

NEUROSCIENCE

WINTER 2015

Q U A R T E R L Y

“We will be able to take on big challenges if we have the discipline and dedication necessary to integrate NINDS into the fabric of U.S. neuroscience and the battle to help those suffering with neurological disorders.”

— Walter Koroshetz,
NINDS Acting Director

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Message From the President

Becoming a Science Advocate



Steven Hyman,
SfN President

A neuroscientist's world must now extend far beyond the four walls of a laboratory. In addition to conducting research, teaching, and writing, we must also spend time advocating for our field. Neuroscientists should view the recently sworn-in Congress, with its 67 new members, as an opportunity to educate and engage policymakers about the importance of our research. Explaining to elected officials — in a way that they can easily understand and appreciate — why our research deserves their political and financial support has become a critical role for our community.

Two years ago, across-the-board spending cuts sliced \$1.5 billion from the NIH budget and \$356 million from NSF. While there has been a reprieve from those cuts, “sequestration” could make a return later in 2015, and even if it stays dormant, science budgets remain very anemic. Although many neuroscientists may not be particularly comfortable in the advocacy role, it is vital that we each do our part to develop a new generation of legislators who understand that science is a priority.

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Neuroscience 2014 in Review: Sharing Science, Connecting With Colleagues

More than 31,200 neuroscientists from around the globe came together in Washington, DC, in November for Neuroscience 2014, the world's largest meeting focused on scientific discovery related to the brain and nervous system. The Washington Convention Center teemed with neuroscience researchers, clinicians, and advocates attending lectures and symposia, sharing their work, and exploring the various professional development and networking opportunities.

The annual meeting featured nearly 14,000 poster presentations, 13 special lectures, and 52 symposia and minisymposia, which covered topics including novel methods and technology development, disorders of the nervous system, improving animal models of neuropsychiatric disorders, and advances in cortical development. In addition to the posters and scientific lectures, attendees navigated an Exhibit Hall with 537 companies displaying and demonstrating new neuroscience tools and technologies.

SfN also offered an expanded set of training, mentoring, and professional development activities for neuroscientists at every stage of their career. Attendees had the opportunity to talk with respected neuroscientists about their research techniques and accomplishments during the Meet-the-Expert Series.

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SOCIETY for
NEUROSCIENCE

No one is more qualified than we are to explain what we do and why it is important. By illustrating the powerful impact of neuroscience, we can help secure the resources that we need now and for the longer term. I strongly encourage SfN members to get involved in advocacy efforts this year — and let the Society help you succeed.

FRAMING THE CONVERSATION

Many of us are drawn to science for the pursuit of fundamental knowledge and discovery — to further our understanding of the brain and nervous system. To capture the attention of policymakers, however, we have to understand and appeal to their interests in scientific research. This means emphasizing that their support for neuroscience research can not only lead to improvements in their constituents' well-being, but can also mitigate the burgeoning costs entailed by an aging population. Scientific progress is crucial for reducing human suffering caused by neurological and psychiatric disorders and for curtailing the relentlessly rising health care costs associated with neurodegenerative diseases and neuropsychiatric conditions that lack effective treatments. In addition, public funding of scientific research creates substantial economic benefits by forming the foundations for vibrant life sciences and device-related industries.

Why should policymakers support neuroscience now? Neuroscientists are better positioned than ever before to achieve significant scientific progress because of incredible new tools and technologies developed during the past decade. The Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative is hastening the creation of yet more potent technologies to further basic science. BRAIN does so by bringing neuroscientists together with engineers, chemists, and physicists with a focus on building tools and discovering foundational knowledge about the brain. Explaining the benefits of BRAIN can help persuade policymakers to stand with this broad spectrum of scientists collaborating for the greater good. The resulting new tools allow us to make observations that are essential to basic science, which undergirds advances in understanding brain disorders such as autism, schizophrenia, and Alzheimer's disease, and traumatic brain injuries such as those suffered by members of our military.

SfN'S ADVOCACY TOOLS AND ACTIVITIES

The Society provides a number of tools at SfN.org/advocacy to help members launch their efforts. SfN's Advocacy Network and its Early Career Policy Fellows Program offer opportunities for direct involvement in advocacy. The fellowship program engages early-career scientists to make advocacy a regular part of their work, while the Advocacy

Network provides a platform for members to learn and discuss a variety of advocacy tools and experiences.

