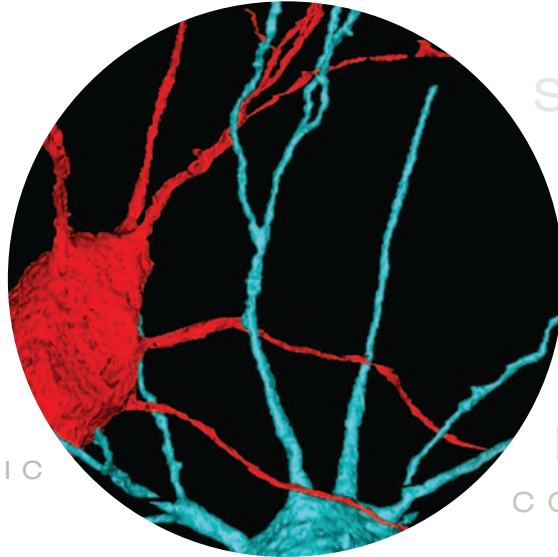


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BRAIN RESEARCH
SUPPORTING
INTERNATIONAL MISSION
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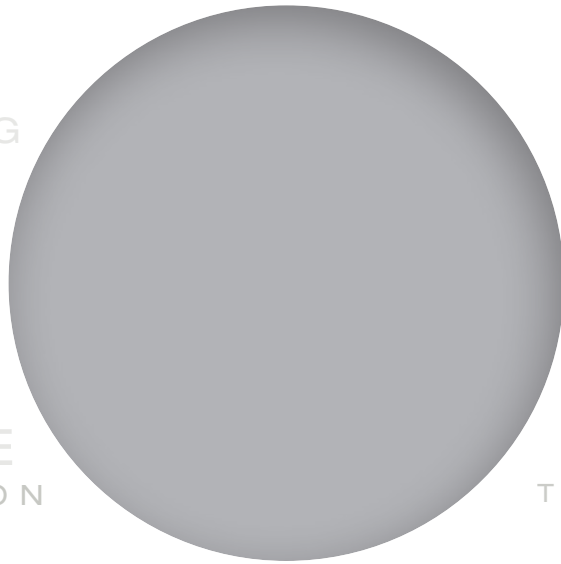
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COGNITION

FOSTERING connections

EMBRACING opportunities

FOSTERING

SERVING
SCIENCE
VALUE
ADVOCACY
CIRCUIT
FUTURE
COGNITION



RESEARCH
OUTREACH
EVOLVING
SUPPORTING
TECHNOLOGIES
MISSION
INTERNATIONAL
MEMORY
TRAINING

2010-2011

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Neuroscience Council**

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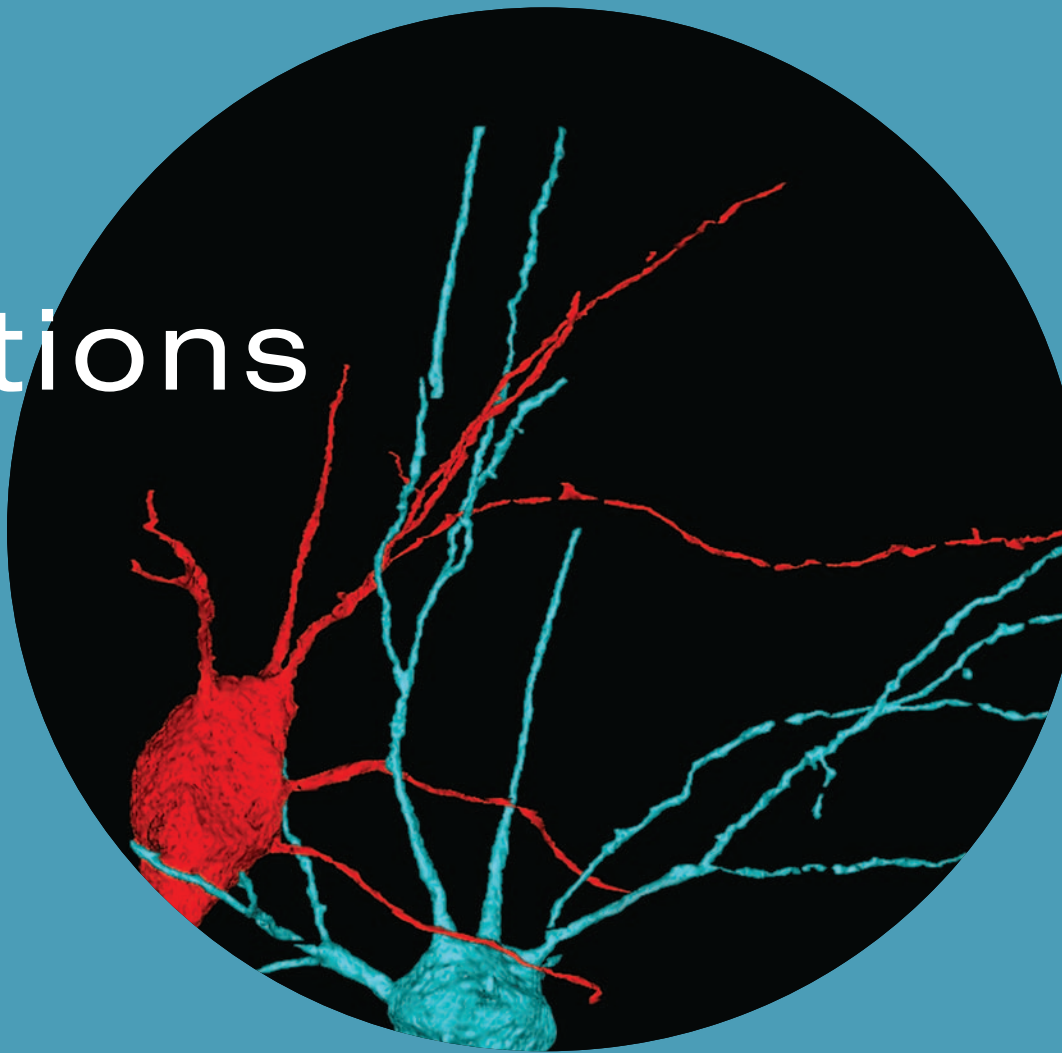
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connections

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DISCOVERY
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Carol A. Barnes, PhD, 2004–05

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Huda Akil, PhD, 2002–03

Fred H. Gage, PhD, 2001–02

Donald L. Price, MD, 2000–01

Dennis W. Choi, MD, PhD, 1999–00

Edward G. Jones, MD, DPhil, 1998–99

Lorne M. Mendell, PhD, 1997–98

Bruce S. McEwen, PhD, 1996–97

Pasko Rakic, MD, PhD, 1995–96

Carla J. Shatz, PhD, 1994–95

Larry R. Squire, PhD, 1993–94

Ira B. Black, MD, 1992–93

Joseph T. Coyle, MD, 1991–92

Robert H. Wurtz, PhD, 1990–91

Patricia S. Goldman-Rakic, PhD, 1989–90

David H. Hubel, MD, 1988–89

Albert J. Aguayo, MD, 1987–88

Mortimer Mishkin, PhD, 1986–87

Bernice Grafstein, PhD, 1985–86

William D. Willis, Jr., PhD, MD, 1984–85

Gerald D. Fischbach, MD, 1983–84

Dominick P. Purpura, MD, 1982–83

David H. Cohen, PhD, 1981–82

Eric R. Kandel, MD, 1980–81

Solomon H. Snyder, MD, 1979–80

Torsten N. Wiesel, MD, 1978–79

W. Maxwell Cowan, PhD, MD, 1977–78

Floyd E. Bloom, MD, 1976–77

Robert W. Doty, PhD, 1975–76

Edward V. Evarts, MD, 1974–75

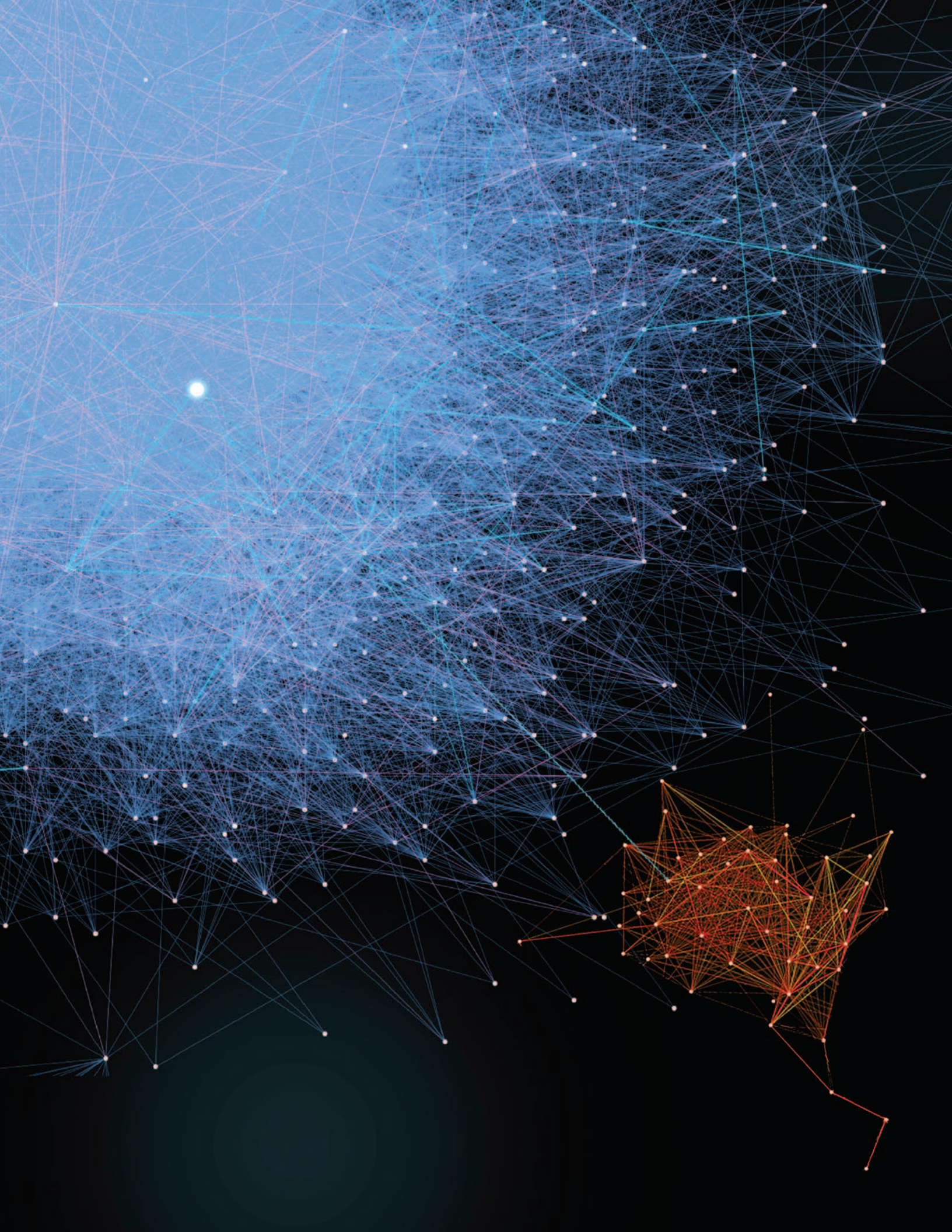
Theodore H. Bullock, PhD, 1973–74

Walle J.H. Nauta, PhD, MD, 1972–73

Neal E. Miller, PhD, 1971–72

Vernon B. Mountcastle, MD, 1970–71

Edward R. Perl, MD, 1969–70



DYNAMIC SCIENCE INTERNATIONAL
ADVOCACY CIRCUIT FUTURE
COGNITION BRAIN MISSION MEMORY
EVOLVING

contents

4 SfN Mission, Vision, and Values

6 Message from the President

8 Strategic Opportunities

10 CREATING VENUES FOR GREAT SCIENCE

11 Annual Meeting: Neuroscience 2011

14 *The Journal of Neuroscience*

20 SUPPORTING THE NEUROSCIENCE COMMUNITY

21 Membership and Chapters

24 Professional Development

32 EDUCATING AND ENGAGING THE PUBLIC

33 Public Information and Outreach

35 Science Advocacy

42 FINANCIAL AND ORGANIZATIONAL HIGHLIGHTS

Science in Society, Science in Progress

Exploring the progress and potential of neuroscience research and its impact on the world around us.

