

NEUROSCIENCE

SPRING 2010

Q U A R T E R L Y

“By joining your national society and getting involved, you can help bring greater benefits to your country’s neuroscience community and, ultimately, to the entire field of neuroscience.”

—*Helmut Kettenmann,*
FENS President

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SfN and National Societies: Common Goals, Unique Roles

As the global economic downturn puts increasing pressure on national governments’ abilities to fund scientific research, stewards of the discipline of neuroscience must work to ensure public and government support keeps pace with the momentum of advances in research and discoveries that have emerged over the past decade. With more than 100 national, regional, and international societies and organizations around the world dedicated to supporting the advancement of neuroscience, there is tremendous strength and potential in numbers. Now more than ever, neuroscientists need to engage at all levels to turn these numbers into a powerful force for sustained support of neuroscience research globally.

National associations such as the British Neuroscience Association and Japan Neuroscience Society, regional groups like the Federation of European Neuroscience Societies (FENS), and global organizations such as the International Brain Research Organization (IBRO) and the Society for Neuroscience (SfN)—each has an important, unique, and complementary role to play in advancing our common global neuroscience agenda. Just as SfN’s continued membership growth fuels the Society’s ability to focus on serving the needs of its members and the field, national societies need the engagement of their constituent members (and potential members) in order to fully accomplish their missions.

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SfN Partners with Research Organizations to Provide FOIA Guidance

To address the growing number of U.S. federal Freedom of Information Act (FOIA) requests being received by SfN members, SfN has helped develop a new resource to help inform U.S. members about their rights and responsibilities under the law. “Responding to FOIA Requests: Facts and Resources” provides an overview of the law’s goals and requirements, provides broad guidance for consideration, and recommends ways to work effectively with university counsel. Released in January, the document addresses the growing use of these requests by animal rights extremists to target scientists for harassment or violence, or take information out of context for advocacy campaigns. For SfN members residing outside the United States, the handbook also provides general guidelines that may serve as a useful template for adaptation to local and national regulations.

In recent years, there has been an increase in the use of FOIA and state open records laws by animal rights activists seeking information related to investigators and research projects. Given that threats, violence, and harassment targeting researchers have escalated over the last decade, SfN determined it a priority to ensure members and their institutions have a comprehensive document providing facts about these requests for information.

Continued on page 13...

Message from the President

Charting Progress Through Responsible Animal Research



Michael E. Goldberg,
SfN President

As scientists engaged in biomedical research, we all know how important animal research is to our lives. When we or our loved ones take medicine, undergo minimally invasive surgery, receive vaccines to prevent polio or hepatitis, or even take a pet to the veterinarian, we have benefitted from health advances made possible through decades of responsible, regulated animal research.

Those facts are invisible in misinformation circulated by a few animal-rights advocates whose scientific claims are disputed by thousands of medical and scientific experts, as well as the National Institutes of Health (NIH). Last fall, one advocate claimed that meaningful health progress could soon be made without animal research. The members of the Society for Neuroscience know this is not true, but the battle for public opinion will be lost if we allow a few inaccurate voices to counteract the evidence.

SCIENTIFIC SUCCESS SPEAKS FOR ITSELF

Animal research has been essential to nearly every major medical advance in the last century and will be equally essential to the next century's progress. This includes hope for neurological and psychiatric diseases, which affect more than 1 billion people worldwide. Our global neuroscience community works to address those diseases using the proven pathway of animal research because it provides biological models that are indispensable to the development of knowledge, treatments, and cures.

Consider Alzheimer's and Parkinson's diseases, which rob families of loved ones and are on track to cost societies trillions as populations age. Animal research on monkeys was essential to map the brain and develop the technique of deep brain stimulation that has rescued thousands of Parkinson's patients who no longer respond well to drugs. Deep brain stimulation is beginning to give hope to patients with otherwise incurable depression. Current work using mice, rats, and monkeys is irreplaceable to understand the genetic and environmental roots of Parkinson's and Alzheimer's, which will form the foundation for future treatments.

Mental health progress on conditions like depression and schizophrenia also depends on animal research. These conditions are the largest source of lost productivity among working age adults worldwide. Current schizophrenia

drugs were born of animal research, and future progress will be born of modern genetic science, which depends on mice and rats. That research will help neuroscientists understand which brain circuits go awry in schizophrenia and when, in hopes of identifying early warning signs and opportunities for treatment.

“Animal research has been essential to nearly every major medical advance in the last century and will be equally essential to the next century's progress.”

At the last SfN annual meeting, while a handful of PETA protestors marched outside, more than 25,000 neuroscientists inside discussed thousands of discoveries, including one offering great hope for conditions like macular degeneration and retinitis pigmentosa, which are among the most prevalent causes of blindness. Funded by NIH's National Eye Institute, neuroscientists announced emerging genetic retinal repair techniques that are enabling partial vision in those once told they were permanently blind. All this progress relies on animal studies to understand function, and ensure safety and effectiveness.

MISREPRESENTING FACTS

This progress is made possible within a carefully regulated system involving federal, state, institutional, and community review that protects animal welfare. We scientists who do animal research understand that we must use animals sensitively, appropriately, and humanely, using as few animals as possible to achieve reliable scientific results. Nonetheless, there are some avenues of inquiry for which computer models, cell culture, and noninvasive techniques will never replace the use of live animals specifically bred for research purposes.

Facts are facts. But the misinformation campaigns underway by groups like PETA use one or two isolated voices to try to rebut decades of proof and thousands of scientists. Unfortunately, some in their cause appear to have moved beyond misrepresenting facts — they are instead using violence and threat to press their case. Since 2003, there

have been more than 100 documented cases of violence and threats against animal researchers, including the recent firebombing of a neuroscientist's home, requiring him and his wife to escape through a second story window with two young children, and prompting federal legislation to combat animal terrorism. Even more alarming, a prominent animal rights promoter openly advocates assassination of researchers who use animals.