One of the most effective ways to reach your elected officials is through in-person meetings or other direct contact, such as SfN's Capitol Hill Day. I look forward to joining my SfN colleagues on March 25 and 26 to meet face to face with members of Congress and their staffs to discuss the incredible value of neuroscience research and the implications for improving public health, strengthening the economy, and continuing scientific progress. If you are interested in joining us on Hill Day, read the related article in this issue of *NQ* and email advocacy@sfn.org to get involved. If you can't make it to Washington, DC, you can conduct similar activities locally. Call or write to your legislators, meet with them in their district office, or participate in a congressional town hall meeting. Better yet, invite elected officials to tour your lab or institution — there is no substitute for a firsthand view of the exciting work occurring in our field. Visit SfN's Action Center at SfN.org/ActionCenter to identify your elected officials and learn how to contact them.

Advocacy, however, is not reserved for the U.S. Congress. SfN also partners with international organizations to build support for science funding on a global scale. Advocacy successes in Europe and Asia will benefit the global community by increasing familiarity with the issues. SfN and the Federation of European Neuroscience Societies (FENS) work closely with the International Brain Research Organization (IBRO) on the IBRO Global Advocacy Initiative, an effort to encourage national neuroscience societies and their members to engage with policymakers and discuss the importance of neuroscience research. This initiative aims to ensure that neuroscientists have access to culturally relevant content and programming, with a focus on those areas with the greatest need for education and advocacy. These and other similar organizations operate in Canada, Japan, Mexico, and elsewhere. Consider reaching out to one of our partners if you have interest in advocating outside the U.S. Advocating for our field is truly a worldwide effort.

EMBRACING ADVOCACY

We must not succumb to the hopelessness that our current budget environment engenders. Instead, we should embrace the chance to speak to new audiences about our work and to create new allies. We are our own best advocates, and with SfN's help, you can be ready to accept a role educating policymakers and the public. I hope you will find opportunities to deliver our message about the importance of brain research and become the advocate that neuroscience critically needs. ■

Hill Day: Join the Fight for Science Funding

For almost a decade, neuroscientists have visited members of Congress each year during SfN's Capitol Hill Day to express their support for U.S. science funding. Last year, 45 SfN members from 26 states met with more than 70 congressional offices to discuss the latest advances in the field of neuroscience and share the economic and public health benefits of investment in scientific and biomedical research. This year, the tradition will continue on March 26 — and there is still time for you to add your voice by RSVPing for Hill Day to advocacy@sfn.org. Hurry, because space is limited.

An in-person meeting is one of the most effective actions a constituent can take — and it can actually lead to an enduring relationship with a legislator. During the 2014 Hill Day, Emanuel DiCicco-Bloom invited Sen. Robert Menendez (D-NJ) to tour his laboratory at Rutgers University. Just nine days later, the senator was in the lab learning about human neurodevelopmental disorders. As DiCicco-Bloom said, “If I hadn’t taken the time to come to Washington ... Sen. Menendez would not have come to see the great work being done in his state.”

Even a missed connection can lead to a later meeting. Although she was unable to secure a time to meet with Rep. Mike Honda's office on Hill Day, Katie Wilkinson, an assistant professor at San Jose State University, successfully leveraged that scheduling conflict into a lab tour for a health policy staffer from the California Democrat's office a few months later.

ANATOMY OF A HILL DAY

SfN makes it easy for even a first-time advocate to contribute to Hill Day. The event begins the night before with a reception and training session at SfN headquarters. Participants hear from notable speakers — previous years featured Thomas Insel, director of the National Institute of Mental Health; Story Landis, then-director of the National Institute for Neurological Disorders and Stroke; and Nora Volkow, director of the National Institute on Drug Abuse. Participants then gather in groups and learn how to conduct a meeting with legislators. The “Meeting With Your Legislator” webinar at SfN.org/advocacywebinars provides more detail on what the discussions entail. Other SfN advocacy resources are available at SfN.org/usadvocacy.

