & Synucleinopathies	6:30–10 p.m.	dlpriceSD@gmail.com	San Diego Convention Center	5AB	3
The Kavli HUMAN Project: Society for Neuroscience Stakeholder Town Hall	6:30–8:30 p.m.	ellenchoi@nyu.edu	Marriott Marquis San Diego Marina	Marina Ballroom DE	2
The University of Chicago 13th Annual Neuroscience Social	6:30–8:30 p.m.	neurograd@uchicago.edu	Hilton San Diego Bayfront	Indigo 202AB	2
Boston University Graduate Program for Neuroscience Reception	7–10 p.m.	sgrasso@bu.edu	Hilton San Diego Bayfront	Indigo 204A	2
Dutch Neuroscience Social	7–10 p.m.	guus.smit@cncr.vu.nl	Manchester Grand Hyatt San Diego	Hillcrest A–D	2
Stanford Neurosciences Alumni Reception	7–10 p.m.	kdiamond@stanford.edu	Hilton San Diego Bayfront	Aqua Salon D	2
Taiwan Night	7:30–9:30 p.m.	taiwan.neuroscience@gmail.com	Hilton San Diego Bayfront	Sapphire Ballroom DHL	2

** multiday event

TITLE	TIME	MORE INFORMATION	FACILITY	ROOM	KEY
MONDAY, NOVEMBER 14					
Breakfast with BrightFocus	7–8 a.m.	dcampbell@brightfocus.org	Manchester Grand Hyatt San Diego	Hillcrest A–D	2
13th Annual Christopher Reeve "Hot Topics" in Stem Cell Biology	6:30–9:30 p.m.	towens@sbpdiscovery.org	San Diego Convention Center	6A	2
2nd Thomas RECORDING Multichannel Recording Workshop	6:30–8:30 p.m.	info@thomasrecording.com	San Diego Convention Center	2	3
Applications of Wearable Sensing's Dry EEG systems in BCI and Cognitive Neuroscience Research	6:30–9:30 p.m.	walid@wearablesensing.com	Manchester Grand Hyatt San Diego	Solana Beach	1
Association of Korean Neuroscientists: Annual Meeting and Social	6:30–8:30 p.m.	leed1@ohio.edu	Horton Grand Hotel		3
BRAIN Initiative "TAD Talks": Technology Accelerating Discovery	6:30–8:30 p.m.	roskams@zoology.ubc.ca	Hilton San Diego Bayfront	Indigo Ballroom AE	2
Green and Open Neurosciences Symposium & Soiree	6:30–9:30 p.m.	lam@greenneuro.org	Manchester Grand Hyatt San Diego	Cortez Hill A–C	2
Knockout Rats: Generation and Characterization of More Translational Models of Autism	6:30–10 p.m.	l.reid@horizondiscovery.com	San Diego Convention Center	30AB	1
Locomotion Analysis to Examine Motor Function in Mouse Models of Neurological Disease	6:30–9 p.m.	yvonne@noldus.com	Manchester Grand Hyatt San Diego	Mission Beach ABC	1
Multiple Slice Recordings: An Essential Tool for Brain Slice Electrophysiology	6:30–8:30 p.m.	sandra.elspass@lohres.de	San Diego Convention Center	32	1
Neurorehabilitation Social	6:30–8:30 p.m.	kingla@ohsu.edu	Hilton San Diego Bayfront	Aqua Salons DEF	2
New Techniques in Electro- and Optophysiology	6:30–8:30 p.m.	margaret@alascience.com	San Diego Convention Center	1	1
NIH Common Fund Research Resources and Funding Opportunities	6:30–9 p.m.	https://commonfund.nih.gov/sfn2016	San Diego Convention Center	7AB	2
Novel Experimental Approaches to Treat Infectious and Environmental Diseases Affecting the Nervous System	6:30–10 p.m.	vdellamaggiore@gmail.com	Marriott Marquis San Diego Marina	San Diego Ballroom C	2
Open Ephys Meeting	6:30–8 p.m.	jvoigts@gmail.com	Marriott Marquis San Diego Marina	San Diego Ballroom A	2
Pavlovian Society Social	6:30–8:30 p.m.	stanton@udel.edu	Hilton San Diego Bayfront	Indigo 206	2
Simons Foundation Autism Research Initiative (SFARI) Social	6:30–8:30 p.m.	agreenebaum@simonsfoundation.org	Hilton San Diego Bayfront	Indigo 204	2
Sleep Research Society Club Hypnos Membership Reception	6:30–8 p.m.	coordinator@srsnet.org	Hilton San Diego Bayfront	Sapphire Ballroom AE	2
Society for Neuroeconomics Social	6:30–8:30 p.m.	michelle@podiumconferences.com	Hilton San Diego Bayfront	Sapphire Ballroom CDGH	2
The Grass Foundation and Marine Biological Laboratory Social	6:30–8 p.m.	execassist@grassfoundation.org	Marriott Marquis San Diego Marina	Presidio 1 & 2	2
The Sixth Annual International Society for Serotonin Research (formerly the Serotonin Club) Mixer	6:30–8 p.m.	berg@uthscsa.edu	The Quad Alehouse	868 5th Avenue	2
Towards a Neuroscience for Architecture and Aesthetics	6:30–8 p.m.	smagsamen@mac.com	Manchester Grand Hyatt San Diego	Hillcrest AB	2
Washington University in St. Louis Neuroscience Reception	6:30–10 p.m.	phathuynh89@gmail.com	Barleymash Restaurant	600 5th Ave. Gaslamp District	2
Women in World Neuroscience Symposium — Meet the Editors: How to Get Published in Major Neuroscience Journals	6:30–8:30 p.m.	edwardse@mail.nih.gov	San Diego Convention Center	23AB	3
LGBT Social	7–9 p.m.	Andrew.Murtishaw@unlv.edu	Babycakes in Hillcrest		3
Sleep and Circadian Biology DataBlitz	8–10 p.m.	laposkya@nhlbi.nih.gov	Hilton San Diego Bayfront	Sapphire Ballroom IJMN	2
THURSDAY, NOVEMBER 17					
Wiring and Functional Principles of Neural Circuits**	8:30 a.m.–5 p.m.	https://neuronet.riem.nagoya-u.ac.jp/neuralcircuit/	Univ. of San Diego	Natural Sciences Building Auditorium, Room 1205	2
Scientific Knowledge Discovery Over Big Data	10 a.m.–4 p.m.	naveen.ashish@gmail.com	Contact Organizer: naveen.ashish@gmail.com		2
FRIDAY, NOVEMBER 18					
Wiring and Functional Principles of Neural Circuits**	8:30 a.m.–5 p.m.	https://neuronet.riem.nagoya-u.ac.jp/neuralcircuit/	Univ. of San Diego	Natural Sciences Building Auditorium, Room 1205	2

** multiday event

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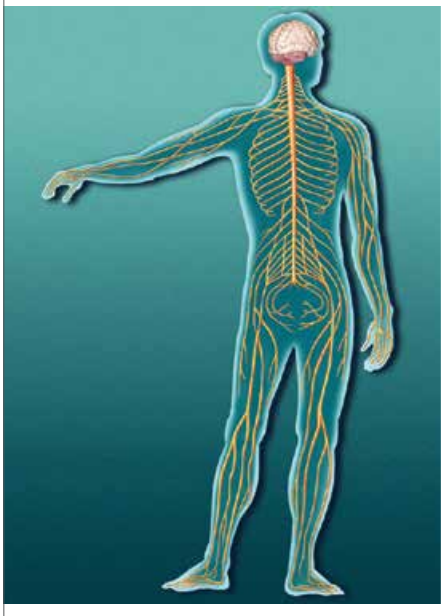

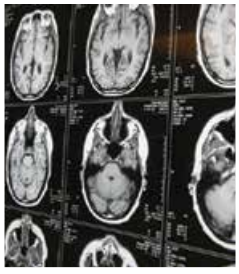

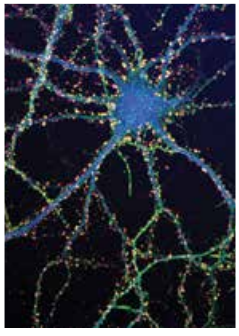

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List of Sessions by Theme and Day

All posters will be presented in the San Diego Convention Center, Halls B-H. All lecture, symposium, minisymposium, and nanosymposium rooms are also in the convention center.

Note: Theme J posters will be on display in Hall B beginning at 1 p.m. on Saturday, November 12 and will remain posted until 5 p.m. on Sunday, November 13. One-hour presentation times will occur either Saturday afternoon or Sunday morning.

THEME DESCRIPTIONS

- **A** Development
- **B** Neural Excitability, Synapses, and Glia
- **C** Neurodegenerative Disorders and Injury
- **D** Sensory Systems
- **E** Motor Systems
- **F** Integrative Physiology and Behavior
- **G** Motivation and Emotion
- **H** Cognition
- **I** Techniques
- **J** History and Education