16 APPROACHES TO MENTAL HEALTH

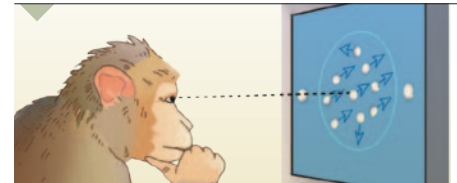


Neuroscientists are making strides in understanding and treating mental illness, but battling these diseases also involves changing prevailing societal views.

16 Fighting the Stigma of Mental Illness

18 Rethinking Depression

28 RESPONSIBLE ANIMAL RESEARCH

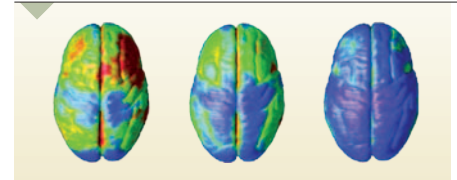


Animal research is vital for advances in science and health, and forms the foundation for understanding functions such as cognition, perception, and sensation.

28 Animal Research:
The Basis of Medical Progress

30 Attention: An Eye-Opening Story

38 THE TEENAGE BRAIN



As society continues to debate how to address teen behavior, research is explaining how the teen brain differs from the adult.

38 Teens, Neuroscience, and Society

40 Teen Brain: Vulnerability Exposed

Mission

Advance the understanding of the brain and the nervous system by bringing together scientists of diverse backgrounds, by facilitating the integration of research directed at all levels of biological organization, and by encouraging translational research and the application of new scientific knowledge to develop improved disease treatments and cures.

Provide professional development activities, information, and educational resources for neuroscientists at all stages of their careers, including undergraduates, graduates, and postdoctoral fellows, and increase participation of scientists from diverse cultural, ethnic, and geographic backgrounds.

Promote public information and general education about the nature of scientific discovery and the results and implications of the latest neuroscience research. Support active and continuing discussions on ethical issues relating to the conduct and outcomes of neuroscience research.

Inform legislators and other policymakers about new scientific knowledge, recent developments, and emerging opportunities in neuroscience research and their implications for public policy, societal benefit, and continued scientific progress.

Vision

Guided by its mission and its values, the vision of the Society for Neuroscience (SfN) is that the next ten years should be a decade of breakthrough discovery in neuroscience and breakthrough translation of scientific advances to improve the health of people everywhere.

SfN represents the entire range of scientific research endeavors aimed at understanding the nervous system and translating this knowledge to the treatment and prevention of nervous system disorders. It fosters the broad interdisciplinarity of the field that uses multiple approaches (e.g., genetic, molecular, cellular, anatomical, neurophysiological, system, comparative, evolutionary, computational, and behavioral) to study the nervous system of organisms ranging from invertebrates to humans across various stages of development, maturation, and aging. SfN facilitates the translation of this fundamental knowledge into strategies for the treatment of nervous system disorders, including neurological, neurosensory, neurodevelopmental, psychiatric, addictive, and other related illnesses. It also encourages information transfer from the clinic back to the basic research arena. In these ways, SfN contributes to the breadth of the field of neuroscience, its highly dynamic nature, and its creative use of all the tools of modern biology to understand neural function in health and disease.

Neuroscience is a rapidly evolving field that benefits greatly from, and helps to drive, the ongoing development of powerful new tools for acquiring and analyzing experimental data. The effort to make efficient use of the staggering amounts and diversity of information known about the nervous system raises challenges that have

social, ethical, and technical dimensions. Some of these challenges are common to biomedical research in general and to its subdisciplines of bioinformatics and scientific ethics. Others are unique to neuroscience by virtue of the tremendous complexity of neural circuits and their role in controlling behavior. This entails opportunities as well as responsibilities for the neuroscience community to develop novel tools and approaches for integrating and advancing our understanding of the nervous system.

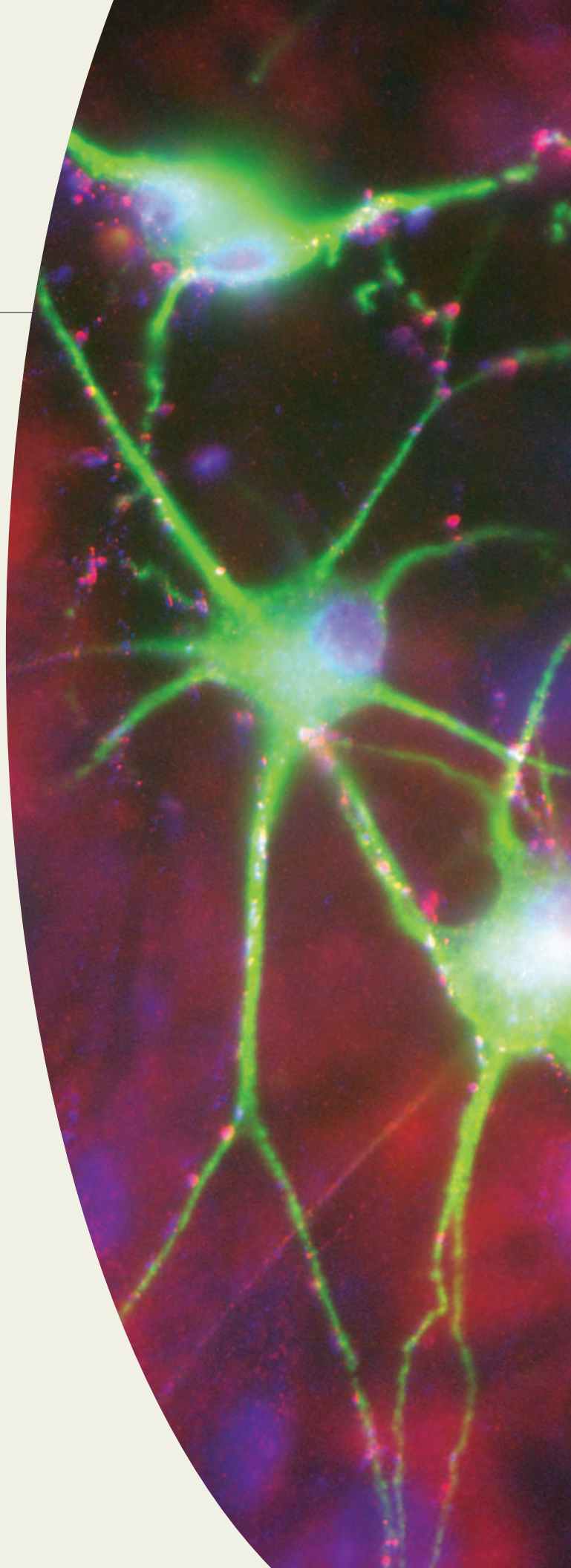
SfN will play a key role in confronting new issues as they challenge and energize the field. This will require active dialogue between SfN and federal funding agencies (NIH, NSF, and others) to define current needs and to develop strategies for meeting them. SfN's perspective on the current nature of the field and its future trajectory permeates all the elements of this strategic plan and will guide the initiatives aimed at enhancing the key scientific functions of the SfN, including the annual meeting and *The Journal of Neuroscience*. This perspective will guide the ways in which SfN will strive to serve its membership and will frame the public outreach and governmental interactions of SfN.

SfN supports the open exchange of scientific information both among scientists and between scientists and the public. The Society is committed to ensuring that its published materials are scientifically accurate, and are widely accessible to interested audiences. The Society seeks to ensure that its access policies and practices for information dissemination are consistent with these goals, and with the sustainability of a system requiring careful scientific review prior to publication.

Values

In carrying out all of its activities, the Society for Neuroscience is committed to the following:

- Identifying and serving the evolving needs of SfN members as well as the field of neuroscience.
- Actively promoting the idea that progress in understanding the nervous system depends on the honest pursuit of scientific research and the truthful representation of findings.
- Continuing to promote greater diversity of representation of women, minorities, and young investigators, along with geographic and specialty balance, in SfN's meetings, conferences, committees, and governance processes.
- Seeking new and innovative ways to utilize technology in ongoing activities to better serve members and to help manage the problems of scale as a successful association in the 21st century.
- Fulfilling its Mission in a socially, economically, and environmentally responsible fashion, including minimizing SfN's environmental footprint through energy efficiency, recycling, and other initiatives, and being mindful of the broader impact of its day-to-day practices, decisions, and actions.
- Developing effective strategic relationships and collaborative initiatives with appropriate external partners, including other scientific societies and associations, health advocacy groups, foundations, public agencies, government entities, educational institutions, corporate entities, information technology service providers, etc.
- Building a model of iterative planning into the fabric of SfN governance and management processes, incorporating regular evaluation of the impact and success of initiatives and activities, and periodic revisiting of major programs and activity clusters.



Message FROM THE

President



Looking back over FY2011, the neuroscience field continued to generate exciting and innovative scientific advances — although the fiscal outlook and research funding in many nations remain uncertain. Given both scientific promise and external challenges, the Society for Neuroscience (SfN) devoted itself to a sustained focus on science, fostering career development, embracing new platforms for public education and advocacy, and establishing new ways to engage our scientific community.

Neuroscience 2011 in San Diego — the Society's 40th annual meeting — displayed neuroscience's tremendous achievements, its interdisciplinary nature, and promising new pathways for discovery. From the poster floor to main lecture halls and hallway conversations, the meeting offered the field's best opportunity to share great science, meet colleagues and mentors, and foster new relationships. Nearly 32,000 attendees took advantage of enhanced career development programming, an expanded line-up of workshops, the field's leading exhibit hall, and highly attended mentoring and advocacy events, as well as the popular "Dialogues Between Neuroscience and Society" discussion with award-winning actress and advocate Glenn Close, and a Special Presentation by former Rep. Patrick J. Kennedy (D-RI).

