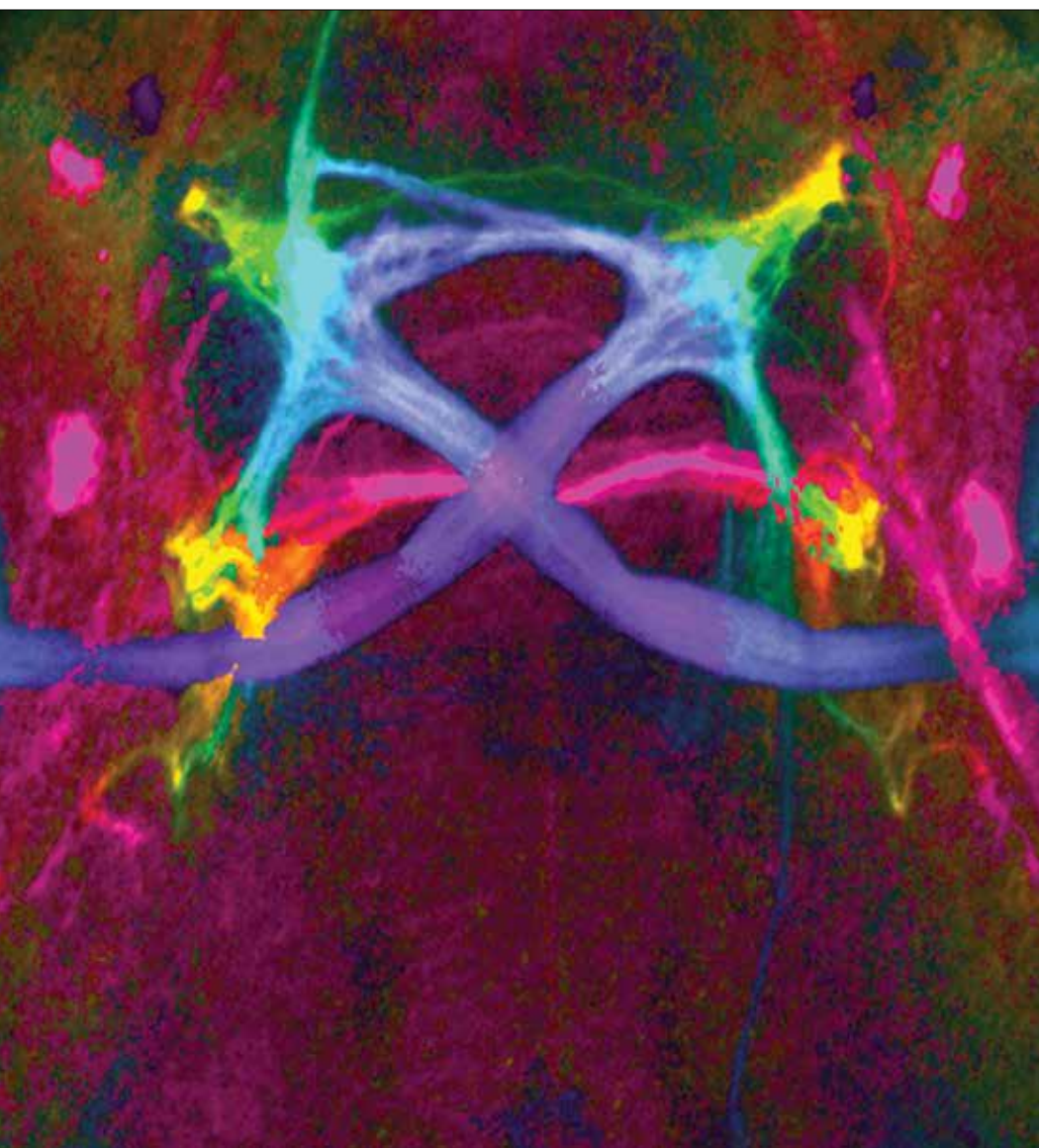


# General Information Program



NEUROSCIENCE  
**2014**

WASHINGTON, DC | November 15–19



SOCIETY *for*  
NEUROSCIENCE

# Information at a Glance

## Important Phone Numbers

### Annual Meeting Headquarters Office

#### Logistics & Programming

Room 102  
Logistics: (202) 249-4100  
Programming: (202) 249-4105

#### Volunteer Leadership Lounge

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

#### Annual Meeting Information Booths

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

#### Press Office

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

### Exhibit Management

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

### First Aid and Hospital Numbers

#### First Aid Room

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

#### George Washington University Hospital

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

#### Medics USA Urgent Care Services

1700 17th Street, NW, Suite A  
Washington, DC 20008  
(202) 483-4400

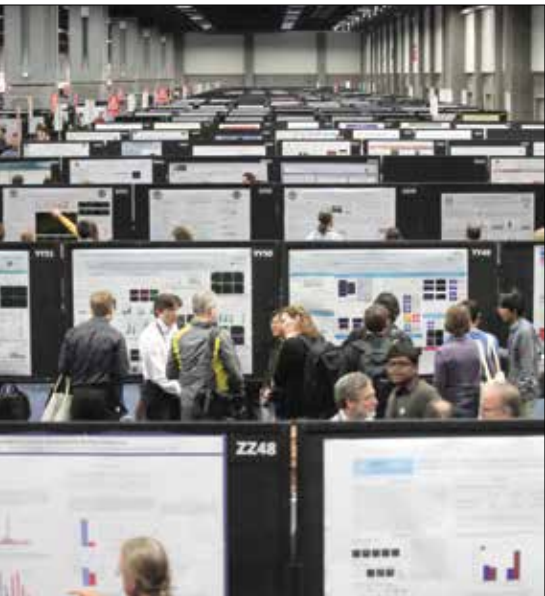
### Key to Poster Floor by Themes

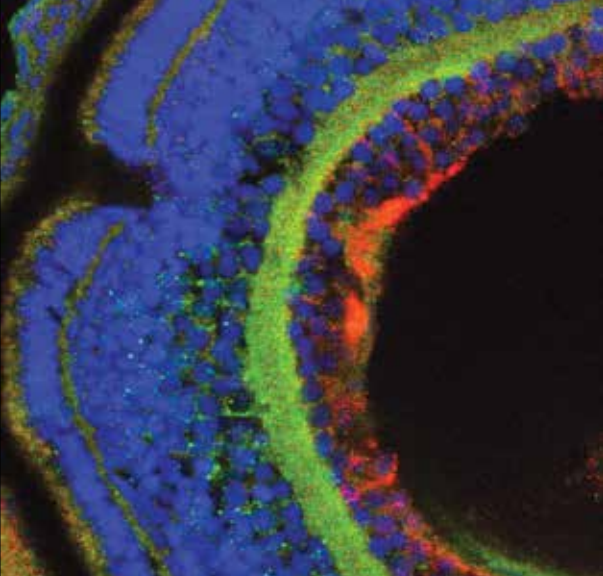
The poster floor begins with Theme A in Hall C and ends with Theme H in Hall A. Refer to the poster floor map at the end of this booklet.

#### Theme

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

**NOTE:** Theme H Posters will be on display in Hall A beginning at 1 p.m. on Saturday, November 15, and will remain posted until 5 p.m., Sunday, November 16. One-hour presentations will occur either Saturday afternoon or Sunday morning.





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Council and Program Committee



# Welcome

## The 44th annual meeting of the Society for Neuroscience starts now!

Neuroscience 2014 is where the breadth and depth of neuroscience discovery comes alive, where you'll explore state of the art tools and technologies, and where you'll form professional connections that will last throughout your career. Over the next five days, scientists at various stages of their career and from all over the world will cross paths with one another to discuss and influence research.



### Explore Great Science

With more than 15,000 scientists sharing their work and hundreds of symposia, workshops, satellites and socials, Neuroscience 2014 is the best place to explore an unmatched diversity of emerging brain science at all levels of inquiry and across disciplines. Discoveries range from the genetic, cellular and molecular to circuits, systems, cognitive function and social implications, and from basic knowledge to translational application. Poster sessions, lectures, symposia, workshops, the exhibit floor, and more offer innovative research and the latest in scientific technologies and techniques.

### Networking and Professional Development

Let's face it, networking can seem like work. Not at the SfN annual meeting. Catch up with old friends and forge new professional relationships in the hallways, in front of posters, on the exhibit floor, after thought-provoking symposia, and during receptions. When else will you be surrounded by over 30,000 of your peers?

Recruit new talent, tap into unbiased and unlimited professional feedback, and talk about what you care about most — neuroscience. You may just walk away with a new research partner, a refreshed perspective on your work, or a lead on grant funding.

### Visit the Dynamic Posters

The Society continues to explore new technologies and opportunities to enhance scientific exchange. This includes dynamic posters — interactive presentations using multimedia. Abstracts of the dynamic posters are viewable within the Neuroscience Meeting Planner and mobile app, enabling you to add them to your schedule. Ten dynamic posters will be on the poster floor each half-day session. Don't miss these exciting presentations!

### Curated Itineraries — Expanded for 2014

Want to explore a defined topic from a variety of scientific perspectives? We have that solved. Building on the success of last year, SfN expanded the number of curated itineraries — special topical tracks chosen

by the SfN Program Committee that link a topic across lectures, symposia and socials. Check out the topics on the Neuroscience Meeting Planner and the meeting mobile app. Download an entire itinerary or only sessions that fit your personal schedule.

### Stay Connected

You and the thousands of your colleagues gathered here in Washington, DC, are the greatest resource to the field. Share your Neuroscience 2014 experience with your peers in real-time, using hashtag #SfN14 on Twitter. Follow @Neurosci2014 and receive updates regarding meeting resources, opportunities, and events. Make new connections using NeurOnLine.SfN.org and discuss research presented at the meeting year-round.

### Enjoy Washington, DC

Whether you are new to Washington, DC, or a return visitor, enjoy all the city has to offer. Prepare for an amazing experience at Neuroscience 2014 and mark your calendars for Neuroscience 2015, October 17–21, in Chicago!

## Annual Meeting Contributors



**Amgen**  
Presidential Special Lecture



**AstraZeneca**  
Young Investigator Award



**Burroughs Wellcome Fund**  
Travel Awards



**The Dana Foundation**  
Science Educator Award



**Elsevier**  
Dialogues Between Neuroscience  
and Society Lecture



**Genzyme**  
Travel Awards



**The Grass Foundation**  
Albert and Ellen Grass Lecture  
Donald B. Lindsley Prize in  
Behavioral Neuroscience



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



**Janssen Research and  
Development, LLC**  
Presidential Special Lecture



**The Kavli Foundation**  
Fred Kavli History of  
Neuroscience Lecture



**David Kopf Instruments**  
David Kopf Lecture on Neuroethics



**Eli Lilly and Company Foundation  
and Lilly USA, LLC**  
Julius Axelrod Prize  
Special Lecture



**Lundbeck Research USA**  
Short Course (Partial Support)



**MedImmune**  
Presidential Special Lecture



**National Institute of Neurological  
Disorders and Stroke (NINDS)**  
Neurobiology of Disease Workshop  
Neuroscience Scholars Program

### The Nemko Family

**The Nemko Family**  
Nemko Prize in Cellular or  
Molecular Neuroscience



**Novartis Institutes for  
BioMedical Research**  
Travel Awardee Poster Session  
(Partial Support)



**Friends of SfN Fund  
and SfN Memorial Fund**  
Travel Awards



**The Swartz Foundation**  
Swartz Prize for Theoretical and  
Computational Neuroscience

### The Trubatch Family

**The Trubatch Family**  
Janett Rosenberg Trubatch Career  
Development Awards

### The Waletzky Award Prize Fund

**The Waletzky Award Prize Fund**  
Jacob P. Waletzky Award



**Emory University / Yerkes  
National Primate  
Research Center**  
Meet-the-Expert Series

## Sustaining Associate Members

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

### Platinum

Carl Zeiss Microscopy, LLC  
David Kopf Instruments  
Sutter Instruments

### Gold

Olympus America Inc.

### Silver

Charles River  
Elsevier  
Nikon Instruments Inc.

### Nonprofit

Grete Lundbeck European Brain  
Research Foundation  
Institute for Basic Science  
National Institute  
on Drug Abuse / National  
Institutes of Health

List current as of Nov. 5, 2014

The Society for Neuroscience gratefully acknowledges the generous contributions made 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 through travel awards to SfN's annual meeting and other career development initiatives. To inquire about specific initiatives or to make a tax-deductible donation, visit [SfN.org/supportsfN](http://SfN.org/supportsfN) or email [development@sfn.org](mailto:development@sfn.org).



|                            |                        |                        |
|----------------------------|------------------------|------------------------|
| Hugo Aréchiga Urtuzuástegi | Ann Kelley             | C. Ladd Prosser        |
| Martin Balaban             | James Kew              | S. K. Quadri           |
| Shlomo Bentin              | John Kulda             | Raniyah Ramadan        |
| Mark A. Berkley            | K. S. Krishnan         | Veronica Rodrigues     |
| Carlos Beyer               | Alberto Mallart        | Fred Samson            |
| Jennifer Brightwell        | Wei Wei Le             | James O. Schenk        |
| Johannes Brügemann         | John Liebeskind        | Obaid Siddiqi          |
| Vincent Dethier            | Shannon G. Matta       | Ralph Siegel           |
| Marie Filbin               | Robert H. McCluer      | James M. Sprague       |
| James Fuller               | León F. Cintra McGlone | Eliot Stellar          |
| Patricia Goldman-Rakic     | Neal Elgar Miller      | Zachary Lech Sulkowski |
| William Greenough          | Peter J. Morgane       | Ada C. Szeto           |
| Jack Griffin               | Frank Morrell          | Wylie Vale             |
| John W. Haycock            | Robert U. Muller       | Michael Walker         |
| Bart Hoebel                | Toshio Narahashi       | Josh Wallman           |
| David Hubel                | David Olton            | Richard E. Whalen      |
| Colin Ingram               | Itzhak Parnas          | Franziska Wollnik      |
| Edward G. Jones            | Bertram Payne          | Brian Wright           |
| Douglas Junge              | Jim Petras             | Henry I. Yamamura      |
| Lawrence Katz              | Fred Plum              | Elizabeth A. Young     |

# NeuroJobs

SfN's ONLINE CAREER CENTER

## Career Center

Saturday, Nov. 15–Tuesday, Nov. 18, 8 a.m.–5 p.m.  
Wednesday, Nov. 19, 8 a.m.–3 p.m.

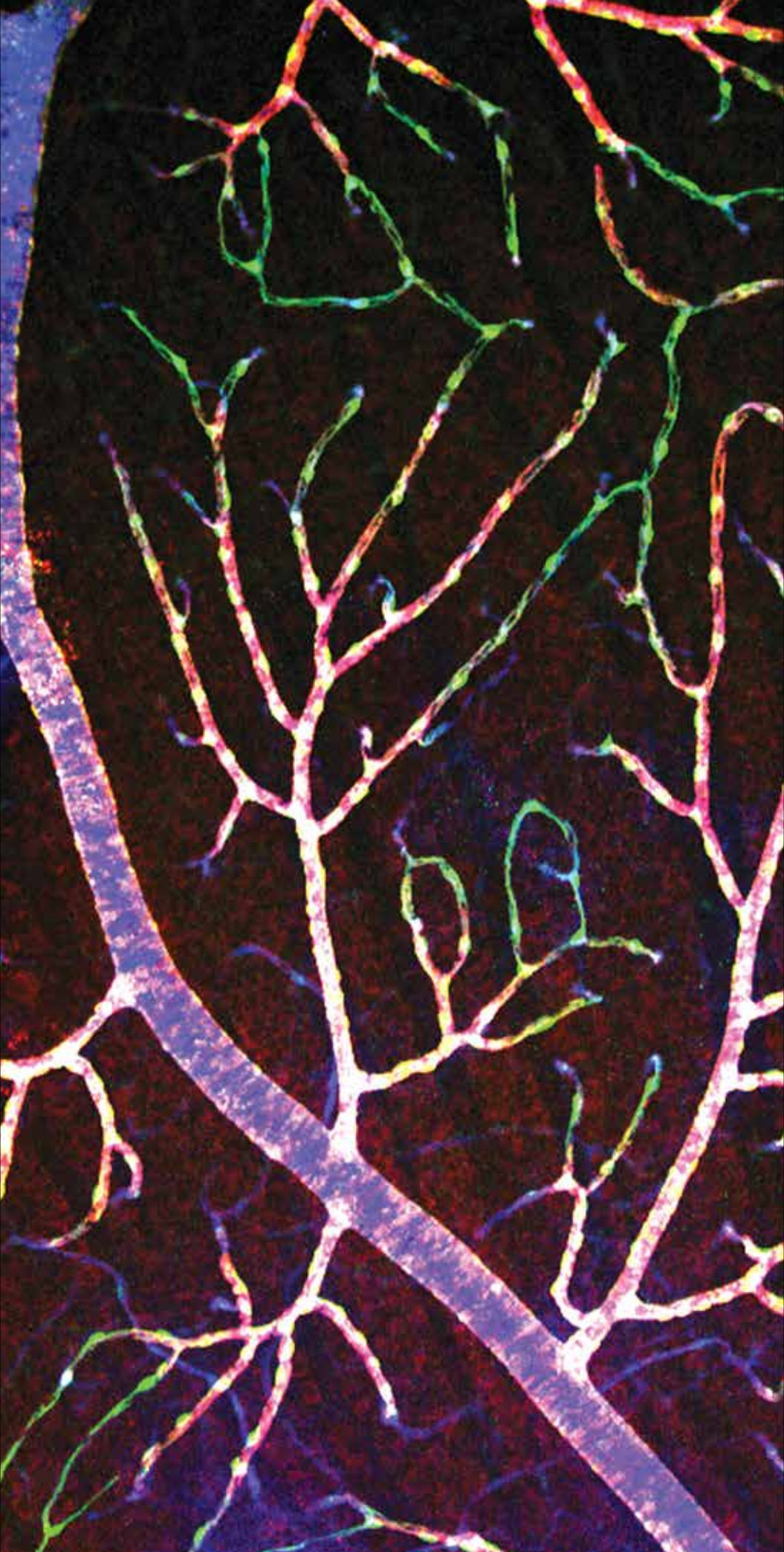
## NeuroJobs.sfn.org

The Premier Resource for Neuroscience Jobs

Access tools for posting jobs, searching resumes, scheduling interviews, connecting with employers, and message services.







NEUROSCIENCE  
**2014**

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| Friday, November 14   |                                                                                                                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8 a.m.–5 p.m.         | <b>Neurobiology of Disease Workshop</b> (p. 21)<br>Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits<br><b>Organizers:</b> Marion Buckwalter, MD, PhD; Claudia Testa, MD, PhD |
| 8 a.m.–6 p.m.         | <b>Short Course #1</b> (p. 21)<br>Advances in Multineuronal Monitoring of Brain Activity<br><b>Organizer:</b> Prakash Kara, PhD                                                                                                       |
| 8:30 a.m.–6 p.m.      | <b>Short Course #2</b> (p. 21)<br>Advances in Brain–Scale, Automated Anatomical Techniques: Neuronal Reconstruction, Tract Tracing, and Atlasing<br><b>Organizer:</b> H. Sebastian Seung, PhD                                         |
| Saturday, November 15 |                                                                                                                                                                                                                                       |
| 8–9:15 a.m.           | Meet-the-Expert Series: Session 1 (p. 21)                                                                                                                                                                                             |
| 9–11 a.m.             | Careers Beyond the Bench (p. 23)<br><b>Organizer:</b> Elisabeth Van Bockstaele, PhD                                                                                                                                                   |
| 9–11 a.m.             | Success in Academia: Different Strategies for Different Stages (p. 23)<br><b>Organizer:</b> Tracy Bale, PhD                                                                                                                           |
| 9:30–10:45 a.m.       | Meet-the-Expert Series: Session 2 (p. 22)                                                                                                                                                                                             |
| 11 a.m.–1 p.m.        | <b>Dialogues Between Neuroscience and Society</b> (p. 9)<br>Food for Thought: Tastes, Aromas, and Memories of Food<br><b>Speaker:</b> Bryan Valtaggio                                                                                 |
| 1–2 p.m.              | Getting the Most Out of SfN: The Annual Meeting and Beyond (p. 23)<br><b>Organizers:</b> David Riddle, PhD; Jeffrey Smith, PhD; Hermes Yeh, PhD                                                                                       |
| 1–3 p.m.              | Graduate School Fair (p. 24)                                                                                                                                                                                                          |
| 1–5 p.m.              | Posters/Nanosymposia                                                                                                                                                                                                                  |
| 1:30–4 p.m.           | <b>Empirical Approaches to Neuroscience and Society Symposium CME</b> (p. 15)<br>Improving Animal Models of Neuropsychiatric Disorders<br><b>Chair:</b> Trevor W. Robbins, PhD                                                        |
| 1:30–4 p.m.           | Symposia/Minisymposia <b>CME</b>                                                                                                                                                                                                      |
| 2–3:10 p.m.           | <b>Special Lecture CME</b> (p. 12)<br>Nanoscopy With Focused Light: Principles and Applications<br><b>Speaker:</b> Stephen W. Hell, PhD                                                                                               |
| 3–4:30 p.m.           | <b>Brain Awareness Campaign Event</b> (p. 24)<br>Communicate Your Science                                                                                                                                                             |
| 3–4:30 p.m.           | Mentor–Mentee Interaction:<br>How to Have a Difficult Conversation (p. 24)<br><b>Organizers:</b> Michael Levine, PhD; Jennifer Raymond, PhD; Cheryl Sisk, PhD                                                                         |
| 3–5 p.m.              | Research Careers in Industry and the Private Sector (p. 24)<br><b>Organizer:</b> Gretchen Snyder, PhD                                                                                                                                 |

| 3:30–5 p.m.           | NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career (p. 24)<br><b>Organizer:</b> Stephen Korn, PhD                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5:15–6:25 p.m.        | <b>Presidential Special Lecture CME</b><br>The Living Record of Memory: Genes, Neurons, and Synapses (p. 9)<br><b>Speaker:</b> Kelsey C. Martin, MD, PhD                |
| 6:30–8:30 p.m.        | Diversity Fellows Poster Session (p. 24)                                                                                                                                |
| 6:30–8:30 p.m.        | International Fellows Poster Session (p. 24)                                                                                                                            |
| 6:30–8:30 p.m.        | Travel Award Recipients Poster Session (p. 24)                                                                                                                          |
| 7:30–9:30 p.m.        | Career Development Topics: A Networking Event (p. 24)                                                                                                                   |
| Sunday, November 16   |                                                                                                                                                                         |
| 8 a.m.–noon           | Posters/Nanosymposia                                                                                                                                                    |
| 8:30–9:40 a.m.        | <b>Special Lecture CME</b> (p. 12)<br>What Drives Sleep–Wake Cycles: Identification of Molecules and Circuits in <i>Drosophila</i><br><b>Speaker:</b> Amita Sehgal, PhD |
| 8:30–11 a.m.          | Symposia/Minisymposia <b>CME</b>                                                                                                                                        |
| 9–11 a.m.             | A Guide to Publishing and Responsible Conduct (p. 24)<br><b>Organizers:</b> Verity Brown, PhD; Shamus O'Reilly, PhD                                                     |
| 9:30 a.m.–5 p.m.      | Exhibits                                                                                                                                                                |
| 10–11:10 a.m.         | <b>Special Lecture CME</b> (p. 11)<br>The Glymphatic System and Its Possible Roles in CNS Diseases<br><b>Speaker:</b> Maiken Nedergaard, MD, DMSc                       |
| 11:30 a.m.–12:40 p.m. | <b>David Kopf Lecture on Neuroethics</b> (p. 9)<br>Mind, Brain, and the Ethics of Intergroup Behavior<br><b>Speaker:</b> Mahzarin Banaji, PhD                           |
| 11:30 a.m.–1 p.m.     | <b>Chapters Workshop</b> (p. 25)<br>Chapter Value: Engaging Members and the Community<br><b>Organizer:</b> James W. Geddes, PhD                                         |
| 11:30 a.m.–1 p.m.     | Successful Career Advancement Through Networking: Is It Who You Know? (p. 25)<br><b>Organizers:</b> Mark Baxter, PhD; Rebecca Shansky, PhD                              |
| noon–2 p.m.           | Graduate School Fair (p. 24)                                                                                                                                            |
| 1–2:10 p.m.           | <b>Special Lecture CME</b> (p. 12)<br>Surprising Origins of Sex Differences in the Brain<br><b>Speaker:</b> Margaret M. McCarthy, PhD                                   |
| 1–3 p.m.              | <b>Social Issues Roundtable</b> (p. 25)<br>The Neuroscience of Gaming<br><b>Organizer:</b> Jonathan Moreno, PhD                                                         |
| 1–5 p.m.              | Posters/Nanosymposia                                                                                                                                                    |
| 1:30–4 p.m.           | Symposia/Minisymposia <b>CME</b>                                                                                                                                        |
| 2–4 p.m.              | News You Can Use: Funding Opportunities for Neuroscience Research and Training at the National Science Foundation (NSF) (p. 25)<br><b>Organizer:</b> Jim Deshler, PhD   |



|                             |                                                                                                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2–5 p.m.                    | Internationalizing Your Research, Training, and Funding Experience ( <i>p. 25</i> )<br><b>Organizers:</b> Laura Colgin, PhD; Ketema Paul, PhD; Michael Zigmond, PhD                  |
| 2:30–3:40 p.m.              | <b>Peter and Patricia Gruber Lecture</b> ( <i>p. 9</i> )<br>Circuits and Strategies for Skilled Motor Behavior<br><b>Speaker:</b> Thomas Jessell, PhD                                |
| 5:15–6:25 p.m.              | <b>Presidential Special Lecture CME</b> ( <i>p. 9</i> )<br>The Integration of Interneurons Into Cortical Circuits: Both Nurture and Nature<br><b>Speaker:</b> Gordon J. Fishell, PhD |
| 6:45–8:45 p.m.              | SfN–Sponsored Socials                                                                                                                                                                |
| <b>Monday, November 17</b>  |                                                                                                                                                                                      |
| 8 a.m.–noon                 | Posters/Nanosymposia                                                                                                                                                                 |
| 8:30–9:40 a.m.              | <b>Special Lecture CME</b> ( <i>p. 11</i> )<br>Building a Synapse Through Nuclear Export of Large RNA Granules and Exosomes<br><b>Speaker:</b> Vivian Budnik, PhD                    |
| 8:30–11 a.m.                | Symposia/Minisymposia <b>CME</b>                                                                                                                                                     |
| 9–11 a.m.                   | How to Effectively Communicate Your Science to the Public ( <i>p. 26</i> )<br><b>Organizer:</b> Scott M. Thompson, PhD                                                               |
| 9–11 a.m.                   | Teaching Neuroscience: Online Learning ( <i>p. 26</i> )<br><b>Organizer:</b> Richard Olivo, PhD                                                                                      |
| 9:30 a.m.–5 p.m.            | Exhibits                                                                                                                                                                             |
| 10–11:10 a.m.               | <b>Special Lecture CME</b> ( <i>p. 11</i> )<br>Genes and Environment Interaction During Development: Redox Imbalance in Schizophrenia<br><b>Speaker:</b> Kim Quang Do, PhD           |
| 11:30 a.m.–12:40 p.m.       | <b>Special Lecture CME</b> ( <i>p. 11</i> )<br>The Brain Is Needed to Cure Spinal Cord Injury<br><b>Speaker:</b> Tadashi Isa, MD, PhD                                                |
| noon–2 p.m.                 | Graduate School Fair ( <i>p. 24</i> )                                                                                                                                                |
| 1–5 p.m.                    | Posters/Nanosymposia                                                                                                                                                                 |
| 1:30–4 p.m.                 | Symposia/Minisymposia <b>CME</b>                                                                                                                                                     |
| 3:15–4:25 p.m.              | <b>Albert and Ellen Grass Lecture CME</b> ( <i>p. 10</i> )<br>Cellular and Molecular Mechanisms of Explicit Learning in the Hippocampus<br><b>Speaker:</b> Roger A. Nicoll, MD       |
| 5:15–6:25 p.m.              | <b>Presidential Special Lecture CME</b> ( <i>p. 10</i> )<br>The First Steps in Vision: Computation and Repair<br><b>Speaker:</b> Botond Roska, MD, PhD                               |
| 6:45–8:45 p.m.              | SfN–Sponsored Socials                                                                                                                                                                |
| <b>Tuesday, November 18</b> |                                                                                                                                                                                      |
| 8 a.m.–noon                 | Posters/Nanosymposia                                                                                                                                                                 |
| 8:30–9:40 a.m.              | <b>Special Lecture CME</b> ( <i>p. 12</i> )<br>Learning and Relearning Movement<br><b>Speaker:</b> Amy J. Bastian, PhD                                                               |
| 8:30–11 a.m.                | Symposia/Minisymposia <b>CME</b>                                                                                                                                                     |
| 9:30 a.m.–5 p.m.            | Exhibits                                                                                                                                                                             |

|                               |                                                                                                                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10–11:10 a.m.                 | <b>Special Lecture CME</b> ( <i>p. 11</i> )<br>Persistent Cocaine-Induced Plasticity and Synaptic Targets for Its Reversal<br><b>Speaker:</b> Marina E. Wolf, PhD                             |
| 11:30 a.m.–12:40 p.m.         | <b>Special Lecture CME</b> ( <i>p. 11</i> )<br>How Do You Feel? The Role of Mechanically Activated Ion Channels in Touch, Pain, Hearing, and Beyond<br><b>Speaker:</b> Ardem Patapoutian, PhD |
| noon–2 p.m.                   | <b>Animals in Research Panel</b> ( <i>p. 26</i> )<br>Global Ramifications of New Animal Rights Tactics<br><b>Organizer:</b> Michael E. Goldberg, MD                                           |
| noon–2 p.m.                   | Celebration of Women in Neuroscience Luncheon ( <i>p. 26</i> )                                                                                                                                |
| noon–2 p.m.                   | Graduate School Fair ( <i>p. 24</i> )                                                                                                                                                         |
| 1–2:10 p.m.                   | <b>Special Lecture CME</b> ( <i>p. 12</i> )<br>Generating and Shaping Novel Action Repertoires<br><b>Speaker:</b> Rui M. Costa, DVM, PhD                                                      |
| 1–5 p.m.                      | Posters/Nanosymposia                                                                                                                                                                          |
| 1:30–4 p.m.                   | Symposia/Minisymposia <b>CME</b>                                                                                                                                                              |
| 2:30–3:40 p.m.                | <b>Fred Kavli History of Neuroscience Lecture</b> ( <i>p. 10</i> )<br>The Messengers of the Mind<br><b>Speaker:</b> Floyd E. Bloom, MD                                                        |
| 3–5 p.m.                      | <b>Public Advocacy Forum</b> ( <i>p. 26</i> )<br>Implications for Science Funding in an Era of Global Brain Initiatives<br><b>Organizer:</b> Anne Young, MD, PhD                              |
| 5:15–6:25 p.m.                | <b>Presidential Special Lecture CME</b> ( <i>p. 10</i> )<br>Stem Cells in the Brain: Glial Identity and Niches<br><b>Speaker:</b> Fiona Doetsch, PhD                                          |
| 6:45–7:30 p.m.                | SfN Members' Business Meeting ( <i>p. 26</i> )                                                                                                                                                |
| 6:45–8:45 p.m.                | SfN–Sponsored Socials                                                                                                                                                                         |
| 9 p.m.–midnight               | Graduate Student Reception ( <i>p. 26</i> )                                                                                                                                                   |
| <b>Wednesday, November 19</b> |                                                                                                                                                                                               |
| 8 a.m.–noon                   | Posters/Nanosymposia                                                                                                                                                                          |
| 8:30–9:40 a.m.                | <b>Special Lecture CME</b> ( <i>p. 11</i> )<br>Exocytosis of Synaptic Vesicles: A Molecular Perspective<br><b>Speaker:</b> Reinhard Jahn, PhD                                                 |
| 8:30–11 a.m.                  | Symposia/Minisymposia <b>CME</b>                                                                                                                                                              |
| 9:30 a.m.–5 p.m.              | Exhibits                                                                                                                                                                                      |
| 11:30 a.m.–12:40 p.m.         | <b>Special Lecture CME</b> ( <i>p. 12</i> )<br>The Sensory Neurons of Touch<br><b>Speaker:</b> David D. Ginty, PhD                                                                            |
| 1–2:10 p.m.                   | <b>Special Lecture CME</b> ( <i>p. 12</i> )<br>Affective Neuroscience of Reward: Limbic Modules for Liking and Wanting<br><b>Speaker:</b> Kent C. Berridge, PhD                               |
| 1–5 p.m.                      | Posters/Nanosymposia                                                                                                                                                                          |
| 1:30–4 p.m.                   | Symposia/Minisymposia <b>CME</b>                                                                                                                                                              |

## Featured Lectures

All featured lectures will be held at the Walter E. Washington Convention Center, Hall D.

### Presidential Special Lecture

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



**Kelsey C. Martin, MD, PhD**  
University of California, Los Angeles  
**Saturday, Nov. 15, 5:15–6:25 p.m.**  
Support contributed by: MedImmune

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

### David Kopf Lecture on Neuroethics

#### Mind, Brain, and the Ethics of Intergroup Behavior



**Mahzarin Banaji, PhD**  
Harvard University  
**Sunday, Nov. 16, 11:30 a.m.–12:40 p.m.**  
Support contributed by:  
David Kopf Instruments

From the moment of birth, every human is a member of many groups. Group memberships create affiliations of “us” and

“them” and sensitivity to status in social hierarchies. Human minds reflect these in myriad attitudes and beliefs that contain deep knowledge about the hidden presence or surprising absence of group love. Unveiling them by observing brain activity and behavior allows understanding of the natural and cultivated ways in which the meanings of in-group and out-group (self and other) are represented and group love is elusively tuned up and down.

### Peter and Patricia Gruber Lecture

#### Circuits and Strategies for Skilled Motor Behavior



**Thomas Jessell, PhD**  
Columbia University, Howard Hughes  
Medical Institute  
**Sunday, Nov. 16, 2:30–3:40 p.m.**  
Support contributed by:  
The Gruber Foundation

The capacity to generate movement on demand is a reflection of neural computations that integrate internal command and external feedback for the purpose of patterned motor output. Advances in deciphering the logic of motor systems have not yet resolved the strategies and mechanisms through which neural circuits direct motor behavior. This lecture probes this issue through an analysis of motor circuits in the mammalian

spinal cord, focusing on the functions of interneurons assigned to two feedback circuits, one that evaluates the fidelity of intended motor acts and a second that filters external sensory reports.

### Presidential Special Lecture

#### The Integration of Interneurons Into Cortical Circuits: Both Nurture and



**Nature **CME****  
**Gordon J. Fishell, PhD**  
New York University  
Neuroscience Institute

**Sunday, Nov. 16, 5:15–6:25 p.m.**

Since the seminal finding that cortical GABAergic interneurons originate within the subpallium, extraordinary mechanisms must exist to ensure they are precisely and reliably embedded into cortical circuitry. Considerable efforts indicate that genetic programs initiated within progenitors assign interneurons into specific cardinal classes. It is less clear whether their synaptic specificity also is intrinsically determined. Fishell will discuss recent evidence concerning how intrinsic genetic programs within interneurons are shaped by local activity-dependent cues. These results suggest that sensory information complements earlier established genetic programs to shape the way interneuronal subtypes integrate into nascent cortical circuits.



## Dialogues Between Neuroscience and Society

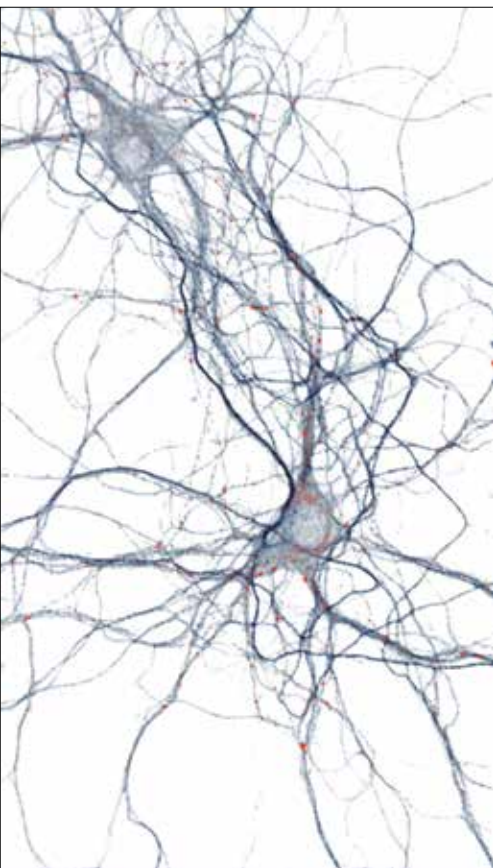
### Food for Thought: Tastes, Aromas, and Memories of Food

#### Bryan Voltaggio, Chef

**Saturday, Nov. 15, 11 a.m.–1 p.m.**  
Support contributed by: Elsevier

From the alluring smells and colors of a prepared dish to the deep emotions surrounding the act of sharing a meal, food unites us. The rich sensory experience that takes place every time we eat is made possible by the brain, which shapes perception of taste and

smell, and seals the meal to memory. Hear noted chef, restaurateur, and *Top Chef* contestant Bryan Voltaggio discuss how he strives to create culinary treasures that not only satiate but entertain and transform how his guests think about food.



#### Albert and Ellen Grass Lecture

### Cellular and Molecular Mechanisms of Explicit Learning in the Hippocampus CME



**Roger A. Nicoll, MD**

University of California, San Francisco

**Monday, Nov. 17, 3:15–4:25 p.m.**

Support contributed by:

The Grass Foundation

Long-term potentiation (LTP) has remained the most compelling cellular model for learning and memory since its discovery nearly 50 years ago by Bliss and Lomo. The thousands of papers published on LTP can be overwhelming to sift through for experts and novices alike. In this lecture, Nicoll will probe the core properties of LTP, arguing that the dozens of proteins linked to the phenomenon are not essential, but rather modulate the threshold and/or magnitude of LTP.

#### Presidential Special Lecture

### The First Steps in Vision: Computation and Repair CME



**Botond Roska, MD, PhD**

Friedrich Miescher Institute for Biomedical Research, University of Basel

**Monday, Nov. 17, 5:15–6:25 p.m.**

Support contributed by: Amgen

At the front end of the visual system, a sophisticated image processor, the retina, creates about a dozen movies about the visual scene and presents them to higher visual brain areas. How do the thalamus and the cortex interpret these movies and how does the retina create them? Furthermore, how can we use our understanding of neuronal computations at the front end of the visual system to design repair strategies for blinding diseases? Roska will present a “cell type”-based approach to address these questions.

#### Fred Kavli History of Neuroscience Lecture

### The Messengers of the Mind



**Floyd E. Bloom, MD**

The Scripps Research Institute

**Tuesday, Nov. 18, 2:30–3:40 p.m.**

Support contributed by:

The Kavli Foundation

At the cellular and molecular levels of operation, neurons and their circuits achieve brain functions by chemical signals, in which the principle agents, neurotransmitters, convey the signal from the sending neuron to the receiving neuron. The discovery of each of the chemical families of neurotransmitters (amino acids, amines, and neuropeptides) provides important insight on understanding how brains function, changing our concepts of the complexities of short-term and long-term brain events, and how medications can intervene in brain dysfunctions.

#### Presidential Special Lecture

### Stem Cells in the Brain: Glial Identity and Niches CME



**Fiona Doetsch, PhD**

Columbia University

**Tuesday, Nov. 18, 5:15–6:25 p.m.**

Support contributed by: Janssen Research and Development, LLC

Glia play key roles in brain development, homeostasis, plasticity, and injury. Specialized glia are stem cells both during development and in adults, and continuously generate new neurons in restricted brain regions throughout life. Doetsch will review the current understanding of the nature of specialized glia cells in the brain and the unique features of the niche in which they reside. Illuminating the biology of endogenous neural stem cells has important implications for brain repair.



## Special Lectures

All special lectures will be held at the Walter E. Washington Convention Center, Hall D.

### Theme A: Development

#### Building a Synapse Through Nuclear Export of Large RNA Granules and Exosomes **CME**



**Vivian Budnik, PhD**

University of Massachusetts  
Medical School

**Monday, Nov. 17, 8:30–9:40 a.m.**

Studies in *Drosophila* are uncovering novel conserved mechanisms for synapse development and plasticity. These include signaling pathways from the membrane to the nucleus, promoting the nuclear assembly and export of ribonucleoprotein granules and their synaptic localization. In addition, pre- and postsynaptic compartments are shaped through transsynaptic transmission of exosomes carrying transmembrane proteins and RNA. This lecture shares lessons from the study of viruses and Wnt signaling that led to these discoveries and highlights their importance in disease.

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

#### How Do You Feel? The Role of Mechanically Activated Ion Channels in Touch, Pain, Hearing, and Beyond **CME**



**Ardem Patapoutian, PhD**

The Scripps Research Institute,  
Howard Hughes Medical Institute

**Tuesday, Nov. 18, 11:30 a.m.–12:40 p.m.**

Mechanosensation is perhaps the last sensory modality not understood at the molecular level. Ion channels that sense mechanical force are postulated to play critical roles in sensing touch/pain (somatosensation), sound (hearing), shear stress (cardiovascular tone), etc. However, the identity of ion channels involved in sensing mechanical force has remained elusive. This lecture focuses on the identification, using functional genomics approaches, and characterization of novel mechanically activated channels including Piezo1 and 2.

#### Exocytosis of Synaptic Vesicles: A Molecular Perspective **CME**



**Reinhard Jahn, PhD**

Max Planck Institute  
for Biophysical Chemistry, Germany

**Wednesday, Nov. 19, 8:30–9:40 a.m.**

Neurotransmitter release from neurons is mediated by  $\text{Ca}^{2+}$ -dependent exocytosis of synaptic vesicles. The molecular machinery involves SNARE proteins that carry out membrane fusion together with other conserved proteins such as SM and CATCHR. Furthermore, specialized proteins such as synaptotagmins and complexins convey  $\text{Ca}^{2+}$  regulation. Jahn will discuss new insight on the mechanisms by which these proteins mediate membrane fusion at the synapse.

### Theme C: Disorders of the Nervous System

#### The Glymphatic System and Its Possible Roles in CNS Diseases **CME**



**Maiken Nedergaard, MD, DMSc**

University of Rochester

**Sunday, Nov. 16, 10–11:10 a.m.**

Past work has focused on cellular recycling of proteins involved in neurodegeneration. This lecture expands the traditional framework to include a macroscopic clearance system — the glymphatic system — by which the brain exports waste products of neural metabolism. Glymphatic clearance is driven by convective CSF influx and is especially active during sleep. Macromolecules, such as amyloid beta, are literally swept out of CNS for ultimate degradation in the liver. As such, the glymphatic system represents a novel and unexplored target for treatment of neurological disease.

#### Genes and Environment Interaction During Development: Redox Imbalance in Schizophrenia **CME**



**Kim Quang Do, PhD**

Center for Psychiatric Neuroscience,  
Lausanne University Hospital, Switzerland

**Monday, Nov. 17, 10–11:10 a.m.**

Understanding how the interaction of genes and environmental risk factors during neurodevelopment leads to cognitive,

affective, and social impairment is a central challenge in psychiatric neuroscience. This lecture discusses the case of schizophrenia where these risk factors converge on a hub made of NMDAR hypofunction, neuroinflammation, and redox imbalance/oxidative stress, affecting parvalbumine neurons and myelination that leads to structural and functional dysconnectivity. A translational approach toward prevention attempts to modify the disease course by redox modulators.

#### Persistent Cocaine-Induced Plasticity and Synaptic Targets for Its Reversal **CME**



**Marina E. Wolf, PhD**

Rosalind Franklin University of  
Medicine and Science

**Tuesday, Nov. 18, 10–11:10 a.m.**

Cocaine addicts remain vulnerable to cue-induced craving and relapse even after long periods of abstinence. In a rat model of this phenomenon, cue-induced cocaine craving increases during withdrawal and remains high for months. This relies on strengthening of glutamate synapses in the nucleus accumbens, a brain region that translates motivation into action. This lecture focuses on mechanisms that maintain this plasticity, as well as strategies for reversing it and thus reducing craving. Potential targets include group I metabotropic glutamate receptors and protein translation.

### Theme D: Sensory and Motor Systems

#### The Brain Is Needed to Cure Spinal Cord Injury **CME**



**Tadashi Isa, MD, PhD**

National Institute for  
Physiological Sciences, Japan

**Monday, Nov. 17, 11:30 a.m.–12:40 p.m.**

Support contributed by: Lilly USA, LLC

Recovery after neuronal damage is learned by the spared neural systems. Isa's research team is studying the mechanism of recovery of hand dexterity after partial spinal cord injury using nonhuman primate models by combining multidisciplinary approaches, such as kinetic analysis, electrophysiology, brain imaging, neuroanatomy, and genetic

manipulation with viral vectors. Isa will talk about the large-scale circuit reorganization that occurs through training and is critical for recovery, spanning over the spinal cord, motor cortices, and even the limbic structures.