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
FEATURED LECTURES							
1	Global Mental Health and Neuroscience: Challenges and Opportunities	Dialogues Between Neuroscience and Society		Ballroom 20	12 Sat	11 a.m.–1 p.m.	
9	Tuning Auditory Circuits for Vocal Communication	Presidential Special Lecture		Ballroom 20	12 Sat	5:15–6:25 p.m.	1.25
196	Random Walk in Neurobiology	Peter and Patricia Gruber Lecture		Ballroom 20	13 Sun	2:30–3:40 p.m.	
197	Limitations on Visual Development: Neurons and Behavior	Presidential Special Lecture		Ballroom 20	13 Sun	5:15–6:25 p.m.	1.25
280	Reforming Forensic Science: Some Insights From Research on Vision and Memory	David Kopf Lecture on Neuroethics		Ballroom 20	14 Mon	10–11:10 a.m.	
377	Natural Products as Probes of the Pain Pathway: From Physiology to Atomic Structure	Albert and Ellen Grass Lecture		Ballroom 20	14 Mon	3:15–4:25 p.m.	1.25
378	Toward Whole-body Connectome in *Drosophila*	Presidential Special Lecture		Ballroom 20	14 Mon	5:15–6:25 p.m.	1.25
569	Sixty Years of Research on Neurotransmitter Release in the Light of Recent Results from the Calyx of Held Synapse	Fred Kavli History of Neuroscience Lecture		Ballroom 20	15 Tues	2:30–3:40 p.m.	
570	Neurobiology of the Adolescent and Young Adult Brain Reveals Unique Strengths and Vulnerabilities: Debunking Myths	Presidential Special Lecture		Ballroom 20	15 Tues	5:15–6:25 p.m.	1.25
THEME A: DEVELOPMENT							
8	Lineage Analyses of Developing CNS Tissues	Lecture		Ballroom 20	12 Sat	2–3:10 p.m.	1.25
10	Mechanisms of Neural Reprogramming	Nanosymposium		23A	12 Sat	1–3:15 p.m.	
28	Neuronal Morphology and Cell Death	Poster	A1–A12	Halls B–H	12 Sat	1–5 p.m.	
29	Adult Neurogenesis Mammalian Systems	Poster	A13–B24	Halls B–H	12 Sat	1–5 p.m.	
30	Genetics of Autism and Autism Models	Poster	B25–C15	Halls B–H	12 Sat	1–5 p.m.	
31	Autism Pathogenesis	Poster	C16–C33	Halls B–H	12 Sat	1–5 p.m.	
32	Genetic Animal Models of Neurodevelopmental Disorders	Poster	C34–D26	Halls B–H	12 Sat	1–5 p.m.	
99	Neuronal Cytoskeleton 2.0: A Revised View of an Ancient Edifice	Symposium		6F	13 Sun	8 a.m.–noon	2.5
117	Neurogenesis and Patterning	Poster	A1–A13	Halls B–H	13 Sun	8 a.m.–noon	
118	Axon Outgrowth and Guidance	Poster	B1–C4	Halls B–H	13 Sun	8 a.m.–noon	
119	Neural Circuit Activity and Maturation I	Poster	C5–C17	Halls B–H	13 Sun	8 a.m.–noon	
120	Autism: Clinical Studies I	Poster	C18–D7	Halls B–H	13 Sun	8 a.m.–noon	
191	Building the Cerebral Cortex: Mechanisms That Mediate Migration, Specification, and Axonal Outgrowth	Minisymposium		29D	13 Sun	1:30–4 p.m.	2.5
198	Adult Neurogenesis During Aging of the Neural Stem Cell Niche	Nanosymposium		25A	13 Sun	1–3:30 p.m.	
208	Regulation of Neurogenesis	Poster	A1–B12	Halls B–H	13 Sun	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
209	Astrocytes Development and Metabolism	Poster	B13–C9	Halls B–H	13 Sun	1–5 p.m.	
210	Injury-Induced Regeneration and Remyelination	Poster	C10–D5	Halls B–H	13 Sun	1–5 p.m.	
211	Astrocytes: Synaptogenesis, Synaptic Plasticity, and Neuron-Interaction	Poster	D6–D33	Halls B–H	13 Sun	1–5 p.m.	
212	Autism: Clinical Studies II	Poster	D34–E21	Halls B–H	13 Sun	1–5 p.m.	
213	Molecular, Cellular, and Physiological Mechanisms of Down Syndrome	Poster	E22–F4	Halls B–H	13 Sun	1–5 p.m.	
214	Animal Models of Neurodevelopmental Disorders: Mechanisms	Poster	F5–F26	Halls B–H	13 Sun	1–5 p.m.	
215	Sensorimotor Development	Poster	F27–F48	Halls B–H	13 Sun	1–5 p.m.	
216	Adolescents: Human Imaging I	Poster	F49–G13	Halls B–H	13 Sun	1–5 p.m.	
277	Human Brain Development and Maturation: Animal Brain Mapping, Human Brain Imaging, and Computer Simulation	Minisymposium		28A	14 Mon	8:30–11 a.m.	2.5
282	Modeling Neuropsychiatric Disease	Nanosymposium		23A	14 Mon	8–11:30 a.m.	
293	Microglia Development and Function	Poster	A1–A13	Halls B–H	14 Mon	8 a.m.–noon	
294	Environmental Influences on Adult Neurogenesis	Poster	B1–B23	Halls B–H	14 Mon	8 a.m.–noon	
295	Synapse Maturation and Remodeling	Poster	B24–C15	Halls B–H	14 Mon	8 a.m.–noon	
296	Molecular and Cellular Mechanisms in Fragile X Syndrome	Poster	C16–D2	Halls B–H	14 Mon	8 a.m.–noon	
297	Rare Genetic Developmental Disorders	Poster	D3–D12	Halls B–H	14 Mon	8 a.m.–noon	
298	Limbic System Development	Poster	D13–D20	Halls B–H	14 Mon	8 a.m.–noon	
299	Adolescent Development: Animal Models I	Poster	D21–E4	Halls B–H	14 Mon	8 a.m.–noon	
379	Axon and Dendrite Development and Regeneration	Nanosymposium		30B	14 Mon	1–3:45 p.m.	
390	Oligodendrocytes and Schwann Cells: Development, Neuron-Interaction, and Myelination	Poster	A1–B13	Halls B–H	14 Mon	1–5 p.m.	
391	Autism: Models	Poster	B14–C17	Halls B–H	14 Mon	1–5 p.m.	
392	Behavior in Fragile X Syndrome and Other Neurodevelopmental Diseases	Poster	C18–C28	Halls B–H	14 Mon	1–5 p.m.	
393	Molecular Mechanisms of Neuronal and Glial Migration	Poster	C29–D10	Halls B–H	14 Mon	1–5 p.m.	
394	Adolescent Development: Animal Models II	Poster	D11–D22	Halls B–H	14 Mon	1–5 p.m.	
472	Neuroepigenetics	Symposium		6A	15 Tues	8 a.m.–noon	2.5
480	Mechanisms of Synapse Formation	Nanosymposium		30B	15 Tues	8–10:30 a.m.	
481	Molecular and Cellular Mechanisms in Autism Models and Other Developmental Diseases	Nanosymposium		25A	15 Tues	8–11 a.m.	
491	Fate Specification and Neural Progenitor Biology	Poster	A1–B17	Halls B–H	15 Tues	8 a.m.–noon	
492	Cerebral Cortex: Fate Specification and Neuronal Differentiation	Poster	B18–C18	Halls B–H	15 Tues	8 a.m.–noon	
493	Mechanisms of Neuronal Differentiation and Fate Specification	Poster	C19–D14	Halls B–H	15 Tues	8 a.m.–noon	
494	Molecular Mechanisms of Adult Neurogenesis	Poster	D15–E7	Halls B–H	15 Tues	8 a.m.–noon	
495	*In Vitro* Models of Human Brain Development and Pathology: From Stem Cells to Brain Organoids	Poster	E8–E36	Halls B–H	15 Tues	8 a.m.–noon	
496	Rett Syndrome	Poster	E37–F11	Halls B–H	15 Tues	8 a.m.–noon	
497	Preclinical Models for Neurodevelopmental Disorder Therapy	Poster	F12–F29	Halls B–H	15 Tues	8 a.m.–noon	
565	Current Perspectives in Autism Spectrum Disorder: From Genes to Therapy	Minisymposium		6F	15 Tues	1:30–4 p.m.	2.5
571	Regulation of Adult Neurogenesis	Nanosymposium		25A	15 Tues	1–3 p.m.	
572	Autism: Physiology and Behavior	Nanosymposium		23A	15 Tues	1–4:45 p.m.	
573	Neurodevelopmental Disorders: New Animal Models and Mechanisms	Nanosymposium		30B	15 Tues	1–4:30 p.m.	
581	Modeling Neurodegenerative Disease from iPS Cells	Poster	A1–B17	Halls B–H	15 Tues	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
582	Modeling Psychiatric Disease from iPS Cells	Poster	B18–C13	Halls B–H	15 Tues	1–5 p.m.	
583	Mechanisms of Synapse Formation	Poster	C14–D9	Halls B–H	15 Tues	1–5 p.m.	
584	Activity-Dependent Transcription and Responses	Poster	D10–D21	Halls B–H	15 Tues	1–5 p.m.	
585	ADHD and Other Behavior Disorders	Poster	D22–E12	Halls B–H	15 Tues	1–5 p.m.	
586	Adolescents: Human Imaging II	Poster	E13–E25	Halls B–H	15 Tues	1–5 p.m.	
654	Regulation of Neural Stem Cell Fate During Development and in the Adult	Lecture		Ballroom 20	16 Wed	8:30–9:40 a.m.	1.25
657	Neural Stem Cells to Cerebral Cortex: Emerging Mechanisms Regulating Progenitor Behavior and Productivity	Minisymposium		29D	16 Wed	8:30–11 a.m.	2.5
663	Mechanisms of Fragile X Syndrome	Nanosymposium		25A	16 Wed	8–11:30 a.m.	
674	Adult Neurogenesis	Poster	A1–B2	Halls B–H	16 Wed	8 a.m.–noon	
675	Peripheral Nervous System Regeneration	Poster	B3–C4	Halls B–H	16 Wed	8 a.m.–noon	
676	Cytoskeletal Mechanisms Underlying Axon Outgrowth and Guidance	Poster	C5–C24	Halls B–H	16 Wed	8 a.m.–noon	
677	Neural Circuit Activity and Maturation II	Poster	C25–D12	Halls B–H	16 Wed	8 a.m.–noon	
678	Sensory Systems Development: Activity and Circuits	Poster	D13–D33	Halls B–H	16 Wed	8 a.m.–noon	
679	Genetic Mechanisms in Autism Models	Poster	D34–E18	Halls B–H	16 Wed	8 a.m.–noon	
680	Physiological Mechanisms in Autism and Autism Models	Poster	E19–F6	Halls B–H	16 Wed	8 a.m.–noon	
681	Animal Models of Environmental Effects on Neurodevelopment	Poster	F7–F35	Halls B–H	16 Wed	8 a.m.–noon	
758	Making Serotonergic Neurons: From Mouse to Human	Symposium		6F	16 Wed	8 a.m.–noon	2.5
764	Rett Syndrome	Nanosymposium		30B	16 Wed	1–4:30 p.m.	
775	Dendritic Arborization	Poster	A1–B12	Halls B–H	16 Wed	1–5 p.m.	
776	Autism: Neuromimmune, Microbiota, and Environmental Factors	Poster	B13–C4	Halls B–H	16 Wed	1–5 p.m.	
777	Adolescents: Mechanisms of Vulnerability	Poster	C5–C27	Halls B–H	16 Wed	1–5 p.m.	
778	Comparative Anatomy	Poster	C28–D24	Halls B–H	16 Wed	1–5 p.m.	
779	Development and Evolution	Poster	D25–E13	Halls B–H	16 Wed	1–5 p.m.	
THEME B: NEURAL EXCITABILITY, SYNAPSES, AND GLIA							
2	Synaptic Actin Dysregulation: A Convergent Mechanism of Mental Disorders?	Symposium		6B	12 Sat	8 a.m.–noon	2.5
33	Dopamine	Poster	D27–E2	Halls B–H	12 Sat	1–5 p.m.	
34	GABAA Receptors	Poster	E3–E31	Halls B–H	12 Sat	1–5 p.m.	
35	Opioid, Purine, and Peptide Receptors	Poster	E32–F13	Halls B–H	12 Sat	1–5 p.m.	
36	Homeostatic Plasticity	Poster	F14–F42	Halls B–H	12 Sat	1–5 p.m.	
37	Microglia I	Poster	F43–G19	Halls B–H	12 Sat	1–5 p.m.	
107	Mechanisms of Neurotransmitter Release	Nanosymposium		25A	13 Sun	8–11 a.m.	
121	Kainate and Other Non-NMDA Receptors	Poster	D8–D19	Halls B–H	13 Sun	8 a.m.–noon	
122	Ligand-Gated Ion Channels	Poster	D20–D33	Halls B–H	13 Sun	8 a.m.–noon	
123	Potassium Channels I	Poster	D34–E24	Halls B–H	13 Sun	8 a.m.–noon	
124	GABA	Poster	E25–F8	Halls B–H	13 Sun	8 a.m.–noon	
125	Synaptic Transmission: Modulation	Poster	F9–F26	Halls B–H	13 Sun	8 a.m.–noon	
126	Long-Term Potentiation: Intracellular Signaling	Poster	F27–F48	Halls B–H	13 Sun	8 a.m.–noon	
127	Astrocyte Cell Biology and Modulation I	Poster	F49–G24	Halls B–H	13 Sun	8 a.m.–noon	
128	Astrocytes in Disease	Poster	G25–G48	Halls B–H	13 Sun	8 a.m.–noon	
192	Astrocytes as Active Participants in Neural Circuits: From Cells to Systems	Minisymposium		6B	13 Sun	1:30–4 p.m.	2.5
217	Amino Acid and Other Transporters	Poster	G14–G37	Halls B–H	13 Sun	1–5 p.m.	
218	Monoamine Signaling	Poster	G38–H10	Halls B–H	13 Sun	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
219	NMDA Receptors I	Poster	H11–I10	Halls B–H	13 Sun	1–5 p.m.	
220	Voltage-Gated Ca^2+ Channels	Poster	I11–K6	Halls B–H	13 Sun	1–5 p.m.	
221	Synaptic Transmission: Synaptic Integration	Poster	K7–L9	Halls B–H	13 Sun	1–5 p.m.	
222	Long-Term Potentiation: Pre- and Postsynaptic Mechanisms	Poster	L10–N3	Halls B–H	13 Sun	1–5 p.m.	
223	Long-Term Depression	Poster	N4–O6	Halls B–H	13 Sun	1–5 p.m.	
224	Transcription and Translation: Mechanisms and Dynamics	Poster	O7–P9	Halls B–H	13 Sun	1–5 p.m.	
273	Quantal Release and Its Requirements	Lecture		Ballroom 20	14 Mon	8:30–9:40 a.m.	1.25
283	Epilepsy: Mechanisms	Nanosymposium		25A	14 Mon	8–10:15 a.m.	
300	Postsynaptic Organization and Structure I	Poster	E5–E20	Halls B–H	14 Mon	8 a.m.–noon	
301	Modulation: Pharmacology	Poster	E21–F1	Halls B–H	14 Mon	8 a.m.–noon	
302	Network Interactions and Signal Propagation	Poster	F2–F26	Halls B–H	14 Mon	8 a.m.–noon	
303	Oscillations and Synchrony: Unit Studies	Poster	F27–F38	Halls B–H	14 Mon	8 a.m.–noon	
304	Neuro-Oncology: Signaling and Therapeutics	Poster	F39–G2	Halls B–H	14 Mon	8 a.m.–noon	
305	Neuro-Oncology: Tumor Characterization and Modeling	Poster	G3–G18	Halls B–H	14 Mon	8 a.m.–noon	
374	Casting a Wide Net: Role of Perineuronal Nets in Neural Plasticity	Minisymposium		29D	14 Mon	1:30–4 p.m.	2.5
395	Invertebrate Neurotransmitters	Poster	D23–D29	Halls B–H	14 Mon	1–5 p.m.	
396	NMDA Receptors II	Poster	D30–E21	Halls B–H	14 Mon	1–5 p.m.	
397	AMPA Receptors	Poster	E22–E33	Halls B–H	14 Mon	1–5 p.m.	
398	Ca^2+ Channels and Ca^2+ Signaling	Poster	E34–F8	Halls B–H	14 Mon	1–5 p.m.	
399	Dopamine Transporter Regulation	Poster	F9–F27	Halls B–H	14 Mon	1–5 p.m.	
400	Visualizing Presynaptic Structure and Function	Poster	F28–F52	Halls B–H	14 Mon	1–5 p.m.	
401	Spike-Timing Dependent Plasticity	Poster	F52–G12	Halls B–H	14 Mon	1–5 p.m.	
402	Structural Plasticity I	Poster	G13–G38	Halls B–H	14 Mon	1–5 p.m.	
403	Transcription and Translation: Synaptic and Circuit Plasticity	Poster	G39–H4	Halls B–H	14 Mon	1–5 p.m.	
404	Synaptic Excitability and Dendritic Integration	Poster	H5–H20	Halls B–H	14 Mon	1–5 p.m.	
405	Oscillations and Synchrony: EEG studies	Poster	H21–J1	Halls B–H	14 Mon	1–5 p.m.	
406	Epilepsy: Synaptic and Post-Seizure Mechanisms	Poster	J2–K6	Halls B–H	14 Mon	1–5 p.m.	
407	Epilepsy: Anticonvulsant and Antiepileptic Strategies	Poster	K7–L6	Halls B–H	14 Mon	1–5 p.m.	
408	Epilepsy: Human Studies I	Poster	L7–M7	Halls B–H	14 Mon	1–5 p.m.	
409	Oligodendrocytes	Poster	M8–N9	Halls B–H	14 Mon	1–5 p.m.	
475	Role of Tau in Neural Network Dysfunction: From Mechanisms to Therapeutics	Minisymposium		29D	15 Tues	8:30–11 a.m.	2.5
498	Dopamine Signaling	Poster	F30–F45	Halls B–H	15 Tues	8 a.m.–noon	
499	Neurotrophins	Poster	F46–G11	Halls B–H	15 Tues	8 a.m.–noon	
500	Nicotinic Acetylcholine Receptors in the Brain: Physiology and Function	Poster	G10–G37	Halls B–H	15 Tues	8 a.m.–noon	
501	Sodium Channels	Poster	G38–H15	Halls B–H	15 Tues	8 a.m.–noon	
502	Glutamate Transporters	Poster	H16–I7	Halls B–H	15 Tues	8 a.m.–noon	
503	Exocytosis and Endocytosis: Mechanisms and Regulation	Poster	I8–J18	Halls B–H	15 Tues	8 a.m.–noon	
504	Short-Term Plasticity	Poster	K1–L3	Halls B–H	15 Tues	8 a.m.–noon	
505	Structural Plasticity II	Poster	L4–M13	Halls B–H	15 Tues	8 a.m.–noon	
506	Oscillations and Synchrony: Other I	Poster	M14–O3	Halls B–H	15 Tues	8 a.m.–noon	
507	Oscillations and Synchrony: Other II	Poster	O4–Q3	Halls B–H	15 Tues	8 a.m.–noon	
508	Epilepsy: *In Vivo* and Behavior	Poster	Q4–R2	Halls B–H	15 Tues	8 a.m.–noon	
509	Astrocyte Cell Biology and Modulation II	Poster	R3–T1	Halls B–H	15 Tues	8 a.m.–noon	
510	Microglia II	Poster	T2–U12	Halls B–H	15 Tues	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
511	Demyelinating Disorders and Their Mechanisms	Poster	U13–V17	Halls B–H	15 Tues	8 a.m.–noon	
562	Cortical Circuits of Vision	Lecture		Ballroom 20	15 Tues	1–2:10 p.m.	1.25
566	Mechanisms and Consequences of White Matter Plasticity	Minisymposium		29D	15 Tues	1:30–4 p.m.	2.5
587	Metabotropic Glutamate Receptors and GABAB Receptors	Poster	E26–F7	Halls B–H	15 Tues	1–5 p.m.	
588	Potassium Channels II	Poster	F8–F19	Halls B–H	15 Tues	1–5 p.m.	
589	Postsynaptic Organization and Structure II	Poster	F20–F36	Halls B–H	15 Tues	1–5 p.m.	
590	Modulation of Neuronal Firing Properties I	Poster	F37–G12	Halls B–H	15 Tues	1–5 p.m.	
591	Oscillations and Synchrony: Other III	Poster	G13–G42	Halls B–H	15 Tues	1–5 p.m.	
592	Epilepsy: Interneurons, Cell Therapies, and Neurogenesis	Poster	G443–H9	Halls B–H	15 Tues	1–5 p.m.	
593	Epilepsy: Networks	Poster	H10–I7	Halls B–H	15 Tues	1–5 p.m.	
594	Epilepsy: Animal Models	Poster	I8–K4	Halls B–H	15 Tues	1–5 p.m.	
595	Epilepsy: Models	Poster	K5–L6	Halls B–H	15 Tues	1–5 p.m.	
664	Microglia in Nervous System Diseases	Nanosymposium		30B	16 Wed	8–11 a.m.	
682	Nicotinic Acetylcholine Receptors: Structure and Regulation	Poster	F36–F53	Halls B–H	16 Wed	8 a.m.–noon	
683	HCN, Cation, and Other Channels	Poster	G1–G13	Halls B–H	16 Wed	8 a.m.–noon	
684	Electrical Synapses and Gap Junctions	Poster	G14–G23	Halls B–H	16 Wed	8 a.m.–noon	
685	Long-Term Potentiation: Kinases and Intracellular Signaling	Poster	G24–G47	Halls B–H	16 Wed	8 a.m.–noon	
686	Mechanisms of Synaptic and Neuronal Plasticity	Poster	G48–H12	Halls B–H	16 Wed	8 a.m.–noon	
687	Modulation of Neuronal Firing Properties II	Poster	H13–I11	Halls B–H	16 Wed	8 a.m.–noon	
688	Epilepsy: Glia and Post-Seizure Mechanisms	Poster	I12–J10	Halls B–H	16 Wed	8 a.m.–noon	
689	Epilepsy: Genetics and Genetic Models	Poster	J11–K14	Halls B–H	16 Wed	8 a.m.–noon	
690	Epilepsy: Anticonvulsant Therapies	Poster	K15–M7	Halls B–H	16 Wed	8 a.m.–noon	
691	Epilepsy: Human Studies II	Poster	M8–N3	Halls B–H	16 Wed	8 a.m.–noon	
692	Demyelinating Disorders: Therapeutics	Poster	N4–N13	Halls B–H	16 Wed	8 a.m.–noon	
693	Demyelinating Disorders: Human and Animal Studies	Poster	N14–O10	Halls B–H	16 Wed	8 a.m.–noon	
759	The Ultrastructural Basis of Synaptic Transmission and Plasticity	Symposium		6A	16 Wed	8 a.m.–noon	2.5
765	Sigma-2/PGRMC1 Receptor Function in Disease and Therapeutics	Nanosymposium		23A	16 Wed	1–3:30 p.m.	
780	Neurotransmitters and Signaling Molecules	Poster	E14–F2	Halls B–H	16 Wed	1–5 p.m.	
781	G-Protein-Coupled Receptors	Poster	F3–F25	Halls B–H	16 Wed	1–5 p.m.	
782	Synaptic Integration	Poster	F26–36	Halls B–H	16 Wed	1–5 p.m.	
THEME C: NEURODEGENERATIVE DISORDERS AND INJURY							
3	Autophagy-Lysosomal Mechanism in Neurodegeneration	Symposium		6A	12 Sat	8 a.m.–noon	2.5
11	APP Processing and Metabolism	Nanosymposium		33C	12 Sat	1–4:15 p.m.	
12	Molecular and Neuroimaging Biomarkers for Alzheimer's Disease	Nanosymposium		32B	12 Sat	1–4:30 p.m.	
13	Alpha Synuclein in Parkinson's Disease: From Astrocytes to Epigenetics	Nanosymposium		5B	12 Sat	1–4:15 p.m.	
14	Movement Disorders	Nanosymposium		24A	12 Sat	1–3:30 p.m.	
38	Immune Responses in Alzheimer's Disease	Poster	G20–G39	Halls B–H	12 Sat	1–5 p.m.	
39	Memory and Cognition in Alzheimer's Disease and Other Neurodegenerative Disorders	Poster	G40–H1	Halls B–H	12 Sat	1–5 p.m.	
40	Diagnostic Biomarkers for Alzheimer's Disease	Poster	H2–I4	Halls B–H	12 Sat	1–5 p.m.	
41	Postural Instability, FOG, and Kinematics in Parkinson's Disease	Poster	I5–J11	Halls B–H	12 Sat	1–5 p.m.	
42	Parkinson's Disease: Molecular Mechanisms and Models	Poster	J12–L6	Halls B–H	12 Sat	1–5 p.m.	
43	Ataxia	Poster	L7–M14	Halls B–H	12 Sat	1–5 p.m.	
44	Motor Neuron Disease	Poster	M15–O1	Halls B–H	12 Sat	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
45	Therapeutic Potential in Motor Neuron Disease	Poster	O2–O16	Halls B–H	12 Sat	1–5 p.m.	
46	Modulating and Tracking Neuroinflammation	Poster	O17–Q14	Halls B–H	12 Sat	1–5 p.m.	
47	Transplantation and Integration of Neural Precursors in the Adult Brain	Poster	R1–S9	Halls B–H	12 Sat	1–5 p.m.	
102	Second Generation AD Mouse Models for Reproducible Preclinical Studies	Minisymposium		28A	13 Sun	8:30–11 a.m.	2.5
108	Energy Metabolism and Mitochondria Function in Health, Disease, and Aging	Nanosymposium		32B	13 Sun	8–10:15 a.m.	
109	Glia and Immune Responses in Alzheimer's Disease	Nanosymposium		33C	13 Sun	8–10:45 a.m.	
129	APP Processing and Metabolism	Poster	GG49–H25	Halls B–H	13 Sun	8 a.m.–noon	
130	Tau: Biochemistry	Poster	H26–J16	Halls B–H	13 Sun	8 a.m.–noon	
131	Alzheimer's Synaptic Dysfunction	Poster	J17–L10	Halls B–H	13 Sun	8 a.m.–noon	
132	Parkinson's Disease: Imaging Studies and Connectomes	Poster	L11–M14	Halls B–H	13 Sun	8 a.m.–noon	
133	Animal Models of Parkinson's Disease and LID Therapy	Poster	M15–N17	Halls B–H	13 Sun	8 a.m.–noon	
134	Cellular Models to Study Disease Mechanisms and Protection in Parkinson's Disease and Related Neurodegenerative Disease	Poster	N18–O11	Halls B–H	13 Sun	8 a.m.–noon	
135	Parkinson's Disease: Dopamine and Non-Dopamine Pathways	Poster	O12–Q4	Halls B–H	13 Sun	8 a.m.–noon	
136	Parkinson's Neuroprotection I	Poster	Q5–Q13	Halls B–H	13 Sun	8 a.m.–noon	
137	Dystonia	Poster	Q14–R17	Halls B–H	13 Sun	8 a.m.–noon	
138	Neuroprotective Mechanisms: Drugs, Alcohol, and Nicotine	Poster	S1–S14	Halls B–H	13 Sun	8 a.m.–noon	
139	Neuroprotective Mechanisms: Oxidative Stress	Poster	T1–T10	Halls B–H	13 Sun	8 a.m.–noon	
140	Physiology and Pathophysiology of Blood Brain Barrier Function	Poster	T11–U7	Halls B–H	13 Sun	8 a.m.–noon	
141	Pharmacological Strategies to Prevent Injury from Stroke Molecular Factors.	Poster	U8–W2	Halls B–H	13 Sun	8 a.m.–noon	
142	Mechanisms in Spinal Cord Injury	Poster	W3–Y1	Halls B–H	13 Sun	8 a.m.–noon	
193	Dysregulation of mRNA Localization and Translation in Genetic Disease	Minisymposium		28A	13 Sun	1:30–4 p.m.	2.5
199	Tau: Biochemistry	Nanosymposium		33C	13 Sun	1–4:30 p.m.	
200	Alzheimer's Synaptic Dysfunction	Nanosymposium		30B	13 Sun	1–4:30 p.m.	
201	ALS Mechanisms	Nanosymposium		32B	13 Sun	1–4:15 p.m.	
202	Stroke and Injury: Optogenetic and Chemogenetic Approaches	Nanosymposium		24A	13 Sun	1–3 p.m.	
225	Alzheimer's Disease: Apolipoproteins	Poster	P10–R10	Halls B–H	13 Sun	1–5 p.m.	
226	Huntington's Disease Mechanisms I	Poster	R11–S14	Halls B–H	13 Sun	1–5 p.m.	
227	Pathogenic Mechanisms of Motor Neuron Disease	Poster	T1–T17	Halls B–H	13 Sun	1–5 p.m.	
228	Neuroprotective Mechanisms: Diabetes, Neuropathy, and Retina	Poster	T18–V4	Halls B–H	13 Sun	1–5 p.m.	
229	Neurodegenerative Diseases	Poster	V5–V18	Halls B–H	13 Sun	1–5 p.m.	
230	Mechanisms of Microglia Activation	Poster	W1–X18	Halls B–H	13 Sun	1–5 p.m.	
231	Ischemia: Cellular Mechanisms	Poster	Y1–Y18	Halls B–H	13 Sun	1–5 p.m.	
232	Traumatic Brain Injury: Plasticity and Behavioral Deficits	Poster	Z1–AA6	Halls B–H	13 Sun	1–5 p.m.	
274	Microtubule and Tau-Based Therapy for Alzheimer's Disease and Other Brain Disorders	Symposium		6A	14 Mon	8 a.m.–noon	2.5
284	Brain Wellness and Aging: From Phenotypes to Mechanisms	Nanosymposium		33C	14 Mon	8–11:30 a.m.	
285	Development of Novel Therapeutics for Alzheimer's Disease: *In Vitro* Studies	Nanosymposium		32B	14 Mon	8–10 a.m.	
286	Structural Changes, Connectivity, and Deep Brain Stimulation Treatment in Parkinson's Disease	Nanosymposium		30B	14 Mon	8–10:30 a.m.	
287	Transplants and Other Treatments of Parkinson's Disease	Nanosymposium		1B	14 Mon	8–11 a.m.	
306	Brain Energetics in Health and Disease	Poster	G19–G48	Halls B–H	14 Mon	8 a.m.–noon	
307	Alzheimer's Disease: *In Vitro* and *In Vivo* Therapeutics	Poster	G49–H8	Halls B–H	14 Mon	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
308	Neuropsychological, Biochemical and Imaging Biomarkers of Alzheimer's Disease and Other Neurodegenerative Diseases	Poster	H9–H25	Halls B–H	14 Mon	8 a.m.–noon	
309	Oscillatory Activity in Parkinson's Disease	Poster	H26–J3	Halls B–H	14 Mon	8 a.m.–noon	
310	Parkinson's Disease: Cell and Circuit Mechanisms	Poster	J4–K14	Halls B–H	14 Mon	8 a.m.–noon	
311	Movement Disorders	Poster	K15–M12	Halls B–H	14 Mon	8 a.m.–noon	
312	ALS	Poster	M13–N14	Halls B–H	14 Mon	8 a.m.–noon	
313	Neuromuscular Disease	Poster	N15–P3	Halls B–H	14 Mon	8 a.m.–noon	
314	Oxidative Stress and Cell Death	Poster	P4–R3	Halls B–H	14 Mon	8 a.m.–noon	
315	Neuroprotective Mechanisms: Alzheimer's Disease and Multiple Sclerosis	Poster	R4–R16	Halls B–H	14 Mon	8 a.m.–noon	
316	Neuroprotective Mechanisms: Brain or Spinal Cord Injury	Poster	R17–S12	Halls B–H	14 Mon	8 a.m.–noon	
317	Neuroprotective Mechanisms: Signaling and Gene Expression	Poster	S13–T14	Halls B–H	14 Mon	8 a.m.–noon	
318	Neuroinflammation	Poster	T15–U8	Halls B–H	14 Mon	8 a.m.–noon	
319	Opto-Chemogenetics and Microvascular Imaging of Stroke and Injury	Poster	U9–V1	Halls B–H	14 Mon	8 a.m.–noon	
320	Injury Responses after Spinal Cord Injury	Poster	V2–W12	Halls B–H	14 Mon	8 a.m.–noon	
321	Trauma and Blast-Induced Neurochemical and Cellular Mechanisms	Poster	X1–Y1	Halls B–H	14 Mon	8 a.m.–noon	
322	Traumatic Brain Injury: Models, Mechanisms, and Treatments	Poster	Y2–Z10	Halls B–H	14 Mon	8 a.m.–noon	
323	Spinal Cord Injury Models and Mechanisms	Poster	Z11–BB8	Halls B–H	14 Mon	8 a.m.–noon	
324	Peripheral Nerve Injury	Poster	BB9–BB18	Halls B–H	14 Mon	8 a.m.–noon	
380	Mechanisms and Role of Synaptic Pathology in Alzheimer's Disease	Nanosymposium		24A	14 Mon	1–3 p.m.	
381	Motor Neuron Disease Mechanisms	Nanosymposium		32B	14 Mon	1–2:45 p.m.	
382	Neuroinflammation: Neurotoxicity and Protection	Nanosymposium		25A	14 Mon	1–4:30 p.m.	
383	Brain and Spinal Cord Injury	Nanosymposium		33C	14 Mon	1–4 p.m.	
410	Alzheimer's Disease: Treatment in Humans	Poster	N10–O3	Halls B–H	14 Mon	1–5 p.m.	
411	Alzheimer's Disease: Secretases	Poster	O4–O16	Halls B–H	14 Mon	1–5 p.m.	
412	Synaptic Pathology in Alzheimer's Disease	Poster	O17–R2	Halls B–H	14 Mon	1–5 p.m.	
413	Disease-Modifying Therapy for Parkinson's Disease	Poster	R3–S6	Halls B–H	14 Mon	1–5 p.m.	
414	Neurodegeneration and Neuroprotection in Parkinson's Disease	Poster	S7–T12	Halls B–H	14 Mon	1–5 p.m.	
415	Human and Non-Human Primate Therapies in Parkinson's Disease	Poster	T13–V5	Halls B–H	14 Mon	1–5 p.m.	
416	Mitochondria, Alpha-Synuclein, and Inflammation in Parkinson's Disease	Poster	V6–W3	Halls B–H	14 Mon	1–5 p.m.	
417	Huntington's Disease Mechanisms II	Poster	W4–X12	Halls B–H	14 Mon	1–5 p.m.	
418	Huntington's Disease Therapeutics	Poster	X13–Z2	Halls B–H	14 Mon	1–5 p.m.	
419	Apoptosis and Mitochondria	Poster	Z3–AA5	Halls B–H	14 Mon	1–5 p.m.	
420	Neurochemistry of Injury: Therapeutic Strategies	Poster	AA6–BB17	Halls B–H	14 Mon	1–5 p.m.	
421	Excitotoxicity and Calcium	Poster	BB18–CC11	Halls B–H	14 Mon	1–5 p.m.	
422	Neuroprotective Mechanisms: Natural Products	Poster	DD1–DD10	Halls B–H	14 Mon	1–5 p.m.	
423	Neurotoxic Agents	Poster	DD11–FF5	Halls B–H	14 Mon	1–5 p.m.	
424	Neuroprotection in Models of Immune Mediated Demyelination	Poster	FF6–HH4	Halls B–H	14 Mon	1–5 p.m.	
425	Stroke Recovery Activity-Dependent Mechanisms	Poster	HH5–II2	Halls B–H	14 Mon	1–5 p.m.	
482	Alzheimer's Disease: Therapeutics in Animal Models	Nanosymposium		33C	15 Tues	8–11:15 a.m.	
483	Therapy of Parkinson's Disease: Alpha-Synuclein Target	Nanosymposium		24A	15 Tues	8–11:15 a.m.	
484	Traumatic Brain Injury: Models, Mechanisms, and Deficits	Nanosymposium		32B	15 Tues	8–11:15 a.m.	
512	Brain Wellness	Poster	V18–X3	Halls B–H	15 Tues	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
513	Alzheimer's Disease: Therapeutics	Poster	X4–Y14	Halls B–H	15 Tues	8 a.m.–noon	
514	Alzheimer's Disease: Beyond Amyloid-Beta and Tau	Poster	Y15–AA12	Halls B–H	15 Tues	8 a.m.–noon	
515	Oxidative Stress in Neurodegeneration	Poster	AA13–BB10	Halls B–H	15 Tues	8 a.m.–noon	
516	Inflammatory Mediator Function in Models of Neurodegeneration	Poster	BB11–DD11	Halls B–H	15 Tues	8 a.m.–noon	
517	Ischemia: Molecular Mechanisms	Poster	DD12–FF5	Halls B–H	15 Tues	8 a.m.–noon	
518	Cellular Mechanisms and Stroke Injury: Macrophage-Microglia and Stem Cells	Poster	FF6–HH3	Halls B–H	15 Tues	8 a.m.–noon	
519	Stroke and Injury Bio-Markers: Electrophysiological and Neurochemical Approaches	Poster	HH4–II5	Halls B–H	15 Tues	8 a.m.–noon	
520	Stroke Imaging and Diagnostic Studies	Poster	II6–JJ13	Halls B–H	15 Tues	8 a.m.–noon	
521	Motor Function: Compensation Stroke and Injury	Poster	JJ14–LL8	Halls B–H	15 Tues	8 a.m.–noon	
522	Regenerative Approaches: Spinal Cord Injury	Poster	MM1–OO4	Halls B–H	15 Tues	8 a.m.–noon	
523	Spinal Cord injury: Therapeutic Development	Poster	OO5–QQ3	Halls B–H	15 Tues	8 a.m.–noon	
563	Proteoglycans in Neural Development and Disease	Symposium		6A	15 Tues	8 a.m.–noon	2.5
574	Mechanisms of APOE-Mediated Pathology in Alzheimer's Disease	Nanosymposium		33C	15 Tues	1–4 p.m.	
575	Phenotype Characterization of New Genetic and Non-Genetic Models of Parkinson's Disease	Nanosymposium		24A	15 Tues	1–4:15 p.m.	
576	Exploring Treatment Strategies in Experimental Spinal Cord Injury Models	Nanosymposium		32B	15 Tues	1–4 p.m.	
596	Brian Wellness and Aging: Models and Mechanisms	Poster	L7–M11	Halls B–H	15 Tues	1–5 p.m.	
597	Mitochondria and Energy Metabolism in Health and Disease	Poster	M12–N5	Halls B–H	15 Tues	1–5 p.m.	
598	Brain Wellness and Aging: Physiological and Molecular Correlates	Poster	N6–O2	Halls B–H	15 Tues	1–5 p.m.	
599	Alzheimer's Disease: Models	Poster	O3–Q3	Halls B–H	15 Tues	1–5 p.m.	
600	Alzheimer's Disease: *In Vitro* Therapeutics	Poster	Q4–R15	Halls B–H	15 Tues	1–5 p.m.	
601	Assessment and Modulation of Cognitive Phenotypes in Murine Models of Neurodegenerative Disease	Poster	516–T9	Halls B–H	15 Tues	1–5 p.m.	
602	Rodent Models and Therapeutics in Parkinson Disease	Poster	T10–V3	Halls B–H	15 Tues	1–5 p.m.	
603	Mechanisms of ALS	Poster	V4–V12	Halls B–H	15 Tues	1–5 p.m.	
604	Neuroprotective Mechanisms: Models of Neurotoxicity, Excitotoxicity, and Stroke	Poster	V13–W9	Halls B–H	15 Tues	1–5 p.m.	
605	Neuroprotective Mechanisms: Regeneration and Therapies	Poster	W10–X8	Halls B–H	15 Tues	1–5 p.m.	
606	Mechanisms and Consequences of Peripheral or Central Innate Immune Activation	Poster	X9–Z2	Halls B–H	15 Tues	1–5 p.m.	
607	Pharmacological Strategies to Prevent Injury from Trauma and Stroke	Poster	Z3–AA17	Halls B–H	15 Tues	1–5 p.m.	
608	Brain Stimulation and Recovery After Stroke	Poster	AA18–BB14	Halls B–H	15 Tues	1–5 p.m.	
609	CNS Injury and Damage: Non-TBI	Poster	BB15–DD1	Halls B–H	15 Tues	1–5 p.m.	
610	Cellular and Sub-Cellular Imaging: Markers of Stress, Trauma, and Stroke	Poster	DD2–DD10	Halls B–H	15 Tues	1–5 p.m.	
611	Trauma Mechanisms and Therapeutic Strategies	Poster	DD11–FF5	Halls B–H	15 Tues	1–5 p.m.	
612	Molecular Therapeutic Strategies of Spinal Cord Injury	Poster	FF6–HH2	Halls B–H	15 Tues	1–5 p.m.	
658	Association of Alzheimer's Disease and Other Cognitive Impairments With Metabolic Syndrome: Whenceforth Causality?	Minisymposium		6F	16 Wed	8:30–11 a.m.	2.5
665	Therapeutic and Protective Strategies for Alzheimer's Disease	Nanosymposium		33C	16 Wed	8–10 a.m.	
666	Therapeutic Potential in Motor Neuron Disease	Nanosymposium		32B	16 Wed	8–9:30 a.m.	
694	*In Vitro* and *In Vivo* Analysis of Tau Pathology	Poster	O11–P6	Halls B–H	16 Wed	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
695	Biochemical Manipulations in Animals: Prevention of Alzheimer's Disease	Poster	P7–R8	Halls B–H	16 Wed	8 a.m.–noon	
696	Genetics and Epigenetics of Alzheimer's Disease and Related Models	Poster	R9–S13	Halls B–H	16 Wed	8 a.m.–noon	
697	Alzheimer's Disease: Imaging Techniques	Poster	S14–T10	Halls B–H	16 Wed	8 a.m.–noon	
698	Modeling Parkinson's Disease	Poster	T11–V4	Halls B–H	16 Wed	8 a.m.–noon	
699	Rodent Models of Parkinson's Disease and Related Disorders	Poster	V5–V17	Halls B–H	16 Wed	8 a.m.–noon	
700	Parkinson's Disease: Biomarkers and Therapeutics	Poster	V18–X10	Halls B–H	16 Wed	8 a.m.–noon	
701	Peripheral Neuropathy	Poster	X11–X15	Halls B–H	16 Wed	8 a.m.–noon	
702	Neuroprotective Mechanisms: Stress, Protein Trafficking, and Protein Degradation	Poster	X16–Y7	Halls B–H	16 Wed	8 a.m.–noon	
703	Non-Pharmacological and Molecular Strategies to Prevent Injury and Stroke.	Poster	Y8–Z9	Halls B–H	16 Wed	8 a.m.–noon	
704	Ischemia: Inflammation	Poster	Z10–AA9	Halls B–H	16 Wed	8 a.m.–noon	
757	Capturing Immune Responses to Understand and Treat Neurodegenerative Disease	Lecture		Ballroom 20	16 Wed	1–2:10 p.m.	1.25
766	Amyloid-Beta Toxicity	Nanosymposium		24A	16 Wed	1–4:30 p.m.	
767	Alzheimer's Disease: Animal Models	Nanosymposium		33C	16 Wed	1–4:30 p.m.	
768	Oxidative Stress and Antioxidants in Neurological and Psychiatric Diseases	Nanosymposium		32B	16 Wed	1–3 p.m.	
769	Axon Growth and Trafficking in Neurodegenerative Disorders	Nanosymposium		25A	16 Wed	1–3 p.m.	
770	Inflammatory and Non-Inflammatory Mechanisms of NeuroHIV/AIDS	Nanosymposium		4	16 Wed	1–4:15 p.m.	
783	Tauopathies	Poster	F37–F47	Halls B–H	16 Wed	1–5 p.m.	
784	Amyloid-Beta Toxicity	Poster	F48–G24	Halls B–H	16 Wed	1–5 p.m.	
785	Alzheimer's Disease: Anti-Amyloid Beta Therapeutics	Poster	G25–G46	Halls B–H	16 Wed	1–5 p.m.	
786	Pharmacology for Alzheimer's Disease Therapeutics	Poster	G47–H14	Halls B–H	16 Wed	1–5 p.m.	
787	Parkinson's Neuroprotection II	Poster	H15–J1	Halls B–H	16 Wed	1–5 p.m.	
788	Immune Responses and Glial Functions in Neurodegenerative Disease	Poster	J2–K13	Halls B–H	16 Wed	1–5 p.m.	
789	HIV-Related Neuroinflammation and Neurotoxicity	Poster	K14–L12	Halls B–H	16 Wed	1–5 p.m.	
790	Ischemia: Perinatal and Recovery	Poster	L13–N5	Halls B–H	16 Wed	1–5 p.m.	
791	*In Vivo* Studies of Ischemia and Neuroprotection	Poster	N6–O14	Halls B–H	16 Wed	1–5 p.m.	
792	Ischemia and Hemorrhage: Translational Studies	Poster	O15–Q11	Halls B–H	16 Wed	1–5 p.m.	
793	Ischemia: Human	Poster	Q12–S9	Halls B–H	16 Wed	1–5 p.m.	
794	Injury and Trauma I	Poster	S10–T18	Halls B–H	16 Wed	1–5 p.m.	
795	Injury and Trauma II	Poster	U1–V9	Halls B–H	16 Wed	1–5 p.m.	
THEME D: SENSORY SYSTEMS							
15	Olfaction: Sensation and Second-Order Representation	Nanosymposium		30B	12 Sat	1–4 p.m.	
48	Disorders of the Auditory or Visual System	Poster	S10–T9	Halls B–H	12 Sat	1–5 p.m.	
49	Somatosensory Cortical Circuits	Poster	T10–U14	Halls B–H	12 Sat	1–5 p.m.	
50	Taste: Behavior and Processing	Poster	U15–W7	Halls B–H	12 Sat	1–5 p.m.	
51	Auditory Processing: Temporal and Frequency	Poster	W8–X17	Halls B–H	12 Sat	1–5 p.m.	
52	Subcortical Visual Pathways: LGN	Poster	X18–Y10	Halls B–H	12 Sat	1–5 p.m.	
53	Visual Cortex: Carnivores	Poster	Y11–Z2	Halls B–H	12 Sat	1–5 p.m.	
54	Mechanisms of Color, Contrast, and Form Perception	Poster	Z3–AA18	Halls B–H	12 Sat	1–5 p.m.	
100	Neuroscience of Music: Novel Discoveries and Their Implications in the Understanding of Music and the Brain	Symposium		6B	13 Sun	8 a.m.–noon	2.5
110	Retina Photoreceptor and Circuitry	Nanosymposium		24A	13 Sun	8–10:15 a.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
143	Nociceptors: Anatomical and Physiological Studies	Poster	Y2–Y13	Halls B–H	13 Sun	8 a.m.–noon	
144	Sensory Disorders: Somatosensation	Poster	Y14–Z5	Halls B–H	13 Sun	8 a.m.–noon	
145	Treatments for Persistent Pain	Poster	Z6–AA11	Halls B–H	13 Sun	8 a.m.–noon	
146	Pain Models: Pharmacology	Poster	AA12–CC4	Halls B–H	13 Sun	8 a.m.–noon	
147	Musculoskeletal and Visceral Pain	Poster	CC5–DD7	Halls B–H	13 Sun	8 a.m.–noon	
148	Pain Imaging and Perception	Poster	DD8–FF2	Halls B–H	13 Sun	8 a.m.–noon	
149	Somatosensation: Whisker System	Poster	FF3–GG6	Halls B–H	13 Sun	8 a.m.–noon	
150	Touch and Proprioception: Peripheral Mechanisms	Poster	GG7–HH4	Halls B–H	13 Sun	8 a.m.–noon	
151	Neural Coding of Tactile Sensation	Poster	HH5–II16	Halls B–H	13 Sun	8 a.m.–noon	
152	Olfactory Behavior	Poster	II17–KK2	Halls B–H	13 Sun	8 a.m.–noon	
153	Auditory Processing: Vocalizations	Poster	KK3–KK17	Halls B–H	13 Sun	8 a.m.–noon	
154	Auditory Processing: Adaption and Learning	Poster	KK18–NN4	Halls B–H	13 Sun	8 a.m.–noon	
203	Molecules and Circuits of Somatosensation	Nanosymposium		23A	13 Sun	1–3:45 p.m.	
204	Higher-Order Processing of Taste and Olfactory Stimuli	Nanosymposium		1B	13 Sun	1–3:15 p.m.	
233	Transient Receptor Potential Channels: Regulation and Function	Poster	AA7–BB6	Halls B–H	13 Sun	1–5 p.m.	
234	Spinal Cord Processing: Anatomy and Physiology	Poster	BB7–DD4	Halls B–H	13 Sun	1–5 p.m.	
235	Somatosensation: Human and Non-Human Primates	Poster	DD5–EE4	Halls B–H	13 Sun	1–5 p.m.	
236	Auditory Processing: Cortex	Poster	EE5–FF14	Halls B–H	13 Sun	1–5 p.m.	
237	Auditory Processing: Humans	Poster	FF15–HH11	Halls B–H	13 Sun	1–5 p.m.	
238	Retina Photoreceptors	Poster	HH12–II6	Halls B–H	13 Sun	1–5 p.m.	
239	Retina Circuitry	Poster	II7–JJ11	Halls B–H	13 Sun	1–5 p.m.	
240	Retina Ganglion Cells and Circuitry	Poster	JJ12–LL2	Halls B–H	13 Sun	1–5 p.m.	
241	Primate Visual Cortex	Poster	LL3–NN1	Halls B–H	13 Sun	1–5 p.m.	
242	Visual Learning, Memory, and Categorization	Poster	NN2–OO8	Halls B–H	13 Sun	1–5 p.m.	
243	Visually Guided Reaching	Poster	OO9–PP4	Halls B–H	13 Sun	1–5 p.m.	
244	Multi-Sensory Integration: Circuits and Development	Poster	PP5–QQ15	Halls B–H	13 Sun	1–5 p.m.	
275	Current Topics in Chronic Pain: From Molecules to Medicine	Symposium		6B	14 Mon	8 a.m.–noon	2.5
288	Neural Coding in the Somatosensory System	Nanosymposium		2	14 Mon	8–11 a.m.	
325	Primary Olfactory Signal Transduction	Poster	CC1–DD2	Halls B–H	14 Mon	8 a.m.–noon	
326	Auditory Processing: Subcortical	Poster	DD3–DD12	Halls B–H	14 Mon	8 a.m.–noon	
327	Auditory Processing: Coding and Theory	Poster	DD13–EE10	Halls B–H	14 Mon	8 a.m.–noon	
328	Motion Processing	Poster	EE11–GG4	Halls B–H	14 Mon	8 a.m.–noon	
329	Visual Motion	Poster	GG5–HH12	Halls B–H	14 Mon	8 a.m.–noon	
330	Visual Cognition: Decision Making	Poster	HH13–JJ1	Halls B–H	14 Mon	8 a.m.–noon	
331	Temporal Factors of Crossmodal Integration	Poster	JJ2–KK12	Halls B–H	14 Mon	8 a.m.–noon	
371	Mechanisms of Object Organization in the Visual Cortex	Symposium		6F	14 Mon	8 a.m.–noon	2.5
384	Representation of Objects and Numbers Across Ventral and Dorsal Pathways	Nanosymposium		23A	14 Mon	1–4:15 p.m.	
385	Spatial Attention and Working Memory	Nanosymposium		7B	14 Mon	1–4 p.m.	
426	Peripheral Neuropathy: Mechanisms and Interventions	Poster	II3–JJ6	Halls B–H	14 Mon	1–5 p.m.	
427	Spinal Cord Processing: Pharmacology	Poster	JJ7–KK8	Halls B–H	14 Mon	1–5 p.m.	
428	Pain: Thalamic and Cortical Processing	Poster	KK9–MM5	Halls B–H	14 Mon	1–5 p.m.	
429	Somatosensation: Thalamocortical Processes	Poster	MM6–NN6	Halls B–H	14 Mon	1–5 p.m.	
430	Second-Order Processing of Olfactory Inputs	Poster	NN7–PP8	Halls B–H	14 Mon	1–5 p.m.	
431	Auditory Processing and Perception in Non-Humans	Poster	PP8–QQ14	Halls B–H	14 Mon	1–5 p.m.	
432	Human Visual Cortex	Poster	QQ15–RR6	Halls B–H	14 Mon	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
433	Rodent Visual Cortex	Poster	RR7–SS8	Halls B–H	14 Mon	1–5 p.m.	
434	Striate Cortex Plasticity I	Poster	SS9–TT11	Halls B–H	14 Mon	1–5 p.m.	
471	Genetic Dissection of Sensorimotor Circuits in the Spinal Cord	Lecture		Ballroom 20	15 Tues	8:30–9:40 a.m.	1.25
485	Visual Cognition: Decision Making	Nanosymposium		4	15 Tues	8–11:15 a.m.	
524	Pain Models: Behavior	Poster	QQ4–RR9	Halls B–H	15 Tues	8 a.m.–noon	
525	Pain Models: Physiology	Poster	RR10–SS17	Halls B–H	15 Tues	8 a.m.–noon	
526	Somatosensory Cortical Circuits: Blue Brain Project	Poster	SS18–TT9	Halls B–H	15 Tues	8 a.m.–noon	
527	Higher-Order Processing of Olfactory Stimuli	Poster	TT10–VV1	Halls B–H	15 Tues	8 a.m.–noon	
528	Auditory Processing: Temporal and Frequency in Humans	Poster	VV2–VV14	Halls B–H	15 Tues	8 a.m.–noon	
529	Subcortical Visual Pathways	Poster	VV15–WW13	Halls B–H	15 Tues	8 a.m.–noon	
530	Representation of Faces and Bodies	Poster	WW14–XX12	Halls B–H	15 Tues	8 a.m.–noon	
531	Spatial and Feature-Based Attention	Poster	XX13–ZZ4	Halls B–H	15 Tues	8 a.m.–noon	
532	Multi-Sensory Integration: Crossmodal Processing in Humans I	Poster	ZZ5–AAA11	Halls B–H	15 Tues	8 a.m.–noon	
577	Pain Imaging	Nanosymposium		5B	15 Tues	1–3:30 p.m.	
613	Central Mechanisms of Pain	Poster	HH3–HH17	Halls B–H	15 Tues	1–5 p.m.	
614	Molecular Mechanisms of Itch and Pain	Poster	II1–JJ13	Halls B–H	15 Tues	1–5 p.m.	
615	Neuropathic Pain I	Poster	JJ14–LL7	Halls B–H	15 Tues	1–5 p.m.	
616	Neuropathic Pain II	Poster	LL8–OO2	Halls B–H	15 Tues	1–5 p.m.	
617	Pain: Non-Opioid Analgesics	Poster	OO3–OO13	Halls B–H	15 Tues	1–5 p.m.	
618	Receptive Field and Response Properties of Tactile Sensation	Poster	OO14–PP16	Halls B–H	15 Tues	1–5 p.m.	
619	Olfactory Circuits and Behavior	Poster	QQ1–QQ18	Halls B–H	15 Tues	1–5 p.m.	
620	Spatial Factors of Crossmodal Integration	Poster	QQ19–RR13	Halls B–H	15 Tues	1–5 p.m.	
621	Multi-Sensory Integration: Crossmodal Processing in Humans II	Poster	RR14–SS12	Halls B–H	15 Tues	1–5 p.m.	
661	Postdiction and Perceptual Awareness	Lecture		Ballroom 20	16 Wed	10–11:10 a.m.	2.5
667	Representation of Features and Objects Along the Ventral Stream	Nanosymposium		1B	16 Wed	8–11:15 a.m.	
668	Representation of Faces and Bodies	Nanosymposium		23A	16 Wed	8–10:45 a.m.	
705	Pain: Trigeminal Processing	Poster	AA10–BB6	Halls B–H	16 Wed	8 a.m.–noon	
706	Pain Models: Human Studies	Poster	BB7–BB16	Halls B–H	16 Wed	8 a.m.–noon	
707	Inflammatory Pain	Poster	BB17–DD16	Halls B–H	16 Wed	8 a.m.–noon	
708	Pain: Opioid Receptor Pharmacology and Signaling Mechanisms	Poster	DD17–EE14	Halls B–H	16 Wed	8 a.m.–noon	
709	Somatosensation: Plasticity	Poster	EE15–FF11	Halls B–H	16 Wed	8 a.m.–noon	
710	Auditory System: Periphery	Poster	FF12–GG2	Halls B–H	16 Wed	8 a.m.–noon	
711	Auditory Processing: Spatial	Poster	GG3–GG12	Halls B–H	16 Wed	8 a.m.–noon	
712	Striate Cortex Circuits	Poster	GG13–HH14	Halls B–H	16 Wed	8 a.m.–noon	
713	Visual Cortex Dynamic Properties	Poster	HH15–JJ2	Halls B–H	16 Wed	8 a.m.–noon	
714	Balance, Posture, and Orientation	Poster	JJ3–JJ17	Halls B–H	16 Wed	8 a.m.–noon	
715	Vision and Eye Movements	Poster	KK1–MM4	Halls B–H	16 Wed	8 a.m.–noon	
716	Visual Sensory-Motor I	Poster	MM5–NN12	Halls B–H	16 Wed	8 a.m.–noon	
761	New Insight Into Cold Pain: Role of Ion Channels, Modulation, and Clinical Perspectives	Minisymposium		28A	16 Wed	1:30–4 p.m.	2.5
771	Global Organization of Extrastriate Cortex	Nanosymposium		7B	16 Wed	1–3:15 p.m.	
796	Extrastriate Cortex I	Poster	V10–W9	Halls B–H	16 Wed	1–5 p.m.	
797	Mouse Visual Cortex	Poster	W10–Y4	Halls B–H	16 Wed	1–5 p.m.	
798	Visual Cortex Human	Poster	Y5–Y17	Halls B–H	16 Wed	1–5 p.m.	
799	Striate Cortex Plasticity II	Poster	Y18–AA2	Halls B–H	16 Wed	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
800	Extrastriate Cortex II	Poster	AA3–AA18	Halls B–H	16 Wed	1–5 p.m.	
801	Representation of Objects and Scenes	Poster	BB1–CC11	Halls B–H	16 Wed	1–5 p.m.	
802	Prosthetic Vestibular Stimulation	Poster	DD1–DD8	Halls B–H	16 Wed	1–5 p.m.	
803	Vestibular System: Central Pathways	Poster	DD9–EE3	Halls B–H	16 Wed	1–5 p.m.	
804	Vestibular System: Periphery	Poster	EE4–EE14	Halls B–H	16 Wed	1–5 p.m.	
805	Visual Sensory-Motor II	Poster	EE15–FF13	Halls B–H	16 Wed	1–5 p.m.	
THEME E: MOTOR SYSTEMS							
5	Neuronal Circuits Driving Behavior: Invertebrates to Vertebrates	Minisymposium		28A	12 Sat	1:30–4 p.m.	2.5
55	Eye Movements I	Poster	BB1–DD1	Halls B–H	12 Sat	1–5 p.m.	
56	Reaching Control: Action and Sensation	Poster	DD2–EE11	Halls B–H	12 Sat	1–5 p.m.	
57	Reaching Movements: Movement Control and Strategy	Poster	EE12–GG5	Halls B–H	12 Sat	1–5 p.m.	
58	Neuroprosthetics: Processing Techniques	Poster	GG6–HH16	Halls B–H	12 Sat	1–5 p.m.	
59	Training, Rehabilitation, and Repair: Spinal Cord Injury Recovery	Poster	HH17–JJ12	Halls B–H	12 Sat	1–5 p.m.	