Leveraging technology to better serve its members, the Society also launched several new online initiatives in FY2011 to facilitate better information sharing and connections within the neuroscience community. *The Journal of Neuroscience* launched a new online layout for easier navigation and functionality and, reflecting a desire for new media, began publishing multi-media files. SfN also launched *NeurOnLine*, a virtual member community to foster discussion and share science



year-round. *NeurOnLine* provides a venue for discussing science, mentor-matching, shared information resources, and forums on a host of topics, from work-life balance to finding jobs outside of academia, and advocacy strategies. Over time, *NeurOnLine* will make connecting and collaborating easy, interactive, and global.

NeurOnLine is one example of how SfN maintains a focus on finding ways to represent and support the global neuroscience community as its membership set new records in 2010 — 41,440 members from 87 countries. Helping members advance careers at all professional stages remains a key priority, and it was a particular emphasis of mine while serving as SfN's president. SfN undertook research to identify and evaluate member needs, including a new advisory group and surveys of worldwide membership, launched a new online mentoring program, and added new professional development options to reflect the needs of an evolving field. It is my hope that SfN's efforts will serve members today, and ensure the field's ability to train and retain the brightest students and professionals in years to come.

To communicate with the public about important discoveries, SfN embraced novel approaches to connect with educators, policymakers, the media, and the public, including the launch of SfN's first Brain Awareness Video Contest and live Web streaming of Neuroscience 2011 press conferences. In addition, the Society received \$1.53 million in funding to create and maintain *BrainFacts.org*, a unique nonprofit online source for authoritative public information about the progress and potential of brain research. With support from founding partners The Kavli Foundation and The Gatsby Charitable Foundation, SfN will launch *BrainFacts.org* in spring 2012. The Society will continue to engage other outside partners and funding sources so that, ultimately, the site's rich content can be supplemented with interactive tools.

The Society also was deeply aware of the severe funding and policy challenges facing scientists in many nations. In FY2011, SfN undertook activities to advocate for federal science investments and responsible animal research in the United States, and forged new partnerships across the international research community to expand collaborative advocacy worldwide. Through cooperation with key partner organizations, member involvement in grassroots, and U.S. activities such as Capitol Hill Day, the Society continues to make the case for strong investment in science, basic research, and essential animal research.

Local and regional SfN chapters played an increasing role as partners in SfN public outreach programs and as a valuable place for members to share information and engage local communities. Today, the Society has 150 chapters in 22 countries and in 47 of the United States. To help new chapters mobilize, SfN provides start-up grants to all new chapters. The Society also disbursed nearly \$80,000 in FY2011 through direct grants that enable chapters to engage in such activities as cross-chapter conferences and new Brain Awareness programs.

SfN's activities throughout the year help our members forge and strengthen connections across the field in a rich neuroscience network. By identifying and seizing new opportunities, SfN's efforts will help to ensure the field emerges from global recession stronger and well-positioned to continue advancing science and improving health.

SUSAN G. AMARA

Strategic Opportunities

As part of its enduring mission to serve the evolving needs of the neuroscience field, SfN has engaged in a far-reaching strategic planning process to discuss emerging trends within the organization and the broader neuroscience community, and to evaluate potential opportunities to enhance value and service for members.

SfN Council embarked on this process after several years of a difficult and volatile economy. The Society weathered this period relatively well, by tightly controlling spending in the face of uncertain revenues, and limiting investment in new activities during this time. But in spite of continuing economic uncertainty — and in some cases *because* of it — SfN recognizes important opportunities to invest selectively in new and expanded programs that benefit members and the neuroscience community.

New Opportunities, New Technologies

Resulting strategic opportunities and initiatives are focusing on those that efficiently serve a highly dynamic, diverse, and globalizing field, and take advantage of, and enhance, SfN's unique abilities and strengths. These opportunity areas include the following:

- A *growing and changing membership* that is becoming younger and more global;
- New *professional development initiatives* and opportunities for members at all stages of their career;
- Enhanced *programming at the annual meeting*; and

- Broader *outreach efforts to raise public awareness of neuroscience research* among the public and policymakers, and to strengthen support among those audiences for research funding.

Cutting across all of these areas is the opportunity to take advantage of *new communications and technology solutions* — paving the way for SfN to deliver programming in new ways and to much wider audiences, including internationally.

Member-Driven Priority Setting

This ambitious global agenda is being advanced through close consultation with key member constituencies. Council is playing a leading role, by choosing and prioritizing which overarching opportunities are most important to the current needs of the membership and the future strength and health of the Society. This leadership and direction from Council guides working group, committee and staff decision-making, and project execution throughout the year.

Advisory groups led by Council members have explored priority topics more fully, engaging the expertise and perspectives of members from across the field and around the globe, and ensuring representation of demographic segments of the membership. Moreover, SfN has been conducting quantitative and qualitative research to better understand member needs, preferences and priorities, and is carefully developing a set of options and initiatives to effectively — and *cost-effectively* — advance SfN's mission.

Implementation is being overseen by member-driven committees and working

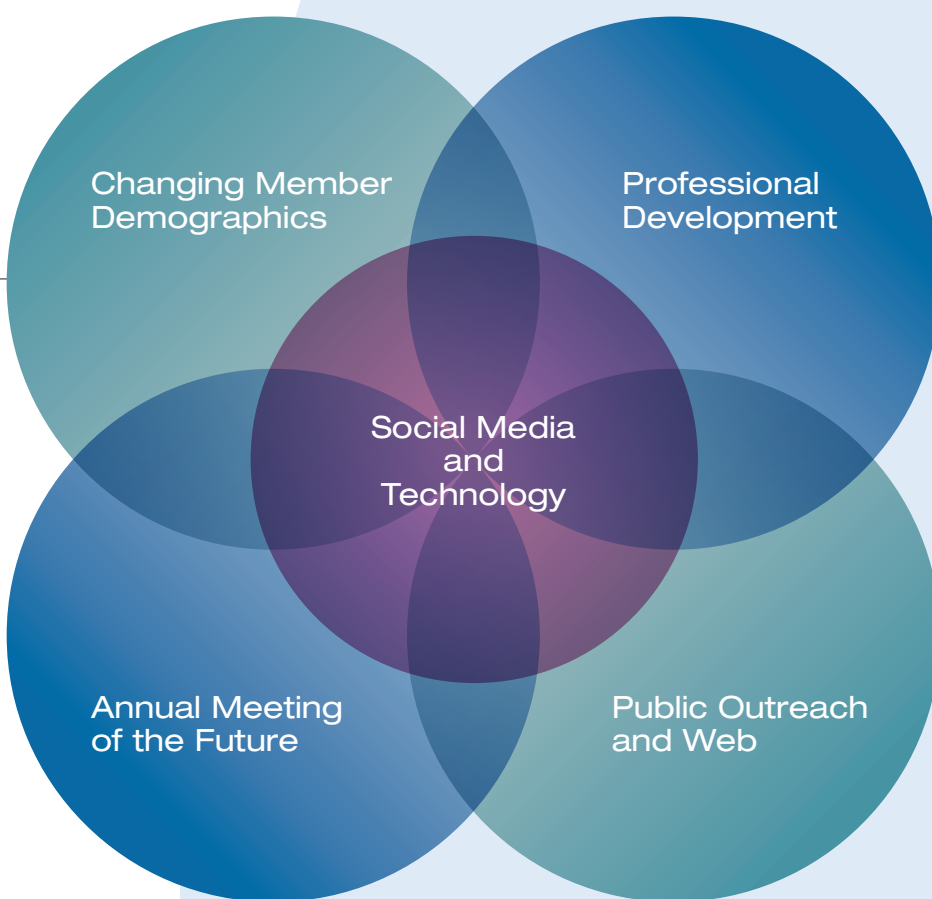
groups, supported by key staff with strong project management and technology skills, using best-in-class vendor-partners where needed with deep expertise implementing similar projects for scientific and educational organizations. SfN is undertaking many of these initiatives in strategic partnerships with other key scientific organizations in the United States or other neuroscience partners around the world.

Stewards for Near-Term Growth, Long-Term Strength

All discussions of new programs and activities take into account responsible financial management — with options for staging programs to available resources — enabling SfN to invest selectively in new priority programs that provide the most benefit to the most members. As new program ideas are considered, Council, committees, and staff are explicitly mindful of:

- Maintaining a balance between expenses and revenues;
- Nurturing continuing revenue sources;
- Shoring up vulnerable sources of revenue; and
- Effectively mining and leveraging new revenue sources such as grants.

As highlighted throughout this annual report, some initiatives are already underway, while many others are just beginning or are under continuing discussion. SfN looks forward to sharing new efforts, getting input, and meeting the needs of the neuroscience community in years to come.

