

NEUROSCIENCE

FALL 2014

Q U A R T E R L Y

"I want eNeuro to become the flagship of open-access neuroscience journals and to build a reputation for scientific excellence consistent with everything the Society for Neuroscience does in the field."

*- Christophe Bernard
eNeuro editor-in-chief*

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Annual Meeting Preview: Optimize Your Time at Neuroscience 2014

With more than 15,000 scientific presentations, nearly 600 exhibitors, 51 symposia and minisymposia, and numerous workshops and networking opportunities, Neuroscience 2014 is an unparalleled venue for the sharing and discussion of neuroscience research. This year's meeting features new workshops and expanded planning resources and builds on popular programs from last year. Maximize your annual meeting experience by adding these events to your itinerary and utilizing SfN's helpful planning tools.

WORKSHOPS

In addition to the successful "Careers Beyond the Bench" workshop, scientists can attend many other workshops at Neuroscience 2014 focusing on issues such as mentoring, career advancement, and communicating science to the public.

Mentor-Mentee Interaction: How to Have a Difficult Conversation

Career coach Samantha Sutton will teach attendees how to skillfully craft a difficult conversation with a mentor or mentee. Attendees will gain conflict resolution skills and learn how to build strong professional relationships in the lab. This workshop will also include "role plays" to help participants sharpen their skills and prepare for real experiences.

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Council Round-Up: Summer 2014 Meeting

At its annual summer meeting in early August, SfN Council focused on long-range and strategic planning. The Society's leadership discussed emerging trends within the organization and the broader neuroscience community as well as evaluated potential opportunities to enhance value and service for the field. The following overview highlights key discussions.

FINANCIAL UPDATE AND STRATEGIC INVESTMENTS

As a result of financial pressure on members and the field, SfN is experiencing modest revenue headwinds. The organization is carefully controlling expenses while still delivering compelling, high-impact programs. Council discussed the Finance Committee's recommendations to ensure sufficient resources to serve members through this time. These recommendations included modest increases to a range of nonmember fees while minimizing the impact to members through lower increases to dues. Council also backed the Finance Committee's recommendation to continue strategic investment in programs that support the field, extending the Strategic Investment Fund for at least three more years. This fund is made possible by SfN leadership's long-term planning over the past 10 years to ensure adequate reserves that enable selective investment, despite the strained environment, in areas that will have the greatest impact to members.

DELIVERING VALUE TO MEMBERS

The Society is focused on delivering programs and services that provide value to members in these challenging times. Recognizing members' time and budget

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SOCIETY for
NEUROSCIENCE

Message From the President

What's Next for Senior Scientists?



Carol Mason,
SfN President

In my last message, I addressed some of the challenges facing young scientists navigating in the changing landscape of opportunities in neuroscience. Just as important, and equally as challenging, are the difficulties of senior scientists approaching retirement yet seeking to stay involved in science in some way.

Some of my colleagues dream of the trips they've always wanted to take or the rounds of golf they look forward to playing. Others want to continue in the lab but make more time to visit family or give back to the community. And those investigators over age 70 who are still active in the lab move along at top speed. But many senior scientists are unsure of their options for remaining engaged or how they'll be received when seeking to continue their decades-long activities.

Based on conversations with colleagues in the U.S. and other countries, I have gathered some ideas for ways that senior scientists can stay engaged and tips for campaigning at their universities and funding agencies to do so.

ROLES FOR INSTITUTIONS

Universities and scientific foundations should consider that they can benefit greatly from the experience senior scientists bring. By providing support and cultivating alternative roles, institutions can encourage these scientists to stay involved while also making use of their valuable scientific and institutional knowledge.

How can this be done? At the Charles A. Dana Research Institute for Scientists Emeriti (RISE) at Drew University in New Jersey, retired industrial scientists supervise undergraduate student research and in return the school provides them with offices, research space, and equipment. These senior scientists spend at least half of their time doing research of their choosing that also engages the students. The University of Cambridge, in certain circumstances, can award a retired academic with a voluntary research agreement, which allows that person to act as the principal investigator under a grant without remuneration.

The Hertie Foundation in Germany offers an endowed professorship for neuroscientists over age 60 who want to dedicate their time to research, and allows them to pursue ideas that could not garner funding through normal routes. Additional awards and grants such as these would benefit both researchers and the field.