101	New Developments in Understanding the Complexity of Human Speaking	Symposium		6A	13 Sun	8 a.m.–noon	2.5
155	Interlimb and Bimanual Control	Poster	NN5–OO6	Halls B–H	13 Sun	8 a.m.–noon	
156	Cortical Planning, Execution, and Modeling	Poster	OO7–PP14	Halls B–H	13 Sun	8 a.m.–noon	
157	Neuroprosthetics: Non-Invasive Control	Poster	PP15–RR7	Halls B–H	13 Sun	8 a.m.–noon	
158	Spinal Cord Injury and Plasticity	Poster	RR8–SS15	Halls B–H	13 Sun	8 a.m.–noon	
159	ALS: Motor Neuron Disease	Poster	SS16–TT4	Halls B–H	13 Sun	8 a.m.–noon	
189	Circuits for Movement	Lecture		Ballroom 20	13 Sun	1–2:10 p.m.	1.25
245	Basal Ganglia: Neuromodulation of Striatal Circuits	Poster	QQ16–RR13	Halls B–H	13 Sun	1–5 p.m.	
246	Striatal Cell Biology and Plasticity	Poster	RR14–SS8	Halls B–H	13 Sun	1–5 p.m.	
247	Reaching: Neurophysiology	Poster	SS9–TT11	Halls B–H	13 Sun	1–5 p.m.	
248	Neuroprosthetics: Sensory Processing	Poster	TT12–VV3	Halls B–H	13 Sun	1–5 p.m.	
249	Neural Control of Respiration I	Poster	VV4–VV24	Halls B–H	13 Sun	1–5 p.m.	
250	Motor Unit Recordings: EMG	Poster	VV25–WW22	Halls B–H	13 Sun	1–5 p.m.	
281	Understanding Mammalian Microcircuits: Let Inspiration Guide the Way	Lecture		Ballroom 20	14 Mon	11:30 a.m.–12:40 p.m.	1.25
289	Voluntary Movements: Oral Motor and Speech	Nanosymposium		24A	14 Mon	8–10 a.m.	
332	Reaching: Human Motor-Learning and Adaptation	Poster	KK13–NN4	Halls B–H	14 Mon	8 a.m.–noon	
333	Neuroprosthetics: eCoG	Poster	NN5–OO4	Halls B–H	14 Mon	8 a.m.–noon	
334	Neuroprosthetics: Network and Motor Processing	Poster	OO5–PP12	Halls B–H	14 Mon	8 a.m.–noon	
335	Posture and Gait: Afferent Control	Poster	PP13–QQ19	Halls B–H	14 Mon	8 a.m.–noon	
336	Neural Control of Respiration II	Poster	QQ20–SS1	Halls B–H	14 Mon	8 a.m.–noon	
372	Facilitation of Recovery of Motor Function After Paralysis With Noninvasive Spinal Cord Stimulation	Symposium		6A	14 Mon	8 a.m.–noon	2.5
435	Cortical Planning and Execution: EEG	Poster	TT2–TT11	Halls B–H	14 Mon	1–5 p.m.	
436	Cortical Planning and Execution: Human Physiology	Poster	TT12–VV6	Halls B–H	14 Mon	1–5 p.m.	
437	Cortical Planning and Execution: MRI	Poster	VV7–VV24	Halls B–H	14 Mon	1–5 p.m.	
438	Neuroprosthetics: Electrodes and Tissue	Poster	VV25–WW15	Halls B–H	14 Mon	1–5 p.m.	
439	Neuroprosthetics: Human Microelectrode-Based Control	Poster	WW16–XX10	Halls B–H	14 Mon	1–5 p.m.	
440	Posture: Muscle Activity, Exercise, and Biomechanics	Poster	XX11–YY6	Halls B–H	14 Mon	1–5 p.m.	
441	Motor Neuron-Muscle Interface	Poster	YY7–ZZ13	Halls B–H	14 Mon	1–5 p.m.	
473	Spike Timing Codes for Motor Control	Symposium		6F	15 Tues	8 a.m.–noon	2.5
486	Learning to Reach	Nanosymposium		23A	15 Tues	8–11:15 a.m.	
533	Reaching: Humans in Health and Disease	Poster	AAA12–BBB5	Halls B–H	15 Tues	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
534	Functional Anatomy of Arm, Hand, and Finger Movement	Poster	BBB6–BBB16	Halls B–H	15 Tues	8 a.m.–noon	
535	Rhythmic Motor Patterns: Connectivity	Poster	BBB17–CCC10	Halls B–H	15 Tues	8 a.m.–noon	
536	Rhythmic Motor Patterns: Control Mechanisms	Poster	CCC11–DDD3	Halls B–H	15 Tues	8 a.m.–noon	
537	Motor Neurons: Activity, Sensory, and Central Control	Poster	DDD4–FFF5	Halls B–H	15 Tues	8 a.m.–noon	
622	Cerebellar Plasticity and the Role of Climbing Fibers	Poster	SS13–TT8	Halls B–H	15 Tues	1–5 p.m.	
623	Human Finger Movements	Poster	TT9–VV2	Halls B–H	15 Tues	1–5 p.m.	
624	Finger Movements: Physiology	Poster	VV3–VV20	Halls B–H	15 Tues	1–5 p.m.	
625	Gait: Aging, Injury, and Disease	Poster	VV21–XX1	Halls B–H	15 Tues	1–5 p.m.	
626	Central Pattern Generating Circuits: Motor Neurons and Interneurons	Poster	XX2–XX22	Halls B–H	15 Tues	1–5 p.m.	
627	Spinal Cord Injury: Rehabilitation	Poster	YY1–AAA2	Halls B–H	15 Tues	1–5 p.m.	
628	Motor Neurons: Development, Identification, Intrinsic Properties, and Modulation	Poster	AAA3–AAA19	Halls B–H	15 Tues	1–5 p.m.	
659	Pre-Bötzinger Complex 25 Years Later: Diverse Functions of the Breathing Rhythm Generator and Their Cellular and Molecular Origins	Minisymposium		28A	16 Wed	8:30–11 a.m.	2.5
669	Cortical Circuits for Grasping	Nanosymposium		24A	16 Wed	8–11:15 a.m.	
717	Eye Movements II	Poster	NN13–PP14	Halls B–H	16 Wed	8 a.m.–noon	
718	Cerebellar Networks and Functions	Poster	PP15–RR2	Halls B–H	16 Wed	8 a.m.–noon	
719	Cerebellum: Anatomy, Cytoarchitecture, and Connectivity	Poster	DP07–RR20	Halls B–H	16 Wed	8 a.m.–noon	
720	Physiology of Basal Ganglia Systems	Poster	RR21–TT2	Halls B–H	16 Wed	8 a.m.–noon	
721	Motor Systems: Oral Motor and Speech	Poster	TT3–UU1	Halls B–H	16 Wed	8 a.m.–noon	
722	Posture and Gait: Higher Order Control	Poster	UU2–VV10	Halls B–H	16 Wed	8 a.m.–noon	
723	Spinal Reflexes	Poster	VV11–VV21	Halls B–H	16 Wed	8 a.m.–noon	
760	The Neural Basis of Adaptive Motor Control in the Cerebellum	Symposium		6B	16 Wed	8 a.m.–noon	2.5
806	Bimanual Coordination: Behavior and Muscles	Poster	FF14–GG5	Halls B–H	16 Wed	1–5 p.m.	
807	Motor Systems and Plasticity in Voluntary Movement	Poster	GG6–II2	Halls B–H	16 Wed	1–5 p.m.	
808	Gait: Muscle Activity, Exercise, and Biomechanics	Poster	II3–JJ14	Halls B–H	16 Wed	1–5 p.m.	
809	Posture: Aging, Injury, and Disease	Poster	JJ15–KK12	Halls B–H	16 Wed	1–5 p.m.	
810	Central Pattern Generating Circuits: Models	Poster	KK13–MM7	Halls B–H	16 Wed	1–5 p.m.	
811	Rhythmic Motor Patterns: Neuromodulation	Poster	MM8–NN13	Halls B–H	16 Wed	1–5 p.m.	
812	ALS: Genetic Models	Poster	NN14–PP2	Halls B–H	16 Wed	1–5 p.m.	
THEME F: INTEGRATIVE PHYSIOLOGY AND BEHAVIOR							
6	Visceral Autonomic Nerves as Targets for Precision Bioelectronic Medicines	Minisymposium		6E	12 Sat	1:30–4 p.m.	2.5
60	HPG Axis I	Poster	JJ13–KK16	Halls B–H	12 Sat	1–5 p.m.	
61	Oxytocin and Vasopressin	Poster	KK17–MM1	Halls B–H	12 Sat	1–5 p.m.	
62	Stress: Sex Differences	Poster	MM2–MM12	Halls B–H	12 Sat	1–5 p.m.	
63	Cortical Hemodynamics	Poster	NN1–OO2	Halls B–H	12 Sat	1–5 p.m.	
64	Molecular Mechanisms Underlying Sleep and Circadian Rhythms	Poster	OO3–QQ1	Halls B–H	12 Sat	1–5 p.m.	
98	Bitten: Understanding and Modulating Mosquito Attraction to Humans	Lecture		Ballroom 20	13 Sun	8:30–9:40 a.m.	1.25
103	Food for Thought: How Diet Influences Cognitive Function and Emotion	Minisymposium		6E	13 Sun	8:30–11 a.m.	2.5
111	Neuroethology of Auditory Communication	Nanosymposium		30B	13 Sun	8–9:45 a.m.	
112	Interactions Between Stress and Immune Function	Nanosymposium		5B	13 Sun	8–11:30 a.m.	
113	Ingestive Behavior	Nanosymposium		2	13 Sun	8–9:30 a.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
160	Neuroethology of Sensory and Motor Systems: Arthropods	Poster	TT5–UU10	Halls B–H	13 Sun	8 a.m.–noon	
161	Social Behavior	Poster	UU11–VV19	Halls B–H	13 Sun	8 a.m.–noon	
162	Steroids and Plasticity	Poster	VV20–WW8	Halls B–H	13 Sun	8 a.m.–noon	
163	Sexual Differentiation	Poster	WW9–XX1	Halls B–H	13 Sun	8 a.m.–noon	
164	Stress: Hypothalamic Mechanisms	Poster	XX2–XX15	Halls B–H	13 Sun	8 a.m.–noon	
165	Stress and Cognition	Poster	XX16–YY5	Halls B–H	13 Sun	8 a.m.–noon	
190	Physical Activity Impacting Neuroplasticity in Aging and Disease	Symposium		6A	13 Sun	8 a.m.–noon	2.5
205	Circadian Rhythms: Timely Topics	Nanosymposium		2	13 Sun	1–3:45 p.m.	
251	Bird Song: Auditory Processing and Song Acquisition	Poster	WW1–XX19	Halls B–H	13 Sun	1–5 p.m.	
252	Molecular and Pharmacological Mechanisms of Sexual Behavior	Poster	XX20–YY10	Halls B–H	13 Sun	1–5 p.m.	
253	Cellular Effects of Stress	Poster	YY11–AAA6	Halls B–H	13 Sun	1–5 p.m.	
254	Sleep Behavior and Systems I	Poster	AAA7–BBB1	Halls B–H	13 Sun	1–5 p.m.	
255	Anatomy and Development of Central Pathway Regulating Energy Balance	Poster	BBB2–BBB25	Halls B–H	13 Sun	1–5 p.m.	
256	Integration of Peripheral Signals for Energy Balance	Poster	BBB26–DDD1	Halls B–H	13 Sun	1–5 p.m.	
257	Thermoregulation and Neuropeptide Regulators of Energy Balance	Poster	DDD2–EEE14	Halls B–H	13 Sun	1–5 p.m.	
278	Neurogenetic Insights Into Speech and Language From Birds and Bats	Minisymposium		6E	14 Mon	8:30–11 a.m.	2.5
337	Neuroethology of Sensory and Motor Systems: Invertebrates	Poster	SS2–SS13	Halls B–H	14 Mon	8 a.m.–noon	
338	Parental Behavior	Poster	SS14–TT6	Halls B–H	14 Mon	8 a.m.–noon	
339	HPG Axis II	Poster	TT7–UU13	Halls B–H	14 Mon	8 a.m.–noon	
340	Stress: Hippocampus	Poster	UU14–VV19	Halls B–H	14 Mon	8 a.m.–noon	
341	Autonomic Control: Cardiovascular Regulation I	Poster	VV20–WW15	Halls B–H	14 Mon	8 a.m.–noon	
342	Sleep Behavior and Systems II	Poster	WW16–XX18	Halls B–H	14 Mon	8 a.m.–noon	
343	Sleep Regulators and Pharmacology	Poster	XX19–ZZ2	Halls B–H	14 Mon	8 a.m.–noon	
386	Physiological and Pathophysiological Mechanisms of the Blood Brain Barrier	Nanosymposium		1B	14 Mon	1–3 p.m.	
442	Neuroethology of Sensory and Motor Systems: Vertebrates	Poster	ZZ14–AAA14	Halls B–H	14 Mon	1–5 p.m.	
443	Genetic Approaches in Songbirds	Poster	AAA15–BBB6	Halls B–H	14 Mon	1–5 p.m.	
444	Social Communication in Non-Avian Models	Poster	BBB7–BBB25	Halls B–H	14 Mon	1–5 p.m.	
445	Neuroimmunology: Regulating Systems	Poster	BBB26–CCC20	Halls B–H	14 Mon	1–5 p.m.	
446	Neuroimmunology: Behavioral Effects	Poster	CCC21–EEE3	Halls B–H	14 Mon	1–5 p.m.	
447	Autonomic Control: Cardiovascular Regulation II	Poster	EEE4–FFF5	Halls B–H	14 Mon	1–5 p.m.	
448	Gastrointestinal: Reproductive Regulation	Poster	FFF6–FFF23	Halls B–H	14 Mon	1–5 p.m.	
449	Gastrointestinal: Urinary and Renal Regulation	Poster	FFF24–GGG19	Halls B–H	14 Mon	1–5 p.m.	
450	Sleep Behavior in Humans and Non-Human Primates	Poster	GGG20–HHH21	Halls B–H	14 Mon	1–5 p.m.	
478	From Song to Synapse: Vocal Communication in Sparrows, Finches, and Mice	Lecture		Ballroom 20	15 Tues	10–11:10 a.m.	1.25
487	Enduring Consequences of Early Stress I	Nanosymposium		5B	15 Tues	8–11:30 a.m.	
538	Social Behavior: Effects of Oxytocin and Vasopressin	Poster	FFF6–FFF17	Halls B–H	15 Tues	8 a.m.–noon	
539	Sexual Behavior	Poster	FFF18–GGG5	Halls B–H	15 Tues	8 a.m.–noon	
540	Stress: Neural Circuits	Poster	GGG6–HHH2	Halls B–H	15 Tues	8 a.m.–noon	
567	Actions of Steroids: New Neurotransmitters	Minisymposium		28A	15 Tues	1:30–4 p.m.	2.5
629	Bird Song: Vocal Performance and Motor Control	Poster	AAA20–BBB18	Halls B–H	15 Tues	1–5 p.m.	
630	Stress and Immune Function	Poster	BBB19–CCC14	Halls B–H	15 Tues	1–5 p.m.	
631	Risk Factors for Brain Disorders	Poster	CCC15–DDD9	Halls B–H	15 Tues	1–5 p.m.	
632	Blood Flow and Functional Imaging	Poster	DDD10–FFF1	Halls B–H	15 Tues	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
655	Getting Down to Business: Identifying Epigenetic Mechanisms of Behaviors Within Discrete Cell Populations	Symposium		6B	16 Wed	8 a.m.–noon	2.5
660	Oxytocin From Rodents to Humans: How to Translate Research Into Therapeutic Applications in Psychiatry	Minisymposium		6E	16 Wed	8:30–11 a.m.	2.5
724	Defensive Behavior and Aggression	Poster	VV22–WW10	Halls B–H	16 Wed	8 a.m.–noon	
725	Glucocorticoid Actions	Poster	WW11–WW21	Halls B–H	16 Wed	8 a.m.–noon	
726	Early-Life Stress: Perinatal	Poster	WW22–XX22	Halls B–H	16 Wed	8 a.m.–noon	
727	Stress: Prenatal	Poster	YY1–YY13	Halls B–H	16 Wed	8 a.m.–noon	
728	Early-Life Stress: Adolescence	Poster	YY14–AAA2	Halls B–H	16 Wed	8 a.m.–noon	
729	Neurovascular and Metabolic Coupling: Normal Brain and Stroke	Poster	AAA3–BBB4	Halls B–H	16 Wed	8 a.m.–noon	
730	Effects of Diet on Brain And Behavior	Poster	BBB5–BBB20	Halls B–H	16 Wed	8 a.m.–noon	
731	Monoamines, Amino Acids, and Other Regulators of Energy Balance	Poster	BBB21–CCC20	Halls B–H	16 Wed	8 a.m.–noon	
762	Hypocretins and Orexins: What Have We Learned in Nearly 20 Years?	Minisymposium		29D	16 Wed	1:30–4 p.m.	2.5
772	Enduring Consequences of Early Stress II	Nanosymposium		5B	16 Wed	1–3:45 p.m.	
813	Neuroendocrine Anatomy and Physiology	Poster	PP3–QQ4	Halls B–H	16 Wed	1–5 p.m.	
814	Neuropeptides: Physiology And Behavior	Poster	QQ5–RR9	Halls B–H	16 Wed	1–5 p.m.	
815	Circadian Mechanisms	Poster	RR10–SS15	Halls B–H	16 Wed	1–5 p.m.	
816	Control of Sleep	Poster	SS16–TT5	Halls B–H	16 Wed	1–5 p.m.	
817	Thirst and Water Balance	Poster	TT6–UU4	Halls B–H	16 Wed	1–5 p.m.	
THEME G: MOTIVATION AND EMOTION							
7	Homeostasis Versus Motivation in the Battle to Control Food Intake	Minisymposium		29D	12 Sat	1:30–4 p.m.	2.5
16	Distinct Approaches in the Study of Emotion: Integrative Informatics, Real Time fMRI, and Functional Connectivity	Nanosymposium		2	12 Sat	1–3:30 p.m.	
65	Appetitive and Incentive Learning and Memory	Poster	QQ2–QQ11	Halls B–H	12 Sat	1–5 p.m.	
66	Dopamine in Reward: *In Vivo* Activity Recording and Manipulation Studies	Poster	QQ12–RR9	Halls B–H	12 Sat	1–5 p.m.	
67	Motivation and Reward Mechanisms	Poster	RR10–SS4	Halls B–H	12 Sat	1–5 p.m.	
68	Motivation: Risky Behaviors	Poster	SS5–SS15	Halls B–H	12 Sat	1–5 p.m.	
69	Human Social Communication and Behavior	Poster	SS16–TT3	Halls B–H	12 Sat	1–5 p.m.	
70	Positive and Negative Emotional States	Poster	TT4–UU11	Halls B–H	12 Sat	1–5 p.m.	
71	Antidepressants in Animal Models of Depression	Poster	UU12–VV21	Halls B–H	12 Sat	1–5 p.m.	
72	Neural Circuits in Animal Models of Depression	Poster	VV22–WW5	Halls B–H	12 Sat	1–5 p.m.	
73	New Molecular Targets in Animal Models of Depression	Poster	WW6–XX13	Halls B–H	12 Sat	1–5 p.m.	
74	Treatment of Depression: Exercise and Physical Therapies	Poster	XX14–YY4	Halls B–H	12 Sat	1–5 p.m.	
75	Anxiety Disorders	Poster	YY5–AAA2	Halls B–H	12 Sat	1–5 p.m.	
76	Addictive Drugs and Development	Poster	AAA3–AAA16	Halls B–H	12 Sat	1–5 p.m.	
77	Cannabinoids: Neural Mechanisms and Addiction	Poster	AAA17–BBB14	Halls B–H	12 Sat	1–5 p.m.	
78	Opioid Abuse	Poster	BBB15–CCC9	Halls B–H	12 Sat	1–5 p.m.	
79	Nicotine Abuse and Effects on the Brain	Poster	CCC10–CCC20	Halls B–H	12 Sat	1–5 p.m.	
104	Spanning the Central-Peripheral Divide: Bridging the Gap to Find Novel Strategies to Target Depression	Minisymposium		29D	13 Sun	8:30–11 a.m.	2.5
106	Translational Neuroepigenetic Insights of Addiction Vulnerability	Lecture		Ballroom 20	13 Sun	11:30 a.m.–12:40 p.m.	1.25
114	Neural Mechanisms Underlying Risk/Reward Decision-Making	Nanosymposium		23A	13 Sun	8–11:30 a.m.	
166	Fear and Aversive Learning and Memory: Modulation	Poster	YY6–ZZ8	Halls B–H	13 Sun	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
167	Dopamine in Reward: Molecular and Cellular Mechanisms	Poster	ZZ9–AAA14	Halls B–H	13 Sun	8 a.m.–noon	
168	Neural Substrates of Fear: Human Studies	Poster	AAA15–AAA24	Halls B–H	13 Sun	8 a.m.–noon	
169	Novel Endpoints and Models of Stress	Poster	AAA25–BBB12	Halls B–H	13 Sun	8 a.m.–noon	
170	Animal Models of Depression	Poster	BBB13–CCC10	Halls B–H	13 Sun	8 a.m.–noon	
171	Effects of Ketamine in Animal Models of Depression	Poster	CCC11–DDD6	Halls B–H	13 Sun	8 a.m.–noon	
172	Opioids and the Brain	Poster	DDD7–EEE10	Halls B–H	13 Sun	8 a.m.–noon	
258	Reward Mechanisms	Poster	FFF1–FFF20	Halls B–H	13 Sun	1–5 p.m.	
259	Motivation Neurocircuitry: Cortex, Extended Amygdala, and Striatum	Poster	FFF21–GGG15	Halls B–H	13 Sun	1–5 p.m.	
260	Social Behavior: Motivational Systems	Poster	GGG16–HHH12	Halls B–H	13 Sun	1–5 p.m.	
290	Microbiome Gut Brain Axis	Nanosymposium		4	14 Mon	8–9:45 a.m.	
344	Neurocircuitry of Human Emotion	Poster	ZZ3–AAA2	Halls B–H	14 Mon	8 a.m.–noon	
345	Depression: Human Postmortem Studies	Poster	AAA3–AAA15	Halls B–H	14 Mon	8 a.m.–noon	
346	Eating Disorders	Poster	AAA16–AAA26	Halls B–H	14 Mon	8 a.m.–noon	
347	Alcohol: Behavioral Studies I	Poster	BBB1–BBB20	Halls B–H	14 Mon	8 a.m.–noon	
348	Amphetamines: Neurocircuitry and Cell Signaling	Poster	BBB21–CCC24	Halls B–H	14 Mon	8 a.m.–noon	
349	Cellular and Circuit Mechanisms of Cocaine Addiction	Poster	CCC25–EEE11	Halls B–H	14 Mon	8 a.m.–noon	
350	Cocaine: Brain Circuitry I	Poster	EEE12–FFF13	Halls B–H	14 Mon	8 a.m.–noon	
351	Cocaine: Cell Signaling	Poster	FFF14–GGG7	Halls B–H	14 Mon	8 a.m.–noon	
352	Nicotine: Neural Mechanisms of Addiction	Poster	GGG8–HHH7	Halls B–H	14 Mon	8 a.m.–noon	
373	Advances in Noninvasive Brain Stimulation Along the Space-Time Continuum	Symposium		6B	14 Mon	8 a.m.–noon	2.5
387	Oxytocin and Social Behavior	Nanosymposium		5B	14 Mon	1–2:45 p.m.	
388	Neural Basis of Emotions	Nanosymposium		2	14 Mon	1–3:30 p.m.	
451	Appetitive and Incentive Learning and Memory: Conditioning I	Poster	HHH22–HHH39	Halls B–H	14 Mon	1–5 p.m.	
452	Fear and Aversive Learning and Memory: Acquisition	Poster	HHH40–III27	Halls B–H	14 Mon	1–5 p.m.	
453	Motivation Neurocircuitry: Thalamus and Hypothalamus	Poster	III28–III51	Halls B–H	14 Mon	1–5 p.m.	
454	Neurocircuitry of Emotion: Brain Stimulation and Synchronization	Poster	DP07–JJJ16	Halls B–H	14 Mon	1–5 p.m.	
455	Circuitry and Substrates of Fear	Poster	JJJ17–JJJ42	Halls B–H	14 Mon	1–5 p.m.	
456	Post-Traumatic Stress Disorder: Models	Poster	JJJ43–KKK10	Halls B–H	14 Mon	1–5 p.m.	
457	Amphetamines: Behavioral Studies	Poster	KKK11–KKK30	Halls B–H	14 Mon	1–5 p.m.	
474	The Lateral Habenula Circuitry: Reward Processing and Cognitive Control	Symposium		6B	15 Tues	8 a.m.–noon	2.5
541	Drug Addiction: Learning and Memory	Poster	HHH3–HHH29	Halls B–H	15 Tues	8 a.m.–noon	
542	Motivation and Economic Processes	Poster	HHH30–III7	Halls B–H	15 Tues	8 a.m.–noon	
543	Cognition: Corticostriatal Circuit and Physiology	Poster	III8–III24	Halls B–H	15 Tues	8 a.m.–noon	
544	Motivation Neurocircuitry: Brainstem Modulatory Centers	Poster	III25–III47	Halls B–H	15 Tues	8 a.m.–noon	
545	Human Emotion: Social, Attention, and Other Influences	Poster	III48–JJJ18	Halls B–H	15 Tues	8 a.m.–noon	
546	Bipolar Disorder	Poster	JJJ19–JJJ29	Halls B–H	15 Tues	8 a.m.–noon	
547	Pain, Headache, Migraine, and Trauma	Poster	JJJ30–JJJ52	Halls B–H	15 Tues	8 a.m.–noon	
548	Drug Addiction: Translational Studies	Poster	JJJ53–KKK20	Halls B–H	15 Tues	8 a.m.–noon	
549	Nicotine: Reinforcement, Seeking, and Reinstatement	Poster	KKK21–KKK46	Halls B–H	15 Tues	8 a.m.–noon	
564	Moving From Pavlovian 'Fear' Conditioning to Active Avoidance	Symposium		6B	15 Tues	8 a.m.–noon	2.5
578	Reward and Decision Making: Clinical Implications	Nanosymposium		2	15 Tues	1–2:45 p.m.	
633	Neuroimaging of Reward Mechanisms	Poster	FFF2–FFF19	Halls B–H	15 Tues	1–5 p.m.	
634	Anxiety Disorders: Preclinical Models	Poster	FFF20–GGG20	Halls B–H	15 Tues	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
635	Anxiety Disorders: Therapeutic Approaches	Poster	GGG21–HHH8	Halls B–H	15 Tues	1–5 p.m.	
636	Molecular Mechanisms of Cocaine Addiction	Poster	HHH9–HHH31	Halls B–H	15 Tues	1–5 p.m.	
656	Neural Basis of Social Rewards and Group Decisions: From Scanners to the Real World	Symposium		6A	16 Wed	8 a.m.–noon	2.5
670	Neural Circuits for Learning and Decision Making	Nanosymposium		5B	16 Wed	8–11 a.m.	
671	Mechanisms of Cocaine Addiction	Nanosymposium		2	16 Wed	8–10:45 a.m.	
732	Neurocircuitry of Emotion: Amygdala and Ventral Hippocampus	Poster	CCC21–DDD10	Halls B–H	16 Wed	8 a.m.–noon	
733	Emotion: Information Processing	Poster	DDD11–EEE13	Halls B–H	16 Wed	8 a.m.–noon	
734	Biomarkers for Animal Models of Depression	Poster	EEE14–FFF11	Halls B–H	16 Wed	8 a.m.–noon	
735	Treatment and Drug Discovery: Depression	Poster	FFF12–GGG11	Halls B–H	16 Wed	8 a.m.–noon	
736	Treatment of Depression: Ketamine	Poster	GGG12–HHH1	Halls B–H	16 Wed	8 a.m.–noon	
818	Appetitive and Incentive Learning and Memory: Conditioning II	Poster	UU5–VV5	Halls B–H	16 Wed	1–5 p.m.	
819	Reward: Neuropharmacology	Poster	VV6–VV23	Halls B–H	16 Wed	1–5 p.m.	
820	Neuroimaging and Behavioral Studies of Depression	Poster	VV24–WW20	Halls B–H	16 Wed	1–5 p.m.	
821	Stress and Trauma: Therapeutics	Poster	DP08–XX11	Halls B–H	16 Wed	1–5 p.m.	
822	Psychostimulants and Other Drugs of Abuse	Poster	XX12–YY9	Halls B–H	16 Wed	1–5 p.m.	
823	Drugs of Abuse: Extracellular Matrix and Inflammation	Poster	YY10–ZZ13	Halls B–H	16 Wed	1–5 p.m.	
824	Alcohol: Behavioral Studies II	Poster	ZZ14–AAA16	Halls B–H	16 Wed	1–5 p.m.	
825	Alcohol: Brain Circuitry I	Poster	AAA17–BBB17	Halls B–H	16 Wed	1–5 p.m.	
826	Alcohol: Brain Circuitry II	Poster	BBB18–CCC11	Halls B–H	16 Wed	1–5 p.m.	
827	Addiction: Ethanol and Volatile Solvents	Poster	CCC12–CCC26	Halls B–H	16 Wed	1–5 p.m.	
828	Alcohol: Cell Signaling	Poster	DDD1–EEE5	Halls B–H	16 Wed	1–5 p.m.	
829	Cocaine: Behavioral Studies I	Poster	EEE6–FFF7	Halls B–H	16 Wed	1–5 p.m.	
830	Cocaine: Behavioral Studies II	Poster	FFF8–GGG3	Halls B–H	16 Wed	1–5 p.m.	
831	Cocaine: Brain Circuitry II	Poster	GGG4–HHH4	Halls B–H	16 Wed	1–5 p.m.	
THEME H: COGNITION							
4	Is the Prefrontal Cortex Special? Working Memory Across the Cortical Mantle: From Single Units to Neural Ensembles	Symposium		6F	12 Sat	8 a.m.–noon	2.5
17	Medial Temporal Lobe Subregion Imaging in Normal and Pathological Memory	Nanosymposium		7B	12 Sat	1–3:45 p.m.	
18	Neural Mechanisms of Language	Nanosymposium		1B	12 Sat	1–3:45 p.m.	
80	Decision Making: Pharmacology and Genetics	Poster	CCC21–DDD5	Halls B–H	12 Sat	1–5 p.m.	
81	Neural Networks for Executive Functioning	Poster	DDD6–EEE8	Halls B–H	12 Sat	1–5 p.m.	
82	Memory Consolidation and Reconsolidation: Neural Circuit Mechanisms	Poster	EEE9–FFF11	Halls B–H	12 Sat	1–5 p.m.	
83	Learning and Memory: Basal Forebrain Circuits	Poster	FFF12–FFF23	Halls B–H	12 Sat	1–5 p.m.	
84	Learning and Memory: Parahippocampal and Related Cortical Circuits	Poster	FFF24–GGG12	Halls B–H	12 Sat	1–5 p.m.	
85	Human Cognition: Temporal Processing I	Poster	GGG13–HHH14	Halls B–H	12 Sat	1–5 p.m.	
86	Human Cognition: Aging I	Poster	HHH15–III2	Halls B–H	12 Sat	1–5 p.m.	
87	Human Long-Term Memory: Spatial and Episodic	Poster	III3–III25	Halls B–H	12 Sat	1–5 p.m.	
88	Attentional Networks	Poster	III26–III51	Halls B–H	12 Sat	1–5 p.m.	
89	Decision Making: Avoidance and Uncertainty	Poster	III52–JJJ18	Halls B–H	12 Sat	1–5 p.m.	
90	Cognitive Development	Poster	JJJ19–JJJ44	Halls B–H	12 Sat	1–5 p.m.	
91	Schizophrenia: Behavior and Symptoms	Poster	JJJ25–JJJ59	Halls B–H	12 Sat	1–5 p.m.	
115	Attentional Networks	Nanosymposium		1B	13 Sun	8–11:15 a.m.	
173	Decision Making: Non-Orbitofrontal Cortex	Poster	EEE11–FFF17	Halls B–H	13 Sun	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
174	Sex, Hormones, and Cognition	Poster	FFF18–GGG19	Halls B–H	13 Sun	8 a.m.–noon	
175	Decision Making: Corticolimbic Circuits	Poster	GGG20–HHH17	Halls B–H	13 Sun	8 a.m.–noon	
176	Executive Function: Inhibitory Control	Poster	HHH18–HHH30	Halls B–H	13 Sun	8 a.m.–noon	
177	Hippocampal Learning and Memory Disruption: Genetic and Viral Approaches	Poster	HHH31–III17	Halls B–H	13 Sun	8 a.m.–noon	
178	Learning and Memory: Prefrontal and Anterior Cingulate Cortex	Poster	III18–III36	Halls B–H	13 Sun	8 a.m.–noon	
179	Hormones and Cognition: Hippocampal Mechanisms	Poster	III37–JJJ1	Halls B–H	13 Sun	8 a.m.–noon	
180	Genes, Learning, and Memory	Poster	JJJ2–JJJ12	Halls B–H	13 Sun	8 a.m.–noon	
181	Cognition and Behavior: Thalamic and Brainstem Circuits	Poster	JJJ13–JJJ24	Halls B–H	13 Sun	8 a.m.–noon	
182	Learning and Memory: Aging - Hippocampus	Poster	JJJ25–JJJ54	Halls B–H	13 Sun	8 a.m.–noon	
183	Grid Cells and Hippocampal Interactions	Poster	JJJ55–KKK23	Halls B–H	13 Sun	8 a.m.–noon	
184	Human Cognition and Memory I	Poster	KKK24–KKK53	Halls B–H	13 Sun	8 a.m.–noon	
194	Neural Mechanisms of Economic Choice	Minisymposium		6F	13 Sun	1:30–4 p.m.	2.5
206	Stress and Cognition	Nanosymposium		5B	13 Sun	1–3:45 p.m.	
261	Animal Cognition: Memory Consolidation and Reconsolidation in Behavior	Poster	HHH13–HHH36	Halls B–H	13 Sun	1–5 p.m.	
262	Learning and Memory: Extinction	Poster	HHH37–III14	Halls B–H	13 Sun	1–5 p.m.	
263	Cortical and Hippocampal Circuits: Place Cells	Poster	III15–III42	Halls B–H	13 Sun	1–5 p.m.	
264	Learning and Memory	Poster	III43–JJJ13	Halls B–H	13 Sun	1–5 p.m.	
265	Human Learning: Perceptual, Motor, and Category	Poster	JJJ14–JJJ28	Halls B–H	13 Sun	1–5 p.m.	
266	Human Cognition: Attention I	Poster	JJJ29–JJJ58	Halls B–H	13 Sun	1–5 p.m.	
267	Perceptual and Motor Decision Making	Poster	JJJ59–KKK19	Halls B–H	13 Sun	1–5 p.m.	
268	Neural Processes of Social Cognition	Poster	KKK20–KKK47	Halls B–H	13 Sun	1–5 p.m.	
269	Schizophrenia: Experimental Therapeutics	Poster	KKK48–KKK59	Halls B–H	13 Sun	1–5 p.m.	
276	Fronto-Subthalamic Circuits for Control of Action and Cognition	Symposium		6F	14 Mon	8 a.m.–noon	2.5
291	Marmoset Neurobiology	Nanosymposium		7B	14 Mon	8–10:30 a.m.	
292	Computational Models of Decision Making and Confidence	Nanosymposium		5B	14 Mon	8–9:45 a.m.	
353	Human Cognition and Memory II	Poster	HHH8–HHH37	Halls B–H	14 Mon	8 a.m.–noon	
354	Decision Making: Orbitofrontal, Anterior Cingulate, and Hippocampal Cortices	Poster	HHH38–III21	Halls B–H	14 Mon	8 a.m.–noon	
355	Animal Cognition: Memory Consolidation and Reconsolidation	Poster	III22–III51	Halls B–H	14 Mon	8 a.m.–noon	
356	Encoding Spatial Memories: Neural Circuits and Ensembles	Poster	III52–JJJ28	Halls B–H	14 Mon	8 a.m.–noon	
357	Learning and Memory: Role of Hippocampal GABAergic Inhibition	Poster	JJJ29–JJJ42	Halls B–H	14 Mon	8 a.m.–noon	
358	Learning and Memory: Amygdala Circuits	Poster	JJJ43–KKK2	Halls B–H	14 Mon	8 a.m.–noon	
359	Spatial Navigation: Head Direction Cells and Spatial Orientation	Poster	KKK3–KKK27	Halls B–H	14 Mon	8 a.m.–noon	
360	Perception and Imagery: Visual Processing	Poster	KKK28–KKK57	Halls B–H	14 Mon	8 a.m.–noon	
361	Human Long-Term Memory: Medial Temporal Lobe	Poster	KKK58–LLL16	Halls B–H	14 Mon	8 a.m.–noon	
362	Cortical Control of Executive Function	Poster	LLL17–LLL45	Halls B–H	14 Mon	8 a.m.–noon	
363	Cortical Mechanisms of Language	Poster	LLL46–MMM3	Halls B–H	14 Mon	8 a.m.–noon	
364	Animal Models of Schizophrenia and Pharmacological Treatments	Poster	MMM4–MMM33	Halls B–H	14 Mon	8 a.m.–noon	
375	Object Encoding, Semantic Representation, and Memory Formation by Single Neurons in the Human Medial Temporal Lobe	Minisymposium		28A	14 Mon	1:30–4 p.m.	2.5
389	The Role of Neuromodulators in Attentional Processing	Nanosymposium		4	14 Mon	1–3:15 p.m.	
458	Attention and Frontal Cortex	Poster	KKK31–KKK47	Halls B–H	14 Mon	1–5 p.m.	
459	Attention in Visual Cortical Areas	Poster	KKK48–KKK57	Halls B–H	14 Mon	1–5 p.m.	
460	Executive Function: Models of Disorders	Poster	KKK58–LLL3	Halls B–H	14 Mon	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
461	Adult Hippocampal Neurogenesis: Consequences of Altering Neuronal Production	Poster	LLL4–LLL14	Halls B–H	14 Mon	1–5 p.m.	
462	Learning and Memory: Gamma and Theta Rhythms	Poster	LLL15–LLL34	Halls B–H	14 Mon	1–5 p.m.	
463	Medial Temporal Lobe: Normal and Pathological Memory Through the Lifespan	Poster	LLL35–LLL44	Halls B–H	14 Mon	1–5 p.m.	
464	Social Behaviors and Pharmacology	Poster	LLL45–LLL64	Halls B–H	14 Mon	1–5 p.m.	
465	Neural Processes and Disorders of Social Cognition	Poster	LLL65–MMM11	Halls B–H	14 Mon	1–5 p.m.	
466	Schizophrenia: Biochemistry and Neuropathology	Poster	MMM12–MMM36	Halls B–H	14 Mon	1–5 p.m.	
476	The Neural and Computational Construction of Confidence in Decision-Making	Minisymposium		28A	15 Tues	8:30–11 a.m.	2.5
479	CLINICAL NEUROSCIENCE LECTURE — Deciphering the Dynamics of the Unconscious Brain Under General Anesthesia	Lecture		Ballroom 20	15 Tues	11:30 a.m.–12:40 p.m.	1.25
488	Schizophrenia: Genetics and Genomics	Nanosymposium		7B	15 Tues	8–9:30 a.m.	
550	Executive Function: *In Vivo* Recording and Functional Study	Poster	KKK47–KKK62	Halls B–H	15 Tues	8 a.m.–noon	
551	Learning and Memory: Amygdala and Hippocampal Circuits	Poster	KKK63–LLL2	Halls B–H	15 Tues	8 a.m.–noon	
552	Working Memory: Hippocampus and Cortex	Poster	LLL3–LLL21	Halls B–H	15 Tues	8 a.m.–noon	
553	Cortical and Hippocampal Circuits: Spatial Navigation	Poster	LLL22–LLL41	Halls B–H	15 Tues	8 a.m.–noon	
554	Hippocampal-Cortical Interactions in Spatial Cognition	Poster	LLL42–LLL60	Halls B–H	15 Tues	8 a.m.–noon	
555	Perception and Imagery	Poster	LLL61–MMM7	Halls B–H	15 Tues	8 a.m.–noon	
556	Human Learning: Spatial	Poster	MMM8–MMM21	Halls B–H	15 Tues	8 a.m.–noon	
557	Motor and Sequence Learning	Poster	MMM22–MMM50	Halls B–H	15 Tues	8 a.m.–noon	
579	Executive Functions of the Human Brain	Nanosymposium		1B	15 Tues	1–3:45 p.m.	
637	Human Cognition and Memory III	Poster	HHH32–III21	Halls B–H	15 Tues	1–5 p.m.	
638	Learning and Memory: Rodent Studies	Poster	III22–III48	Halls B–H	15 Tues	1–5 p.m.	
639	Learning and Memory Encoding in Hippocampal Circuits	Poster	III49–JJJ26	Halls B–H	15 Tues	1–5 p.m.	
640	Learning, Remembering, and Forgetting	Poster	JJJ27–JJJ55	Halls B–H	15 Tues	1–5 p.m.	
641	Learning and Memory: Sensory and Association Cortex	Poster	JJJ56–KKK16	Halls B–H	15 Tues	1–5 p.m.	
642	Learning and Memory: Invertebrates	Poster	KKK17–KKK46	Halls B–H	15 Tues	1–5 p.m.	
643	Neural Circuits for Timing, Temporal Processing, and Sequences	Poster	KKK47–KKK62	Halls B–H	15 Tues	1–5 p.m.	
644	Human Cognition and Memory IV	Poster	LLL1–LLL24	Halls B–H	15 Tues	1–5 p.m.	
645	Reward Learning in Humans	Poster	LLL24–LLL51	Halls B–H	15 Tues	1–5 p.m.	
646	Human Cognition: Attention II	Poster	LLL52–MMM9	Halls B–H	15 Tues	1–5 p.m.	
647	Behavioral Demonstrations of Executive Function	Poster	MMM10–MMM25	Halls B–H	15 Tues	1–5 p.m.	
648	Decision Making: Information, Impulsivity, and Social Rewards	Poster	MMM26–MMM55	Halls B–H	15 Tues	1–5 p.m.	
649	Human Cognition: Aging II	Poster	MMM56–NNN21	Halls B–H	15 Tues	1–5 p.m.	
650	Schizophrenia: Genetics and Genomics	Poster	NNN22–NNN36	Halls B–H	15 Tues	1–5 p.m.	
662	The Social Brain in Human Adolescence	Lecture		Ballroom 20	16 Wed	11:30 a.m. –12:40 p.m.	1.25
672	Perception and Imagery: Scene Perception and Spatial Navigation	Nanosymposium		7B	16 Wed	8–10:30 a.m.	
737	Neural Mechanisms of Value-Based Decision-Making	Poster	HH2–HHH12	Halls B–H	16 Wed	8 a.m.–noon	
738	Memory Consolidation and Reconsolidation: Fear Conditioning Circuits	Poster	HHH13–HHH27	Halls B–H	16 Wed	8 a.m.–noon	
739	Learning and Memory: Executive Functions	Poster	HHH28–III3	Halls B–H	16 Wed	8 a.m.–noon	
740	Transcriptional and Epigenetic Mechanisms of Learning and Memory	Poster	III4–III30	Halls B–H	16 Wed	8 a.m.–noon	
741	Cholinergic Modulation: Physiology and Behavior	Poster	III31–JJJ4	Halls B–H	16 Wed	8 a.m.–noon	
742	Modulation of Cognition and Behavior I	Poster	JJJ5–JJJ29	Halls B–H	16 Wed	8 a.m.–noon	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
743	Learning and Memory: Aging - Other Areas	Poster	JJJ30–JJJ49	Halls B–H	16 Wed	8 a.m.–noon	
744	Human Cognition and Memory V	Poster	JJJ50–KKK15	Halls B–H	16 Wed	8 a.m.–noon	
745	Human Cognition: Individual Differences I	Poster	KKK16–KKK38	Halls B–H	16 Wed	8 a.m.–noon	
746	Human Cognition: Temporal Processing II	Poster	KKK39–KKK48	Halls B–H	16 Wed	8 a.m.–noon	
747	Plasticity and Disorders of Executive Function	Poster	KKK49–KKK68	Halls B–H	16 Wed	8 a.m.–noon	
748	Computational Models of Reward and Decision Making	Poster	KKK69–LLL25	Halls B–H	16 Wed	8 a.m.–noon	
749	Decision Making and Reasoning	Poster	LLL26–LLL46	Halls B–H	16 Wed	8 a.m.–noon	
750	Human Cognition	Poster	LLL47–LLL64	Halls B–H	16 Wed	8 a.m.–noon	
773	Perception and Imagery: Perception and Behavior in Real-World Settings	Nanosymposium		2	16 Wed	1–4:30 p.m.	
832	Cognition and Behavior: Dopamine and Dopamine Receptors	Poster	HHH5–HHH19	Halls B–H	16 Wed	1–5 p.m.	
833	Functional Mechanisms of Attention	Poster	HHH20–III2	Halls B–H	16 Wed	1–5 p.m.	
834	Cognition: Corticostriatal Circuits	Poster	III3–III19	Halls B–H	16 Wed	1–5 p.m.	
835	Cognition: Striatal Regions	Poster	III20–III34	Halls B–H	16 Wed	1–5 p.m.	
836	Models of Memory Consolidation, Protection, and Enhancement	Poster	III35–JJJ1	Halls B–H	16 Wed	1–5 p.m.	
837	Cognition: Nucleus Accumbens	Poster	JJJ2–JJJ15	Halls B–H	16 Wed	1–5 p.m.	
838	Learning and Memory: Molecules and Circuit Dynamics	Poster	JJJ16–JJJ36	Halls B–H	16 Wed	1–5 p.m.	
839	Modulation of Cognition and Behavior II	Poster	JJJ37–JJJ48	Halls B–H	16 Wed	1–5 p.m.	
840	Human Cognition and Memory VI	Poster	JJJ49–KKK16	Halls B–H	16 Wed	1–5 p.m.	
841	Human Cognition: Individual Differences II	Poster	KKK17–KKK31	Halls B–H	16 Wed	1–5 p.m.	
842	Perception and Imagery: Perception and Related Predictions Across Different Modalities	Poster	KKK32–KKK56	Halls B–H	16 Wed	1–5 p.m.	
843	Language in Normal and Damaged Brains	Poster	KKK57–LLL11	Halls B–H	16 Wed	1–5 p.m.	
844	Schizophrenia Circuits and Systems	Poster	LLL12–LLL40	Halls B–H	16 Wed	1–5 p.m.	
845	Schizophrenia: Developmental Models	Poster	LLL41–LLL70	Halls B–H	16 Wed	1–5 p.m.	
THEME I: TECHNIQUES							
19	Genetic Techniques	Nanosymposium		25A	12 Sat	1–4:15 p.m.	
92	Optogenetic Approaches to Studying Neural Circuit Function	Poster	JJJ60–KKK28	Halls B–H	12 Sat	1–5 p.m.	
93	Genomics, Proteomics, and Systems Biology	Poster	KKK29–KKK43	Halls B–H	12 Sat	1–5 p.m.	
94	Light Microscopy: Advances in Technologies, Software, and Analysis	Poster	KKK44–KKK60	Halls B–H	12 Sat	1–5 p.m.	
95	New Approaches for Neuromodulation	Poster	KKK61–KKK70	Halls B–H	12 Sat	1–5 p.m.	
96	Automation	Poster	LLL1–LLL20	Halls B–H	12 Sat	1–5 p.m.	
97	Data Analysis and Statistics: Software Tools I	Poster	LLL21–LLL45	Halls B–H	12 Sat	1–5 p.m.	
105	Dendritic Spines Shaping Memory and Behaviors	Lecture		Ballroom 20	13 Sun	10–11:10 a.m.	1.25
116	Techniques in Electrophysiological Recording and Stimulation	Nanosymposium		7B	13 Sun	8–10 a.m.	
185	Super-Resolution and Expansion Microscopy	Poster	KKK54–KKK63	Halls B–H	13 Sun	8 a.m.–noon	
186	Advanced Imaging Techniques: Electron Microscopy	Poster	KKK64–LLL7	Halls B–H	13 Sun	8 a.m.–noon	
187	Drug and Biomarker Discovery in Mood Disorders and Schizophrenia	Poster	LLL8–LLL27	Halls B–H	13 Sun	8 a.m.–noon	
188	Data Analysis and Statistics: Human Data I	Poster	LLL28–LLL51	Halls B–H	13 Sun	8 a.m.–noon	
195	Using Miniature Microscopes to Probe the Neural Ensemble Correlates of Innate and Learned Behaviors in Freely Moving Mice	Minisymposium		6E	13 Sun	1:30–4 p.m.	2.5
207	Transcranial Stimulation and MRI Techniques	Nanosymposium		7B	13 Sun	1–2:45 p.m.	
270	Optical Methods Development	Poster	KKK60–LLL14	Halls B–H	13 Sun	1–5 p.m.	
271	Data Analysis and Statistics: Human Data II	Poster	LLL15–LLL38	Halls B–H	13 Sun	1–5 p.m.	
272	Data Analysis and Statistics: Software Tools II	Poster	LLL39–LLL59	Halls B–H	13 Sun	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
279	Mesoscale Imaging of Cortical Function and Dysfunction in Mice	Minisymposium		29D	14 Mon	8:30–11 a.m.	2.5
365	Anatomical Techniques: Circuit Tracing and Staining	Poster	MMM34–MMM48	Halls B–H	14 Mon	8 a.m.–noon	
366	Transsynaptic Tracing	Poster	MMM49–MMM53	Halls B–H	14 Mon	8 a.m.–noon	
367	Staining, Tracing, and Imaging Techniques: Novel Probes	Poster	MMM54–NNN16	Halls B–H	14 Mon	8 a.m.–noon	
368	Models of Excitability: Networks and Single Neurons I	Poster	NNN17–NNN40	Halls B–H	14 Mon	8 a.m.–noon	
369	Computational Tools for Human Data I	Poster	NNN41–0007	Halls B–H	14 Mon	8 a.m.–noon	
376	Mammalian Nervous System Cell Types: CNS Diversity Through the Lens of Single-Cell RNA Sequencing (RNA-seq)	Minisymposium		6E	14 Mon	1:30–4 p.m.	2.5
467	Bioinformatics	Poster	MMM37–MMM52	Halls B–H	14 Mon	1–5 p.m.	
468	Optical Methods: Probe Development and Applications	Poster	MMM53–NNN15	Halls B–H	14 Mon	1–5 p.m.	
469	Electrode Arrays I	Poster	NNN16–NNN45	Halls B–H	14 Mon	1–5 p.m.	
470	Computational Tools for Circuit Mapping	Poster	NNN46–00016	Halls B–H	14 Mon	1–5 p.m.	
477	Multiscale Connectomics: Maps, Models, and Mechanisms	Minisymposium		6E	15 Tues	8:30–11 a.m.	
489	Biomarker and Drug Discovery Approaches	Nanosymposium		1B	15 Tues	8–10:30 a.m.	
490	Models of Memory and Anticipatory Coding	Nanosymposium		2	15 Tues	8–11 a.m.	
558	Optogenetic Tools for Studying Neural Circuits	Poster	MMM51–NNN6	Halls B–H	15 Tues	8 a.m.–noon	
559	Anatomical Techniques: Tomography	Poster	NNN7–NNN18	Halls B–H	15 Tues	8 a.m.–noon	
560	Optical Methods: Real-Time Imaging	Poster	NNN19–NNN40	Halls B–H	15 Tues	8 a.m.–noon	
561	Neurophysiological Approaches and Techniques	Poster	NNN41–00014	Halls B–H	15 Tues	8 a.m.–noon	
568	Computational Ethological Approaches for Dissecting the Neural Basis of Behavior in Genetic Model Systems	Minisymposium		6E	15 Tues	1:30–4 p.m.	2.5
580	Advanced Imaging Methods and Probes	Nanosymposium		7B	15 Tues	1–4:15 p.m.	
651	Anatomical Techniques: Optical Tissue Clearing		NNN37–NNN48	Halls B–H	15 Tues	1–5 p.m.	
652	New Assays for Monitoring Cells, Circuits, and Behavior	Poster	NNN49–0006	Halls B–H	15 Tues	1–5 p.m.	
653	Data Analysis and Statistics: Neuronal Networks	Poster	0007–00019	Halls B–H	15 Tues	1–5 p.m.	
673	Molecular Techniques	Nanosymposium		4	16 Wed	8–10:45 a.m.	
751	Molecular Techniques	Poster	LLL65–MMM20	Halls B–H	16 Wed	8 a.m.–noon	
752	Cellular and Network Electrophysiological Approaches	Poster	MMM21–MMM43	Halls B–H	16 Wed	8 a.m.–noon	
753	Optical Methods: Imaging and Photostimulation	Poster	MMM44–MMM56	Halls B–H	16 Wed	8 a.m.–noon	
754	Biomarkers and Drug Delivery Systems	Poster	MMM57–NNN25	Halls B–H	16 Wed	8 a.m.–noon	
755	Computational Tools: Outcomes and Evaluations	Poster	NNN26–NNN39	Halls B–H	16 Wed	8 a.m.–noon	
756	Data Analysis and Statistics: Neuronal networks	Poster	NNN40–0005	Halls B–H	16 Wed	8 a.m.–noon	
763	Nanoscale Neurocartography: Approaches and Theory for Inference and Analysis of Synaptomes and Connectomes	Minisymposium		6E	16 Wed	1:30–4 p.m.	2.5
774	New Electrode Technologies	Nanosymposium		1B	16 Wed	1–4:15 p.m.	
846	Biochemical Techniques	Poster	MMM1–MMM19	Halls B–H	16 Wed	1–5 p.m.	
847	Genetic Techniques	Poster	MMM20–MMM49	Halls B–H	16 Wed	1–5 p.m.	
848	Electrode Arrays II	Poster	MMM50–NNN12	Halls B–H	16 Wed	1–5 p.m.	
849	Models of Excitability: Networks and Single Neurons II	Poster	NNN13–NNN29	Halls B–H	16 Wed	1–5 p.m.	
850	Algorithms and Network Models for Cognition and Behavior	Poster	NNN30–NNN40	Halls B–H	16 Wed	1–5 p.m.	
851	Computational Tools for Human Data II	Poster	NNN41–00014	Halls B–H	16 Wed	1–5 p.m.	
THEME J: HISTORY AND EDUCATION							
20	History of Neuroscience	Theme J Poster	MMM1–MMM12	Halls B–H	12 Sat	1–5 p.m.	
21	K-12 Teaching	Theme J Poster	MMM13–MMM22	Halls B–H	12 Sat	1–5 p.m.	
22	College Teaching I	Theme J Poster	MMM23–MMM47	Halls B–H	12 Sat	1–5 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
23	College Teaching II	Theme J Poster	MMM48–NNN8	Halls B–H	12 Sat	1–5 p.m.	
24	Graduate and Professional Teaching	Theme J Poster	NNN9–NNN27	Halls B–H	12 Sat	1–5 p.m.	
25	Public Awareness of Neuroscience: Education	Theme J Poster	NNN28–NNN42	Halls B–H	13 Sun	8 a.m.–noon	
26	Public Awareness of Neuroscience: Outreach	Theme J Poster	NNN43–0008	Halls B–H	13 Sun	8 a.m.–noon	
27	Ethical and Policy Issues in Neuroscience	Theme J Poster	0009–00026	Halls B–H	13 Sun	8 a.m.–noon	
SFN PRE-CONFERENCE SESSIONS							
SPC01	NEUROBIOLOGY OF DISEASE WORKSHOP: From Pediatric Encephalopathy to Alzheimer's: Linking Mitochondria to Neurological Diseases	SfN Pre-Conference Sessions		6A	11 Fri	8–5 p.m.	
SPC02	SHORT COURSE #2: Data Science and Data Skills for Neuroscientists	SfN Pre-Conference Sessions		6C	11 Fri	8 a.m.–6 p.m.	
SPC03	SHORT COURSE #1: Using Single-Cell Genomics to Analyze Neurons, Glia, and Circuits	SfN Pre-Conference Sessions		6B	11 Fri	8:30 a.m.–6 p.m.	
SPC04	SHORT COURSE #3: Record Keeping and Data Management for High-Quality Science	SfN Pre-Conference Sessions		11B	11 Fri	1–5:30 p.m.	
SPC05	Meet-the-Clinician-Expert	SfN Pre-Conference Sessions		Manchester Grand Hyatt: Cortez Hill	12 Sat	8–9:15 a.m.	
SPC06	Meet-the-Expert: Session 1	SfN Pre-Conference Sessions		Manchester Grand Hyatt	12 Sat	8–9:15 a.m.	
SPC07	Meet-the-Expert: Session 2	SfN Pre-Conference Sessions		Manchester Grand Hyatt	12 Sat	9:30–10:45 a.m.	
PROFESSIONAL DEVELOPMENT WORKSHOPS							
PDW01	NEUROSCIENCE DEPARTMENTS AND PROGRAMS WORKSHOP — Training the Trainers: Diverse Career Trajectories in Neuroscience: Helping Trainees Chart a Course for Success	Professional Development Workshop		30C	12 Sat	9–11 a.m.	
PDW02	Success in Academia: A Focus on Strategies for Women	Professional Development Workshop		31C	12 Sat	9–11 a.m.	
PDW03	Careers in Making Medicines: Translating Basic Research Into Pharmaceutical Development	Professional Development Workshop		31C	12 Sat	noon–2 p.m.	
PDW04	Creating, Sustaining, and Enhancing Undergraduate Neuroscience Programs	Professional Development Workshop		30C	12 Sat	noon–2 p.m.	
PDW05	Biomedical Education and Career Options for Scientists (PhD) and Physician-Scientists (MD-PhD)	Professional Development Workshop		30C	12 Sat	3–5 p.m.	
PDW06	NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Training Career	Professional Development Workshop		31C	12 Sat	3–5 p.m.	
PDW07	A Guide to Publishing in Journals	Professional Development Workshop		31C	13 Sun	9–11 a.m.	
PDW08	Stand up and Be Heard: Navigating Career Communications	Professional Development Workshop		30C	13 Sun	9–11 a.m.	
PDW09	Successful Career Advancement Through Networking: Is It Who You Know?	Professional Development Workshop		31C	13 Sun	noon–1:30 p.m.	
PDW10	Path to Translation for the Inspired	Professional Development Workshop		30C	13 Sun	noon–2:15 p.m.	
PDW11	Meeting Expectations: NIH Review Criteria on Scientific Rigor and Reproducibility	Professional Development Workshop		31C	13 Sun	3–5 p.m.	
PDW12	Optimizing the Mentor-Trainee Relationship	Professional Development Workshop		30C	13 Sun	3–5 p.m.	
PDW13	How to Present Science Using Visual Tools	Professional Development Workshop		30C	14 Mon	9–11 a.m.	
PDW14	Teaching Neuroscience With Big Data	Professional Development Workshop		31C	14 Mon	9–11 a.m.	
PDW15	It's a Win-Win: Effectively Engaging Undergraduates in Research	Professional Development Workshop		30C	14 Mon	noon–2 p.m.	