EDUCATING AROUND THE GLOBE

Animal activists also are using methods other than propaganda and terror to further their aims. They are trying to use legislative and regulatory strategies to obstruct animal research. I just recently returned from the European Primate Neurobiology Meeting in Tübingen, Germany. A major part of the meeting was devoted to discussing a directive on the use of animals in research contemplated by the European Union that will terribly hamper research while doing little for animal welfare. In particular, this directive is full of special restrictions on the use of non-human primates and considers basic research inherently

less worthy than applied/translational research. In the United States, a bill has been introduced in Congress to prevent all research on chimpanzees, which could conceivably cripple research on a future infectious disease that only affects humans and their closest relatives. Regulatory agencies on both sides of the Atlantic are bombarded with unfounded complaints by animal activists.

The only way we can protect ourselves is to fight back. Teach the public about the essential role of animal research in medical progress. Inform our legislators about the importance of animal research, and invite them to our labs. Our European members should join their own national neuroscience societies to further the policy advocacy in their own countries. We will never convince the animal activists about the importance of our work, just as they will never convince us. But we can and must convince the public and policymakers of the importance of animal research to ensure continuing medical progress, the inanity of animal activist groups like PETA, and the villainy of animal terrorists. ■

Institutional Program Members Address Challenges in the Field



Participants took advantage of small group discussions to address future initiatives regarding higher education and training.

The 2010 Annual Spring Conference of Neuroscience Departments and Programs (NDP), themed *The Future of Higher Education and Training in Neuroscience: Challenges and Opportunities*, was held on March 26 in Washington, DC. Nearly 80 attendees heard panel presentations, engaged in interactive discussions, and shared ideas about priorities for future SfN activities in higher education and

training. Highlights of the meeting will appear in the Summer 2010 issue of *Neuroscience Quarterly* and slide presentations will be available on the SfN Web site.

The annual spring conference is a signature event of SfN's Committee on Neuroscience Departments and Programs (CNDP), and one of many benefits offered to SfN's Institutional Program (IP) members—academic departments and programs that award an undergraduate major or advanced degree in neuroscience or a neuroscience-related discipline. The conference offers a venue for IP members to gather with like-minded institutions to discuss and share ideas around common issues facing neuroscience training and education.

Other benefits of IP membership include listing in the online searchable directory of neuroscience training programs, reduced registration fees for the annual spring conference, access to the NDP booth at the SfN annual meeting for displaying program brochures and information, and one free e-mail blast each year to SfN's student members.

For more information about CNDP and Institutional Program member benefits, visit www.sfn.org/ndp. ■

Pierre J. Magistretti: A Global Collaborative Approach



Pierre J. Magistretti,
Secretary-General,
IBRO

Pierre J. Magistretti was elected this winter as secretary-general of the International Brain Research Organization (IBRO) and is a past president of the Federation of European Neuroscience Societies (FENS). He is Director of the Brain Mind Institute at Ecole Polytechnique Fédérale in Lausanne, Switzerland, and Director of the Center for Psychiatric Neuroscience of the Centre Hospitalier

Universitaire Vaudois and University of Lausanne. He is an internationally recognized leader in the field of brain energy metabolism and glia biology.

NQ: As IBRO secretary-general, what are your priorities and what are the biggest challenges?

I view as the main priority for IBRO in the coming years to expand and strengthen its role in stimulating the progress of neuroscience worldwide by promoting neuroscience education through activities such as schools, fellowship programs, and workshops. Indeed IBRO's unique niche is to facilitate access to continuing education and training of the most talented young neuroscientists, especially, but in no way exclusively, from less favored countries. I consider it very important to stimulate such activities at the inter-regional level, thus bringing together neuroscientists from different parts of the world. We should not underestimate this cultural dimension in IBRO's activities.

I also intend to put a particular emphasis on communication and activities that enhance the visibility of IBRO so that the community can better take advantage of all programs supported by IBRO. In addition, I truly believe that IBRO should be viewed as one of the reference points for neuroscientists around the world, and that its members should share a sense of community and belonging. In this respect, IBRO alumni, who have benefited from the various activities of IBRO such as schools, fellowships, travel grants and return home funding, play a key role and we will support activities that strengthen this sense of community.

NQ: You have said public information and education must be a global priority; likewise, Sfn sees it is critical to advancing understanding of brain health and disease, as well as sustaining long-term science funding. What is IBRO doing on this front and how can we all do a better job of cooperating on public outreach?

Another priority will be to expand the outreach activities of IBRO worldwide, by inspiring and supporting them and by providing the necessary documentation to facilitate the public understanding of neuroscience. This is an essential activity to establishing a fruitful dialogue with society, the media, and policymakers. I am particularly committed to these activities in which I have now been personally involved for several years, for example as vice chairman of the European Dana Alliance for the Brain. IBRO should ensure that information is available in as many languages as possible, besides English. Here, partnerships with national neuroscience societies, FENS, Sfn and with organizations such as the Dana Alliance for Brain Initiatives will be extremely important. Diffusion of information through the Web should be strengthened as it represents an efficient and cost-effective way of diffusion of information.

“Indeed IBRO’s unique niche is to facilitate access to continuing education and training of the most talented young neuroscientists.”

NQ: Asian nations have some of the fastest growing neuroscience communities worldwide. How is IBRO’s Asian/Pacific Regional Committee addressing the needs of the diverse Asian neuroscience communities and helping to strengthen collaboration within the region and across regions? What about Latin America and Africa—what do you see as the key opportunities and challenges in those regions?

Indeed, IBRO is organized in regions, including the Asian/Pacific, African, Latin American, but also western, central and eastern Europe as well as North America. Of course there are specific needs that should be met in the different regions of the world. The important issue is to target the educational and training activities supported by IBRO in a way that is appropriate for each situation. For this, it is essential to rely on the knowledge of the local neuroscientists. They are in the best position to assess what is most needed. It would be rather inefficient to apply a centralized model to the diverse situations met around the world, in a one-size-fits-all mode. I think that the regional organization of IBRO catches these differences and facilitates an optimal fit. The cultural dimension is extremely important.