STAY ACTIVE IN ACADEMIA

How can individuals plan for staying in the game without funding? The following are just a few suggestions of ways to continue contributing in the academic realm. You can:

Join the lab of a more junior PI or even a peer: Serve as an “elder” in the lab and carry out actual experiments at the bench. Arrange for an office or desk in the midst of the lab, not shuttered away at a distance.

Serve as a mentor to students, trainees, or postdocs: You can assume this role formally (within a university program) or in an unofficial capacity, advising young neuroscientists on career options both inside and outside of academia.

Teach a seminar on your favorite topic: If you are passionate about a specific area, pass on your excitement to students. Your experience and knowledge allows you to compare current and historical approaches to the topic and foster discussion surrounding long-standing questions.

Travel to a different domestic or foreign lab: Mentor students in places lacking the professional skills training that many research universities offer, or edit manuscripts in English for those trainees and PIs for whom English is not their first language.

VOLUNTEER IN THE COMMUNITY

For senior scientists who wish to move away from lab research, the world of volunteerism is a felicitous way to keep connected to the scientific community.

Volunteer for a community or science organization: Give back to your community and the neuroscience field by becoming a volunteer leader. Serve on committees or boards, or coordinate programs.

Educate young students: Participate in programs that teach young children or students about science. For instance, the RE-SEED (Retirees Enhancing Science Education through Experiments and Demonstrations) program at Northeastern University trains retired scientists to assist K-12 teachers in the classroom with the aim of improving student outcomes in STEM fields.

COMMUNICATE THE IMPORTANCE OF SCIENCE

Effectively communicating to the public and policymakers about science and its important role in society is a constant challenge for the field, and senior scientists can help meet this challenge.

Advocate for research funding: Head to Capitol Hill or your local legislature to share your passion for science and convey the importance of funding research. Join SfN's Advocacy Network to stay informed and take action on the many issues that affect neuroscience research. Or work with an advocacy group such as Research!America to spread the word.

Become a resource: Educators, students, and the public need your expertise. SfN can connect you with groups that need your help through its Find a Neuroscientist program. By signing up, your contact information will be entered in a database of members interested in education outreach and you could be contacted to visit a class or speak at an event.

Write or edit articles for science publications or the popular press: If you enjoy reading and writing about science, consider becoming a writer or editor. You could write op-ed pieces on scientific topics of concern to you.

BE PROACTIVE

The field and the public can learn so much from senior scientists, who could play a vastly larger role than they realize in shaping the future of the field. By staying involved and pursuing opportunities to mentor and volunteer, senior scientists will become more highly valued.

If you are nearing retirement age and are preparing to step down but would like to stay involved, I encourage you to initiate conversations with your peers, deans, provosts, and presidents about the roles that you can play as a senior scientist. Approach foundations or even NIH to establish senior fellowships for the activities I discuss above. Check out the blog *The Singular Scientist*, which has recent posts aimed at helping senior scientists grappling with questions about retirement.

When I have discussed these ideas, they have been met with open arms by scientists of all ages, but now we need to work together for change — for the benefit of senior scientists, the next generation of scientists, and the public. ■



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Registration and abstract submission will be opened on **Monday, November 3, 2014.**

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eNeuro: An Innovative, Open-Access Publishing Venue for Excellent Science



Christophe Bernard,
eNeuro editor-in-chief

Christophe Bernard is serving as the first editor-in-chief of eNeuro, SfN's new online, open-access journal. He was appointed in May by the Council of the Society for Neuroscience. Bernard is director of research for INSERM U751 in Marseilles, France, and he has worked as a reviewing editor for Science and The Journal of Neuroscience.

NQ: SfN's new open-access, online scientific journal, eNeuro, is now accepting papers, and the first issue will appear this fall. As editor-in-chief, what are your goals for the publication?

As authors, we often suffer from the way our manuscripts are handled by some journals. Reviews should be constructive and helpful to authors, and not appear as a judgment of, or even a punishment for, one's research. Reviews at *eNeuro* will seek to be fair and transparent, and, most importantly, decisions will be justified and based on facts. Thus, one of *eNeuro's* goals is to ensure that authors have a satisfying and constructive experience with the evaluation of their research.