On Hill Day, groups of three to five SfN members, along with a staff guide, meet with representatives, senators, and their staff, visiting up to six offices in one day. During the meetings, the participants, who come from all career stages,



Neuroscientists, including SfN member Tanea Reed (right), meet with Rep. Andy Barr (R-KY) during SfN's 2014 Capitol Hill Day to communicate the importance of science funding.

relay personal stories and share vital information about the state of funding for NIH and NSF.

Members of Congress are receptive to these messages, with many voicing strong support for scientific research. Thomas Crockett, a graduate student at Washington University in St. Louis, commented that Rep. Kevin Yoder (R-Kan.) “seemed to really care about what we were saying and listened to us until he was called out of the office by a pending vote.” Angela Pierce, a graduate student at the University of Kansas Medical Center, agreed: “Congressmen understand the fundamental importance that is science in society.”

ADVOCATE FROM HOME

If you are unable to come to Washington, DC, you can still take action. Members of Congress increasingly use social media to communicate with their constituents. Calling your legislator is also a fast and easy way to communicate your position on an issue. To find your federal legislators' contact information, go to SfN's Action Center at SfN.org/ActionCenter and enter your zip code into the appropriate box. ■

NINDS Acting Director Discusses Challenges, Priorities for Institute



Walter Koroshetz,
NINDS Acting Director

Walter Koroshetz became acting director of NINDS in October 2014. Previously, he served as deputy director under Story Landis. He has held leadership roles in several NIH and NINDS programs, including the BRAIN Initiative.

NQ: What are your priorities for NINDS and what do you see as the institute's biggest challenges as you step into your role?

Under Dr. Landis' leadership, NINDS was seen as a fair and transparent funding agency that engendered the trust of our multiple stakeholders: the neuroscience community, neurological disease-related organizations, and professional societies, particularly SfN. My goal is to maintain and build upon this trust by ensuring that every federal dollar invested is optimally allocated. NINDS staff care deeply about neuroscience and always strive to make the right decision, especially when faced with a challenging fiscal environment. NINDS must be an excellent steward of taxpayers' investment in neuroscience and neurological disorders. This means improving how we train and fund superb scientists, stimulating scientific dialogue, providing necessary infrastructure, aligning incentives with broadly supported goals, and disseminating the great science produced by our funded investigators. We will be able to take on big challenges if we have the discipline and dedication necessary to integrate NINDS into the fabric of U.S. neuroscience and the battle to help those suffering with neurological disorders.

NQ: What are the next steps for the BRAIN Initiative and how is NINDS interfacing with other NIH institutes, federal agencies, and business partners to achieve the initiative's goals?

The BRAIN Initiative is quite remarkable, as the impetus for this ambitious effort came from the president of United States. Now the BRAIN Initiative is receiving international attention, with countries each taking different approaches, and it's interesting to see how these various efforts are complementary. The U.S. initiative focuses on the development of technologies for neuroscientists working to understand neural circuits. The scholarly approach recommended by the NIH's Advisory Committee to the Director as outlined in "BRAIN 2025: A Scientific Vision" is a must-read. In a simplified view

of the BRAIN pipeline, NSF grantees from the physical sciences and engineering complete the critical upfront work, NIH grantees develop and test applications of new technologies in neural tissue, and DARPA grantees apply these technologies to solving clinical problems of importance to our veterans. Partnerships with industry are still in the nascent stages. From the NIH viewpoint, we want to harness powerful tools in informatics, signal detection, pattern recognition, and materials science for the challenges that our investigators will be attacking.

NQ: As neuroscience becomes increasingly "transdisciplinary," drawing on many other fields, leaders are thinking about the evolution of scientific training. What are NINDS' short- and long-term priorities and programs in this area?

NIH is intensely interested in how we can engage with the science community to best train the next generation of neuroscientists. My own entry to neuroscience was through biophysics, so early on I saw the advantages of bringing mathematical modeling, structural chemistry, computer engineering, and optics to bear on fundamental problems in neuroscience. Even in my clinical research career, it was the collaborations with geneticists, MRI physicists, and engineers that enabled the breakthroughs. We can't predict which transdisciplinary links will turn out to be critical for neuroscience trainees, so they must cultivate a receptive and disciplined approach that will allow exploration of new scientific areas and techniques. Neuroscience training programs may need to partner with other science departments and develop special tracks for trainees so they come out highly skilled in both neuroscience and a sister science.