NQ: As SfN’s international membership continues to grow, SfN is taking steps to better serve its members around the world. Yet there are many critical roles to play at the local, national, and transnational levels and many organizations working to serve them. How can IBRO, FENS, national societies, SfN, and other groups best coordinate and cooperate to advance the field? Are there specific ways that IBRO, FENS, and SfN can help national societies play their essential advocacy role at the national government level?

I think that a collaboration between the organizations that you mention is very desirable. This should happen at the highest level of the organizations. Indeed, each organization has specific strengths to bring to the table. Public understanding of neuroscience is an ideal topic for collaboration. Possibly an international task force with members from SfN, IBRO, FENS, and organizations such as DANA could work together and enhance the visibility of the existing resources and develop new ones. Ethical issues could also benefit from coordinated initiatives, as the joint position of several organizations on a given issue will carry considerable weight with policymakers around the world. ■

Recognizing Achievement: 2010 Award Season In Full Swing

Every year, SfN acknowledges some of the best research and achievements by neuroscientists around the globe. With more than \$450,000 in prize money, SfN honors research that expands knowledge of the brain and its functions, outreach programs that educate the public on the importance of neuroscience, and mentoring efforts that cultivate achievement for the next generation of neuroscientists.

Nominations for the 2010 awards will open soon and close mid-summer. This is your opportunity to recognize a colleague, student, or mentor whose work stands out in his or her field.

Achievement

- Ralph W. Gerard Prize — outstanding contribution to neuroscience
- Julius Axelrod Prize — achievements in neuropharmacology or related field
- Jacob P. Waletzky Award — research in substance abuse and the brain
- Donald B. Lindsley Prize — PhD thesis in behavioral neuroscience
- Swartz Prize for contributions in theoretical and computational neuroscience
- Research Awards for Innovation in Neuroscience — imaginative, innovative research in neuroscience
- Career Development, Young Investigator, and Peter and Patricia Gruber International Research Awards — achievements by young neuroscientists

Education and Outreach

- Award for Education in Neuroscience — contributions to neuroscience research and education
- Science Educator Award — educating the public
- Next Generation Award — outreach by SfN chapter members

Advancement of Women

- Bernice Grafstein Award — promoting women’s advancements in neuroscience through mentoring
- Louise Hanson-Marshall Special Recognition Award — contributions to neuroscience and the advancement of female neuroscientists by someone working outside the field
- Mika Salpeter Lifetime Achievement Award — career achievements and promoting women’s advancements in neuroscience
- Patricia Goldman-Rakic Hall of Honor — posthumous award for sustained exceptional achievements and dedication to mentoring young women

Travel Awards

- Graduate Student and Postdoctoral Fellow Travel Awards — trainees presenting outstanding abstracts
- Graduate Student and Postdoctoral Fellow Chapters Travel Awards — outstanding trainees nominated by local SfN chapters
- SfN-IBRO International Travel Awards — promising young neuroscientists from lower and middle-income countries

Visit www.sfn.org/awards for details and deadlines for each award.

Music Training and the Brain

Professional musicians put extraordinary effort into training on their instrument. By the age of 21 it is estimated that they have played for 10,000 hours. But until recently, it was unclear what effect their experience had on the brain and behavior.

Neuroscientists are studying musicians to assess how performing and practicing music alter psychophysics, cognition, and synaptic physiology — in a clear example of experience-dependent plasticity. The researchers are looking at how musical training influences the processing and perception of sound and examining the effect of music education on brain development. Recent research indicates that musicians excel in areas other than musical ability. For example, they outclass most in processing speech and emotionally expressive sounds.

At Neuroscience 2009, several neuroscientists reported their latest research findings about music training and the brain in a press conference moderated by Mark Tramo of Harvard Medical School. The findings indicate that musicians also perform better than nonmusicians on tasks of auditory attention and on receiving and processing auditory information in challenging listening environments.

TRAINING AND EXPERIENCE INFLUENCE HEARING

Lifetime experience affects the processing and perception of sound even following hearing loss, according to research presented by Markus Engelmann, a researcher at Friedrich Schiller University of Jena in Jena, Germany. Engelmann and his colleagues found that musicians suffering from hearing loss could detect whether chords were out of tune, even when the tones were in the range of sounds they could no longer hear well. Although the musicians performed well on the task, factory workers with similar hearing deficits did not. EEG recordings showed that the musicians' brains registered whether a chord was in or out of tune, even if the musicians did not consciously perceive the sound.

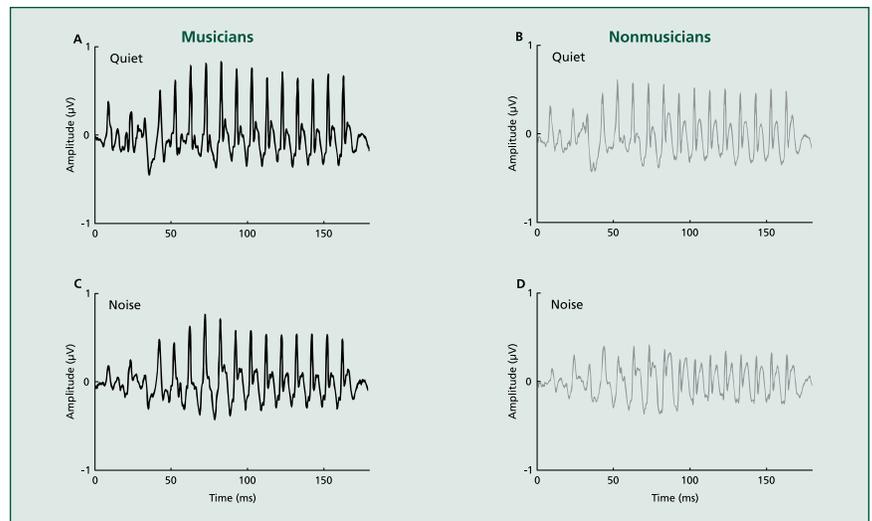
The findings suggest that the typical sounds associated with a profession build a set of auditory skills that seem to sharpen the ability to extract and identify related sounds. Both musicians

and factory workers show high rates of occupational hearing loss after being exposed to loud noise over the course of their careers. Engelmann suggests that while the musicians were better able to identify “failed” musical tones despite their hearing loss, the factory workers may be similarly skilled at identifying sounds indicating machine failure.