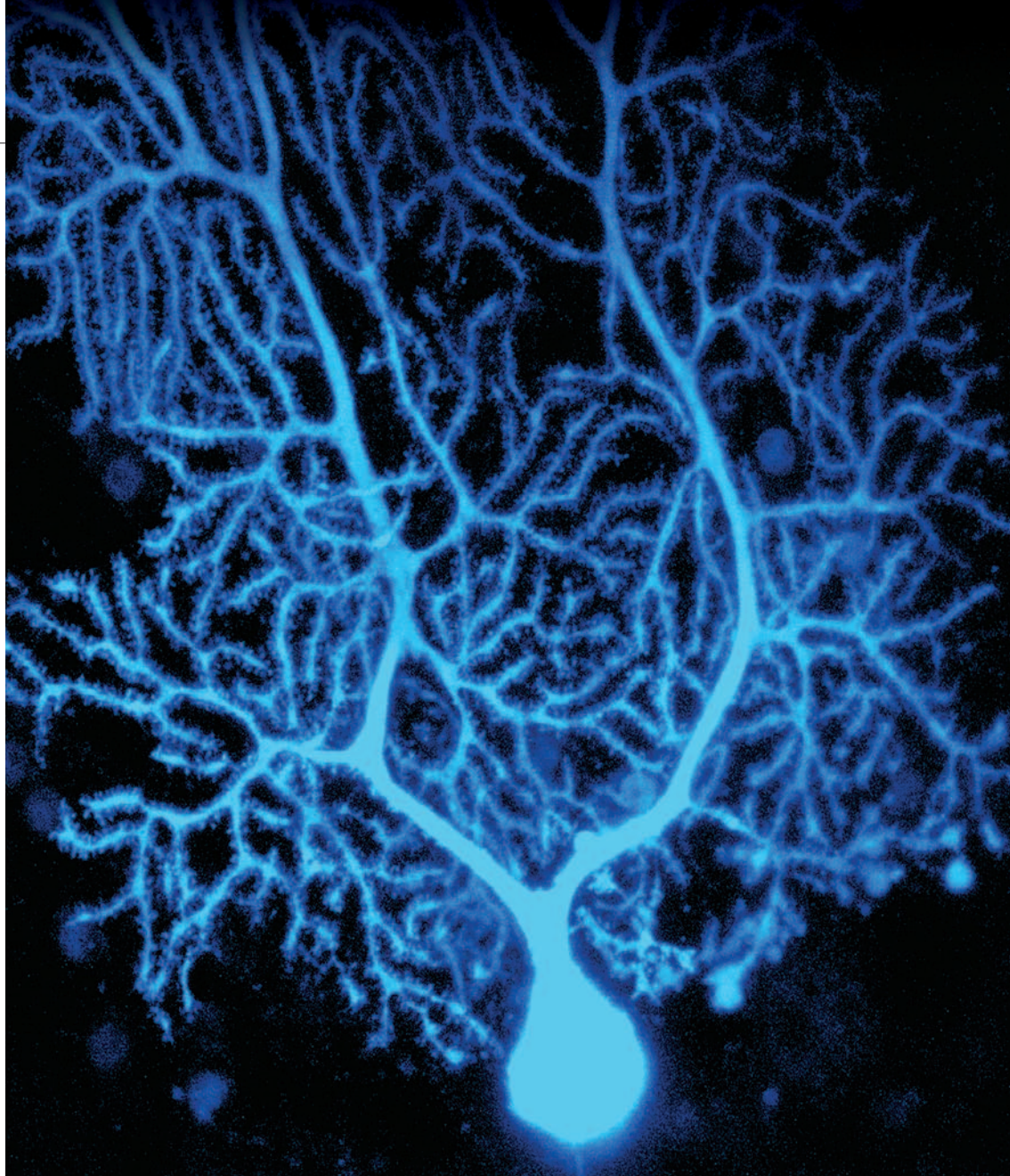


Strategic opportunities and initiatives serve a highly dynamic, diverse, and globalizing field, and take advantage of, and enhance, SfN's unique abilities and strengths.

Creating Venues



An essential part of the Society's mission is to advance the understanding of the brain and nervous system by bringing together scientists worldwide and facilitating the integration of research that spans the discipline.



FOR Great Science



Neuroscience 2010: Inspiring Speakers, New Professional Opportunities

Nearly 32,000 people gathered in the San Diego Convention Center for Neuroscience 2010, the premier venue for neuroscientists from around the globe, to explore the latest research on the brain and nervous system. This year marked the 40th consecutive year scientists convened for the annual meeting, and the sixth time San Diego hosted the SfN annual meeting. Society members and attendees had access to more than 16,000 abstract presentations about cutting-edge research. In addition, 11 featured lectures, 13 special lectures, 21 symposia, and 25 minisymposia expanded the breadth of knowledge shared among attendees. On the exhibit floor, a diverse group of 576 exhibitors represented commercial, nonprofit, government, and academic institutions with products, services, and programs aimed at SfN's varied membership.

Pairing Science with a Message

The highly attended Presidential Special Lectures at Neuroscience 2010 addressed SfN President Michael E. Goldberg's theme for the meeting, "Neuroscience from Molecules to Mind." Martin Chalfie presented research on *C. elegans* and the molecules that help sense touch. Okihide Hikosaka discussed how animals use neuronal signals to construct "road maps" that help them make optimal behavioral choices. Pawan Sinha discussed his

research on how the brain learns to recognize objects, scenes, and sequences while highlighting Project Prakash, a humanitarian and scientific initiative that aims to provide sight to congenitally blind children and foster insight into the early stages of vision. Helen S. Mayberg explained how advances in neuroimaging have shifted the focus of depression to more anatomically based models. She discussed the theoretical and data-driven foundation of deep brain stimulation, including clinical results from ongoing studies.

Other Featured Lectures included the Fred Kavli Distinguished International Scientist Lecture by Christine Petit; the Peter and Patricia Gruber Lecture by Robert H. Wurtz; the David Kopf Lecture on Neuroethics by Henry T. Greely; the Albert and Ellen Grass Lecture by Lily Jan and Yuh Nung Jan; and the History of Neuroscience Lecture by Victor P. Whittaker.

In the popular "Dialogues Between Neuroscience and Society" presentation, award-winning actress and advocate Glenn Close, joined by her sister and nephew, led a discussion on how science and society can collaborate to change minds on the topic of mental illness. Acknowledging that much work must be done to help the American public understand that mental illness is a brain disease, Close and her family members tackled questions like: "How do we reduce misconceptions, stigma, and bias that confront

those with conditions like depression, bipolar disorder, and PTSD?”

In a Special Presentation, Rep. Patrick J. Kennedy (D-RI) delivered a rallying speech on his vision for a new campaign for brain research. Alluding to his uncle’s call 50 years ago to put a man on the moon, Kennedy called for a new “moonshot” — a plan for unprecedented research advancements over the next 10 years. He called on attendees to conduct the research necessary to fight diseases of the brain affecting millions of families in the United States and around the world.

Engaging Dialogues with the Public

In addition to the presentations by Close and Kennedy, two more events were open to the public. Gerald D. Fischbach organized the Public Symposium, “Autism: Progress and Prospects,” an overview of the current state of autism research and

the ways in which genetic, cellular, and behavioral analyses reinforce each other.

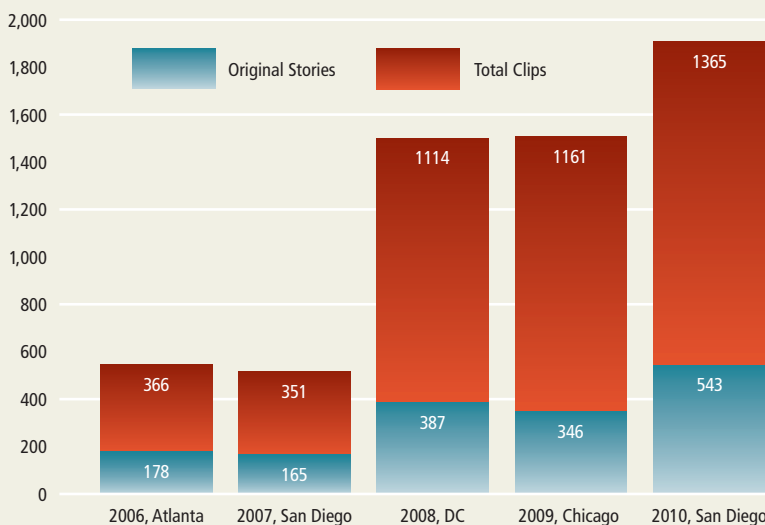
The 2010 Public Advocacy Forum entitled “Military TBI and PTSD Research: Advancing

Rep. Patrick Kennedy’s “Moonshot”: One Mind for Research

In a Special Presentation at Neuroscience 2010, former U.S. Rep. Patrick Kennedy introduced a new initiative to increase support for neuroscience research and development over the next decade. Following his remarks at the annual meeting, Kennedy requested assistance from SfN leaders to develop a strong scientific core for the “One Mind for Research” campaign, which held its first annual forum May 23-25 in Boston. In continuing dialogue with Kennedy and One Mind cofounder Garen Staglin, SfN leaders played a vital role in ensuring high-quality and compelling science was central to the forum’s program. Under the leadership of then-Harvard Provost and neuroscientist Steve Hyman, the campaign’s “10-year Plan for Neuroscience: From Molecules to Brain Health” includes an emphasis on the irreplaceable role of basic science along with crucial clinically relevant discovery. The plan is available at www.1mind4research.org.



ANNUAL MEETING MEDIA COVERAGE



Neuroscience 2010 coverage continued along a sustained growth trajectory, and speaks to SfN’s effectiveness in creating opportunities to raise visibility of neuroscience in the public sphere.

Science, Reducing Stigma, and Providing Hope” proved to be a standing-room only event. It featured U.S. and international scientists and a brain injury advocate on a discussion of the role and future of military research on these “signature injuries” of war; progress and new discoveries being made; and how emerging knowledge can be applied to address broader civilian health issues, from epilepsy to depression and PTSD.

Connecting on Social Media

The SfN neuroblogging initiative enjoyed a second year of success during Neuroscience 2010. The Program Committee selected 14 members to serve as the official neurobloggers, providing attendees with news about buzz-worthy events and the public with an inside look at what takes place during the meeting. Bloggers wrote about a variety of annual meeting experiences, including must-see posters, exceptional science presented within symposia, places to eat, after-hours social events, and tried-and-true tips for navigating the

meeting. Many of the bloggers also tweeted during the meeting using the Neuroscience 2010 hashtag #sfn10.

On SfN's Twitter streams @SfNtweets and @Neurosci2010, the Society posted more than 140 tweets and used Facebook announcements to highlight upcoming events, shared news releases from the meeting, and alerted attendees to useful information. Some of the most popular tweets linked to the neuroblogs and reminded attendees of the time and place for special lectures. More than 3,000 tweets were sent using the hashtag #sfn10 during the annual meeting.

Advancing Careers at All Stages

Guided by SfN's new Professional Development Committee and a Council-appointed Professional Development Working Group, the 40th annual meeting provided attendees with an enhanced offering

of career-related programs and activities. An expanded line-up of 11 workshops focused on popular issues such as grant writing in the new NIH format, career options outside academia, and securing funding to assist early-career scientists in the transition to independent investigator. The annual poster sessions highlighting the research of diversity fellows and international fellows were expanded this year to include a new poster session for SfN travel award recipients. The close proximity of the three sessions allowed several hundred attendees to flow from one session to another, learning, networking, and supporting the work of the featured young investigators.

While mentoring occurred at many levels and venues throughout Neuroscience 2010, nearly 200 people attended "Career Development Topics: A Mentoring and Networking Event." The year's

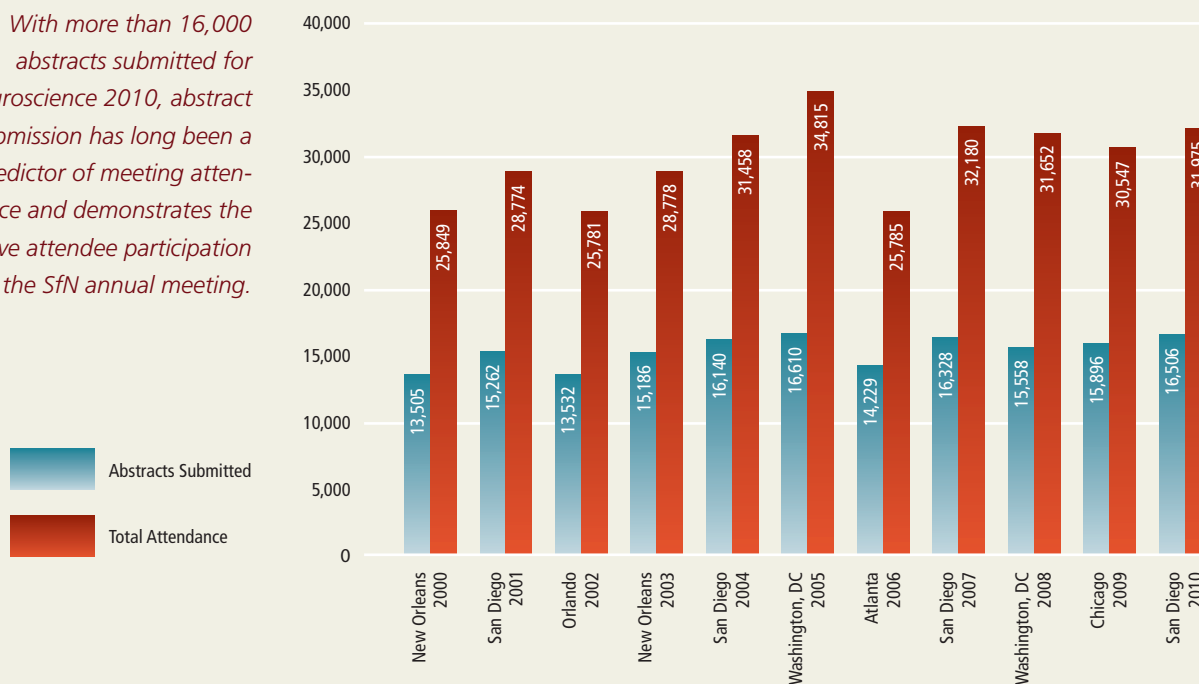
mentoring event gave attendees the ability to connect with multiple mentors in an informal, roundtable format, and drew trainees from the neighboring poster sessions who were able to drop in for additional networking and guidance. Discussions included work-life balance, choosing graduate schools and postdoctoral positions, job hunting in the biotech industry, and more.