NQ: Another issue that has received a lot of attention is scientific rigor and methodological approaches in the field. What are the main concerns in this area and how are NINDS and NIH tackling the issue?

There is nothing like failure to make one re-examine one's processes. I was involved in the neuroprotection stroke trials in the 1990s in which hundreds of millions of industry dollars were invested in following the story of glutamate excitotoxicity in ischemic injury. In 1999, after the debacle of failed trials, the stroke community took a hard look at the preclinical data and made recommendations called the "STAIR criteria" for rigorous

methodology in preclinical studies, but the message never moved out of the stroke field. Now reports on the difficulty of reproducing novel findings have created momentum among many different fields of neuroscience. Shai Silberberg at NINDS has been an important leader in promoting transparent reporting of methods in publications and NIH grant applications. Dissemination of good laboratory practices and a greater understanding of statistics will do much to decrease practices that occur by chance. However, I think the problem of translating “therapeutic” results from animal to human studies is much more than a methodological one. Robustness and generalizability of the beneficial effect across varied experimental conditions, strains, species, genders, ages, etc., are issues that have to be approached in a rigorous fashion before investing in resource-intensive translational and clinical studies. Most critical is the need to develop objective measures that test whether an agent given at a specific dose and duration has the intended biologic effect in humans, i.e., “hit the target.” Without the latter, the human brain is treated like a “black box” when the leap is made from animal to patient studies. In its translational program, NINDS will invest in research to better estimate the value of potential therapeutic agents, whether tests of reproducibility, robustness, or markers of biologic effect in humans.

NQ: NINDS has placed a priority on diversity in the scientific workforce. What efforts is NINDS undertaking in this area?

Diverse backgrounds make for stronger teams. NIH is the taxpayers’ investment in biomedical research, and the recipients of those funds should reflect the diverse makeup of our citizens. In addition, one of our clinical missions is to reduce the tragic disparities in neurologic health in our country, and a diverse workforce is essential in this effort. Since the 1990s, NINDS has worked to enable students of diverse backgrounds to train in neuroscience and advance into impactful positions. The Enhancing Neuroscience Diversity through Undergraduate Research Education Experiences (ENDURE) program, in which we partner with SfN to support young trainees, is clearly successful. We are proud of the various programs administered by our Office of Training, Career Development and Workforce Diversity. Despite our activities to promote diversity in the neuroscience workforce, we remain disappointed that so few diverse trainees progress on to independent NIH funding. We are committed to working creatively to come up with effective programs aimed not only at the entry level but also at the hypercompetitive level of securing independent ROI funding. ■



AWARDS

At Neuroscience 2014, SfN awarded **more than \$500,000** to recognize scientific excellence and achievements, training and education, and outreach efforts by neuroscientists at all career levels.

Learn more about nominating colleagues for 2015 awards and prizes at SfN.org/awards.

Studies Explore How Diet Affects Brain Structure, Function

The number of people worldwide who are overweight or obese is a growing concern, given the implications for health and wellness on a global scale. According to the most recent reports by the World Health Organization, more than 1.4 billion adults worldwide are overweight and 500 million are obese. Obesity is a major risk factor for a variety of diseases, including some that affect the brain, such as dementia and stroke.

“What we eat really affects our brain, our behavior, our neural circuits, and our health in many ways,” said Ralph DiLeone, associate professor of psychiatry and neurobiology at Yale University and moderator for a press conference on diet and the brain at Neuroscience 2014. During the event, presenters described recent findings that reveal the effects that diet may have on brain structure and function across the lifespan, as well as possible ways diet may be used to reverse the devastating effects of neurodegenerative disease.