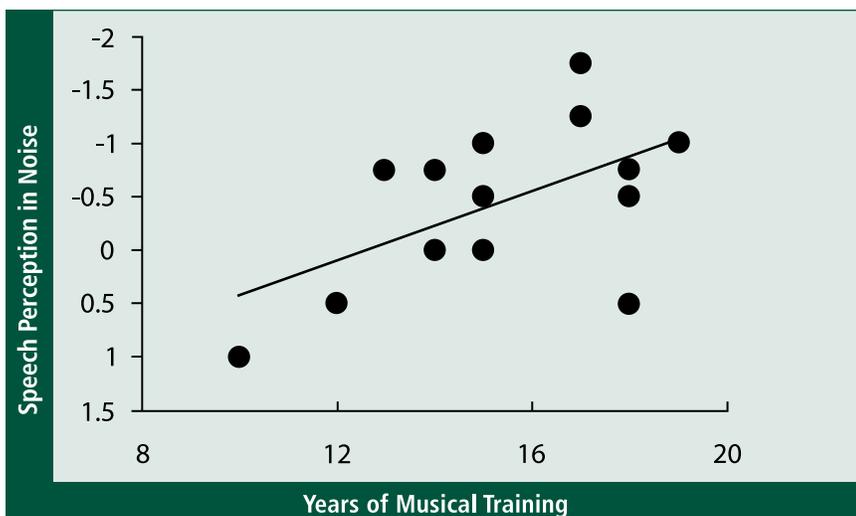
MUSICAL EXPERIENCE STRENGTHENS COGNITIVE FUNCTION

Musical experience also appears to strengthen cognitive function related to auditory attention and memory, according to Dana Strait, a graduate student working with Nina Kraus and Richard Ashley at Northwestern University. Strait and her colleagues found people with extensive music training outperformed those with little to no musical training on tests of auditory attention, frequency discrimination, and backward masking — the ability to distinguish one sound from another that comes after it. The researchers controlled for differences in IQ and hearing, and there was little difference between the two groups on tasks that tested visual attention. The findings suggest long-term musical training fine-tunes the neural mechanisms that lead to enhanced performance of auditory tasks.

This study joins a growing body of research supporting the idea that musical training could benefit children who have difficulty with auditory processing and related language



The auditory brainstem response to speech in quiet and in background noise by musicians (A,C) and nonmusicians (B,D). Musicians demonstrated a greater degree of similarity between their responses in quiet and noise, suggesting their responses are less degraded by the addition of background noise, unlike nonmusicians. The musicians are plotted in black and the nonmusicians in gray. Courtesy, with permission: Parbery-Clark A, Skoe E, Kraus K (2009) *The Journal of Neuroscience* 29(45): 14100-14107.



The ability of musicians to distinguish speech in background noise is better than nonmusicians. A musician's perception of speech in noise improves as the number of years of musical training increases. Modified, with permission: Parbery-Clark A, Skoe E, Lam C, Kraus N (2009) Musician Enhancement for Speech-In-Noise. *Ear & Hearing* 30(6): 653-661.

and literacy skills. These children struggle to attend to particular brief sequential sounds, which interferes with their ability to hear certain syllables in spoken language. Strengthening cognitive and perceptual functions through auditory training (i.e., musically) could help them overcome their disability.

Researchers are just beginning to examine the underlying processes that bolster musicians' cognitive and perceptual enhancements — possibly a top-down modulation of cochlear and brainstem function mediated by the corticofugal pathway, according to Strait.

MUSICIANS ARE BETTER LISTENERS AT COCKTAIL PARTIES

The ability to extract spoken words from background noise can be challenging for many people, especially for older adults, children with language-based learning problems, and people who are hearing impaired. Musicians, though, seem to have less difficulty, according to research presented by Kraus.

Musicians need to listen specifically for the sounds of their own instruments among many others. Does this enhanced ability to distinguish sound translate to non-musical skills? In their research, Kraus and colleagues treated speech-in-noise as a homolog for segregating musical sounds. They compared behavioral performance and evoked auditory

brainstem responses in musicians and non-musicians listening to speech sounds in two settings: quiet and noisy.

The musicians were better able to identify speech presented against background noise and exhibited stronger speech-evoked auditory brainstem responses. Further, the musicians displayed earlier response onset timing and greater phase-locking to the temporal waveform and stimulus harmonics. In other words, background noise had a smaller negative impact on auditory processing in musicians than in non-musicians.

Musicians with more years of musical experience were better able to detect speech in noise than their younger colleagues, highlighting the continued plasticity of the auditory system and suggesting that with practice, distinguishing sounds becomes easier for the brain.

If musical training could enhance the ability to hear spoken words against a background of everyday noise, this could ultimately lead to a therapy for people who face the challenge or for those with learning or communication disorders.

This new research on music and learning, which represents a small slice of a growing research field, shows that rigorous and long-term training on auditory tasks can strengthen cognitive and perceptual abilities related to the auditory domain in a clear example of experience-dependent plasticity. Listening alone does not appear to do the trick — actual performance appears to be necessary to achieve these benefits.