As authors, we also frequently receive unreasonable demands from reviewers for additional experiments that are suggested to be essential, but may be unnecessary and very expensive and time-consuming to perform. This delays publication, costs money, and all too often detracts from the main aims of the original study. Another goal of *eNeuro* is to ensure that requests for additional experiments are limited and thoroughly justified. Thus, *eNeuro* will require the reviewing editor and reviewers to come to a consensus on the question of additional experiments. The consensus approach also addresses the common and exasperating experience of authors having to deal with reviews that contradict one another.

An additional goal is for *eNeuro* to add unique value as a publishing venue for the international community of neuroscientists. Along with cutting-edge science, *eNeuro* will also publish other types of papers, including those with predominantly negative results and failures to reproduce results of previous — sometimes influential — studies. This is particularly important because studies that cannot be reproduced — and the standards applied to nonreplication must be very high — can lead a whole field astray and waste

valuable and scarce research funds. A failure to replicate key findings in support of dominating hypotheses that arise from carefully conducted studies should surely be published.

eNeuro's overarching goal is to be the best open-access, neuroscience-specific journal made for and by neuroscientists.

NQ: What will make eNeuro distinctive in the broad field of neuroscience publishing, and what unique strengths do you think SfN brings by launching this new journal?

The reviewing process will be *eNeuro's* major strength. Once both reviews are received, the reviewers and the reviewing editor will engage in a dialogue. The role of the reviewing editor is to facilitate and articulate a consensus with the reviewers regarding the potential impact of the paper and whether it requires additional (i.e., essential control) experiments. If too many experiments are deemed necessary, the paper will be rejected, with the possibility of resubmitting if the paper is regarded as potentially important. This approach was chosen because authors may strive for many months to perform the requested experiments, with no guarantee of acceptance at the end of the process. At *eNeuro*, the intention is to not engage in an endless cycle of revisions. Authors will decide whether to perform the experiments and resubmit.

Additionally, *eNeuro* will experiment with a double-blind review process, with the intention of improving evaluation of papers by removing biases. Obviously, it is sometimes very difficult — or even impossible, in some cases — to achieve this. But it seems worth moving forward with this trial because I believe that the double-blind process will be beneficial to the majority of authors.

The *eNeuro* editorial board is another notable strength of the journal. *eNeuro* will launch with a board of more than 40 active neuroscientists, and the goal is that most of the field will be represented and that most authors will be comfortable that there is a reviewing editor who is appropriate for their work. Of course, in a field as broad as neuroscience, it is not possible to cover every corner of the field, and additions and adjustments will be made as needed. The composition of the editorial board is intentionally very international and may skew a bit younger than editorial boards of other journals. The field of neuroscience is very broad and diverse, and the board purposefully reflects that.

Finally, we know that most studies in neuroscience are statistically underpowered, if only because we don't have human and financial resources to reach statistical power. So, let's be honest about it. *eNeuro* articles will include a statistical table containing the power of the statistical analysis for each presented experiment. Low power is not a deterrent to publication (for example, primate research often uses very small numbers of animals), but at least readers will be able to judge for themselves how confident they can be about the data presented.

***NQ:* In addition to publishing new discoveries, *eNeuro* will publish a wide range of content, including null results and replication studies. How can this best serve the field and what challenges might you face?**

It is estimated that 30 percent of the results published in the top scientific journals cannot be reproduced and that another 30 percent can only be partially reproduced. This information usually remains undisclosed. Yet, these papers can lead a field astray and build dogma. In addition, they may even prevent scientists from obtaining grants if their hypothesis goes against published results. It would therefore benefit the field to publish studies disclosing failures to reproduce results. *eNeuro* will evaluate these papers according to strict criteria to ensure that failures to replicate reflect rigorous and accurate research. Likewise, it is equally important to provide evidence that an influential study can be replicated. It will increase its weight, in effect improving its statistical power.

Another way to serve the field is to publish null results. How many of us received funding to test a hypothesis but ended up with negative results? If these results are not published, it is possible that another group will spend money and energy testing the same hypothesis, also generating null results, which similarly never see the light of day through publication. This is particularly important for preclinical studies. One mission of *eNeuro* is to provide this type of information in order to optimize research spending and resources. However, this is not without challenge. As mentioned above, *eNeuro's* goal is not to publish every replication or null result study. Authors will have to provide arguments regarding why such a study is important.

Two types of articles will also be introduced in *eNeuro*: commentaries discussing published papers and opinion pieces presenting new ideas and discussing the state of a field. These articles are intended to convey an educational perspective, discussing concepts useful to the community.

eNeuro will have many other types of studies, a list of which can be found on the website, eNeuro.org.