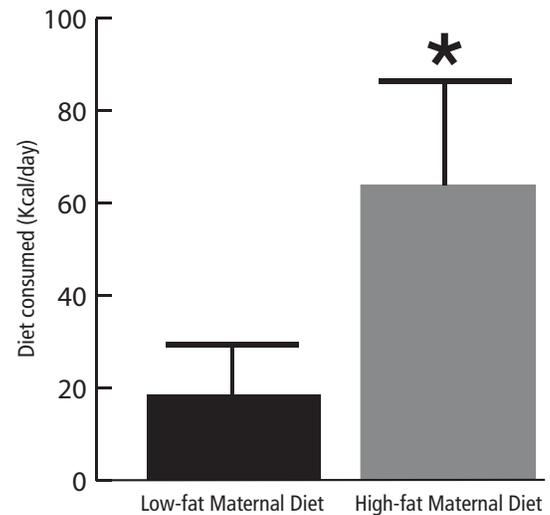
PRENATAL DIET SHAPES FOOD PREFERENCE AND DOPAMINE SIGNALING IN MONKEYS

The foundation for a person’s eating habits may be laid long before birth, according to studies demonstrating the association between maternal and childhood obesity. However, scientists have yet to identify how a mother’s body weight and food choices may have such an impact on her offspring. To examine how a mother’s high-fat diet affects her young, press conference presenter Heidi Rivera, a postdoctoral fellow in Elinor Sullivan’s laboratory at the Oregon National Primate Research Center, fed female monkeys either a high- or low-fat diet during gestation and lactation. After the offspring reached seven months (comparable in development to a human toddler), the researchers evaluated the food preferences of the offspring of the two groups.

Rivera found that despite receiving a low-fat diet, monkeys born to mothers on a high-fat diet showed a preference for food that was high in fat and sugar, compared with the offspring of mothers on a low-fat diet. When Rivera later examined the brains of the offspring at one year of age, she found the monkeys born to mothers that consumed a high-fat diet also had decreased dopamine projections to the prefrontal cortex.

“These findings suggest that eating a high-fat diet during pregnancy impairs the development of a brain circuit that regulates feeding behavior in monkey offspring,” Rivera said.

Effects of Maternal Diet on High Fat/High Sugar Consumption



Despite receiving a low-fat diet after weaning, monkeys whose mothers consumed a high-fat diet during gestation and lactation show a greater preference for food high in fat and sugar early in life. Courtesy, with permission: Heidi Rivera, Oregon Health and Science University.

HIGH-FRUCTOSE DIET INCREASES DEPRESSIVE-LIKE BEHAVIORS IN ADOLESCENT RATS

As the global number of people living with obesity continues to climb, so too does the number of people living with depression or other mental health conditions. Previous studies have found that, in addition to contributing to metabolic dysregulation, fructose consumption is associated with elevated production of stress hormones called glucocorticoids, which have been linked to anxiety and depression.

Because adolescents are the greatest consumers of fructose and adolescence marks a period of great brain development, press conference presenter Constance Harrell, a graduate student in Gretchen Neigh’s laboratory at Emory University, wondered whether high fructose consumption in adolescence could be changing the developing brain. She and her colleagues were particularly interested in whether such changes could be promoting long-term dysregulation of the stress response.

To address this question, Harrell and her colleagues fed young rats either a high-fructose or standard diet for 10 weeks. After 10 weeks, some of the animals were intermittently exposed

to social defeat and restraint stress over a period of 12 days. Afterward, all animals underwent a series of tests to assess anxiety- and depressive-like behaviors. Compared with rats on a standard diet, animals fed a high-fructose diet displayed higher rates of anxiety-like behaviors in the elevated plus maze and higher rates of depressive-like behaviors in the forced swim test, irrespective of stress history. The fructose-fed rats also showed elevated baseline levels of the stress hormone corticosterone and changes in gene expression in the hypothalamus. These differences were not seen in rats fed fructose in adulthood only.

“A high-fructose diet [during adolescence] is at least potentially able to increase depressive- and anxiety-like behaviors, increase stress hormones, and cause widespread changes in gene expression in the brain,” Harrell said.

OBESITY LEADS TO GREATER HIPPOCAMPAL LOSS IN AGING

Press conference presenters also discussed how diet affects the aging brain. While previous studies suggest obesity increases the risk of developing dementia, scientists continue to examine the biological basis of these changes. Press conference presenter Nicolas Cherbuin of the Australian National University described his work comparing hippocampal shrinkage in people who were overweight or obese to those of normal weight as they aged. The hippocampus, a region that is critical for memory formation, is implicated in Alzheimer’s disease and other dementias.