#### Learning and Relearning Movement CME



**Amy J. Bastian, PhD**

Kennedy Krieger Institute, Johns Hopkins University School of Medicine

**Tuesday, Nov. 18, 8:30–9:40 a.m.**

Human motor learning depends on a suite of brain mechanisms that are driven by different signals and operate on timescales ranging from minutes to years. Understanding these processes requires identifying how new movement patterns are normally acquired, retained, and generalized, as well as the effects of distinct brain lesions. The lecture focuses on normal and abnormal motor learning and how we can use this information to improve rehabilitation for individuals with neurological damage.

#### The Sensory Neurons of Touch CME



**David D. Ginty, PhD**

Harvard Medical School, Howard Hughes Medical Institute

**Wednesday, Nov. 19, 11:30 a.m.–12:40 p.m.**

The somatosensory system endows us with enormous capacity for object recognition, texture discrimination, sensory-motor feedback, and social exchange. Innocuous touch of the skin is detected by physiologically distinct low-threshold mechanosensory neurons (LTMRs). Ginty's research team has amassed a genetic toolbox that enables interrogation of the physiology, morphology, and function of LTMR subtypes and their synaptic target neurons in the spinal cord. Ginty will discuss morphological and physiological features of LTMRs and the organizational logic of LTMR projections and circuits in the central nervous system.

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

##### What Drives Sleep-Wake Cycles: Identification of Molecules and Circuits in *Drosophila* CME



**Amita Sehgal, PhD**

Perelman School of Medicine at the University of Pennsylvania, Howard Hughes Medical Institute

**Sunday, Nov. 16, 8:30–9:40 a.m.**

This lecture focuses on the cellular and molecular mechanisms that regulate sleep. The 24-hour rhythm of sleep is driven by a circadian clock, while the need to sleep comes from a homeostatic system, which ensures adequate sleep levels. The lecture shows how the use of *Drosophila* has led to the identification of mechanisms that generate a circadian clock and to some of the downstream circuitry required for circadian timing of behavior. It also highlights recent developments in identifying molecular components and cellular circuits that underlie homeostatic regulation.

##### Surprising Origins of Sex Differences in the Brain CME



**Margaret M. McCarthy, PhD**

University of Maryland School of Medicine

**Sunday, Nov. 16, 1–2:10 p.m.**

Brain sex differences are established early by genes, hormones, environment, and experience. Animal models reveal multiple endpoints modified by steroid hormones in a region-specific manner and that these changes underlie sex differences in adult behavior. This talk reviews the cellular and molecular mechanisms mediating masculinization involving inflammatory molecules, immune signaling, endocannabinoids, and epigenetic changes. Illuminating the biological origins of brain and behavior sex differences is essential for enhancing health and preventing disease.

#### Theme F: Cognition and Behavior

##### Generating and Shaping Novel Action Repertoires CME



**Rui M. Costa, DVM, PhD**

Champlain Foundation, Portugal

**Tuesday, Nov. 18, 1–2:10 p.m.**

Many actions are learned anew throughout life, likely through a process of trial and selection. Researchers investigated how

novel self-paced actions are generated and how actions that lead to particular outcomes are then selected. Research found that dopamine is critical for the initiation of novel actions and that plasticity in cortico-basal ganglia circuits is essential for action selection. With iteration, actions become organized in modules, and neural substrates of chunking emerge in these circuits.

##### Affective Neuroscience of Reward: Limbic Modules for Liking and Wanting CME



**Kent C. Berridge, PhD**

University of Michigan, Ann Arbor

**Wednesday, Nov. 19, 1–2:10 p.m.**

Reward involves several different psychological components. “Wanting” a reward is generated by robust mesolimbic circuitry, whereas “liking” the same reward is generated by hedonic-hotspot circuitry that is neuroanatomically and neurochemically more restricted. This wanting-liking difference has implications for addiction disorders. Yet surprisingly, forms of positive wanting and negative fear share some of the same brain mechanisms. New insight on the generation of these intense “liking,” “wanting,” and other emotion states are emerging in affective neuroscience.

#### Theme G: Novel Methods and Technology Development

##### Nanoscopy With Focused Light: Principles and Applications CME



**Stefan W. Hell, PhD**

Max Planck Institute for Biophysical Chemistry, Germany

**Saturday, Nov. 15, 2–3:10 p.m.**

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

# Symposia

## Theme A: Development

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

Chair: Alain Chedotal, PhD

Saturday, Nov. 15, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom C

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

### Advances in Studying Human Cortical Development **CME**

Chair: Arnold Kriegstein, MD, PhD

Sunday, Nov. 16, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom C

Our concepts of human cortical development are evolving rapidly, with many advances coming from studies of primary tissue, *in vitro* cerebral organoids, and human cortical mutations. These findings are not only relevant to a wide range of neurodevelopment disorders, but also shed light on brain evolution, particularly in cortical expansion among primates.

### Oligodendrocyte and Myelin Plasticity and Its Impact on the Function of Neural Circuits and Behavior **CME**

Chair: Gabriel Corfas, PhD

Sunday, Nov. 16, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom A

Proper myelination is necessary for the effective function of neuronal circuits. Oligodendrocytes and the myelin they generate have been considered static components of the nervous system. This symposium discusses new findings that show oligodendrocytes and their precursors are dynamic and plastic cells whose generation, morphology, and function can be regulated by experience, and that this plasticity has an impact on cognitive function and behavior.

### Cellular and Molecular Mechanisms of Neural Regeneration **CME**

Chair: Zhigang He, PhD

Co-chair: Jeffrey Goldberg, MD, PhD

Tuesday, Nov. 18, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom A

Understanding the mechanisms regulating neural regeneration remains an unmet challenge in neuroscience and medicine. Recent studies in different species and models have started to reveal fundamental principles and key molecular players in such processes. This symposium highlights several advances in understanding of axon regeneration in mammals and neural tissue regeneration in salamanders.

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

### Aerobic Glycolysis in the Brain: Emerging Roles of Lactate in Synaptic Plasticity and Axonal Function **CME**

Chair: Pierre J. Magistretti, MD, PhD

Tuesday, Nov. 18, 8:30–11 a.m.

Walter E. Washington Convention Center: 151AB

The coupling between neuronal activity and energy metabolism is critical for brain function and is tightly regulated, as best illustrated by functional brain imaging (e.g., PET and fMRI). Recent evidence indicates that CNS glial cells play a key role in this neurometabolic coupling. Specifically, lactate formed by astrocytes and oligodendrocytes under normoxic conditions through aerobic glycolysis is required for long-term memory, axon function maintenance, and survival.

### More Than a Pore: Ion Channel Signaling Complexes **CME**

Chair: Amy Lee, PhD

Tuesday, Nov. 18, 1:30–4 p.m.

Walter E. Washington Convention Center: 151AB

Voltage — and ligand — gated ion channels are some of the most studied of all proteins in heterologous expression systems. Yet ion channels often exhibit unexpected properties *in vivo* due to their interaction with a variety of signaling/scaffolding proteins. The objective of this symposium

is to distill the view that ion channels act as macromolecular complexes, the dysregulation of which may lead to a variety of nervous system disorders.

## Theme C: Disorders of the Nervous System

### C9orf72: A Repeat Disease That Underlies Dementia and Neurodegeneration **CME**

Chair: Jeffrey D. Rothstein, MD, PhD

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

Saturday, Nov. 15, 1:30–4 p.m.

Walter E. Washington Convention Center: 151AB

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

### Target Validation in Huntington's Disease: Advances Through the Development and Use of Animal Models **CME**

Chair: M. Flint Beal, MD

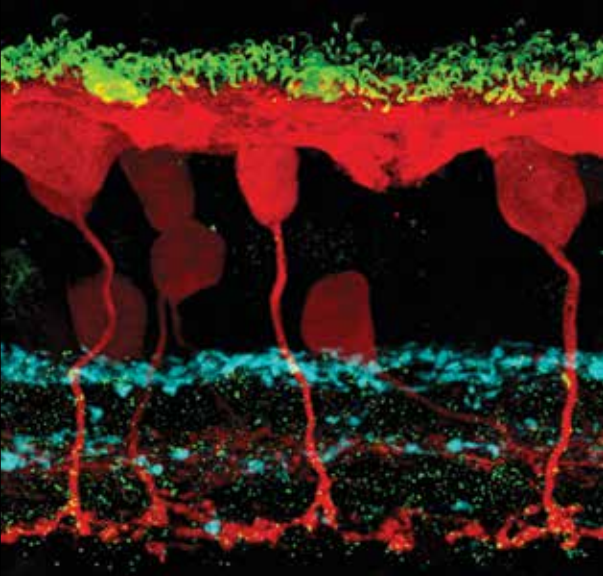
Co-chair: X. William Yang, MD, PhD

Monday, Nov. 17, 8:30–11 a.m.

Walter E. Washington Convention Center: 146AB

A major challenge in advancing treatment for neurodegenerative disorders is to validate novel therapeutic targets with animal models that often partially capture the disease phenotypes. By focusing on Huntington's disease (HD) as a model, the speakers will address the development of novel and diverse mouse genetic models, the recent adoption of best-practice guidelines for using such animal models in the field, and identification of novel disease-modifying targets for HD.





### Repairing and Piloting Neuronal Networks to Control Epilepsy **CME**

Chair: Christophe Bernard, PhD

Co-chair: Ivan Soltesz, PhD

**Monday, Nov. 17, 1:30–4 p.m.**

Walter E. Washington Convention Center: Ballroom A

Current antiepileptic drugs fail in 30 percent of patients and have adverse side effects. This symposium examines two ideal solutions: repairing the circuitry and acting on demand when and where it is needed. After presenting general rules of seizure dynamics, the speakers will show how closed-loop systems can abort seizures with optogenetics and designer receptors exclusively activated by designer drugs. The speakers also will demonstrate how grafts of GABA progenitors can repair the circuitry and discuss the translational value of these findings.

### Infiltration of Innate Immune Cells Into the Injured, Infected, or Inflamed Brain **CME**

Chair: Charles L. Howe, PhD

**Wednesday, Nov. 19, 8:30–11 a.m.**

Walter E. Washington Convention Center: Ballroom B

Innate immune cells such as monocytes, neutrophils, dendritic cells, and mast cells play a fundamental role in neurologic diseases, from infection and epilepsy to traumatic brain injury and multiple sclerosis. There is a need for better understanding of the mechanisms that these cells enter the central nervous system, the effector functions utilized by these cells on arrival in the brain, and the interactions initiated by these cells with brain-resident immune cells.

### Nature, Nurture, and Trajectories to Mental Health **CME**

Chair: Takao K. Hensch, PhD

**Wednesday, Nov. 19, 8:30–11 a.m.**

Walter E. Washington Convention Center: Ballroom A

How do genetic and environmental forces coalesce to shape neural circuits that control sensation, emotion, and cognition? To what extent are symptoms of mental disorders such as anxiety, autism, and schizophrenia rooted in alterations of critical periods in the development of these circuits? This symposium explores developmental origins of mental health and illness at many levels, ranging from molecular and cellular to systems and behavioral studies, using data from mice, monkeys, and humans.

### Gut Microbes and the Brain: Paradigm Shift in Neuroscience **CME**

Chair: Emeran A. Mayer, MD

Co-chair: Rob Knight, PhD

**Wednesday, Nov 19, 1:30–4 p.m.**

Walter E. Washington Convention Center: 146AB

This symposium reviews (1) the possible role of environmentally induced (e.g., diet, antibiotics, hygiene) gut microbial changes in the increase in central nervous system (CNS) disorders; (2) the preclinical evidence demonstrating a role for the gut microbiome in CNS development, including the development of the stress system, pain modulation, and emotional behavior; and (3) preliminary evidence from human subjects linking gut microbial communities and their metabolic products to brain signatures and CNS disorders.

### The Latest on the Ubiquitin Pathway and Central Nervous System Disease **CME**

Chair: Tauseef R. Butt, PhD

**Wednesday, Nov. 19, 1:30–4 p.m.**

Walter E. Washington Convention Center: Ballroom B

This symposium brings together leaders in ubiquitin pathway research applied to translational medicine and drug discovery in neuroscience. The ubiquitin pathway, which governs the half-life, activity, and cell localization of most proteins, has emerged as an important means of controlling both normal brain function and dysregulated function manifested in disorders such as Alzheimer's disease, Parkinson's disease, polyQ disease, synaptic impairment, and neuroinflammation. Researchers who have defined these roles for ubiquitin will evaluate them in terms of their therapeutic potential in neuronal disease.

### Theme D: Sensory and Motor Systems

#### Implicit Processes in Action Control **CME**

Chair: Patrick Haggard, PhD

Co-chair: Hiroaki Gomi, PhD

**Sunday, Nov. 16, 8:30–11 a.m.**

Walter E. Washington Convention Center: Ballroom B

Neural circuits that control action show a broadly hierarchical organization: movement details are delegated to low-level implicit processes. However, the relations between these processes and higher cortical centers for action programming remain poorly understood. This symposium shows how low-level implicit processes are integrated into action control across the full motor range, extending from spinal reflexes to orienting behaviors, manual reaching, and initiation of volitional action.



## Empirical Approaches to Neuroscience and Society Symposium

### Improving Animal Models of Neuropsychiatric Disorders **CME**

Chair: Trevor W. Robbins, PhD

Saturday, Nov. 15, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom A

The relative lack of success of big pharma in producing new drugs for psychiatric disorders has focused attention in part on improving animal models. This symposium focuses on recent examples of innovative molecular, genetic, and behavioral approaches to animal models

of schizophrenia and depression.

The symposium also will provide an industry perspective and suggest new ways of advancing collaboration and development of this field to achieve more effective translation to the clinic.

### Peripheral Gating of Pain Signals by Endogenous Lipid Mediators **CME**

Chair: Daniele Piomelli, PhD

Co-chair: Andrea Hohmann, PhD

Sunday, Nov. 16, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom B

Peripheral pain signals are subject to a dynamic filtering process before they reach the spinal cord. Lipid-derived mediators are emerging as key players in this peripheral gating mechanism. The symposium presents new data showing that bioactive lipids produced at sites of nerve injury or inflammation modulate nociception by interacting with receptors on sensory afferents and neighboring host-defense cells (e.g., macrophages, keratinocytes). The clinical significance of these advances and their contribution to the discovery of safer pain medicines will be discussed.

### The Effects of Hearing Loss on Neural Processing, Plasticity, and Aging **CME**

Chair: Arthur Wingfield, PhD

Co-chair: Jonathan Peelle, PhD

Monday, Nov. 17, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom C

The brain has a remarkable ability to adapt to the degraded auditory signals that accompany hearing loss, with neuroplasticity affecting both low-level and higher-level functions. This session presents findings from animal, human, and computational approaches that demonstrate the cascading effects of hearing loss on higher-level neural processing and the implications for the hearing impaired.

### Auditory Cortical Processing in Real-World Listening **CME**

Chair: Israel Nelken, PhD

Co-chair: Jennifer Bizley, PhD

Tuesday, Nov. 18, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom C

The auditory system has to solve daunting computational problems to create a useful representation of the acoustic environment. The four speakers in this symposium will describe the way the auditory cortex deals with the real-world challenges of listening in complex auditory scenes, using a variety of animal models, auditory computations, and neurophysiological methods.

### OdorSpace: Deciphering Stimulus Space in Olfaction **CME**

Chair: Noam Sobel, PhD

Wednesday, Nov. 19, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom C

Neural coding of color and pitch was probed by titrating light and sound along the physical axes of wavelength and frequency respectively. However, how can we meaningfully probe the neural coding of smell? What is a meaningful olfactory axis? Without this, there is no meaningful way to probe olfaction. This symposium features efforts to reach at such olfactory axes through the study of insects, rodents, genes, and human behavior and perception.

### Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge Exercise, Energy Intake, and the Brain **CME**

Chair: Mark P. Mattson, PhD

Co-chair: Henriette van Praag, PhD

Monday, Nov. 17, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom B

The speakers will describe the cellular signaling and molecular mechanisms that exercise and energy intake modify, the structure and functionality of neural circuits involved in learning and memory, and the central role of a brain-islet glucoregulatory system in protecting against diabetes and obesity. Exercise and intermittent fasting engage adaptive cellular stress responses and improve neuronal bioenergetics, which may promote optimal brain health throughout life.

### Neural and Immune Mechanisms Regulating Resilience to Stress **CME**

Chair: Seema Bhatnagar, PhD

Co-chair: Scott Russo, PhD

Tuesday, Nov. 18, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom A

Despite increasing attention in the last few years toward identifying the neural mechanisms that underlie resilience to stress, our understanding of these mechanisms has been piecemeal and poorly developed. The four presentations in this symposium focus on well-developed and recent advances in knowledge about these neural mechanisms. They represent not only the breadth of current understanding but also converge on neuroinflammatory molecules as important substrates of resilience.

#### Theme F: Cognition and Behavior

##### Studying Human Cognition with Intracranial EEG and Electrical Brain Stimulation **CME**

Chair: Josef Parvizi, MD, PhD

Co-chair: Robert T. Knight, MD

Sunday, Nov. 16, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom C

Speakers at this symposium will highlight some of the latest breakthroughs in human intracranial EEG and electrical stimulation research that has given rise to new waves of discoveries in cognitive neuroscience.

##### Attention, Reward, and Information Seeking **CME**

Chair: Jacqueline Gottlieb, PhD

Co-chair: Antonio Rangel, PhD

Monday, Nov. 17, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom A

Attention is a core cognitive function that is involved in nearly all behaviors. However, despite countless investigations, many aspects of attention remain poorly understood. This symposium highlights recent findings from humans and nonhuman primates that support a view of attention as a decision that is optimized for sampling information. This view can advance our understanding of attention by probing how it is related to uncertainty reduction, learning, and decision-making.

##### Toward Naturalistic Interactive Neuroimaging **CME**

Chair: Talma Hendler, MD, PhD

Co-chair: Gadi Gilam

Tuesday, Nov. 18, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom C

Recent conceptual and empirical developments consistently indicate the need for neuroscientific investigations of brain dynamics during real-time interactions and within naturalistic environments. This symposium combines theoretical, methodological, and experimental imaging perspectives, which address and exemplify these advances by revealing the neural underpinnings of hallmark features of human day-to-day life and illuminate our understanding of socially oriented psychiatric disorders.

##### Neuroscience of Implicit Cognition and Learning: Current Theories and Methods **CME**

Chair: Richard Ivry, PhD

Co-chair: Dezso Nemeth, PhD

Wednesday, Nov. 19, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom A

This symposium provides a state-of-the-art overview of theoretical and empirical developments on the neurocognition of implicit cognition and nonconscious

learning processes from animal to human research. This symposium covers a range of experimental and computational methods to examine implicit processes in a wide range of task domains. A particular focus will be on methods and analytic techniques that dissociate implicit and explicit processes and how these different systems might interact.

#### Theme G: Novel Methods and Technology Development

##### Enhancing Reproducibility of Neuroscience Studies **CME**

Chair: Story Landis, PhD

Co-chair: Thomas Insel, MD

Sunday, Nov. 16, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom A

There are growing concerns about the reproducibility of life science research results and the impact that these concerns could have on neuroscience. The presentations in this symposium summarize common causes of poor reproducibility, describe actions taken by NIH and journals to improve reliability, offer investigator perspectives, and address relevance for training. A panel discussion will include questions from the audience.





# Minisymposia

## Theme A: Development

### Novel RNA Modifications in the Nervous System: Form and Function **CME**

Chair: John Satterlee, PhD

Co-chair: Jonathan Pollock, PhD

Tuesday, Nov. 18, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom B

Modified RNA molecules have recently been shown to regulate nervous system functions. This minisymposium provides an overview of the types and known functions of novel modified RNAs in the nervous system, including (1) methylated RNAs in intellectual disability and dopamine neuron function; (2) circular RNAs in microRNA regulation and specification of neuron fate; and (3) the consequences of adenosine-to-inosine RNA editing in neurological diseases and substance abuse.

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

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

Chair: Marco Brancaccio, PhD

Saturday, Nov. 15, 1:30–4 p.m.

Walter E. Washington Convention Center: 145B

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

### Activity-Dependent Regulation of Synapse Organization and Function by Palmitoylation **CME**

Chair: Elva Diaz, PhD

Co-chair: Shernaz Bamji, PhD

Sunday, Nov. 16, 8:30–11 a.m.

Walter E. Washington Convention Center: 151AB

Palmitoylation is a reversible posttranslational modification to cysteine residues in target proteins. In recent years, a large number of synaptic proteins, including glutamate receptors, auxiliary factors, signaling molecules, and scaffolds, have been shown to be regulated by palmitoylation in an activity-dependent manner to modulate synapse organization and function. This minisymposium highlights recent discoveries in this newly emerging fundamental phenomenon of synapse biology.

### Mitochondria in the Development and Plasticity of Neurons **CME**

Chair: Zheng Li, PhD

Sunday, Nov. 16, 1:30–4 p.m.

Walter E. Washington Convention Center: 146AB

Mitochondria participate in cell metabolism, apoptosis, and  $\text{Ca}^{2+}$  buffering, and due to strong needs for ATP and  $\text{Ca}^{2+}$  handling in neurons, are key for neuronal function. Mitochondrial dysfunction also is implicated in the pathophysiology of brain disorders. This minisymposium discusses new findings about mitochondria, including their roles in neuronal development and plasticity, how their trafficking is regulated in different neuronal compartments, and their abnormalities observed in diseased brains.

## Theme C: Disorders of the Nervous System

### Lipidomics and Lipid Signaling in Neurodegeneration **CME**

Chair: Kimberly B. Kegel-Gleason, PhD

Sunday, Nov. 16, 8:30–11 a.m.

Walter E. Washington Convention Center: 145B

In addition to forming the structural barrier that encompasses cells and organelles, lipids are an integral part of diverse signaling pathways critical to neuronal function and survival. This minisymposium provides a comprehensive introduction to new methods

of impartial identification of lipid changes in brain dysfunction and the current status of hypothesis-driven research on lipid modifying enzymes and neuronal function.

### Emerging Roles of Extracellular Vesicles in the Nervous System **CME**

Chair: Xandra O. Breakefield, PhD

Co-chair: Lawrence Rajendran, PhD

Sunday, Nov. 16, 1:30–4 p.m.

Walter E. Washington Convention Center: 151AB

Exosomes, or extracellular vesicles, have emerged as a new form of intercellular communication in the nervous system's physiology and pathology. These vesicles contain signaling proteins, coding, and regulatory RNAs. They play a critical role in normal function such as regeneration and plasticity. They also have a more sinister role in the propagation of toxic amyloids in neurodegeneration, which is present in Alzheimer's disease, neuroinflammation, and brain tumors.

### Endocannabinoids and Related Mediators in Brain Function **CME**

Chair: Miriam Melis, PhD

Co-chair: Vincenzo Di Marzo, PhD

Monday, Nov. 17, 1:30–4 p.m.

Walter E. Washington Convention Center: Ballroom C

The endocannabinoid system (ECS) participates in neuroprotection, modulation of nociception, regulation of motor activity, neurogenesis, synaptic plasticity, and control of certain phases of memory processing. It also may modulate immune and inflammatory responses, hypothalamic neuropeptide function, and neuronal and astrocyte mitochondrial activity. This minisymposium provides a contextual background on ECS's function in nervous system health and disease.

### The Role of Mitochondrial Dynamics and Brain Metabolism in Health and Disease **CME**

Chair: Eugenia Trushina, PhD

Tuesday, Nov. 18, 8:30–11 a.m.

Walter E. Washington Convention Center: 145B

Mounting evidence suggests a remarkable relationship between mitochondrial

dynamics, function, energy metabolism, and numerous human neurodegenerative diseases. This minisymposium includes the latest findings that will advance the understanding of the molecular mechanisms involved in the regulation of mitochondrial dynamics; the understanding of the relationship between mitochondrial dynamics, brain metabolism, learning, and memory; the development of innovative methods to study dynamic lives of mitochondria; and the development of mitochondria-targeted therapeutic strategies.

### **Trafficking Dysfunction in Neurodegenerative Diseases CME**

**Chair:** Gopal Thinakaran, PhD

**Co-chair:** Huaxi Xu, PhD

**Tuesday, Nov. 18, 8:30–11 a.m.**

Walter E. Washington Convention Center: 146AB

Dynamic transport of proteins between membrane organelles is a fundamental process in a multitude of neuronal functions. Dysfunction of protein transport contributes to pathogenesis of neurodegenerative diseases such as Alzheimer's disease, Huntington's disease, and Amyotrophic Lateral Sclerosis. This minisymposium reviews recent advances in the neuronal protein sorting field, with particular relevance the trafficking of organelles and proteins implicated in neurodegenerative diseases.

### **Bath Salts, Spice, and Related Designer Drugs: The Science Behind the Headlines CME**

**Chair:** Michael H. Baumann, PhD

**Co-chair:** Jenny L. Wiley, PhD

**Tuesday, Nov. 18, 1:30–4 p.m.**

Walter E. Washington Convention Center: Ballroom B

Recently there has been an alarming increase in the nonmedical use of novel psychoactive substances known as "designer drugs." Synthetic cathinones and synthetic cannabinoids are two of the most widely abused classes of designer drugs. This minisymposium presents the most up-to-date information about the molecular sites of action, pharmacokinetics and metabolism, and *in vivo* neurobiology of synthetic cathinones and cannabinoids.

### **Human Subcortical Connectivity with High-Field MRI CME**

**Chair:** Salvatore J. Torrisi, PhD

**Co-chair:** Monique Ernst, MD, PhD

**Wednesday, Nov 19, 1:30–4 p.m.**

Walter E. Washington Convention Center: Ballroom C

Standard neuroimaging has encountered roadblocks from limited spatial resolution. Until recently, functional and structural descriptions of the human connectivity of small subcortical regions have generally been weak. However, advances in fMRI and DTI at high magnetic fields (>3T) permit us to go beyond these limitations. This minisymposium connects researchers at the forefront of investigating the *in vivo* functional and structural connectivity of the human diencephalon and mesencephalon.

### **Theme D: Sensory and Motor Systems**

#### **The Neural Basis of Affective Touch CME**

**Chair:** India Morrison, PhD

**Co-chair:** Hakan William Olausson, MD, PhD

**Saturday, Nov. 15, 1:30–4 p.m.**

Walter E. Washington Convention Center: Ballroom B

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

#### **New Roles for the External Globus Pallidus in Basal Ganglia Circuits and Behavior CME**

**Chair:** Aryn Gittis, PhD

**Monday, Nov. 17, 8:30–11 a.m.**

Walter E. Washington Convention Center: 151AB

The external segment of the globus pallidus (GPe) has long been depicted as a homogenous nucleus within the motor-suppressing "indirect" pathway of basal ganglia. However, recent work has rendered this simplistic view of the GPe obsolete. This minisymposium highlights recent discoveries about the organization

and function of neural circuits in the GPe that influence both motor and nonmotor behaviors in health and disease.

### **The Role of Parvalbumin Neurons in Visual Processing and Plasticity CME**

**Chair:** Aaron W. McGee, PhD

**Co-chair:** Sandra Kuhlman, PhD

**Monday, Nov. 17, 8:30–11 a.m.**

Walter E. Washington Convention Center: 145B

This minisymposium examines the genes and mechanisms that parvalbumin-positive (PV+) interneurons modulate the function and flexibility of visual cortical circuitry. The speakers will present new findings on how PV+ interneurons contribute to visual processing including contextual modulation, gain control, and binocularity, as well as describe the role of several genes that operate within PV+ neurons to regulate cortical synaptic connectivity and visual plasticity.

### **From Objects to Actions: Dynamics in Parietal and Frontal Cortex CME**

**Chair:** Patrizia Fattori, PhD

**Co-chair:** Hans Scherberger, MD

**Monday, Nov. 17, 1:30–4 p.m.**

Walter E. Washington Convention Center: 146AB

How does the brain process object information to guide actions? Novel imaging and electrophysiological studies in frontal and parietal cortex of humans and nonhuman primates emphasize the importance of distributed network activity for the successful transformation of sensory object information to meaningful reaching and grasping actions. Complementary analysis methods have the potential to jointly challenge and reshape current theories of sensorimotor transformation for object manipulation.

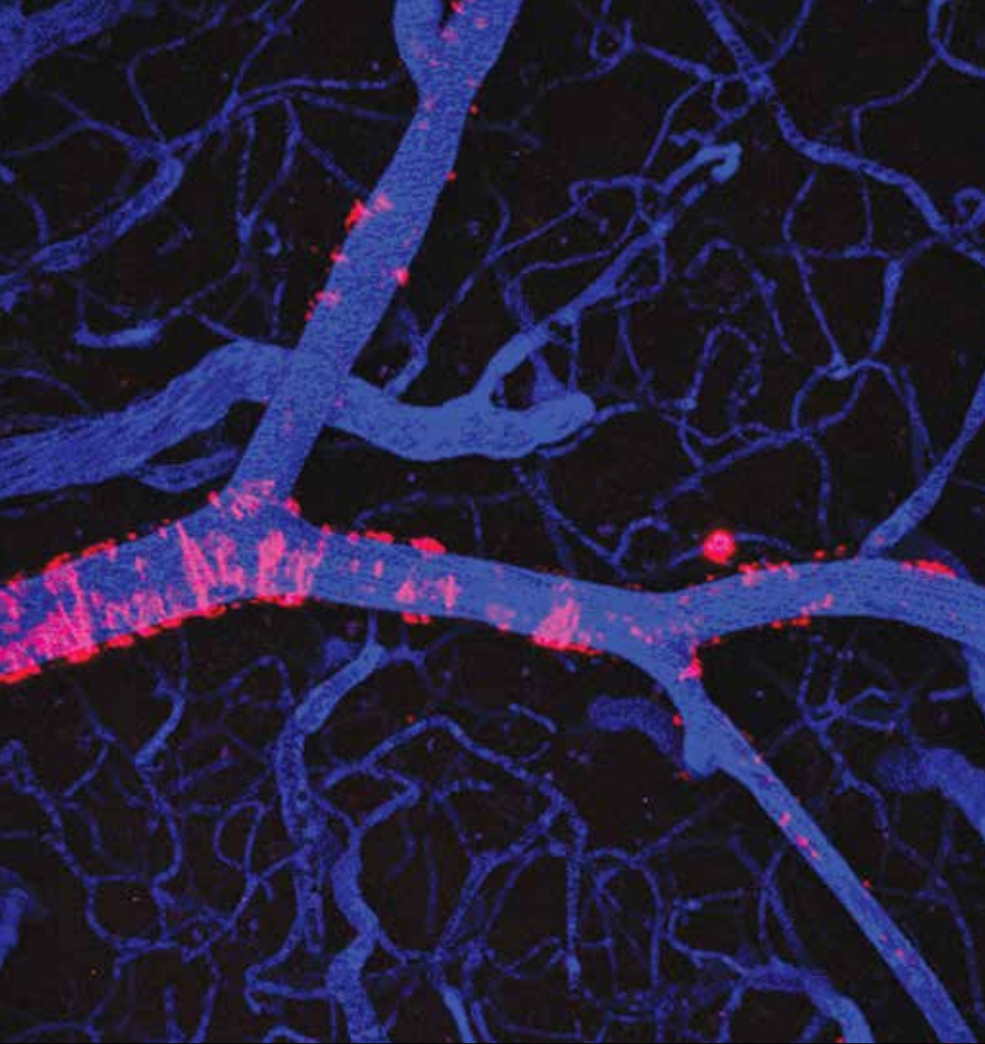
### **Pro-Nociceptive Interactions Between Spinal and Supraspinal Centers in Chronic Pain: Mechanisms and Avenues for Novel Drug Targets CME**

**Chair:** Shafaq Sikandar, PhD

**Wednesday, Nov. 19, 1:30–4 p.m.**

Walter E. Washington Convention Center: 151AB

Recent preclinical and clinical data will support discussion of the role of spinal and supraspinal neuronal and nonneuronal processes that produce and maintain persistent pain (i.e., following neuropathy



or inflammation of somatic and visceral structures). Mechanisms of enhanced central excitability underlying sensory phenotypes of chronic pain patients will be explored. Current and novel pharmacological targets within relevant neurotransmitter systems and nociceptive pathways will be highlighted.

**Theme E: Integrative Systems: Neuroendocrinology, Neuroimmunology, and Homeostatic Challenge**  
**Hypothalamic Control of Autonomic Nervous System Outflow and Obesity: Impact on Multiple Systems CME**

Chair: Colleen M. Novak, PhD

Co-chair: Haifei Shi, PhD

Tuesday, Nov. 18, 1:30–4 p.m.

Walter E. Washington Convention Center: 146AB

Alterations in the central control of autonomic nervous system activity modulate metabolism and metabolic disease risk and sequelae. There has been renewed interest in brain — specifically hypothalamic — modulation

of autonomic drive, especially as it relates to thermogenesis and lipid and glucose metabolism. This minisymposium explores how diet- and obesity-related changes in autonomic activity impact multiple physiological systems, and probes common pathways among these systems as they relate to obesity.

**Is There a Neurobiological Basis for Food Addiction? CME**

Chair: Ivan E. De Araujo, PhD

Co-chair: Ralph DiLeone, PhD

Wednesday, Nov. 19, 8:30–11 a.m.

Walter E. Washington Convention Center: 146AB

This minisymposium discusses the mechanisms that high-calorie foods affect and alter dopamine pathways, allowing for the emergence of inflexible and compulsive eating behaviors. The presenters will provide an in-depth coverage of the latest research on the identity of the physiological factors and neural circuits linking metabolic signaling to dopamine/striatal function.

**Theme F: Cognition and Behavior**

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

Chair: Biyu He, PhD

Co-chair: Karim Jerbi, PhD

Saturday, Nov. 15, 1:30–4 p.m.

Walter E. Washington Convention Center: 146AB

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



**Advances in Understanding Mechanisms of Cortico-Thalamic Interactions in Cognition and Behavior CME**

Chair: Yogita Chudasama, PhD

Co-chair: Anna S. Mitchell, PhD

Sunday, Nov. 16, 8:30–11 a.m.

Walter E. Washington Convention Center: 146AB

Although it is customary to think of the thalamus as a relay that enables corticocortical communication, converging methods of neuroanatomy, neurophysiology, and optogenetics have highlighted the important contribution of the thalamus as a structure whose activities regulate cognitive behavior. This minisymposium presents an exciting array of findings that are making seminal contributions to our understanding of systems-level mechanisms affording new insight and perspectives into the so-called cognitive thalamus.

**Characterizing the Roles of Fronto–Cingulo–Subcortical Circuits in Pain, Emotion, and Cognition CME**

Chair: David Seminowicz, PhD

Monday, Nov. 17, 1:30–4 p.m.

Walter E. Washington Convention Center: 145B

Circuits involving the prefrontal and cingulate cortices along with subcortical areas (e.g., striatum, amygdala, hippocampus, midbrain) are involved in the expression and modulation of pain, cognition, and emotion. Although there is considerable overlap in the regions involved, data from electroencephalography (EEG) and structural and functional MRI from healthy and diseased brain states demonstrate the unique circuits for regulating cognitive, emotional, and perceptual processes.

**Understanding Mechanisms and Functions of Cortical Rhythms by Selective Interventions CME**

Chair: Cyriel M. Pennartz, PhD

Monday, Nov. 17, 1:30–4 p.m.

Walter E. Washington Convention Center: 151AB

Cortical rhythms have been associated with a range of cognitive and regulatory functions such as perception, learning, attention, and spatial navigation. However, most studies so far have been correlative or manipulated oscillations by systemic treatment. This minisymposium presents new insight in

mechanisms and functions of neocortical and hippocampal oscillations based on selective and time-restricted interventions, combining electrophysiology, behavior and optogenetics, or pharmacology.

**Noradrenergic Function and Dysfunction: New Insight From Selective Genetic Targeting of Locus Coeruleus CME**

Chair: Elena M. Vazey, PhD

Tuesday, Nov. 18, 1:30–4 p.m.

Walter E. Washington Convention Center: 145B

The broad projection network from the brain nucleus locus coeruleus (LC) provides diverse functions in arousal, mood, and cognitive processes. However, selectively targeting the small brainstem LC nucleus has been challenging. This minisymposium highlights recent advances in genetic strategies to specifically manipulate LC–norepinephrine (LC–NE) neurons and define functions in reward, neural development, anxiety, and pain.

**Imaging and Segmentation of Hippocampal Subfields in Humans: Relevance to Cognition and Disease CME**

Chair: Geoffrey A. Kerchner, MD, PhD

Co-chair: Paul Yuschkevich, PhD

Wednesday, Nov. 19, 8:30–11 a.m.

Walter E. Washington Convention Center: 145B

The hippocampus is composed of discrete subfields that contribute differentially to memory processing and exhibit selective vulnerability to illnesses like Alzheimer's disease. Advanced high-resolution imaging has fueled recent studies of hippocampal subfields in humans. In this minisymposium, presenters will showcase new insight into the human hippocampus, including how it functions normally to subserve memory, how it degenerates in disease, and what challenges and opportunities lay ahead.

**Theme G: Novel Methods and Technology Development In vivo Reprogramming for Brain Repair CME**

Chair: Gong Chen, PhD

Co-chair: Chun-Li Zhang, PhD

Monday, Nov. 17, 8:30–11 a.m.

Walter E. Washington Convention Center: Ballroom B

Induced pluripotent stem cell technology has made it possible to trans-differentiate one cell type into another. However, most of these studies were carried out *in vitro*



and their clinical relevance is unclear. This minisymposium presents a series of cutting-edge work using trans-differentiation technology to reprogram glial cells into neurons in injured or diseased mouse brain *in vivo* for brain repair.

**Transgenic Primate Models of Human Brain CME**

Chair: John H. Reynolds, PhD

Co-chair: Partha P. Mitra, PhD

Wednesday, Nov. 19, 8:30–11 a.m.

Walter E. Washington Convention Center: 151AB

One of the mouse model's great strengths is its array of genetic tools available for probing the brain. However, there are considerable anatomical, physiological, and behavioral differences between mice and humans, which, in some areas of inquiry, limit the degree that insight derived from the mouse can be applied to understanding the human brain. This minisymposium outlines recent developments that make it feasible to apply genetic tools borrowed from the mouse to the nonhuman primate.

# Workshops, Meetings & Events

## Professional Development, Advocacy, and Networking Resources

### Friday, November 14

#### Neurobiology of Disease Workshop

##### Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits

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

8 a.m.–5 p.m.

Walter E. Washington Convention Center: Ballroom C

**Contact:** pdgp@sfn.org

*Support contributed by: National Institute of Neurological Disease and Stroke*

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

#### Short Course #1

##### Advances in Multineuronal Monitoring of Brain Activity

**Organizer:** Prakash Kara, PhD

8 a.m.–6 p.m.

Walter E. Washington Convention Center: Ballroom A

**Contact:** pdgp@sfn.org

*Partial Support contributed by: Lundbeck Research USA*

New tools for measuring the activity of entire neuronal populations at single-cell resolution are quickly advancing our knowledge of the macro- and micro- circuits that support mammalian behavior. For instance, genetically encoded sensors, delivered virally or transgenically, allow monitoring of spiking and synaptic activity in specific cell types while optical prisms allow simultaneous two-photon functional imaging of all layers of neocortex. Single neuron responses can now be imaged simultaneously across

multiple brain areas or in a 3-D volume. Importantly, new strategies also are being devised for single neuron resolution imaging in the macaque monkey brain. Finally, state-of-the-art, multi-electrode recordings are still a gold standard to monitor neuronal populations in behaving animals.

#### Short Course #2

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

**Organizer:** H. Sebastian Seung, PhD

8:30 a.m.–6 p.m.

Walter E. Washington Convention Center: Ballroom B

**Contact:** pdgp@sfn.org

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

### Saturday, November 15

#### Meet-the-Expert Series

8–9:15 a.m., 9:30–10:45 a.m.

Renaissance Washington, DC Meeting Rooms

**Contact:** pdgp@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 offers an opportunity for

 **Preregistration Required**

 **Course Fee**

 **Professional Development**

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## Workshop Fees

### Short Course (Includes lunch and syllabus book)

|                              |       |
|------------------------------|-------|
| Student member .....         | \$140 |
| Student nonmember .....      | \$170 |
| Postdoctoral member .....    | \$210 |
| Postdoctoral nonmember ..... | \$255 |
| Faculty member .....         | \$275 |
| Faculty nonmember .....      | \$335 |

### Neurobiology of Disease Workshop \$35

(Includes breakfast, lunch, and reception)

**Note:** Preregistration is required for Short Courses and the Neurobiology of Disease Workshop. Visit [SfN.org](http://SfN.org) to register.

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

#### Session 1, 8–9:15 a.m.

### John Donoghue, PhD

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

Renaissance Washington, DC: Room 5

Neuroscience research is driven by desire, both to understand how neurons and nervous systems function and to use that knowledge to better the lives of those who have, or may acquire, nervous systems disorders. Neuroscience research is driving the development of new tools that expand our ability to investigate animal models and human brains, as well as providing innovative new approaches to treat disorders and restore lost function. BrainGate, a brain-computer interface (BCI) technology, is an example of a human application of knowledge and tools that emerged from a basic neuroscience lab and enabled pilot human clinical trials of a BCI. The BrainGate system is being created to help people with paralysis gain independence and control. Donoghue will describe how the quest to understand how cortical circuits generate behavior led to the BrainGate project and how this project is

opening a door to human cortical function not previously available. The path led a neurobiologist into the startup world and back to an interdisciplinary group in an academic research program that is a fledgling model for human neuroscience.

#### **Julie Fiez, PhD**

##### **Building a Program of Interdisciplinary Research That Bridges Neuroscience and Education**

Renaissance Washington, DC: Room 4

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

#### **Samer Hattar, PhD**

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

Renaissance Washington, DC: Room 2

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

#### **Helen Mayberg, MD**

##### **Studying Human Neuropsychiatric Disease Circuits From a Therapy Perspective**

Renaissance Washington, DC: Room 8

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

#### **Peter Strick, PhD**

##### **The Mind–Body Connection**

Renaissance Washington, DC: Room 9

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

#### **Feng Zhang, PhD**

##### **Editing the Genome to Understand Genetic Contributions of Disease**

Renaissance Washington, DC: Room 12

From yogurt bacteria to genome editing, this discussion examines the development and applications of the Cas9 nuclease from the microbial immune system CRISPR for making a precise alteration of the mammalian genome. This new technology is enabling the generation of more realistic disease

models and broadening the number of genetically-tractable organisms that can be used to study a variety of neurological processes. The Cas9 nuclease also can be modified to modulate transcription, alter epigenetic states, and track the dynamics of chromatin in living cells. The speaker also will look at the on-going challenges as well as future prospects of the technology.

[Session 2, 9:30–10:45 a.m.](#)

#### **Rui M. Costa, DVM, PhD**

##### **The Acting Brain**

Renaissance Washington, DC: Room 2

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

#### **Diane Lipscombe, PhD**

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

Renaissance Washington, DC: Room 4

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

It never gets old to watch single channel currents, in real time, in a stochastic dance across the screen. The more you watch the more you see — an unquestionable truism in science and an especially apt description of the speaker’s current research on cell-specific control of calcium ion channel splicing. Calcium ion channel genes have the capacity to generate numerous isoforms. But, does each have unique function? This session reviews experimental approaches,



## Workshops, Meetings & Events (continued)

### Professional Development, Advocacy, and Networking Resources

including exon-specific targeting, asking if individual sites of alternative splicing impact behavior and if isoforms have therapeutic value.

#### Mark Schnitzer, PhD

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

Renaissance Washington, DC: Room 5

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

#### Michal Schwartz, PhD

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

Renaissance Washington, DC: Room 8

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

#### Kenton Swartz, PhD

##### Exploring Ion Channel Structures and Gating Mechanisms Using Tarantula Toxins

Renaissance Washington, DC: Room 9

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

#### Careers Beyond the Bench

**Organizer:** Elisabeth Van Bockstaele, PhD

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

**9–11 a.m.**

Walter E. Washington Convention Center: 207A

**Contact:** pdgp@sfn.org

The Careers Beyond the Bench workshop will focus on crafting your individual career trajectory in a nonacademic setting. An emphasis will be placed on building credentials for successful job-seeking, strategies for networking, and providing tips for a smooth transition from an academic setting. Panelists will address the following topics: the importance of creating an "individual development plan" for careers outside of academia; how to talk to your advisor about a career shift, including timing and best practices; undertaking the

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job search, such as the value of networking; working with recruiters; or considering another degree; and the relative effectiveness of social media and face-to-face networking in making a career transition.

#### Success in Academia: Different Strategies for Different Stages

**Organizer:** Tracy Bale, PhD

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

**9–11 a.m.**

Walter E. Washington Convention Center: 207B

**Contact:** pdgp@sfn.org

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

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

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

**Panelists:** Cara Altimus, PhD; Lori McMahon, PhD

**1–2 p.m.**

Walter E. Washington Convention Center: 207A

**Contact:** pdgp@sfn.org

Students, postdocs, and others new to the SfN annual meeting are invited to this session where experienced participants will share tips on how to get the most out of your annual meeting experience, both during and after Neuroscience 2014. Whether you are looking for networking strategies or simply ways to make your experience productive and enjoyable, this session will be beneficial. Representatives from the SfN Program

Committee, SfN Committee on Neuroscience Departments and Programs, the Faculty for Undergraduate Neuroscience, and an institutional postdoctoral association will provide strategies for navigating the annual meeting, discuss professional development tools available during and after the meeting, suggest ways to find and use a mentor, and answer questions from session participants.