SESSION #	SESSION TITLE	SESSION TYPE	POSTER BOARD #	LOCATION	DATE	TIME	CME HOURS
MEETINGS AND EVENTS							
ME01	NeuroJobs Career Center	Meetings and Events		Sails Pavilion	12 Sat	8 a.m.–5 p.m.	
ME02	Meeting Mobile App Tutorial	Meetings and Events		10	12 Sat	10–11 a.m.	
ME03	Graduate School Fair	Meetings and Events		Sails Pavilion	12 Sat	1–3 p.m.	
ME04	BRAIN AWARENESS CAMPAIGN EVENT: Sharing the Magic of Brain Awareness	Meetings and Events		16	12 Sat	3–4:30 p.m.	
ME05	Diversity Fellows Poster Session	Meetings and Events		Hall A	12 Sat	6:30–8:30 p.m.	
ME06	International Fellows Poster Session	Meetings and Events		Hall A	12 Sat	6:30–8:30 p.m.	
ME07	Trainee Professional Development Awards Poster Session	Meetings and Events		Hall A	12 Sat	6:30–8:30 p.m.	
ME08	Career Development Topics: A Networking Event	Meetings and Events		Hall A	12 Sat	7:30–9:30 p.m.	
ME09	NeuroJobs Career Center	Meetings and Events		Sails Pavilion	13 Sun	8 a.m.–5 p.m.	
ME10	CHAPTERS WORKSHOP: Utilizing Chapters to Teach Innovative Science to Broad Audiences	Meetings and Events		11B	13 Sun	11:30 a.m.–1 p.m.	
ME11	Graduate School Fair	Meetings and Events		Sails Pavilion	13 Sun	noon–2 p.m.	
ME12	SOCIAL ISSUES ROUNDTABLE: Concussion: From the Players' Experience to the Future of Research	Meetings and Events		10	13 Sun	1–3 p.m.	
ME13	NeuroJobs Career Center	Meetings and Events		Sails Pavilion	14 Mon	8 a.m.–5 p.m.	
ME14	CLINICAL ROUNDTABLE #1: The Subcortical Source of Inflammatory Malaise	Meetings and Events		11B	14 Mon	8:30–11 a.m.	
ME15	Graduate School Fair	Meetings and Events		Sails Pavilion	14 Mon	noon–2 p.m.	
ME16	NeuroJobs Career Center	Meetings and Events		Sails Pavilion	15 Tues	8 a.m.–5 p.m.	
ME17	CLINICAL ROUNDTABLE #2: Medications Development for Cannabis Use Disorder: CB1 Receptor Agonists, Antagonists and Signaling-Specific Inhibitors	Meetings and Events		11B	15 Tues	8:30–11 a.m.	
ME18	ANIMALS IN RESEARCH PANEL: How to Engage Institutions to Publicly Support Animal Research: A Top-Down Approach	Meetings and Events		10	15 Tues	10 a.m.–noon	
ME19	Celebration of Women in Neuroscience Luncheon	Meetings and Events		Hilton San Diego Bayfront: Sapphire ABEF	15 Tues	noon–2 p.m.	
ME20	Graduate School Fair	Meetings and Events		Sails Pavilion	15 Tues	noon–2 p.m.	
ME21	PUBLIC ADVOCACY FORUM: Art, Music, and the Brain: How the Arts Influence us from Youth to Maturity	Meetings and Events		10	15 Tues	3–5 p.m.	
ME22	SfN Members' Business Meeting	Meetings and Events		3	15 Tues	6:45–7:30 p.m.	
ME23	Graduate Student Reception	Meetings and Events		Hilton San Diego Bayfront: Sapphire Ballroom	15 Tues	9 p.m.–midnight	
ME24	NeuroJobs Career Center	Meetings and Events		Sails Pavilion	16 Wed	8 a.m.–3 p.m.	
ME25	CLINICAL ROUNDTABLE #3: Critical Topics in Pain Mechanisms and Therapeutics	Meetings and Events		11B	16 Wed	8:30–11 a.m.	