These findings also add to a growing body of data from a variety of laboratories suggesting that musical training could help people, especially children with developmental dyslexia who often experience noise-exclusion deficits. Interestingly these children can demonstrate neural deficits in the subcortical processes that are enhanced in musicians. An estimated 10 percent of children in developed countries wrestle with language and learning deficits. Ongoing longitudinal studies are also currently helping to determine in a rigorous fashion whether music education has beneficial effects on brain and behavior for children of all abilities. ■

To view the video of the press conference and related slides, go to www.sfn.org/amhighlights.

SfN Advocates Promote Strong Research Funding at Capitol Hill Day



Nearly 50 SfN members contributed to a successful fourth annual SfN Capitol Hill Day on March 25 in Washington, DC, expanding dramatically from 16 in the first year.

Participants from 21 states, as well as the District of Columbia, Germany, and Canada met with more than 70 congressional offices to advocate for \$35 billion for National Institutes of Health and \$7.4 billion for the National Science Foundation in the FY2011 budget. They shared their research and relayed how research funded by the 2009 American Reinvestment and Recovery Act is advancing science, creating jobs, and improving the economy at local, state, and national levels.

SfN President-Elect Susan Amara urged participants to use Hill Day as the start to building strong, productive relationships with legislators and their staff. Amara also asked participants to share their Hill Day experience with their SfN chapter colleagues back home to engage more members in science advocacy. ■



COULDN'T MAKE IT THIS YEAR?
Make plans for 2011 Capitol Hill Day and get involved throughout the year by joining SfN's advocacy network.
Visit www.sfn.org/advocacy to learn more.

1. SfN members pose in front of the U.S. Capitol between Hill visits.
2. Bruce McEwen, Chair of SfN's Government and Public Affairs Committee, told Hill Day attendees that their participation will make a crucial difference by adding a valued voice to the efforts to ensure strong, sustained science funding.
3. SfN President-Elect Susan Amara and Sergio Paradiso of University of Iowa presented Sen. Tom Harkin (D-IA) the 2009 SfN Public Advocacy Award for his tremendous leadership on behalf of NIH and championing \$10 billion for NIH through the Recovery Act.
4. Carmen Canaiver of Louisiana State University and SfN chapter leader Jeffrey Tasker of Tulane University shared with Rep. Joseph Cao (R-LA) the important role research funding plays in creating and preserving jobs at their universities while boosting the local economy.
5. Mark Rasnick, Scott Brady of the University of Illinois–Chicago, and Kam Sripada of Harvard University thanked Rep. Jan Schakowsky (D-IL) for her continued support of biomedical research funding.
6. Joe Coyle of Harvard Medical School, Bruce Johnson of Cornell University, and Rob Burgess of Jackson Laboratory met with Sen. Scott Brown's (R-MA) health legislative staffer to discuss biomedical research.
7. Sen. Sheldon Whitehouse (D-RI) greeted SfN chapter leader Jerome Sanes of Brown University and Kam Sripada of Harvard University. Sanes expressed the need to sustain the momentum from the Recovery Act and to make the new research capacity permanent.
8. SfN Pittsburgh chapter member Andrew Samuelson expressed to Rep. Mike Doyle's (D-PA) legislative health staffer the critical need for a strong scientific research funding platform to ensure the future of the next generation of scientists.
9. SfN Iowa chapter member Sergio Paradiso and Minnesota chapter members Katherine Himes and Virginia Seybold discussed the need for a robust and reliable investment in biomedical research with Rep. David Loebsack (D-IA).



Scientists from around the world will gather for Neuroscience 2010 in San Diego, Calif., to exchange the latest cutting-edge research on the brain, spinal cord, and nervous system from November 13 to 17. Offering innovative topics and perspectives, Neuroscience 2010 is enriched by an impressive lineup of presidential and featured lectures, the new nanosymposia matching forum, and the great city of San Diego.

DIALOGUES BETWEEN NEUROSCIENCE AND SOCIETY



Glenn Close,
Actress

Featured at the 2010 Dialogues Between Neuroscience and Society Lecture is award-winning actress and mental health advocate

Glenn Close. As a champion for mental health, affected by her own family's history of mental illness, Close works to bring awareness and support to families through her national anti-stigma campaign, Bring Change 2 Mind. Close, a strong supporter of continued research to improve mental health treatment,

acknowledges that erasing the stigma of mental illness leads to better funding and better care. Close will speak about the personal impact of mental illness for families and society in hope of inspiring the next generation of research and discovery.

NANOSYMPOSIA: NEW NANOSYMPOSIUM TOPIC MATCHING FORUM

SfN launched a new tool to help you make connections to form nanosymposium partners. Nanosymposia were launched at Neuroscience 2009, in order to fuse thematically coherent sessions by allowing abstract presenters to form and suggest the composition of their own sessions. To enhance this feature at Neuroscience 2010, the Nanosymposium Topic Matching Forum is now available to spark potential collaborations for a group nano submission. The new forum uses the Neuroscience 2010 themes and topics list so that attendees can easily search for members from other labs with similar interests to form a nanosymposium group

ahead of abstract submission and increase chances of acceptance. To sign up, visit www.sfn.org/cfa.

PLANNING AHEAD MAKES TRAVEL MORE AFFORDABLE

Make plans early to take advantage of the many ways to save on registration, airfare, and lodging, by planning ahead. Use these money-saving and trip-planning strategies as the meeting approaches.