The NeuroJobs Career Center at the annual meeting attracted more than 1,000 job seekers and 200 employers. Nearly 300 on-site interviews were scheduled, fostering new opportunities for employers and job seekers alike. Following the success of the 2010 Career Center, SfN looks forward to the first Career Day at Neuroscience 2011, featuring a new on-site job fair.

LEARN MORE:
www.sfn.org/am2010
www.sfn.org/am2011

STRONG SCIENCE DRIVES STRONG ATTENDANCE

With more than 16,000 abstracts submitted for Neuroscience 2010, abstract submission has long been a predictor of meeting attendance and demonstrates the active attendee participation in the SfN annual meeting.



The *Journal of Neuroscience* continued to be the most highly cited journal in the field in FY2010, continuing its tradition of serving as the premier publishing platform for neuroscientists to share new scientific knowledge and advance the understanding of the brain and nervous system. FY2010 saw another vibrant year for *The Journal* with submission numbers and subscription rates staying strong, an enhanced online version, and a considerable interest from the news media in the latest articles. 2011 also marks the 30th anniversary of *The Journal of Neuroscience*, which has expanded from 12 issues per year in 1981 to the current 50 issues each year, reflecting the growth of the field. Over the years, the addition of special features, such as the Journal Club and Toolbox articles, which describe and evaluate

methods and techniques, has enriched the content.

A New Online Look

Editor-in-Chief John Maunsell, professor of neurobiology at Harvard Medical School, oversaw the launch of a new look for *The Journal of Neuroscience* online. In February, www.jneurosci.org displayed new features and functionalities aimed at simplifying site navigation and increasing user satisfaction.

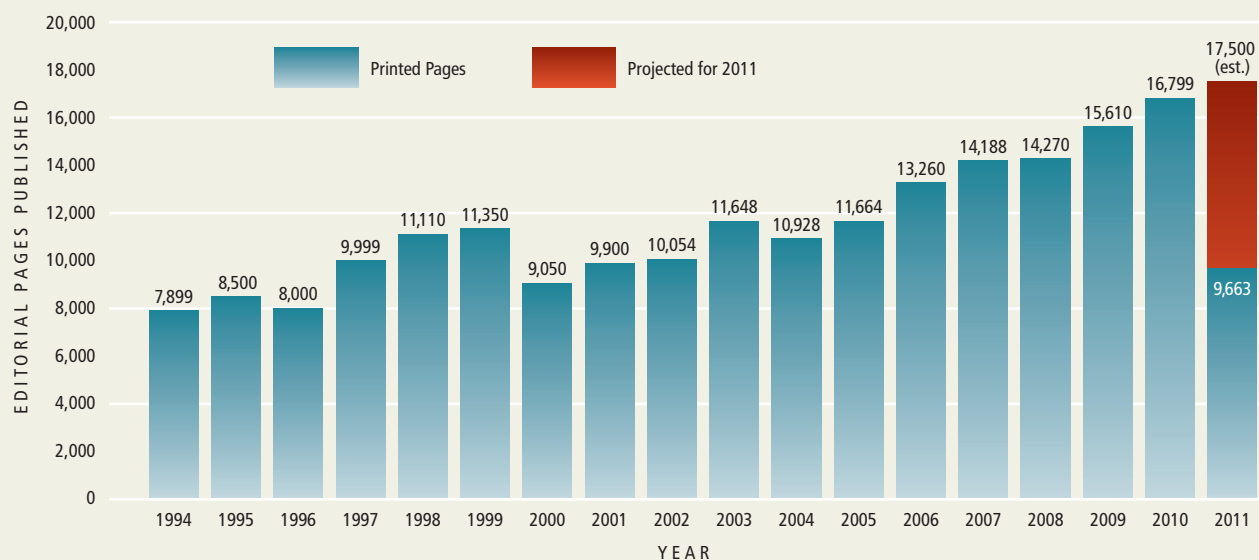
A modified page layout allows for easier scanning with quick previous/next links to scan by article section and improved text fonts and formatting. A popular-articles list makes the Most Read and Most Cited articles easily accessible. A related-articles search allows readers to perform a one-click search for related articles by author, keyword, or subject classification from within

an article. An abstract preview allows for a mouse-over, pop-up version of the abstract to display on the table of contents. With the elimination of supplemental material in November 2010, *The Journal* began publishing multimedia files in online and PDF versions. Integrated videos allow data to be accessed more efficiently and comprehensively.

Remaining a Leader in the Field

The Journal continues a longstanding tradition of solid readership and submissions. The number of published articles continues to grow in response to strong subscriptions — as of June 30 *The Journal* received 3,228 submissions. *The Journal's* acceptance rate remains approximately 28 percent. Institutional subscriptions remain strong with 1,071 in CY2011.

EDITORIAL PAGES PUBLISHED CONTINUES AN UPWARD TREND



The continued increase in number of editorial pages published demonstrates The Journal's credible presence and reputation as a premier venue for scientific publishing.

Meeting with Members

Editor-in-Chief Maunsell met with Society members in an informal setting, holding “office hours” at the SfN exhibit booth at Neuroscience 2010 in San Diego. The experiment was very successful, and Maunsell was able to answer member and author questions relating to *The Journal*. Questions covered a range of topics, including editorial procedures, cover art submissions, and whether specific manuscripts would be appropriate for *The Journal*. Several members shared suggestions for improving *The Journal*, and many students and postdoctoral fellows inquired about making submissions to the Journal Club feature.

Media

The Journal remains a respected and reliable news source for local, national, and international media coverage. In FY2011, SfN engaged reporters and public information

offices, receiving more than 5,200 media hits for studies appearing in *The Journal*. Coverage included *The New York Times*, *Discover Magazine*, *Scientific American*, and NPR in the United States; *The Guardian*, *The Telegraph*, *The Times*, *Dagens Nyheter*, *Die Zeit*, Agence France-Presse (AFP), and the BBC in Europe; *Radio Canada* in Canada; *Yahoo! Taiwan* in Taiwan; Asian News International wire in India; *International Business Times* in Australia; and other English and foreign-language media around the world. Reporter relationships, coupled with significant findings, continue to keep *The Journal* and neuroscientists in the news throughout the year.

LEARN MORE:

www.jneurosci.org

STRATEGIC Opportunity

Social media tools present an opportunity for SfN to connect the global neuroscience community year-round. In June 2011, SfN launched *NeurOnLine* — a new, members-only online community where members can share great science, network, and forge collaborations — anytime, anywhere — within a trusted forum. As with the annual meeting and *The Journal of Neuroscience*, *NeurOnLine*'s content and discussions are generated by members, for members.

NeurOnLine

fire together wire together

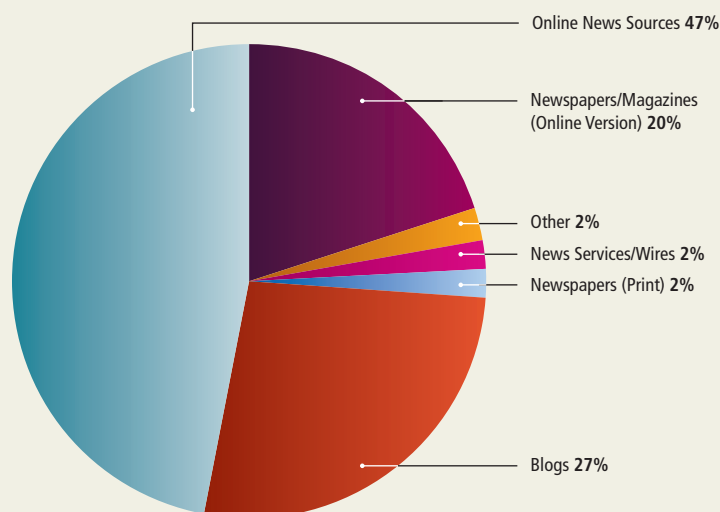
NeurOnLine provides members with a venue to talk about topics and concerns facing neuroscientists today:

- Discuss emerging scientific findings and issues.
- Explore new research tools and techniques.
- Network year-round with more than 41,000 members worldwide.
- Share experiences, get guidance or provide mentoring on career paths, stages, and challenges.
- Get involved in public outreach, from Brain Awareness and science teaching to advocacy.

NeurOnLine helps members advance their science and their career through real-time discussions and networking with other scientists worldwide, and mentoring and professional development resources.

JOIN THE CONVERSATION
neuronline.sfn.org

SPREADING THE WORD ABOUT EMERGING SCIENCE NEWS



Media hits totaled more than 5,200 for FY2011.

Each week, reporters seek out *The Journal* studies and member experts for featured and breaking news. Working with media from around the globe, SfN promotes awareness of new scientific discoveries and research progress.

Fighting the Stigma OF Mental Illness

Fighting stigma is critical in helping people with mental illness seek and receive proper treatment and care.

The National Institute of Mental Health (NIMH) estimates that mental illness affects 26.2 percent of adults in the United States in any given year. Unfortunately, the widespread stigma associated with mental disorders prevents many from seeking proper diagnosis and treatment. This refusal to ask for help can eventually lead to isolation, reduced quality of life, and even suicide.

At Neuroscience 2010, celebrated actress Glenn Close spoke about the importance of confronting this stigma during “Dialogues Between Neuroscience and Society,” SfN’s annual presentation highlighting the ways brain research touches the human experience.

Bringing Change to Mind

Close helped create *BringChange2Mind*, a nonprofit organization dedicated to raising awareness about mental illness and eliminating the stigma associated with it. She was inspired to become an advocate for families living with mental illness by her own family — her sister Jessie Close is living with bipolar disorder, and Jessie’s son, Calen Pick, is living



with schizo-affective disorder. Both joined Close on stage to discuss their experiences and personal struggles with mental illness.