### Graduate School Fair 📅

**Saturday, Nov. 15, 1–3 p.m.**

**Sunday, Nov. 16 — Tuesday, Nov. 18, noon–2 p.m.**

Walter E. Washington Convention Center: Hall E

**Contact:** ndp@sfn.org

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

### Brain Awareness Campaign Event

#### Communicate Your Science 📅 🗣️

**3–4:30 p.m.**

Walter E. Washington Convention Center: Hall E

**Contact:** baw@sfn.org

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

### Mentor-Mentee Interaction: How to Have a Difficult Conversation 📅 🗣️

**Organizers:** Michael Levine, PhD;

Jennifer Raymond, PhD; Cheryl Sisk, PhD

**Panelist:** Samantha Sutton, PhD

**3–4:30 p.m.**

Walter E. Washington Convention Center: 103B

**Contact:** pdgp@sfn.org

The mentor/mentee relationship is a crucial component in the training of neuroscience graduate students and postdoctoral fellows. Great relationships don't "just happen." They require work and difficult conversations about pressing issues. Most mentors and mentees shy away from having difficult conversations, but in this seminar, Samantha Sutton, PhD, will teach you how

to skillfully design these conversations to be positive, productive experiences. You will learn the tools to resolve issues with grace and to build strong partnerships no matter how "quirky" the other person may seem. You also will participate in role-plays in the second hour of the workshop in order to sharpen these tools. You will leave the session with a set of tangible skills on how to develop strong relationships with your mentor or mentee and other scientific colleagues, which will powerfully advance your research and career goals.

### Research Careers in Industry and the Private Sector 📅 🗣️

**Organizer:** Gretchen Snyder, PhD

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

**3–5 p.m.**

Walter E. Washington Convention Center: 207B

**Contact:** pdgp@sfn.org

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

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

**Organizer:** Stephen Korn, PhD

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

**3:30–5 p.m.**

Walter E. Washington Convention Center: 207A

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

### Diversity Fellows Poster Session 📅 🗣️

**6:30–8:30 p.m.**

Walter E. Washington Convention Center: Hall E

**Contact:** nsp@sfn.org

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

### International Fellows Poster Session 📅 🗣️

**6:30–8:30 p.m.**

Walter E. Washington Convention Center: Hall E

**Contact:** pdgp@sfn.org

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

### Travel Award Recipients Poster Session 📅 🗣️

**6:30–8:30 p.m.**

Walter E. Washington Convention Center: Hall E

**Contact:** awards@sfn.org

*Partial support contributed by: Novartis Institutes for BioMedical Research*

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

### Career Development Topics:

#### A Networking Event 📅 🗣️ 🗣️

**7:30–9:30 p.m.**

Walter E. Washington Convention Center: Hall E

**Contact:** pdgp@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, and many others. Participants from diverse backgrounds, fields, and work sectors are encouraged to attend.

## Workshops, Meetings & Events (continued)

### Professional Development, Advocacy, and Networking Resources

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

#### Sunday, November 16

##### A Guide to Publishing and Responsible Conduct

**Organizers:** Verity Brown, PhD; Shamus O'Reilly, PhD  
**Panelists:** Vincenzo Crunelli, PhD; Valina Dawson, PhD  
9–11 a.m.

Walter E. Washington Convention Center: 207A

**Contact:** pdgp@sfn.org

Journals form a core part of the process of scholarly communication and are an integral part of scientific research itself. Journals exist to disseminate new research findings and the latest new thinking to scholarly and professional communities worldwide. During this workshop, presenters will provide a rare opportunity to gain insight into journal publishing from publishing staff and editors. This session covers a myriad of topics, including authorship, reviewing, open-access publishing, ethics, and innovation. There will be ample opportunity for questions.

##### Chapters Workshop

##### Chapter Value: Engaging Members and the Community

**Organizer:** James W. Geddes, PhD  
**Panelists:** Cecilia M. Fox, PhD; Adam O. Ghoweri; Jordan Trecki, PhD  
11:30 a.m.–1 p.m.

Walter E. Washington Convention Center: 103AB

**Contact:** chapters@sfn.org

Learn from your peers who have proven success in reaching and engaging their community in neuroscience learning and events year-round. Hear from chapter representatives and student leaders on initiatives that helped make their chapter consistently successful in outreach. Also hear about successfully leveraging local resources to carry out chapter events on a limited budget and finding additional funding. After these short presentations, attendees will hold roundtable discussions about member and community engagement. Don't miss this opportunity to unlock the value in your community and, in turn, heighten the value of your chapter for members and the public.

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

**Organizers:** Mark Baxter, PhD; Rebecca Shansky, PhD  
**Panelists:** Kathleen Anderson, PhD; Joanne Berger-Sweeney, PhD; Liisa Galea, PhD; Matthew Hill, PhD; Benjamin Saunders, PhD  
11:30 a.m.–1 p.m.

Walter E. Washington Convention Center: 207B

**Contact:** pdgp@sfn.org

Networking can have a powerful effect on a scientist's career trajectory. Presenters will share tips and advice for successful networking, as well as vignettes from their own careers about where networking has been key to their success. They will highlight different venues for networking (conferences, social media, intradepartmental, etc.). Discussion time will allow workshop participants to learn from each other's networking successes (and failures).

##### Social Issues Roundtable

##### The Neuroscience of Gaming

**Organizer:** Jonathan Moreno, PhD  
**Speakers:** Martha J. Farah, PhD; Adam Gazzaley, MD, PhD; Daniel Greenberg; Mark Griffiths, PhD  
1–3 p.m.

Walter E. Washington Convention Center: 201

**Contact:** advocacy@sfn.org

A countless number of people from all demographics use electronic games daily, but are mostly unaware how programmers use neuroscience concepts in the game designs. Organized by the Institute of Medicine Neuroscience Forum, this roundtable explores the use of neuroscience in gaming, with an emphasis on scientific, ethical, and societal issues. Participants will explore design features derived from neuroscience concepts while considering both the positive and negative implications of the use of neuroscience in design. Finally, the roundtable will discuss potential ethical implications and policy outcomes that may protect gamers from design features that may have negative outcomes.

##### News You Can Use: Funding Opportunities for Neuroscience Research and Training at the NSF

**Organizer:** Jim Deshler, PhD  
**Panelists:** Mary Ann Asson-Batres, PhD; David Coppola, PhD; Mary Ann Horn, PhD; Bill Miller, PhD; Sri Raghavachari, PhD; Edda Thiels, PhD; Betty Tuller, PhD; Ken Whang, PhD; Terry Woodin, PhD  
2–4 p.m.

Walter E. Washington Convention Center: 207A

**Contact:** pdgp@sfn.org

Hear the latest word from NSF program officers and deputy/division directors on funding opportunities for neuroscientists, including all areas of fundamental neuroscience research and networking, education and training, career development opportunities, and large-scale multidisciplinary funding mechanisms. Talk with neuroscientists who have been successful in receiving NSF funding and gain general information about the agency, its role in the BRAIN Initiative, the review process, and tips for writing successful proposals, including guidance for developing a Data Management Plan and a Broader Impacts description, both of which are required for all NSF proposals. NSF maintains an exhibit booth featuring relevant publications and video presentations. Program officers will be available on-site for extended conversation.

##### Internationalizing Your Research, Training, and Funding Experience

**Organizers:** Laura Colgin, PhD; Ketema Paul, PhD; Michael Zigmund, PhD  
**Panelists:** Beth Fischer, PhD; Shigang He, PhD; Yuan Lin, PhD; Kathy Michels, PhD; Vijayalakshmi Ravindranath, PhD; Gonzalo Torres, PhD; Desire Tshala-Katumbay, PhD  
2–5 p.m.

Walter E. Washington Convention Center: 207B

**Contact:** pdgp@sfn.org

This workshop focuses on several topics of direct relevance to anyone wishing to internationalize their training and research.



Topics include the value of an international research experience and advice for selecting a lab and obtaining funding. The workshop includes speaker presentations and a panel. Representatives from public and private funding agencies will be available for discussion.

### Monday, November 17

#### How to Effectively Communicate Your Science to the Public 📱 📺 📢

**Organizer:** Scott M. Thompson, PhD

**Panelists:** Stuart Firestein, PhD; Tiffany Lohwater; Jane Nevins; Elaine Snell

**9–11 a.m.**

Walter E. Washington Convention Center: 207B

**Contact:** baw@sfn.org

This workshop provides scientists with strategies and advice on how to effectively communicate neuroscience to general audiences. Presenters will focus on how to write about science, speak publicly and deliver scientific presentations, and communicate using various forms of social media.

#### Teaching Neuroscience: Online Learning 📺

**Organizer:** Richard Olivo, PhD

**Panelists:** David Cox, PhD; Patricia Dinneen, MDE; Kristen Frenzel, PhD; Kurt R. Illig, PhD; Henry A. Lester, PhD; Samuel S. Wang, PhD

**9–11 a.m.**

Walter E. Washington Convention Center: 207A

**Contact:** pdgp@sfn.org

Online courses are suddenly on everyone's agenda, but traditional courses also can benefit from online components. This year's teaching workshop discusses "blended learning" that mixes live classes and web instruction, continues with how to find useful online resources, and ends with a glimpse of neuroscience massive open online courses (MOOCs).



### Tuesday, November 18

#### Animals in Research Panel

#### Global Ramifications of New Animal Rights Tactics 📢 📺

**Organizer:** Michael E. Goldberg, MD

**Panelists:** Richard Cupp, JD; Patricia Foley, DVM; Wendy Jarrett; Jeff Kordower, PhD

**Noon–2 p.m.**

Walter E. Washington Convention Center: 103A

**Contact:** advocacy@sfn.org

Yesterday's terrorism tactics have given way to a new breed of activism with implications for all researchers that work with animal models. Today's tactics include misuse of governmental and regulatory processes. This not only drives up the cost of research but also forces researchers out of the lab to respond to unfounded claims. These tactics undermine the legitimate role of a strong regulatory framework. This panel will explore the global implications for biomedical research and how this new breed of activism impacts scientists.

#### Celebration of Women in Neuroscience Luncheon 📺 📢

**Noon–2 p.m.**

Renaissance Washington, DC: Grand Ballroom North and Central

**Contact:** cwin@sfn.org

The annual luncheon honors women leaders in neuroscience. Marian Joëls, PhD, Past President of the Federation of European Neuroscience Societies, will deliver a keynote address followed by a roundtable group discussion on a topic related to women in neuroscience. Space is limited. Registration is required. For more information, visit [SfN.org/cwinrsvp](http://SfN.org/cwinrsvp).

#### Public Advocacy Forum

#### Implications for Science Funding in an Era of Global Brain Initiatives 📢 📺

**Organizer:** Anne Young, MD, PhD

**Panelists:** Sarah J. Caddick, PhD; Miyoung Chun, PhD; William T. Newsome, PhD; Hideyuki Okano, MD, PhD

**3–5 p.m.**

Walter E. Washington Convention Center: 201

**Contact:** advocacy@sfn.org

Neuroscience has been identified as a priority through initiatives in the U.S., Europe, Asia, and other global programs. At a time of flat or declining budgets for biomedical research throughout much of the world, what are the implications of



these initiatives for the future of science funding? What are the implications as researchers increasingly turn to alternative sources of funding, including private sector, nonprofit, and crowd funding? What effects may these shifts in funding sources have on individual research projects, primary investigators, universities, businesses, and science as a whole?

#### SfN Members' Business Meeting 📢

**6:45–7:30 p.m.**

Walter E. Washington Convention Center: 202B

**Contact:** info@sfn.org

Participate in a key forum to share your thoughts and suggestions with SfN leadership while learning about your professional society's latest accomplishments. Learn how to get involved in SfN committees. Enjoy camaraderie with other SfN members as you enjoy light refreshments.

#### Graduate Student Reception 📢

**9 p.m.–midnight**

Renaissance Washington, DC: Grand Ballroom

**Contact:** meetings@sfn.org

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

# SfN-Sponsored Socials

**Sunday, Nov. 16, 6:45-8:45 p.m.**

## Cajal Club Social

### Social with Brief Presentation

**Chair:** Christopher A. Walsh, MD, PhD

**Co-chair:** Dennis D. O'Leary, PhD

**Guests:** V. Casagrande; P. Hof; J. Kaas; C. A. Mason; P. Rakic; C. Ribak; J. Rubenstein; L. Shapiro; G. M. Shepherd; L. Swanson; H. Zeng  
Renaissance Washington, DC: Renaissance Ballroom East

Join us for informal socializing along with the presentation of Krieg Cortical Kudos Awards to deserving neuroscientists at senior, middle, and early career stages. The Palay Award also will be presented. There will be a brief presentation by Hongkui Zeng (Allen Institute for Brain Science) and Jon Kaas (Vanderbilt University) on high-throughput cerebral cortical connectomics and its importance in how we think about cerebral cortical areas and cortical function.

## Cell Death and Cell Stress Social

### Purely Social

**Chair:** Jochen H. Prehn, PhD

**Guests:** C. Culmsee, V. Dawson, M. Deshmukh, R. Freeman, L. Greene, J. Ham, E. Jonas, E. Mandelkow, B. McLaughlin, N. Plesnila, B. Polster, R. Ratan, R. Swanson, C. Troy, B. Wolozin  
Renaissance Washington, DC: Meeting Rooms 10 and 11

During their life time, neurons are often exposed to different types of stress. While moderate stress often boosts neuronal function, severe stress may be detrimental and lead to degenerative changes and, ultimately, the death of the neuron. Join experts in the field discussing how stress signaling leads to survival or cell death, and the mechanisms and differences of the multiple forms of cell death such as apoptosis, necroptosis, pyroptosis, and necrosis, to name a few.

## Clinical Neurosciences Social: What Is Clinical Neuroscience and How Do I Get There?

### Purely Social

**Chair:** David G. Standaert, MD, PhD

**Guests:** T. Dawson, H. Federoff, D. Fink, W. Koroshetz, J. Meador-Woodruff, S. Przedborski, A. Young  
Renaissance Washington, DC: Congressional Ballroom A and C

There will be brief introductions of the guests but no presentations. The goal is to provide an opportunity for those at early- and mid-career stages to meet established and senior clinical investigators and discuss the joys and challenges of a career in clinical neuroscience.

## Hearing and Balance Social

### Purely Social

**Chair:** Stephen Lomber, PhD

Renaissance Washington, DC: Meeting Rooms 12, 13, and 14

Join your fellow hearing and balance colleagues for an informal evening. We also welcome all alumni from the first four Gordon Research Conferences and Seminars on the Auditory System for an informal reunion.

## Neuroethology/Invertebrate Neurobiology Social

### Purely Social

**Chair:** Wolfgang Stein, PhD

Renaissance Washington, DC: Meeting Rooms 8 and 9

Celebrate neuroethology, invertebrate neuroscience research, and the role of the nervous system in producing behavior. Come meet old friends and make new ones. Postdocs and students are encouraged to drop in to socialize and network.

## Spinal Cord Injury Social

### Social with Brief Presentation

**Chair:** Jane Roskams, PhD

**Co-chair:** Moses Chao, PhD

**Guests:** P.J. Brophy, M.B. Bunge, P. Casaccia, S. Firestein, Z. He, C. Henderson, C.A. Mason, R.H. Miller, R. Ratan, J.D. Rothstein, J. Salzer, M.E. Schwab, J. Silver, O. Steward, M.T. Tessier-Lavigne, M.H. Tuszynski, F. Walsh

Renaissance Washington, DC: Mount Vernon Square A and B

Join us for our annual SCI social. Meet and network with scientists across the globe. Also, celebrate the life of Marie Filbin, who lost her fight with cancer on January 15, 2014. Her findings indelibly changed the field of central nervous system regeneration and influenced scores of investigators who studied the effects of myelin on axonal regeneration. Graduate students, postdoctoral fellows, and her colleagues from around the world are invited. There will be short speeches and presentations. Join your colleagues in a relaxed and social atmosphere.

## Synapses and Excitatory Amino Acids Social

### Purely Social

**Chair:** Jeffrey Diamond, PhD

Renaissance Washington, DC: Renaissance Ballroom West B

Pre vs. post? That is so 1990s. Come have a drink, and let's find something new to fight about.

**Monday, Nov. 17, 6:45-8:45 p.m.**

## Alzheimer's and Related Dementias Social

### Purely Social

**Chair:** Brian C. Kraemer, PhD

**Co-chair:** Chad Dickey, PhD

Renaissance Washington, DC: Congressional Ballroom A

Catch up and network with neurodegenerative disease researchers studying Alzheimer's disease and related dementia disorders. This will be a social event with cash bar.

## Behavioral Neuroendocrinology Social

### Social with Brief Presentation

**Chair:** Cheryl Sisk, PhD

Renaissance Washington, DC: Renaissance Ballroom East

Meet and speak with friendly colleagues interested in hormones, brain, and behavior. Whether you are new to the field or an old-timer, this is a fun opportunity to socialize with others studying these oh-so-powerful molecules. This is a social occasion at which the winner of the Society for Behavioral Neuroendocrinology's 2014 Frank A. Beach Award will be announced.

## **Developmental Neurobiology Social**

### **Purely Social**

**Chair:** Patricia Jensen, PhD

**Co-chair:** Daniel Goldowitz, PhD

Renaissance Washington, DC: Meeting Rooms 10 and 11

Come have a drink, relax, and meet with friendly colleagues with a common interest in the developing nervous system. This purely social event is meant to facilitate interactions between scientists. This is an excellent opportunity for students and postdoctoral fellows to interact with prominent neuroscientists in a relaxed atmosphere. Everyone is welcome!

## **Faculty for Undergraduate Neuroscience Social**

### **Social with Brief Presentation**

**Chair:** Noah Sandstrom, PhD

**Co-chair:** Jeffrey Smith, PhD

**Guest:** L. Gabel

Renaissance Washington, DC:

Grand Ballroom North and Central

Socialize and exchange ideas with others interested in undergraduate neuroscience research and education. Undergraduates will present posters of their research and several awards will be announced including the FUN Student Travel Awards. See the FUN website for travel award information and registration information for poster presentations ([funfaculty.org](http://funfaculty.org)).

## **Hippocampus Social**

### **Social with Brief Presentation**

**Chair:** Denise Manahan-Vaughan, PhD

**Guests:** Z. Bashir, B. Christie, J. Disterhoft, H. Eichenbaum, K.J. Jeffery, R. Kesner, J. Knierim, T.J. McHugh, R.G.M. Morris, C. Ranganath, M. Rugg, W. Suzuki, H. Tanila, C. Zorumski  
Renaissance Washington, DC: Congressional Ballroom B

Fascinated by the hippocampus? This social event will give you the opportunity to interact with outstanding hippocampal researchers, meet old friends, and make new ones. Join us to exchange ideas, get inspiration for your research, think about new collaborations, or maybe even line up your next position. All of this fun in a relaxed atmosphere with music and drinks.

## **Ingestive Social**

### **Purely Social**

**Chair:** Barry E. Levin, MD

**Guests:** H-R. Berthoud, L. Rinaman, A. Watts  
Renaissance Washington, DC: Congressional Ballroom C

Socialize, network, and take a break from the hectic SfN annual meeting with friends and colleagues. We expect a wide range of internationally established investigators from academia and industry, students, and postdoctoral fellows working in ingestive behavior and allied fields of obesity, diabetes, and eating disorders, using model systems that include flies, worms, mammals, and humans... truly a diverse group of scientists and interests. Please plan to attend, for a few hours or a few minutes, to mix and mingle.

## **Music Social**

### **Purely Social**

**Chair:** William J. Pearce, PhD

**Co-chair:** Joe C. LaManna, PhD

Renaissance Washington, DC: Mount Vernon Square A and B

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. The program fills quickly and there are no walk-ons. 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 and Data Highlight**

### **Social with Brief Presentation**

**Chair:** Alan F. Sved, PhD

Renaissance Washington, DC: Renaissance Ballroom West A

This social event is a gathering of scientists interested in the role of the autonomic nervous system and the neural systems involved in respiratory regulation in health and disease such as hypertension, sleep apnea, metabolic syndrome, obesity, and many others. The gathering is meant to facilitate informal interactions between scientists at all career levels and highlight some of the most transformational research in this field. The social will highlight some of the abstracts presented at this year's meeting.

## **Oculomotor and Vestibular Systems Social**

### **Purely Social**

**Chair:** Terrence R. Stanford, PhD

**Guests:** M. Basso, B. Corneil, D. Crawford, K. Cullen, P. Gamlin, N. Gandhi, J. Groh, P. May, D.P. Munoz, E. Salinas, J. Schall, M. Sommer  
Renaissance Washington, DC: Meeting Room 15

Drink and munch snacks among oculomotor and vestibular neuroscientists. Get a preview of the upcoming Gordon Research Conference (GRC) and Seminar (GRS) on eye movements to be held July 25-31 at Bentley University. Past, present, and future chairs will be on hand to chat about the meeting dedicated solely to all things oculomotor. Students and postdoctoral fellows can learn more about the GRS or simply hang out with established neuroscientists in a relaxed, informal setting. All are welcome.

## **Pavlovian Society Social**

### **Purely Social**

**Chair:** Matt Lattal, PhD

**Guests:** A. Delamater, F. Helmstetter

Renaissance Washington, DC: Meeting Room 16

Get together with scientists from all academic levels (student to emeritus) working at all levels of analysis (molecular to behavioral) with a shared interest in learning, memory, and emotion. We also welcome Tolmanians and other non-Pavlovians who enjoy consummatory conditioned responses evoked by cues associated with snacks and beverages.

## **Psychopharmacology Social: Your Brain on Drugs**

### **Purely Social**

**Chair:** Jared W. Young, PhD

**Co-chair:** Stan Floresco, PhD

**Guests:** S. Ahmari, J. Cryan, A. Holmes, I. Lucki, K.A. Miczek, T.W. Robbins, B.J. Sahakian, P. Skolnick  
Renaissance Washington, DC: Meeting Rooms 12, 13, and 14

Come one, come all. Experience the magical medicinal properties of those molecules you've been studying. Yes, this social is to celebrate your brain on drugs! We got into this field for a reason, now is your chance to get together and recall why (beverages will be available for those whose recall is context-dependent). Join us for an informal evening socializing with your fellow psychopharms.



## SfN-Sponsored Socials (continued)

Given the hard day's neuroscience, take the opportunity to loosen up with a refreshing beverage and listen to a psychopharmacologically inspired playlist.

### Vision Social: The Game Show Edition

#### Purely Social

**Chair:** Anita Disney, PhD

**Co-chair:** Mehrdad Jazayeri, PhD

**Guests:** B. Cumming, I. Fine, J. Hirsch, A. Huk, J.A. Movshon

Renaissance Washington, DC: Renaissance Ballroom West B

Come join us for the 2014 Vision Social. We will have games and a quiz show with our special guests as team captains. Perhaps yours will be the team crowned The Most Game. This is a chance to laugh with (and at) friends, old and new.

**Tuesday, Nov. 18, 6:45-8:45 p.m.**

### Cognitive Neuroscience Social: Where Brains and Minds Meet

#### Purely Social

**Chair:** Stephen J. Gotts, PhD

**Co-chair:** Kevin S. Weiner, PhD

Renaissance Washington, DC: Congressional Ballroom C

This is the most inclusive social! If you are interested in interactions between behavior, cognition, and the brain, we want you. Come have a drink and get your GABA on while we talk shop. Meet up with old friends, indoctrinate new friends, and sort out the intricacies of the biological underpinnings of mental, social, and affective processes.

### Computational Neuroscience Social

#### Purely Social

**Chair:** Eilif Muller, PhD

**Co-chair:** Viola Priesemann, PhD

**Guests:** W. Bialek, K. Blackwell, N. Brunel, E. De Schutter, S. Deneve, G. Einevoll, B. Gutkin, K. Harris, D. Plenz, J. Rinzel, I. Segev, F.T. Sommer, T. Tchumatchenko

Renaissance Washington, DC: Renaissance Ballroom East

Join us for an evening with elegant models, great spirits, networking theories, and quadrillions of action potentials! Reunite with old friends, make new ones, mingle with top researchers and special guests, and learn about upcoming CompNeuro events. Everyone is welcome!

### Epilepsy Social

#### Purely Social

**Chair:** Mark Beenhakker, PhD

**Co-chair:** Chris Dulla, PhD

**Guests:** S. Baraban, A. Brewster, A. Brooks-Kayal, S. Danzer, J. Huguenard, L. Jansen, F. Jensen, J. Kapur, J. Maguire, M. Patel, I. Soltesz, H.S. White  
Renaissance Washington, DC: Congressional Ballroom A and B

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

### Neuroendocrinology Social

#### Purely Social

**Chair:** Debra Bangasser, PhD

**Co-chair:** Georgia Hodes, PhD

**Guests:** T. Bale, S.M. Breedlove, M. McCarthy, B. McEwen, A. Murphy, K. Olsen, J. Pfaus, H. Richardson, R. Romeo, C. Sisk, R. Spencer, R. Valentino, L. Young

Renaissance Washington, DC: Renaissance Ballroom West A

This year's social will feature a battle of the sexes quiz show to determine whether men or women know more esoteric neuroendocrine trivia. Come and compare your knowledge with that of our expert contestants and see which team takes home the prize.

### Neuroethics: What Is the Top Ethical Consideration for Your Neuroscience Research?

#### Social with Brief Presentation

**Chair:** Barbara J. Sahakian, PhD

**Co-chair:** Verity Brown, PhD

**Guests:** F.H. Gage, J. Giedd, G. Koob, B. Mason, H. Mayberg, A. Phillips, T. Robbins, C. Tamminga  
Renaissance Washington, DC: Renaissance Ballroom West B

In this neuroethics panel, we will have experts defining the top ethical issue in their area of research and why they

think it is important. Come and join in the discussion on ethical considerations of neuroscience research and the application of neuroscience research findings.

### Optogenetics Social

#### Purely Social

**Chair:** Stephan Lammel, PhD

**Co-chair:** Elizabeth E. Steinberg, PhD

Renaissance Washington, DC:

Meeting Rooms 12, 13, and 14

Laser or LED? NpHR or Arch? Wine or beer? Hash out these and other important issues with fellow neuroscientists interested in optogenetic approaches. Catch up with old friends and make new ones at this purely social event. Both neophytes and experienced practitioners are encouraged to attend.

### Sensorimotor Social

#### Purely Social

**Chair:** Lena H. Ting, PhD

**Co-chair:** Alaa Ahmed, PhD

Renaissance Washington, DC: Mount Vernon B

This is a social gathering for all members of the sensorimotor research community.

### Songbird Social

#### Purely Social

**Chair:** Kazuhiro Wada, MD, PhD

**Guests:** S. Canaria, T. Guttata, L. Striata, S. Vulgaris

Renaissance Washington, DC: Meeting Room 15

This is a purely social gathering to chat, tweet, or sing your song, like a songbird, with new and old friends.

## Satellite Events & 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](http://SfN.org/satellites). These events also are available in the online Neuroscience Meeting Planner (NMP). Attendees can access the NMP on-site or at [SfN.org/NMP](http://SfN.org/NMP).

### Sponsor Category Key:

- 1 Commercial
- 2 University/Nonprofit
- 3 Individual/Group

| Title                                                                                                                            | Time                | More Information                                                                                                                                         | Facility                                                | Room                   | Key |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------|-----|
| <b>SUNDAY, NOV. 9</b>                                                                                                            |                     |                                                                                                                                                          |                                                         |                        |     |
| Basic fMRI Design and Analysis                                                                                                   | 9 a.m.–5 p.m.       | <a href="mailto:zeffiro@neurometrika.org">zeffiro@neurometrika.org</a>                                                                                   | University of Maryland, College Park                    |                        | 2   |
| <b>MONDAY, NOV. 10</b>                                                                                                           |                     |                                                                                                                                                          |                                                         |                        |     |
| Basic fMRI Design and Analysis                                                                                                   | 9 a.m.–5 p.m.       | <a href="mailto:zeffiro@neurometrika.org">zeffiro@neurometrika.org</a>                                                                                   | University of Maryland, College Park                    |                        | 2   |
| <b>TUESDAY, NOV. 11</b>                                                                                                          |                     |                                                                                                                                                          |                                                         |                        |     |
| Basic fMRI Design and Analysis                                                                                                   | 9 a.m.–5 p.m.       | <a href="mailto:zeffiro@neurometrika.org">zeffiro@neurometrika.org</a>                                                                                   | University of Maryland, College Park                    |                        | 2   |
| <b>WEDNESDAY, NOV. 12</b>                                                                                                        |                     |                                                                                                                                                          |                                                         |                        |     |
| Basic fMRI Design and Analysis                                                                                                   | 9 a.m.–5 p.m.       | <a href="mailto:zeffiro@neurometrika.org">zeffiro@neurometrika.org</a>                                                                                   | University of Maryland, College Park                    |                        | 2   |
| <b>THURSDAY, NOV. 13</b>                                                                                                         |                     |                                                                                                                                                          |                                                         |                        |     |
| American Society of Neurorehabilitation (ASNR) Annual Meeting                                                                    | 7 a.m.–10 p.m.      | <a href="http://asnr.com">asnr.com</a>                                                                                                                   | Hyatt Capitol Hill                                      |                        | 2   |
| J. B. Johnston Club for Evolutionary Neuroscience                                                                                | 7:30 a.m.–7 p.m.    | <a href="http://jbclub.org">jbclub.org</a>                                                                                                               | Fairfax at Embassy Row Hotel                            |                        | 3   |
| 9th Brain Research Conference — Neuroprotection: Basic Mechanisms and Translational Potential                                    | 8 a.m.–6 p.m.       | <a href="http://brainresearchconference.com">brainresearchconference.com</a>                                                                             | Sheraton Pentagon City                                  |                        | 1   |
| Barrels XXVII                                                                                                                    | 8 a.m.–10 p.m.      | <a href="http://qcpages.qc.cuny.edu/psychology/people/faculty.brumberg/index.html">qcpages.qc.cuny.edu/psychology/people/faculty.brumberg/index.html</a> | Glass Pavilion, Johns Hopkins University, Baltimore, MD |                        | 3   |
| 7th International Workshop on Advances in Electroencephalography                                                                 | 8:30 a.m.–5:30 p.m. | <a href="mailto:schalk@wadsworth.org">schalk@wadsworth.org</a>                                                                                           | Washington Marriott Wardman Park                        |                        | 2   |
| Cell Symposia—Translational Neuroscience                                                                                         | 8:30 a.m.–5:30 p.m. | <a href="http://cell-symposia-translationalneuroscience.com">cell-symposia-translationalneuroscience.com</a>                                             | Sheraton Pentagon City                                  |                        | 1   |
| GABAergic Signaling in Health and Disease: 23rd Neuropharmacology Conference                                                     | 8:30 a.m.–6:30 p.m. | <a href="mailto:k.nichols@elsevier.com">k.nichols@elsevier.com</a>                                                                                       | Sheraton Pentagon City                                  |                        | 1   |
| 13th Annual Molecular and Cellular Cognition Society: Course — “Tools to Integrate and Plan Experiments in Neuroscience”         | noon–4 p.m.         | <a href="http://iclm.ucla.edu/Registration.php">iclm.ucla.edu/Registration.php</a>                                                                       | Almas Temple, 1315 K St., NW, DC                        | Oasis Room             | 2   |
| Synaptopathies in Neurodevelopmental Disorders: SHANK Mutations as a Window into Synaptic Function: Panel Discussions            | 1–6 p.m.            | <a href="https://regonline.com/builder/site/?eventid=1533500">https://regonline.com/builder/site/?eventid=1533500</a>                                    | Marriott Marquis Washington, DC                         | see website            | 2   |
| S4SN 2014 Annual Meeting                                                                                                         | 2–7 p.m.            | <a href="mailto:kbosch@taramillerevents.com">kbosch@taramillerevents.com</a>                                                                             | Renaissance Washington, DC                              | Grand Ballroom Central | 2   |
| International Neuroethics Society Annual Meeting                                                                                 | 5–7:30 p.m.         | <a href="mailto:kgraham@neuroethicssociety.org">kgraham@neuroethicssociety.org</a>                                                                       | AAAS Building, 12th & H St., NW, DC                     |                        | 2   |
| Synaptopathies in Neurodevelopmental Disorders: SHANK Mutations as a Window into Synaptic Function: Poster Session and Reception | 6–8:30 p.m.         | <a href="https://regonline.com/builder/site/?eventid=1533500">https://regonline.com/builder/site/?eventid=1533500</a>                                    | Marriott Marquis Washington, DC                         | see website            | 2   |

| Title                                                                                                              | Time                | More Information                                                                                                                                         | Facility                                                                           | Room                             | Key |
|--------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------|-----|
| 13th Annual Molecular and Cellular Cognition Society: Poster Session                                               | 6:30–9:30 p.m.      | <a href="http://iclm.ucla.edu/Registration.php">iclm.ucla.edu/Registration.php</a>                                                                       | Almas Temple, 1315 K St., NW, DC                                                   | Sphinx Grand Ballroom            | 2   |
| FRIDAY, NOV. 14                                                                                                    |                     |                                                                                                                                                          |                                                                                    |                                  |     |
| J. B. Johnston Club for Evolutionary Neuroscience                                                                  | 7 a.m.–9 p.m.       | <a href="http://jbjclub.org">jbjclub.org</a>                                                                                                             | Fairfax at Embassy Row Hotel                                                       |                                  | 3   |
| S4SN 2014 Annual Meeting                                                                                           | 8 a.m.–7 p.m.       | <a href="mailto:kbosch@taramillerevents.com">kbosch@taramillerevents.com</a>                                                                             | Renaissance Washington, DC                                                         | Grand Ballroom Central           | 2   |
| Tucker-Davis Symposium on Advances and Perspectives in Auditory Neurophysiology (APAN)                             | 7 a.m.–7 p.m.       | <a href="mailto:ycohen@mail.med.upenn.edu">ycohen@mail.med.upenn.edu</a>                                                                                 | Marriott Marquis Washington, DC                                                    | Liberty Ballroom, Salons IJKL    | 2   |
| International Neuroethics Society Annual Meeting                                                                   | 8 a.m.–7:30 p.m.    | <a href="mailto:kgraham@neuroethicssociety.org">kgraham@neuroethicssociety.org</a>                                                                       | AAAS Building, 12th & H St., NW, DC                                                |                                  | 2   |
| 9th Brain Research Conference — Neuroprotection: Basic Mechanisms and Translational Potential                      | 8 a.m.–6 p.m.       | <a href="http://brainresearchconference.com">brainresearchconference.com</a>                                                                             | Sheraton Pentagon City                                                             |                                  | 1   |
| Barrels XXVII                                                                                                      | 8 a.m.–5 p.m.       | <a href="http://qcpages.qc.cuny.edu/psychology/people/faculty.brumberg/index.html">qcpages.qc.cuny.edu/psychology/people/faculty.brumberg/index.html</a> | Glass Pavilion, Johns Hopkins University, Baltimore, MD                            |                                  | 3   |
| Birdsong 4: Rhythms and Clues from Neurons to Behavior                                                             | 8 a.m.–7 p.m.       | <a href="http://bottjerlab.usc.edu/">bottjerlab.usc.edu/</a>                                                                                             | Georgetown University                                                              |                                  | 3   |
| National Institute on Drug Abuse Frontiers in Addiction Research Mini-Convention                                   | 8 a.m.–6 p.m.       | <a href="http://seiservices.com/nida/frontiers2014/">seiservices.com/nida/frontiers2014/</a>                                                             | NIH, Natcher Auditorium                                                            | Bldg. 45, Bethesda, MD           | 2   |
| Neural Mechanisms of Feeding and Swallowing                                                                        | 8 a.m.–6 p.m.       | <a href="https://home.uchicago.edu/~kazutaka/sfn2014satellite.html">https://home.uchicago.edu/~kazutaka/sfn2014satellite.html</a>                        | Washington Chapter, American Institute of Architects                               | District Architecture Center     | 1   |
| Spinal Cord Plasticity in Motor Control                                                                            | 8 a.m.–5 p.m.       | <a href="mailto:sophia.pallone@health.ny.gov">sophia.pallone@health.ny.gov</a>                                                                           | Marriott Marquis Washington, DC                                                    | Georgetown Room                  | 2   |
| Synaptopathies in Neurodevelopmental Disorders: SHANK Mutations as a Window into Synaptic Function: Panel Sessions | 8 a.m.–5:30 p.m.    | <a href="https://regonline.com/builder/site/?eventid=1533500">https://regonline.com/builder/site/?eventid=1533500</a>                                    | Marriott Marquis Washington, DC                                                    | see website                      | 2   |
| Translational and Computational Motor Control                                                                      | 8 a.m.–7 p.m.       | <a href="http://sites.google.com/site/admcconference/">sites.google.com/site/admcconference/</a>                                                         | Renaissance Washington, DC                                                         | Renaissance Ballroom, East Salon | 2   |
| 7th International Workshop on Advances in Electroencephalography                                                   | 8:30 a.m.–6:30 p.m. | <a href="mailto:schalk@wadsworth.org">schalk@wadsworth.org</a>                                                                                           | Washington Marriott Wardman Park, 2660 Woodley Road, NW, DC                        |                                  | 2   |
| Advances in ALS and FTD Genetics                                                                                   | 8:30 a.m.–6 p.m.    | <a href="http://meetings.NINDS.NIH.GOV/meetings/ALS_FTD_GENETICS">meetings.NINDS.NIH.GOV/meetings/ALS_FTD_GENETICS</a>                                   | Washington Marriott Wardman Park, 2660 Woodley Road, NW, DC                        |                                  | 2   |
| Cell Symposia—Translational Neuroscience                                                                           | 8:30 a.m.–5:30 p.m. | <a href="http://cell-symposia-translationalneuroscience.com/">cell-symposia-translationalneuroscience.com/</a>                                           | Sheraton Pentagon City                                                             |                                  | 1   |
| GABAergic Signaling in Health and Disease: 23rd Neuropharmacology Conference                                       | 8:30 a.m.–7 p.m.    | <a href="mailto:k.nichols@elsevier.com">k.nichols@elsevier.com</a>                                                                                       | Sheraton Pentagon City                                                             |                                  | 1   |
| NeuroEpegenetics                                                                                                   | 8:30 a.m.–7 p.m.    | <a href="mailto:sarah.dolny@abcam.com">sarah.dolny@abcam.com</a>                                                                                         | The Westin in Crystal City                                                         |                                  | 1   |
| PTSD, the Amygdala and Alcohol Use Disorders                                                                       | 8:30 a.m.–5:30 p.m. | <a href="mailto:changhai.cui@nih.gov">changhai.cui@nih.gov</a>                                                                                           | Walter E. Washington Convention Center                                             | 207B                             | 2   |
| The Virtual Brain: Node #2 Workshop                                                                                | 8:30 a.m.–5:30 p.m. | <a href="mailto:tbrown@research.baycrest.org">tbrown@research.baycrest.org</a>                                                                           | Renaissance Washington, DC                                                         | Congressional Ballroom           | 2   |
| 7th Satellite Symposium on Motor Systems                                                                           | 9 a.m.–5 p.m.       | <a href="mailto:odonovm@ninds.nih.gov">odonovm@ninds.nih.gov</a>                                                                                         | Porter Neuroscience Center, NIH                                                    |                                  | 2   |
| 13th Annual Molecular and Cellular Cognition Society Meeting                                                       | 9 a.m.–5 p.m.       | <a href="http://iclm.ucla.edu/Registration.php">iclm.ucla.edu/Registration.php</a>                                                                       | Walter E. Washington Convention Center                                             | 207A                             | 2   |
| Using NEURON to Model Cells and Networks                                                                           | 9 a.m.–5 p.m.       | <a href="mailto:ted.carnevale@yale.edu">ted.carnevale@yale.edu</a>                                                                                       | <a href="http://neuron.yale.edu/neuron/courses">neuron.yale.edu/neuron/courses</a> |                                  | 2   |
| Next Generation Technologies for Large-Scale Recordings of Neural Activity                                         | 1–6 p.m.            | <a href="mailto:stephani@inscopix.com">stephani@inscopix.com</a>                                                                                         | Walter E. Washington Convention Center                                             | 156                              | 1   |
| SATURDAY, NOV. 15                                                                                                  |                     |                                                                                                                                                          |                                                                                    |                                  |     |
| Birdsong 4: Rhythms and Clues from Neurons to Behavior                                                             | 8 a.m.–10:30 a.m.   | <a href="http://bottjerlab.usc.edu/">bottjerlab.usc.edu/</a>                                                                                             | Georgetown University                                                              |                                  | 3   |
| Findings of the International Brain Research Report                                                                | 6:30–8:30 p.m.      | <a href="mailto:h.falk-krzesinski@elsevier.com">h.falk-krzesinski@elsevier.com</a>                                                                       | Marriott Marquis Washington, DC                                                    | Georgetown Room                  | 1   |



| Title                                                                                                  | Time            | More Information                                           | Facility                               | Room                   | Key |
|--------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------|----------------------------------------|------------------------|-----|
| g.tec's Brain-Computer Interface Workshop for Control, Assessment and Rehabilitation                   | 6:30–9 p.m.     | vogt@gtec.at                                               | Walter E. Washington Convention Center | 156                    | 2   |
| Using the Neuroscience Gateway Portal for Parallel Simulations                                         | 8:30–10:30 a.m. | majumdar@sdsc.edu                                          | nsgportal.org/workshop                 |                        | 2   |
| <b>SUNDAY, NOV. 16</b>                                                                                 |                 |                                                            |                                        |                        |     |
| 2014 NIMH BRAINS Awards Ceremony                                                                       | 6:30–9 p.m.     | pearsonmi@mail.nih.gov                                     | Renaissance Washington, DC             | 3                      | 2   |
| Arab Neuroscientists Social                                                                            | 6:30–8:30 p.m.  | arabneuroscientists.org                                    | Walter E. Washington Convention Center | 209B                   | 3   |
| ASPET's Neuropharmacology Division Social                                                              | 6:30–8 p.m.     | lakshmi.devi@mssm.edu                                      | Marriott Marquis Washington, DC        | Dogwood Room           | 2   |
| Boston University Graduate Program for Neuroscience Reception                                          | 7–10 p.m.       | neurosci@bu.edu                                            | Marriott Marquis Washington, DC        | Magnolia Room          | 2   |
| Chinese Neuroscientist Social                                                                          | 6:30–9 p.m.     | lsi.umich.edu/<br>labs/bing-ye-lab                         | Marriott Marquis Washington, DC        | Marquis Salons 1,2,3,4 | 2   |
| Drexel University College of Medicine Alumni Reception                                                 | 6:30–8 p.m.     | pcomey@drexel.edu                                          | Marriott Marquis Washington, DC        | Judiciary Square Room  | 2   |
| Dutch Neuroscience Social 2014                                                                         | 6:30–10 p.m.    | brigitte.borgman@vu.nl                                     | Marriott Marquis Washington, DC        | Chinatown Room         | 2   |
| Ernst Strüngmann Forum Social                                                                          | 6:30–9:30 p.m.  | lupp@esforum.de                                            | Marriott Marquis Washington, DC        | Scarlet Oak Room       | 2   |
| Evelyn F. McKnight Brain Research Foundation Poster Reception                                          | 6:30–8:30 p.m.  | uab.edu/medicine/neurobiology.<br>mcknight-grain-institute | Marriott Marquis Washington, DC        | Liberty Ballroom IJKL  | 2   |
| Filling Unmet Medical Need in CNS Diseases: Systems Biology for Fun(ding) and Profit                   | 6:30–8:30 p.m.  | larry.hardy@sunovion.com                                   | Marriott Marquis Washington, DC        | Cherry Blossom Room    | 1   |
| Georgetown University Neuroscience Reception                                                           | 6:30–8:30 p.m.  | ss3176@georgetown.edu                                      | Marriott Marquis Washington, DC        | Georgetown Room        | 2   |
| g.tec's Functional Mapping with the ECoG                                                               | 6:30–8:30 p.m.  | vogt@gtec.at                                               | Walter E. Washington Convention Center | 156                    | 2   |
| International Behavioral Neuroscience Society (IBNS) Reception                                         | 6:30–8 p.m.     | ibns@ibnshomepage.org                                      | Renaissance Washington, DC             | 15                     | 2   |
| <i>Journal of Neurophysiology</i> Social                                                               | 6:30–8 p.m.     | ckight@the-aps.org                                         | Renaissance Washington, DC             | Grand Ballroom Central | 2   |
| NeuroEpigenetics Symposium: Research Questions, Technological Advances and Analytical Challenges       | 6:30–9:30 p.m.  | c.zanden@elsevier.com                                      | Walter E. Washington Convention Center | 152B                   | 1   |
| Neuroimmunology Social                                                                                 | 6:30–8:30 p.m.  | staci.bilbo@duke.edu                                       | Marriott Marquis Washington, DC        | Capitol Room           | 2   |
| NeuroRehabilitation Social                                                                             | 6:30–8:30 p.m.  | horakf@ohsu.edu                                            | Marriott Marquis Washington, DC        | Archives Room          | 2   |
| OIST Social                                                                                            | 7–9 p.m.        | davie_vanvactor@hms.harvard.edu                            | Renaissance Washington, DC             | Grand Ballroom South   | 2   |
| Society for Neuroeconomics Decision-Making Social                                                      | 6:30–8 p.m.     | shaw@cns.nyu.edu                                           | Renaissance Washington, DC             | Renaissance West A     | 2   |
| Stanford Neuroscience Program Alumni Reception                                                         | 6:30–7:30 p.m.  | larkspur@stanford.edu                                      | Marriott Marquis Washington, DC        | Mint Room              | 2   |
| So You Want to Be a Scientist...and Get Paid Along the Way — A Workshop for Early Career Investigators | 6:30–9:30 p.m.  | npilotte@mail.nih.gov                                      | Walter E. Washington Convention Center | 103AB                  | 2   |
| University of Chicago Reception                                                                        | 6:30–8 p.m.     | chansel@uchicago.edu                                       | Renaissance Washington, DC             | Grand Ballroom North   | 2   |