***NQ:* What would you say to colleagues about why they should submit to *eNeuro*?**

Do you want a fair and transparent assessment of your research? *eNeuro* is the place to send it. Let's be honest; scientific publishing is a world still dominated by impact factors (IF). I believe more in publication reputation than IF (for example, the IF of *The Journal of Neuroscience*, the most frequently cited journal in the field, does not reflect its impact in the field). While *eNeuro* is committed to publishing excellent science, it will not be focused on maximizing impact factor. I believe that impact factor does not measure anything relevant about the scientific quality of a journal. I want *eNeuro* to become the flagship of open-access neuroscience journals and to build a reputation for scientific excellence consistent with everything the Society for Neuroscience does in the field.

***NQ:* What made you want to accept the role of editor-in-chief of *eNeuro*?**

The answer is simple: the possibility of influencing for the better the rules of scientific evaluation and publication. I want to be a part of building a journal that would satisfy me as an author, and I want authors to be happy and proud to publish in *eNeuro*.

***NQ:* Looking back five years from now, how do you hope *eNeuro* will have advanced the field of neuroscience?**

eNeuro is designed to publish studies that will move forward the many areas of neuroscience. If *eNeuro* has acquired this reputation in five years, the endeavor will have succeeded. If authors and readers feel that they have a positive experience and trust an open-access neuroscience journal that is experimenting with emerging publishing, peer review, and content concepts, that would be gratifying. At the appropriate time, *eNeuro* will evaluate its publishing experiments and adjust processes if needed. If other journals adopt the way that *eNeuro* handles and publishes papers, it will also prove we have been successful. Perhaps the least visible but most important development may be to improve how we perform and present statistical analyses in the future. This would be important for the whole field. ■

Inside Neuroscience

Scientists Investigate Underpinnings of Social Behavior

Humans are very social creatures. While positive social experiences can boost health and mood, unstable or negative social environments can lead to stress and increased risk for mood disorders.

During a press conference at Neuroscience 2013, researchers described the ways the brain evaluates interactions with others, copes with sudden changes in social hierarchies, and responds to social stress. The event was moderated by Larry Young, director of the Center for Translational Social Neuroscience at Emory University in Atlanta.

BRAIN MAY ADAPT TO SIZE OF SOCIAL NETWORK

Sociability likely gave our ancestors an evolutionary advantage over competitors and prey, allowing them to survive and thrive in communities. While previous studies point to the role of the frontal lobes in social behaviors, recent studies suggest other brain regions are also engaged during social behaviors.

Press conference presenter Maryann Noonan of the University of Oxford and McGill University wanted to know whether variations in the size of an individual's social network were related to gray matter size and connectivity in the brain. She and her colleagues scanned the brains of 18 people with varying sized social networks and found that brain regions including the anterior cingulate cortex (ACC), posterior cingulate cortex, and amygdala — key cortical areas thought to be involved in such complex social thoughts as theory of mind — were larger in size and displayed increased connectivity in people who reported having larger social networks. The study also showed that some of the brain regions that were bigger in people with larger social networks were also more strongly connected with the default mode network (DMN).

Scans of macaque monkeys housed in large and small social groups of differing sizes revealed similar differences, with animals with greater social networks showing more gray matter in the ACC, mid-superior temporal cortex, and rostral prefrontal cortex, and greater connectivity between some of these brain regions and with the DMN.

“Areas in the brain that are important for social cognition and behavior are bigger and better connected in both species,” Noonan said. “These studies suggest that the brain adapts to [each individual's] social environment.”