BringChange2Mind's mission is two-fold: to offer quick and easy access to information and resources for people with mental illness, and to combat the crippling stigma surrounding these brain disorders. The goal of these efforts is to fight the persistent and toxic beliefs that negatively impact the lives of individuals suffering from mental illness.

The U.S. Department of Health and Human Services estimates that 10.5 million American adults have an unmet need for treatment of mental illness. Anxiety resulting from possible social stigma — including fears of job loss and failure to maintain social standing — prevents almost



◀ Acclaimed actress Glenn Close discusses mental illness with NIMH Director Thomas Insel during the “Dialogues Between Neuroscience and Society” lecture at Neuroscience 2010. Close’s family experience with mental illness inspired her to help create *BringChange2Mind*, a nonprofit organization dedicated to fighting the stigma surrounding mental illness.

30 percent of these individuals from getting help. Beyond the human suffering, there is a societal cost as well: the impact of mental illness is estimated at more than \$193 billion in lost earnings each year.

Need for a New Approach

Although a majority of Americans know that mental disorders are brain diseases with a biological basis, eliminating the prevailing prejudice against people living with mental illness has proven to be difficult. NIMH Director Thomas Insel, who participated in the Dialogues presentation, noted previous campaigns to reduce the stigma of mental illness from the World Health Organization and others have done little to improve the daily experiences of these individuals or encourage


them to get help, highlighting the need for a new approach.

Without professional medical care, many people with mental disorders turn to destructive behaviors, such as substance abuse. In extreme cases, individuals with severe mental distress may contemplate suicide. In fact, almost 90 percent of the more than 34,000 individuals dying by suicide each year in the United States are affected by mental illness. That figure is almost twice the number of homicides that occur annually. Despite continued efforts by NIMH and other organizations to motivate people in distress to seek proper resources and care, the number of people dying by suicide has remained constant for the past 20 years.

Principles for Change

For Close and *BringChange2Mind*, confronting the stigma of mental disorders requires action. Removing the fear and shame means understanding and accepting the reality of mental disease and the organization advocates a set of key principles to raise awareness and fight stigma. “Mental illness can be uncomfortable. All the clichés come into play,” said Close. But facing those stereotypes is essential for overcoming this stigma, she said. ■

Rethinking Depression



Research with zebrafish may offer a new way to conduct screens of future therapeutics for people with depression.

Scientific advances are leading brain researchers to a clearer understanding of the biology of depression and ways to improve therapy.

Depression, one of the most common and costly brain diseases, affects an estimated 121 million people worldwide. Persistent sadness and the inability to experience pleasure often overcome victims of depression, and disruptions in sleep, appetite, and mood are common. In the most severe cases, depression can lead to suicide.

While current treatments can be both safe and effective, finding the right one for each patient can be hit-or-miss. It can take weeks before the drugs take effect, and even then, side effects are common. Up to two-thirds of patients continue to experience depression following first-line therapies. In 30 percent of cases, antidepressants fail to offer any relief.

Recent advances — leveraging imaging and animal studies — are guiding researchers to a better understanding of the biology of depression and ways to improve disease treatment.

Building Better Drugs

Most antidepressants cause the mood-regulating chemicals serotonin and norepinephrine to flood the gaps between brain cells, kicking off molecular changes inside the cells. Researchers are increasingly interested in what is going on inside

those cells for clues about how to improve antidepressants, including reducing the time it takes for drugs to take effect.

Recent studies with mice show daily doses of selective serotonin reuptake inhibitors (SSRIs) — a popular class of antidepressants — lead to an increase in several proteins inside brain cells that may be key to antidepressant response. Other studies point to the role of several enzymes that may regulate important cellular processes.

Drugs approved for other disorders may improve the response to antidepressants by manipulating the chemicals that brain cells use to communicate. Studies in mice suggest a drug that helps people quit smoking by blocking the brain chemical acetylcholine improves the response to SSRIs. Other studies show promise for the general anesthetic ketamine, which blocks some of the actions of the brain chemical glutamate. Ketamine relieves symptoms of depression in people resistant to current therapies within four to six hours, rather than weeks, according to recent research. These findings may shed light on the cellular and chemical events that lead to depression.

Neuroscientists continue to explore the role of the immune and stress systems in depression for potential ways to improve treatment.



◀ *Deep brain stimulation helps relieve symptoms of depression in some patients who are resistant to current drug options. As shown in the X-ray image, the therapy uses an implanted electrode to deliver electrical impulses deep within the brain.*

Research shows immune-triggered inflammation leads to depressive-like behavior in mice — an outcome that is reversed by blocking the hormone that signals inflammation in the brain. Other researchers have demonstrated that zebrafish with a mutation in a receptor involved in stress show depressive-like behaviors, which are alleviated when SSRIs are added to their water. Once treated with SSRIs, the once immobile zebrafish mutants increased their swimming behaviors, perhaps indicating a new way to conduct drug screens of future therapeutics.

Stimulating the Depressed Brain

People who do not experience relief from current antidepressants may benefit from brain stimulation

therapies. In recent years, there has been growing interest in deep brain stimulation (DBS), which uses finely tuned electrical currents to stimulate circuits of the brain. Patients who receive DBS in the subcallosal cingulate gyrus — a region of the brain believed to be overactive in treatment-resistant patients — display marked improvement within hours of treatment. Studies show patients continue to experience the benefits of DBS even after years of chronic therapy.

Some neuroscientists believe DBS may act as a reset button for the brain, manipulating brain networks whose dysfunction leads to depression. For instance, DBS in the subcallosal cingulate gyrus was

associated with changes in cortical and limbic circuits — both of which are implicated in depression. DBS may offer a long-term solution for treatment-resistant patients, and point researchers toward a better understanding of how changes in brain pathways lead to depression.

Neuroscientists continue to uncover clues about how the brains of depressed people differ from others — from the molecular to the anatomical scale. With greater insight about how current treatment options for depression work, scientists strive to develop new therapies that will begin to offer faster relief with fewer side effects. ■

TRAINING

MEMBERSHIP

POSTDOCS

SPINES

EMERITUS

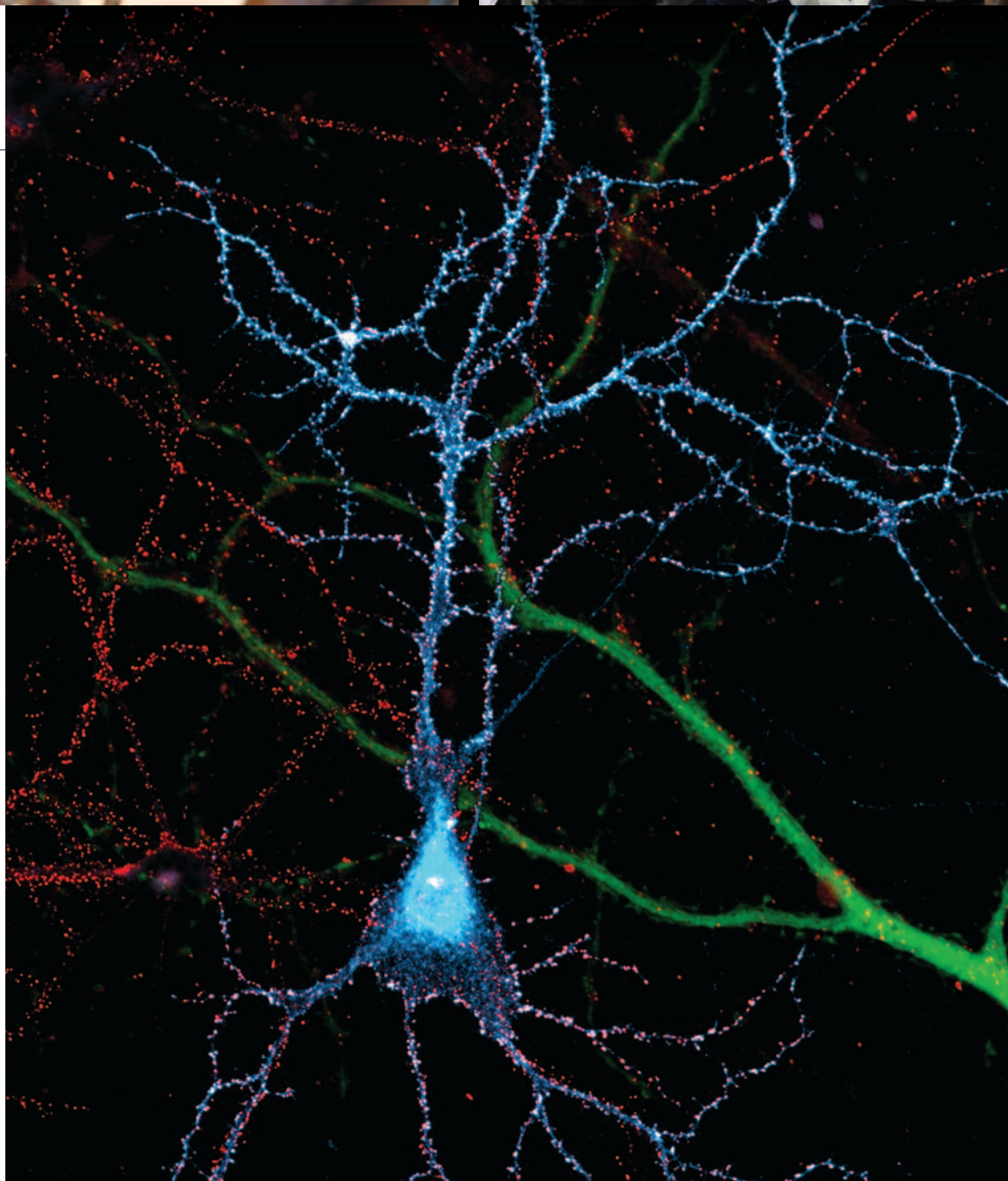
MENTORING

STU

Supporting THE Neuroscience



*SfN continually aligns
strategies, programs,
and member offerings
with a growing and
increasingly diverse
membership in mind.*



Community



Membership and Chapters: *Connecting a Growing Global Community*

During a period when many associations struggled with flat or declining membership, SfN's grew by nearly 3 percent in 2010 to a record 41,440 members in 87 countries. Non-U.S. members comprise 38 percent of all members, up one percentage point from 2009, while student membership remained a robust 26 percent of the membership. Institutional Program (IP) membership — newly created in 2009 for neuroscience departments and programs — also saw gains. Strong membership numbers reflect the dynamism of the field and SfN's continued success in delivering value to an expanding membership. Two major member surveys were conducted this year to identify new opportunities for SfN to provide increased value to members in the coming years.

Measuring Member Needs

To ensure SfN remains focused on the evolving needs of its growing membership, the SfN Council formed an advisory group to explore changing membership demographics, gauge progress in meeting evolving member needs, and identify additional areas where SfN can provide greater value. A comprehensive membership survey was conducted in April 2011, with a remarkable 29 percent of members participating. Results are informing an updated membership enhancement strategy that fully reflects the varied segments of the Society's global community.