Clinician-Scientists and Continuing Medical Education (CME)

Clinical Neuroscience Content at Neuroscience 2016

Neuroscience 2016 will feature two new session formats designed to emphasize collaboration between basic neuroscience researchers and clinician-scientists:

- Meet-the-Clinician-Expert: Hear from Dennis Choi, MD, PhD, a clinician-researcher who will describe his techniques and accomplishments in a smaller, less formal setting. (pg. 25)
- Three Basic-Translational-Clinical Roundtables: Panel sessions followed by audience discussion about hot topics impacting the field. (pg. 30, 31)

Other Featured Clinical Sessions:

- Clinical Neuroscience Lecture: Learn about the dynamics of the unconscious brain from Emery Brown, MD, PhD. (pg. 15)
- Clinical Neuroscience Social. (pg. 32)

Clinician-scientist attendees can take advantage of select programming while earning Continuing Medical Education (CME) credits. Remember to sign up for the SfN CME Program during registration or onsite at the meeting.

Continuing Medical Education

The Society for Neuroscience (SfN) annual meeting is a forum for the education of physicians in the field of neuroscience.

By attending lectures, symposia, and minisymposia, physicians will receive both a broad overview of the field and information about the most recent, detailed research on the topic of the session. The abstract of each plenary session contains a brief description of the material to be presented. By attending any of the activities, physicians will better understand the basic science that underlies clinical practice.

Statement of Need

It is important that physicians comprehend the basic science that underlies clinical medicine. The SfN annual meeting is the premier venue for this educational opportunity. Physicians learn about the most up-to-date, cutting-edge discoveries regarding the nervous system.

Global Learning Objective

Given a patient with a neurological or psychiatric condition, physicians will integrate the most

up-to-date information and research about the mechanism, treatment, and diagnosis of conditions related to neurological and psychiatric disorders into their diagnostic and therapeutic modalities of practices in order to determine the best course of action in treating the patient.

Accreditation

SfN is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation by Format

Symposia

SfN designates this live activity for a maximum of 2.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Minisymposia

SfN designates this live activity for a maximum of 2.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Albert and Ellen Grass Lecture

SfN designates this live activity for a maximum of 1.25 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Presidential Special Lecture

SfN designates this live activity for a maximum of 1.25 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Special Lecture

SfN designates this live activity for a maximum of *1.25 AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Basic-Translational-Clinical Roundtables

SfN designates this live activity for a maximum of 2.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

A meeting attendee seeking Continuing Medical Education (CME) credit may use a combination of the activities described above to claim a maximum of 35 *AMA PRA Category 1 Credits*™.

CME Registration

CME registration must be completed before or during the annual meeting. An on-site processing fee of $125 is charged in addition to the meeting registration fee. Purchase orders will not be accepted as payment. To register for CME, check the appropriate box on the annual meeting registration form and include the CME processing fee.

Those who do not register for CME before the conclusion of the meeting will not be able to request CME credits. CME registration cannot be completed after the annual meeting. Two weeks prior to the start of the meeting, CME registgrants will receive the CME Supplemental Program, which contains important information regarding the CME program, including disclosure information and instructions for how to obtain the CME certificate.

CME Credit for Exhibitors

Exhibitors with medical degrees can earn *AMA PRA Category 1 Credits*™ by registering for the CME program and attending lectures, symposia, and minisymposia. Call Convention Data Services at (888) 736-6690 or (508) 743-8563 to add CME to your exhibitor registration.

Awards in Neuroscience

Award for Education in Neuroscience

The Award for Education in Neuroscience recognizes individuals who have made outstanding contributions to neuroscience education and training. The award will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Monday, November 14, in the San Diego Convention Center, Ballroom 20.

Bernice Grafstein Award for Outstanding Accomplishments in Mentoring

Support contributed by Bernice Grafstein, PhD

The Bernice Grafstein Award is given to an individual who has shown dedication to, and success in, mentoring women neuroscientists and facilitating their entry or retention in the field. The award will be presented during the Celebration of Women in Neuroscience Luncheon on Tuesday, November 15.

Donald B. Lindsley Prize in Behavioral Neuroscience

Support contributed by The Grass Foundation

The Donald B. Lindsley Prize recognizes a young neuroscientist for his or her outstanding PhD thesis in the general area of behavioral neuroscience. The prize will be presented prior to the Albert and Ellen Grass Lecture at 3:15 p.m. on Monday, November 14, in the San Diego Convention Center, Ballroom 20.

Jacob P. Waletzky Award

Support contributed by The Waletzky Award Prize Fund and The Waletzky Family

The Jacob P. Waletzky Award is given to a scientist each year to conduct research in the area of substance abuse and the brain and nervous system. In addition, the recipient must have received an advanced degree of a PhD or MD within the past 15 years. The award will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Saturday, November 12, in the San Diego Convention Center, Ballroom 20. The recipient also will deliver the Jacob P. Waletzky Memorial Lecture at the Frontiers in Addiction Research: 2016 Joint NIDA-NIAAA Mini-Convention at the San Diego Convention Center, Room 7, Friday, November 11.

Janett Rosenberg Trubatch Career Development Award

Support contributed by The Trubatch Family

The Career Development Award recognizes individuals who have demonstrated originality and creativity in research. It is intended to promote success during academic transitions prior to tenure. The award will be presented during the Celebration of Women in Neuroscience Luncheon on Tuesday, November 15.

Julius Axelrod Prize

Support contributed by Eli Lilly and Company Foundation

The Julius Axelrod Prize honors a scientist with distinguished achievements in the field of neuropharmacology or a related area, and exemplary efforts in mentoring young scientists. The award will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Saturday, November 12, in the San Diego Convention Center, Ballroom 20.

Mika Salpeter Lifetime Achievement Award

The Mika Salpeter Lifetime Achievement Award recognizes an individual with outstanding career achievements in neuroscience who also has significantly promoted the professional advancement of women in neuroscience. The award will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Monday, November 14, in the San Diego Convention Center, Ballroom 20.

Nemko Prize in Cellular or Molecular Neuroscience

Support contributed by The Nemko Family

The Nemko Prize recognizes a young neuroscientist's outstanding PhD thesis that advances the understanding of molecular, genetic, or cellular mechanisms underlying brain function, including higher function and cognition. The prize will be presented prior to the Albert and Ellen Grass Lecture at 3:15 p.m. on Monday, November 14, in the San Diego Convention Center, Ballroom 20.

Awards in Neuroscience

Next Generation Award

The Next Generation Award recognizes SfN chapter members who have made outstanding contributions to public communication, outreach, and education about neuroscience. The award will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Tuesday, November 15, in the San Diego Convention Center, Ballroom 20.

Peter and Patricia Gruber International Research Award in Neuroscience

Support contributed by The Gruber Foundation

The Peter and Patricia Gruber International Research Award in Neuroscience is presented each year to two young neuroscientists for outstanding research and educational pursuit in an international setting. The awards will be presented prior to the Peter and Patricia Gruber Lecture at 2:30 p.m. on Sunday, November 13, in the San Diego Convention Center, Ballroom 20.

Patricia Goldman-Rakic Hall of Honor

The Patricia Goldman-Rakic Hall of Honor posthumously recognizes a neuroscientist who has pursued career excellence and exhibited dedication to the advancement of women in neuroscience. The award will be presented during the Celebration of Women in Neuroscience Luncheon on Tuesday, November, 15.

Ralph W. Gerard Prize in Neuroscience

The Ralph W. Gerard Prize, the highest recognition conferred by SfN, honors an outstanding scientist who has made significant contributions to neuroscience throughout his or her career. This prize is named after Ralph W. Gerard, who was instrumental in founding SfN and served as honorary president from 1970 until his death in 1974. The prize will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Sunday, November 13, in the San Diego Convention Center, Ballroom 20.

Science Educator Award

Support contributed by The Dana Foundation

The Science Educator Award honors two outstanding neuroscientists who have made significant contributions to educating the public about neuroscience: one who conducts education activities full time and one who devotes his/her time primarily to research while conducting outreach, policy, and education activities. The award will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Tuesday, November 15, in the San Diego Convention Center, Ballroom 20.

SfN Chapter-of-the-Year Award

This award is given to an SfN chapter that has engaged in exceptional, innovative activities at a local and community level and advanced the mission of the Society. The award will be presented at the Chapters Workshop at 11:30 a.m. on Sunday, November 13 in the San Diego Convention Center, Room 11B.

Swartz Prize for Theoretical and Computational Neuroscience

Support contributed by The Swartz Foundation

The Swartz Prize honors an individual who has made noteworthy contributions in the field of theoretical or computational neuroscience. The prize will be presented prior to the Presidential Special Lecture at 5:15 p.m. on Saturday, November 12, in the San Diego Convention Center, Ballroom 20.

Young Investigator Award

The Young Investigator Award recognizes the outstanding achievements and contributions by a young neuroscientist who has received his or her advanced professional degree in the past 10 years. The award will be presented prior to the Albert and Ellen Grass Lecture at 3:15 p.m. on Monday, November 14, in the San Diego Convention Center, Ballroom 20.

SfN Professional Development Awards

Trainee Professional Development Awards

Support contributed by the Friends of SfN Fund, SfN Memorial Fund, Pfizer, and Burroughs Wellcome Fund

These awards honor outstanding undergraduate and graduate students and postdoctoral fellows. Recipients are chosen on the basis of the scientific merit of their abstract, CV, a letter of recommendation, and an essay. Awardees will present a poster during the Trainee Professional Development Awards Poster Session.

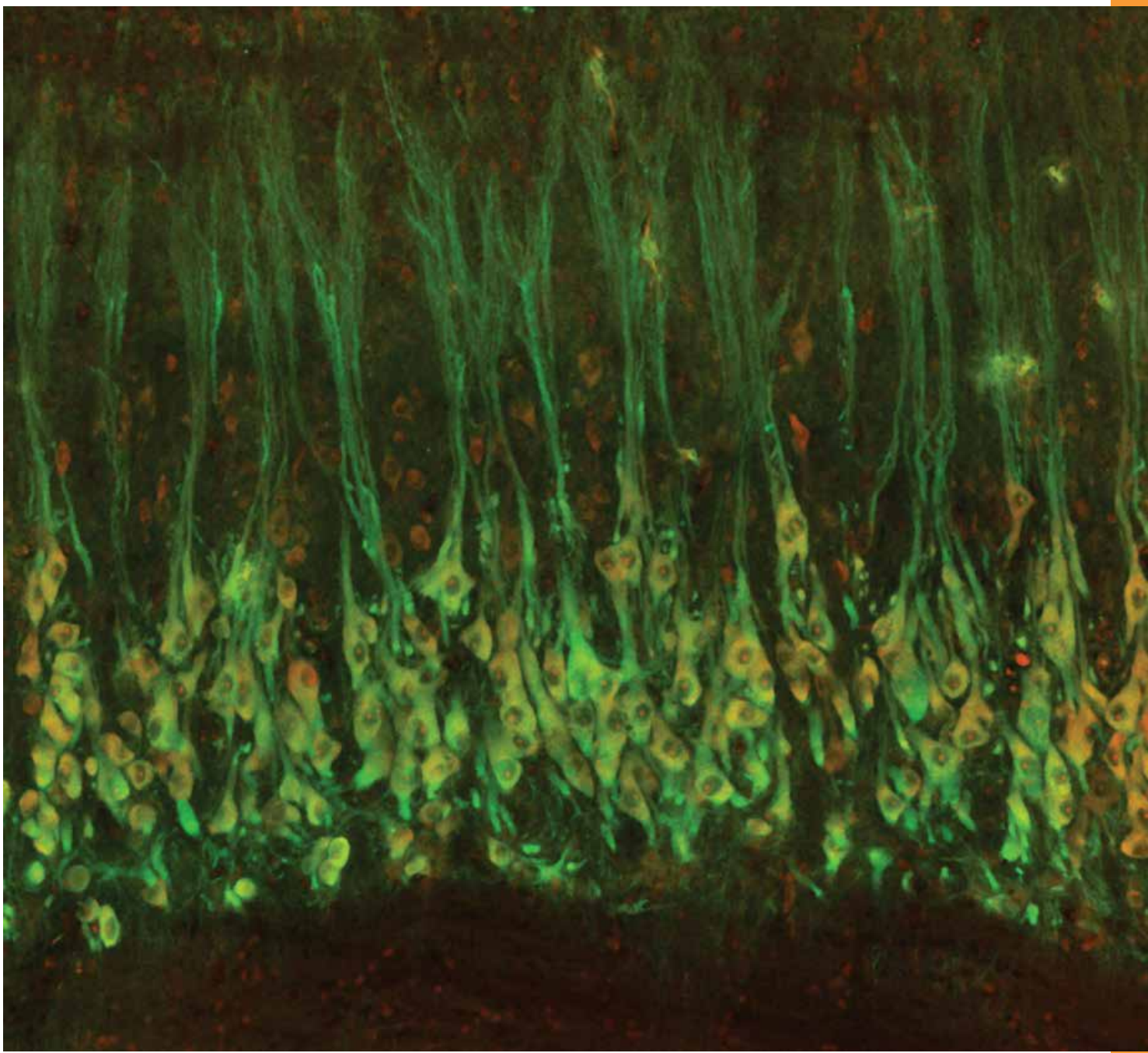
SfN/IBRO International Travel Awards

Sponsored by SfN and selected by the International Brain Research Organization (IBRO), these awards recognize young investigators from countries defined by the World Bank as low, lower-middle, or upper-middle income. This year, 30 awardees will attend Neuroscience 2016.

SfN/JNS Travel Award

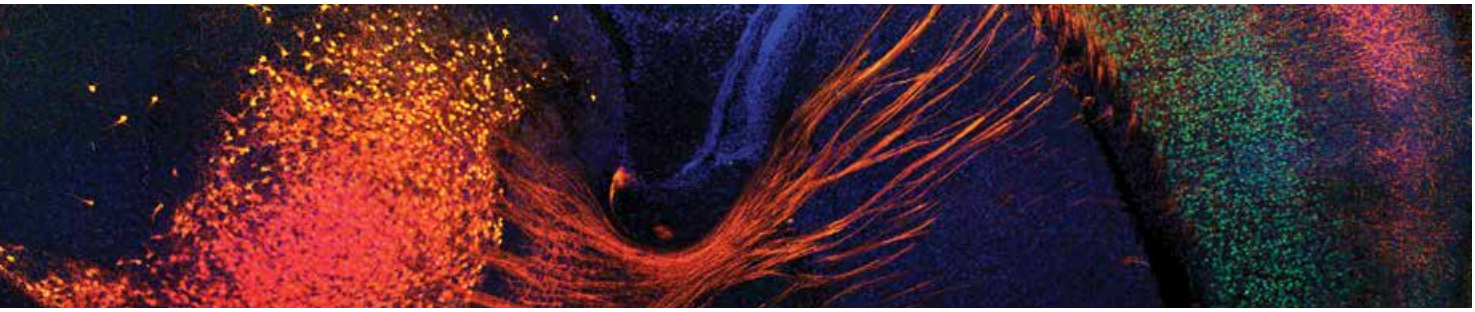
SfN and the Japan Neuroscience Society (JNS) sponsor a joint award program allowing trainees from Japan to attend the SfN annual meeting and North American trainees from SfN to attend the JNS meeting in Japan. This year, SfN sent five trainees from North America to the JNS meeting in July. The program is administered by SfN's Global Membership Committee and JNS.

REGISTRATION, HOTEL, AND TRAVEL



Registration

Registration Categories and Fees



Online Discount	Opens at midnight EDT on October 5 and continues through the annual meeting
On-Site In Line	Opens at 7:30 a.m. EST on November 12 and continues through the annual meeting

Registration Category	Online Discount	On-Site In Line
Member	$430	$515
Member, Category II	$180	$220
Member, Category III	$245	$285
Postdoctoral Member	$325	$390
Postdoctoral Member, Category II	$115	$140
Postdoctoral Member, Category III	$180	$215
Student Member	$215	$260
Student Member, Category II	$75	$95
Student Member, Category III	$120	$145
Student Member, Undergraduate	$110	$130
Student Member, Undergraduate Category II	$40	$45
Student Member, Undergraduate Category III	$60	$75
Nonmember	$775	$930
Student Nonmember	$390	$470
Guest — Nonscientific	$60	$70
CME Accreditation	$105	$125

All members must be in good standing at the time of registering for the annual meeting to receive member rates. Membership status will be verified. Fees vary based on registration categories and options. Refunds will not be issued for incorrect registration category. If you are uncertain about your membership status, contact **membership@sfn.org or call (202) 962-4000.**

Accepted Forms of Payment

MasterCard, Visa, American Express, Discover, checks, or money orders in U.S. dollars drawn on a U.S. bank made payable to the Society for Neuroscience, and cash (on-site only).

Badge Reprint Fee

Attendees will incur a $25 fee for badge reprints. If you require a badge reprint, visit the Attendee Resources counter in the Sails Pavilion of the San Diego Convention Center.

WHEN TO REGISTER

Online Discount

From Wednesday, Oct. 5, through the duration of the annual meeting, discounted fees are available by using the online registration system. Avoid waiting in line and bring your confirmation number to any Express Badge Pick-Up location to claim your meeting materials.

On-Site In Line Registration

Discounted registration fees are available through the online registration system. If you prefer to register at an on-site counter, higher registration fees apply. On-site and online registration will be available for the duration of the meeting.

On-Site Registration Hours

Friday, November 11*, 2–5 p.m.
Saturday, November 12–Wednesday, November 16, 7:30 a.m.–5 p.m.

*Express Badge Pick-Up stations available only. **Full registration services will begin Saturday, November 12, at 7:30 a.m. PST.**

Note: Single day registration is not available.

Navigating the Meeting

With a meeting that includes thousands of presentations from top neuroscientists from all over the world, SfN continues to develop new and improved ways for attendees to find their way around the annual meeting.

Curated Itineraries

Curated itineraries tailor the annual meeting to your area of interest. These itineraries are created by experts from the SfN Program Committee and link topics across scientific sessions and socials. Download the itineraries using the meeting mobile app or the Neuroscience Meeting Planner.

The curated itinerary topics for 2016 are listed below.