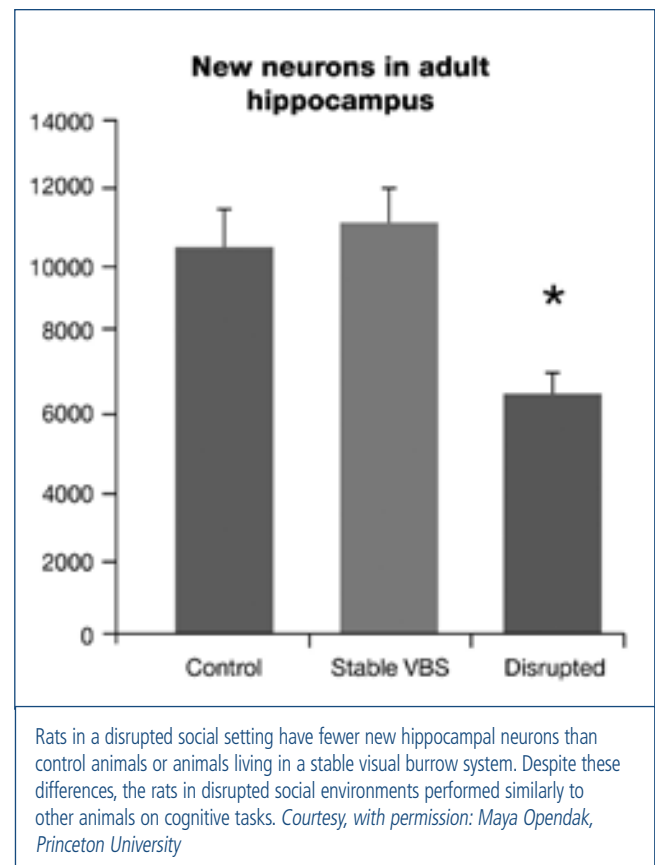
STIMULATING CINGULATE CORTEX DECREASES COOPERATIVE BEHAVIOR

To successfully navigate social settings, individuals must not only consider how decisions might affect them

personally but also how others might react to them.

Curious about the neuronal basis for social decision-making, press conference presenter Keren Haroush of Harvard Medical School and her colleagues paired monkeys together for a game in which the animals had to decide whether to work together to enhance their mutual reward or against each other to enhance their personal reward. As the monkeys played the game, Haroush measured the activity of cells in the ACC, a brain region known to be important for decision-making and reward anticipation.

Recordings from hundreds of neurons in the ACC revealed that neurons are divided into distinct populations, with some neurons signaling the action a monkey planned to take and others predicting the opponent monkey's concurrent or upcoming response. The researchers next evaluated whether electrical stimulation of the ACC would influence the monkeys' choices. They found that animals that had cooperated with partners on preceding trials became less likely to cooperate after electrical stimulation of the ACC, “effectively abolishing the established positive interaction with their opponent,” Haroush said.



According to Haroush, the study “suggests that the cingulate is involved in mutually beneficial social interactions between individuals.”

SOCIAL COMPETITION ACTIVATES REWARD NETWORKS

An individual’s ability to sense where they stack up against potential rivals in social settings and adapt to the social hierarchy is critical to success in social settings. Press conference presenter Romain Ligneul, a graduate student in the laboratory of Jean-Claude Dreher at the National Center for Scientific Research in Bron, France, described his research examining how people come to understand social rank. In one study, Ligneul and Dreher asked healthy male participants to compete against three different players in a computerized decision-making task while undergoing a functional magnetic resonance imaging scan. During the game, participants were unaware that their challengers were computer-generated (representing three levels of difficulty).

As participants learned how they stacked up against their opponents through the frequency of their wins and losses, the researchers measured their brain activity to track the dynamics of social learning and the emerging social hierarchy. Analysis revealed that social competition activates brain networks involved in reward learning, even when there is no tangible reward at stake in the competition.

SOCIAL INSTABILITY MAY BETTER EQUIP ANIMALS FOR NOVEL SOCIAL SITUATIONS

In humans, socially unstable settings are associated with persistent stress and increased incidence of mental illness. To better understand how the brain responds to social instability, press conference presenter Maya Opendak, a graduate student in the laboratory of Elizabeth Gould at Princeton University, and her colleagues allowed two groups of rats to form stable hierarchies before switching the dominant animals between the two communities.

The change led to increased aggression between the animals and significant changes in hierarchy, with dominants losing their position to previous subordinates. Subsequent behavioral tests revealed that while the rats from disrupted social environments behaved differently in social environments, they performed similarly to controls on cognitive tasks and appeared less anxious.

Analysis of the hippocampi of the animals revealed that animals that experienced the disrupted social setting had fewer new neurons and stem cells than animals living in standard cages.

Reduced generation of neurons in the hippocampus is often accompanied by cognitive impairments, Opendak explained. However, “these data suggest that animals with experience in

more dynamic social environments, such as one with a disruption, may be better equipped for dealing with novel social situations,” she said.