In response to growing communication needs across all member segments, SfN launched an enhanced online member directory in fall 2010. This members-only resource allows individuals to enter expanded career-related profile information for networking purposes and to form online communities around shared interests. The directory is an integral part of *NeurOnLine*, SfN's global online forum for members.

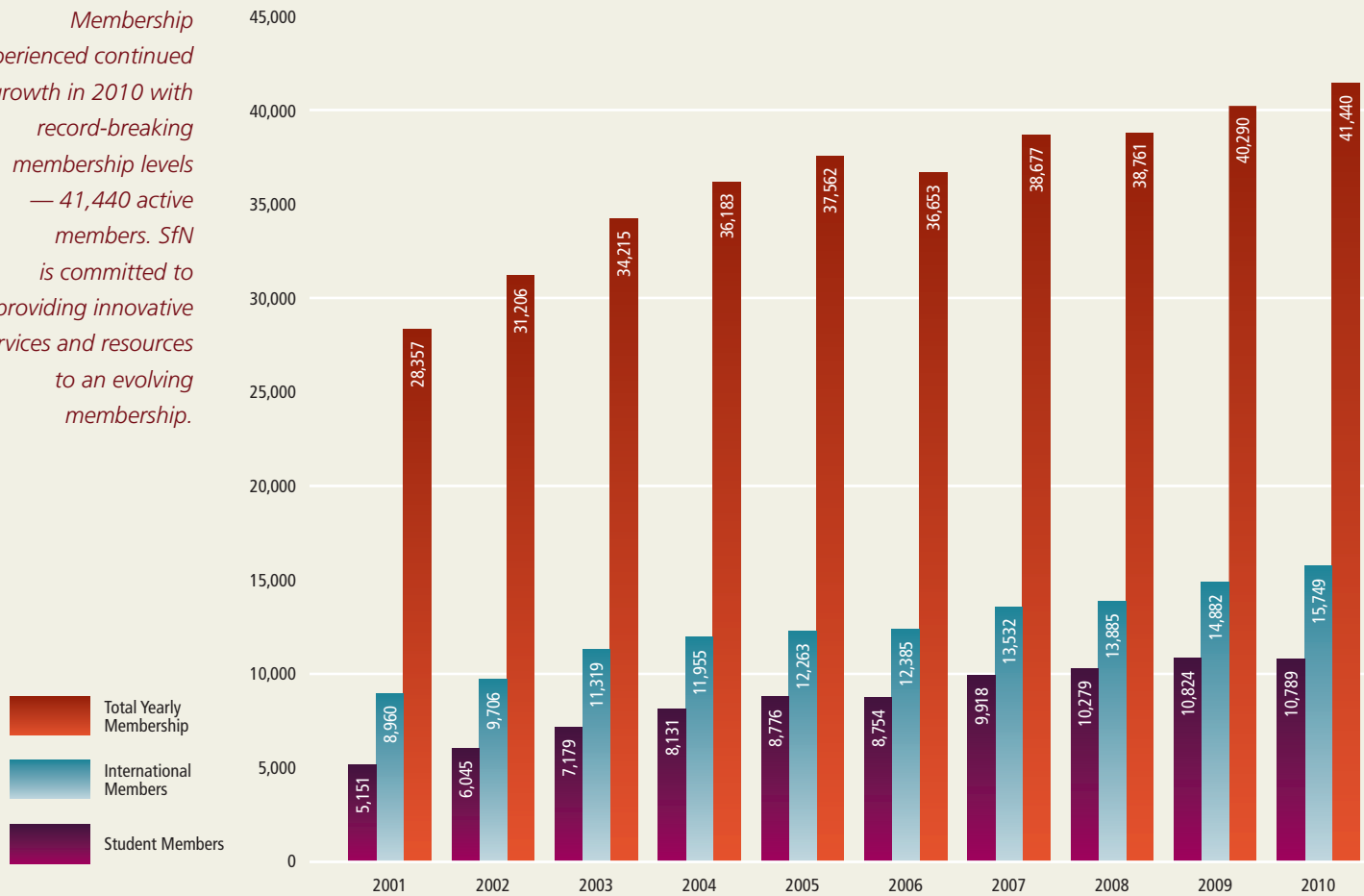
Serving International Members

With a dynamic and growing international membership, SfN maintained focus on finding ways to represent and support the global neuroscience community. To better understand the needs of these members, SfN conducted for the first time a survey of members outside the United States, which elicited strong participation. This survey, together with the all-member survey, offers rich data that is informing the SfN leadership's ongoing strategic planning efforts.

Meanwhile, in support of international members, a new reduced dues and fees category for members in World Bank-defined lower-middle-income countries went into effect in 2011. Non-U.S. members are also seeing greater representation on SfN committees, going from 9.5 percent of all committee members four years ago to 14 percent in 2011. Under new rules adopted in

DIVERSE AND EVOLVING MEMBERSHIP SHOWS CONSISTENT GROWTH

Membership experienced continued growth in 2010 with record-breaking membership levels — 41,440 active members. SfN is committed to providing innovative services and resources to an evolving membership.



SfN chapters are an effective way to educate the public and policymakers about neuroscience research at a local level. The University of California, San Diego, hosted a lab tour for Rep. Susan Davis (D-CA) (left) and highlighted cutting-edge neuroscience research.



2009, the first member of Council from outside of North America was elected in 2010.

New diplomatic efforts and initiatives also support SfN's growing international membership. Through relationships with national and regional societies — which have unique and important roles to play — and using multiple venues, SfN is providing international neuroscientists with greater opportunities to exchange knowledge, information, and resources. SfN again participated in a joint international symposium at the Japan Neuroscience Society (JNS) annual meeting in September 2010. When Japan was hit by the devastating earthquake and tsunami, SfN responded to JNS's request by supporting 20 Japanese students and young investigators traveling to Neuroscience 2011. A new collaboration with the Chinese Neuroscience Society, where SfN membership is growing fast, has resulted in joint activities planned for early FY2012. In the coming year, SfN will explore new ways to leverage the resources of the Society to serve international members and champion global neuroscience.

Chapters Serve Members Locally

Local and regional SfN chapters remained strong in FY2011, helping members to network, share information, educate communities about neuroscience, and engage in local advocacy. Today, the Society has 150 chapters in 22 countries and in 47 of the United States. SfN established four new chapters last year — including the first in Brazil — and reactivated several dormant chapters. To help new chapters mobilize, SfN continued to provide start-up grants to all new chapters.

One sign of the growing strength of chapters was found in the recent



▲ Students and faculty of the Ricardo Miledi Neuroscience Training Program conduct an experiment on pain sensory reception during the 2011 course in Montevideo, Uruguay. Funded by The Grass Foundation, the Miledi Program provides intensive, practical training to outstanding students from Latin America and the Caribbean.

membership survey, which highlighted increases in chapter membership by 32 percent and satisfaction with chapters by 11 percent since the 2007 survey.

Supporting Local Engagement

Chapters are playing an increasingly vital role as partners in new and ongoing programs that support SfN's mission and members. In FY2011, the Society disbursed nearly \$80,000 through 52 direct grants that enabled chapters to engage in such activities as cross-chapter conferences and new Brain Awareness Week programs. Two new chapter grant programs in FY2012 will offer funding to replace the popular traveling scientist program previously funded by The Grass Foundation, and support for locally organized professional development workshops.

The fourth annual Chapters Workshop in San Diego drew 98

participants. Organized by the Membership and Chapters Committee, the workshop offered practical tips on maximizing SfN resources available to chapters and allowed for networking. A Chapter Resource Kit continues to be updated and made available online.

Recognizing Chapter Achievements

During Neuroscience 2010, SfN presented the second Chapter-of-the-Year Award to the Chicago chapter for outstanding achievements in public outreach and education. The vital role chapters play in these efforts also was recognized through the Next Generation Awards, which went to student members of the Michigan chapter for exceptional achievements in educational outreach.

LEARN MORE:
www.sfn.org/membership
www.sfn.org/chapters

Professional Development: *Fostering Careers at Every Stage*

SfN provides professional development and recognition for scientists at all career levels — connecting members across specialties worldwide. Fellowships, mentoring programs, skills training, and other initiatives foster gender, ethnic, and geographic diversity within the field.

Meeting Mentoring Needs

Led by its Professional Development Committee (PDC), SfN launched a new online mentoring program aimed at meeting mentorship needs

across all career stages. A central feature of the program is user-generated mentor-matching, which allows mentees and mentors to find each other and establish relationships year-round. The program, an integral part of *NeurOnLine*, includes a discussion forum and resource library on topics related to mentoring.

Serving the Higher Education Community

SfN's Committee on Neuroscience Departments and Programs (CNDP) implemented another successful

annual spring conference on *Current Trends in Neuroscience Education: Training the Millennial Student*. Responding to needs expressed by conference participants, next year's meeting will be preceded by a hands-on teaching workshop.

Results of the 2009-2010 biennial survey of neuroscience training programs in the United States and Canada were published, and the CNDP Chair met with Federation of European Neuroscience Societies (FENS) counterparts to share findings and discuss common goals



▲ The third of five IWIn workshops, held in April at the University of Arizona, provided chairs of neuroscience and related departments with strategies for recruiting, advancing, and creating a favorable work climate for female faculty and faculty from diverse backgrounds.

and areas of collaboration. CNDP continues strategic planning to identify opportunities to increase value provided to the higher education community.

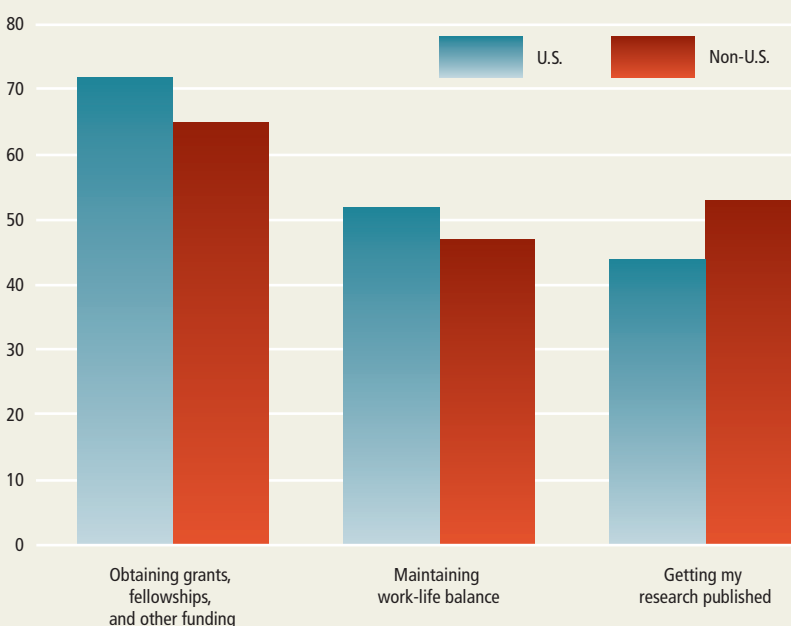
To further support the needs of this constituency, SfN secured funding from the National Science Foundation (NSF) to develop an exciting new tool — *Educational Resources in Neuroscience* (ERIN), a consolidated online source of catalogued and reviewed resources for teaching neuroscience. ERIN, expected to launch in early 2012, is intended to help neuroscience faculty easily find high-quality and wide-ranging materials for use in the classroom.