| Title                                                                                              | Time           | More Information                                         | Facility                               | Room                                         | Key |
|----------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------|----------------------------------------|----------------------------------------------|-----|
| <b>MONDAY, NOV. 17</b>                                                                             |                |                                                          |                                        |                                              |     |
| 11th Anniversary of the Christopher Reeve "Hot Topics" in Stem Cell Biology Data Blitz             | 6:30–9:30 p.m. | rachelb@sanfordburnham.org                               | Walter E. Washington Convention Center | 146AB                                        | 1   |
| Annual International Society for Serotonin (ISSR, formerly Serotonin Club) Mixer                   | 6:30–8 p.m.    | berg@uthscsa.edu                                         | Fado's Irish Pub                       |                                              | 2   |
| Association of Korean Neuroscientists: Annual Meeting and Social                                   | 6:30–9:30 p.m. | akneuro.org/cms/                                         | Twelve & K Hotel<br>1201 K St. NW      |                                              | 2   |
| Autism-Like Behaviors in Rodent Models                                                             | 6:30–9 p.m.    | yvonne.humphrey@noldus.com                               | Marriott Marquis Washington, DC        | Chinatown Room                               | 1   |
| Axon Electrophysiology Symposium                                                                   | 6:30–8:30 p.m. | jeffrey.tang@Moldev.com                                  | Walter E. Washington Convention Center | 150B                                         | 1   |
| Club Hypnos                                                                                        | 6:30–8 p.m.    | dmerrow@srsnet.org                                       | Marriott Marquis Washington, DC        | Marquis 7                                    | 2   |
| Friends of Ohio State University Social                                                            | 6:30–8:30 p.m. | medicine.osu.edu/<br>cbscr/index.cfm                     | Renaissance Washington, DC             | Grand Ballroom South                         | 2   |
| From Theories to Therapies: Accelerating Neuroscience Research on Human Diseases and Disorders     | 6:30–8 p.m.    | kharvey@ndriresources.org                                | Walter E. Washington Convention Center | 152B                                         | 2   |
| Exploring the Mind Using the Semblance Hypothesis                                                  | 7–8 a.m.       | umvadakk@cc.manitoba.ca                                  | Walter E. Washington Convention Center | 209A                                         | 3   |
| DFG Leibniz Lecture: CHRISTIAN HAASS                                                               | 6:30–7:30 p.m. | emily.formica@dfg.de                                     | Marriott Marquis Washington, DC        | Marquis Ballroom Salons 3 & 4                | 2   |
| Lafayette–Campden 2014 Touch Screen Symposium                                                      | 6:30–9 p.m.    | lafayetteneuroscience.com/<br>product_list.asp?catid=116 | Walter E. Washington Convention Center | 207B                                         | 1   |
| LGBT Social                                                                                        | 7–9 p.m.       | Andrew.Murtishaw@UNLV.edu                                | Number Nine                            |                                              | 3   |
| Marmoset Social                                                                                    | 7–10 p.m.      | james.bourne@monash.edu                                  | Renaissance Washington, DC             | 4                                            | 3   |
| Multi-Analyte Detection Techniques for Neuroscientists: More Data from Less Sample                 | 6:30–7:30 p.m. | gregg.hickey@rndsystems.com                              | Walter E. Washington Convention Center | 147B                                         | 1   |
| Neuron–Glia Interactions Social                                                                    | 6:30–8:30 p.m. | fieldsd@mail.nih.gov                                     | Walter E. Washington Convention Center | 209A                                         | 2   |
| Neuroscience in Germany XXI Social                                                                 | 7:30–10 p.m.   | emily.formica@dfg.de                                     | Marriott Marquis Washington, DC        | Marquis Ballroom, Salons 1 & 2               | 2   |
| NIH Funding Opportunity: Longitudinal Study of Neurodevelopmental Consequences of Substance Use    | 6:30–8:30 p.m. | nvolkow@nida.nih.gov                                     | Walter E. Washington Convention Center | 150A                                         | 1   |
| Knockout Rats: Generation and Characterization of More Translational Models of Parkinson's Disease | 6:30–9:30 p.m. | kevin.gamber@sagere-searchlabs.com                       | Walter E. Washington Convention Center | 147A                                         | 1   |
| Schizophrenia Social                                                                               | 6:30–8:30 p.m. | nico@schizophreniaforum.org                              | Marriott Marquis Washington, DC        | Scarlet Oak Room                             | 2   |
| Simons Foundation Autism Research Initiative (SFARI) Social                                        | 6:30–9 p.m.    | agreenebaum@simonsfoundation.org                         | Marriott Marquis Washington, DC        | University of DC & Catholic University Rooms | 2   |
| Sleep and Circadian Biology DataBlitz                                                              | 8–10 p.m.      | laposkya@nhlbi.nih.gov                                   | Marriott Marquis Washington, DC        | Marquis Ballroom, Salons 8,9,10              | 2   |
| Taiwan Night                                                                                       | 6:30–9:30 p.m. | cclien@ym.edu.tw                                         | Walter E. Washington Convention Center | 103AB                                        | 2   |
| The Grass Foundation and Marine Biological Laboratory Social                                       | 6:30–8 p.m.    | execassist@grassfoundation.org                           | Marriott Marquis Washington, DC        | Georgetown Room                              | 2   |
| WWN Mentoring Circles to Increase Collaborations, Networking and Careers in Neuroscience           | 6:30–8:30 p.m. | edwardse@mail.nih.gov                                    | Walter E. Washington Convention Center | 209B                                         | 2   |
| Washington University in St. Louis Neuroscience Reception                                          | 6:30–9:30 p.m. | Taylor.Sheahan@wustl.edu                                 | R.F.D. Washington                      |                                              | 2   |
| <b>TUESDAY, NOV. 18</b>                                                                            |                |                                                          |                                        |                                              |     |
| IBS Career Opportunity Reception                                                                   | 6:30–8:30 p.m. | sunnykim@ibs.re.kr                                       | Marriott Marquis Washington, DC        | Liberty Ballroom IJK                         | 2   |
| Iranian Neuroscientists Community Annual Social Event                                              | 6:30–8:30 p.m. | mkiaei@uams.edu                                          | Walter E. Washington Convention Center | 103AB                                        | 2   |

# List of Sessions by Theme and Day

## Theme Descriptions

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

All posters will be presented in the Walter E. Washington Convention Center, Halls A–C. All lecture, symposium, minisymposium, and nanosymposium rooms are in the Walter E. Washington Convention Center.

Note: Theme H Posters will be on display in Hall A beginning at 1 p.m. on Saturday, Nov. 15, and will remain posted until 5 p.m. on Sunday, Nov. 16. One-hour presentation times will occur either Saturday afternoon or Sunday morning.

| Session Number       | Session Title                                                                   | Presentation Type                          | Poster Board # | Location   | Date    | Session Time          | CME Hours |
|----------------------|---------------------------------------------------------------------------------|--------------------------------------------|----------------|------------|---------|-----------------------|-----------|
| FEATURED LECTURES    |                                                                                 |                                            |                |            |         |                       |           |
| 001                  | Food for Thought: Tastes, Aromas, and Memories of Food                          | Dialogues Between Neuroscience and Society |                | Hall D     | 15 Sat  | 11 a.m.–1 p.m.        |           |
| 009                  | The Living Record of Memory: Genes, Neurons, and Synapses                       | Presidential Special Lecture               |                | Hall D     | 15 Sat  | 5:15–6:25 p.m.        | 1.25      |
| 108                  | Mind, Brain, and the Ethics of Intergroup Behavior                              | David Kopf Lecture on Neuroethics          |                | Hall D     | 16 Sun  | 11:30 a.m.–12:40 p.m. |           |
| 195                  | Circuits and Strategies for Skilled Motor Behavior                              | Peter and Patricia Gruber Lecture          |                | Hall D     | 16 Sun  | 2:30–3:40 p.m.        |           |
| 196                  | The Integration of Interneurons Into Cortical Circuits: Both Nurture and Nature | Presidential Special Lecture               |                | Hall D     | 16 Sun  | 5:15–6:25 p.m.        | 1.25      |
| 380                  | Cellular and Molecular Mechanisms of Explicit Learning in the Hippocampus       | Albert and Ellen Grass Lecture             |                | Hall D     | 17 Mon  | 3:15–4:25 p.m.        | 1.25      |
| 381                  | The First Steps in Vision: Computation and Repair                               | Presidential Special Lecture               |                | Hall D     | 17 Mon  | 5:15–6:25 p.m.        | 1.25      |
| 574                  | The Messengers of the Mind                                                      | Fred Kavli History of Neuroscience Lecture |                | Hall D     | 18 Tues | 2:30–3:40 p.m.        |           |
| 575                  | Stem Cells in the Brain: Glial Identity and Niches                              | Presidential Special Lecture               |                | Hall D     | 18 Tues | 5:15–6:25 p.m.        | 1.25      |
| THEME A: DEVELOPMENT |                                                                                 |                                            |                |            |         |                       |           |
| 003                  | Evolution of Neural Circuits: From Axon Guidance Genes to Spoken Language       | Symposium                                  |                | Ballroom C | 15 Sat  | 1:30–4 p.m.           | 2.5       |
| 029                  | Neural Lineage Specification and Plasticity                                     | Poster                                     | A1–A23         | Halls A–C  | 15 Sat  | 1–5 p.m.              |           |
| 030                  | Neuronal Differentiation                                                        | Poster                                     | A24–A46        | Halls A–C  | 15 Sat  | 1–5 p.m.              |           |
| 031                  | Dendritic Development and Branching                                             | Poster                                     | A47–A64        | Halls A–C  | 15 Sat  | 1–5 p.m.              |           |
| 032                  | Mechanisms of Dendritic Growth and Branching                                    | Poster                                     | A65–B16        | Halls A–C  | 15 Sat  | 1–5 p.m.              |           |
| 033                  | Adolescent Drug Exposure: Alcohol and Nicotine                                  | Poster                                     | B17–B35        | Halls A–C  | 15 Sat  | 1–5 p.m.              |           |
| 101                  | Advances in Studying Human Cortical Development                                 | Symposium                                  |                | Ballroom C | 16 Sun  | 8:30–11 a.m.          | 2.5       |
| 120                  | Mechanisms of Neuronal Cell Fate Acquisition                                    | Poster                                     | A1–A11         | Halls A–C  | 16 Sun  | 8 a.m.–noon           |           |
| 121                  | Neurotrophins                                                                   | Poster                                     | A12–A40        | Halls A–C  | 16 Sun  | 8 a.m.–noon           |           |

| Session Number | Session Title                                                                                        | Presentation Type | Poster Board # | Location   | Date    | Session Time   | CME Hours |
|----------------|------------------------------------------------------------------------------------------------------|-------------------|----------------|------------|---------|----------------|-----------|
| 122            | Development and Age-Related Changes in Cognition                                                     | Poster            | A41–A65        | Halls A–C  | 16 Sun  | 8 a.m.–noon    |           |
| 190            | Oligodendrocyte and Myelin Plasticity and Its Impact on the Function of Neural Circuits and Behavior | Symposium         |                | Ballroom A | 16 Sun  | 1:30–4 p.m.    | 2.5       |
| 208            | Neuronal Migration                                                                                   | Poster            | A1–A25         | Halls A–C  | 16 Sun  | 1–5 p.m.       |           |
| 209            | Environmental Regulation of PNS Regeneration                                                         | Poster            | A26–A44        | Halls A–C  | 16 Sun  | 1–5 p.m.       |           |
| 210            | Adolescent Vulnerability: Animal Models                                                              | Poster            | A45–B6         | Halls A–C  | 16 Sun  | 1–5 p.m.       |           |
| 273            | Building a Synapse Through Nuclear Export of Large RNA Granules and Exosomes                         | Special Lecture   |                | Hall D     | 17 Mon  | 8:30–9:40 a.m. | 1.25      |
| 294            | Neurogenesis                                                                                         | Poster            | A1–A21         | Halls A–C  | 17 Mon  | 8 a.m.–noon    |           |
| 295            | Transplantation                                                                                      | Poster            | A22–A38        | Halls A–C  | 17 Mon  | 8 a.m.–noon    |           |
| 296            | Intrinsic Mechanisms of PNS Regeneration                                                             | Poster            | A39–A52        | Halls A–C  | 17 Mon  | 8 a.m.–noon    |           |
| 382            | Disease Modeling Using Pluripotent Stem Cells I                                                      | Nanosymposium     |                | 156        | 17 Mon  | 1–4:30 p.m.    |           |
| 394            | Postnatal Neurogenesis: Molecular Mechanisms                                                         | Poster            | A1–A30         | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 395            | Postnatal Neurogenesis: Environmental and Pharmacological Regulation                                 | Poster            | A31–A52        | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 396            | Postnatal Neurogenesis: Temporal and Spatial Patterns                                                | Poster            | A53–B3         | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 397            | Neural Differentiation of Pluripotent Stem Cells                                                     | Poster            | B4–B33         | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 398            | Activity-Dependent Changes in Connectivity                                                           | Poster            | B34–C3         | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 399            | Intrinsic Mechanisms of CNS Regeneration                                                             | Poster            | C4–C27         | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 476            | Novel RNA Modifications in the Nervous System: Form and Function                                     | Minisymposium     |                | Ballroom B | 18 Tues | 8:30–11 a.m.   | 2.5       |
| 493            | Patterning of Brain                                                                                  | Poster            | A1–A24         | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 494            | Brain Patterning and Cell Death                                                                      | Poster            | A25–A50        | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 495            | Proliferation: Self-Renewal and Cell Cycle                                                           | Poster            | A51–B9         | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 496            | Proliferation: Molecular Mechanisms                                                                  | Poster            | B10–B29        | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 497            | Neuron-Glia Interactions During Development                                                          | Poster            | B30–B51        | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 498            | Development of Motor, Sensory, and Limbic Systems                                                    | Poster            | B52–C6         | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 499            | Evolution of Developmental Mechanisms                                                                | Poster            | C7–C27         | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 569            | Cellular and Molecular Mechanisms of Neural Regeneration                                             | Symposium         |                | Ballroom A | 18 Tues | 1:30–4 p.m.    | 2.5       |
| 576            | Synapse Function in Development and Disease                                                          | Nanosymposium     |                | 147A       | 18 Tues | 1–3:15 p.m.    |           |
| 588            | Neuronal Differentiation: Transcriptional Mechanisms                                                 | Poster            | A1–A11         | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 589            | Oligodendrocyte and Schwann Cell Biology                                                             | Poster            | A12–A32        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 590            | Disease Modeling Using Pluripotent Stem Cells II                                                     | Poster            | A33–A62        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 591            | Axon Growth and Guidance: Cytoskeletal Dynamics                                                      | Poster            | A63–B15        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 592            | Axon Growth and Guidance: Adhesion Molecules                                                         | Poster            | B16–B28        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 593            | Axon Growth and Guidance: Intrinsic Mechanisms                                                       | Poster            | B29–B58        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 594            | Axon Growth and Guidance: Extrinsic Mechanisms                                                       | Poster            | B59–C11        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 595            | Extrinsic Mechanisms Controlling CNS Regeneration                                                    | Poster            | C12–C28        | Halls A–C  | 18 Tues | 1–5 p.m.       |           |



| Session Number                                                        | Session Title                                                                                                             | Presentation Type | Poster Board # | Location  | Date   | Session Time | CME Hours |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|--------|--------------|-----------|
| 681                                                                   | Induced Neurogenesis                                                                                                      | Poster            | A1–A9          | Halls A–C | 19 Wed | 8 a.m.–noon  |           |
| 777                                                                   | Synapse Development                                                                                                       | Poster            | A1–A25         | Halls A–C | 19 Wed | 1–5 p.m.     |           |
| 778                                                                   | Synapse Formation: Transynaptic Mechanisms                                                                                | Poster            | A26–A33        | Halls A–C | 19 Wed | 1–5 p.m.     |           |
| 779                                                                   | Development of Motor Systems                                                                                              | Poster            | A34–A47        | Halls A–C | 19 Wed | 1–5 p.m.     |           |
| 780                                                                   | Development of Sensory Systems                                                                                            | Poster            | A48–B9         | Halls A–C | 19 Wed | 1–5 p.m.     |           |
| THEME B: NEURAL EXCITABILITY, SYNAPSES, AND GLIA: CELLULAR MECHANISMS |                                                                                                                           |                   |                |           |        |              |           |
| 005                                                                   | Network-Mediated Encoding of Circadian Time: The Suprachiasmatic Nucleus (SCN) From Genes to Neurons to Circuits and Back | Minisymposium     |                | 145B      | 15 Sat | 1:30–4 p.m.  | 2.5       |
| 034                                                                   | Dopamine and Dopamine Receptor Function                                                                                   | Poster            | B36–B60        | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 035                                                                   | Opiate, Cytokines, and Other Neuropeptides                                                                                | Poster            | C1–C11         | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 036                                                                   | Muscarinic Acetylcholine and Metabotropic Glutamate Receptors                                                             | Poster            | C12–C37        | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 037                                                                   | Postsynaptic Structure I                                                                                                  | Poster            | C38–C49        | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 038                                                                   | Electrical Synapse and Gap Junction                                                                                       | Poster            | C50–C57        | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 039                                                                   | Signal Propagation in Neural Networks                                                                                     | Poster            | C58–D12        | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 040                                                                   | Oscillations and Synchrony                                                                                                | Poster            | D13–D25        | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 104                                                                   | Activity-Dependent Regulation of Synapse Organization and Function by Palmitoylation                                      | Minisymposium     |                | 151AB     | 16 Sun | 8:30–11 a.m. | 2.5       |
| 109                                                                   | Astrocyte Action in CNS Disorders                                                                                         | Nanosymposium     |                | 144A      | 16 Sun | 8–11 a.m.    |           |
| 123                                                                   | Diversity of Glutamate Receptors                                                                                          | Poster            | A66–B15        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 124                                                                   | Glycine and GABAA Receptors                                                                                               | Poster            | B16–B42        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 125                                                                   | TRP Channels                                                                                                              | Poster            | B43–B54        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 126                                                                   | Ion Channels and Disease States I                                                                                         | Poster            | B55–C4         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 127                                                                   | Glutamate and Glutamate Transporters                                                                                      | Poster            | C5–C27         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 128                                                                   | Synaptic Transmission: Synaptic Integration I                                                                             | Poster            | C28–C43        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 129                                                                   | Synaptic Transmission: Synaptic Integration II                                                                            | Poster            | C44–C60        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 130                                                                   | Oscillations and Synchrony in Neural Networks                                                                             | Poster            | C61–D3         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 131                                                                   | Oligodendrocytes: Cell Biology and Signaling I                                                                            | Poster            | D4–D18         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 193                                                                   | Mitochondria in the Development and Plasticity of Neurons                                                                 | Minisymposium     |                | 146AB     | 16 Sun | 1:30–4 p.m.  | 2.5       |
| 211                                                                   | Neurotransmitter Signaling in Health and Disease                                                                          | Poster            | B7–B32         | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 212                                                                   | Calcium Channels: Functions and Regulation of Voltage-Gated Calcium Channels                                              | Poster            | B33–C1         | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 213                                                                   | Postsynaptic Structure II                                                                                                 | Poster            | C2–C26         | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 214                                                                   | LTP: Pre- and Postsynaptic Mechanisms I                                                                                   | Poster            | C27–C40        | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 215                                                                   | Oscillations: Mechanisms                                                                                                  | Poster            | C41–C62        | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 216                                                                   | Neural Oscillators and Activity-Dependent Plasticity of Intrinsic Membrane Properties                                     | Poster            | C63–D8         | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 217                                                                   | Synapse Development, Maintenance, and Aging                                                                               | Poster            | D9–D20         | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 297                                                                   | GABAA Receptors in Circuitry                                                                                              | Poster            | A53–A65        | Halls A–C | 17 Mon | 8 a.m.–noon  |           |

| Session Number | Session Title                                                                                         | Presentation Type | Poster Board # | Location  | Date    | Session Time     | CME Hours |
|----------------|-------------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|---------|------------------|-----------|
| 298            | Sodium Channel Structure Function                                                                     | Poster            | A66–B24        | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 299            | Ion Channels and Disease States II                                                                    | Poster            | B25–B55        | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 300            | Synaptic Transmission: Modulation I                                                                   | Poster            | B56–C7         | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 301            | Synaptic Transmission: Modulation II                                                                  | Poster            | C8–C22         | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 302            | Synaptic Plasticity                                                                                   | Poster            | C23–C36        | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 303            | Oscillations: EEG                                                                                     | Poster            | C37–C59        | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 304            | Dendritic Excitability and Synaptic Integration                                                       | Poster            | C60–C72        | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 305            | Astroglial Homeostasis and Function                                                                   | Poster            | D1–D32         | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 306            | Oligodendrocytes: Cell Biology and Signaling II                                                       | Poster            | D33–D46        | Halls A–C | 17 Mon  | 8 a.m.–noon      |           |
| 383            | Microglia                                                                                             | Nanosymposium     |                | 144A      | 17 Mon  | 1–3:30 p.m.      |           |
| 400            | Invertebrate Transmission                                                                             | Poster            | C28–C41        | Halls A–C | 17 Mon  | 1–5 p.m.         |           |
| 401            | Nicotinic Receptors: Physiology and Pharmacology                                                      | Poster            | C42–C71        | Halls A–C | 17 Mon  | 1–5 p.m.         |           |
| 402            | Neurotransmitter Release: Docking, Fusion, and Calcium Dependence                                     | Poster            | C72–D18        | Halls A–C | 17 Mon  | 1–5 p.m.         |           |
| 403            | Neurotransmitter Release: Vesicle Recycling and Biogenesis                                            | Poster            | D19–D33        | Halls A–C | 17 Mon  | 1–5 p.m.         |           |
| 404            | LTP: Pre-and Postsynaptic Mechanisms II                                                               | Poster            | D34–D47        | Halls A–C | 17 Mon  | 1–5 p.m.         |           |
| 473            | Aerobic Glycolysis in the Brain: Emerging Roles of Lactate in Synaptic Plasticity and Axonal Function | Symposium         |                | 151AB     | 18 Tues | 8:30–11 a.m.     | 2.5       |
| 480            | How Do You Feel? The Role of Mechanically Activated Ion Channels in Touch, Pain, Hearing, and Beyond  | Special Lecture   |                | Hall D    | 18 Tues | 11:30–12:40 p.m. | 1.25      |
| 481            | Oscillations and Synchrony                                                                            | Nanosymposium     |                | 152B      | 18 Tues | 8–10:45 a.m.     |           |
| 500            | Structure and Function of Nicotinic Receptors and Asics                                               | Poster            | C28–C56        | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 501            | NMDA Receptor Structure and Function                                                                  | Poster            | C57–D8         | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 502            | Purine and Other G-Protein Coupled Receptors                                                          | Poster            | D9–D38         | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 503            | Serotonin and GABA Transporters                                                                       | Poster            | D39–D50        | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 504            | Dopamine Transporters                                                                                 | Poster            | D51–E4         | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 505            | LTP: Kinases and Intracellular Signaling                                                              | Poster            | E5–F10         | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 506            | Spike Timing Dependent Plasticity                                                                     | Poster            | F11–G10        | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 507            | Cellular Mechanisms of Modulation of Neuronal Firing Properties                                       | Poster            | G11–I12        | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 508            | Astroglia Function and Reaction to Pathological Processes                                             | Poster            | J1–L8          | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 509            | Microglia Activation Pathways                                                                         | Poster            | L9–N3          | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 510            | Microglia Functions                                                                                   | Poster            | N4–O12         | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 511            | Glial Physiology and Glia-Neuronal Physiology                                                         | Poster            | P1–R9          | Halls A–C | 18 Tues | 8 a.m.–noon      |           |
| 570            | More Than a Pore: Ion Channel Signaling Complexes                                                     | Symposium         |                | 151AB     | 18 Tues | 1:30–4 p.m.      | 2.5       |

| Session Number                           | Session Title                                                           | Presentation Type | Poster Board # | Location  | Date    | Session Time   | CME Hours |
|------------------------------------------|-------------------------------------------------------------------------|-------------------|----------------|-----------|---------|----------------|-----------|
| 577                                      | Physiology of Glia–Neuronal Interactions                                | Nanosymposium     |                | 206       | 18 Tues | 1–4:30 p.m.    |           |
| 596                                      | Synaptic Signaling: Retrograde Messengers                               | Poster            | C29–C42        | Halls A–C | 18 Tues | 1–5 p.m.       |           |
| 597                                      | Cellular Mechanisms of Neural Excitability: Ion Channels                | Poster            | C43–C59        | Halls A–C | 18 Tues | 1–5 p.m.       |           |
| 598                                      | Presynaptic Organization and Structure                                  | Poster            | C60–D15        | Halls A–C | 18 Tues | 1–5 p.m.       |           |
| 599                                      | Synaptic Transmission: Modulation III                                   | Poster            | D16–D42        | Halls A–C | 18 Tues | 1–5 p.m.       |           |
| 600                                      | Synaptic Plasticity: Short-Term Plasticity                              | Poster            | D43–D55        | Halls A–C | 18 Tues | 1–5 p.m.       |           |
| 601                                      | Long-Term Depression                                                    | Poster            | D56–E3         | Halls A–C | 18 Tues | 1–5 p.m.       |           |
| 662                                      | Exocytosis of Synaptic Vesicles — A Molecular Perspective               | Special Lecture   |                | Hall D    | 19 Wed  | 8:30–9:40 a.m. | 1.25      |
| 682                                      | Brain Cholinergic Mechanisms                                            | Poster            | A10–A31        | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 683                                      | Opioid Receptor Signaling and Function                                  | Poster            | A32–A44        | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 684                                      | Calcium Channels: Intracellular Calcium Signaling                       | Poster            | A45–A54        | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 685                                      | Ca-Gated K Channels                                                     | Poster            | A55–A61        | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 686                                      | Neuronal Excitability: HCN and Non-Selective Cation Channels            | Poster            | A62–B3         | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 687                                      | Acetylcholine and Other Transporters                                    | Poster            | B4–B22         | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 688                                      | Homeostatic Synaptic Plasticity and Presynaptic Function                | Poster            | B23–B45        | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 689                                      | Synaptic Plasticity: Transcription and Translation                      | Poster            | B46–C15        | Halls A–C | 19 Wed  | 8 a.m.–noon    |           |
| 767                                      | Synaptic Plasticity: Molecular and Circuit Mechanisms                   | Nanosymposium     |                | 147A      | 19 Wed  | 1–4:15 p.m.    |           |
| 781                                      | AMPA Receptor Modifications                                             | Poster            | B10–B20        | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| 782                                      | GABAA Receptor Pharmacology and Function                                | Poster            | B21–B35        | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| 783                                      | Inhibitory Plasticity                                                   | Poster            | B36–B51        | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| 784                                      | Serotonin and GABAB GPCRs                                               | Poster            | B52–C3         | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| 785                                      | Spine Dynamics                                                          | Poster            | C4–C31         | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| 786                                      | Synaptic Plasticity: Other                                              | Poster            | C32–C49        | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| 787                                      | Oscillations: Connectivity                                              | Poster            | C50–C61        | Halls A–C | 19 Wed  | 1–5 p.m.       |           |
| THEME C: DISORDERS OF THE NERVOUS SYSTEM |                                                                         |                   |                |           |         |                |           |
| 004                                      | C9orf72: A Repeat Disease That Underlies Dementia and Neurodegeneration | Symposium         |                | 151AB     | 15 Sat  | 1:30–4 p.m.    | 2.5       |
| 010                                      | Neurogenesis and Neurotransmission in Neurodegenerative Diseases        | Nanosymposium     |                | 152A      | 15 Sat  | 1–2:45 p.m.    |           |
| 011                                      | Autism Synaptic and Cellular Mechanisms                                 | Nanosymposium     |                | 144A      | 15 Sat  | 1–3 p.m.       |           |
| 012                                      | Demyelinating Disorders                                                 | Nanosymposium     |                | 152B      | 15 Sat  | 1–4:15 p.m.    |           |
| 013                                      | Psychomotor Stimulant Reinforcement                                     | Nanosymposium     |                | 140A      | 15 Sat  | 1–3:30 p.m.    |           |

| Session Number | Session Title                                                  | Presentation Type | Poster Board # | Location  | Date   | Session Time  | CME Hours |
|----------------|----------------------------------------------------------------|-------------------|----------------|-----------|--------|---------------|-----------|
| 041            | Alzheimer's Disease: Tau Animal Models                         | Poster            | D26–D46        | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 042            | Beta Amyloid Toxicity                                          | Poster            | D47–D70        | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 043            | Alzheimer's Disease: Proteinopathy, Non-Abeta, and Non-Tau     | Poster            | D71–F3         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 044            | Alzheimer's Disease: Imaging and Biomarkers                    | Poster            | F4–H9          | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 045            | Huntington's Disease Animal Models and Therapeutic Strategies  | Poster            | H10–J5         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 046            | Huntington's Disease Mechanisms I                              | Poster            | J6–L12         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 047            | Dystonia Mechanisms and Model Systems                          | Poster            | M1–N7          | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 048            | Neuromuscular Diseases                                         | Poster            | N8–P1          | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 049            | Epilepsy: Synapses and Ion Channels                            | Poster            | P2–R9          | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 050            | Neurological Disease: Cellular Mechanisms and Oxidative Stress | Poster            | R10–S9         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 051            | Schizophrenia and Bipolar Disorder                             | Poster            | S10–U11        | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 052            | Schizophrenia: Mutant Models                                   | Poster            | U12–V4         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 053            | Alcohol: Neural Mechanisms and Behavior I                      | Poster            | V5–V23         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 054            | Cocaine Reinforcement I                                        | Poster            | V24–W21        | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 055            | Methamphetamine and MDMA                                       | Poster            | W22–X4         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 056            | Addiction Treatment: Translational and Clinical Studies        | Poster            | X5–X15         | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 057            | Learning, Memory, Dependence, and Addiction                    | Poster            | X16–Y15        | Halls A–C | 15 Sat | 1–5 p.m.      |           |
| 105            | Lipidomics and Lipid Signaling in Neurodegeneration            | Minisymposium     |                | 145B      | 16 Sun | 8:30–11 a.m.  | 2.5       |
| 107            | The Glymphatic System and Its Possible Roles in CNS Diseases   | Special Lecture   |                | Hall D    | 16 Sun | 10–11:10 a.m. | 1.25      |
| 110            | Alzheimer's Disease: Genetics and Biology I                    | Nanosymposium     |                | 152A      | 16 Sun | 8–11:30 a.m.  |           |
| 111            | Motor Neuron Disease Mechanisms and Models                     | Nanosymposium     |                | 143A      | 16 Sun | 8–11:15 a.m.  |           |
| 112            | Autism: Physiology and Systems III                             | Nanosymposium     |                | 146C      | 16 Sun | 8–10:15 a.m.  |           |
| 113            | Traumatic Brain Injury: Exploring Mechanisms and Interventions | Nanosymposium     |                | 150B      | 16 Sun | 8–10:45 a.m.  |           |
| 114            | Gene Therapy                                                   | Nanosymposium     |                | 140A      | 16 Sun | 8–10:15 a.m.  |           |
| 132            | Brain Wellness                                                 | Poster            | D19–D44        | Halls A–C | 16 Sun | 8 a.m.–noon   |           |
| 133            | Abeta Pathology and Therapeutic Approaches                     | Poster            | D45–D71        | Halls A–C | 16 Sun | 8 a.m.–noon   |           |
| 134            | Alzheimer's Disease: APP Abeta <i>In Vivo</i> Models I         | Poster            | D72–F9         | Halls A–C | 16 Sun | 8 a.m.–noon   |           |
| 135            | Alzheimer's Disease: Experimental Therapeutics II              | Poster            | F10–H10        | Halls A–C | 16 Sun | 8 a.m.–noon   |           |
| 136            | Alzheimer's Disease: Experimental Therapeutics III             | Poster            | H11–J11        | Halls A–C | 16 Sun | 8 a.m.–noon   |           |
| 137            | Parkinson's Disease: Animal Therapies                          | Poster            | J12–M5         | Halls A–C | 16 Sun | 8 a.m.–noon   |           |
| 138            | Parkinson's Disease: Neuroprotective Mechanisms                | Poster            | M6–O6          | Halls A–C | 16 Sun | 8 a.m.–noon   |           |



| Session Number | Session Title                                                       | Presentation Type | Poster Board # | Location  | Date   | Session Time | CME Hours |
|----------------|---------------------------------------------------------------------|-------------------|----------------|-----------|--------|--------------|-----------|
| 139            | Ataxias: Mechanisms and Models                                      | Poster            | O7–Q9          | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 140            | Autism: Physiology and Systems I                                    | Poster            | R1–S10         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 141            | Autism: Physiology and Systems II                                   | Poster            | S11–T10        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 142            | Developmental Disorders I                                           | Poster            | T11–U22        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 143            | Ischemia: Cellular Mechanisms and Neuroprotection I                 | Poster            | U23–V12        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 144            | Neuroprotective Mechanisms: Oxidative Stress                        | Poster            | V13–W6         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 145            | Environmental Toxins and Toxicity                                   | Poster            | W7–W26         | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 146            | Neurodegeneration I                                                 | Poster            | W27–X20        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 147            | Sensory Disorders: Visual and Auditory                              | Poster            | X21–Y19        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 148            | Somatosensation and Pain                                            | Poster            | Y20–Z13        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 149            | Molecular– and Cellular–Oriented Models of Schizophrenia            | Poster            | Z14–Z36        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 150            | Stress and Drug Abuse: Alcohol and Nicotine                         | Poster            | AA1–AA13       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 151            | Amphetamine Reinforcement I                                         | Poster            | AA14–BB17      | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 152            | Food and Addiction Mechanisms                                       | Poster            | BB18–BB31      | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 153            | Mechanisms of Drug Withdrawal and Aversion                          | Poster            | BB32–CC19      | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 154            | Traumatic Brain Injury: Perinatal and Pediatric                     | Poster            | CC20–CC32      | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 194            | Emerging Roles of Extracellular Vesicles in the Nervous System      | Minisymposium     |                | 151AB     | 16 Sun | 1:30–4 p.m.  | 2.5       |
| 197            | Molecular and Functional Biomarkers of Neurodegeneration            | Nanosymposium     |                | 144A      | 16 Sun | 1–2:45 p.m.  |           |
| 198            | Neuroinflammation in Alzheimer's Disease                            | Nanosymposium     |                | 143A      | 16 Sun | 1–3:45 p.m.  |           |
| 199            | Neuroprotection in Parkinson's Disease: Mechanisms and Therapies    | Nanosymposium     |                | 206       | 16 Sun | 1–4:30 p.m.  |           |
| 200            | Fragile X Syndrome: Molecular Mechanisms and Therapeutic Strategies | Nanosymposium     |                | 147B      | 16 Sun | 1–4:15 p.m.  |           |
| 201            | Epilepsy: Man and Mouse                                             | Nanosymposium     |                | 146C      | 16 Sun | 1–3:15 p.m.  |           |
| 202            | Traumatic Brain Injury: Animal and Human Studies                    | Nanosymposium     |                | 152A      | 16 Sun | 1–4:30 p.m.  |           |
| 218            | Parkinson's Disease: Neuroprotective Therapies                      | Poster            | D21–D44        | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 220            | Epilepsy: Circuits                                                  | Poster            | D45–D56        | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 221            | Ischemia: Cellular Mechanisms and Neuroprotection II                | Poster            | D57–E7         | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 222            | Ischemia: Neuroprotection                                           | Poster            | E8–G1          | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 223            | Demyelinating Disorders                                             | Poster            | G2–I7          | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 224            | Demyelinating Disorders: Human Studies and Therapeutics             | Poster            | I8–L2          | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 225            | Traumatic Brain Injury: Animal Studies                              | Poster            | L3–N8          | Halls A–C | 16 Sun | 1–5 p.m.     |           |
| 226            | Excitotoxicity and Metabolic Stress                                 | Poster            | N9–Q1          | Halls A–C | 16 Sun | 1–5 p.m.     |           |

| Session Number | Session Title                                                                                        | Presentation Type | Poster Board # | Location  | Date   | Session Time  | CME Hours |
|----------------|------------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|--------|---------------|-----------|
| 227            | Drugs, Pharmaceuticals, and Toxicity                                                                 | Poster            | Q2–S1          | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 228            | Gene Therapy                                                                                         | Poster            | S2–T2          | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 229            | Psychosis: Neuropathology                                                                            | Poster            | T3–U12         | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 230            | Systems-Oriented Models of Schizophrenia                                                             | Poster            | U13–V2         | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 231            | Nicotine: Reward and Seeking                                                                         | Poster            | V3–V32         | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 232            | Cocaine: Neural Mechanisms I                                                                         | Poster            | W1–W23         | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 233            | Catecholamines and Behavior                                                                          | Poster            | W24–X9         | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 234            | Drug Discovery and Development: Neurodegenerative Diseases I                                         | Poster            | X10–Y14        | Halls A–C | 16 Sun | 1–5 p.m.      |           |
| 275            | Target Validation in Huntington's Disease: Advances Through the Development and Use of Animal Models | Symposium         |                | 146AB     | 17 Mon | 8:30–11 a.m.  | 2.5       |
| 280            | Genes and Environment Interaction During Development: Redox Imbalance in Schizophrenia               | Special Lecture   |                | Hall D    | 17 Mon | 10–11:10 a.m. | 1.25      |
| 282            | Parkinson's Disease: LRRK2                                                                           | Nanosymposium     |                | 147A      | 17 Mon | 8–10:45 a.m.  |           |
| 283            | Aging Brain and Cognition                                                                            | Nanosymposium     |                | 152B      | 17 Mon | 8–11:30 a.m.  |           |
| 284            | Ischemia: Cellular Mechanisms and Neuroprotection I                                                  | Nanosymposium     |                | 146C      | 17 Mon | 8–10:30 a.m.  |           |
| 286            | Spinal Cord Injury: Therapeutic Strategies                                                           | Nanosymposium     |                | 152A      | 17 Mon | 8–11:30 a.m.  |           |
| 287            | Mood Disorders: Novel Therapeutic Mechanisms                                                         | Nanosymposium     |                | 140A      | 17 Mon | 8–11:15 a.m.  |           |
| 307            | Alzheimer's Disease: APP Abeta Tau Interactions I                                                    | Poster            | D47–D72        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 308            | Microglia and Inflammatory Mediators in Neurodegeneration                                            | Poster            | E1–G6          | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 309            | Parkinson's Disease: Human Studies                                                                   | Poster            | G7–I12         | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 310            | Animal Studies on the Aging Brain                                                                    | Poster            | J1–L9          | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 311            | Animal Models of Epilepsy I                                                                          | Poster            | L10–N12        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 312            | Animal Models of Pediatric Epilepsy                                                                  | Poster            | O1–P1          | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 313            | Anticonvulsant Therapies for Seizures                                                                | Poster            | P2–R1          | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 314            | Non-Pharmacological Treatments for Seizures                                                          | Poster            | R2–T2          | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 315            | Spinal Cord Injury: Therapeutic Strategies I                                                         | Poster            | T3–U19         | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 316            | Neurodegeneration II                                                                                 | Poster            | U20–U35        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 317            | Neuroinflammation and Neurological Diseases                                                          | Poster            | U36–V13        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 318            | Neuro-Oncology I                                                                                     | Poster            | V14–W8         | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 319            | Neuro-Oncology II                                                                                    | Poster            | W9–W26         | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 320            | Psychosis: Brain Imaging and EEG Studies                                                             | Poster            | W27–X12        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 321            | Mood Disorders: Novel Therapeutic Mechanisms                                                         | Poster            | X13–Y17        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |
| 322            | Cellular and Molecular Basis for Mood Disorders                                                      | Poster            | Y18–Y27        | Halls A–C | 17 Mon | 8 a.m.–noon   |           |

| Session Number | Session Title                                                           | Presentation Type | Poster Board # | Location   | Date   | Session Time | CME Hours |
|----------------|-------------------------------------------------------------------------|-------------------|----------------|------------|--------|--------------|-----------|
| 323            | Anxiety and Anxiolytic Mechanisms                                       | Poster            | Y28–Z5         | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 324            | Alcohol: Neural Mechanism and Behavior II                               | Poster            | Z6–Z35         | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 325            | Cocaine: Cellular and Synaptic Studies                                  | Poster            | Z36–AA15       | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 326            | Cocaine: Neural Mechanisms II                                           | Poster            | AA16–BB10      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 327            | Opiate Addiction                                                        | Poster            | BB11–CC1       | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 375            | Repairing and Piloting Neuronal Networks to Control Epilepsy            | Symposium         |                | Ballroom A | 17 Mon | 1:30–4 p.m.  | 2.5       |
| 377            | Endocannabinoids and Related Mediators in Brain Function                | Minisymposium     |                | Ballroom C | 17 Mon | 1:30–4 p.m.  | 2.5       |
| 384            | Synaptic Signaling and Neurotransmitter Deficits in Alzheimer's Disease | Nanosymposium     |                | 150B       | 17 Mon | 1–3:30 p.m.  |           |
| 385            | Neuroimaging in Alzheimer's Disease and Tauopathies                     | Nanosymposium     |                | 152B       | 17 Mon | 1–3 p.m.     |           |
| 386            | Neurodegeneration Mechanisms in Parkinson's Disease                     | Nanosymposium     |                | 147A       | 17 Mon | 1–4:45 p.m.  |           |
| 387            | Cocaine: New Findings on Neural Mechanisms                              | Nanosymposium     |                | 140A       | 17 Mon | 1–3 p.m.     |           |
| 405            | APP Function and Processing                                             | Poster            | D48–D65        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 406            | APP and Abeta Pathology Models                                          | Poster            | D66–F7         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 407            | Amyloid Beta Aggregation and Toxicity                                   | Poster            | F8–G9          | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 408            | Alzheimer's Disease: APOE and Cholesterol                               | Poster            | G10–I4         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 409            | Parkinson's Disease Models II                                           | Poster            | I5–J11         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 410            | Parkinson's Disease: Genetic Models                                     | Poster            | J12–L7         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 411            | Parkinson's Disease: Alpha-Synuclein                                    | Poster            | L8–N6          | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 412            | Parkinson's Disease: Clinical Therapies                                 | Poster            | N7–P3          | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 413            | Proteopathic Mechanisms in Parkinson's Disease                          | Poster            | P4–R7          | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 414            | Parkinson's Disease: Circuit Mechanisms                                 | Poster            | R8–T5          | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 415            | Huntington's Disease Animal Models and Therapeutics                     | Poster            | T6–U17         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 416            | SBMA and Other Non-Huntington's Disease Repeat Diseases                 | Poster            | U18–U25        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 417            | Motor Neuron Disease: Cellular Mechanisms                               | Poster            | U26–V16        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 418            | Down Syndrome Molecular Mechanisms                                      | Poster            | V17–V30        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 419            | Epilepsy: Networks                                                      | Poster            | V31–W18        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 420            | Ischemia: Cellular Mechanisms and Neuroprotection III                   | Poster            | W19–X1         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 421            | Traumatic Brain Injury: Neurogenesis and Neurophysiology                | Poster            | X2–X19         | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 422            | Spinal Cord Injury: Animal Models and Human Studies                     | Poster            | X20–Y25        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 423            | Nerve Agents and Warfare Illness                                        | Poster            | Y26–Z11        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |
| 424            | Psychosis: Genetic Mechanisms                                           | Poster            | Z12–Z33        | Halls A–C  | 17 Mon | 1–5 p.m.     |           |