TOO MUCH STRESS MAY TRIGGER BRAIN MECHANISMS OF NATURAL RESILIENCY

While exposure to prolonged stress can lead some animals to become depressed and socially avoidant, others become more resilient in coping with stress. To better understand the neurophysiological basis of stress resilience, press conference presenter Allyson Friedman of Icahn School of Medicine at Mount Sinai and her colleagues measured the activity of dopamine (DA) neurons in the ventral tegmental area (VTA) of mice that were susceptible to stress of social defeat and mice that were resilient. Previous studies show that these neurons are hyperactive in mice expressing depressive-like symptoms, and this hyperactivity is associated with an increase in ion channels called H-channels.

Recordings from DA neurons in the VTA of stress-susceptible mice revealed a hyperactive firing pattern and increased H-channel current after social defeat stress. In contrast, the DA neurons in the VTA of resilient mice exhibited controlled firing after the social stress. It is noteworthy that this controlled firing was accompanied by an even larger increase in the H-channel current compared with susceptible mice.

To understand how DA neurons in the VTA of resilient mice are able to achieve the stable firing pattern despite larger hyperpolarization-activated current, Friedman and her colleagues examined K⁺ channels, which are known to decrease the hyperactivity of cells. The DA neurons in the VTA of resilient mice exhibited increased K⁺ channel current, suggesting “there is a unique stress-induced balancing homeostatic mechanism underlying resilient behavior,” according to Friedman.

When the researchers increased the H-channel current in the susceptible mice by infusing the drug lamotrigine into the VTA, they were able to trigger increased K⁺ current, normalizing the firing pattern rate in the DA neurons in the VTA and reducing the depressive-like symptoms in the mice.

“Our findings suggest that the resilient brain remains stable through the heightened use of ion channels,” Friedman said. “By promoting and triggering homeostatic function, we may be able to come up with novel therapeutic strategies not only to reverse depressive symptoms but to also push people toward resilience.”

Understanding the biological and cognitive factors that determine how we relate to others has the potential to answer big questions about the complex relationship between biology and behavior. ■

LATP Provides Young Neuroscientists With Valuable Professional Development Opportunities

Fifteen neuroscience trainees from Latin American and Caribbean countries traveled to Querétaro, México, in August to participate in a three-week course as part of SfN's new Latin American Training Program (LATP). Organized by the Institute of Neurobiology at the Universidad Nacional Autónoma de México (UNAM), the hands-on experience of these 15 LATP fellows complements yearlong online programming made available to all 73 LATP associates, including webinars, recorded content from the course, online discussions, and Web chats designed to highlight cutting-edge science and provide professional development opportunities to emerging scientists.

The LATP is made possible through funding by The Grass Foundation, regional bodies of the International Brain Research Organization, and host institutions.

“The course brings together young and very bright people from all over Latin America,” said Adrian Rodriguez-Contreras, an LATP faculty member and assistant professor at the City College of New York. “The warm, interactive environment of Querétaro acts as a catalyst for a great scientific experience, including a very open scientific community and a great technical infrastructure.”

Students in Querétaro enjoyed an intensive learning environment, receiving hands-on training in a wide variety of new technologies. Highlights from the three-week course included lectures from leaders in the field and labs in both optogenetic and magnetic resonance imaging (MRI) technologies. Fellows also had the opportunity to serve as test subjects, using an MRI machine to see the internal workings of their own brains.

LATP fellows benefited from the intimate environment afforded by the course design. In addition to enjoying small classes with respected neuroscientists, they were able to discuss the field with their professors during meals and time outside the lab, allowing them to take advantage of every possible networking opportunity.

“To have had the chance to learn from esteemed researchers and my fellow students is one of the most enriching professional experiences I have ever had,” said LATP Fellow Raian Contreras of the Universidad de Los Andes in Venezuela. “We all had different backgrounds to contribute to the discussion, which allowed us all to benefit from one another's strengths.”

The LATP places an emphasis on providing resources to student scientists across the Latin American and Caribbean



LATP Fellows Humberto Mestre of Mexico and Jose Prieto of Uruguay take turns viewing lab slides during the 2014 LATP Fellows Course in August in Mexico.

communities. The online associates program makes this content accessible to all qualified applicants, giving students the opportunity to discuss professional development, ethical issues, and scientific conduct with their peers and with leaders in the field.

“One of the primary advantages to participating in this program is the networking opportunities it provides,” said LATP Fellow Betina Gonzalez of the Pharmacological Research Institute in Buenos Aires, Argentina. “Coming into contact with so many people in different stages of their scientific careers and being able to chat with them about how we do science and what we can improve is incredibly valuable, especially in our region.”