Registration Discounts

An easy way to save money is by renewing your SfN membership for 2010. Visit www.sfn.org/renewnow and log in with your membership ID and password. Your membership must be current to sponsor or submit a 2010 abstract, plus members also receive substantial meeting registration discounts. Regular members save **\$205**, student members save **\$55**, and undergraduate student members save **\$65** on the cost of nonmember registration. This year's advance member registration opens on **July 14** and advance nonmember

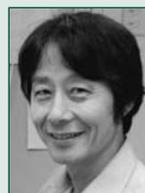
PRESIDENTIAL SPECIAL LECTURES



Martin Chalfie
Adventures in Non-translational Research: Neuronal Differentiation and Mechanosensory Transduction in *C. elegans*



Pawan Sinha
Learning to See Late in Life



Okihide Hikosaka
Motivational Neuronal Circuits for Value, Salience, and Information



Helen Mayberg
Tuning Depression Circuits Using Deep Brain Stimulation

FEATURED LECTURES

Albert and Ellen Grass Lecture
Lily Jan and Yuh Nung Jan, University of California, San Francisco

Fred Kavli Distinguished International Neuroscientist Lecture Christine Petit, Pasteur Institute, Paris, France

David Kopf Lecture on Neuroethics Henry Greely, Stanford University

History of Neuroscience Lecture Victor Whittaker, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

Peter and Patricia Gruber Lecture
TBA late April

registration opens on **July 20**. Details and registration fees can be found at www.sfn.org/am2010.

Lower Airfare

If you're planning to fly to San Diego, contact the providers recommended by the Society. Special fares have been negotiated for Neuroscience 2010 attendees. Visit www.sfn.org/transportation for more information.

Reduced Student and Member Category I and II Lodging

If you are a student or member from a developing country, look no further than the student/member Category I and II housing block for discounted lodging. A limited number of lower-priced hotel rooms have been set aside and rooms will be assigned on a first-come, first-served basis until depleted or until October 5, when they will be released for general sale to all attendees. Students must provide proper student verification to be placed in the student block. Only student and member Category I and II registrants, spouses, immediate

family members, or registered guests of Neuroscience 2010 sponsored by a student or member Category I and II occupant are permitted to occupy hotel rooms within the discounted room block.

Roommate Matching Forum

Save money in 2010 by using SfN's Roommate Matching Forum. The forum provides an online venue where meeting attendees can arrange shared lodging. Visit the Neuroscience 2010 Web site to read the forum thread, "Things to think about when searching for a roommate." This information can guide your search for a potential roommate.

Fellowships, Awards, and Prizes

Don't miss the opportunity to apply for SfN awards and prizes. Several Society awards and fellowship programs offer travel assistance to the annual meeting. See page 7 for 2010 awards and prizes or visit www.sfn.org/awards for details.

NEW REQUIREMENTS FOR INTERNATIONAL TRAVEL

International attendees: take steps now to ensure a smooth trip to San

Diego. Check out new U.S. travel regulations now in place. If you are from a nation participating in the Visa Waiver Program (VWP), it is important for you to review guidelines early in your travel planning to ensure compliance so you are able to board your U.S. bound flight. Other international attendees may request a letter of invitation from SfN through an online form. See the four-step process and more at www.sfn.org/am2010.

SEE YOU IN SAN DIEGO!

Neuroscience 2010 is a unique opportunity for learning and professional development. In addition to educational lectures, symposia, workshops, and hundreds of neuroscience exhibitors, the meeting offers a variety of free services for members, such as access to job listings and interview booths at the NeuroJobs career center, the Student Hospitality Suite, and many others. Check future issues of *Neuroscience Quarterly* and visit www.sfn.org/am2010 for more money-saving and trip-planning strategies as the meeting approaches.

Bookmark www.sfn.org/am2010 for more information on Neuroscience 2010. ■

Take Advantage of a Fellowship Opportunity for Diversity in Neuroscience

The Neuroscience Scholars Program is a three-year fellowship designed to enhance career development and professional networking opportunities for underrepresented minority trainees in neuroscience.

Application Deadline:
May 21, 2010

www.sfn.org/nsp

National neuroscience societies support the advancement of scientific research by offering varying combinations and levels of meetings and conferences, publications of journals and newsletters, and professional development opportunities for their members. Many also are engaged in advocacy and public education to increase awareness among policymakers, the general public, and primary and secondary students and teachers to ensure continued growth in funding and support for neuroscience research in their home countries.

Unlike the science itself, which easily transcends borders and provide a common language that bridges cultures, goals such as science advocacy and public outreach require a localized approach and language to be effective. National societies are uniquely positioned to achieve these objectives. They have their “ear to the ground,” are familiar with local realities, and have established networks not only with national neuroscientists, but also with members of the government, media, public advocacy organizations, and funders of scientific research in their own countries.

LEADERS SPEAK OUT ON ROLE OF NEUROSCIENCE NATIONAL SOCIETIES

“Funding of neuroscience research in Europe is either decided on the national or on the European level. To advocate for increased funding, the national societies need the support of their neuroscientists in order to effectively speak to the decision-makers on their behalf. FENS’s task is to provide arguments for the European Commission that European citizens profit from the investment into neuroscience research. By joining your national society and getting involved, you can help bring greater benefits to your country’s neuroscience community and, ultimately, to the entire field of neuroscience. This is not specific for Europe, but also applies to other countries and continents.” —Helmut Kettenmann, FENS President

“While we’re thrilled with the increasingly international membership of SfN, we want to encourage all of our colleagues outside the United States to consider joining their national societies, which play critical roles in advancing the common global neuroscience agenda. Sustained advocacy and action are essential at the local and national levels to urge increased investments in science. In Washington, and in capitals around the globe, united neuroscientist voices can be positive and powerful voices.” —Michael E. Goldberg, SfN President

ADVOCACY AT THE NATIONAL LEVEL

The Australian Neuroscience Society, for example, organizes face-to-face meetings for its members with members of parliament and a “Science Meets Parliament” dinner. Similarly, the German Neuroscience Society maintains contacts with European Union and German national government programs, as well as private foundations that fund neuroscience research, to ensure support for neuroscience among policymakers and funders. In the advocacy arena, SfN focuses its efforts largely within the United States, where it is headquartered and where 63 percent of its members reside. SfN also supports national advocacy efforts in Canada and Mexico through partnerships with local neuroscience organizations in those countries. Drawing upon this core membership base, SfN reaches out to legislators in the U.S. Congress, to make them aware of the significance of neuroscience research for human health and to advocate for increased funding for the National Institutes of Health and National Science Foundation.