Cherbuin and colleagues scanned the brains and computed the body mass index of more than 400 60- to 64-year-olds multiple times over the course of eight years. As predicted, the hippocampal volume of the participants decreased over the course of the study. After controlling for age, gender, education, hypertension, depression, and other factors, the researchers found that participants who were obese or overweight had smaller hippocampi at the beginning of the study and greater hippocampal shrinkage over the eight-year period compared with people at a healthy weight.

“While we did not investigate the relationship between shrinkage and function, other studies in the field have shown that greater shrinkage in the hippocampus leads to a greater risk of cognitive decline and a greater risk of developing dementia,” Cherbuin said. Further studies are needed to explore the ways that obesity affects thinking abilities, he added.

‘HUNGER HORMONE’ LESSENS DOPAMINE CELL LOSS

Even as scientists continue to investigate how being overweight or obese affects cognitive abilities, efforts are ongoing to identify ways that diet can slow cell loss in aging. One potential intervention for diseases of aging is calorie restriction. Previous studies have found that reducing caloric intake may decrease dopaminergic cell loss in Parkinson’s disease and that the “hunger hormone” ghrelin may play a role in this protection. However, just how calorie restriction protects against neuronal loss remains unknown.

To better understand the relationship between a calorie-restricted diet, ghrelin, and the preservation of dopamine cells in Parkinson’s disease, press conference presenter Jacqueline Bayliss, a graduate student in the laboratory of Zane Andrews at Monash University in Melbourne, Australia, compared the effects of a calorie-restricted diet on Parkinson’s-model mice that could not produce ghrelin to Parkinson’s-model mice that could produce the hormone.

On a regular diet, Parkinson’s-model mice had fewer dopamine neurons in the substantia nigra pars compacta, the region of cell loss in Parkinson’s disease. While a calorie-restricted diet rescued some of the dopamine neurons in the Parkinson’s-model mice, this protective effect was not seen in the mice that could not produce ghrelin. When the researchers administered a single injection of ghrelin to normal mice, they found heightened dopamine levels in the substantia nigra and striatum.

“These findings suggest that ghrelin is responsible for the beneficial effects of calorie restriction in Parkinson’s disease,” Bayliss said.

A HEALTHY DIET FOR A HEALTHY MIND

At the conclusion of the press conference, DiLeone, who moderated the session, noted that while the studies presented at Neuroscience 2014 highlighted some of the perils of unhealthy diets in relation to brain development, mood disorders, and neurodegenerative diseases, they also demonstrated the power that a healthy diet can have on brain health. By continuing to explore the relationship between food and the brain, scientists hope to gain greater insight into the ways diet can promote brain wellness across the lifespan. ■

Gearing Up for Brain Awareness Outreach

For the past two decades, organizations around the world have increased public awareness about the benefits of brain research by hosting educational activities for people of all ages during Brain Awareness Week. As this global campaign marks its 20th anniversary, celebrate with your peers across the field March 16-22 by taking part in BAW activities that raise the profile of brain science.

“For scientists, it’s really important to share our work because we get inspired by talking about our work,” said Rebekah Corlew, a research coordinator at the Max Planck Florida Institute who has volunteered at a variety of BAW events.

BAW activities take many forms, including classroom workshops, neuroscience lab tours, public forums and exhibits on brain-related topics, social media campaigns, and more. Every effort to spread the word is meaningful — no matter how small — so find a way to mark the occasion that works for you.

ORGANIZE AN EVENT

SfN and the Dana Foundation offer numerous resources to help you plan your own BAW event, and there are a variety of activities you can choose from. Visit a classroom, organize a local Brain Bee contest, visit a senior center, or partner with a nearby science museum. Check out the tips and resources available at dana.org/BAW, and then follow the step-by-step instructions at dana.org/BAW/EventIdeas.

“I called libraries, I called museums, I called other organizations, and said, ‘I’m a neuroscientist. I’d love to come talk to you guys,’” Corlew said. “They were really excited and open to it.”



Children color anatomically labelled brain hats at the SfN Kansas City Chapter’s 2014 Brain Discovery Fair.

PhD candidate Jonathan Berken said many students in his neuroscience program at McGill University in Canada are interested in improving their teaching skills and giving back to the community, so during Brain Awareness Week, they visited rural elementary and high schools. “We have the expertise, but we also have the enthusiasm to make a really, really big impact,” he said.