Since meeting in Mexico, LATP participants have continued to engage in extensive discussion and interaction via *NeurOnLine*, SfN's members-only online community where neuroscientists can share great science, network, forge collaborations, and keep in touch.

For more information, including a schedule of online associate events and how to apply for next year's program, visit SfN.org/LATP. ■

constraints, SfN is committed to offering additional opportunities for members to learn and engage outside of the annual meeting through online year-round programming. Council also recognizes the diverse needs of a global membership and will continue to leverage partnerships with international organizations to deliver that value.

Considering the broad membership and its evolving needs, Council revisited its governance strategy and took a comprehensive look at committees. As a result, the Membership and Chapters Committee and the International Affairs Committee are being merged into a single Global Membership Committee. This committee will work with other committees, chapters, and strategic partners to provide guidance on the development of SfN programs to increase membership value. Council also made revisions to the Scientific Vision Section of SfN's strategic plan to expand the scope of the field and provided direction on a publishing strategy to be finalized in the fall.

STRATEGIC OPPORTUNITIES FOR THE FIELD OF NEUROSCIENCE

Council had in-depth conversations about scientific rigor and directions for training and the workforce. Through the work of the Scientific Rigor Working Group, the Society is considering a set of principles that will help guide future activities, addressing concerns about experimental design, data analysis, replicability, and other problems such as perverse incentive structures in science. The discussion will continue at Neuroscience 2014 with a symposium chaired by NINDS Director Story Landis, "Enhancing Reproducibility of Neuroscience Studies," and the Empirical Approaches to Neuroscience and Society Symposium, "Improving Animal Models of Neuropsychiatric Disorders." Council also formed a Workforce and Training Working Group to explore how SfN may best serve members' evolving training needs and to consider novel programming aimed at neuroscientists at various career stages. Council will continue this conversation into the future to help crystalize the vision for SfN's role in more actively supporting neuroscience training. ■

Students Compete in International Brain Bee

Students from around the world traveled to Washington, DC, in August to compete in the International Brain Bee, a neuroscience competition that encourages secondary school students to learn about the brain and pursue education and careers in the sciences. The Brain Bee begins with local and regional competitions that feed into the national and international competitions. The winner of the 2014 International Brain Bee is Gayathri Muthukumar of India.

The Brain Bee is organized and hosted by University of Maryland associate professor Norbert Myslinski and sponsored by the American Psychological Association. The Society for Neuroscience hosts the DC regional Brain Bee, supports the U.S. and international contests, and arranges scientific lab internships for the U.S. and international winners.

For information on how to get involved in your local Brain Bee, contact baw@sfn.org or nmyslinski@umaryland.edu. ■



Left: International Brain Bee winner Gayathri Muthukumar of India identifies a region of the brain during the competition. Right: High school students from 17 countries compete in the International Brain Bee.

... Annual Meeting Preview, continued from page 1



At the “Meet-the-Experts” sessions during Neuroscience 2013, attendees interacted with established neuroscientists such as George Koob (above) and asked questions about their research.

Internationalizing Your Research, Training, and Funding Experience

This session is a new take on last year’s “Making the Most of Your International Training” workshop. Representatives from private and public funding agencies will present and host a roundtable discussion about the value of international research experience and how to obtain funding.

How to Effectively Communicate Your Science to the Public

An experienced panel will provide researchers with advice about how to communicate neuroscience to general audiences, focusing on writing, public speaking, and using various forms of social media.

Teaching Neuroscience: Online Learning

This year’s teaching workshop will discuss the benefits of “blended learning,” combining aspects of traditional courses with online components. Panelists will discuss helpful online resources and neuroscience Massive Online Open Courses (MOOCs).

Meet-the-Expert series

The “Meet-the-Expert” series is a popular group of sessions that gives attendees a behind-the-scenes look at factors influencing various neuroscientists’ groundbreaking research. Each of the sessions allows attendees to engage in an informal discussion over breakfast. Experts at Neuroscience 2014 will include: Diane Lipscombe of Brown University, Julie Fiez of the University of Pittsburgh, Helen Mayberg of Emory University, and Kenton Swartz of NIH.

For a full list of workshops at Neuroscience 2014, visit SfN.org/workshops.