- Adolescence
- Brain and Spinal Cord Injury
- Clinical Curated Itineary: Neuroimmunology
- Clocks and Sleep
- Connectomics
- Decision-Making
- Molecular Mechanisms of Pain
- Molecular Neuropharmacology
- Neurodegeneration
- Neurodevelopment and Disease
- Neuroscience of Drug Addiction
- Optical Methods
- Stress and Cognition
- Synapses

Meeting Mobile App

Download the meeting mobile app to your Apple or Android devices and access annual meeting content on-the-go. With improved search functionality, an updated schedule view, and enhanced integration with the NMP, the 2016 meeting mobile app will make navigating the annual meeting easier than ever. **The app is available in iTunes™ and the Google Play™ App Store.**

To ensure that attendees are able to take advantage of all of the newest features for the meeting mobile app, a free user tutorial led by the app's developers well be held during the meeting.

Use the meeting mobile app and the Neuroscience Meeting Planner and save!

SfN is committed to helping the environment by reducing waste, so starting this year, SfN will print fewer program books. Attendees will receive free, printed copies of the general information book and the *Exhibit Guide*. The printed daily books and the author index will be available for a minimal fee. Information from the daily books and author index will be available in the meeting mobile app and the Neuroscience Meeting Planner. Attendees may also opt to download PDF versions of the printed books from SfN.org.

Daily Book Fees	Online and On-Site
Full Set of five Daily Books and Author Index, Member	$30
Full Set of five Daily Books and Author Index, Nonmember	$40
Individual Daily Books, Member	$14
Individual Daily Books, Nonmember	$19

Note: Limited quanities will be available for on-site purchase.

Meeting Mobile App Tutorial Session

Saturday, November 12
San Diego Convention Center: 10
Time: 10–11 a.m.

NEW Neuroscience Meeting Planner

The NMP has been updated for Neuroscience 2016 with an improved user interface, expanded search features, increased usability, and the option to save search terms for future meetings. Attendees can access the NMP at **sfn.org/NMP** or on-site in the Neuroscience Meeting Planner Viewing Area in the Sails Pavilion.

Hotel Map

The Society's housing company, Convention Management Resources (CMR), will be on-site to assist with any housing questions during the meeting. Representatives will be located in the San Diego Convention Center, Sails Pavilion, November 12–16 during the following hours:

Friday, November 11, Lobby A only	2–5 p.m.	Monday, November 14	7:30 a.m.–5 p.m.
Saturday, November 12	7:30 a.m.–5 p.m.	Tuesday, November 15	7:30 a.m.–5 p.m.
Sunday, November 13	7:30 a.m.–5 p.m.	Wednesday, November 16	7:30 a.m.–3 p.m.

On-site phone: (619) 525-6215

Hotel List

The Hilton San Diego Bayfront, the Manchester Grand Hyatt San Diego and the Marriott Marquis San Diego Marina are the official co-headquarter hotels.

#	HOTEL NAME / ADDRESS	SHUTTLE ROUTE	PICK UP POINT	LOCATION
	Co-Headquarters Hotels			
1	Hilton San Diego Bayfront One Park Boulevard	Walk	Walk to San Diego Convention Center	Downtown
2	Manchester Grand Hyatt San Diego One Market Place	Walk	Walk to San Diego Convention Center	Downtown
3	Marriott Marquis San Diego Marina 333 West Harbor Drive	Walk	Walk to San Diego Convention Center	Downtown
	Attendee Hotels			
4	Andaz San Diego 600 F Street	7-Purple	Across Street on 6th Ave. at F Street	Downtown
5	Bay Club Hotel & Marina 2131 Shelter Island Drive	1-Red	Walk to Humphreys Half Moon-Curbside in Front on Shelter Island Dr.	Shelter Island
6	Best Western Plus Bayside Inn 555 West Ash Street	8-Grey	On India Street at Ash Street	Downtown
7	Best Western Plus Island Palms Hotel & Marina 2051 Shelter Island Drive	1-Red	Curbside in Front	Shelter Island
8	Best Western Seven Seas 411 Hotel Circle South	4-Green	Walk to Courtyard — Curbside in Front	Mission Valley
9	Bristol Hotel San Diego 1055 1st Ave.	6-Pink	Walk to Westin Gaslamp Quarter on 1st Ave.	Downtown
10	Courtyard San Diego Downtown 530 Broadway	7-Purple	Curbside on 6th Ave.	Downtown
11	Courtyard San Diego Mission Valley/Hotel Circle 595 Hotel Circle South	4-Green	Curbside in Front — on Hotel Circle	Mission Valley
12	Days Inn San Diego Hotel Circle 543 Hotel Circle South	4-Green	Walk to Courtyard — Curbside in Front	Mission Valley
13	Doubletree Hotel by Hilton San Diego Downtown 1646 Front Street	8-Grey	Curbside at Union Street Entrance	Downtown
14	Doubletree Hotel by Hilton San Diego Hotel Circle 1515 Hotel Circle South	4-Green	Curbside at Bus Stop on Hotel Circle	Mission Valley
15	Embassy Suites by Hilton San Diego Bay Downtown 601 Pacific Hwy.	5-Orange	Curbside on Pacific Hwy.	Downtown
16	Four Points by Sheraton San Diego Downtown 1617 1st Ave.	8- Grey	Walk to Doubletree — Curbside at Union Street Entrance	Downtown
17	Hampton Inn San Diego Downtown 1531 Pacific Hwy.	5-Orange	Curbside in Front on Pacific Hwy.	Downtown
18	Handlery San Diego Hotel 950 Hotel Circle North	4-Green	Curbside on Hotel Circle at Hotel Driveway	Mission Valley
19	Hard Rock Hotel San Diego 207 Fifth Ave.	Walk	Walk to San Diego Convention Center	Downtown
20	Hilton San Diego Airport/Harbor Island 1960 Harbor Island Drive	2-Blue	Curbside Front Entrance	Harbor Island
21	Hilton San Diego Gaslamp Quarter 401 K Street	Walk	Walk to San Diego Convention Center	Downtown

#	HOTEL NAME / ADDRESS	SHUTTLE ROUTE	PICK UP POINT	LOCATION
22	Hilton San Diego Mission Valley 901 Camino Del Rio South	3-Yellow	Curbside at Tour Bus Stop on Camino Del Rio	Mission Valley
23	Holiday Inn San Diego Bayside 4875 North Harbor Drive	1-Red	Curbside on Harbor Drive	Shelter Island
24	Horton Grand Hotel 311 Island Ave.	Walk	Walk to San Diego Convention Center	Downtown
25	Hotel Indigo San Diego Gaslamp Quarter 509 9th Ave.	7-Purple	Front of Hotel — on 9th Ave.	Downtown
26	Hotel Solamar San Diego 435 6th Ave.	Walk	Walk to San Diego Convention Center	Downtown
27	Humphreys Half Moon Inn & Suites 2303 Shelter Island Drive	1-Red	Curbside in Front on Shelter Island Drive	Shelter Island
28	La Quinta Inn & Suites San Diego SeaWorld/Zoo Area 641 Camino Del Rio South	3-Yellow	Curbside in Front — on Camino Del Rio	Mission Valley
29	Omni San Diego Hotel 675 L Street	Walk	Walk to San Diego Convention Center	Downtown
30	Porto Vista Hotel 1835 Columbia Street	8-Grey	Walk to Doubletree — Curbside at Union Street Entrance	Downtown
31	Renaissance San Diego Downtown 421 West B Street	6-Pink	Walk to Westin San Diego Curbside on Broadway	Downtown
32	Residence Inn San Diego Bayfront 900 Bayfront Court	5-Orange	Curbside on Pacific Hwy.	Downtown
33	Residence Inn San Diego Downtown 1747 Pacific Hwy.	5-Orange	Walk to Hampton Inn-Curbside on Pacific Hwy.	Downtown
34	Residence Inn San Diego Gaslamp Quarter 356 6th Ave.	Walk	Walk to San Diego Convention Center	Downtown
35	San Diego Marriott Gaslamp Quarter 660 K Street	Walk	Walk to San Diego Convention Center	Downtown
36	Sheraton Mission Valley San Diego 1433 Camino del Rio South	3-Yellow	Curbside in front of hotel on Camino Del Rio	Mission Valley
37	Sheraton San Diego Hotel & Marina 1380 Harbor Island Drive	2-Blue	Curbside Marina Tower & Curbside Bay Tower Entrances	Harbor Island
38	Sofia Hotel 150 West Broadway	6-Pink	Walk to Westin Gaslamp Quarter on 1st Ave.	Downtown
39	SpringHill Suites San Diego Downtown/Bayfront 900 Bayfront Court	5-Orange	Curbside on Pacific Hwy.	Downtown
40	US GRANT 326 Broadway	6-Pink	Walk to Westin Gaslamp Quarter on 1st Ave.	Downtown
41	Westgate Hotel 1055 2nd Ave.	6-Pink	Walk to Westin Gaslamp Quarter on 1st Ave.	Downtown
42	Westin San Diego 400 West Broadway	6-Pink	Curbside on Broadway	Downtown
43	Westin San Diego Gaslamp Quarter 910 Broadway Circle	6-Pink	Curbside on 1st Ave.	Downtown
44	Wyndham San Diego Bayside 1355 North Harbor Drive	5-Orange	Curbside in Front	Downtown

Current sales and occupancy taxes are 12.64% per room, per night. Hotel tax is subject to change and does not include additional surcharges (up to $0.27 per night) which may be applicable. Hotel rates include a nominal $18 fee to help defray the high cost of the shuttle service, which will be provided to the San Diego Convention Center from most of the hotels throughout the day.

Travel Information and Shuttle Schedule

AIRPORT

San Diego International Airport

Web site: www.san.org
Phone: (619) 400-2404

San Diego International Airport is served by 24 commercial airlines and is located three miles from downtown San Diego.

PUBLIC TRANSPORTATION

Metropolitan Transit System (MTS)

The Metropolitan Transit System (MTS), San Diego's commuter trolley and bus system, is available for transportation all over San Diego. There is a trolley station at the Convention Center, and within a short walk from most major downtown hotels.

Taxis

There are several companies that provide taxicab service in San Diego. Taxis are easily accessible at the convention center, major hotels, and other downtown locations.

Parking

On-site private vehicle parking is available at the San Diego Convention Center's underground garage. Enter the parking garage on Harbor Drive between First and Fifth Avenues. The garage contains 1,950 parking spaces. The daily rate is $15. Parking rates may range from $15 to $35 on days when there are special events at Petco Park or other downtown locations. Payment is due upon entry and there are no in-and-out privileges.

Directly across the street from the convention center, on the corner of Harbor and Eighth Avenue, is a 2,000 space parking structure.

Off-site parking is available at numerous nearby parking lots and garages in downtown San Diego, many of which are within walking distance of the convention center. Parking lots and garages are individually owned and operated, and prices vary by location.

SHUTTLE SCHEDULE

Hours of Service

Date	Time	Service
Saturday, November 12	7 a.m.–4 p.m.	Service every 20 minutes
	4–10 p.m.	Service every 10 minutes
Sunday, November 13	6:30–10:30 a.m.	Service every 10 minutes
	10:30 a.m.–4 p.m.	Service every 20 minutes
	4–8 p.m.	Service every 10 minutes
	8–9:30 p.m.	Service every 20 minutes
Monday, November 14	7–10:30 a.m.	Service every 10 minutes
and	10:30 a.m.–4 p.m.	Service every 20 minutes
Tuesday, November 15	4–8 p.m.	Service every 10 minutes
	8–9:30 p.m.	Service every 20 minutes
Wednesday, November 16	7–10:30 a.m.	Service every 10 minutes
	10:30 a.m.–3:30 p.m.	Service every 20 minutes
	3:30–6 p.m.	Service every 10 minutes

SHUTTLE SERVICE

SfN provides complimentary shuttle service between the San Diego Convention Center and most of the official SfN meeting hotels, with the exception of hotels within walking distance to the convention center.

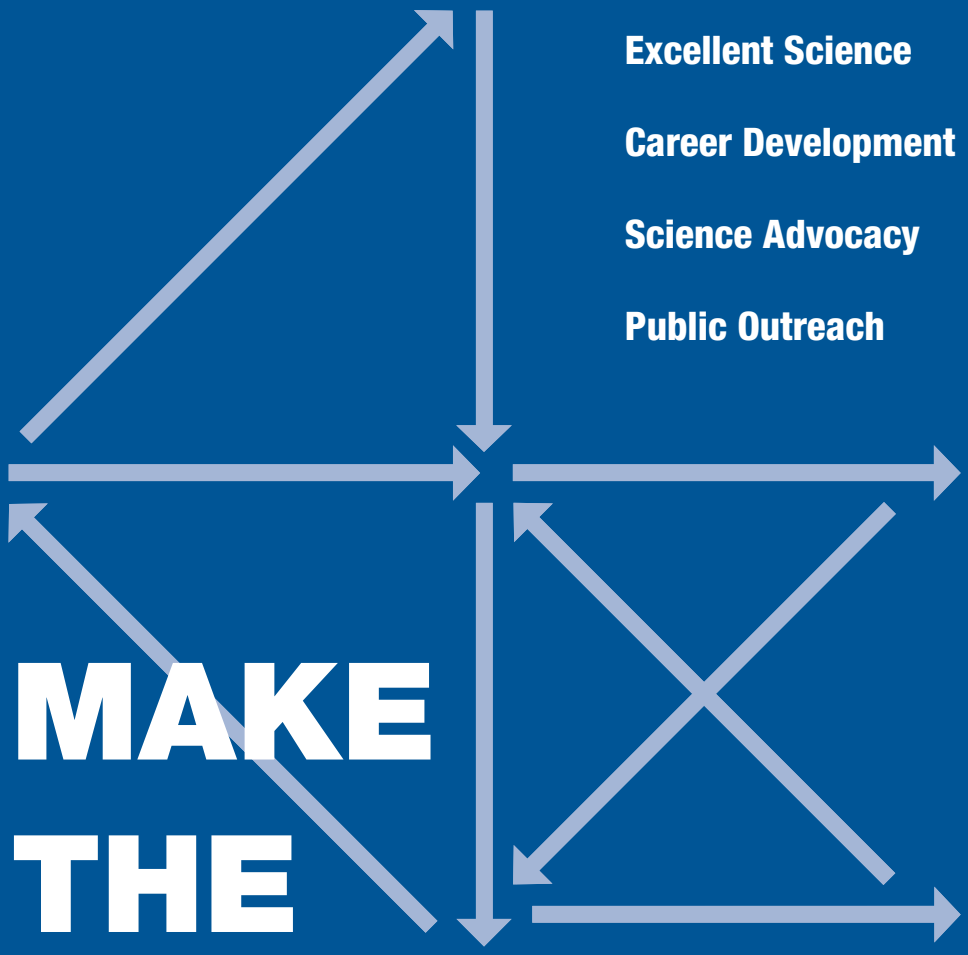
The shuttle schedule varies daily, with shuttles departing between the hotels and the convention center every 10 minutes during peak time or every 20 minutes during off-peak time. Each shuttle route is coded with a unique color and number.

For questions or concerns about shuttle routes and schedules while at the annual meeting, call the shuttle information desk at (619)-525-6245 or stop by the shuttle information desk located in the San Diego Convention Center, Lobby E.

Airport Shuttle Service

Production Transport provides express shuttle service to the San Diego International Airport from the San Diego Convention Center on Tuesday, November 15, and Wednesday, November 16, 11 a.m.–6 p.m. Tickets can be purchased for $10 at the Shuttle Information Desk in Lobby E Monday, November 14–Wednesday, November 16, during shuttle service hours. To make your reservation early and secure your seat, email kkeidser@prodtrans.com. Buses will depart every 30 minutes on the hour and half hour. For questions regarding shuttle services, please contact **meetings@sfn.org.**

Cloud 9 Shuttle/SuperShuttle offers transportation between the San Diego International Airport and downtown San Diego hotels. Cloud 9 Shuttle/SuperShuttle operates on a shared-ride, on-demand basis. For more information, call **(800)-258-3826 or visit http://supershuttle.com/.**



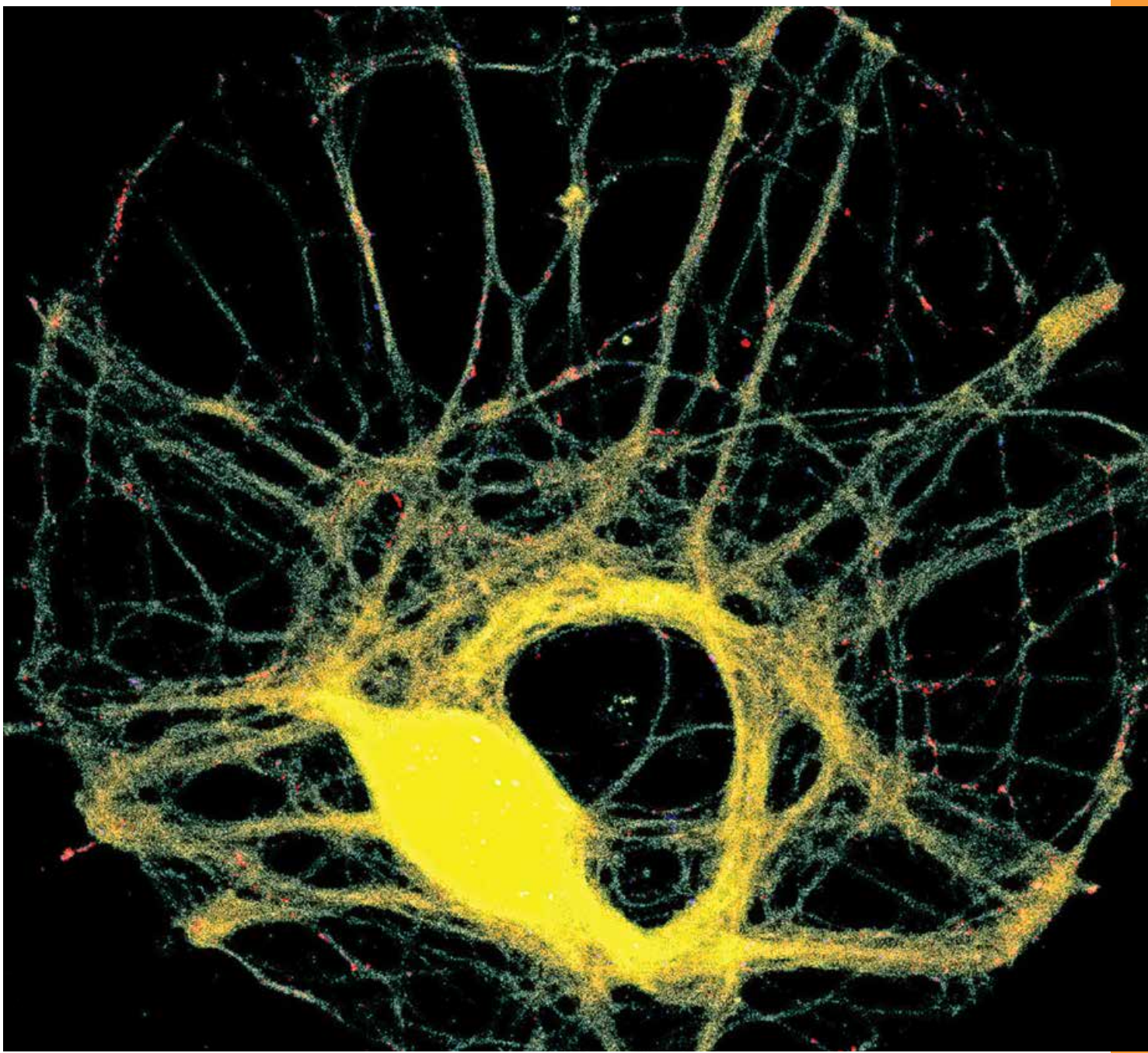
MAKE THE CONNECTION

There's never been a more important time to connect with your field through membership with SfN.

Our members make us what we are — a vibrant, diverse, and global community with a shared commitment to advancing excellence in neuroscience. Your SfN membership benefits your career as well as your profession — an invaluable investment that will pay dividends throughout your future. Join or renew for 2017 at the 2016 rate, and experience the value of your SfN membership immediately!

JOIN SfN TODAY ▸ SfN.org/join

RESOURCES



Attendee Resources

SfN aims to provide a high level of service. The Society has compiled a series of resources to help all attendees navigate Neuroscience 2016.

Airport Shuttle

Production Transport provides express shuttle service to the San Diego International Airport from the San Diego Convention Center on Tuesday, November 15, and Wednesday, November 16, 11 a.m.–6 p.m. Tickets can be purchased for $10 at the Shuttle Information Desk in Lobby E Monday, November 14–Wednesday, November 16 during shuttle service hours. To make your reservation early and secure your seat, email **kkeidser@prodtrans.com.** Buses will depart every 30 minutes on the hour and half hour. For questions regarding shuttle services, please contact **meetings@sfn.org.**

Cloud 9 Shuttle/Super Shuttle offers daily, door-to-door service to and from the San Diego International Airport. Shuttle service is available at the Transportation Plaza across from Terminals 1 and 2. Shuttles operate on a shared-ride, on-demand basis. Advance notice is strongly urged. For more information, **call 1-800-258-3826 or visit http://supershuttle.com/.**

ANNUAL MEETING HEADQUARTERS OFFICE

Logistics and Programming

San Diego Convention Center: Sails Pavilion

HOURS:

Friday, November 11
8 a.m.–5 p.m.

Saturday, November 12–Wednesday, November 16
7 a.m.–6 p.m.

HQ Office/Logistics
(619) 525-6200

HQ Office/Programming
(619) 525-6205

The Annual Meeting Headquarters Office addresses all questions concerning annual meeting logistics and programming for the 2016 and 2017 annual meetings.

ATM Machines

There are two automatic teller machines (ATMs) located in Hall B2 and Lobby E. The lobbies of the Marriott Marquis San Diego Marina, Manchester Grand Hyatt San Diego, and Hilton San Diego Bayfront hotels have ATMs for your added convenience.

Business Center

Shipping, mailing, faxing, photocopying, and other important services are available at the San Diego Convention Center. A FedEx Office is conveniently located in the Hall D lobby and specializes in digital distribution and printing of conference materials. Depending on your needs, you will find a wide range of supplies and services. For your added convenience, the Marriott Marquis San Diego Marina, Manchester Grand Hyatt San Diego, and Hilton San Diego Bayfront hotels also operate full-service business centers.

Certificate of Attendance

San Diego Convention Center: Sails Pavilion and Lobby A

Every attendee is advised to obtain a certificate of attendance, available at a designated booth in the registration area. Certificates of attendance are proof to home institutions that attendees were present at the meeting. The document is often required for reimbursement of meeting expenses. Attendees must pick up the certificate in person at the meeting. There are no exceptions.

Child Care

San Diego Convention Center: 17B

On-site child care and youth programs will be available at Neuroscience 2016 for children ages 6 months to 12 years. This service is provided through KiddieCorp, a national firm with more than 20 years of experience in on-site conference child care. KiddieCorp services provide attendees with flexibility in meeting schedules and with a reliable, affordable, and trustworthy option for child care during the annual meeting.

Details, pricing, and reservation information are available on the KiddieCorp-Neuroscience 2016 Web page, **jotform.com/kiddiecorp/neurokids.** All policies and fees are established by KiddieCorp, and all questions should be directed to them. Space is limited.

Coat and Luggage Check

San Diego Convention Center

HOURS:

Lobby C
Friday, November 11–Tuesday, November 15
7:30 a.m.–7 p.m.

Wednesday, November 16
7:30 a.m.–6 p.m.

Lobby D
Saturday, November 12–Wednesday, November 16
7:30 a.m.–6 p.m.

Limited space will be available for coat and luggage check on a first-come, first-served basis at the convention center. Please do not bring luggage into the meeting rooms.

Continuing Medical Education (CME)

CME registration must be completed before or during the annual meeting. Those who do not register at these times will not receive the necessary documentation should they request it after the meeting. CME registrants will receive, via email two weeks before the meeting, the CME Supplemental Program, which contains important information regarding the CME Program, including disclosure information and instructions for obtaining CME credits. Visit **sfn.org/cme** or see page 62 for details.

Disabilities and Special Needs

For assistance with special needs or disabilities on-site, visit the Annual Meeting Headquarters Office in the Sails Pavilion of the San Diego Convention Center. SfN staff will provide information and assistance, but without prior notification of need, SfN cannot ensure availability of appropriate accommodations. Scooter and wheelchair rentals are available by contacting ScootAround, Inc by phone at **(888) 441-7575,** by email at **info@scootaround.com,** or by fax at **(204) 478-1172.** For additional information, email **meetings@sfn.org.**

Event Locations

Lectures, exhibits, scientific sessions, symposia, poster sessions, registration, and headquarters offices will be located in the San Diego Convention Center. SfN-Sponsored Socials will be held at the Marriott Marquis San Diego

Marina. Satellite and ancillary events will be held at the San Diego Convention Center, the Marriott Marquis San Diego Marina, the Manchester Grand Hyatt San Diego, the Hilton Bayfront hotels and other San Diego facilities.

San Diego Convention Center
111 W. Harbor Drive
San Diego, CA 92101

Marriott Marquis San Diego Marina
333 W. Harbor Drive
San Diego, CA 92101

Manchester Grand Hyatt San Diego
One Market Place
San Diego, CA 92101

Hilton San Diego Bayfront
One Park Boulevard
San Diego, CA 92101

Exhibits

San Diego Convention Center: Halls B–H

HOURS:

Sunday, November 13–Wednesday, November 16
9:30 a.m.–5 p.m.

Exhibits provide attendees an opportunity to learn about the latest products, publications, and services available. Pick up a copy of the *Exhibit Guide* at any program pick-up kiosk. The *Exhibit Guide* includes a listing of exhibiting companies and a cross-referenced listing of companies by type of product exhibited. Links to exhibiting company websites are available through the Neuroscience 2016 website, sfn.org/exhibits. The hyperlinks will remain live through June 30, 2017.
Inquiry cards: Your badge will serve a double purpose: (1) as a name badge and (2) an exhibit inquiry card. Your demographic information will be encoded onto the front of the badge. Email addresses will only be included if you selected the option box when registering. Council encourages all annual meeting attendees to present their badge at each exhibit booth they visit. Exhibitors determine the success of their participation in the annual meeting by the number of leads they accumulate from attendees visiting their exhibit booths. A successful exhibit program helps defray the costs of running the annual meeting and keeps registration fees at a minimum, so SfN appreciates your cooperation.

For further information, visit the exhibits section of the SfN website at **sfn.org/exhibits** or contact **exhibits@sfn.org.**

First Aid and Emergencies

San Diego Convention Center: Box Office G

During session hours, the first aid room at the convention center will be open and staffed by certified medical providers. Scripps Mercy Hospital can be reached at **(619) 294-8111.**

Food Court

San Diego Convention Center: Sails Pavilion

HOURS:

Saturday, November 12
11 a.m.–2 p.m.

Sunday, November 13–Wednesday, November 16
7:30 a.m.–3 p.m.

IMPORTANT PHONE NUMBERS

Headquarters Offices

HQ Office/Logistics
(619) 525-6200

HQ Office/Programming
(619) 525-6205

Press Office
(619) 525-6230

Exhibit Management

(619) 525-6240

First Aid and Hospital Numbers

First Aid Station: Box Office G
(619) 525-6211

Scripps Mercy Hospital
4077 Fifth Avenue
San Diego, CA 92103
(619) 294-8111

Sharp Rees-Stealy Downtown San Diego
Urgent Care
300 Fir Street
San Diego, CA 92101
(858) 499-2600

Infant Care Facilities

San Diego Convention Center: Room 19

An infant care room designated for the privacy of parents and guardians caring for infants is available at the San Diego Convention Center.

The room is equipped with chairs and tables in private areas for changing diapers or nursing, as well as electricity and a water cooler (room temperature). Parents and guardians are responsible for providing infant care supplies. The infant care room is unsupervised. SfN is not responsible for accidents or injuries that may occur in this room.

Information Booths

Information booths, operated by members of SfN staff, are located in the following places in the San Diego Convention Center:

- Lobby A
- Lobby D
- Sails Pavilion

HOURS:

Friday, November 11
2–6 p.m.

Saturday, November 12–Tuesday, November 15
7:30 a.m.–6 p.m.

Wednesday, November 16
7:30 a.m.–5 p.m.

International Attendees

To ensure your travel to the United States goes smoothly, check out U.S. Travel regulations on the U.S. State Department website at **travel.state.gov.** International attendees may also request an official letter of invitation using the visa request form on the SfN website at **sfn.org/visainfo.**

Literature Displays

San Diego Convention Center: Sails Pavilion

Keep your eyes open for important annual meeting event updates on display in the registration area of the San Diego Convention Center. Approval is required to place announcements on displays. Attendees can get approval before the meeting by contacting **meetings@sfn.org,** or inquire on-site in the Annual Meeting Headquarters Office.

Lost and Found

San Diego Convention Center: Sails Pavilion

Direct inquiries about lost items to the lost and found counter in the registration area of the San Diego Convention Center.

My Neuroscience Marketplace

Build your list of preferred exhibitors through My Neuroscience Marketplace on **sfn.org/exhibits,** a virtual directory of vendors offering products and services to the neuroscience community. My Neuroscience Marketplace is searchable by exhibitor names, booth numbers, products, or keywords.

NeuroJobs Career Center

San Diego Convention Center: Sails Pavilion

HOURS:

Saturday, November 12–Tuesday, November 15
8 a.m.–5 p.m.

Wednesday, November 16
8 a.m.–3 p.m.

The on-site SfN NeuroJobs Career Center connects employers with a pool of well-qualified candidates seeking opportunities ranging from postdoctoral and faculty positions to neuroscience-related jobs in industry and other areas. Job seekers and employers can take advantage of interview booths and computers for posting jobs and scheduling interviews. For more information on how to set up a NeuroJobs account, including prices, visit **sfn.org/neurojobs.** On-site payment can only be made by credit card.