| Session Number | Session Title                                                                 | Presentation Type | Poster Board # | Location  | Date    | Session Time  | CME Hours |
|----------------|-------------------------------------------------------------------------------|-------------------|----------------|-----------|---------|---------------|-----------|
| 425            | Mood Disorders: Ketamine                                                      | Poster            | Z34-AA9        | Halls A-C | 17 Mon  | 1-5 p.m.      |           |
| 426            | Mood Disorders: SSRIs                                                         | Poster            | AA10-AA22      | Halls A-C | 17 Mon  | 1-5 p.m.      |           |
| 427            | Post-Traumatic Stress Disorder and Brain Trauma                               | Poster            | AA23-BB9       | Halls A-C | 17 Mon  | 1-5 p.m.      |           |
| 428            | Alcohol: Intake and Preference                                                | Poster            | BB10-CC5       | Halls A-C | 17 Mon  | 1-5 p.m.      |           |
| 429            | Alcohol: Behavioral Effects                                                   | Poster            | CC6-CC31       | Halls A-C | 17 Mon  | 1-5 p.m.      |           |
| 430            | Cocaine Reinforcement II                                                      | Poster            | CC32-DD22      | Halls A-C | 17 Mon  | 1-5 p.m.      |           |
| 477            | The Role of Mitochondrial Dynamics and Brain Metabolism in Health and Disease | Minisymposium     |                | 145B      | 18 Tues | 8:30-11 a.m.  | 2.5       |
| 478            | Trafficking Dysfunction in Neurodegenerative Diseases                         | Minisymposium     |                | 146AB     | 18 Tues | 8:30-11 a.m.  | 2.5       |
| 479            | Persistent Cocaine-Induced Plasticity and Synaptic Targets for Its Reversal   | Special Lecture   |                | Hall D    | 18 Tues | 10-11:10 a.m. | 1.25      |
| 482            | Aggregation of Amyloid, Tau, and Other Proteins                               | Nanosymposium     |                | 152A      | 18 Tues | 8-11:15 a.m.  |           |
| 483            | Modeling APP and Abeta Pathology in Animals                                   | Nanosymposium     |                | 147B      | 18 Tues | 8-10:15 a.m.  |           |
| 484            | Alpha-Synuclein and LRRK2 Mechanisms in Parkinson's Disease                   | Nanosymposium     |                | 146C      | 18 Tues | 8-10:45 a.m.  |           |
| 485            | Epilepsy: Circuits, Mechanisms, and Potential Therapies                       | Nanosymposium     |                | 144A      | 18 Tues | 8-11:15 a.m.  |           |
| 486            | Traumatic Brain Injury: Therapeutic Strategies I                              | Nanosymposium     |                | 156       | 18 Tues | 8-11:30 a.m.  |           |
| 487            | Biomarkers for Psychosis: EEG and Imaging                                     | Nanosymposium     |                | 150B      | 18 Tues | 8-11:15 a.m.  |           |
| 512            | Parkinson's Disease: Imaging, Dyskinesia, and Development                     | Poster            | R10-T4         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 513            | Parkinson's Disease: Neuroprotection                                          | Poster            | T5-U13         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 514            | Motor Neuron Disease Therapeutics                                             | Poster            | U14-V4         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 515            | Rett Syndrome                                                                 | Poster            | V5-V32         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 516            | Down Syndrome Anatomical and Behavioral Correlations                          | Poster            | W1-W13         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 517            | Developmental Disorders II                                                    | Poster            | W14-W31        | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 518            | Developmental Disorders: Animal Models I                                      | Poster            | W32-Y1         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 519            | Developmental Disorders: Animal Models II                                     | Poster            | Y2-Y30         | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 520            | Animal Models of Epilepsy II                                                  | Poster            | Y31-Z21        | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 521            | Anticonvulsant and Antiepileptic Therapies                                    | Poster            | Z22-AA4        | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 522            | Traumatic Brain Injury: Mechanisms and Therapeutics I                         | Poster            | AA5-BB8        | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 523            | Spinal Cord Injury: Therapeutic Strategies II                                 | Poster            | BB9-CC5        | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 524            | Schizophrenia: Dopamine and Antipsychotic Drugs                               | Poster            | CC6-CC24       | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 525            | Schizophrenia: Experimental Therapeutics and Preclinical Pharmacology         | Poster            | CC25-DD10      | Halls A-C | 18 Tues | 8 a.m.-noon   |           |
| 526            | Opiate Reinforcement                                                          | Poster            | DD11-DD22      | Halls A-C | 18 Tues | 8 a.m.-noon   |           |



| Session Number | Session Title                                                                     | Presentation Type | Poster Board # | Location   | Date    | Session Time | CME Hours |
|----------------|-----------------------------------------------------------------------------------|-------------------|----------------|------------|---------|--------------|-----------|
| 527            | Monoamines and Behavior: Serotonin and Histamine                                  | Poster            | DD23–EE7       | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 528            | Drug Discovery and Development: Neurodegenerative Diseases II                     | Poster            | EE8–FF1        | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 571            | Bath Salts, Spice, and Related Designer Drugs: The Science Behind the Headlines   | Minisymposium     |                | Ballroom B | 18 Tues | 1:30–4 p.m.  | 2.5       |
| 578            | Tauopathy: Molecular Pathogenesis and Experimental Therapy                        | Nanosymposium     |                | 152A       | 18 Tues | 1–3 p.m.     |           |
| 579            | Risk Factors for Neurodegenerative Diseases                                       | Nanosymposium     |                | 150B       | 18 Tues | 1–3:15 p.m.  |           |
| 580            | Parkinson's Disease: Mechanisms and Circuits                                      | Nanosymposium     |                | 146C       | 18 Tues | 1–3:45 p.m.  |           |
| 581            | Ischemia: Cellular Mechanisms and Neuroprotection II                              | Nanosymposium     |                | 156        | 18 Tues | 1–3 p.m.     |           |
| 602            | Autism Behavioral Analysis I                                                      | Poster            | E4–G3          | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 603            | Autism Genetic Models                                                             | Poster            | G4–I2          | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 604            | Autism Synaptic and Cellular Mechanisms                                           | Poster            | I3–K3          | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 605            | Status Epilepticus-Induced Changes                                                | Poster            | K4–L9          | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 606            | Human Studies of Epilepsy                                                         | Poster            | L10–O1         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 607            | Traumatic Brain Injury: Cellular Events and Repair                                | Poster            | O2–Q3          | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 608            | Traumatic Brain Injury: Mechanisms and Therapeutics II                            | Poster            | Q4–S12         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 609            | Spinal Cord Signaling in Trauma                                                   | Poster            | T1–U11         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 610            | Neuroprotection in Ischemia, Stress, and Injury                                   | Poster            | U12–U30        | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 611            | Ischemia Inflammation: White Cells and Cytokines                                  | Poster            | U31–V6         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 612            | Neuroinflammation: HIV and Infections                                             | Poster            | V7–V26         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 613            | Schizophrenia: Glutamate                                                          | Poster            | V27–W14        | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 614            | Biomarkers in Serious Mental Illness                                              | Poster            | W15–X4         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 615            | Depression Biology                                                                | Poster            | X5–Y8          | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 616            | Cocaine: Behavioral Studies                                                       | Poster            | Y9–Y30         | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 617            | Cocaine: Neural Mechanisms III                                                    | Poster            | Y31–Z16        | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 618            | Cocaine and Amphetamine Reinforcement                                             | Poster            | Z17–Z31        | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 619            | Exposure to Addictive Drugs: Genetic and Behavioral Effects                       | Poster            | Z32–AA22       | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 663            | Infiltration of Innate Immune Cells Into the Injured, Infected, or Inflamed Brain | Symposium         |                | Ballroom B | 19 Wed  | 8:30–11 a.m. | 2.5       |
| 664            | Nature, Nurture, and Trajectories to Mental Health                                | Symposium         |                | Ballroom A | 19 Wed  | 8:30–11 a.m. | 2.5       |
| 670            | Complex Neurodegenerative Pathologies                                             | Nanosymposium     |                | 140A       | 19 Wed  | 8–10 a.m.    |           |
| 671            | Alzheimer's Disease: Experimental Therapeutics I                                  | Nanosymposium     |                | 147B       | 19 Wed  | 8–10 a.m.    |           |
| 672            | Ischemia: Neuroprotection                                                         | Nanosymposium     |                | 152A       | 19 Wed  | 8–11 a.m.    |           |
| 673            | Metabolic and Excitotoxic Mechanisms of Cell Death and Degeneration               | Nanosymposium     |                | 144A       | 19 Wed  | 8–11:30 a.m. |           |

| Session Number | Session Title                                                          | Presentation Type | Poster Board # | Location   | Date   | Session Time | CME Hours |
|----------------|------------------------------------------------------------------------|-------------------|----------------|------------|--------|--------------|-----------|
| 690            | Alzheimer's Disease: Cognitive Function                                | Poster            | C16–C36        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 691            | Neuropharmacology and Neurotransmission in Dementia                    | Poster            | C37–C61        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 692            | Parkinson's Disease: Animal Intoxication Models                        | Poster            | C62–D15        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 693            | Parkinson's Disease: Cellular Mechanisms                               | Poster            | D16–D42        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 694            | Parkinson's Disease                                                    | Poster            | D43–D68        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 695            | Mechanisms of Cell Death and Dysfunction                               | Poster            | D69–F1         | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 696            | Motor Neuron Disease and Animal Models                                 | Poster            | F2–G11         | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 697            | Other Neurodegenerative Disorders I                                    | Poster            | G12–I7         | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 698            | Physiology and Pathophysiology of Hormones                             | Poster            | I8–K4          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 699            | Fragile X Syndrome                                                     | Poster            | K5–M6          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 700            | Attention Deficit Hyperactivity Disorder                               | Poster            | M7–N7          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 701            | Ischemia: Cellular Mechanisms and Neuroprotection IV                   | Poster            | N8–O8          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 702            | Ischemia: Pathophysiology, Biomarkers, and Treatment                   | Poster            | O9–Q6          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 703            | Traumatic Brain Injury: Human Studies                                  | Poster            | Q7–S5          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 704            | Spinal Cord Injury                                                     | Poster            | S6–U6          | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 705            | Peripheral and Central Nerve Injury                                    | Poster            | U7–U31         | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 706            | Psychosis and Affect: Human Biomarker Studies                          | Poster            | U32–V21        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 707            | Developmental Animal Models of Schizophrenia                           | Poster            | V22–W18        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 708            | Mood Disorders: Human Postmortem                                       | Poster            | W19–W33        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 709            | Mood Disorders: Animal Models I                                        | Poster            | W34–Y3         | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 710            | Mood Disorders Animal Models II                                        | Poster            | Y4–Y29         | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 711            | Mood Disorders Animal Models III                                       | Poster            | Y30–Z25        | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 712            | Alcohol: Developmental Effects                                         | Poster            | Z26–AA11       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 713            | Drug Discovery and Delivery                                            | Poster            | AA12–BB17      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 714            | New Drugs for Pain, Headache, and Migraine                             | Poster            | BB18–BB33      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 715            | Stroke Recovery: Rodent Models                                         | Poster            | CC1–CC17       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 716            | Stroke Recovery                                                        | Poster            | CC18–DD4       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 717            | Stroke: Imaging and Diagnostics I                                      | Poster            | DD5–DD25       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 718            | Stroke: Imaging and Diagnostics II                                     | Poster            | DD26–EE3       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 762            | Gut Microbes and the Brain: Paradigm Shift in Neuroscience             | Symposium         |                | 146AB      | 19 Wed | 1:30–4 p.m.  | 2.5       |
| 764            | The Latest on the Ubiquitin Pathway and Central Nervous System Disease | Symposium         |                | Ballroom B | 19 Wed | 1:30–4 p.m.  | 2.5       |
| 765            | Human Subcortical Connectivity with High-Field MRI                     | Minisymposium     |                | Ballroom C | 19 Wed | 1:30–4 p.m.  | 2.5       |
| 768            | APP Functions and Processing Pathways                                  | Nanosymposium     |                | 150B       | 19 Wed | 1–3:30 p.m.  |           |

| Session Number                     | Session Title                                                              | Presentation Type | Poster Board # | Location   | Date   | Session Time | CME Hours |
|------------------------------------|----------------------------------------------------------------------------|-------------------|----------------|------------|--------|--------------|-----------|
| 769                                | Huntington's Disease Mechanisms and Therapeutic Strategies                 | Nanosymposium     |                | 147B       | 19 Wed | 1–4:15 p.m.  |           |
| 770                                | Repeat Diseases From SBMA to Motor Neuron Disease                          | Nanosymposium     |                | 146C       | 19 Wed | 1–3 p.m.     |           |
| 771                                | Stroke Recovery                                                            | Nanosymposium     |                | 152B       | 19 Wed | 1–4:15 p.m.  |           |
| 788                                | Alzheimer's Disease: Tau Biochemistry                                      | Poster            | C62–D13        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 789                                | Alzheimer's Disease: APP Abeta <i>In Vivo</i> Models II                    | Poster            | D14–D37        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 790                                | Modulation of Disease Pathology in Alzheimer's Disease Models              | Poster            | D38–D59        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 791                                | APP Cleavage and Metabolism Processes                                      | Poster            | D60–F2         | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 792                                | Alzheimer's Disease: Tauopathy                                             | Poster            | F3–H1          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 793                                | Alzheimer's Disease: Genetics and Biology II                               | Poster            | H2–I6          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 794                                | Parkinson's Disease Models III                                             | Poster            | I7–K9          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 795                                | Huntington's Disease Mechanisms II                                         | Poster            | L1–N1          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 796                                | Motor Neuron Disease Mechanisms                                            | Poster            | N2–P7          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 797                                | Other Neurodegenerative Disorders II                                       | Poster            | P8–S1          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 798                                | Autism Behavioral Analysis II                                              | Poster            | S2–T6          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 799                                | Autism Environment and Pathology                                           | Poster            | T7–U6          | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 800                                | Ischemia: Cellular Mechanisms and Neuroprotection V                        | Poster            | U7–U28         | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 801                                | Ischemia: Cellular Mechanisms and Neuroprotection VI                       | Poster            | U29–V4         | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 802                                | Ischemia: Cellular Mechanisms and Neuroprotection VII                      | Poster            | V5–V21         | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 803                                | Ischemia: Inflammation                                                     | Poster            | V22–V30        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 804                                | Ischemia: Neuroprotection II                                               | Poster            | V31–W21        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 805                                | Ischemia: Cellular Mechanisms and Neuroprotection VIII                     | Poster            | W22–W31        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 806                                | Microglia in Neuroinflammation and Neuroprotection                         | Poster            | W32–X13        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 807                                | Neuroinflammation                                                          | Poster            | X14–Y16        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 808                                | Mood Disorders in Animal Models IV                                         | Poster            | Y17–Z13        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 809                                | Amphetamine Reinforcement II                                               | Poster            | Z14–AA1        | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 810                                | Cannabis: Neural Mechanisms and Addiction                                  | Poster            | AA2–AA15       | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 811                                | Neural Plasticity, Dependence, and Addiction                               | Poster            | AA16–BB21      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 812                                | Drug Self-Administration: Behavioral Pharmacology and Molecular Mechanisms | Poster            | BB22–BB32      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 813                                | Neuropeptides and Behavior                                                 | Poster            | BB33–CC22      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| THEME D: SENSORY AND MOTOR SYSTEMS |                                                                            |                   |                |            |        |              |           |
| 006                                | The Neural Basis of Affective Touch                                        | Minisymposium     |                | Ballroom B | 15 Sat | 1:30–4 p.m.  | 2.5       |

| Session Number | Session Title                                                                           | Presentation Type | Poster Board # | Location   | Date   | Session Time | CME Hours |
|----------------|-----------------------------------------------------------------------------------------|-------------------|----------------|------------|--------|--------------|-----------|
| 014            | Plasticity in the Olfactory System                                                      | Nanosymposium     |                | 147A       | 15 Sat | 1–3:30 p.m.  |           |
| 015            | Auditory Processing                                                                     | Nanosymposium     |                | 206        | 15 Sat | 1–4 p.m.     |           |
| 016            | Spatial and Feature-Based Attention                                                     | Nanosymposium     |                | 146C       | 15 Sat | 1–4 p.m.     |           |
| 017            | Plasticity After Spinal Cord Injury                                                     | Nanosymposium     |                | 143A       | 15 Sat | 1–3 p.m.     |           |
| 058            | Olfaction: Central Circuits and Neurotransmitters                                       | Poster            | Y16–Y27        | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 059            | Retina: Circuits and Coding                                                             | Poster            | Y28–Z7         | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 060            | Striate Cortex: Neural Coding                                                           | Poster            | Z8–Z35         | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 061            | Visual Processing: Contrast, Form, and Color                                            | Poster            | Z36–AA16       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 062            | Eye Movements: Cerebellum, Brainstem, and Muscles                                       | Poster            | AA17–BB16      | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 063            | Somatosensory System                                                                    | Poster            | BB17–BB31      | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 064            | Thalamocortical Mechanisms                                                              | Poster            | BB32–CC17      | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 065            | Generation of Motor Patterns                                                            | Poster            | CC18–DD6       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 066            | Parkinson's Disease Models I                                                            | Poster            | DD7–DD19       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 067            | Posture and Gait: Kinematics, Muscle Activity, Exercise and Fatigue, and Biomechanics I | Poster            | DD20–EE6       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 068            | Posture and Gait: Aging and Stroke                                                      | Poster            | EE7–EE21       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 069            | Posture and Gait: Injury and Disease                                                    | Poster            | EE22–FF11      | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 070            | Visuomotor Coordination                                                                 | Poster            | FF12–GG9       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 071            | Interlimb Coordination                                                                  | Poster            | GG10–HH1       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 072            | Motor Deficits                                                                          | Poster            | HH2–HH14       | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 073            | Cortical Motor Planning                                                                 | Poster            | HH15–HH29      | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 074            | Noninvasive Neurophysiology                                                             | Poster            | HH30–II15      | Halls A–C  | 15 Sat | 1–5 p.m.     |           |
| 102            | Implicit Processes in Action Control                                                    | Symposium         |                | Ballroom B | 16 Sun | 8:30–11 a.m. | 2.5       |
| 115            | Spinal Cord Injury: Repair and Rehabilitation                                           | Nanosymposium     |                | 152B       | 16 Sun | 8–9:45 a.m.  |           |
| 155            | Striate Cortex: Maps and Their Circuits                                                 | Poster            | CC33–DD15      | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 156            | Visual Attention                                                                        | Poster            | DD16–EE2       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 157            | Central Physiology and Anatomy                                                          | Poster            | EE3–EE17       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 158            | Spinal Cord Processing: Pharmacology                                                    | Poster            | EE18–FF9       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 159            | Mechanisms of Neuropathic Pain: Inflammatory Mediators and Neurotrophins                | Poster            | FF10–FF21      | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 160            | Motor Unit Recordings, Kinematics, and EMG                                              | Poster            | FF22–GG8       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 161            | Motor Neuron–Muscle Interface                                                           | Poster            | GG9–GG23       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 162            | Finger and Grasp Control: Age, Pathology, and Physiology                                | Poster            | GG24–HH6       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 163            | Sensorimotor Learning                                                                   | Poster            | HH7–HH20       | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |



| Session Number | Session Title                                                                     | Presentation Type | Poster Board # | Location   | Date   | Session Time          | CME Hours |
|----------------|-----------------------------------------------------------------------------------|-------------------|----------------|------------|--------|-----------------------|-----------|
| 164            | Stroke and Voluntary Movement                                                     | Poster            | HH21–II9       | Halls A–C  | 16 Sun | 8 a.m.–noon           |           |
| 165            | Neural Decoding                                                                   | Poster            | II10–II27      | Halls A–C  | 16 Sun | 8 a.m.–noon           |           |
| 191            | Peripheral Gating of Pain Signals by Endogenous Lipid Mediators                   | Symposium         |                | Ballroom B | 16 Sun | 1:30–4 p.m.           | 2.5       |
| 235            | Auditory Processing of Natural Sounds                                             | Poster            | Y15–Z2         | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 236            | Extrastriate Cortex: Responses and Coding                                         | Poster            | Z3–Z28         | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 237            | Eye Movements: Clinical and Behavioral                                            | Poster            | Z29–AA2        | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 238            | Eye Movements: Cortex and Superior Colliculus                                     | Poster            | AA3–AA19       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 239            | Pain Behavioral Models                                                            | Poster            | AA20–BB25      | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 240            | Inflammatory Pain                                                                 | Poster            | BB26–CC18      | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 241            | Pain: Ion Channels and Physiology                                                 | Poster            | CC19–DD10      | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 242            | Mechanisms of Neuropathic Pain: Signaling Pathways and Models                     | Poster            | DD11–EE4       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 243            | Pain Imaging and Perception                                                       | Poster            | EE5–FF4        | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 244            | Opioids and Other Analgesics                                                      | Poster            | FF5–FF29       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 245            | Somatosensory Transduction                                                        | Poster            | FF30–GG14      | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 246            | Neocortical Plasticity                                                            | Poster            | GG15–HH2       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 247            | Motor Neurons: Development, Identification, Intrinsic Properties, and Modulation  | Poster            | HH3–HH20       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 248            | Small Networks and Plasticity                                                     | Poster            | HH21–II3       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 249            | Grasping Dexterity                                                                | Poster            | II4–II24       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 250            | Reaching Control: Action and Sensation                                            | Poster            | II25–JJ10      | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 251            | Reaching Control: Movement Selection and Strategy                                 | Poster            | JJ11–KK3       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 252            | Neuroprosthetics                                                                  | Poster            | KK4–LL1        | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 253            | Brain-Machine Interface                                                           | Poster            | LL2–LL13       | Halls A–C  | 16 Sun | 1–5 p.m.              |           |
| 276            | The Effects of Hearing Loss on Neural Processing, Plasticity, and Aging           | Symposium         |                | Ballroom C | 17 Mon | 8:30–11 a.m.          | 2.5       |
| 278            | New Roles for the External Globus Pallidus in Basal Ganglia Circuits and Behavior | Minisymposium     |                | 151AB      | 17 Mon | 8:30–11 a.m.          | 2.5       |
| 279            | The Role of Parvalbumin Neurons in Visual Processing and Plasticity               | Minisymposium     |                | 145B       | 17 Mon | 8:30–11 a.m.          | 2.5       |
| 281            | The Brain Is Needed to Cure Spinal Cord Injury                                    | Special Lecture   |                | Hall D     | 17 Mon | 11:30 a.m.–12:40 p.m. | 1.25      |
| 288            | Eye Movements and Perception                                                      | Nanosymposium     |                | 144A       | 17 Mon | 8–11:15 a.m.          |           |
| 289            | The Cells and Molecules of Touch, Itch, and Thermoreception                       | Nanosymposium     |                | 143A       | 17 Mon | 8–11 a.m.             |           |
| 328            | Auditory System: Cortical Processing in Animals and Humans                        | Poster            | CC2–CC12       | Halls A–C  | 17 Mon | 8 a.m.–noon           |           |
| 329            | Auditory Subcortical and Neuromodulatory Processes                                | Poster            | CC13–CC28      | Halls A–C  | 17 Mon | 8 a.m.–noon           |           |
| 330            | Auditory System: Adaptation, Learning, and Memory                                 | Poster            | CC29–DD7       | Halls A–C  | 17 Mon | 8 a.m.–noon           |           |

| Session Number | Session Title                                                                                   | Presentation Type | Poster Board # | Location  | Date   | Session Time | CME Hours |
|----------------|-------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|--------|--------------|-----------|
| 331            | Multisensory and Temporal Factors in Cross-Modal Processing                                     | Poster            | DD8-DD25       | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 332            | Extrastriate Cortex: Organization                                                               | Poster            | DD26-EE10      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 333            | Binocular Vision                                                                                | Poster            | EE11-EE26      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 334            | Sensorimotor Transformation: Physiology and Imaging                                             | Poster            | EE27-FF13      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 335            | Hair Cells, End-Organ, and Nerve                                                                | Poster            | FF14-FF23      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 336            | Pain Transduction: TRP Channels                                                                 | Poster            | FF24-GG14      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 337            | Descending Modulation                                                                           | Poster            | GG15-GG34      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 338            | Musculoskeletal Pain                                                                            | Poster            | GG35-HH8       | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 339            | Somatosensory Stimulus Response Features                                                        | Poster            | HH9-HH24       | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 340            | Somatosensory: Functional Studies                                                               | Poster            | HH25-II10      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 341            | Cerebellum: Plasticity and Climbing Fibers                                                      | Poster            | II11-II23      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 342            | Basal Ganglia: Cellular Physiology                                                              | Poster            | II24-JJ10      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 343            | Finger and Grasp Control: Normal Human Behavior                                                 | Poster            | JJ11-JJ30      | Halls A-C | 17 Mon | 8 a.m.-noon  |           |
| 378            | From Objects to Actions: Dynamics in Parietal and Frontal Cortex                                | Minisymposium     |                | 146AB     | 17 Mon | 1:30-4 p.m.  | 2.5       |
| 388            | Neural Processing of Natural Sounds                                                             | Nanosymposium     |                | 152A      | 17 Mon | 1-3:15 p.m.  |           |
| 389            | Retinal Processing                                                                              | Nanosymposium     |                | 143A      | 17 Mon | 1-3:15 p.m.  |           |
| 390            | Pain Imaging: From Neural Circuits to Perception                                                | Nanosymposium     |                | 147B      | 17 Mon | 1-4 p.m.     |           |
| 431            | Auditory Processing: Temporal, Frequency, and Spectral Processing-Model Systems and Subcortical | Poster            | DD23-DD32      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 432            | Multisensory: Neural Circuitry and Connections                                                  | Poster            | EE1-EE18       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 433            | Photoreceptors                                                                                  | Poster            | EE19-FF12      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 434            | Striate Cortex Input Circuits                                                                   | Poster            | FF13-FF29      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 435            | Decision Making and the Cortex                                                                  | Poster            | FF30-GG15      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 436            | Sensorimotor Transformation: Behavior                                                           | Poster            | GG16-GG27      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 437            | Reaching Action                                                                                 | Poster            | GG28-HH15      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 438            | Eye Movements: Cortex                                                                           | Poster            | HH16-II3       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 439            | Mechanisms of Neuropathic Pain: Glia                                                            | Poster            | II4-II14       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 440            | Somatosensory Cortex                                                                            | Poster            | II15-JJ1       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 441            | Somatosensory: Stimulus Feature Neural Coding                                                   | Poster            | JJ2-JJ25       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 442            | Systems Physiology and Circuits                                                                 | Poster            | JJ26-KK16      | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 443            | Cortical Planning of Actions                                                                    | Poster            | KK17-LL3       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 444            | Brain-Machine Interface: Implanted Electrodes I                                                 | Poster            | LL4-LL22       | Halls A-C | 17 Mon | 1-5 p.m.     |           |
| 445            | Brain-Machine Interface: Analytical Methods for Monitoring Tissue Responses                     | Poster            | LL23-MM4       | Halls A-C | 17 Mon | 1-5 p.m.     |           |

| Session Number | Session Title                                                                | Presentation Type | Poster Board # | Location   | Date    | Session Time   | CME Hours |
|----------------|------------------------------------------------------------------------------|-------------------|----------------|------------|---------|----------------|-----------|
| 446            | Comparative Anatomy and Evolution I                                          | Poster            | MM5–MM28       | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 447            | Comparative Anatomy and Evolution II                                         | Poster            | MM29–NN9       | Halls A–C  | 17 Mon  | 1–5 p.m.       |           |
| 472            | Learning and Relearning Movement                                             | Special Lecture   |                | Hall D     | 18 Tues | 8:30–9:40 a.m. | 1.25      |
| 488            | Auditory System: Circuits and Perception                                     | Nanosymposium     |                | 143A       | 18 Tues | 8–11 a.m.      |           |
| 489            | Striate Cortex                                                               | Nanosymposium     |                | 206        | 18 Tues | 8–11:15 a.m.   |           |
| 529            | Auditory Processing: Temporal, Frequency, and Spectral Processing-Perception | Poster            | FF2–FF13       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 530            | Auditory Processing: Neural Coding, Animal Studies, and Computation          | Poster            | FF14–FF25      | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 531            | Auditory Processing: Neural Coding, Human Experiment, and Theory             | Poster            | FF26–GG3       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 532            | Striate Cortex: Intracortical Circuitry                                      | Poster            | GG4–GG26       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 533            | Eye Movements and Perception                                                 | Poster            | GG27–HH11      | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 534            | Nociceptors: Molecular and Pharmacological Studies                           | Poster            | HH12–II6       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 535            | Somatosensory: Local Cortical Circuits                                       | Poster            | II7–JJ4        | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 536            | Plasticity After Spinal Cord Injury I                                        | Poster            | JJ5–JJ26       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 537            | Plasticity After Spinal Cord Injury II                                       | Poster            | JJ27–KK12      | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 538            | Circuit Connectivity                                                         | Poster            | KK13–LL5       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 539            | Motor Neurons and Muscle                                                     | Poster            | LL6–MM7        | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 540            | Cortex and Nuclei: Anatomy and <i>In Vitro</i> Studies                       | Poster            | MM8–MM19       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 541            | Transmitters and Neuromodulation                                             | Poster            | MM20–NN1       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 542            | Plasticity of Voluntary Movements                                            | Poster            | NN2–NN29       | Halls A–C  | 18 Tues | 8 a.m.–noon    |           |
| 568            | Auditory Cortical Processing in Real-World Listening                         | Symposium         |                | Ballroom C | 18 Tues | 1:30–4 p.m.    | 2.5       |
| 582            | Visual Processing: Faces                                                     | Nanosymposium     |                | 143A       | 18 Tues | 1–4:15 p.m.    |           |
| 583            | Brainstem: Motor and Sensory Systems                                         | Nanosymposium     |                | 144A       | 18 Tues | 1–3:15 p.m.    |           |
| 620            | Olfactory Sensory Neurons: Development and Signal Transduction               | Poster            | AA23–BB13      | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 621            | Taste                                                                        | Poster            | BB14–CC6       | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 622            | Auditory Processing: Human Studies of Perception, Cognition, and Action      | Poster            | CC7–CC34       | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 623            | Multisensory: Cross-Modal Processing in Humans, Audio-Visual                 | Poster            | CC35–DD11      | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 624            | Visual Cognition: Decision-Making                                            | Poster            | DD12–DD27      | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 625            | Multisensory and Motor Interactions                                          | Poster            | DD28–EE25      | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 626            | Eye Movement Behavior                                                        | Poster            | EE26–FF19      | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 627            | Spinal Cord Processing: Anatomy and Physiology                               | Poster            | FF20–GG8       | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 628            | Visceral Pain                                                                | Poster            | GG9–GG29       | Halls A–C  | 18 Tues | 1–5 p.m.       |           |
| 629            | Spinal Cord Injury and Plasticity I                                          | Poster            | GG30–HH11      | Halls A–C  | 18 Tues | 1–5 p.m.       |           |

| Session Number | Session Title                                                                                                                      | Presentation Type | Poster Board # | Location   | Date    | Session Time          | CME Hours |
|----------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------|------------|---------|-----------------------|-----------|
| 630            | Spinal Cord Injury: Repair, Training, and Rehabilitation I                                                                         | Poster            | HH12–II9       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 631            | Afferent and Descending Control                                                                                                    | Poster            | II10–JJ3       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 632            | Cortex and Nuclei: <i>In Vivo</i> Studies                                                                                          | Poster            | JJ4–JJ23       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 633            | Systems Physiology and Behavior                                                                                                    | Poster            | JJ24–KK16      | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 634            | Motor Skill-Learning                                                                                                               | Poster            | KK17–LL9       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 635            | Reaching Learning                                                                                                                  | Poster            | LL10–MM7       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 636            | Rehabilitation                                                                                                                     | Poster            | MM8–NN1        | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 637            | Craniofacial Functions                                                                                                             | Poster            | NN2–NN23       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 638            | Brain-Machine Interface: Implanted Electrodes II                                                                                   | Poster            | NN24–002       | Halls A–C  | 18 Tues | 1–5 p.m.              |           |
| 665            | OdorSpace: Deciphering Stimulus Space in Olfaction                                                                                 | Symposium         |                | Ballroom C | 19 Wed  | 8:30–11 a.m.          | 2.5       |
| 669            | The Sensory Neurons of Touch                                                                                                       | Special Lecture   |                | Hall D     | 19 Wed  | 11:30 a.m.–12:40 p.m. | 1.25      |
| 674            | Extrastriate Cortex: Neural Coding                                                                                                 | Nanosymposium     |                | 143A       | 19 Wed  | 8–10:30 a.m.          |           |
| 719            | Olfactory Coding: Second-Order Regions (Olfactory Bulb and Antennal Lobe)                                                          | Poster            | EE4–FF2        | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 720            | Olfactory Coding: Higher-Order Regions, Oscillations and Integrative Studies                                                       | Poster            | FF3–FF23       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 721            | Olfaction: Behavior Perception and Relationship to Neurophysiology                                                                 | Poster            | FF24–GG3       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 722            | Mechanoreceptors and Cochlea                                                                                                       | Poster            | GG4–GG13       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 723            | Sound Localization and Binaural Interactions                                                                                       | Poster            | GG14–GG27      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 724            | Multisensory: Cross-Modal Processing in Humans                                                                                     | Poster            | GG28–HH6       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 725            | Retinal Circuitry                                                                                                                  | Poster            | HH7–HH27       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 726            | Visual Motion                                                                                                                      | Poster            | HH28–II25      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 727            | Nociceptors: Anatomical and Physiological Studies                                                                                  | Poster            | II26–JJ10      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 728            | Thalamic and Cortical Processing                                                                                                   | Poster            | JJ11–JJ25      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 729            | Treatments for Persistent Pain                                                                                                     | Poster            | JJ26–KK9       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 730            | Pain Models: Pharmacology                                                                                                          | Poster            | KK10–LL3       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 731            | Neurorehabilitation                                                                                                                | Poster            | LL4–LL17       | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 732            | Spinal Cord Injury: Repair, Training, and Rehabilitation II                                                                        | Poster            | LL18–MM18      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 733            | Cerebellum: Human Studies                                                                                                          | Poster            | MM19–MM30      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 734            | Afferent Control of Posture and Gait                                                                                               | Poster            | MM31–NN10      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 735            | Motor Cortex                                                                                                                       | Poster            | NN11–NN31      | Halls A–C  | 19 Wed  | 8 a.m.–noon           |           |
| 766            | Pro-Nociceptive Interactions Between Spinal and Supraspinal Centers in Chronic Pain: Mechanisms and Avenues for Novel Drug Targets | Minisymposium     |                | 151AB      | 19 Wed  | 1:30–4 p.m.           | 2.5       |
| 772            | Functional Organization of the Human Visual Cortex                                                                                 | Nanosymposium     |                | 144A       | 19 Wed  | 1–3:30 p.m.           |           |

| Session Number                                                                               | Session Title                                                                                | Presentation Type | Poster Board # | Location  | Date   | Session Time   | CME Hours |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------|----------------|-----------|--------|----------------|-----------|
| 814                                                                                          | Auditory Cortex                                                                              | Poster            | CC23-DD6       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 815                                                                                          | Auditory Processing: Perception, Cognition, and Action via Animal and Modeling Studies       | Poster            | DD7-DD20       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 816                                                                                          | Subcortical Visual Pathways                                                                  | Poster            | DD21-EE6       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 817                                                                                          | Subcortical Visual Pathways: Rodents                                                         | Poster            | EE7-EE27       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 818                                                                                          | Striate Cortex: High-Level Factors                                                           | Poster            | EE28-FF18      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 819                                                                                          | Striate Cortex: Plasticity                                                                   | Poster            | FF19-GG10      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 820                                                                                          | Extrastriate Cortex: Connections and Function                                                | Poster            | GG11-GG23      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 821                                                                                          | Visual Motion: Heading and Orientation                                                       | Poster            | GG24-GG33      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 822                                                                                          | Visual Processing: Objects and Scenes                                                        | Poster            | GG34-HH27      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 823                                                                                          | Visual Processing: Faces                                                                     | Poster            | HH28-II25      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 824                                                                                          | Visual Learning, Memory, and Categorization                                                  | Poster            | II26-JJ12      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 825                                                                                          | Sensory Coding, Perception, and Navigation                                                   | Poster            | JJ13-JJ30      | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 826                                                                                          | Trigeminal Processing of Pain                                                                | Poster            | JJ31-KK7       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 827                                                                                          | Spinal Cord Injury and Plasticity II                                                         | Poster            | KK8-LL2        | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 828                                                                                          | Neuromodulation                                                                              | Poster            | LL3-MM2        | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 829                                                                                          | Muscle Physiology and Biochemistry                                                           | Poster            | MM3-MM18       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 830                                                                                          | Posture and Gait: Kinematics, Muscle Activity, Exercise and Fatigue, and Biomechanics II     | Poster            | MM19-NN2       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| 831                                                                                          | Posture and Gait                                                                             | Poster            | NN3-NN20       | Halls A-C | 19 Wed | 1-5 p.m.       |           |
| THEME E: INTEGRATIVE SYSTEMS: NEUROENDOCRINOLOGY, NEUROIMMUNOLOGY, AND HOMEOSTATIC CHALLENGE |                                                                                              |                   |                |           |        |                |           |
| 018                                                                                          | Neuroimmunology                                                                              | Nanosymposium     |                | 150A      | 15 Sat | 1-4:15 p.m.    |           |
| 075                                                                                          | Gonadotropin-Releasing Hormone and Hpg Control                                               | Poster            | II16-JJ1       | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 076                                                                                          | Kisspeptin and Related Systems                                                               | Poster            | JJ2-JJ12       | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 077                                                                                          | Neural Control of Cardiovascular Function I                                                  | Poster            | JJ13-JJ32      | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 078                                                                                          | Stress: Corticotropin-Releasing Factor                                                       | Poster            | JJ33-KK7       | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 079                                                                                          | Stress: Genes and Epigenetics                                                                | Poster            | KK8-KK18       | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 080                                                                                          | Adolescent Stress                                                                            | Poster            | KK19-LL2       | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 081                                                                                          | Stress Effects on Cortex and Other Brain Regions                                             | Poster            | LL3-LL20       | Halls A-C | 15 Sat | 1-5 p.m.       |           |
| 100                                                                                          | What Drives Sleep-Wake Cycles: Identification of Molecules and Circuits in <i>Drosophila</i> | Special Lecture   |                | Hall D    | 16 Sun | 8:30-9:40 a.m. | 1.25      |
| 116                                                                                          | Consequences and Mechanisms of Exposure to Stressors                                         | Nanosymposium     |                | 147B      | 16 Sun | 8-10 a.m.      |           |
| 166                                                                                          | Neuroimmune Regulators: Microglia                                                            | Poster            | II28-JJ9       | Halls A-C | 16 Sun | 8 a.m.-noon    |           |
| 167                                                                                          | Female Sexual Behavior                                                                       | Poster            | JJ10-JJ32      | Halls A-C | 16 Sun | 8 a.m.-noon    |           |
| 168                                                                                          | Neural Control of Cardiovascular Function II                                                 | Poster            | JJ33-KK17      | Halls A-C | 16 Sun | 8 a.m.-noon    |           |
| 169                                                                                          | Autonomic Control of Thermoregulatory, Gastrointestinal, and Reproductive Functions          | Poster            | KK18-LL2       | Halls A-C | 16 Sun | 8 a.m.-noon    |           |



| Session Number | Session Title                                                | Presentation Type | Poster Board # | Location   | Date    | Session Time | CME Hours |
|----------------|--------------------------------------------------------------|-------------------|----------------|------------|---------|--------------|-----------|
| 189            | Surprising Origins of Sex Differences in the Brain           | Special Lecture   |                | Hall D     | 16 Sun  | 1–2:10 p.m.  | 1.25      |
| 203            | Obstructive Sleep Apnea: Intermittent Oxygenation            | Nanosymposium     |                | 152B       | 16 Sun  | 1–2:30 p.m.  |           |
| 254            | Neuroimmune System Pathways and Regulators                   | Poster            | LL14–MM15      | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 255            | Thirst and Water Balance                                     | Poster            | MM16–MM26      | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 256            | Central Pathways: Anatomy and Development                    | Poster            | MM27–NN13      | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 257            | Sleep                                                        | Poster            | NN14–O05       | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 258            | Sleep: Systems and Behavior                                  | Poster            | O06–PP1        | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 259            | Functional Neuroimaging: Neurovascular Mechanisms            | Poster            | PP2–PP18       | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 290            | Neural Mechanisms of Energy Balance Regulation and Obesity   | Nanosymposium     |                | 147B       | 17 Mon  | 8–11:15 a.m. |           |
| 291            | Sleep and Memory                                             | Nanosymposium     |                | 206        | 17 Mon  | 8–10:45 a.m. |           |
| 344            | Parental Behavior                                            | Poster            | JJ31–KK15      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 345            | Stress: Neuroimmune Aspects                                  | Poster            | KK16–LL1       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 346            | Sex Differences in Stress Responses                          | Poster            | LL2–LL13       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 347            | Stress and Anxiety: Modulation                               | Poster            | LL14–MM5       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 348            | Stress and Aversive States                                   | Poster            | MM6–MM28       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 349            | Stress and the Hippocampus                                   | Poster            | MM29–NN6       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 350            | Stress and Anxiety: Mechanisms                               | Poster            | NN7–NN36       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 351            | Psychosocial Stress                                          | Poster            | O01–O014       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 352            | Brain Blood Flow                                             | Poster            | O015–PP2       | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 374            | Exercise, Energy Intake, and the Brain                       | Symposium         |                | Ballroom B | 17 Mon  | 1:30–4 p.m.  | 2.5       |
| 391            | Cellular Effects of Stress                                   | Nanosymposium     |                | 146C       | 17 Mon  | 1–3:45 p.m.  |           |
| 392            | Brain Wellness: Metabolism and Energetics                    | Nanosymposium     |                | 206        | 17 Mon  | 1–4:30 p.m.  |           |
| 448            | Neuroendocrine Anatomy and Physiology                        | Poster            | NN10–NN32      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 449            | Male Sexual Behavior                                         | Poster            | NN33–O013      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 450            | Defensive Behavior and Aggression                            | Poster            | O014–O024      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 451            | Behavioral and Neural Effects of Gonadal Hormones            | Poster            | O025–PP19      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 452            | HPA Axis                                                     | Poster            | PP20–QQ8       | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 453            | Monoamines and Other Regulators                              | Poster            | QQ9–QQ33       | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 454            | Suprachiasmatic Nucleus and Circadian Rhythms                | Poster            | QQ34–RR27      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 474            | Neural and Immune Mechanisms Regulating Resilience to Stress | Symposium         |                | Ballroom A | 18 Tues | 8:30–11 a.m. | 2.5       |
| 490            | Psychosocial Stress and the Brain                            | Nanosymposium     |                | 140A       | 18 Tues | 8–11 a.m.    |           |
| 543            | Luteinizing Hormone Secretion, Puberty, and Seasonality      | Poster            | NN30–O08       | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 544            | Sexual Differentiation                                       | Poster            | O09–O021       | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |

| Session Number                  | Session Title                                                                                    | Presentation Type | Poster Board # | Location  | Date    | Session Time | CME Hours |
|---------------------------------|--------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|---------|--------------|-----------|
| 545                             | Neuroimmunology: Behavioral Effects                                                              | Poster            | 0022-PP18      | Halls A-C | 18 Tues | 8 a.m.–noon  |           |
| 546                             | Stress: Cellular Consequences                                                                    | Poster            | PP19-QQ10      | Halls A-C | 18 Tues | 8 a.m.–noon  |           |
| 547                             | Stress: Neurodevelopmental Aspects                                                               | Poster            | QQ11-QQ22      | Halls A-C | 18 Tues | 8 a.m.–noon  |           |
| 548                             | Sleep: Mechanisms and Molecules I                                                                | Poster            | QQ23-RR15      | Halls A-C | 18 Tues | 8 a.m.–noon  |           |
| 549                             | Sleep: Mechanisms and Molecules II                                                               | Poster            | RR16-RR26      | Halls A-C | 18 Tues | 8 a.m.–noon  |           |
| 572                             | Hypothalamic Control of Autonomic Nervous System Outflow and Obesity: Impact on Multiple Systems | Minisymposium     |                | 146AB     | 18 Tues | 1:30–4 p.m.  | 2.5       |
| 584                             | Early Exposure to Stress: Environmental Factors                                                  | Nanosymposium     |                | 147B      | 18 Tues | 1–3:45 p.m.  |           |
| 585                             | Brain Glucose and Energy-Sensing                                                                 | Nanosymposium     |                | 152B      | 18 Tues | 1–4:15 p.m.  |           |
| 639                             | Neurosteroids                                                                                    | Poster            | 003-0015       | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 640                             | Steroids and Plasticity                                                                          | Poster            | 0016-PP2       | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 641                             | Social Behavior: Drivers and Mechanisms                                                          | Poster            | PP3-PP21       | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 642                             | Hormones and Cognition                                                                           | Poster            | PP22-QQ19      | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 643                             | Respiratory Neurobiology                                                                         | Poster            | QQ20-RR12      | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 644                             | Stress and Cognition                                                                             | Poster            | RR13-RR34      | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 645                             | Circadian Clock                                                                                  | Poster            | RR35-RR49      | Halls A-C | 18 Tues | 1–5 p.m.     |           |
| 667                             | Is There a Neurobiological Basis for Food Addiction?                                             | Minisymposium     |                | 146AB     | 19 Wed  | 8:30–11 a.m. | 2.5       |
| 675                             | The Neurobiological Sequelae of Early-Life Stress                                                | Nanosymposium     |                | 206       | 19 Wed  | 8–11:15 a.m. |           |
| 676                             | Biological Rhythms and Sleep: Mechanisms                                                         | Nanosymposium     |                | 152B      | 19 Wed  | 8–11:15 a.m. |           |
| 677                             | Blood Brain Barrier: Development and Disease                                                     | Nanosymposium     |                | 147A      | 19 Wed  | 8–10:15 a.m. |           |
| 736                             | Autonomic Control of Renal, Urinary, and Reproductive Functions                                  | Poster            | NN32-0023      | Halls A-C | 19 Wed  | 8 a.m.–noon  |           |
| 737                             | Integration of Peripheral Signals: Systems                                                       | Poster            | 0024-PP6       | Halls A-C | 19 Wed  | 8 a.m.–noon  |           |
| 738                             | Energy Metabolism                                                                                | Poster            | PP7-QQ3        | Halls A-C | 19 Wed  | 8 a.m.–noon  |           |
| 739                             | Blood Brain Barrier: Cell Biology, Physiology, and Disease                                       | Poster            | QQ4-QQ18       | Halls A-C | 19 Wed  | 8 a.m.–noon  |           |
| 740                             | Functional Neuroimaging: Networks, Regions, and Resting State                                    | Poster            | QQ19-QQ28      | Halls A-C | 19 Wed  | 8 a.m.–noon  |           |
| 773                             | Neuroscience and Psychology of Motherhood                                                        | Nanosymposium     |                | 140A      | 19 Wed  | 1–3:30 p.m.  |           |
| 774                             | Respiratory Neurobiology                                                                         | Nanosymposium     |                | 150A      | 19 Wed  | 1–3:15 p.m.  |           |
| 832                             | Social Behavior: Oxytocin                                                                        | Poster            | NN21-006       | Halls A-C | 19 Wed  | 1–5 p.m.     |           |
| 833                             | Integration of Peripheral Signals: Regulators                                                    | Poster            | 007-0024       | Halls A-C | 19 Wed  | 1–5 p.m.     |           |
| 834                             | Neuropeptide Regulators                                                                          | Poster            | 0025-PP19      | Halls A-C | 19 Wed  | 1–5 p.m.     |           |
| THEME F: COGNITION AND BEHAVIOR |                                                                                                  |                   |                |           |         |              |           |
| 007                             | Multimodal Investigation of Large-Scale Brain Dynamics: Combining fMRI and Intracranial EEG      | Minisymposium     |                | 146AB     | 15 Sat  | 1:30–4 p.m.  | 2.5       |