PRESIDENTIAL LECTURE SERIES

The 2014 Presidential Lecture Series, “Cells of the Brain,” will explore a variety of research topics relating to brain development and vision. Each year, the SfN president selects neuroscientists to present research on topics stemming from his or her area of interest. SfN President Carol Mason’s research explores the mechanisms of mammalian brain and visual systems development, looking specifically at axon guidance in visual pathways.

This year’s lecturers are Kelsey Martin of UCLA, Gordon Fishell of New York University, Botond Roska of the Friedrich Miescher Institute for Biomedical Research, and Fiona Doetsch of Columbia University.

PUBLIC ADVOCACY FORUM

This Neuroscience 2014 forum will focus on the implications for science funding in an era of global brain initiatives. The U.S., Europe, Asia, the Middle East, and other parts of the world have identified neuroscience as a priority. Yet, in many places, science budgets remain flat or are falling. This forum will tackle questions such as: How will these large-scale projects impact the field? What role will private funding play in these initiatives? How will funding practices influence individual research projects, primary investigators, universities, businesses, and science as a whole?

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43	trees
19,489	gallons of water
1,235	pounds of solid waste
4,322	pounds of hazardous effluent

ENHANCED PLANNING RESOURCES

In a continued effort to help attendees take full advantage of their time at Neuroscience 2014, SfN is expanding its organizational tools that make the meeting easier to navigate. Find lectures, symposia, and topics of interest faster through these mobile tools.

Neuroscience Meeting Planner

The Neuroscience Meeting Planner allows attendees to build and save itineraries, browse sessions and events by day or type, and search for author indexes. The advanced search will also feature more specific search options to help users.

Meeting Mobile App

The Meeting Mobile App, available on Android, Apple, and e-reader devices, has improved the Schedule View and enhanced the Advanced Search with filters that can search by half-day, session type, or theme. Build your itinerary offline, or sync your personal schedule to the Neuroscience Meeting

Planner. Improved email notes will allow you to reference back to items you have favorited or starred. Performance improvements have increased the speed and reliability of the mobile app.

Curated Itineraries

Neuroscience 2014 will feature eight curated itineraries to help researchers navigate the annual meeting by identifying lectures and events pertaining to specific topics. This year, the eight topics will be: addiction research, neurobiology of visual processing, neurodegeneration, psychiatric disorders, sleep and circadian clocks, spinal cord, synapses, and visual cognition and perception. Attendees can add all or part of the curated itinerary to their schedules through the Neuroscience Meeting Planner or mobile app.

Stay up-to-date on all Neuroscience 2014 activity by following us on Facebook and Twitter. Get instant notifications by following the annual meeting @Neurosci2014 and the Society @SfNtweets. ■

GETTING THE MOST OUT OF THE ANNUAL MEETING

Navigating among 30,000 neuroscience researchers, clinicians, and advocates and surrounded by posters, symposia, socials, and professional development workshops, it is easy to get lost in the magnitude of SfN's annual meeting. To help new and returning annual meeting attendees maximize their time in Washington, DC, the Society hosted the webinar "Making the Most Out of the Annual Meeting."

In the webinar, experienced annual meeting attendees explain how you can better navigate the poster floor, network at socials, and maximize professional development training opportunities at various workshops.

"What you don't want to be is traversing back and forth across the length of the poster hall," said moderator David R. Riddle, professor of biomedical sciences at Western Michigan University's School of Medicine. "That's where planning and having a good itinerary comes in."

The webinar covers topics including the Neuroscience Meeting Planner, the Neuroscience Meeting App, *NeurOnLine*, the various types of symposia and lectures, navigating the poster floor, and social events.

Webinar presenters are Jeffrey Smith, director of the Brain Research Lab at Saginaw Valley State University, and Cara Altimus, a postdoctoral fellow in the Department of Neuroscience at Johns Hopkins School of Medicine.

The webinar can be viewed online at www.SfN.org/webinararchives.

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What Is Your Professional Society Doing For You?



In the 2014 Annual Report, read about how SfN is:

- Creating venues to share great research through the annual meeting, *The Journal of Neuroscience*, and the new open-access journal, *eNeuro*.
- Expanding public outreach through *BrainFacts.org*, with more than 4.4 million page views from more than 2 million unique visitors.
- Enhancing online professional development resources through webinars and workshops.

**“In the face of change, SfN possesses the resources
to help our members navigate a changing landscape.”**

Carol Mason | President, 2013–14

Available at SfN.org
November 2014