Promoting public awareness and support through outreach activities, often as part of the annual Brain Awareness Week celebrated around the world, is also a critical area where national societies can and do take the lead in order to improve funding and support for neuroscience research. While neuroscience education and information resources can be and often are shared across national borders and translated, community-based outreach can obviously only be accomplished through country-specific efforts.

ENGAGE AS A CITIZEN-SCIENTIST

To complement such efforts and to help achieve common goals in professional development, public advocacy and outreach, SfN is committed to taking advantage of opportunities to expand its collaborations with strategic partners around the world, including national societies. While international organizations such as FENS, IBRO, and SfN can serve as catalysts and sources of support for the global pursuit of these goals, national societies will and must continue to play a critical role by raising awareness and public support for neuroscience within their borders in ways that are unique to their circumstances and needs.

Individual neuroscientists have much to gain from professional society memberships that allow them to contribute and benefit at multiple levels. SfN applauds the commitment and work of national neuroscience societies and their members, while encouraging neuroscientists around the world to fully engage as “citizen-scientists” in pursuing our common goal of advancing the field. ■

FOIA BEST PRACTICES

- All researchers, regardless of their research area, should be aware of the proper institutional procedures for responding to state open records requests and federal FOIA requests.
- Identify a point person within the institution who will be responsible for state open records requests and federal FOIA requests to ensure the system facilitates an orderly response.
- Understand which records are subject to disclosure.
- Be aware of commonly requested documents.
- Understand how animal rights activists target you.
- Do not post personal information in the public domain.
- Always be in full compliance with relevant laws and regulations, but do not provide extraneous information that is not required by law; extraneous information may be taken out of context and used by animal rights activists to target you.
- Accurately estimate the costs of complying with a state open records request.
- Review all exemptions to determine whether sensitive information falls within the protection of an exemption.
- Apply institutional document retention policies and keep all records required by law or otherwise necessary for business, research or operational purposes.

FOIA Guide available at www.sfn.org/animals.

SfN joined with the National Association for Biomedical Research (NABR) and the Federation of American Societies for Experimental Biology (FASEB) in a collaborative effort to develop guidance for their members. Members of the National Association of College and University Attorneys also contributed to the drafting of the document.

The guide details best practices (see sidebar) on how to approach responsibilities under open records and FOIA requests, while mitigating risks to researchers. It includes examples of commonly requested documents, provides recommendations for establishing institutional procedures to respond to requests, and outlines suggestions to ensure responsible disclosure. Also included are data on records requested through the National Institutes of Health,

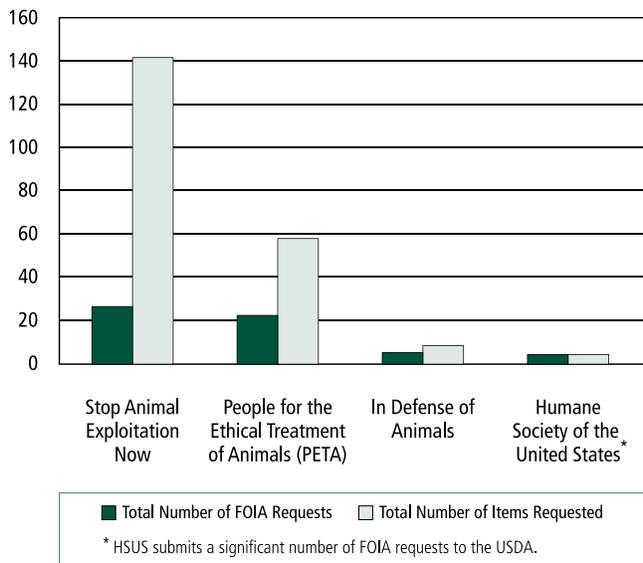
quick tips for investigators and university counsels, and an overview of exemptions permitted in the FOIA law. “While scientists fully appreciate the important role and goal of the FOIA, law-abiding researchers conducting life-saving research are also being targeted for harassment and violence based in part on information contained in federal grant proposals,” said Frankie Trull, president of the NABR.

SfN, FASEB, and NABR members have expressed appreciation for having the FOIA guide and a concise resource on a topic that many are unfamiliar or uncomfortable with. “Our members are scientists, not lawyers—they may not know their rights and responsibilities,” said SfN President Michael E. Goldberg. “Scientists are being threatened, bombed, and harassed. This not only affects their families—it will affect fundamental scientific advances if they are driven out of the field.”

The FOIA guide seeks to ease some of the concerns of individuals by helping them navigate a complex process that could expose them to potential attack by extremists.

The guide seeks a careful balance between respecting the public’s information and protecting scientists. This publication provides additional guidance to the research community on complying with open records requests responsibly, while satisfying the public’s right to know and protecting the security of sensitive information. ■

Number of FOIA Requests NIH Received from Animal Rights Groups in 2008



Education and Outreach Peak During Brain Awareness Week

Each year in March, neuroscience education and outreach activities peak at an exciting rate across the globe. March 15 to 21, 2010, marked the 15th annual Brain Awareness Week (BAW) campaign and thousands of neuroscientists and teachers partnered in their communities to elevate the public's understanding of the brain and nervous system.

PARTNERING WITH A MUSEUM

In Washington, DC, SfN and its local Potomac chapter partnered with the National Museum of Health and Medicine in their 11th annual BAW event, which drew more than 550 students from area schools. After presentation of a proclamation of BAW by DC Mayor Adrian Fenty, students rotated through stations where they engaged in hands-on activities focused on brain anatomy. National Institutes of Health and George Washington, Howard, and Georgetown Universities were among the institutions who organized stations that focused on topics such as the five senses, brain injury, neuronal signaling. The museum is home to one of the most renowned neuroanatomical collections in the country.



Students from the greater Washington, DC area engaged in hands-on activities, which included examining a whole brain specimen.