For more guidance, start a conversation with an experienced BAW organizer in the Brain Awareness community of *NeurOnLine*. You can also view “The ABCs of BAW” webinar at SfN.org/abcbaw to learn best practices for planning and running successful events.

VOLUNTEER AT AN EVENT

There are plenty of opportunities to provide a helping hand at an already-established BAW event. Reach out to your local SfN chapter or find events in your area using the Dana Foundation’s international calendar of BAW events at dana.org/BAW/Calendar. The BAW Calendar of Events allows you to search for activities taking place in your area immediately before, during, and after Brain Awareness Week.

Corlew said she learns a lot by getting involved in other organizations’ BAW events. “I will participate in anything within driving distance,” she said. Her favorite outreach event involves visiting a children’s art studio to talk with the kids about neuroscience and help them create art of the brain.

SPEAK OUT ON SOCIAL MEDIA

Take the BAW message to Twitter or Facebook to educate your friends, family, and others. You can craft your own tweets about the importance of brain research or retweet posts from @SfNtweets, @Brain_Facts_org, @dana_fdn, or other brain science organizations. Examples of BAW campaigns on social media include posting a daily fact or brain fitness tip on Facebook or your blog, or tweeting about the brain with #brainweek.

Scott Thompson, chair of the Department of Physiology at University of Maryland School of Medicine and chair of SfN’s Public Education and Communication Committee, recommended visiting BrainFacts.org, a public information initiative of SfN, The Kavli Foundation, and the Gatsby Charitable Foundation, for inspiration on communicating to a nonscientific audience.

For more information about Brain Awareness Week and ways that you can get involved, contact baw@sfn.org and sign up for brain awareness e-alerts from BrainFacts.org. ■

Submit to SfN’s Open-Access Journal, *eNeuro*

Have you visited SfN’s new open-access journal, *eNeuro*? Since its launch during Neuroscience 2014, *eNeuro* has continued to publish high-quality papers, including one from the Scripps Research Institute lab of Hollis Cline on the pathophysiology of fragile X syndrome, another from the Brandeis University lab of Eve Marder on how nervous systems respond to altered neuromodulatory environments, and a commentary reflecting on the work and life of Roger Nicoll, who received the Ralph W. Gerard Prize in Neuroscience from SfN in recognition of his many contributions to our understanding of neuromodulation and long-term potentiation.

“Submitting research to *eNeuro* allows researchers to share their science and advance the field,” Editor-in-Chief Christophe Bernard said. “With input from an exceptional editorial board of prominent scientists across our multidisciplinary field, *eNeuro* is developing into an innovative and important forum for communicating about discoveries in neuroscience.” *eNeuro* provides authors an innovative publishing experience by:

- **Accepting a wide array of content covering a broad range of excellent science:** In addition to innovative discoveries, *eNeuro* accepts studies on negative results, failures to reproduce, tools and methods, new theories, and commentaries, all of which contribute to advancing understanding of the brain and nervous system.
- **Offering a fair, fast, and transparent review by working scientists:** This includes an innovative double-blind review experiment in which authors and reviewers are anonymous to each other during the process.
- **Providing authors with clear and open feedback:** Once reviewer consensus is reached, authors receive a fact-based synthesis of reviewer comments explaining why their work was accepted or rejected, and that review is published with the accepted article.

More information on submission requirements can be found at eNeuro.org. Questions, comments, and general feedback about submission requirements may be directed to eNeuro@sfn.org. ■

Fall Council Round-Up

During its fall meeting, SfN Council reflected on the success of Neuroscience 2014, with its more than 31,000 attendees and rich and diverse scientific program, and met with committees to review key accomplishments and discuss strategic priorities.

ENHANCING PUBLISHING VENUES AND COMMUNICATIONS

Council celebrated the growth and evolution of the Society’s publishing venues with the launch of *eNeuro*, SfN’s new open-access journal. Recognizing the transition of *The Journal of Neuroscience*’s leadership, Council applauded outgoing Editor-in-Chief John Maunsell and welcomed new Editor-in-Chief Dora Angelaki. Council also enthusiastically thanked outgoing *BrainFacts.org* Editor-in-Chief Nick Spitzer and approved John Morrison as his successor.