| Session Number | Session Title                                                                                   | Presentation Type | Poster Board # | Location  | Date   | Session Time | CME Hours |
|----------------|-------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|--------|--------------|-----------|
| 019            | Brain Wellness: Cognitive Development                                                           | Nanosymposium     |                | 150B      | 15 Sat | 1–3 p.m.     |           |
| 082            | Human Long-Term Memory: Medial Temporal Lobe I                                                  | Poster            | LL21–MM19      | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 083            | Human Emotion: Perception and Expression                                                        | Poster            | MM20–NN1       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 084            | Human Decision-Making: Perceptual Processes                                                     | Poster            | NN2–NN23       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 085            | Cognitive Development                                                                           | Poster            | NN24–007       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 086            | Aging Brain                                                                                     | Poster            | 008–0019       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 087            | Alzheimer's Disease: Novel Therapeutics                                                         | Poster            | 0020–0032      | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 088            | Healthy Aging                                                                                   | Poster            | PP1–PP18       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 089            | Appetitive and Incentive Learning and Memory I                                                  | Poster            | PP19–QQ15      | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 090            | Memory Consolidation and Reconsolidation                                                        | Poster            | QQ16–RR7       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 091            | Animal Models: Anatomical Connections in Learning and Memory Circuits                           | Poster            | RR8–RR24       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 092            | Animal Models: Impairments in Learning and Memory                                               | Poster            | RR25–RR45      | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 093            | Learning and Memory: Physiology I                                                               | Poster            | RR46–SS20      | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 094            | Cortical and Hippocampal Circuits: Spatial Navigation I                                         | Poster            | SS21–SS50      | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 095            | Motivation and Emotion: Information Processing                                                  | Poster            | SS51–TT6       | Halls A–C | 15 Sat | 1–5 p.m.     |           |
| 106            | Advances in Understanding Mechanisms of Cortico–Thalamic Interactions in Cognition and Behavior | Minisymposium     |                | 146AB     | 16 Sun | 8:30–11 a.m. | 2.5       |
| 117            | Functional Mechanisms of Attention                                                              | Nanosymposium     |                | 150A      | 16 Sun | 8–11 a.m.    |           |
| 118            | Attentional Networks in Humans                                                                  | Nanosymposium     |                | 147A      | 16 Sun | 8–10:30 a.m. |           |
| 119            | Corticolimbic Circuits and Decision-Making                                                      | Nanosymposium     |                | 206       | 16 Sun | 8–11 a.m.    |           |
| 170            | Aging of Neural Functions                                                                       | Poster            | LL3–LL18       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 171            | Spatial Learning                                                                                | Poster            | LL19–MM7       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 172            | Human Long-Term Memory                                                                          | Poster            | MM8–MM33       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 173            | Working Memory I                                                                                | Poster            | MM34–NN26      | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 174            | Human Social Cognition: Behavior and Pharmacology                                               | Poster            | NN27–003       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 175            | Pharmacology for Attention                                                                      | Poster            | 004–0014       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 176            | Animal Models: Cortical Circuits and Behavioral Tasks                                           | Poster            | 0015–PP4       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 177            | Learning and Memory: Skill-Learning                                                             | Poster            | PP5–QQ3        | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 178            | Motivation                                                                                      | Poster            | QQ4–QQ28       | Halls A–C | 16 Sun | 8 a.m.–noon  |           |
| 179            | Reward: Neuropharmacology                                                                       | Poster            | QQ29–RR15      | Halls A–C | 16 Sun | 8 a.m.–noon  |           |

| Session Number | Session Title                                                                   | Presentation Type | Poster Board # | Location   | Date   | Session Time | CME Hours |
|----------------|---------------------------------------------------------------------------------|-------------------|----------------|------------|--------|--------------|-----------|
| 180            | Motivation and Emotions: Risk-Taking                                            | Poster            | RR16–RR31      | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 181            | Neuroethology                                                                   | Poster            | RR32–SS10      | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 182            | Vocal Communication in Songbirds: Sensory and Motor Mechanisms I                | Poster            | SS11–SS26      | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 183            | Social Communication                                                            | Poster            | SS27–SS45      | Halls A–C  | 16 Sun | 8 a.m.–noon  |           |
| 192            | Studying Human Cognition with Intracranial EEG and Electrical Brain Stimulation | Symposium         |                | Ballroom C | 16 Sun | 1:30–4 p.m.  | 2.5       |
| 204            | Language: Spoken and Written                                                    | Nanosymposium     |                | 150B       | 16 Sun | 1–4:30 p.m.  |           |
| 205            | Working Memory                                                                  | Nanosymposium     |                | 147A       | 16 Sun | 1–4:30 p.m.  |           |
| 206            | The Neural Basis of Reward-Based Decisions                                      | Nanosymposium     |                | 140A       | 16 Sun | 1–4:15 p.m.  |           |
| 260            | Sequence Learning                                                               | Poster            | PP19–QQ17      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 261            | Consciousness and Neural Networks                                               | Poster            | QQ18–QQ27      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 262            | Human Decision-Making and Learning: Individual Differences and Disorders        | Poster            | QQ28–RR15      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 263            | Functional Mechanisms of Attention I                                            | Poster            | RR16–RR40      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 264            | Hippocampal and Cortical Circuits I                                             | Poster            | RR41–SS9       | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 265            | Learning and Memory: Pharmacology I                                             | Poster            | SS10–SS34      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 266            | Invertebrate Learning and Memory I                                              | Poster            | SS35–SS51      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 267            | Motivation and Reward                                                           | Poster            | SS52–TT13      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 268            | Motivation and Emotions: Negative Emotional States                              | Poster            | TT14–TT39      | Halls A–C  | 16 Sun | 1–5 p.m.     |           |
| 274            | Attention, Reward, and Information Seeking                                      | Symposium         |                | Ballroom A | 17 Mon | 8:30–11 a.m. | 2.5       |
| 292            | Reward: Physiology and Connectivity                                             | Nanosymposium     |                | 150B       | 17 Mon | 8–10:30 a.m. |           |
| 293            | Extended Amygdala Circuits and Behavior                                         | Nanosymposium     |                | 150A       | 17 Mon | 8–10:30 a.m. |           |
| 353            | Perception and Imagery                                                          | Poster            | PP3–QQ7        | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 354            | Human Long-Term Memory: Medial Temporal Lobe II                                 | Poster            | QQ8–RR5        | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 355            | Disorders of Attention                                                          | Poster            | RR6–RR18       | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 356            | Language and Brain Dynamics                                                     | Poster            | RR19–RR47      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 357            | Human Social Cognition: Neural Mechanisms                                       | Poster            | RR48–SS13      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 358            | Prefrontal Cortex I                                                             | Poster            | SS14–SS42      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 359            | Rodent Learning and Memory                                                      | Poster            | SS43–SS59      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 360            | Cortical and Hippocampal Circuits: Spatial Navigation II                        | Poster            | SS60–TT16      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |
| 361            | Prefrontal and Striatal Systems I                                               | Poster            | TT17–TT40      | Halls A–C  | 17 Mon | 8 a.m.–noon  |           |

| Session Number | Session Title                                                                                   | Presentation Type | Poster Board # | Location   | Date    | Session Time | CME Hours |
|----------------|-------------------------------------------------------------------------------------------------|-------------------|----------------|------------|---------|--------------|-----------|
| 362            | Reward: Dopamine I                                                                              | Poster            | TT41–TT62      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 363            | Decision-Making: Neurocircuitry                                                                 | Poster            | TT63–TT82      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 364            | Reward I                                                                                        | Poster            | TT83–UU20      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 365            | Vocal Communication in Songbirds: Learning and Social Influences                                | Poster            | UU21–UU41      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 376            | Characterizing the Roles of Fronto-Cingulo-Subcortical Circuits in Pain, Emotion, and Cognition | Minisymposium     |                | 145B       | 17 Mon  | 1:30–4 p.m.  | 2.5       |
| 379            | Understanding Mechanisms and Functions of Cortical Rhythms by Selective Interventions           | Minisymposium     |                | 151AB      | 17 Mon  | 1:30–4 p.m.  | 2.5       |
| 455            | Face and Scene Perception                                                                       | Poster            | RR28–RR41      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 456            | Direct Current Stimulation                                                                      | Poster            | RR42–SS4       | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 457            | Human Learning: Feedback, Reinforcement, and Reward                                             | Poster            | SS5–SS26       | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 458            | Human Decision-Making: Social and Emotional Factors                                             | Poster            | SS27–SS40      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 459            | Human Decision-Making: Value                                                                    | Poster            | SS41–SS55      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 460            | Human Social Cognition I                                                                        | Poster            | SS56–TT17      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 461            | Fear and Aversive Memories: Mechanisms                                                          | Poster            | TT18–TT36      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 462            | Prefrontal Cortex II                                                                            | Poster            | TT37–TT60      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 463            | Animal Models: Spatial Learning and Place Cells                                                 | Poster            | TT61–TT87      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 464            | Learning and Memory: Signaling and Gene Expression                                              | Poster            | TT88–UU21      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 465            | Cortical and Hippocampal Circuits: Learning and Memory                                          | Poster            | UU22–UU36      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 466            | Cortical and Hippocampal Circuits: Timing and Temporal Processing I                             | Poster            | UU37–UU59      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 467            | Fear and Aversive Memories: Acquisition and Extinction                                          | Poster            | UU60–UU87      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 468            | Fear and Aversive Memories: Modulation                                                          | Poster            | UU88–VV22      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 469            | Cocaine                                                                                         | Poster            | VV23–VV37      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 470            | Fear and Anxiety: Human and Nonhuman Primates                                                   | Poster            | VV38–VV61      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 471            | Invertebrate Motor Circuits                                                                     | Poster            | VV62–VV75      | Halls A–C  | 17 Mon  | 1–5 p.m.     |           |
| 475            | Toward Naturalistic Interactive Neuroimaging                                                    | Symposium         |                | Ballroom C | 18 Tues | 8:30–11 a.m. | 2.5       |
| 491            | Perception and Imagery                                                                          | Nanosymposium     |                | 147A       | 18 Tues | 8–11:30 a.m. |           |
| 492            | Human Reinforcement Learning: Development and Aging                                             | Nanosymposium     |                | 150A       | 18 Tues | 8–11:15 a.m. |           |
| 550            | Visual Perception: Neural Mechanisms                                                            | Poster            | RR27–RR48      | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 551            | Human Long-Term Memory: Medial Temporal Lobe III                                                | Poster            | RR49–SS26      | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 552            | Language: Neuropsychological Approaches                                                         | Poster            | SS27–SS44      | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 553            | Human Emotion: Behavioral and Neural Mechanisms                                                 | Poster            | SS45–TT3       | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |



| Session Number | Session Title                                                                                           | Presentation Type | Poster Board # | Location  | Date    | Session Time | CME Hours |
|----------------|---------------------------------------------------------------------------------------------------------|-------------------|----------------|-----------|---------|--------------|-----------|
| 554            | Working Memory II                                                                                       | Poster            | TT4–TT19       | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 555            | Human Decision-Making: Cognition and Computation                                                        | Poster            | TT20–TT44      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 556            | Human Cognition: Timing and Temporal Processing                                                         | Poster            | TT45–TT71      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 557            | Executive Function: Models of Disorders I                                                               | Poster            | TT72–TT88      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 558            | Decision-Making I                                                                                       | Poster            | TT89–UU25      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 559            | Memory Consolidation and Reconsolidation: Neural Mechanisms                                             | Poster            | UU26–UU47      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 560            | Hippocampal and Cortical Circuits II                                                                    | Poster            | UU48–UU68      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 561            | Invertebrate Learning and Memory II                                                                     | Poster            | UU69–UU85      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 562            | Decision-Making: Neuropharmacology                                                                      | Poster            | UU86–VV6       | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 563            | Motivation and Emotions: Neurocircuitry                                                                 | Poster            | VV7–VV28       | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 564            | Social Behavior: Neuropharmacology                                                                      | Poster            | VV29–VV39      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 565            | Vocal Communication in Songbirds: Sensory and Motor Mechanisms II                                       | Poster            | VV40–VV62      | Halls A–C | 18 Tues | 8 a.m.–noon  |           |
| 567            | Generating and Shaping Novel Action Repertoires                                                         | Special Lecture   |                | Hall D    | 18 Tues | 1–2:10 p.m.  | 1.25      |
| 573            | Noradrenergic Function and Dysfunction: New Insight From Selective Genetic Targeting of Locus Coeruleus | Minisymposium     |                | 145B      | 18 Tues | 1:30–4 p.m.  | 2.5       |
| 586            | Human Long-Term Memory: Encoding-Retrieval Interactions                                                 | Nanosymposium     |                | 140A      | 18 Tues | 1–4:30 p.m.  |           |
| 587            | Human Decision-Making: Neural Mechanisms                                                                | Nanosymposium     |                | 150A      | 18 Tues | 1–3:45 p.m.  |           |
| 646            | Human Long-Term Memory: Encoding Retrieval Interactions                                                 | Poster            | RR50–SS15      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 647            | Attentional Networks: Brain-Behavior Relations                                                          | Poster            | SS16–SS40      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 648            | Executive Function I                                                                                    | Poster            | SS41–SS65      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 649            | Human Social Cognition II                                                                               | Poster            | SS66–TT14      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 650            | Appetitive and Incentive Learning and Memory II                                                         | Poster            | TT15–TT35      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 651            | Decision-Making II                                                                                      | Poster            | TT36–TT64      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 652            | Learning and Memory: Physiology II                                                                      | Poster            | TT65–TT80      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 653            | Learning and Memory: Aging I                                                                            | Poster            | TT81–UU4       | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 654            | Motivation and Emotions: Fear and Pain                                                                  | Poster            | UU5–UU25       | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 655            | Motivation and Emotions: Rodent Anxiety Models                                                          | Poster            | UU26–UU45      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 656            | Reward II                                                                                               | Poster            | UU46–UU65      | Halls A–C | 18 Tues | 1–5 p.m.     |           |
| 666            | Imaging and Segmentation of Hippocampal Subfields in Humans: Relevance to Cognition and Disease         | Minisymposium     |                | 145B      | 19 Wed  | 8:30–11 a.m. | 2.5       |
| 678            | Human Reinforcement Learning: Neural Mechanisms                                                         | Nanosymposium     |                | 150B      | 19 Wed  | 8–10:30 a.m. |           |
| 679            | Human Cognition: White Matter and Functional Connectivity                                               | Nanosymposium     |                | 146C      | 19 Wed  | 8–11:15 a.m. |           |
| 741            | Human Long-Term Memory: Encoding                                                                        | Poster            | QQ29–RR17      | Halls A–C | 19 Wed  | 8 a.m.–noon  |           |
| 742            | Human Emotion: Individual Differences and Disorders                                                     | Poster            | RR18–RR44      | Halls A–C | 19 Wed  | 8 a.m.–noon  |           |

| Session Number | Session Title                                                                 | Presentation Type | Poster Board # | Location   | Date   | Session Time | CME Hours |
|----------------|-------------------------------------------------------------------------------|-------------------|----------------|------------|--------|--------------|-----------|
| 743            | Human Decision-Making: Risk, Effort, and Loss                                 | Poster            | RR45–SS5       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 744            | Attention: Individual Differences                                             | Poster            | SS6–SS25       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 745            | Executive Function: Models of Disorders II                                    | Poster            | SS26–SS43      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 746            | Fear and Aversive Memories: Cortex                                            | Poster            | SS44–TT1       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 747            | Fear and Aversive Memories: Amygdala                                          | Poster            | TT2–TT28       | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 748            | Fear and Aversive Memories: Other Regions and Circuits                        | Poster            | TT29–TT41      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 749            | Memory Consolidation and Reconsolidation: Behavior                            | Poster            | TT42–TT69      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 750            | Animal Models: Recognition Memory and Novelty Detection                       | Poster            | TT70–TT91      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 751            | Oscillations and Learning                                                     | Poster            | TT92–UU18      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 752            | Cortical and Hippocampal Circuits: Timing and Temporal Processing II          | Poster            | UU19–UU40      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 753            | Prefrontal and Striatal Systems II                                            | Poster            | UU41–UU62      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 754            | Fear and Aversive Memories: Hippocampus                                       | Poster            | UU63–UU76      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 755            | Reward: Dopamine II                                                           | Poster            | UU77–UU91      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 756            | Motivation and Emotions: Reward Circuitry                                     | Poster            | UU92–VV12      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 757            | Human Reward                                                                  | Poster            | VV13–VV42      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 758            | Sex and Steroids                                                              | Poster            | VV43–VV54      | Halls A–C  | 19 Wed | 8 a.m.–noon  |           |
| 761            | Affective Neuroscience of Reward: Limbic Modules for Liking and Wanting       | Special Lecture   |                | Hall D     | 19 Wed | 1–2:10 p.m.  | 1.25      |
| 763            | Neuroscience of Implicit Cognition and Learning: Current Theories and Methods | Symposium         |                | Ballroom A | 19 Wed | 1:30–4 p.m.  | 2.5       |
| 775            | Long-Term Memory: Medial Temporal Lobe                                        | Nanosymposium     |                | 143A       | 19 Wed | 1–4 p.m.     |           |
| 776            | Predictive Coding: Human Cognition                                            | Nanosymposium     |                | 152A       | 19 Wed | 1–4 p.m.     |           |
| 835            | Functional Mechanisms of Attention II                                         | Poster            | PP20–QQ18      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 836            | Decision-Making and Stress                                                    | Poster            | QQ19–QQ28      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 837            | Disorders of Executive Function                                               | Poster            | QQ29–RR12      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 838            | Executive Function II                                                         | Poster            | RR13–RR33      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 839            | Human Cognition I                                                             | Poster            | RR34–SS8       | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 840            | Human Cognition II                                                            | Poster            | SS9–SS22       | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 841            | Mechanisms of Attention: Parietal and Prefrontal                              | Poster            | SS23–SS34      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 842            | Executive Function: Learning and Memory I                                     | Poster            | SS35–SS56      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 843            | Executive Function: Learning and Memory II                                    | Poster            | SS57–TT10      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 844            | Executive Function: Network Activity                                          | Poster            | TT11–TT38      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 845            | Neurogenesis and Plasticity                                                   | Poster            | TT39–TT68      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 846            | Learning and Memory: Pharmacology II                                          | Poster            | TT69–TT88      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |
| 847            | Learning and Memory: Aging II                                                 | Poster            | TT89–UU15      | Halls A–C  | 19 Wed | 1–5 p.m.     |           |

| Session Number                                    | Session Title                                                          | Presentation Type | Poster Board # | Location   | Date    | Session Time | CME Hours |
|---------------------------------------------------|------------------------------------------------------------------------|-------------------|----------------|------------|---------|--------------|-----------|
| 848                                               | Cortical and Hippocampal Circuits: Spatial Navigation III              | Poster            | UU16–UU45      | Halls A–C  | 19 Wed  | 1–5 p.m.     |           |
| 849                                               | Social Behavior: Neural Mechanisms                                     | Poster            | UU46–UU63      | Halls A–C  | 19 Wed  | 1–5 p.m.     |           |
| THEME G: NOVEL METHODS AND TECHNOLOGY DEVELOPMENT |                                                                        |                   |                |            |         |              |           |
| 008                                               | Nanoscopy With Focused Light: Principles and Applications              | Special Lecture   |                | Hall D     | 15 Sat  | 2–3:10 p.m.  | 1.25      |
| 020                                               | Data Analysis and Statistics                                           | Nanosymposium     |                | 147B       | 15 Sat  | 1–4 p.m.     |           |
| 096                                               | Genomics, Proteomics, and Systems Biology                              | Poster            | TT7–TT35       | Halls A–C  | 15 Sat  | 1–5 p.m.     |           |
| 097                                               | Imaging Advances: Cell Biology                                         | Poster            | TT36–TT65      | Halls A–C  | 15 Sat  | 1–5 p.m.     |           |
| 098                                               | Imaging Advances: Neural Ultrastructure                                | Poster            | TT66–TT79      | Halls A–C  | 15 Sat  | 1–5 p.m.     |           |
| 099                                               | Network Models and Computational Studies                               | Poster            | TT80–UU15      | Halls A–C  | 15 Sat  | 1–5 p.m.     |           |
| 103                                               | Enhancing Reproducibility of Neuroscience Studies                      | Symposium         |                | Ballroom A | 16 Sun  | 8:30–11 a.m. | 2.5       |
| 184                                               | Imaging Advances: Human                                                | Poster            | SS46–SS59      | Halls A–C  | 16 Sun  | 8 a.m.–noon  |           |
| 185                                               | Imaging Advances: Silico and High Throughput                           | Poster            | SS60–TT21      | Halls A–C  | 16 Sun  | 8 a.m.–noon  |           |
| 186                                               | Network Models and Data Simulation                                     | Poster            | TT22–TT49      | Halls A–C  | 16 Sun  | 8 a.m.–noon  |           |
| 187                                               | Computation Tools                                                      | Poster            | TT50–TT72      | Halls A–C  | 16 Sun  | 8 a.m.–noon  |           |
| 188                                               | Data Analysis and Statistics I                                         | Poster            | TT73–UU6       | Halls A–C  | 16 Sun  | 8 a.m.–noon  |           |
| 207                                               | Imaging the Healthy and the Diseased Brain                             | Nanosymposium     |                | 150A       | 16 Sun  | 1–4:15 p.m.  |           |
| 269                                               | Optical Methods I                                                      | Poster            | TT40–TT58      | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 270                                               | Optical Methods II                                                     | Poster            | TT59–TT75      | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 271                                               | Optogenetics: Tool Development                                         | Poster            | TT76–TT92      | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 272                                               | Data Analysis and Statistics II                                        | Poster            | UU1–UU20       | Halls A–C  | 16 Sun  | 1–5 p.m.     |           |
| 277                                               | <i>In Vivo</i> Reprogramming for Brain Repair                          | Minisymposium     |                | Ballroom B | 17 Mon  | 8:30–11 a.m. | 2.5       |
| 366                                               | Techniques for Monitoring Proteins in Neurons                          | Poster            | UU42–UU65      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 367                                               | Imaging                                                                | Poster            | UU66–UU78      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 368                                               | Imaging Advances: New Histology, Reagents, and Approaches              | Poster            | UU79–VV16      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 369                                               | Electrophysiology Recording Tools and Techniques                       | Poster            | VV17–VV28      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 370                                               | TMS, tDCS, and Other Brain Stimulation Tools                           | Poster            | VV29–VV46      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 371                                               | Bioinformatics                                                         | Poster            | VV47–VV64      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 372                                               | Cellular Models                                                        | Poster            | VV65–VV88      | Halls A–C  | 17 Mon  | 8 a.m.–noon  |           |
| 393                                               | Novel Electrode Technologies                                           | Nanosymposium     |                | 150A       | 17 Mon  | 1–4 p.m.     |           |
| 566                                               | Optical Methods for Studying Neural Pathways                           | Poster            | VV63–VV83      | Halls A–C  | 18 Tues | 8 a.m.–noon  |           |
| 657                                               | Techniques for Profiling and Manipulating Defined Neuronal Populations | Poster            | UU66–VV3       | Halls A–C  | 18 Tues | 1–5 p.m.     |           |
| 658                                               | Techniques to Image or Modulate Neural Activity                        | Poster            | VV4–VV20       | Halls A–C  | 18 Tues | 1–5 p.m.     |           |

| Session Number                                                                     | Session Title                                                                                                                               | Presentation Type                                          | Poster Board # | Location                                                    | Date    | Session Time     | CME Hours |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------|-------------------------------------------------------------|---------|------------------|-----------|
| 659                                                                                | Optogenetics: Integration With Electrophysiology                                                                                            | Poster                                                     | VV21–VV39      | Halls A–C                                                   | 18 Tues | 1–5 p.m.         |           |
| 660                                                                                | Cellular Electrophysiological Methods                                                                                                       | Poster                                                     | VV40–VV52      | Halls A–C                                                   | 18 Tues | 1–5 p.m.         |           |
| 661                                                                                | Electrophysiology Recording Tools and Techniques                                                                                            | Poster                                                     | VV53–VV83      | Halls A–C                                                   | 18 Tues | 1–5 p.m.         |           |
| 668                                                                                | Transgenic Primate Models of Human Brain                                                                                                    | Minisymposium                                              |                | 151AB                                                       | 19 Wed  | 8:30–11 a.m.     | 2.5       |
| 680                                                                                | Novel Assays: Nanotools for Neuroscience I                                                                                                  | Nanosymposium                                              |                | 150A                                                        | 19 Wed  | 8–11:15 a.m.     |           |
| 759                                                                                | Novel Assays: Nanotools for Neuroscience II                                                                                                 | Poster                                                     | VV55–VV70      | Halls A–C                                                   | 19 Wed  | 8 a.m.–noon      |           |
| 760                                                                                | Network Models and Cognitive Function                                                                                                       | Poster                                                     | VV71–VV78      | Halls A–C                                                   | 19 Wed  | 8 a.m.–noon      |           |
| 850                                                                                | Imaging Advances: <i>In Vivo</i> Animals                                                                                                    | Poster                                                     | UU64–W1        | Halls A–C                                                   | 19 Wed  | 1–5 p.m.         |           |
| 851                                                                                | Optogenetics: Experimental Uses                                                                                                             | Poster                                                     | W2–VV18        | Halls A–C                                                   | 19 Wed  | 1–5 p.m.         |           |
| 852                                                                                | Modeling Neurons, Circuits, and Behavior                                                                                                    | Poster                                                     | W19–W35        | Halls A–C                                                   | 19 Wed  | 1–5 p.m.         |           |
| 853                                                                                | Data Analysis and Statistics III                                                                                                            | Poster                                                     | W36–W50        | Halls A–C                                                   | 19 Wed  | 1–5 p.m.         |           |
| 854                                                                                | Data Analysis and Statistics: Software Tools                                                                                                | Poster                                                     | W51–W79        | Halls A–C                                                   | 19 Wed  | 1–5 p.m.         |           |
| THEME H: HISTORY, TEACHING, PUBLIC AWARENESS, AND SOCIETAL IMPACTS IN NEUROSCIENCE |                                                                                                                                             |                                                            |                |                                                             |         |                  |           |
| 002                                                                                | Improving Animal Models of Neuropsychiatric Disorders                                                                                       | Empirical Approaches to Neuroscience and Society Symposium |                | Ballroom A                                                  | 15 Sat  | 1:30–4 p.m.      | 2.5       |
| 021                                                                                | History of Neuroscience                                                                                                                     | Theme H Poster                                             | UU21–UU40      | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 022                                                                                | K–12                                                                                                                                        | Theme H Poster                                             | UU41–UU62      | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 023                                                                                | College Experiences                                                                                                                         | Theme H Poster                                             | UU63–UU82      | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 024                                                                                | Teaching Neuroscience: College Courses                                                                                                      | Theme H Poster                                             | UU83–W17       | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 025                                                                                | Graduate and Professional Education                                                                                                         | Theme H Poster                                             | W18–W36        | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 026                                                                                | Public Outreach I                                                                                                                           | Theme H Poster                                             | W37–W55        | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 027                                                                                | Public Outreach II                                                                                                                          | Theme H Poster                                             | W56–W75        | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| 028                                                                                | Ethical and Policy Issues                                                                                                                   | Theme H Poster                                             | W76–W88        | Halls A–C                                                   | 15 Sat  | 1–5 p.m.         |           |
| WORKSHOPS, MEETINGS, AND EVENTS                                                    |                                                                                                                                             |                                                            |                |                                                             |         |                  |           |
| PDW01                                                                              | Neurobiology of Disease Workshop: Stroke Recovery: Connecting Neuroimmunology, Regeneration, and Engineering to Restore Functional Circuits | Professional Development Workshop                          |                | Ballroom C                                                  | 14 Fri  | 8 a.m.–5 p.m.    |           |
| PDW02                                                                              | Short Course #1: Advances in Multineuronal Monitoring of Brain Activity                                                                     | Professional Development Workshop                          |                | Ballroom A                                                  | 14 Fri  | 8 a.m.–6 p.m.    |           |
| PDW03                                                                              | Short Course #2: Advances in Brain-Scale, Automated Anatomical Techniques: Neuronal Reconstruction, Tract Tracing, and Atlasing             | Professional Development Workshop                          |                | Ballroom B                                                  | 14 Fri  | 8:30 a.m.–6 p.m. |           |
| PDW04                                                                              | Meet-the-Expert: Session 1                                                                                                                  | Professional Development Workshop                          |                | Renaissance Washington, DC: Meeting Rooms 2, 4, 5, 8, 9, 12 | 15 Sat  | 8–9:15 a.m.      |           |
| PDW05                                                                              | Careers Beyond the Bench                                                                                                                    | Professional Development Workshop                          |                | 207A                                                        | 15 Sat  | 9–11 a.m.        |           |
| PDW06                                                                              | Success in Academia: Different Strategies for Different Stages                                                                              | Professional Development Workshop                          |                | 207B                                                        | 15 Sat  | 9–11 a.m.        |           |
| PDW07                                                                              | Meet-the-Expert: Session 2                                                                                                                  | Professional Development Workshop                          |                | Renaissance Washington, DC: Meeting Rooms 2, 4, 5, 8, 9     | 15 Sat  | 9:30–10:45 a.m.  |           |

| Session Number | Session Title                                                                                 | Presentation Type                 | Poster Board # | Location                                         | Date    | Session Time      | CME Hours |
|----------------|-----------------------------------------------------------------------------------------------|-----------------------------------|----------------|--------------------------------------------------|---------|-------------------|-----------|
| PDW08          | Getting the Most Out of SfN: The Annual Meeting and Beyond                                    | Professional Development Workshop |                | 207A                                             | 15 Sat  | 1–2 p.m.          |           |
| ME01           | Graduate School Fair                                                                          | Meetings and Events               |                | Hall E                                           | 15 Sat  | 1–3 p.m.          |           |
| ME02           | Brain Awareness Campaign Event: Communicate Your Science                                      | Meetings and Events               |                | Hall E                                           | 15 Sat  | 3–4:30 p.m.       |           |
| PDW09          | Mentor–Mentee Interaction: How to Have a Difficult Conversation                               | Professional Development Workshop |                | 103B                                             | 15 Sat  | 3–4:30 p.m.       |           |
| PDW10          | Research Careers in Industry and the Private Sector                                           | Professional Development Workshop |                | 207B                                             | 15 Sat  | 3–5 p.m.          |           |
| PDW11          | NIH Funding and You: A Practical Guide to Surviving and Thriving in Your Research Career      | Professional Development Workshop |                | 207A                                             | 15 Sat  | 3:30–5 p.m.       |           |
| ME03           | Diversity Fellows Poster Session                                                              | Meetings and Events               |                | Hall E                                           | 15 Sat  | 6:30–8:30 p.m.    |           |
| ME04           | International Fellows Poster Session                                                          | Meetings and Events               |                | Hall E                                           | 15 Sat  | 6:30–8:30 p.m.    |           |
| ME05           | Travel Award Recipients Poster Session                                                        | Meetings and Events               |                | Hall E                                           | 15 Sat  | 6:30–8:30 p.m.    |           |
| PDW12          | Career Development Topics: A Networking Event                                                 | Professional Development Workshop |                | Hall E                                           | 15 Sat  | 7:30–9:30 p.m.    |           |
| PDW13          | A Guide to Publishing and Responsible Conduct                                                 | Professional Development Workshop |                | 207A                                             | 16 Sun  | 9–11 a.m.         |           |
| ME06           | Chapters Workshop: Chapter Value — Engaging Members and the Community                         | Meetings and Events               |                | 103A                                             | 16 Sun  | 11:30 a.m.–1 p.m. |           |
| PDW14          | Successful Career Advancement Through Networking: Is It Who You Know?                         | Professional Development Workshop |                | 207B                                             | 16 Sun  | 11:30 a.m.–1 p.m. |           |
| ME07           | Graduate School Fair                                                                          | Meetings and Events               |                | Hall E                                           | 16 Sun  | noon–2 p.m.       |           |
| ME08           | The Neuroscience of Gaming                                                                    | Social Issues Roundtable          |                | 201                                              | 16 Sun  | 1–3 p.m.          |           |
| PDW15          | News You Can Use: Funding Opportunities for Neuroscience Research and Training at the NSF     | Professional Development Workshop |                | 207A                                             | 16 Sun  | 2–4 p.m.          |           |
| PDW16          | Internationalizing Your Research, Training, and Funding Experience                            | Professional Development Workshop |                | 207B                                             | 16 Sun  | 2–5 p.m.          |           |
| PDW17          | How to Effectively Communicate Your Science to the Public                                     | Professional Development Workshop |                | 207B                                             | 17 Mon  | 9–11 a.m.         |           |
| PDW18          | Teaching Neuroscience: Online Learning                                                        | Professional Development Workshop |                | 207A                                             | 17 Mon  | 9–11 a.m.         |           |
| ME09           | Graduate School Fair                                                                          | Meetings and Events               |                | Hall E                                           | 17 Mon  | noon–2 p.m.       |           |
| ME10           | Animals in Research Panel: Global Ramifications of New Animal Rights Tactics                  | Meetings and Events               |                | 103A                                             | 18 Tues | noon–2 p.m.       |           |
| ME11           | Celebration of Women in Neuroscience                                                          | Meetings and Events               |                | Renaissance Washington, DC: Grand Ballroom North | 18 Tues | noon–2 p.m.       |           |
| ME12           | Graduate School Fair                                                                          | Meetings and Events               |                | Hall E                                           | 18 Tues | noon–2 p.m.       |           |
| ME13           | Public Advocacy Forum: Implications for Science Funding in an Era of Global Brain Initiatives | Meetings and Events               |                | 201                                              | 18 Tues | 3–5 p.m.          |           |
| ME14           | SfN Members' Business Meeting                                                                 | Meetings and Events               |                | 202B                                             | 18 Tues | 6:45–7:30 p.m.    |           |
| ME15           | Graduate Student Reception                                                                    | Meetings and Events               |                | Renaissance Washington, DC: Grand Ballroom       | 18 Tues | 9 p.m.–midnight   |           |



# 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, the 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

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

## Credit Designation by Format Symposium

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.

## Minisymposium

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.

A meeting attendee seeking Continuing Medical Education (CME) credit may use a combination of the activities described above to gain a maximum of *33.75 AMA PRA Category 1 Credits™*.

## CME Registration

CME registration must be completed before or during the annual meeting. An on-site processing fee of \$95 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 at these times will not receive the necessary documentation and it cannot be provided 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 a 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 during the Neuroscience Departments and Programs Reception.

## Bernice Grafstein Award for Outstanding Accomplishments in Mentoring

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.

## 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, Nov. 17, at the Walter E. Washington Convention Center, Hall D.

## Jacob P. Waletzky Award

*Support contributed by: The Waletzky Award Prize Fund*

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 Monday, Nov. 17, in the Walter E. Washington Convention Center, Hall D. The recipient also will deliver the Jacob P. Waletzky Memorial Lecture at the NIDA mini-convention at 9:30 a.m. on Friday, Nov. 14, at the Natcher Auditorium (Building 45) on the NIH campus in Bethesda, Md.

## Janett Rosenberg Trubatch Career Development Award

*Support contributed by: The Trubatch Family*

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

## 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, Nov. 15, in the Walter E. Washington Convention Center, Hall D.

## Louise Hanson Marshall Special Recognition Award

The Louise Hanson Marshall Special Recognition Award honors an individual who has significantly promoted the professional development of women in neuroscience. The award will be presented during the Celebration of Women in Neuroscience Luncheon.

## 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 Tuesday, Nov. 18, in the Walter E. Washington Convention Center, Hall D.

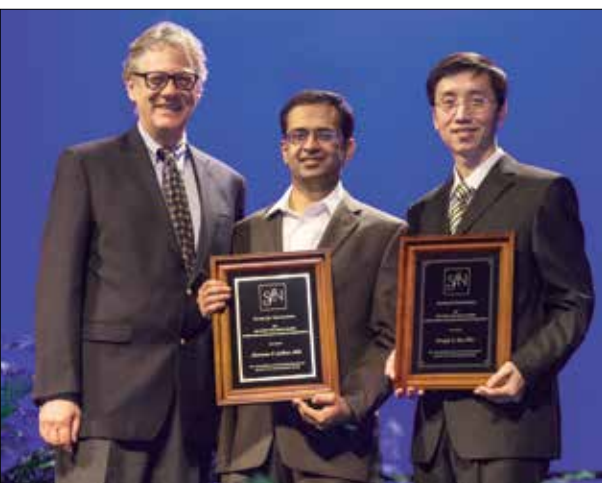
## Nemko Prize in Cellular or Molecular Neuroscience

*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, Nov. 17, at the Walter E. Washington Convention Center, Hall D.

## Neuroscience Program Achievement Award

These awards recognize significant innovations in higher education and training in neuroscience. Two Institutional Program members of SfN — one undergraduate and one graduate/postdoctoral — are selected by the Committee on Neuroscience Departments and Programs. The awards will be presented during the Neuroscience Departments and Programs Reception.



### **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 Sunday, Nov. 16, in the Walter E. Washington Convention Center, Hall D.

### **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, Nov. 16, in the Walter E. Washington Convention Center, Hall D.

### **Ralph W. Gerard Prize in Neuroscience**

The Ralph W. Gerard Prize, the highest recognition conferred by the Society, 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, Nov. 16, in the Walter E. Washington Convention Center, Hall D.

### **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 fulltime 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 Saturday, Nov. 15, in the Walter E. Washington Convention Center, Hall D.

### **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 for Neuroscience. Awardees are selected by the SfN Membership and Chapters Committee. The award will be presented at the Chapters Workshop at 11:30 a.m. on Sunday, Nov. 16, in the Walter E. Washington Convention Center, Room 103AB.

### **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 Monday, Nov. 17, in the Walter E. Washington Convention Center, Hall D.

### **Young Investigator Award**

*Support contributed by: AstraZeneca*

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, Nov. 17, in the Walter E. Washington Convention Center, Hall D.

## **SfN Travel Awards**

### **Chapter Graduate Student and Postdoctoral Fellow Travel Awards**

*Support contributed by: Friends of SfN Fund and SfN Memorial Fund*

Recipients of these awards are nominated by their local chapters and evaluated by the SfN Membership and Chapters Committee based on the scientific merit of their abstract, evidence of outreach activities, and letters of nomination from their faculty mentor and local nominating chapter. The awards will be presented at the Chapters Reception.

### **Graduate Student and Postdoctoral Fellow Travel Awards**

*Support contributed by: Burroughs Wellcome Fund and Genzyme*

These awards honor outstanding graduate students and postdoctoral fellows. Awardees are evaluated by the Professional Development Committee and chosen on the basis of the scientific merit of their abstract, a letter of recommendation from their principal investigator or mentor, their research and career goals, and an essay. Awardees will be recognized during the Celebration of Women in Neuroscience Luncheon.

### **SfN/IBRO International Travel Awards**

Sponsored by SfN and selected by the International Brain Research Organization (IBRO), these awards recognize young investigators from developing countries. This year, 30 awardees (from 12 countries) will attend Neuroscience 2014.

### **SfN/JNS Travel Award**

SfN and the Japan Neuroscience Society (JNS) sponsor a joint award program allowing five trainees from Japan to attend the SfN annual meeting and five North American trainees from SfN to travel to Japan to attend the JNS meeting in September. The program is administered by SfN's International Affairs Committee and JNS.

### **Undergraduate Student Travel Awards**

These awards honor outstanding undergraduate students associated with a SfN Institutional Program member. Awardees are evaluated by the Committee on Neuroscience Departments and Programs and chosen on the basis of the scientific merit of their abstract, a letter of recommendation from their research advisor, their research and career goals, and their CV. The awards will be presented during the Neuroscience Departments and Programs Reception.



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## Registration, Hotel & Travel

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# Registration

## Registration Categories and Fees

|                        |                                                                           |
|------------------------|---------------------------------------------------------------------------|
| <b>Online Discount</b> | Opens Sept. 18, at midnight EDT, and continues through the annual meeting |
| <b>On-Site In Line</b> | Opens Nov. 15, at 7:30 a.m. EST, and continues through the annual meeting |

| Registration Category                      | Online Discount | On-Site In Line |
|--------------------------------------------|-----------------|-----------------|
| Member                                     | \$355           | \$430           |
| Member, Category II                        | \$135           | \$165           |
| Member, Category III                       | \$190           | \$225           |
| Postdoctoral Member                        | \$265           | \$320           |
| Postdoctoral Member, Category II           | \$100           | \$130           |
| Postdoctoral Member, Category III          | \$150           | \$170           |
| Student Member                             | \$140           | \$175           |
| Student Member, Category II                | \$40            | \$45            |
| Student Member, Category III               | \$75            | \$95            |
| Student Member, Undergraduate              | \$100           | \$125           |
| Student Member, Undergraduate Category II  | \$35            | \$40            |
| Student Member, Undergraduate Category III | \$55            | \$65            |
| Nonmember                                  | \$630           | \$760           |
| Student Nonmember                          | \$220           | \$260           |
| Guest – Non-Scientific                     | \$50            | \$60            |
| CME Accreditation                          | \$95            | \$95            |

**Note:** Single day registration is not available.

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

### 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 East Salon of the Walter E. Washington Convention Center.

### Accepted Forms of Payment

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



## When to Register

### Online Discount

From Thursday, Sept. 18, 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 rates apply. On-site and online registration will be available for the duration of the meeting.

### On-Site Registration Hours

|                    |                  |
|--------------------|------------------|
| Friday, Nov. 14*   | 2–5 p.m.         |
| Saturday, Nov. 15  | 7:30 a.m.–5 p.m. |
| Sunday, Nov. 16    | 7:30 a.m.–5 p.m. |
| Monday, Nov. 17    | 7:30 a.m.–5 p.m. |
| Tuesday, Nov. 18   | 7:30 a.m.–5 p.m. |
| Wednesday, Nov. 19 | 7:30 a.m.–5 p.m. |

\*Express Badge Pick-Up stations available only. Full registration services will begin Saturday, Nov. 15, at 7:30 a.m. EST.



# Neuroscience 2014: Navigating the Meeting

## Meeting Mobile App

Access annual meeting content from the palm of your hand! The Neuroscience 2014 meeting mobile app allows attendees to browse sessions, create personalized itineraries, take notes on sessions, and much more. The app is available in iTunes™ and the Google Play™ App Store.