Neuroscience Meeting Planner Viewing Area

San Diego Convention Center: Sails Pavilion

HOURS:

Saturday, November 12–Tuesday, Nov.15
7:30 a.m.–5 p.m.

Wednesday, November 16
7:30 a.m.–3 p.m.

The Neuroscience Meeting Planner (NMP) contains full text abstracts and allows attendees to plan an itinerary for Neuroscience 2016. It can be accessed online at **sfn.org/nmp** or on-site in the NMP Viewing Area.

Photography and Electronic Recording Restrictions/Cell Phones

Photography, video, filming, tape recording, and all other forms of recording are prohibited during the poster sessions, lectures, symposia, minisymposia, nanosymposia, courses, workshops, and on the exhibit floor. Such recording is only permitted during press conferences. Other arrangements must be made in advance in the Press Room. Cell phone use in sessions is prohibited. For arrangements to photograph the exhibit floor, contact **exhibits@sfn.org.**

Poster Sessions

San Diego Convention Center: Halls B-H

HOURS:

Saturday, November 12
1–5 p.m.

Sunday, November 13–Wednesday, November 16
8 a.m.–noon, 1–5 p.m.

Press Offices

San Diego Convention Center

- Press Room, Room 15B
- Press Conference Room, Room 15A
- Press Interview Room, Room 14B

HOURS:

Saturday, November 12–Wednesday, November 16
8 a.m.–5 p.m.

Members of the press must register and pick up their badges in the Press Room.

Program and *Exhibit Guide* Pick-Up

San Diego Convention Center: Lobby A, and Sails Pavilion

HOURS:

Lobby A
Friday, November 11: 2–5 p.m.
Saturday, November 12–Sunday, November 13:
7:30 a.m.–5 p.m.

Sails Pavilion
Saturday, November 12–Sunday, November 13:
7:30 a.m. –5 p.m.
Monday, November 14: 7:30 a.m. –noon

The final *Program* will be available on-site at the San Diego Convention Center and online at sfn.org/am2016 as downloadable PDFs. Attendees can pick up a copy of the General Information book of the final *Program* and *Exhibit Guide* at any *Program* and *Exhibit Guide* pick-up location in the convention center. To obtain printed versions of the daily books, attendees must have purchased the books during registration. Limited quantities will be available for purchase on-site.

Restaurant Reservations

San Diego Convention Center: Lobby B and Lobby E

Restaurant reservation services are available at the San Diego Convention Center.

HOURS:

Saturday, November 12
Noon–6 p.m.

Sunday, November 13–Tuesday, November 15
10 a.m.–6 p.m.

Wednesday, November 16
10 a.m.–5 p.m.

SfN Booth

San Diego Convention Center: Hall D, Booth #2013

As you experience Neuroscience 2016's Exhibit Hall, stop by the SfN Booth to learn about new member resources and services offered by your professional society.

Speaker Ready Room

San Diego Convention Center: 9

HOURS:

Friday, November 11–Wednesday, November 16
7 a.m.–5 p.m.

Presenters are urged to check their media at least 24 hours in advance of presentation in the Speaker Ready Room to confirm compatibility with the session room computers. See page 77 for more information.

Transportation to and From San Diego Convention Center/Hotels

Shuttle

The Society for Neuroscience will provide complimentary shuttle service between the San Diego Convention Center and all SfN-contracted hotels with the exception of the hotels within walking distance to the convention center. Shuttle service will operate during the annual meeting dates of Saturday, November 12, to Wednesday, November 16. For questions, visit the shuttle information desk located at the San Diego Convention Center: Lobby E. See page 71 for more information.

San Diego Resources and Attractions

For visitor's information, visit **http://meetmeinsandiego.com/neuroscience2016**

Volunteer Leadership Lounge

San Diego Convention Center: 14A

HOURS:

Saturday, November 12–Wednesday, November 16
7:30 a.m.–5 p.m.

The Volunteer Leadership Lounge addresses matters for Council, committees, and past presidents.

Wireless Internet

As a service to annual meeting registrants, SfN provides free wireless internet access in designated areas of the San Diego Convention Center during Neuroscience 2016. To take advantage of this free service, bring a laptop, smartphone, or tablet with a built-in wireless network card or with an external wireless card that is 802.11g, 802.11n, or 802.11ac compatible, and set your network card to use DHCP ("or Acquire address automatically"). The Exhibit Hall will provide wireless service only to wireless cards that are 802.11n compatible. Wireless network users should reference the FAQs and disclaimers at sfn.org/wireless before accessing the network. SfN will provide support for wireless users at the Wireless Support booth in Attendee Services area.

Speaker Resources

Nanosymposia, minisymposia, symposia, dynamic poster, and lecture presenters are encouraged to check their media at least 24 hours in advance of their presentation in the Speaker Ready Room, located in the San Diego Convention Center, Room 9, to confirm compatibility with the session room computers. Presenters should arrive in their session room at least 30 minutes prior to the start of their session to download their presentations onto the in-room computer hard drive.

Presenters using their own laptops MUST bring a laptop interface cable that will connect to the DVI-D (24+1) cable provided. This is the type of connection that will be used to connect your laptop to the session room's data projector. If this cable is not provided by each presenter, there will be no way to connect each presenters laptop to the session room's data projector.

Available Audiovisual Equipment for Nanosymposia, Minisymposia, Symposia, and Lectures

Although presenters are welcome to use a personal laptop for their presentation (see: Tips for Presenters Using a Personal Laptop Computer), the following audiovisual equipment will be set up in all session rooms:

- Audio system with microphones
- One data/video projector
- One laser pointer
- One PC computer with an open USB port for flash drives
- One screen (multiple screens for lectures)
- Projectionist to assist with audiovisual equipment set-up and operation

Presentation Software for Nanosymposia, Minisymposia, Symposia, and Lectures

The only available presentation software in each session room will be PowerPoint 2013 and Adobe Acrobat Reader 11 (PDF-based). Presenters using other software (e.g., Mac Keynote or PC Corel Draw 12) should save their presentation in PowerPoint 2013 or Adobe Acrobat Reader 11. When saving a presentation into the recommended formats, remember to include the extension .ppt or .pdf, or the session room computers will not recognize the file format.

Recommended Presentation Storage Media

Presenters are urged to bring their presentation on a USB flash drive to avoid setup delays between presentations. Macintosh users should note that Macs can write a PC-formatted readable USB flash drive. Presenters must also have a copy of all external files, such as movie or sound files (e.g., .wav, avi., mpeg, etc.), contained within their PowerPoint presentations.

Tips for Presenters Using a Personal Laptop Computer

Presenters using their own devices must be set up prior to the session start time to avoid setup time that will decrease their allotted presentation time. Presenters should be certain to have the most recent version/update of drivers installed.

Those who use a personal laptop must also know how to get the image to the external port of the laptop. Instructions are in each laptop operator's manual. (If the external port is not always "on," it is usually a function key, or combination of shift plus a function key, that may turn on the external port, or possible cycle through laptop screen, external port, or both.)

NOTE: The laptop output resolution should be no more than XGA (1024 x 768). The native resolution on the data projectors is 1024 x 768, so higher resolutions will force the data projectors into a compression mode, possibly losing some information or interfering with projection.

Poster Sessions

Projection equipment will not be available in the poster area. No audiovisual orders will be accepted onsite.

For more information, visit **SfN.org/presenterresources.**

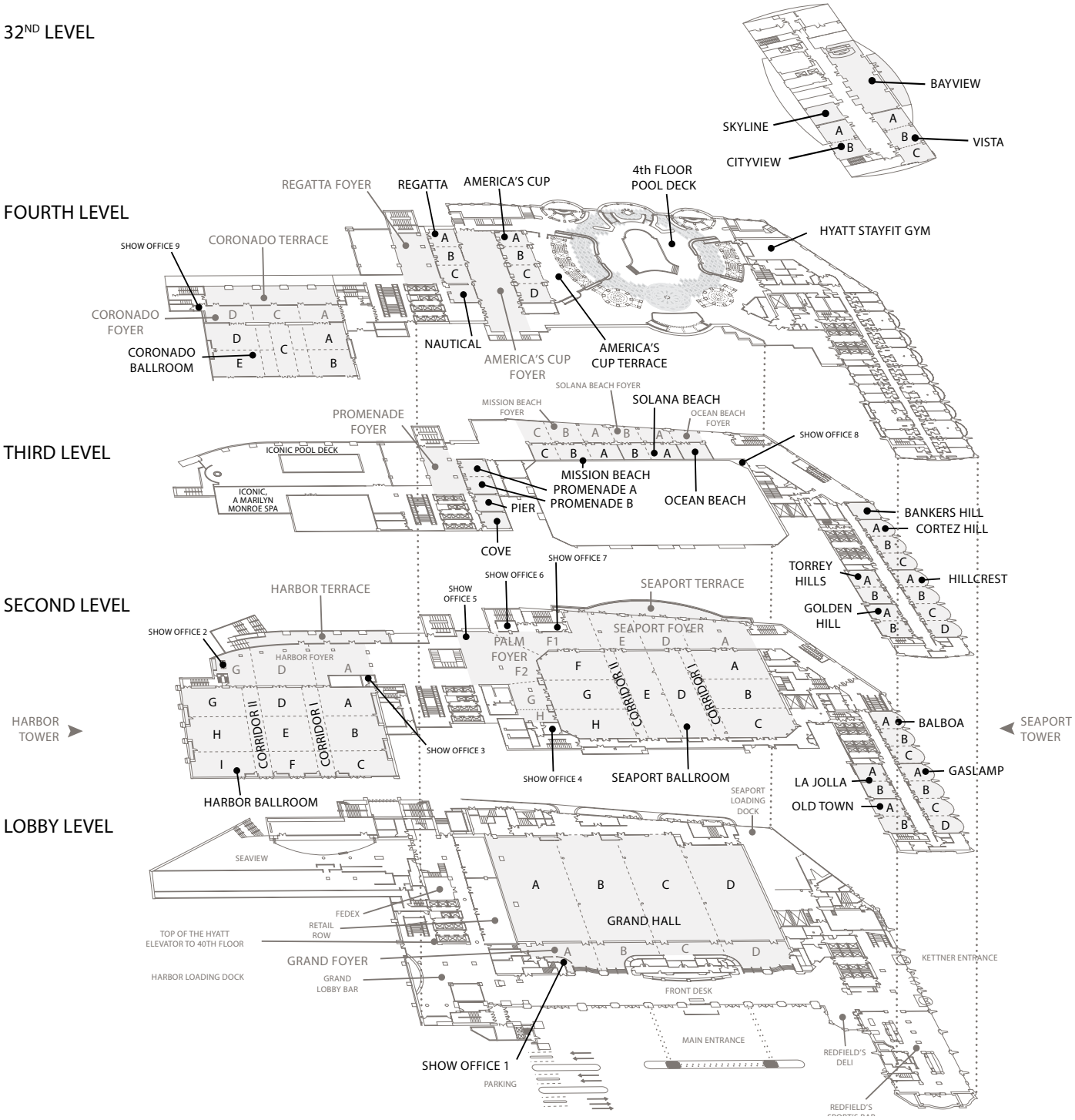
Exhibitor List

AS OF AUGUST 31, 2016

Hotel Floor Plans

MANCHESTER GRAND HYATT

1 Market Pl
San Diego, CA 92101

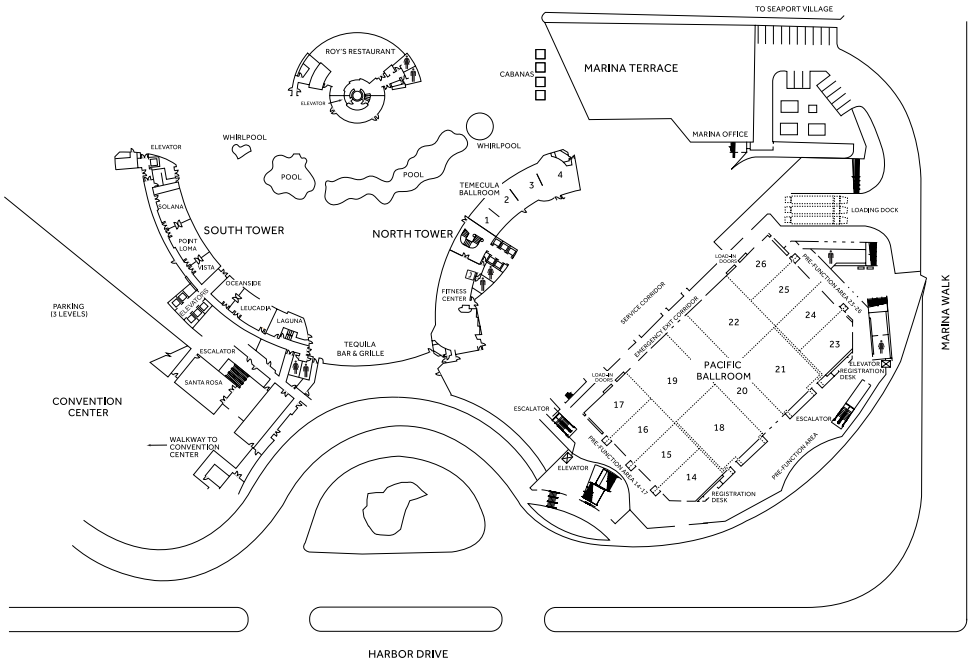


MARRIOTT MARQUIS SAN DIEGO MARINA

333 W Harbor Dr
San Diego, CA 92101

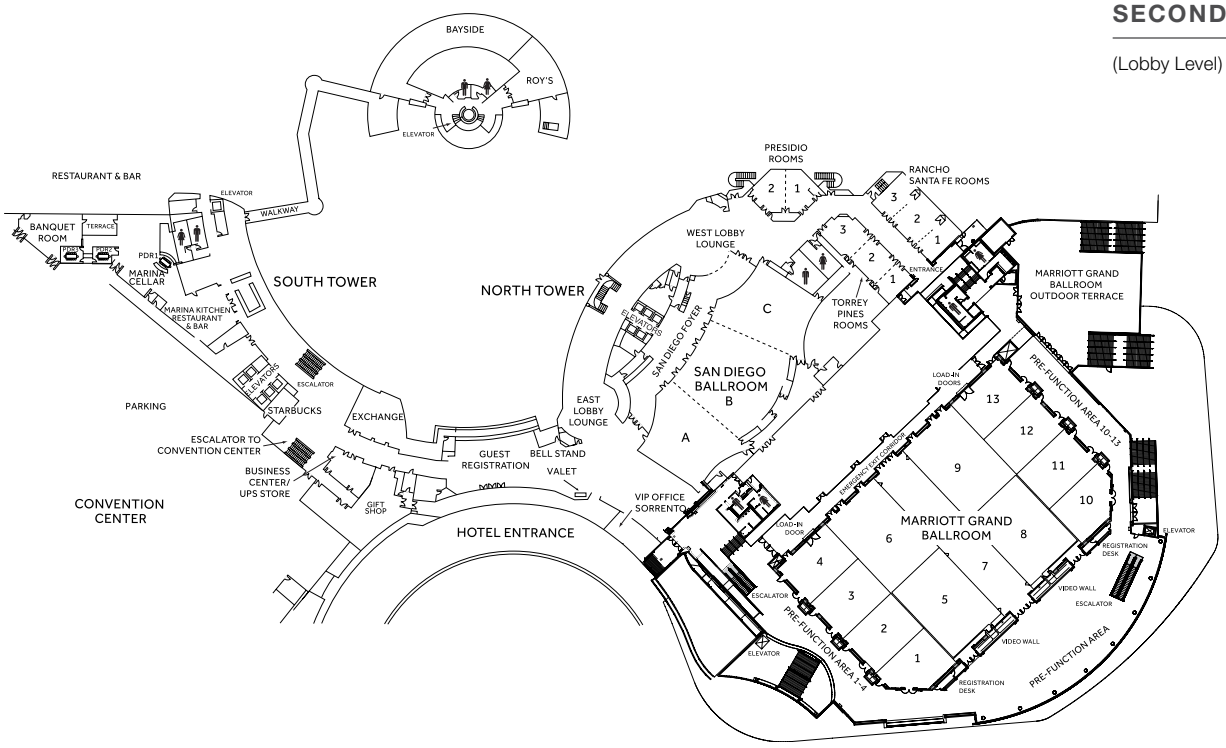
FIRST FLOOR

(Ground Level)



SECOND FLOOR

(Lobby Level)



SOUTH TOWER

Second Floor
Bayside

1st Floor
Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

3rd Floor
Balboa
Cardiff
Carlsbad
Del Mar
Encinitas
Marina Ballroom D–G
Miramar
Mission Hills
Palomar

4th Floor
Catalina
Coronado
Dana Point
La Costa
La Jolla
La Mesa
Malibu
Newport Beach

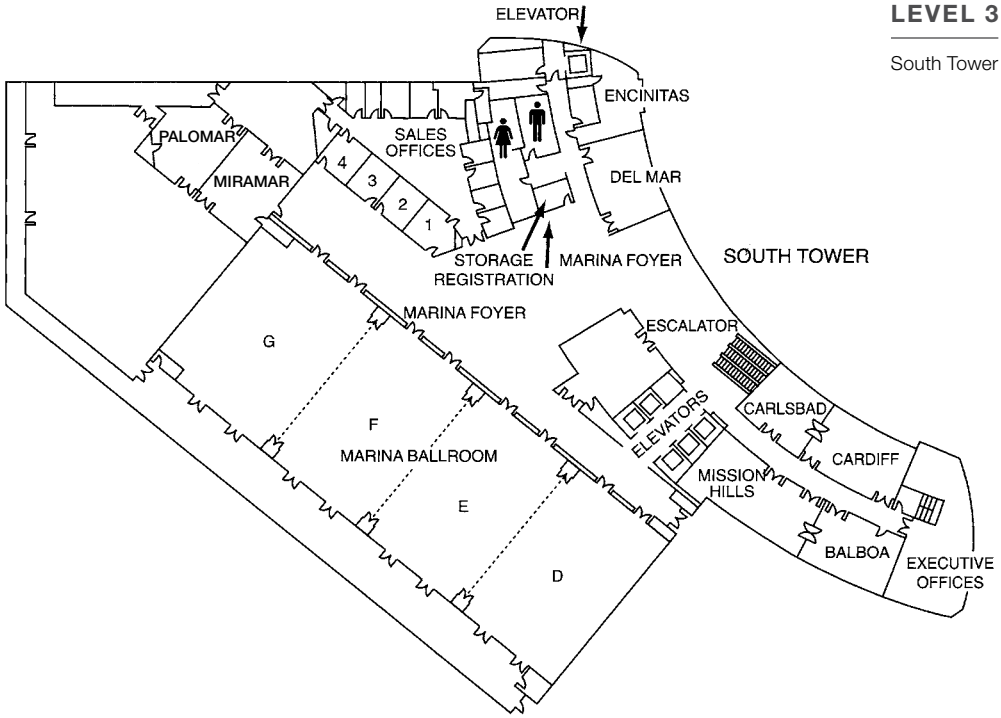
NORTH TOWER

Lobby Level
Presidio 1–2
Rancho Santa Fe 1–3
Marriott Ballroom 1–13
San Diego Ballrooms A–C
Torrey Pines 1–3

1st Floor
Temecula

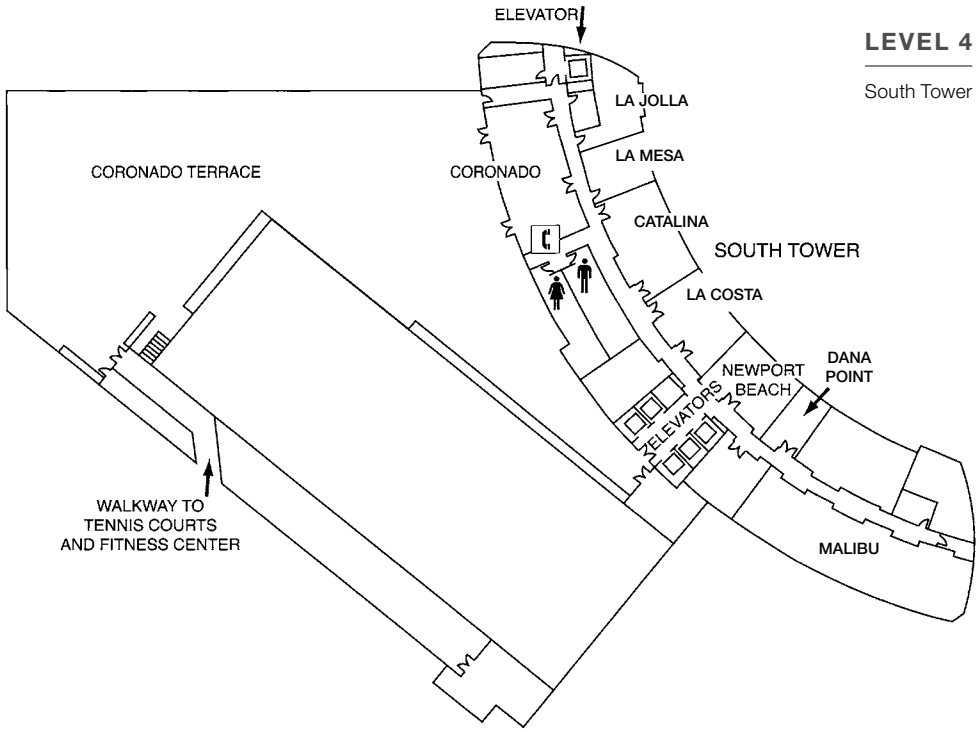
LEVEL 3

South Tower



LEVEL 4

South Tower



HILTON SAN DIEGO BAYFRONT

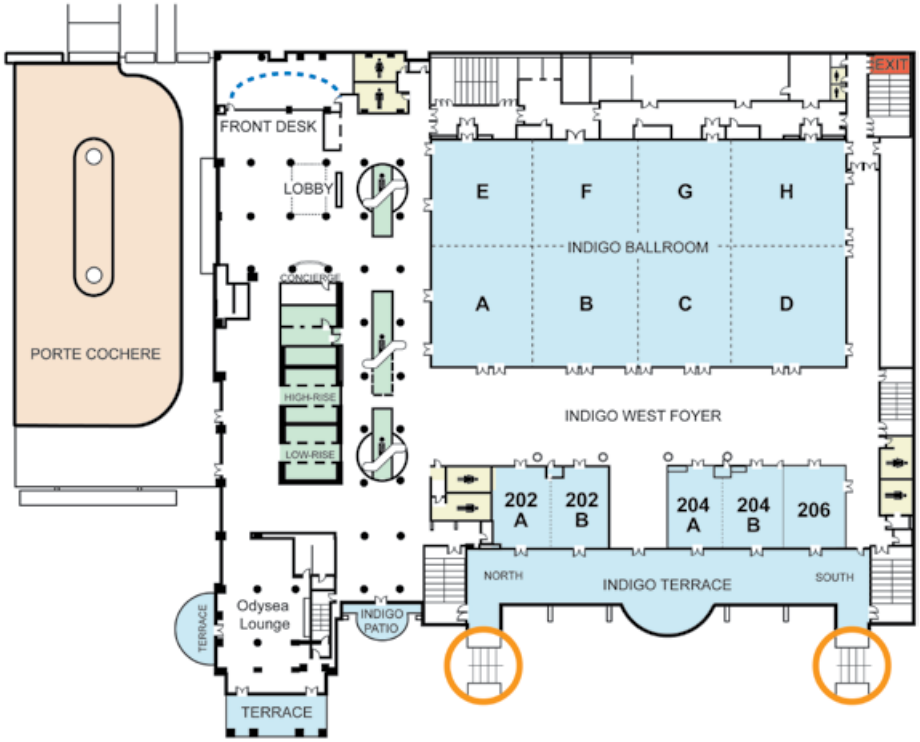
1 Park Blvd
San Diego, CA 92101

= Function Space
= Elevators and Escalators
= Restrooms
= Stairs

AQUA LEVEL

COBALT LEVEL

INDIGO LEVEL



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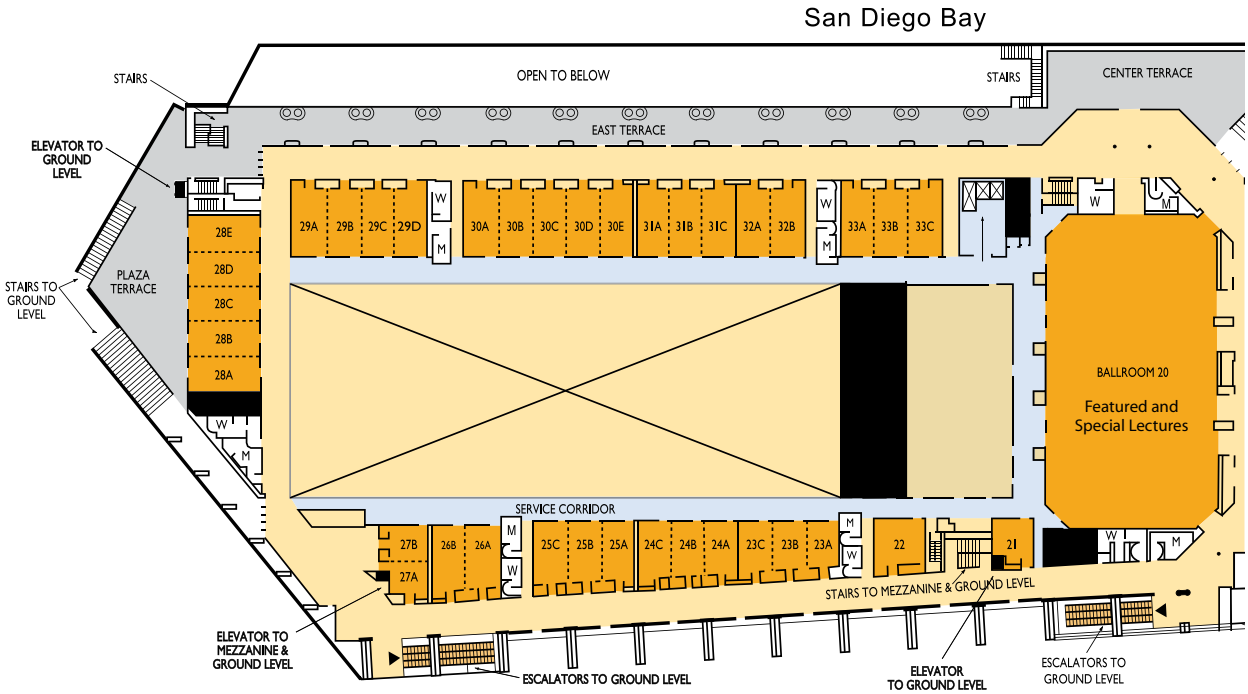
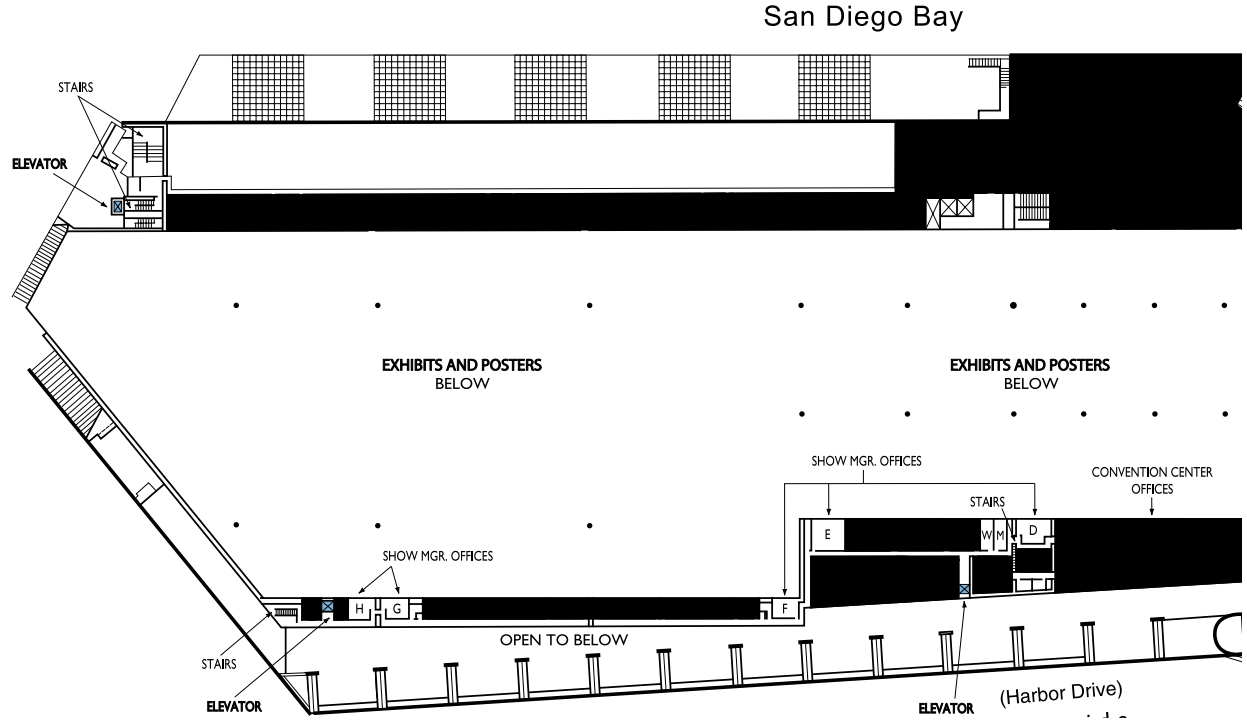
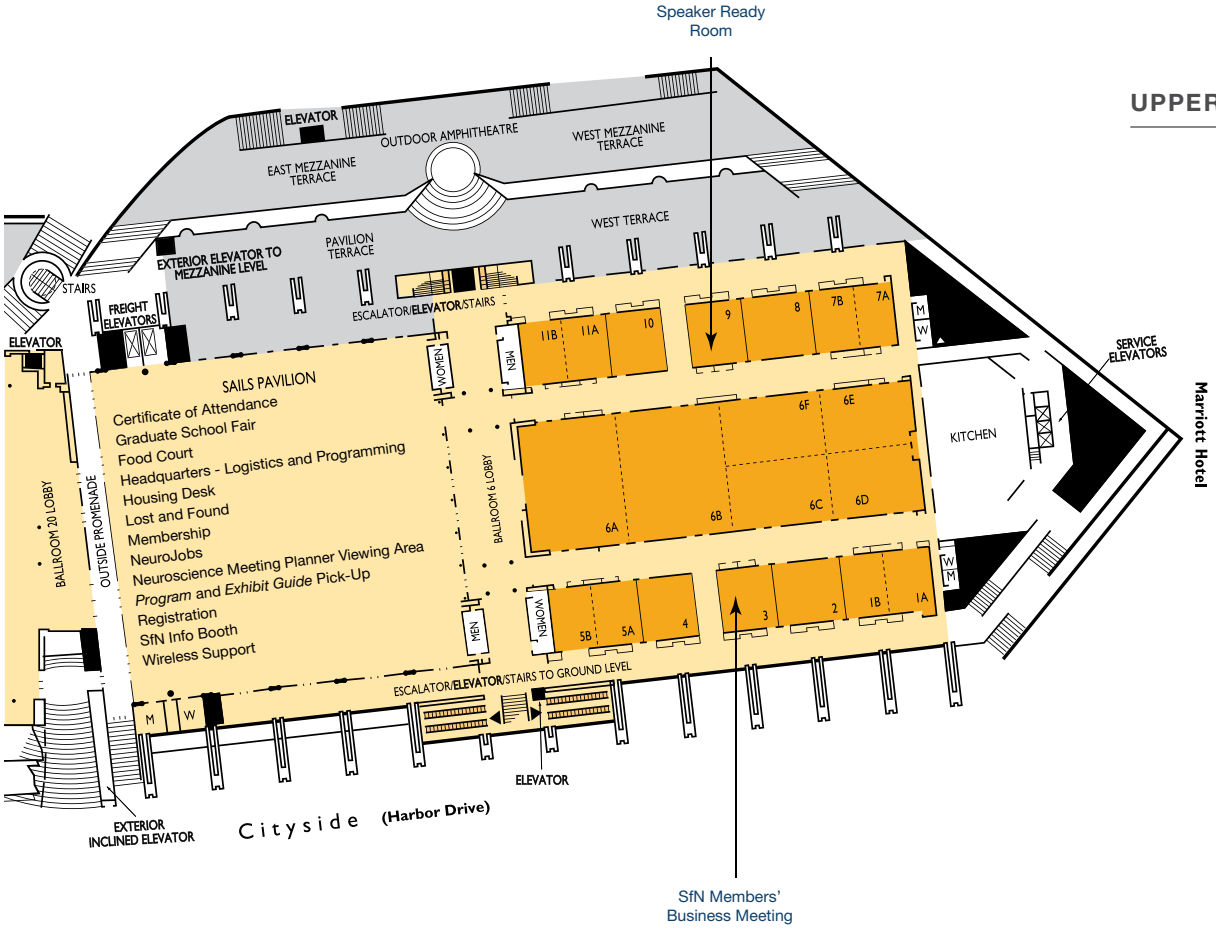
SAN DIEGO CONVENTION CENTER