Go to SfN's BAW Web site at www.sfn.org/baw to access these resources for your next outreach activity.

- **Brain Facts on Audio**—Download or listen to individual sections of *Brain Facts*. Includes information on brain development, learning, memory, language, neurological and psychiatric illnesses, potential therapies, and more.
- **Neuroscience Core Concepts**—What brain basics should everyone know? Organize an event that demonstrates the essential principles and use *Neuroscience Core Concepts* as your guide.
- **Neuroscience Education Resources Virtual Encycloportal (NERVE)**—Access hundreds of lesson plans, games, flash animation movies, and presentations.
- **Neuromyth Busters**—See the eight most common myths about the brain, along with the science that dispels them.

REACHING OUT TO TEACHERS

At the National Science Teachers Association's (NSTA) national conference in Philadelphia, SfN shared resources and presented workshops during a meeting of more than 10,000 teachers from around the country. The annual NSTA conference has coincided with BAW for the past two years, opening the door for an SfN "brain blitz" directly to teachers during the campaign. In collaboration, the Philadelphia chapter and SfN offered two workshops that oriented teachers to SfN's popular *Neuroscience Core Concepts* and the new *Neuromyth Busters* publication, which dispels common misconceptions about the brain.



Public Education and Communication Committee Member Emanuel DiCicco-Bloom shares the *Neuroscience Core Concepts* publication with a teacher at SfN's exhibit at the National Science Teachers Association conference in Philadelphia.

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| | |
|--------|------------------------------|
| 32 | trees |
| 14,858 | gallons of water |
| 902 | pounds of solid waste |
| 3,085 | pounds of hazardous effluent |



The Dana Alliance for Brain Initiatives organized the New York City Regional Brain Bee where SfN President Mickey Goldberg (pictured with the top three winning students) served as a judge for the competition.

At the SfN exhibit booth, hundreds of enthusiastic teachers stopped by to talk and pick up SfN materials, helping them learn the basic principles of learning, memory, and attention that they can incorporate into their classrooms.

REACHING OUT TO THE PUBLIC

BAW activities spanned the globe. In Australia, the Melbourne chapter collaborated with local universities to host a traveling public lecture titled "Stroke: The Hidden Brain Problem." In Canada, the Montreal chapter of SfN organized open houses at the Institut Universitaire de Gériatrie de Montréal and the Montreal Neurological Institute, inviting the public to tour their laboratories and learn about new discoveries in brain research. The Montreal chapter's popular Science Cafés also offered the public fun, informal settings to meet local neuroscientists. The cafés hosted Q&A sessions with several guest experts, plus snacks and entertainment.

ENCOURAGING THE NEXT GENERATION OF NEUROSCIENTISTS

The International Brain Bee program provides standout students the chance to plumb the depths of their neuroscience knowledge and get rewarded with valuable prizes such as internships in prestigious research labs. In the United States, BAW culminated with the National Brain Bee that involved 36 competing students from 20 states. To reach the national competition, students won their regional Brain Bees, organized locally throughout February. At the Bees, students have to identify brain anatomy and function, as well as established research methods and applications. The international competition will take place at the American Psychological Association annual convention in San Diego this August.

The annual BAW campaign was launched by the Dana Alliance for Brain Initiatives in 1996. Involvement has grown to more than 2,400 participants in 76 countries, and this year marked the campaign's 15th anniversary. SfN members can help celebrate BAW accomplishments at the Annual Brain Awareness Campaign Event during Neuroscience 2010 in San Diego. ■

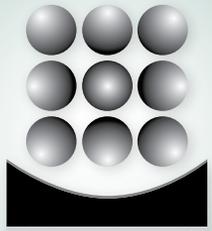
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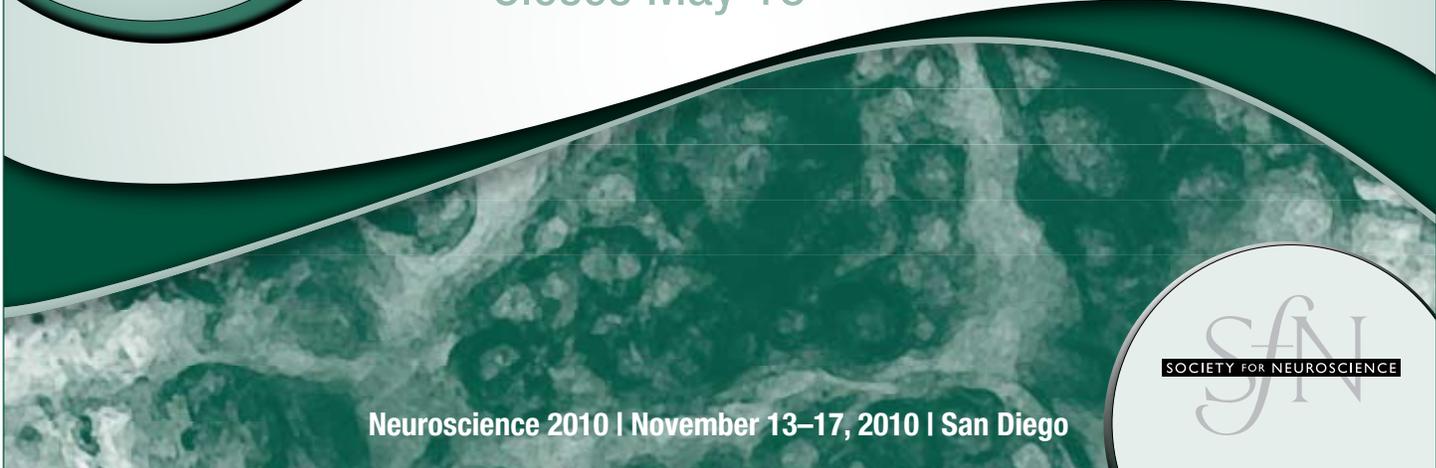
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