## Neuroscience Meeting Planner

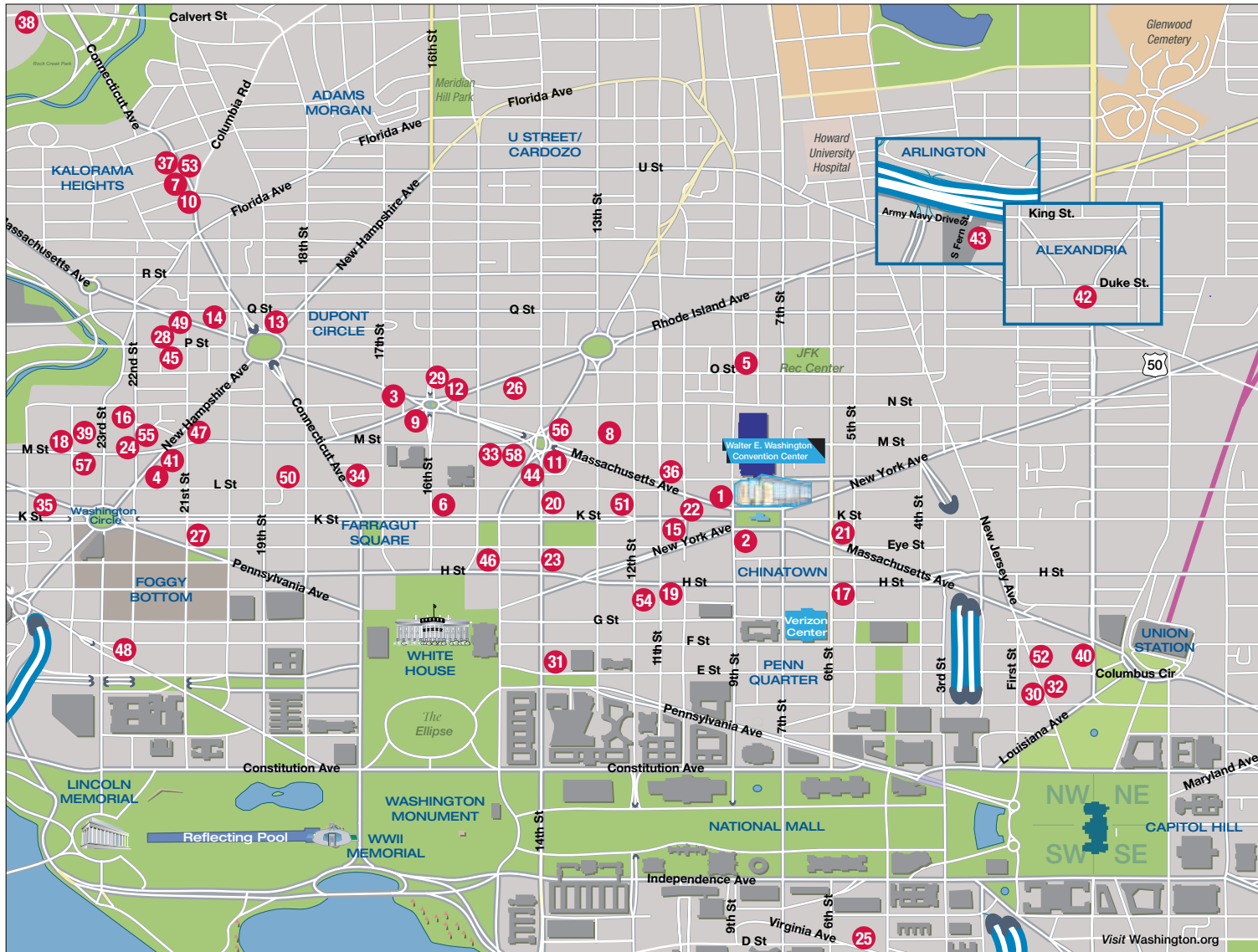
The Neuroscience Meeting Planner (NMP) allows meeting attendees to explore all sessions happening during the annual meeting. Attendees can use the NMP to explore abstracts, search an author index, create personalized itineraries, and more. Itineraries created on the NMP can be synced with the meeting mobile app for access to your itinerary on-the-go. The NMP is available at [SfN.org/NMP](http://SfN.org/NMP).

## Curated Itineraries

Curated itineraries tailor the annual meeting to your area of interest. These specific, topical tracks include scientific sessions and SfN-sponsored socials, and each itinerary is created by experts from the SfN Program Committee. Download the itineraries into your personalized schedule using the meeting mobile app or the Neuroscience Meeting Planner. For more information, visit [SfN.org](http://SfN.org).



# Hotel Map



- |                                                    |                                                     |                                                    |
|----------------------------------------------------|-----------------------------------------------------|----------------------------------------------------|
| 1. Marriott Marquis Washington DC                  | 21. Hampton Inn Washington Convention Center        | 41. Renaissance Washington DC, Dupont Circle Hotel |
| 2. Renaissance Washington, DC Downtown             | 22. Henley Park Hotel                               | 42. Residence Inn Alexandria Old Town/Duke Street  |
| 3. Beacon Hotel & Corporate Quarters               | 23. Hilton Garden Inn Washington, DC                | 43. Residence Inn Arlington Pentagon City          |
| 4. Best Western Georgetown Hotel & Suites          | 24. Hilton Garden Inn Washington DC/Georgetown Area | 44. Residence Inn Washington, DC Downtown          |
| 5. Cambria Suites Washington, DC Convention Center | 25. Holiday Inn Capitol - Washington DC             | 45. Residence Inn Washington, DC/Dupont Circle     |
| 6. Capital Hilton                                  | 26. Hotel Helix                                     | 46. Sofitel Washington, DC Lafayette Square        |
| 7. Churchill Embassy Row Hotel                     | 27. Hotel Lombardy Washington DC                    | 47. St. Gregory Luxury Hotel & Suites              |
| 8. Comfort Inn Downtown DC/Convention Center       | 28. Hotel Palomar Washington DC                     | 48. State Plaza Hotel                              |
| 9. Courtyard by Marriott Embassy Row               | 29. Hotel Rogue                                     | 49. The Fairfax at Embassy Row, Washington DC      |
| 10. Courtyard Washington, DC/Dupont Circle         | 30. Hyatt Regency Washington on Capitol Hill        | 50. The Quincy                                     |
| 11. Donovan House Hotel                            | 31. JW Marriott Washington, DC                      | 51. Twelve & K Hotel Washington, DC                |
| 12. DoubleTree by Hilton Hotel Washington, DC      | 32. Liaison Capitol Hotel, An Affinia Hotel         | 52. Washington Court Hotel                         |
| 13. Dupont Circle Hotel                            | 33. Loews Madison Hotel - Washington, DC            | 53. Washington Hilton                              |
| 14. Embassy Row Hotel                              | 34. Mayflower Renaissance Washington, DC Hotel      | 54. Washington Marriott at Metro Center            |
| 15. Embassy Suites DC Convention Center            | 35. Melrose Georgetown Hotel                        | 55. Washington Marriott Georgetown                 |
| 16. Embassy Suites Washington DC Downtown          | 36. Morrison-Clark Inn                              | 56. Washington Plaza Hotel                         |
| 17. Fairfield Inn & Suites Washington, DC/Downtown | 37. Normandy Hotel                                  | 57. Westin Georgetown, Washington, DC              |
| 18. Fairmont Washington DC                         | 38. Omni Shoreham Hotel                             | 58. Westin Washington D.C. City Center             |
| 19. Grand Hyatt Washington DC                      | 39. Park Hyatt Washington                           |                                                    |
| 20. Hamilton Crowne Plaza                          | 40. Phoenix Park Hotel                              |                                                    |

# Hotel List

The Society's housing company, Convention Management Resources, will be on-site to assist with any housing questions during the meeting. Representatives will be located in the Walter E. Washington Convention Center, East Salon, Nov. 15–19 during the following hours:

|                    |                  |
|--------------------|------------------|
| Friday, Nov. 14    | 2–5 p.m.         |
| Saturday, Nov. 15  | 7:30 a.m.–5 p.m. |
| Sunday, Nov. 16    | 7:30 a.m.–5 p.m. |
| Monday, Nov. 17    | 7:30 a.m.–5 p.m. |
| Tuesday, Nov. 18   | 7:30 a.m.–5 p.m. |
| Wednesday, Nov. 19 | 7:30 a.m.–3 p.m. |

On-site phone: (202) 249-4115

The Marriott Marquis Washington, DC, and the Renaissance Washington, DC Downtown, are the official co-headquarters hotels.

| #                             | Hotel Name/Address                                                    | Shuttle Route | Pick-up point                             | Nearest Metro stop/line/distance              |
|-------------------------------|-----------------------------------------------------------------------|---------------|-------------------------------------------|-----------------------------------------------|
| <b>Co-headquarters Hotels</b> |                                                                       |               |                                           |                                               |
| 1                             | Marriott Marquis Washington, DC<br>901 Massachusetts Ave. NW          | Walk          | Walk to Washington Convention Center      | Mt. Vernon Square/<br>Green & Yellow/2 blocks |
| 2                             | Renaissance Washington, DC Downtown<br>999 9th St. NW                 | Walk          | Walk to Washington Convention Center      | Mt. Vernon Square/<br>Green & Yellow/2 blocks |
| <b>Non-headquarter Hotels</b> |                                                                       |               |                                           |                                               |
| 3                             | Beacon Hotel & Corporate Quarters<br>1615 Rhode Island Ave. NW        | 6             | Entrance on Rhode Island Ave.             | Farragut North/Red/3 blocks                   |
| 4                             | Best Western Georgetown Hotel & Suites<br>1121 New Hampshire Ave. NW  | 9             | At Walgreens at 22nd and M St.            | Foggy Bottom/Blue & Orange/2 blocks           |
| 5                             | Cambria Suites Washington DC Convention Center<br>899 O St. NW        | Walk          | Walk to Washington Convention Center      | Mt. Vernon Square/<br>Green & Yellow/3 blocks |
| 6                             | Capital Hilton<br>1001 16th St. NW                                    | 4             | On K and 16th St.                         | Farragut North/Red/3 blocks                   |
| 7                             | Churchill Embassy Row Hotel<br>1914 Connecticut Ave. NW               | 10            | Walk to Hilton Washington on T St.        | Dupont Circle/Red/4 blocks                    |
| 8                             | Comfort Inn Downtown DC/Convention Center<br>1201 13th St. NW         | 5             | Walk to Washington Plaza–Front Entrance   | McPherson Square/<br>Blue & Orange/5 blocks   |
| 9                             | Courtyard by Marriott Embassy Row<br>1600 Rhode Island Ave. NW        | 6             | Walk to Beacon Hotel on Rhode Island Ave. | Dupont Circle/Red/4 blocks                    |
| 10                            | Courtyard Washington DC/Dupont Circle<br>1900 Connecticut Ave. NW     | 10            | Walk to Hilton Washington on T St.        | Dupont Circle/Red/4 blocks                    |
| 11                            | Donovan House Hotel<br>1155 14th St. NW                               | 5             | Walk to Washington Plaza–Front Entrance   | McPherson Square/<br>Blue & Orange/5 blocks   |
| 12                            | Doubletree by Hilton Hotel Washington DC<br>1515 Rhode Island Ave. NW | 6             | Curbside on Rhode Island Ave.             | Dupont Circle/Red/6 blocks                    |
| 13                            | Dupont Circle Hotel<br>1500 New Hampshire Ave. NW                     | 7             | Corner of New Hampshire on Dupont Circle  | Dupont Circle/Red/1 block                     |
| 14                            | Embassy Row Hotel<br>2015 Massachusetts Ave. NW                       | 7             | Massachusetts Ave. at 21st St.            | Dupont Circle/Red/1 block                     |
| 15                            | Embassy Suites DC Convention Center<br>900 10th St. NW                | Walk          | Walk to Washington Convention Center      | Mt. Vernon Square/<br>Green & Yellow/3 blocks |
| 16                            | Embassy Suites Washington DC Downtown<br>1250 22nd St. NW             | 9             | At Walgreens at 22nd and M St.            | Dupont Circle/Red/4 blocks                    |

| #                        | Hotel Name/Address                                                     | Shuttle Route | Pick-up point                                            | Nearest Metro stop/line/distance                    |
|--------------------------|------------------------------------------------------------------------|---------------|----------------------------------------------------------|-----------------------------------------------------|
| # Non-headquarter Hotels |                                                                        |               |                                                          |                                                     |
| 17                       | Fairfield Inn & Suites Washington DC/Downtown<br>500 H St. NW          | Walk          | Walk to Washington Convention Center                     | Gallery Place/Green, Red & Yellow/3 blocks          |
| 18                       | Fairmont Washington DC<br>2401 M St. NW                                | 9             | On M St. at Side Entrance                                | Foggy Bottom/Blue & Orange/5 blocks                 |
| 19                       | Grand Hyatt Washington DC<br>1000 H St. NW                             | Walk          | Walk to Washington Convention Center                     | Metro Center/Red, Blue & Orange/2 blocks            |
| 20                       | Hamilton Crowne Plaza<br>1001 14th St. NW                              | 4             | On K and 14th St.                                        | McPherson Square/Blue & Orange/2 blocks             |
| 21                       | Hampton Inn Washington Convention Center<br>901 6th St. NW             | Walk          | Walk to Washington Convention Center                     | Mt. Vernon Square/<br>Green & Yellow/3 blocks       |
| 22                       | Henley Park Hotel<br>926 Massachusetts Ave. NW                         | Walk          | Walk to Washington Convention Center                     | Mt. Vernon Square/<br>Green & Yellow/3 blocks       |
| 23                       | Hilton Garden Inn Washington, DC<br>815 14th St. NW                    | 8             | 14th St. Entrance                                        | McPherson Square/Blue & Orange/1 block              |
| 24                       | Hilton Garden Inn Washington DC/Georgetown Area<br>2201 M St. NW       | 9             | At Walgreens at 22nd and M St.                           | Foggy Bottom/Blue & Orange/5 blocks                 |
| 25                       | Holiday Inn Capitol – Washington DC<br>550 C St. NW                    | 2             | At C St. Entrance SW                                     | L'Enfant Plaza/Blue, Green, Orange & Yellow/1 block |
| 26                       | Hotel Helix<br>1430 Rhode Island Ave. NW                               | 6             | Walk to Doubletree on Rhode Island Ave.                  | McPherson Square/Blue & Orange/6 blocks             |
| 27                       | Hotel Lombardy Washington DC<br>2019 Pennsylvania Ave. NW              | 8             | I St. Entrance                                           | Foggy Bottom/Blue & Orange/4 blocks                 |
| 28                       | Hotel Palomar Washington DC<br>2121 P St. NW                           | 7             | Corner of 21st and P St.                                 | Dupont Circle/Red/4 blocks                          |
| 29                       | Hotel Rouge<br>1315 16th St. NW                                        | 6             | Walk to Doubletree on Rhode Island Ave.                  | Dupont Circle/Red/4 blocks                          |
| 30                       | Hyatt Regency Washington on Capitol Hill<br>400 New Jersey Ave. NW     | 3             | Front of Hotel on New Jersey Ave.                        | Union Station/Red/3 blocks                          |
| 31                       | JW Marriott Washington, DC<br>1331 Pennsylvania Ave. NW                | 1             | On E St.                                                 | Metro Center/Blue, Orange & Red/4 blocks            |
| 32                       | Liaison Capitol Hill, An Affinia Hotel<br>415 New Jersey Ave. NW       | 3             | Walk to Hyatt – Front of Hotel on New Jersey Ave.        | Union Station/Red/3 blocks                          |
| 33                       | Loews Madison Hotel – Washington, DC<br>1177 15th St. NW               | 5             | Walk to Westin City Center – NE Corner of 15th and M St. | McPherson Square/Blue & Orange/3 blocks             |
| 34                       | Mayflower Renaissance Washington, DC Hotel<br>1127 Connecticut Ave. NW | 4             | On DeSales St.                                           | Farragut North/Red/2 blocks                         |
| 35                       | Melrose Georgetown Hotel<br>2430 Pennsylvania Ave. NW                  | 9             | Front of Hotel on Pennsylvania Ave.                      | Foggy Bottom/Blue & Orange/3 blocks                 |
| 36                       | Morrison-Clark Inn<br>1015 L St. NW                                    | Walk          | Walk to Washington Convention Center                     | Mt. Vernon Square/<br>Green & Yellow/3 blocks       |
| 37                       | Normandy Hotel<br>2118 Wyoming Ave. NW                                 | 10            | Walk to Hilton Washington on T St.                       | Dupont Circle/Red/5 blocks                          |
| 38                       | Omni Shoreham Hotel<br>2500 Calvert St. NW                             | 10            | Curbside on Calvert St.                                  | Woodley Park/Red/2 blocks                           |
| 39                       | Park Hyatt Washington<br>1201 24th St. NW                              | 9             | Walk to Fairmont – on M St. at Side Entrance             | Foggy Bottom/Blue & Orange/4 blocks                 |



| #                        | Hotel Name/Address                                                             | Shuttle Route             | Pick-up point                                       | Nearest Metro stop/line/distance        |
|--------------------------|--------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------|-----------------------------------------|
| # Non-headquarter Hotels |                                                                                |                           |                                                     |                                         |
| 40                       | Phoenix Park Hotel<br>520 N. Capitol St. NW                                    | 3                         | Walk to Hyatt – Front of Hotel on New Jersey Avenue | Union Station/Red/1 block               |
| 41                       | Renaissance Washington, DC Dupont Circle Hotel<br>1143 New Hampshire Ave. NW   | 9                         | At Walgreens at 22nd and M St.                      | Foggy Bottom/Blue & Orange/4 blocks     |
| 42                       | Residence Inn Alexandria Old Town/Duke Street<br>1456 Duke St., Alexandria, VA | No Shuttle<br>Metro Pass* | No Shuttle<br>Metro Pass*                           | King Street/Blue & Yellow/4 blocks      |
| 43                       | Residence Inn Arlington Pentagon City<br>550 Army Navy Drive, Arlington, VA    | No Shuttle<br>Metro Pass* | No Shuttle<br>Metro Pass*                           | Pentagon City/Blue & Yellow/3 blocks    |
| 44                       | Residence Inn Washington, DC Downtown<br>1199 Vermont Ave. NW                  | 5                         | Walk to Washington Plaza – Front Entrance           | McPherson Square/Blue & Orange/5 blocks |
| 45                       | Residence Inn Washington, DC/Dupont Circle<br>2120 P St. NW                    | 7                         | Dupont Circle – Corner of 21st and P St.            | Dupont Circle/Red/2 blocks              |
| 46                       | Sofitel Washington, DC Lafayette Square<br>806 15th St. NW                     | 8                         | Walk to Hilton Garden Inn – 14th St. Entrance       | McPherson Square/Blue & Orange/2 blocks |
| 47                       | St. Gregory Luxury Hotel & Suites<br>2033 M St. NW                             | 9                         | M St. Entrance                                      | Dupont Circle/Red/3 blocks              |
| 48                       | State Plaza Hotel<br>2117 E St. NW                                             | 8                         | Curbside on E St.                                   | Foggy Bottom/Blue & Orange/3 blocks     |
| 49                       | The Fairfax at Embassy Row, Washington, DC<br>2100 Massachusetts Ave. NW       | 7                         | Massachusetts Ave. at 21st St.                      | Dupont Circle/Red/2 blocks              |
| 50                       | The Quincy<br>1823 L St. NW                                                    | 4                         | Walk to Renaissance Mayflower on DeSales St.        | Farragut North/Red/3 blocks             |
| 51                       | Twelve & K Hotel Washington, DC<br>1201 K St. NW                               | Walk                      | Walk to Washington Convention Center                | McPherson Square/Blue & Orange/4 blocks |
| 52                       | Washington Court Hotel<br>525 New Jersey Ave. NW                               | 3                         | Walk to Hyatt – Front of Hotel on New Jersey Ave.   | Union Station/Red/3 blocks              |
| 53                       | Washington Hilton<br>1919 Connecticut Ave. NW                                  | 10                        | Bus Entrance on T St.                               | Dupont Circle/Red/4 blocks              |
| 54                       | Washington Marriott at Metro Center<br>775 12th St. NW                         | Walk                      | Walk to Washington Convention Center                | Metro Center/Blue, Orange & Red/1 block |
| 55                       | Washington Marriott Georgetown<br>1221 22nd St. NW                             | 9                         | At Walgreens at 22nd and M St.                      | McPherson Square/Blue & Orange/5 blocks |
| 56                       | Washington Plaza Hotel<br>10 Thomas Cir. NW                                    | 5                         | Front Entrance                                      | McPherson Square/Blue & Orange/4 blocks |
| 57                       | The Westin Georgetown, Washington, DC<br>2350 M St. NW                         | 9                         | Walk to Fairmont – on M St. at Side Entrance        | Foggy Bottom/Blue & Orange/4 blocks     |
| 58                       | Westin Washington, DC City Center<br>1400 M St. NW                             | 5                         | NE Corner of 15th and M St.                         | McPherson Square/Blue & Orange/5 blocks |

Current sales and occupancy taxes total 14.5% per room, per night. Hotel rates include a nominal \$15 fee to help defray the high cost of the shuttle service, which will be provided to the Walter E. Washington Convention Center from most of the hotels throughout the day.

\*Metro Pass amounts vary by property and cover a round trip from the hotel to the Mt. Vernon Square/Convention Center Metro stop. These passes are only offered at hotels not on a shuttle route.



# Shuttle Schedule

| Date                   | Times                                                           | Service                                                                          |
|------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------|
| Saturday, November 15  | 7 a.m.–4 p.m.<br>4–7:15 p.m.                                    | 20 minute service<br>10 minute service                                           |
| Sunday, November 16    | 6:30–10:30 a.m.<br>10:30 a.m.–4 p.m.<br>4–8 p.m.<br>8–9:30 p.m. | 10 minute service<br>20 minute service<br>10 minute service<br>20 minute service |
| Monday, November 17    | 7–10:30 a.m.<br>10:30 a.m.–4 p.m.<br>4–8 p.m.<br>8–9:30 p.m.    | 10 minute service<br>20 minute service<br>10 minute service<br>20 minute service |
| Tuesday, November 18   | 7–10:30 a.m.<br>10:30 a.m.–4 p.m.<br>4–8 p.m.<br>8–9:30 p.m.    | 10 minute service<br>20 minute service<br>10 minute service<br>20 minute service |
| Wednesday, November 19 | 7–10:30 a.m.<br>10:30 a.m.– 3:30 p.m.<br>3:30–6 p.m.            | 10 minute service<br>20 minute service<br>10 minute service                      |

SfN provides complimentary shuttle services between the Walter E. Washington Convention Center and most of the official SfN meeting hotels.

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 (202) 249-4091 or stop by the shuttle information desk located in the Walter E. Washington Convention Center, L St. Concourse.

## Airport Shuttle Service

### Service to Washington Dulles Airport Only

Production Transport provides express shuttle service to Dulles Airport from the Walter E. Washington Convention Center on Tuesday, Nov. 18, and Wednesday, Nov. 19, 11 a.m.-6 p.m. Tickets can be purchased for \$35 per person (cash or credit card), at the Shuttle Information Desk in L St. Concourse, Monday, Nov. 17, thru Wednesday, Nov. 19, during shuttle service hours.

To make your reservation early and secure your seat, email [mponce@prodtrans.com](mailto:mponce@prodtrans.com). Buses will depart every 30 minutes on the hour and the half hour. For questions regarding the shuttle services, contact [meetings@sfn.org](mailto:meetings@sfn.org).

### Service to Ronald Reagan Washington National Airport, Washington Dulles Airport, and Baltimore Washington International Thurgood Marshall Airport

SuperShuttle offers transportation to and from downtown Washington, DC and the three major airports. Fares will vary according to your final destination. When you arrive at the airport, claim your luggage and visit the SuperShuttle counter in the baggage claim area of your respective airport. Return trips to the airport may be prearranged by calling (800) 258-3826.



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## Resources

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Council and Program Committee

# Attendee Resources

SfN aims to provide high levels of service. The Society has compiled a series of resources to help all attendees navigate Neuroscience 2014.

## Annual Meeting Offices

### Headquarters Office

#### Logistics and Programming

Walter E. Washington Convention Center: Room 102

#### Hours:

Friday, Nov. 14  
8 a.m.–5 p.m.

Saturday, Nov. 15–Wednesday, Nov. 19  
7 a.m.–6 p.m.

The office addresses all questions concerning annual meeting logistics and programming for the 2014 and 2015 annual meetings.

## ATM Machines

There are three automatic teller machines (ATMs) located on Level 1, outside of Room 140A; on the L Street Bridge, outside of Halls D and E on Level 2; and in the south lobby of the Walter E. Washington Convention Center. The lobbies of the Marriott Marquis Washington, DC, and the Renaissance Washington, DC, hotels also have ATMs.

## Business Center

Capital Business Center, a full-service company, is conveniently located in the main lobby of the convention center. The Capital Business Center offers copying, mailing, faxing as well as other services. They also provide fast and efficient shipping and receiving services for our attendees. For your added convenience, the Marriott Marquis Washington, DC, and Renaissance Washington, DC Downtown, hotels also operate full-service business centers.

## Certificate of Attendance

Walter E. Washington Convention Center: East Salon

Every attendee is advised to obtain a certificate, available at a designated booth in the registration area. Signed and sealed by SfN staff, 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

Walter E. Washington Convention Center: Room 204

On-site child care and youth programs will be available at Neuroscience 2014 for children ages six 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 2014 Web page, [kiddiecorp.com/neurokids.htm](http://kiddiecorp.com/neurokids.htm). All policies and fees are established by KiddieCorp, and all questions should be directed to them. Space is limited.

## Coat and Luggage Check

Walter E. Washington Convention Center

#### Hours:

Room 149  
Friday, Nov. 14–Tuesday, Nov. 18  
7:30 a.m.–7 p.m.  
Wednesday, Nov. 19  
7:30 a.m.–6 p.m.

East Salon  
Tuesday, Nov. 18  
7:30 a.m.–7 p.m.  
Wednesday, Nov. 19  
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 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](http://SfN.org/cme) or see page 64 for details.

## Disabilities and Special Needs

For assistance with special needs or disabilities on-site, visit the SfN headquarters office in Room 102AB of the Walter E. Washington 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](mailto:info@scootaround.com) or by fax at (204) 478-1172. For additional information, email [meetings@sfn.org](mailto:meetings@sfn.org).

## Event Locations

Lectures, exhibits, scientific sessions, symposia, poster sessions, registration, and headquarters offices will be located in the Walter E. Washington Convention Center. SfN-sponsored socials will be held at the Renaissance Washington, DC. Satellite and ancillary events will be held at Walter E. Washington Convention Center, the Marriott Marquis Washington, DC, and the Renaissance Washington, DC Downtown and other Washington facilities.

### Walter E. Washington Convention Center

801 Mt. Vernon Place, NW  
Washington, DC 20001

### Marriott Marquis Washington, DC, Hotel

901 Massachusetts Avenue, NW  
Washington, DC 20001

### Renaissance Washington, DC Downtown Hotel

999 Ninth Street, NW  
Washington, DC 20001



## Exhibits

Walter E. Washington Convention Center: Halls A–C

### Hours:

Sunday, Nov. 16–Wednesday, Nov. 19  
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 2014 website, SfN.org/exhibits. The hyperlinks will remain live through June 30, 2015.

Inquiry cards: Your badge will serve a double purpose: (1) as a name badge and (2) an exhibit inquiry card. Your demographic information is 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. We appreciate your cooperation — a successful exhibit program helps defray the cost of running the annual meeting and keeps registration fees at a minimum.

For further information, visit the exhibits section of the SfN Web site at SfN.org/exhibits, email exhibits@sfn.org, or call (202) 962-4000.

## First Aid and Emergencies

Walter E. Washington Convention Center:  
Hall A and Hall D

During session hours, the first aid room at the convention center will be open and staffed by certified medical providers.

## Food Courts

Walter E. Washington Convention Center: Hall E

### Hours:

Saturday, Nov. 15  
11 a.m.–2 p.m.

Sunday, Nov. 16–Wednesday, Nov. 19  
8:30 a.m.–5 p.m.

## Important Phone Numbers

### Headquarters Office

#### HQ Office/Logistics and Programming

Logistics (202) 249-4100

Programming (202) 249-4105

### Press Office

#### Press Room

(202) 249-4130

### Exhibit Management

(202) 249-4080

### First Aid and Hospital Numbers

#### First Aid Room #1, Hall A

(202) 249-3108

#### First Aid Room #2, Hall D

(202) 249-3109

### George Washington University Hospital

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

### Medics USA Urgent Care Services

1700 17th Street, NW, Suite A  
Washington, DC 20008  
(202) 483-4400

## Infant Care Facilities

Walter E. Washington Convention Center: Room 205

An infant room designated for the privacy of parents and guardians caring for infants is available in the Walter E. Washington 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 changing room is unsupervised. SfN is not responsible for accidents or injuries that may occur in this room.

## Information Booths

Walter E. Washington Convention Center

### Grand Lobby

#### L Street Bridge

#### L Street Concourse

### Hours:

Friday, Nov. 14  
2–6 p.m.

Saturday, Nov. 15–Tuesday, Nov. 18  
7:30 a.m.–6 p.m.

Wednesday, Nov. 19  
8 a.m.–5 p.m.

## International Attendees

International attendees should refer to the U.S. State Department website at travel.state.gov for more information regarding visas.

## Literature Displays

Walter E. Washington Convention Center: West Salon

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

## Lost and Found

Walter E. Washington Convention Center: East Salon

Direct inquiries about lost items to the lost and found counter in the registration area of the Walter E. Washington Convention Center.

## Mobile Resources

Several resources are available that allow meeting attendees to access meeting information on mobile devices. PDF versions of the annual meeting *Program* and abstract eBooks are available for download at SfN.org for use on eReader devices. Attendees are also able to use the Neuroscience Meeting Planner (NMP) and the meeting mobile app to explore annual meeting sessions. Download the Neuroscience 2014 Meeting Mobile App via iTunes™ or the Google Play™ app store. Once downloaded, the Meeting Mobile App can be used without an internet connection. The NMP, an online resource, is available at SfN.org/NMP.

## My Neuroscience Marketplace

Build your list of preferred exhibitors through My Neuroscience Marketplace, 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

Walter E. Washington Convention Center: West Salon

### Hours:

Saturday, Nov. 15–Tuesday, Nov. 18  
8 a.m.–5 p.m.

Wednesday, Nov. 19  
8 a.m.–3 p.m.

The onsite 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](http://SfN.org/neurojobs). Onsite payment can only be made by credit card.

## Neuroscience Meeting Planner Viewing Area

Walter E. Washington Convention Center: West Salon

### Hours:

Saturday, Nov. 15–Tuesday, Nov. 18  
8 a.m.–5 p.m.

Wednesday, Nov. 19  
8 a.m.–3 p.m.

The Neuroscience Meeting Planner (NMP) contains the full text of abstracts and allows attendees to plan an itinerary for Neuroscience 2014. It can be accessed online at [SfN.org/NMP](http://SfN.org/NMP) or onsite in the NMP Viewing Area where computers will be available.

## 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 SfN

press conferences. Other arrangements must be made in advance in the Press Room. Cell phone use in sessions is prohibited.

## Poster Sessions

Walter E. Washington Convention Center: Halls A–C

### Hours:

Saturday, Nov. 15  
1–5 p.m.

Sunday, Nov. 16–Wednesday, Nov. 19  
8 a.m.–noon, 1–5 p.m.

## Press Offices

Walter E. Washington Convention Center

Press Room, Room 202A  
Press Conference Room, 202B  
Press Interview Room, 203

### Hours:

Saturday, Nov. 15–Wednesday, Nov. 19  
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

Walter E. Washington Convention Center: West Salon

### Hours:

Friday, Nov. 14  
2–5 p.m.

Saturday, Nov. 15–Sunday, Nov. 16  
7:30 a.m.–5 p.m.

Monday, Nov. 17  
7:30 a.m.–noon

The *Program* will be available on-site at the Walter E. Washington Convention Center and online at [SfN.org/am2014](http://SfN.org/am2014) as a downloadable PDF. Attendees can pick up a copy of the *Program* or *Exhibit Guide* at any *Program* and *Exhibit Guide* pick-up location in the convention center.

## Restaurant Reservations

Walter E. Washington Convention Center: Grand Lobby

### Hours:

Saturday, Nov. 15  
Noon–6 p.m.

Sunday, Nov. 16–Tuesday, Nov. 18  
10 a.m.–6 p.m.

Wednesday, Nov. 19  
10 a.m.–5 p.m.

## SfN Booth

Walter E. Washington Convention Center: Hall B, Booth #1203

As you experience Neuroscience 2014's Exhibit Hall, stop by the SfN Booth to learn about new member resources and services offered by your professional society and purchase SfN gifts and memorabilia.

## Speaker Ready Room

Walter E. Washington Convention Center: 209C

### Hours:

Friday, Nov. 14–Wednesday, Nov. 19  
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 80 for more information.

## Transportation to and from Walter E. Washington Convention Center/Hotels

### Shuttle

SfN will provide a complimentary shuttle service between the Walter E. Washington Convention Center and most SfN-contracted hotels. The shuttle service will operate during the annual meeting dates of Saturday, Nov. 15 to Wednesday, Nov. 19. For questions, visit the shuttle information desk located at the Walter E. Washington Convention Center: L Street Concourse. See page 74 for more information.

### Metro

The Washington Metropolitan Area Transit Authority's Metrorail system is available in the downtown area for a base fee of \$2.70 and increases by distance traveled. For assistance in locating the Metro stop closest to your desired location, visit Metro's Trip Planner at [wmata.com](http://wmata.com).

### Taxis

There are several companies that provide taxicab services in Washington, DC. Taxicabs are easily accessible at the convention center, major hotels, and other downtown locations and attractions.

### The Circulator

The Circulator is a public transit system designed to take riders to the city's cultural, shopping, dining, and business destinations



including the Walter E. Washington convention center. There are two routes near the convention center as well as one that travels around the National Mall. At just \$1 and with buses arriving every 10 minutes, the Circulator provides daily bus service throughout Washington, DC. For more information, visit [dccirculator.com](http://dccirculator.com).

## Washington, DC Resources and Attractions

For visitor's information, visit [washington.org/things-do](http://washington.org/things-do).

## Volunteer Leadership Lounge

Walter E. Washington Convention Center: Salon F

### Hours:

Saturday, Nov. 15–Wednesday, Nov. 19  
7:30 a.m.–5 p.m.

The Volunteer Leadership Lounge addresses matters for the 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 Walter E. Washington Convention Center during Neuroscience 2014. 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 or 802.11n compatible, and set your network card to use DHCP ("or Acquire address automatically"). The Exhibit Hall areas will provide wireless service only to wireless devices that are 802.11n compatible. Wireless network users should reference the FAQs and disclaimers at [SfN.org/wireless](http://SfN.org/wireless) before accessing the network. SfN will provide support for wireless users at the Wireless Support booth in the 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 presentation in the Speaker Ready Room, located in the Walter E. Washington Convention Center, Room 209C, 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 have a VGA 15 pin HD female video output cable. If the cable is not brought with the laptop computer being used, there is no way to connect it to the session room data/video projector.

NOTE: Many laptop computers use a special interface cable (e.g., DVI to VGA ) to attach video out to the session room data/video 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 Presenter Using a Personal Laptop Computer), the following audiovisual equipment will be set up in all session rooms:

- One data/video projector
- One PC computer with an open USB port for flash drives
- One screen (multiple screens for lectures)
- Audio system with microphones
- One laser pointer
- 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 also must 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 laptop computers 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.

NOTE: The laptop output resolution should be no more than XGA (1024 x 768). The native resolution on the data projectors are 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 on site.

For more information, visit [SfN.org/presenterresources](http://SfN.org/presenterresources).

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# Exhibitor List

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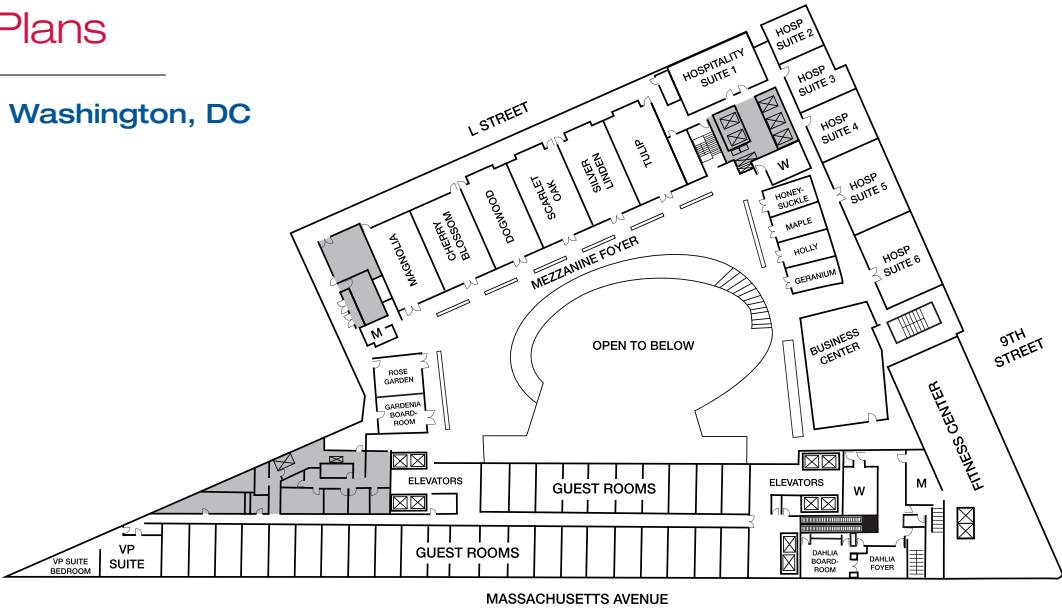
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# Hotel Floor Plans