111 W Harbor Dr
San Diego, CA 92101

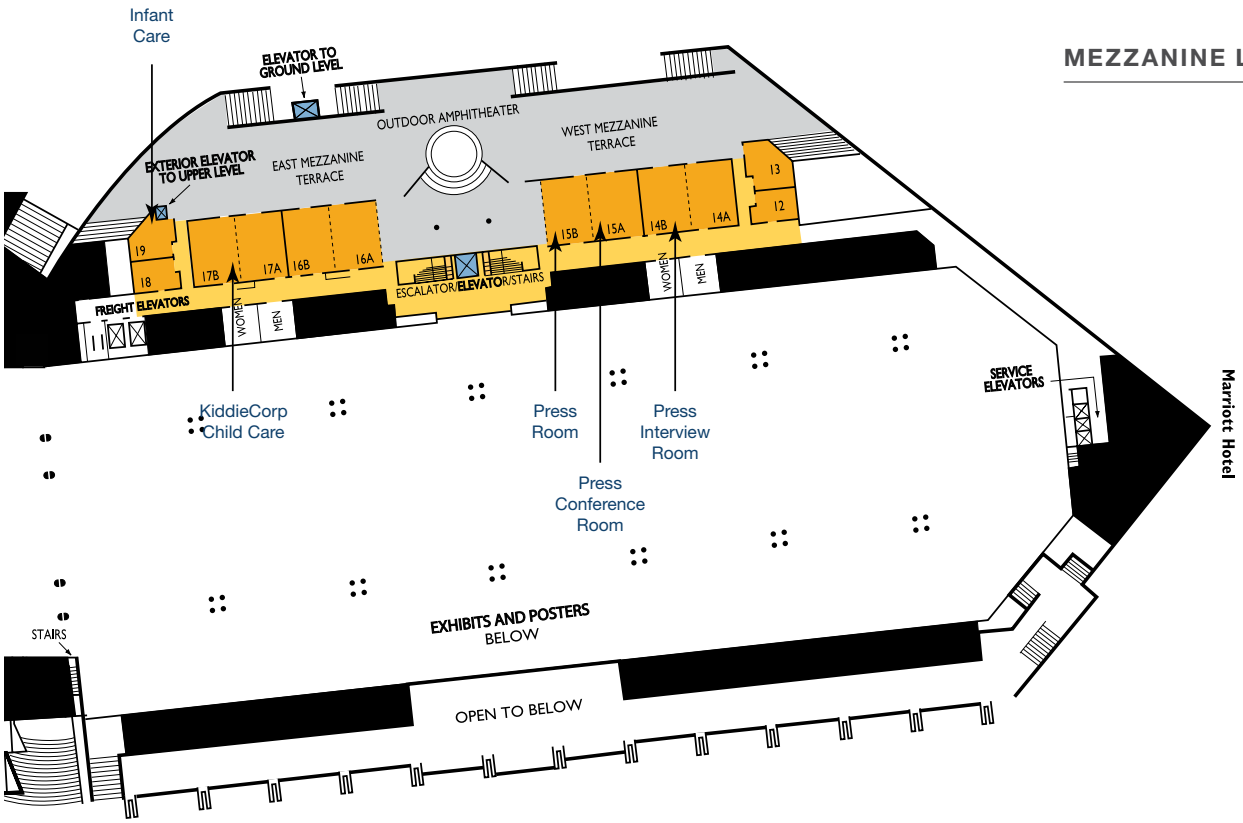




UPPER LEVEL



MEZZANINE LEVEL



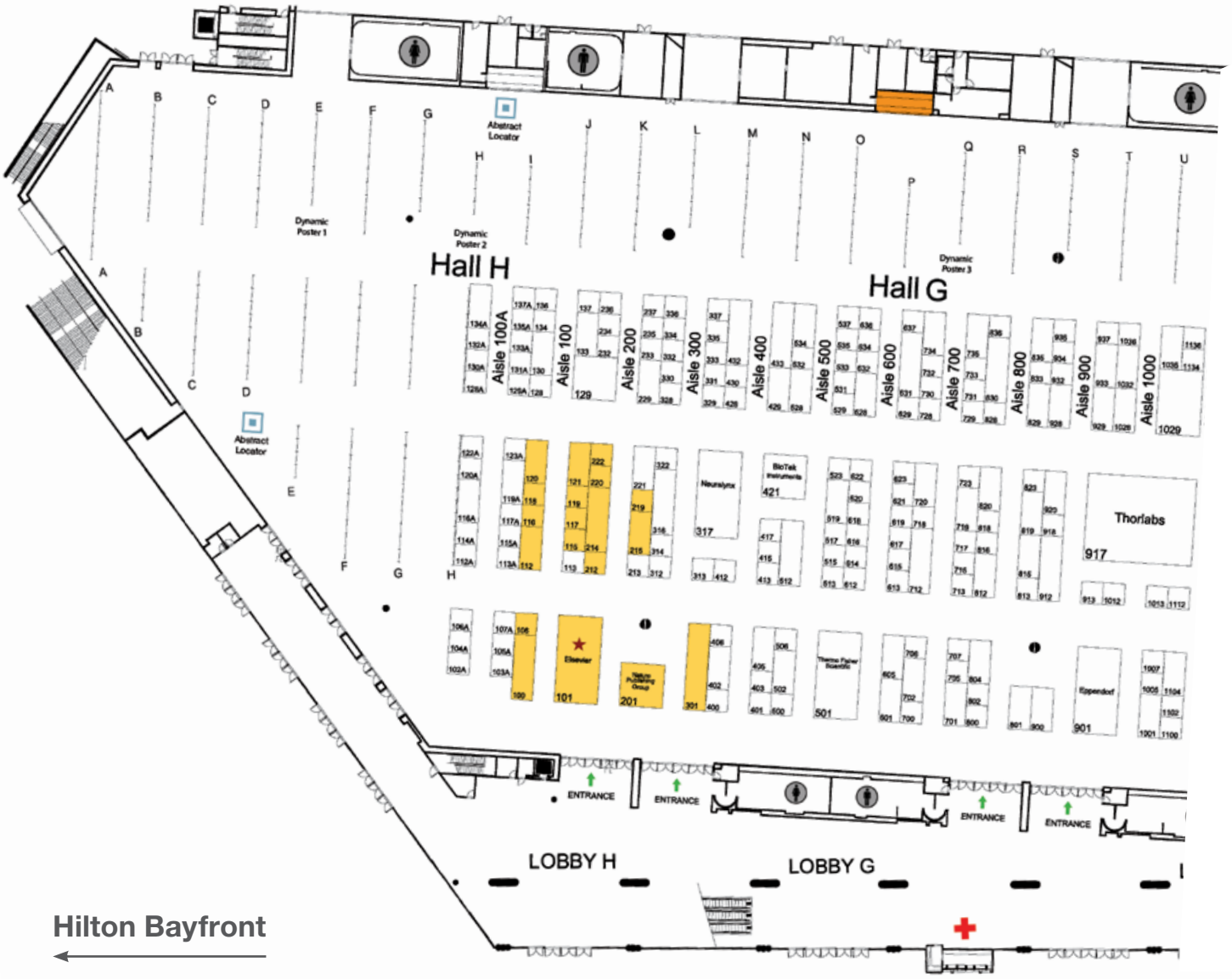
Exhibits and Poster Sessions

SAN DIEGO CONVENTION CENTER

Meeting Dates: November 12–16

Exhibit Dates: November 13–16

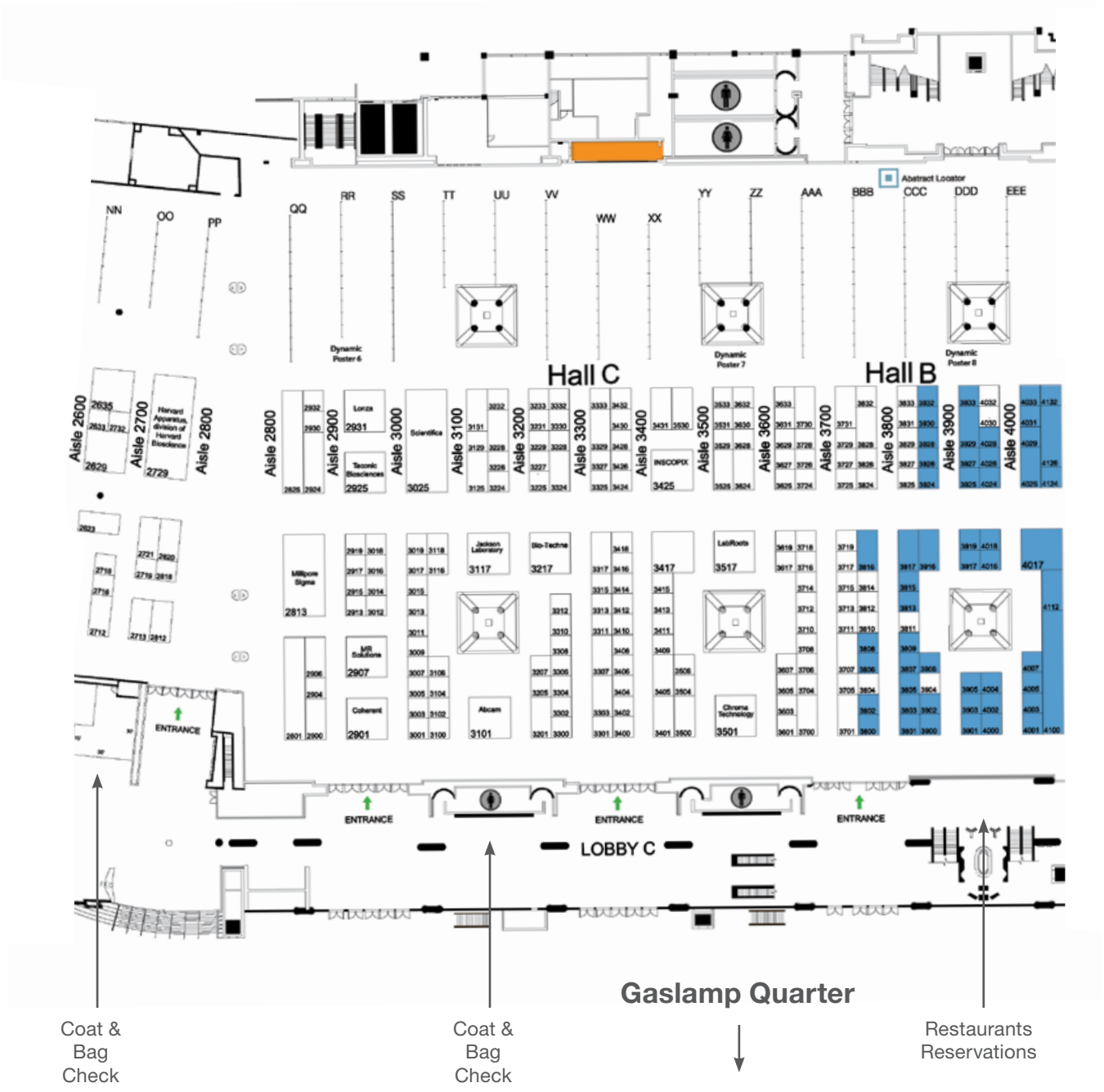
Note: Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday. Pending fire marshal approval. Floor plans subject to change. For current floor plan, visit **SfN.org/exhibits.**



KEY

- Publishers Row
- SfN Booth
- Nonprofits/ U.S. Government Agencies
- Sustaining Associate Members
- Abstract Locator
- Concession Area
- Women's Restroom
- Men's Restroom
- Entrance

SAN DIEGO CONVENTION CENTER



KEY

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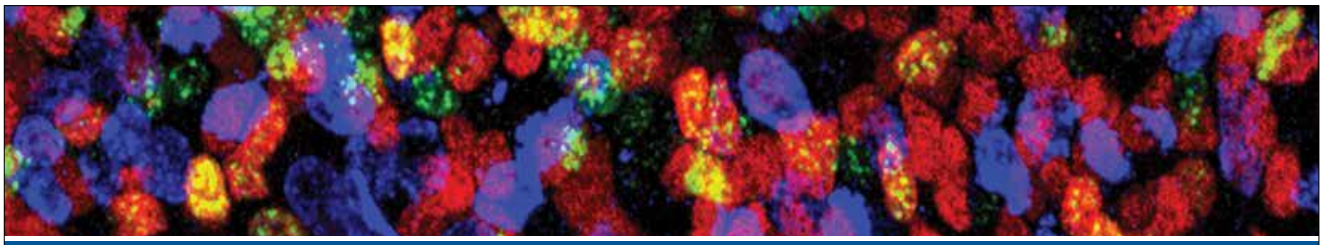
- Sustaining Associate Members
- Abstract Locator
- Concession Area
- Women's Restroom
- Men's Restroom
- Entrance

Marriott Marquis and Marina



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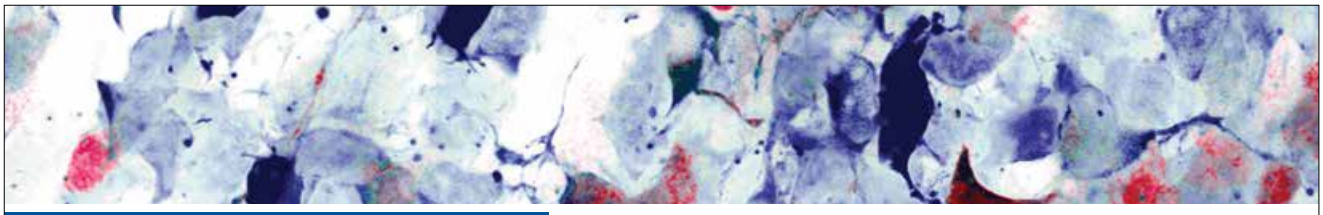
SOCIETY for NEUROSCIENCE | **SfN.org/join**



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Program Cover
This hippocampal neuron, 14 d in vitro, lacks NMDA receptor subunit GluN2B. It was immunostained for the AMPA receptor subunit GluA1 (green), the vesicular glutamate transporter VGLUT1 (red), and the microtubule-associated protein MAP2 (blue). An edge-detect filter was used to enhance color and cluster contour. In the absence of the GluN2B subunit, synaptic clustering of AMPA receptors is increased as a result of impaired anchoring of the synaptic proteasome.
Courtesy, with permission: Joana S. Ferreira, Jeannette Schmidt, Pedro Rio, Rodolfo Águas, Amanda Rooyakkers, Ka Wan Li, August B. Smit, Ann Marie Craig, and Ana Luisa Carvalho, 2015, *The Journal of Neuroscience 35(22): 8462-8479.*

Page 2
Choroid plexus epithelial cells (CPECs) differentiated from human embryonic stem cell-derived neuroepithelial progenitors. CPEC markers TTR and ZO1 are marked in red and green, respectively, with Hoechst nuclear counterstaining in blue.
Courtesy, with permission: Momoko Watanabe, Young-Jin Kang, Lauren M. Davies, Sanket Meghpara, Kimbley Lau, Chi-Yeh Chung, Jaymin Kathiriya, Anna-Katerina Hadjantonakis, and Edwin S. Monuki, 2012, *The Journal of Neuroscience, 32(45): 15934-15945.*

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Copyright 2013; San Diego Tourism Authority. All rights reserved. Photographer unknown.

Page 4
This image shows dentate granule cells in the hippocampus of an adult mouse that lacks TRIM9 ubiquitin ligase. These cells, labeled with red and green florescent proteins, exhibit occasional ectopic migration into the molecular layer.
Courtesy, with permission: Cortney C. Winkle, Reid H. J. Olsen, Hyojin Kim, Sheryl S. Moy, Juan Song, and Stephanie L. Gupton, 2016, *The Journal of Neuroscience 36(18): 4940-4958.*

Page 7
Fluorescence micrograph of a glial microdot island containing reciprocally connected hippocampal neurons, a GABAergic (blue) and a glutamatergic (red) neuron. MPTS (red) or Alexa-568 (blue) was infused during double whole-cell recordings. Both neurons were transduced with Synaptophysin-pHluorin, which allowed the identification of active glutamatergic and GABAergic synapses after train stimulation of either neuron (glutamatergic synapses: green spots; GABAergic synapses: white spots). Comparing the number of active synapses to the rate of mEPSC and mIPSC showed that innervation by a GABAergic neuron downregulates spontaneous release rates in glutamatergic neurons.
Courtesy, with permission: Keimpe D. B. Wierda and Jakob B. Sørensen, *The Journal of Neuroscience, 5 February 2014, 34(6): 2100-2110.*

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A cross section through a mouse quadriceps nerve showing discontinuous Drp2 staining (green) in the plasma membrane of Schwann cells, with axons stained for neurofilament (blue) and myelin stained for P0 (red).
Courtesy, with permission: Diane L. Sherman, Lai Man N. Wu, Matthew Grove, C. Stewart Gillespie, and Peter J. Brophy, *The Journal of Neuroscience, 4 July 2012, 32(27): 9419-9428.*

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Confocal micrograph of motor cortical neurons (orange) that project to the auditory cortex in mice. The neurons were labeled by injecting a retrogradely transported virus encoding Cre into the auditory cortex of a mouse that expresses a fluorescent protein in a Cre-dependent manner. DAPI is in blue.
Courtesy, with permission: Anders Nelson, David M. Schneider, Jun Takatoh, Katsuyasu Sakurai, Fan Wang, and Richard Mooney, *The Journal of Neuroscience 4 September 2013, 33(36): 14342-14353.*

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Confocal image of a hippocampal neuron grown on a glial cell microisland. The neuron was labeled with anti-MAP2 antibody (red). Blue staining (DAPI) identifies cell nuclei. Autaptic cultures of single hippocampal neurons were used to investigate the effects of intracellular accumulation of amyloid-βprotein on glutamatergic synaptic transmission.

Courtesy, with permission: Cristian Ripoli,Sara Cocco, Domenica D. Li Puma, Roberto Piacentini, Alessia Mastrodonato, Federico Scala, Daniela Puzzo, Marcello D'Ascenzo, and Claudio Grassi, 2014, *The Journal of Neuroscience, 17 September 2014, 34(38).*

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This image displays a dense localization of fluorescently labeled perineuronal nets (green) around mouse hippocampal CA2 pyramidal neurons (red) and proximal neurites. Perineuronal nets are stained with Wisteria floribunda agglutinin, CA2 neurons are labeled using a mouse line expressing EGFP under control of the Amigo2 promoter (Gensat). Nuclei are stained with DAPI (blue).

Courtesy, with permission: Kelly E. Carstens, Mary L. Phillips, Lucas Pozzo-Miller, Richard J. Weinberg, and Serena M. Dudek, 8 June 2016, 36(23): 6312-6320.

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Confocal micrograph taken from the lesion core of a spinal cord injury in the rat showing reparative macrophages (green) associated with a key angiogenic cytokine, vascular endothelial growth factor (red), following extracellular matrix modification by means of chondroitinase gene delivery. Bartus et al. demonstrated a novel interaction between matrix modification and modulation of the inflammatory response following spinal cord injury.
Courtesy, with permission: Katalin Bartus, Nicholas D. James, Athanasios Didangelos, Karen D. Bosch, Joost Verhaagen, Rafael J. Yáñez-Muñoz, John H. Rogers, Bernard L. Schneider, Elizabeth M. Muir, and Elizabeth J. Bradbury, *The Journal of Neuroscience, 2 April 2014, 34(14): 4822-4836.*

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A side view of the trunk of a 24-h-old transgenic zebrafish embryo in which motor neurons express green fluorescent protein under the motor neuron specific promotor hb9 is shown. False colors code for relative depths of green fluorescent protein positive somata and axons from deep (blue) to superficial (yellow), indicating rows of ventral motor axons on the left and right side of the trunk. In this embryo, plexinA3 expression has been reduced by morpholino injection resulting in aberrant growth of some motor axons (far left and right).
Courtesy, with permission: Julia Feldner, Michell M. Reimer, Jörn Schweitzer, Björn Wendik, Dirk Meyer, Thomas Becker, and Catherina G. Becker, *The Journal of Neuroscience, 2 May 2007, 27(18): 4978-4983.*

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Abundant α-synuclein inclusions (green) localize throughout axons (magenta).
Courtesy, with permission: Laura A. Volpicelli-Daley, Hisham Abdelmotilib, Zhiyong Liu, Lindsay Stoyka, João Paulo Lima Daher, Austen J. Milnerwood, Vivek K. Unni, Warren D. Hirst, Zhenyu Yue, Hien T. Zhao, Kyle Fraser, Richard E. Kennedy, and Andrew B. West, *The Journal of Neuroscience, 13 July 2016, 36(28): 7415-7427.*

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This confocal micrograph shows an olfactory bulb slice from a postnatal day 14 mouse. Newborn interneurons were labeled by EGFP (green) and gap-mCherry (blue). The dendritic branching of interneurons was seen from the granule cell layer to the external plexiform layer.
Courtesy, with permission: Hiroo Takahashi, Yoichi Ogawa, Sei-ichi Yoshihara, Ryo Asahina, Masahito Kinoshita, Tatsuro Kitano, Michiko Kitsuki, Kana Tatsumi, Mamiko Okuda, Kouko Tatsumi, Akio Wanaka, Hirokazu Hirai, Peter L. Stern, and Akio Tsuboi, *The Journal of Neuroscience, 13 August 2016, 36(31): 8210-8227.*

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The input–output gain of individual motor neurons, stained for choline acetyltransferase (green) in this saggital view of the ventral horn of spinal cord (down is ventral), is modulated by the premotor interneuron network (red cells stained with Nissl) to optimize the control of muscular force. Image courtesy of Peter C. Petersen, Kristian Jensen, and the core facility for integrative microscopy, University of Copenhagen.
Courtesy, with permission: Mikkel Vestergaard and Rune W. Berg, *The Journal of Neuroscience, 25 February 2015, 35(8): 3711-3723.*

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A thalamocortical slice from a 4-dayold mouse brain in which neurons in the ventrobasal thalamus express Cre recombinase and tdTomato, allowing visualization of thalamocortical axons (red) innervating the barrel cortex. Layer 6 corticothalamic neurons (green) were labeled by an antibody to the transcription factor TBR1, and all other cell bodies were counterstained with ToPro (blue). The same Cre line was crossed with a channelrhodopsin reporter for optogenetically guided dual recording experiments from connected thalamic and cortical neurons, as described in the article by Hu and Agmon.
Courtesy, with permission: Hang Hu and Ariel Agmon, *The Journal of Neuroscience, 29 June 2016, 36(26).*

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Confocal image of a cholinergic single-cell microculture. This neuron has been partially depleted of clathrin by RNAi. It is expressing GFP (pseudocolored orange-yellow) and has been stained to show synapses (red) and clathrin (blue). Autaptic electrophysiological recordings in these cultures, together with electron microscopy, live cell imaging, or immunofluorescence, reveal that clathrin levels set limits for presynaptic plasticity.
Courtesy, with permission: Francisco J. López-Murcia, Stephen J. Royle, and Artur Llobet, *The Journal of Neuroscience, 18 June 2014, 34(25): 8618-8629.*

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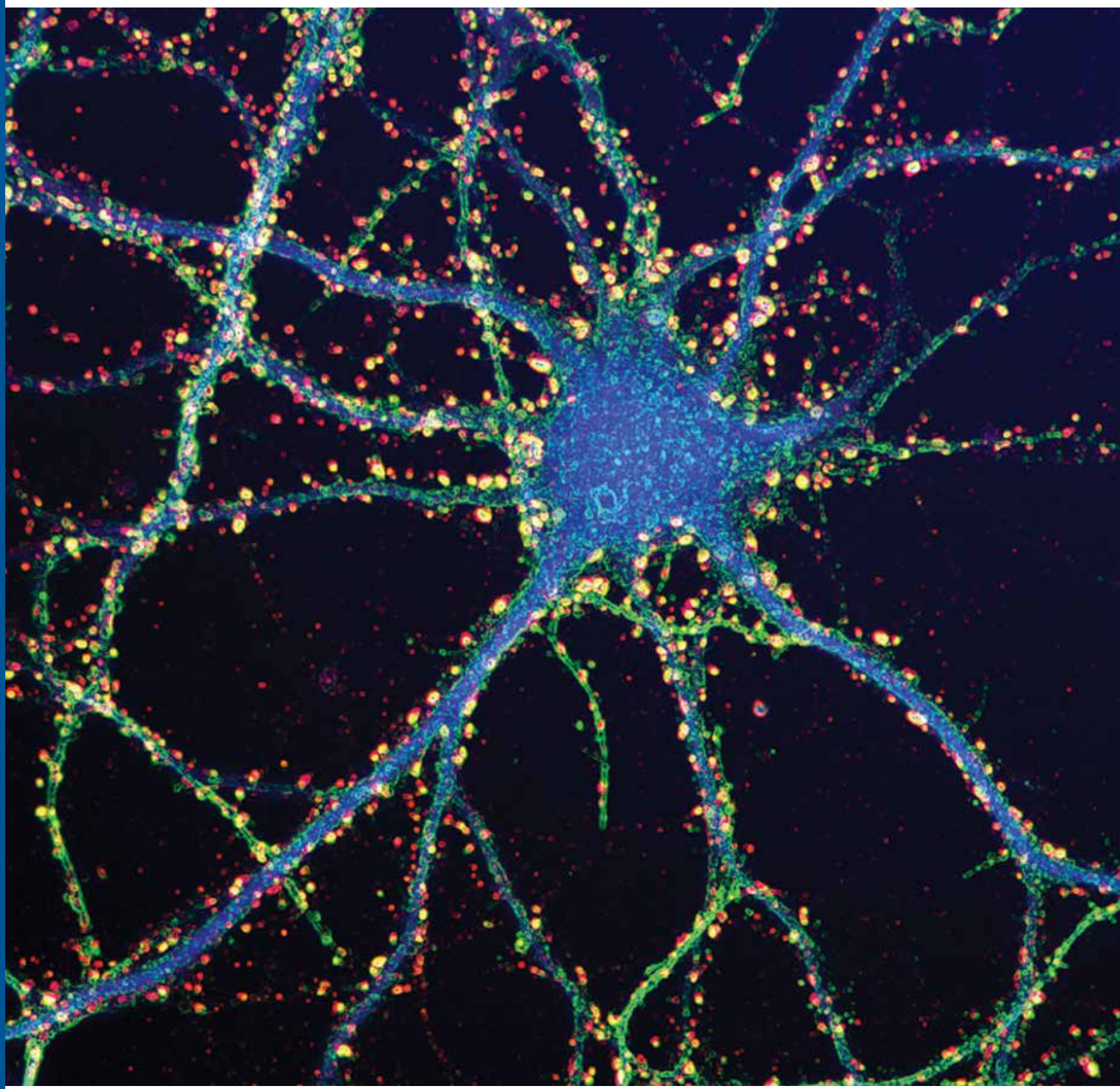
Notes

Notes

Neuroscience 2016



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