To better promote the dissemination of the innovative science communicated in both journals, Council approved a revised licensing policy, effective January 1, and a new media engagement strategy. Council also encouraged the development of rapid statements of support for animal research practices.

PROVIDING YEAR-ROUND VALUE TO MEMBERS

With regard to membership engagement and professional development, Council looks forward to the spring 2015

launch of a digital content portal with valuable educational and collaborative resources for SfN members. Council expressed support for an effort to review existing research on workforce and training issues in neuroscience, as the Society explores how it might help inform the evolution of scientific training. Council also approved the development of a half-day short course at the annual meeting on responsible conduct of research. In addition, the trainee voice remains an important focus for Council, and thus several committees discussed how to continue to engage this important group of members in the Society’s programs and services.

FINANCIAL STRENGTH AND INVESTMENT

As SfN expands its innovative programs and services, Council reviewed the Society’s finances to ensure that SfN can continue to operate from a position of stability and strength. Council endorsed a long-term plan focusing on selective and strategic investment in high-impact programs, with an emphasis on member needs and value. Council also discussed ways to provide engaging, high-quality content and programming to members year-round. By ending a few programs and activities that, while valuable, had accomplished what they set out to do, Council freed up some resources and capacity for possible new initiatives that would have increased reach and impact. Some of the areas being explored for potential new programming include scientific rigor, responsible conduct, and scientific training. ■

NEUROSCIENCE 2014



... *Neuroscience 2014 in Review*, continued from page 1

The popular Careers Beyond the Bench workshop helped neuroscientists explore and create career trajectories outside of academia. Hundreds of neuroscientists also took advantage of full-day training opportunities — the Neurobiology of Disease Workshop on stroke recovery and two short courses on advances in multineuronal monitoring of brain activity and brain-scale, automated anatomical techniques.

DIALOGUES LECTURE: FOOD FOR THOUGHT

During his Dialogues Between Neuroscience and Society lecture, noted chef, restaurateur, and *Top Chef* contestant Bryan Voltaggio prepared culinary treats for a panel of esteemed neuroscientists to sample while discussing his creative process in developing meals. He described how he uses alluring smells, colors, and flavors to tease and deceive the senses.

“In a dining experience, you touch on all five major senses, no matter what. Taking them and playing with them and trying to figure out a way to trick them is fun and exciting,” Voltaggio said.

Not only is eating a rich sensory experience, it also affects memory and future perceptions. Voltaggio explained that he attempts to create a pleasurable culinary experience that connects his diners to a place, time, or memory. The panel of neuroscientists then analyzed their own expectations and sensations as they tried a variety of dishes, including mock oysters, smoked salmon, and mushroom porridge. Watch the complete Dialogues lecture at SfN.org/dialogues.

TAKING THE CONVERSATION ONLINE

For Neuroscience 2014, 10 official SfN bloggers recorded their personal experiences from the meeting, with at least one blogger covering each of the eight main meeting themes. If you couldn't make it to the meeting or if you attended but are curious about things you might have missed, check out these blogs at SfN.org/bloggers. You can also keep the conversation and collaboration going in *NeurOnLine's* Neuroscience 2014 community at neuronline.sfn.org/AM14.

Did you have a chance to visit the exhibit floor? You can revisit the Exhibit Hall online to check out annual meeting products with the My Neuroscience Marketplace virtual directory at SfN.org/exhibithall. Browse by alphabetical listing or category, and search by product, company description, keyword, exhibitor name, and booth number.

You can also check out the early buzz about Neuroscience 2015, taking place October 17-21 in Chicago, by visiting SfN on Twitter at @SfN_tweets or @Neurosci2015 and using the hashtag #SfN15. ■

Counterclockwise from top left: More than 31,000 neuroscience researchers, clinicians, and advocates had the chance to visit nearly 14,000 posters during Neuroscience 2014. Attendees connect and share their work between events at the meeting. FENS Past President Marian Joëls speaks at the Celebration of Women in Neuroscience luncheon. Neuroscientists present their research during the poster sessions. Noted chef and restaurateur Bryan Voltaggio prepares a smoked salmon dish during the Dialogues Between Neuroscience and Society lecture. Rui Costa of the Champalimaud Foundation presents research about generating new actions during his special lecture.

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Submit an abstract for a poster session
or nanosymposium.



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