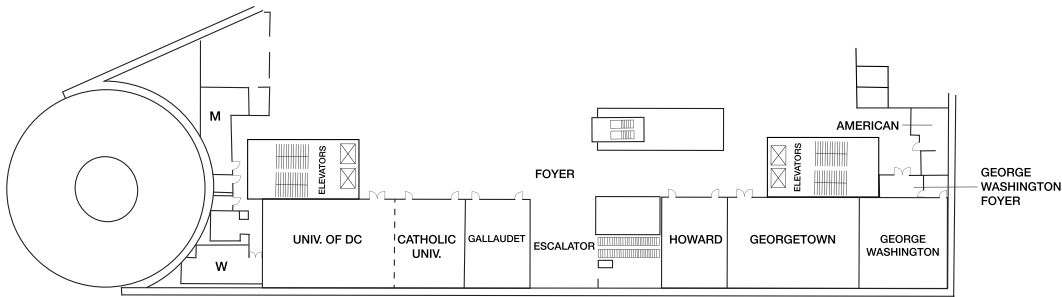
## Marriott Marquis Washington, DC

### Mezzanine Level



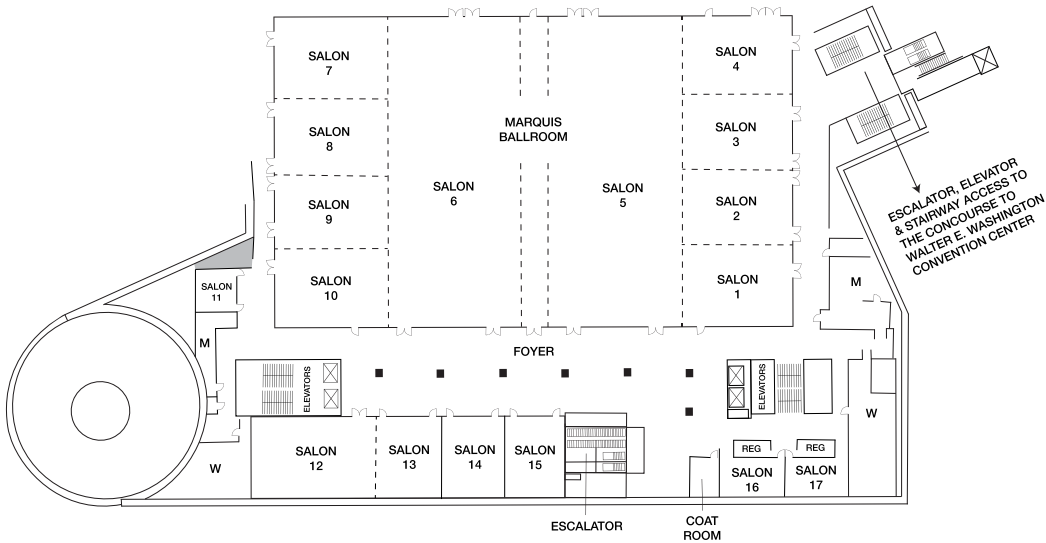
## Marriott Marquis Washington, DC

### Meeting Level 1



## Marriott Marquis Washington, DC

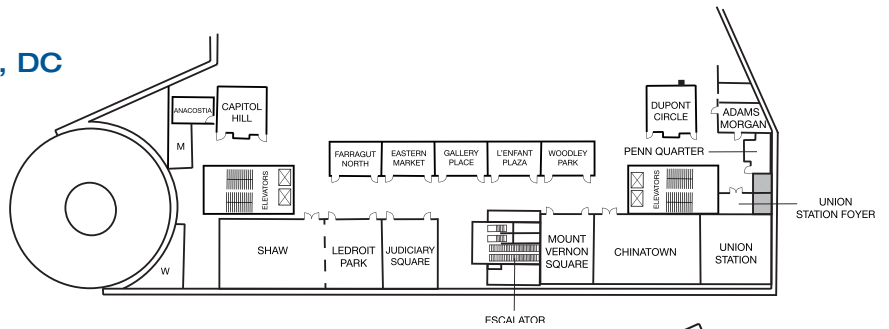
### Meeting Level 2



# Hotel Floor Plans

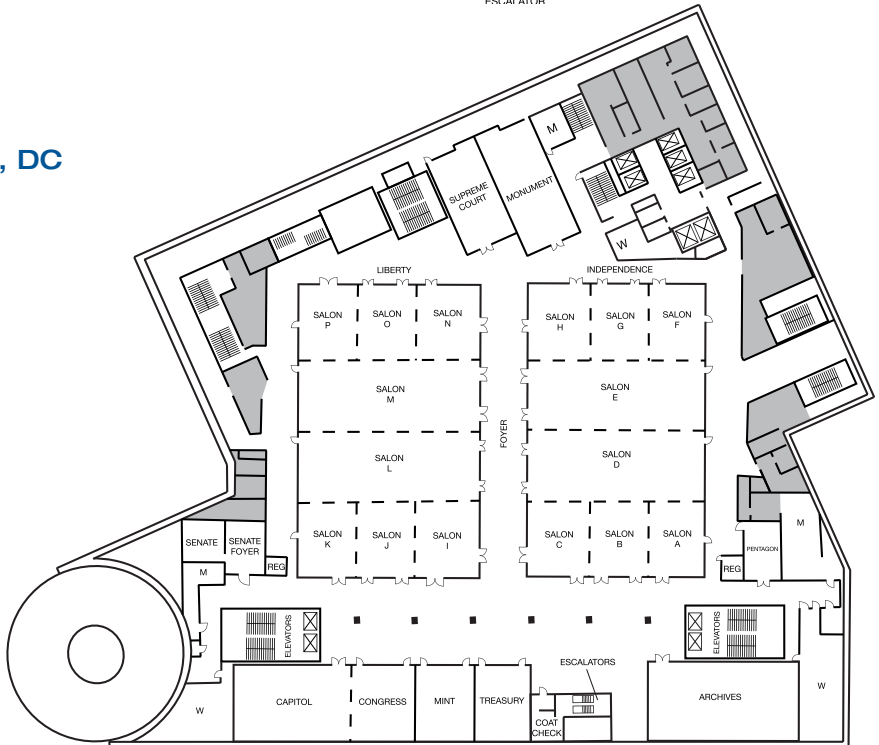
## Marriott Marquis Washington, DC

### Meeting Level 3



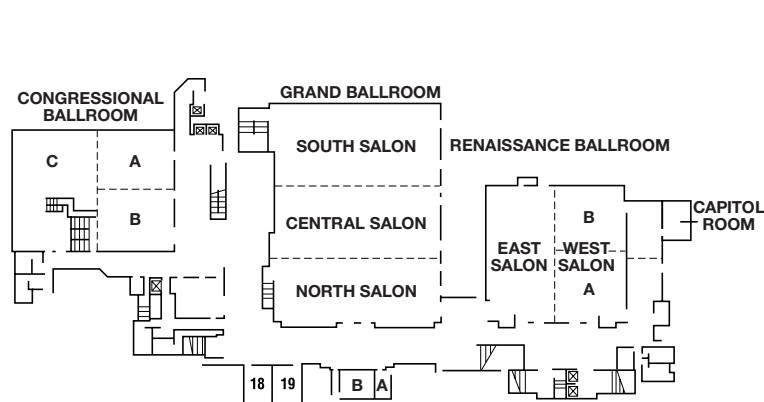
## Marriott Marquis Washington, DC

### Meeting Level 4



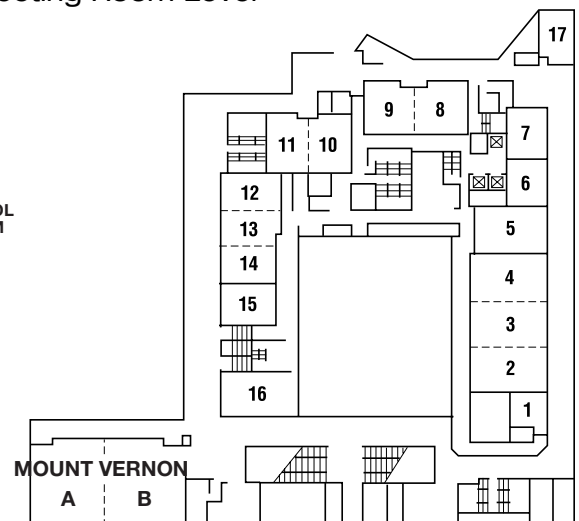
## Renaissance Washington, DC Downtown

### Ballroom Level



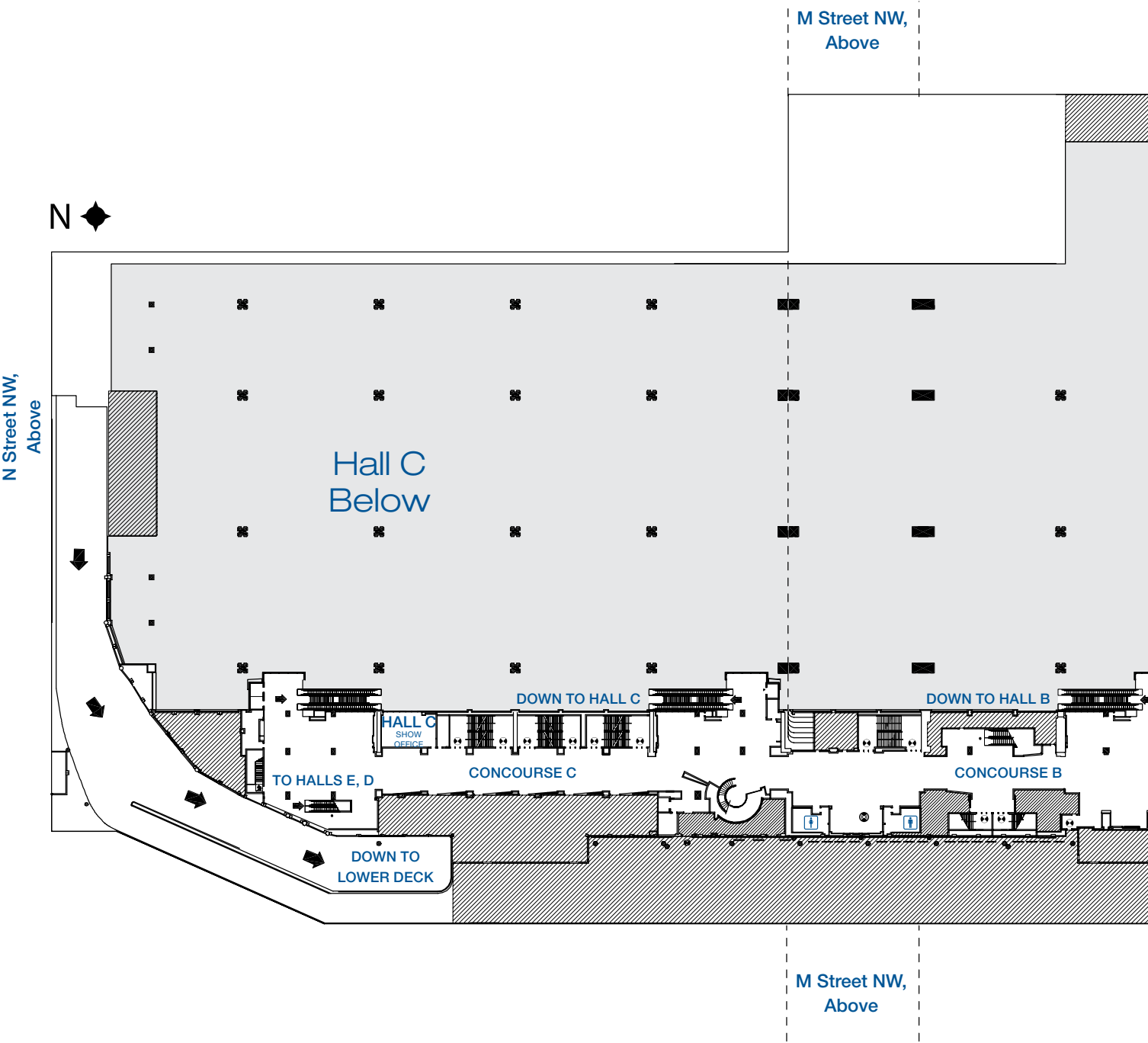
## Renaissance Washington, DC Downtown

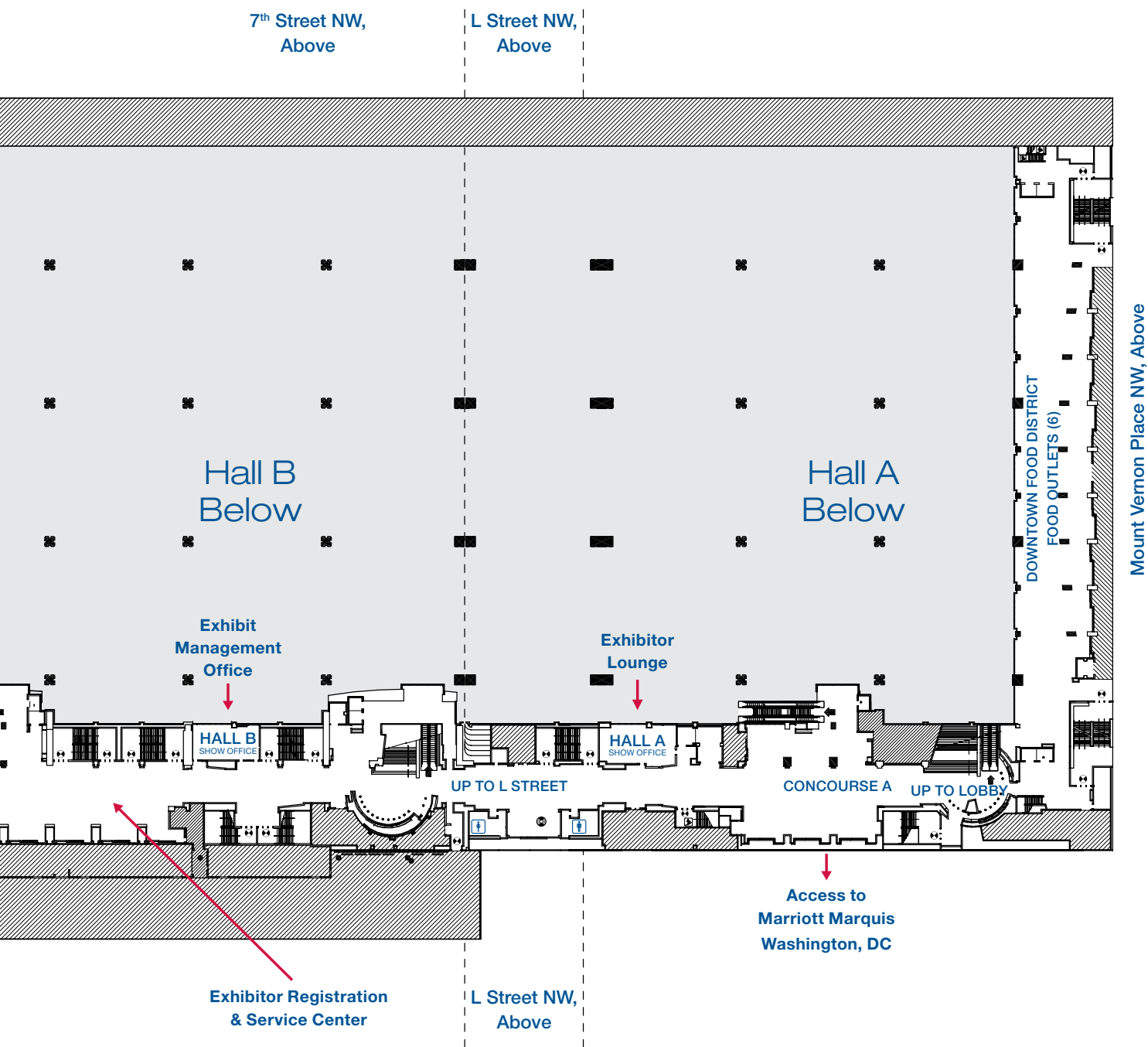
### Meeting Room Level



# Convention Center Floor Plans

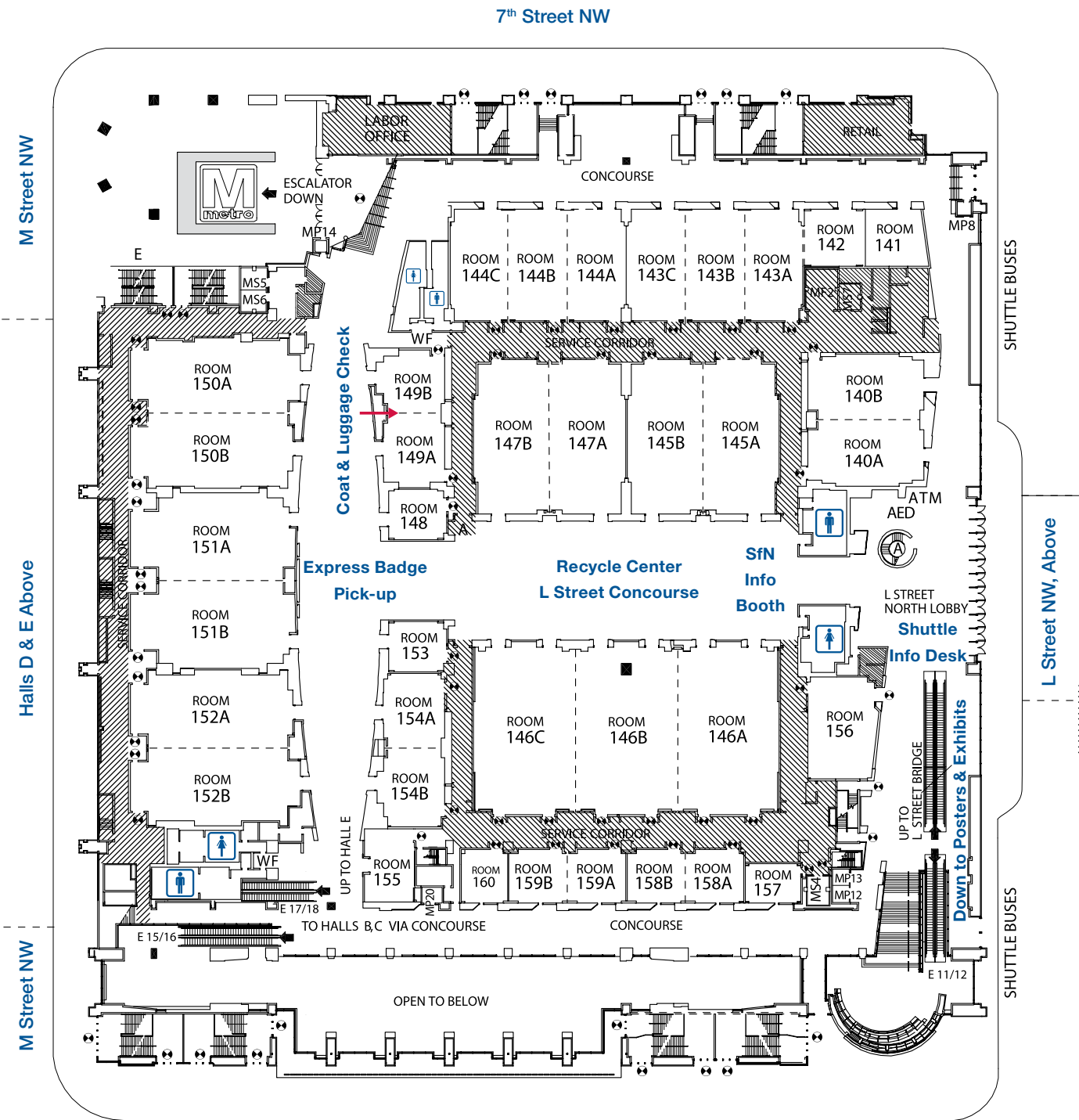
Concourse Level  
Access to Exhibit Halls A-C  
Show Offices A-C



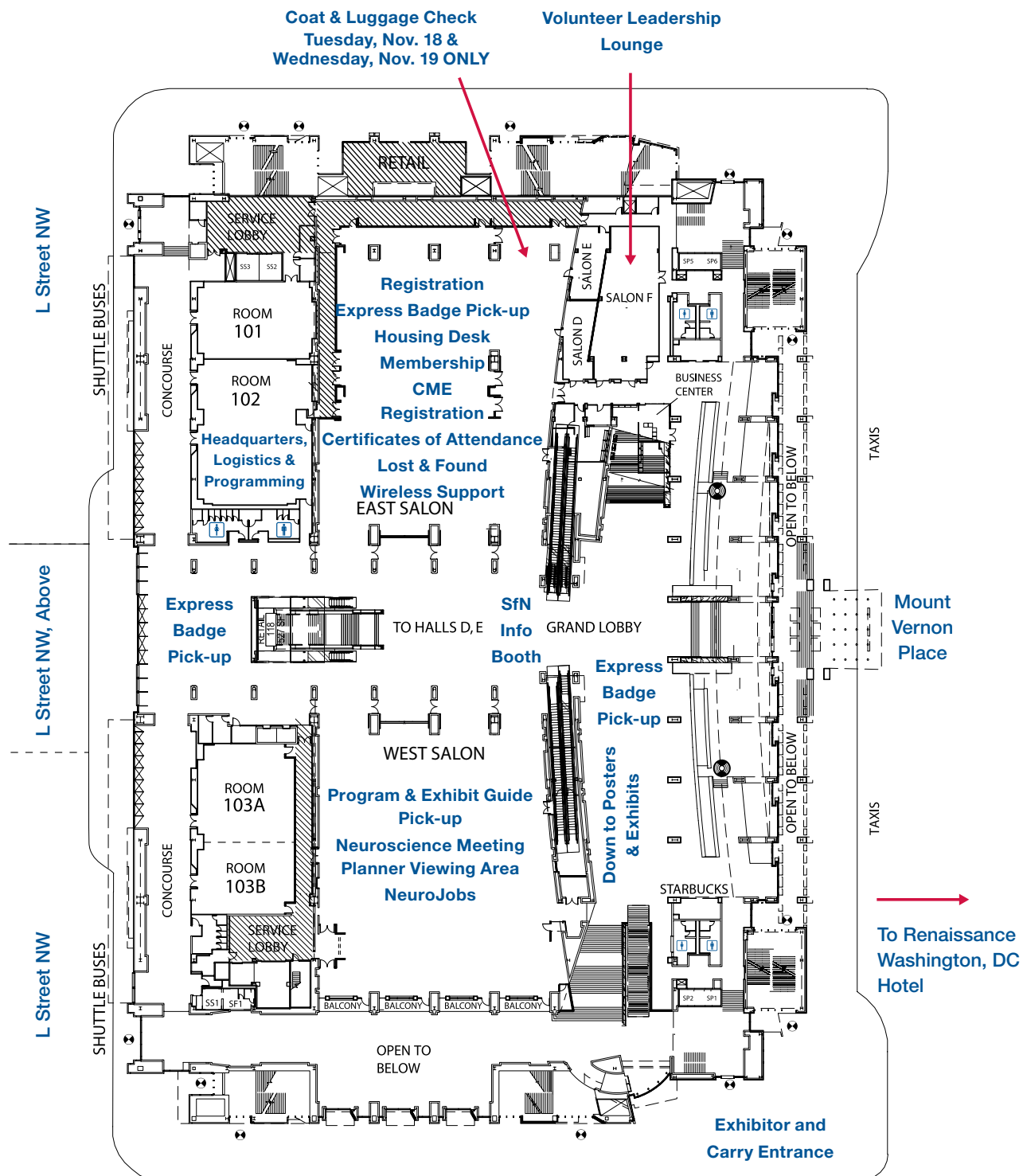


# Convention Center Floor Plans

Lobby Level/Level 1  
Meeting Rooms 101-103 & 150-160

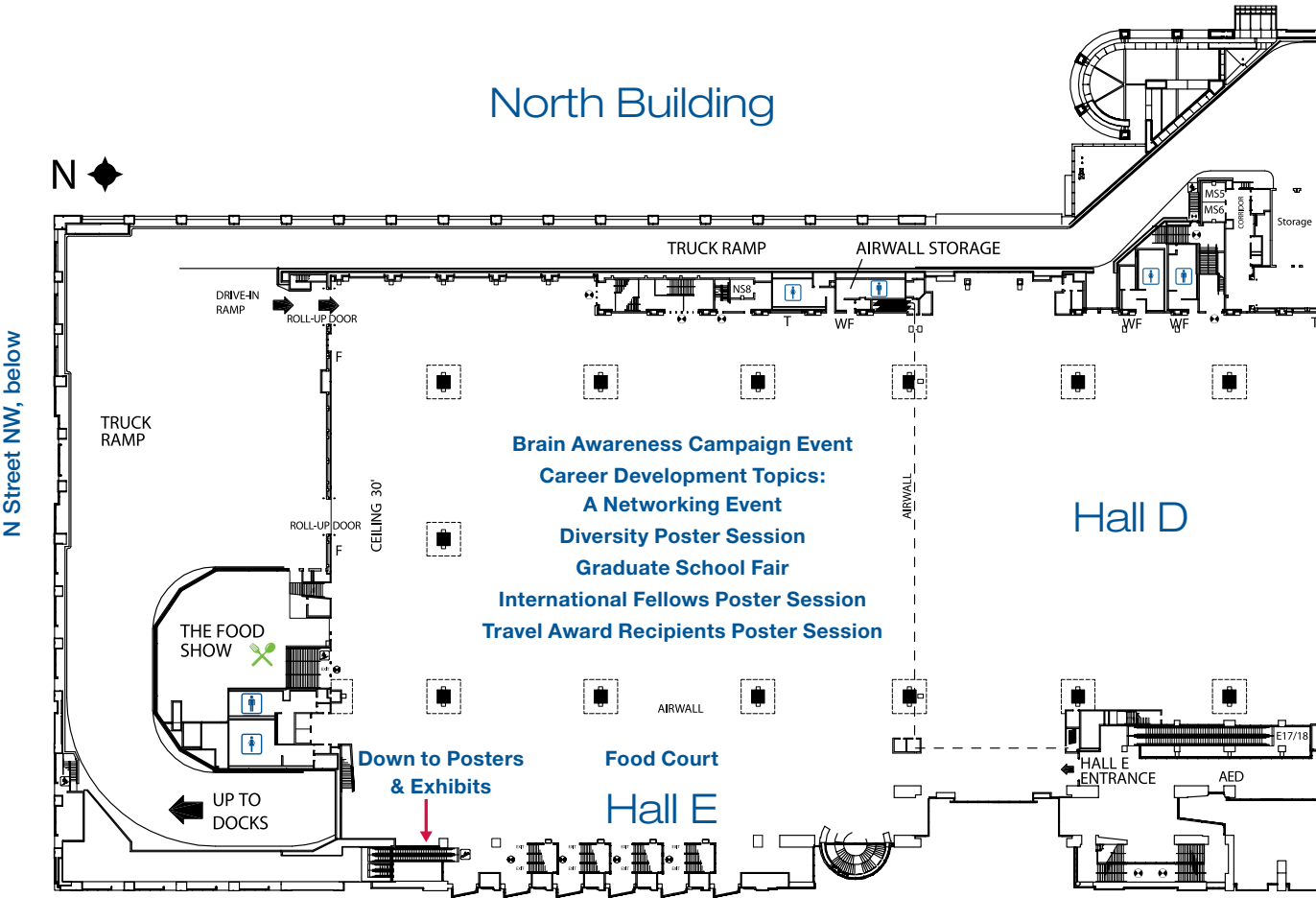






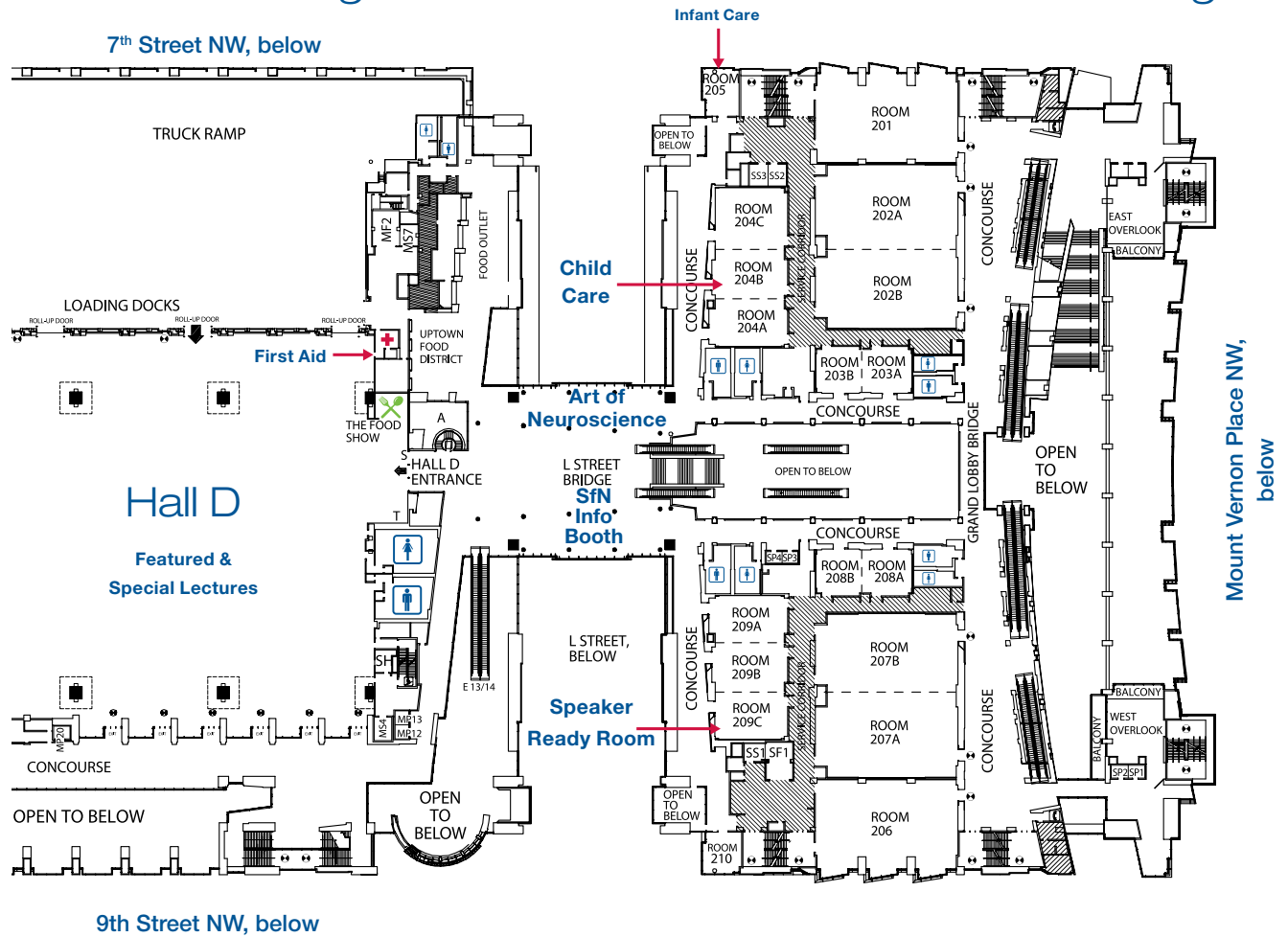
# Convention Center Floor Plans

Level 2  
Halls D & E  
Meeting Rooms 201-210



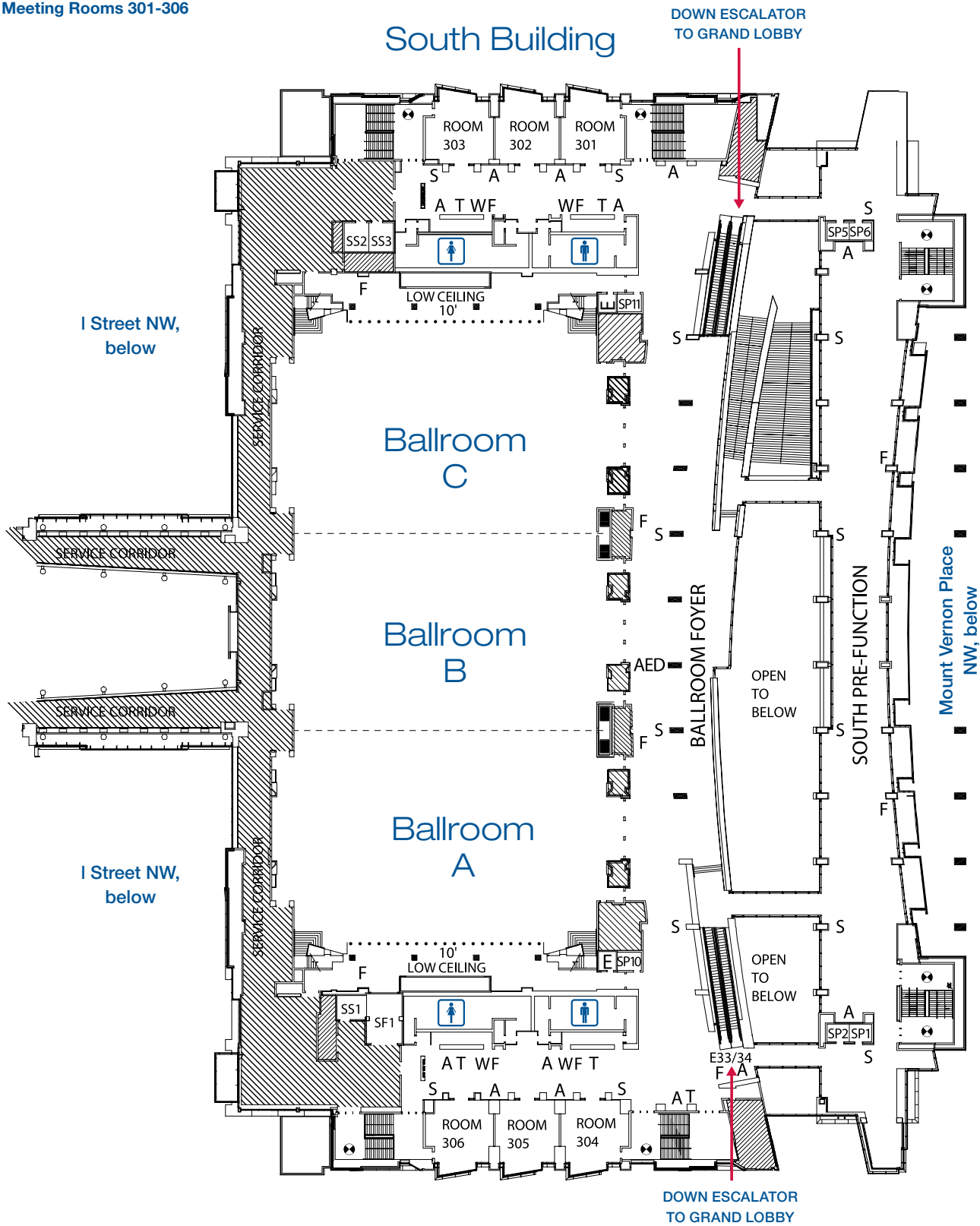
## Middle Building

## South Building



# Convention Center Floor Plans

Level 3  
Ballrooms A-C  
Meeting Rooms 301-306



# Neuroscience 2014 — Exhibits and Poster Sessions

## Walter E. Washington Convention Center: Halls A-C

**Meeting Dates: November 15–19**

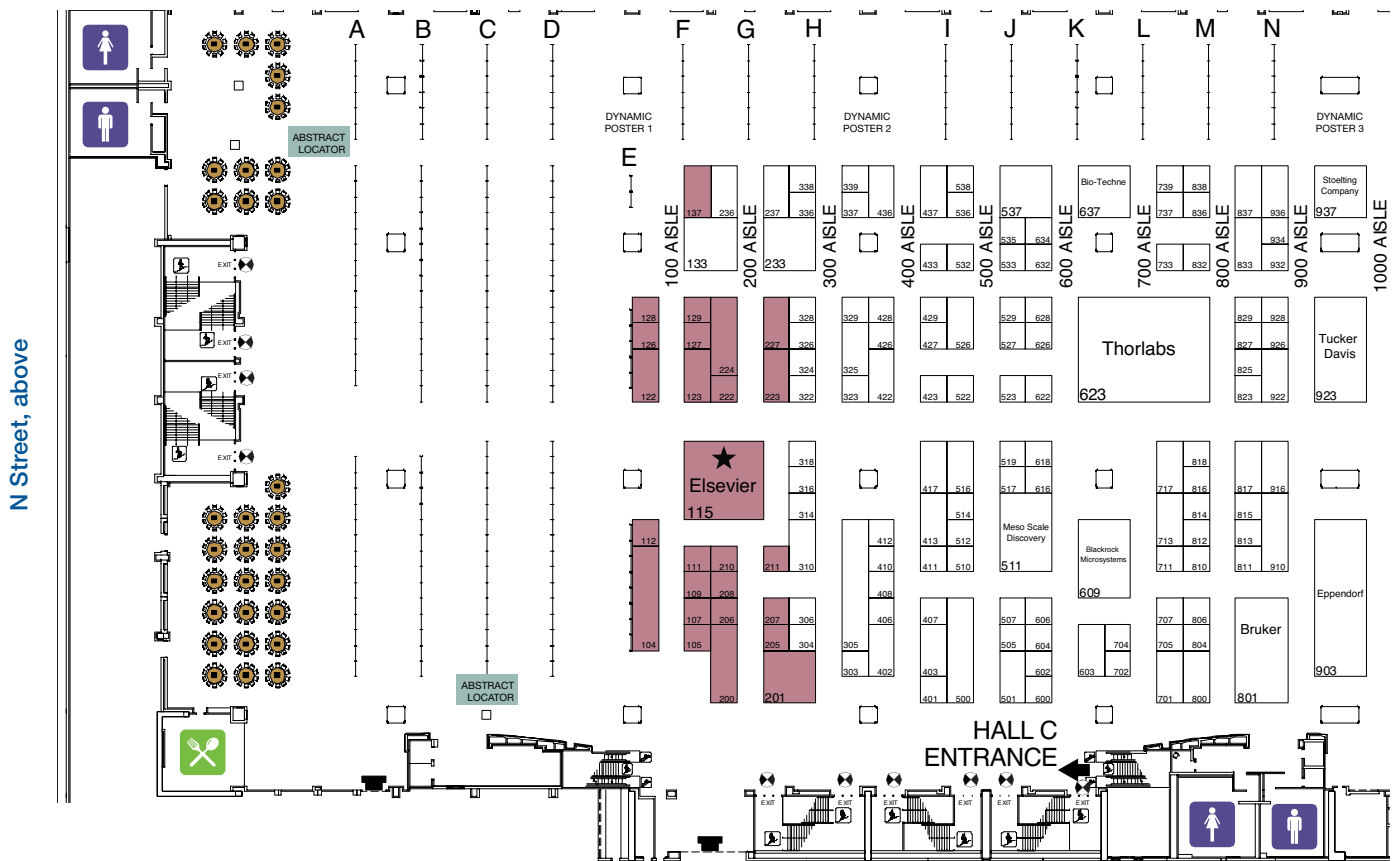
**Exhibit Dates: November 16–19**

Hall entrances open at noon on Saturday, Nov. 15, and at 7 a.m. Sunday, Nov. 16, to Wednesday, Nov. 19, for poster presenter setup.

Poster sessions open for all attendees at 1 p.m. on Saturday, Nov. 15, and 8 a.m. Sunday, Nov. 16, to Wednesday, Nov. 19.

### KEY

- |                                                                                                                |                                                                                                     |                                                                                                      |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|  Institutions                 |  Abstract Locators |  Concession Areas |
|  Publishers                   |  SfN Booth         |  Restrooms        |
|  Nonprofits                   |  First Aid Station |  Emergency Exit   |
|  Sustaining Associate Members |  Seating Area      |                                                                                                      |



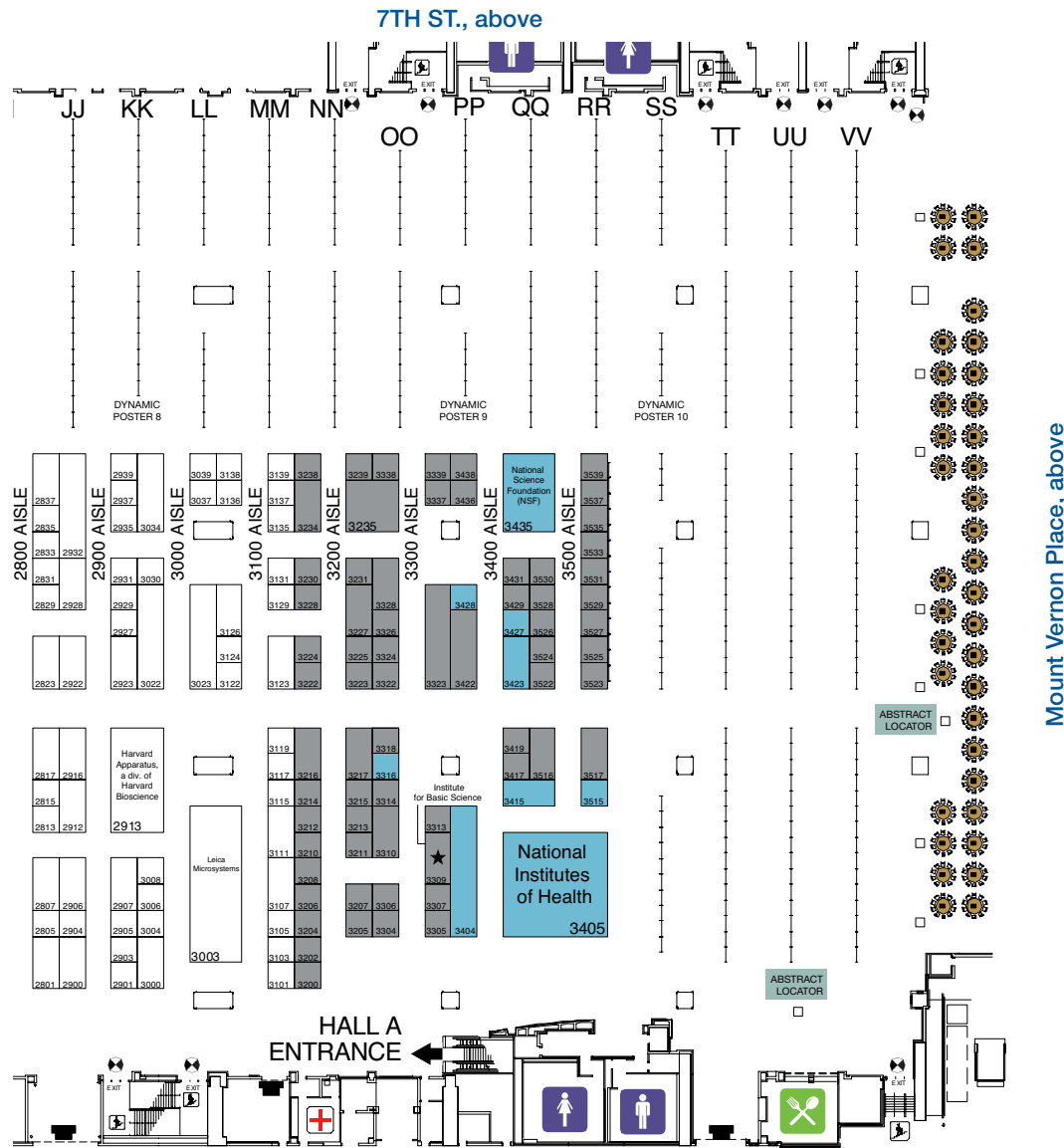


## Walter E. Washington Convention Center



## KEY

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|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|  Institutions                 |  Abstract Locators |  Concession Areas |
|  Publishers                   |  SfN Booth         |  Restrooms        |
|  Nonprofits                   |  First Aid Station |  Emergency Exit   |
|  Sustaining Associate Members |  Seating Area      |                                                                                                      |



**NOTE:** Floor plans subject to change. For current floor plan, visit [SfN.org/exhibits](http://SfN.org/exhibits)

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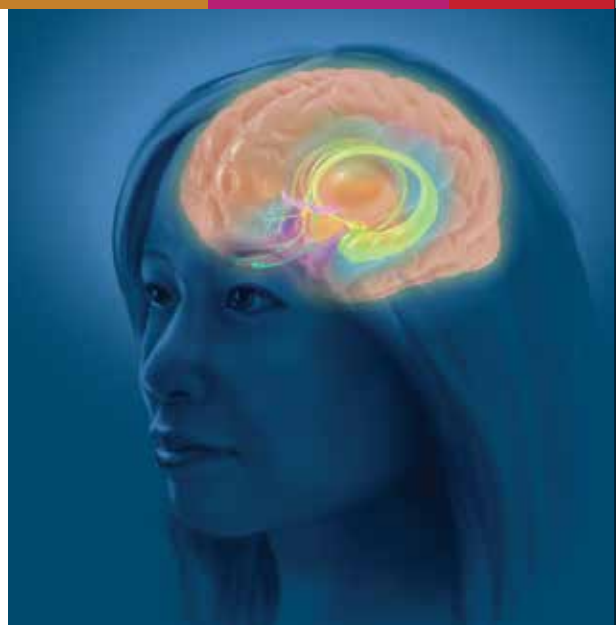
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## Program Cover

A high-powered view of the optic chiasm of a 72 h zebrafish larva that is mutant for the axonal guidance receptor robo2. Loss of robo2 makes retinal axons insensitive to slits, repellents that help guide them across the midline and to their targets. Anterior is to the top, and the eyes are out of frame on either side. Retinal axons are color coded depending on their dorsal-ventral position in the brain, with cool colors indicating ventral levels near the chiasm and warm colors indicating more dorsal levels. Retinal axons sweep towards the center, cross at the ventral midline, travel to the contralateral side of the brain, and then extend dorsally. A variety of profound axonal pathfinding errors can be seen, including ectopic retinal commissures at both ventral and dorsal levels. This projection image was made on a Leica DMIRE2 confocal microscope of a fish in which retinal axons were visualized by GFP expression driven by the Brn3C promoter (a kind gift from the Baier laboratory, University of California, San Francisco).

Sreekanth H. Chalasani, Angela Sabol, Hong Xu, Michael A. Gyda, Kendall Rasband, Michael Granato, Chi-Bin Chien, and Jonathan A. Raper, 2007, *The Journal of Neuroscience*, 27(5): 973-980.

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Expression of marker proteins in the retina of zebrafish embryos (72 h postfertilization). Frozen eye sections were stained with PKC $\beta$ 1 (green), Zn-5 (red), and DAPI (blue).

Naoki Nakaya, Hee-Sheung Lee, Yuichiro Takada, Itai Tzchori, and Stanislav I. Tomarev, 2008, *The Journal of Neuroscience*, 28(31): 7900-7910.

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## Page 6

Confocal micrograph of the vasculature of the rat retina, labeled for the pericyte marker NG2 (green), the contractile protein  $\alpha$ -smooth muscle actin (red), and the vessel marker Isolectin-IB4 (blue). A primary arteriole (left) branches into smaller arterioles and capillaries. A primary venule is at the right. Retinal blood flow is actively regulated primarily by dilation and constriction of the larger arterioles.

Tess E. Kornfield and Eric A. Newman, 2014, *The Journal of Neuroscience*, 34(34): 11504-11513.

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Confocal micrograph of cultured hippocampal neurons stained for neuronal nitric oxide synthase (nNOS, grey-blue) and the postsynaptic protein gephyrin (red). nNOS activity modulates the clustering of gephyrin at GABAergic synapses.

Borislav Dejanovic and Guenter Schwarz, 2014, *The Journal of Neuroscience*, 34(23): 7763-7768.

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Ultrastructural transmission electron microscope image of *Xenopus laevis* retina, with colors overlain to reveal GABAergic (red) and glycinergic (green) amacrine cells with their processes in the inner plexiform layer, as well as glutamatergic (blue) excitatory cell classes, including bipolar cells and ganglion cells.

Damian C. Lee, Felix R. Vazquez-Chona, W. Drew Ferrell, Beatrice M. Tam, Bryan W. Jones, Robert E. Marc, and Orson L. Moritz, 2012, *The Journal of Neuroscience*, 32: 2121-2128.

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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.

Momoko Watanabe, Young-Jin Kang, Lauren M. Davies, Sanket Meghpara, Kimbley Lau, Chi-Yeh Chung, Jaymin Kathirya, Anna-Katerina Hadjantonakis, and Edwin S. Monuki, 2012, *The Journal of Neuroscience*, 32: 15934-15945.

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The axons of an ON cone bipolar cell type (red with long, descending axons) contain synaptic ribbons (green) high in their axons, which make contact with dopaminergic amacrine cells (cyan) of the rabbit retina. These axonal synapses explain the ON light responses of three retinal cell types, which ramify in the OFF layer and challenge the traditional ON/OFF segregation of bipolar cell outputs.

Hideo Hoshi, Wei-Li Liu, Stephen C. Massey, and Stephen L. Mills, 2009, *The Journal of Neuroscience*, 29(28): 8875-8883.

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Cerebrovascular amyloid angiopathy (CAA)-affected vessel in the Tg2576 mouse model of amyloid deposition. Representative example of CAA in a vessel segment of a living Tg2576 mouse imaged with multiphoton microscopy. Vascular and parenchymal A $\beta$  deposits are identified by fluorescence from systemically administered methoxy-XO4 (red pseudocolor). Fluorescent angiograms with Texas Red dextran were performed to identify fiduciary markers (blue

pseudocolor). The serial imaging of individual segments of CAA-laden leptomeningeal vessels allowed detection of clearance of CAA after treatment with anti-A $\beta$  antibody.

Claudia M. Prada, Monica Garcia-Alloza, Rebecca A. Betensky, Sandy X. Zhang-Nunes, Steven M. Greenberg, Brian J. Bacskai, and Matthew P. Frosch, 2007, *The Journal of Neuroscience*, 27(8): 1973-1980.

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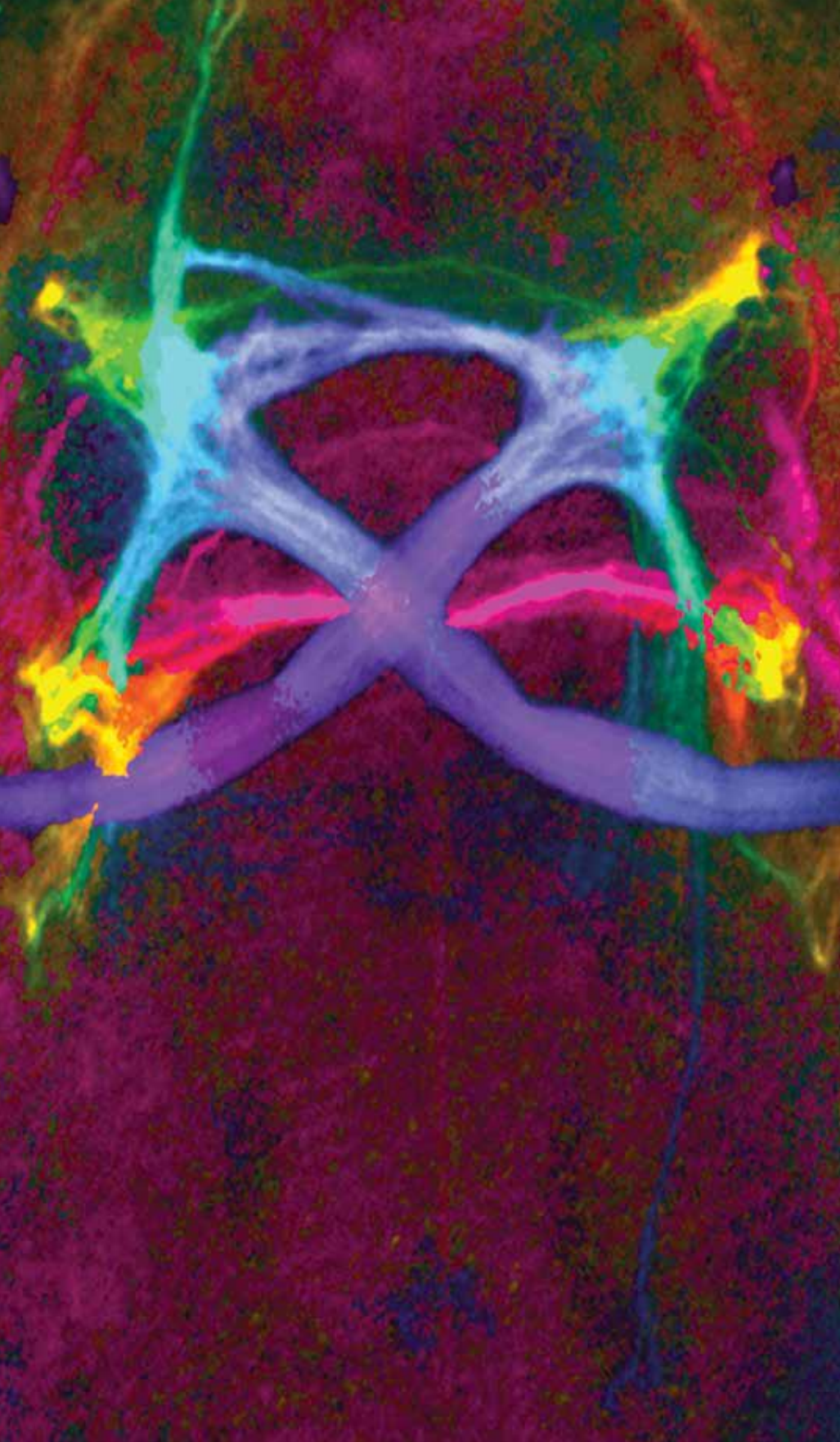


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