Broadening Commitment to Diversity

SfN continued its leadership role in encouraging the development of a more diverse neuroscience workforce through its NSF-funded project, *Department Chair Training to Increase Women in Neuroscience* (IWIn). Two workshops were held in FY2011 for academic leaders from 15 institutions across the United States on improving the recruitment, promotion, and work climate for women and underrepresented minorities at their campuses.

In the 30th year of the Neuroscience Scholars Program (NSP), the Society supported 52 diversity trainees with funding from the National Institute of Neurological Disorders and Strokes. As a supplement to the NSP grant, SfN provided intensive coaching and mock reviews to 12 competitively selected minority postdoctoral fellows and junior faculty submitting NIH grant proposals. The pilot project aims to increase the number of successful research and

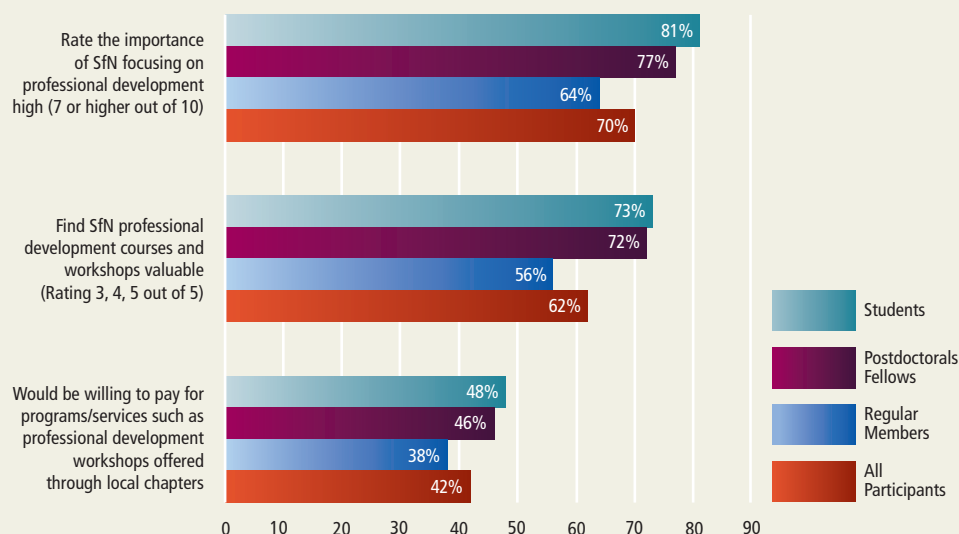
TOP CAREER CHALLENGES FACING U.S. VS. NON-U.S. MEMBERS*



U.S. and non-U.S. members rated the same three challenges as the most significant ones they face in advancing their careers.

*SOURCE: 2011 SfN MEMBERSHIP SURVEY

PROFESSIONAL DEVELOPMENT — GROWING NEEDS AND OPPORTUNITIES



As the field of neuroscience continues to grow rapidly, data reflect SfN members' evolving need for valued professional development resources.



▲ The annual Diversity Poster Session showcases the work of young investigators in SfN's Neuroscience Scholars Program and other diversity training programs and offers another venue for networking.



▲ Participants at the 2011 Annual Spring Conference of Neuroscience Departments and Programs network and discuss challenges and opportunities facing higher education and training in neuroscience.

training grant applications from this demographic.

New in FY2011, SfN supported the best neuroscience poster presentations at the Annual Biomedical Research Conference for Minority Students. The awards encourage undergraduate students interested in pursuing careers in neuroscience.

Training for Members Around the Globe

Together with strategic partners, SfN continued to offer training opportunities to neuroscientists around the world. The 7th Ricardo Miledi Neuroscience Training Program course, "Neuroscience: From Basic Mechanisms to Brain Diseases," was held in Uruguay, for 17 young investigators from throughout Latin America. The program is funded by The Grass

Foundation, and each year's trainees also receive fellowships from SfN to attend the annual meeting.

SfN supported the professional development of African university-based neuroscience educators through the third "Teaching Tools in Neuroscience" workshop held this year in Kenya and organized in collaboration with the International Brain Research Organization (IBRO). The second FENS-IBRO-SfN Neuroscience School on neural circuits was held in June in Naples, Italy. The course, jointly organized by a U.S. and a British institution, brought together 30 students and young scientists from 12 countries throughout Europe and North America.

SfN further supported international members through the IBRO-SfN travel awards, which enable 30 early-career neuroscientists from developing countries each year to attend the annual

meeting and participate in poster and orientation sessions tailored to international fellows.

New initiatives for FY2012 include collaborations with IBRO and the Chinese Neuroscience Society to offer symposia and workshops that build on SfN's recently updated *Guidelines for Responsible Conduct in Scientific Communications*. These sessions are intended to help increase awareness about international standards of responsible research practices and reduce instances of scientific misconduct.

Honoring Scientists Across the Field

FY2011 marked another successful year for members in the area of scientific achievement. The Society honored 113 outstanding individuals with scientific awards and prizes, fellowships, and travel awards. To facilitate the nominations process,

the Society launched a new awards submission site that streamlined the process for submitting materials online. SfN reached out to new groups for award promotion through the use of social media, including Facebook and Twitter. As a result, traffic to the submission site increased and overall submissions increased by 44 percent.

LEARN MORE:

www.sfn.org/pd

www.sfn.org/awards

STRATEGIC Opportunity

Professional Development: Embracing the Career Lifecycle

Recognizing the growing dynamism of the profession and evolving member needs at pivotal transition points in their careers, the Council-appointed Professional Development Working Group (PDWG) created a multi-year plan for addressing key professional development challenges and opportunities. The plan, enthusiastically endorsed by Council, is creating new opportunities for learning and career development for members — some short-term, easily achievable and lower-cost strategies, and other larger, longer-term initiatives. Two guiding principles include addressing needs across the career lifecycle and reflecting the full range of career options for neuroscientists.

Programs and activities include those at and beyond the annual meeting; online programs and resources to



reach a broad audience; local, regional, and international offerings; and collaborations with SfN chapters and partner organizations.

Existing programs such as mentoring have been significantly enhanced, while new initiatives underway include launching a new online NeuroJobs Career Center, travel awards for undergraduates affiliated with SfN's Institutional Program members, and a new chapter grants program to support professional development workshops.

Animal Research:

THE Basis of Medical



Briard dogs carry a genetic defect that causes blindness. Using Briard dogs like Lancelot (shown), scientists found a cure for Leber congenital amaurosis, restoring vision to affected dogs and humans.

The use of
animals in research
is necessary to find
cures or treatments for
many debilitating and
life-threatening diseases.

Countless health advances that exist today, such as medications, flu shots, veterinary interventions, and minimally invasive surgery, have been made possible through decades of responsible animal research. Carefully regulated, humane animal research is the foundation of nearly every major medical advance in the last century, and it promises to be equally essential to the next century's progress.

Neuroscientists are key players in charting a path to greater understanding of diseases and disorders of the brain and improved health outcomes. Researchers have found new treatment options for soldiers who have lost limbs, and potential ways to spot and treat Alzheimer's disease earlier. All of this progress relies on animal studies to understand brain function and ensure safe and effective therapies.

However, public support of the humane and responsible use of animals in biomedical research has recently eroded. According to the Foundation for Biomedical Research, nearly 85 percent of Americans supported animal research in 1948, but only about 55 percent do today. This decline is due in part to misinformation campaigns by animal

rights activists. These groups make the assertion that meaningful health progress could be made without animal research and that most animal research is not related to human benefit. Thousands of medical and scientific experts, as well as the National Institutes of Health and the American Medical Association, attest that this is simply not true. The humane and responsible use of animals in research remains necessary to battle human disease.

Animal research has been indispensable to the development of knowledge, treatment, and cures for hundreds of neurological and psychiatric diseases affecting millions world-wide. One example is Parkinson's disease, which robs families of loved ones and is on track to cost trillions as global populations age. Research using mice and rats is fundamental to understanding the genetic and environmental roots of the disease, and forms the foundation for future treatments. Research on monkeys was essential to mapping the brain and developing the technique of deep brain stimulation, which has benefited thousands of people with Parkinson's disease who no longer respond to drugs.

Progress in understanding how the healthy brain works also depends on animal research. For example, our ability to visually focus on one specific object in the busy scenes of daily

Progress

Animal Model	Medical Benefit for People
Guinea Pigs	Treatment for bipolar disorder
Dog	Gene therapy for a genetic form of blindness
Mouse	Cochlear implants to treat some forms of deafness
Cone Snail	Treatment of chronic pain
Rat	Potential treatment for post-traumatic stress disorder
Electric Eel	Understanding nicotine addiction
Songbird	Understanding brain plasticity
Monkey	Brain-controlled prosthetics for ameliorating paralysis
Rabbit	Treatment to limit damage in stroke

Researchers have developed treatments for human diseases and disorders based on basic research in a variety of animal models.

life is a complex process involving many brain areas. Neuroscientists are learning how the brain accomplishes this difficult task by recording brain cell activity in active monkeys. This research might someday help unravel various forms of blindness and attention deficit disorders.

These advances are made possible within a carefully regulated system involving federal, state, institutional, and community review that protects animal welfare. Scientists who do animal research understand they must use animals sensitively, appropriately, and humanely, using as few animals and as many alternative techniques as possible to achieve reliable results. Nonetheless, there are some avenues of inquiry for which computer

models, cell culture, and noninvasive techniques may never replace the use of live animals specifically bred for research purposes.

When it comes to animal research, the stakes for medical progress are high, and democratic discourse is vital. Unfortunately, some groups opposed to the use of animals in research have turned to threats and even violence instead of dialogue. In response, the Animal Enterprise Terrorism Act was passed as a federal law by the U.S. Congress in 2006 to prohibit the use of force, violence, or threats to interfere with animal research.

To raise international awareness and support and to develop global collaboration around animal research issues, SfN partnered with the Federation of European Neuroscience

Societies (FENS) and the Japan Neuroscience Society (JNS) in 2011 to issue the *FENS-JNS-SfN Joint Statement on the Use of Animals in Research*. This document aims to provide a united global statement of support for responsible animal research.

Additionally, in FY11 SfN submitted a successful grant proposal to the Esther A. and Joseph Klingenstein Fund to engage the public about the responsible use of animals in research. This three year program will begin in FY12 by featuring content on the new public information Web site *BrainFacts.org*, which will launch in April 2012. The information will emphasize the importance of animal research, and how it is responsibly overseen by the scientific community and governmental bodies.

There is hardly a family that has not been touched by cancer, Alzheimer's disease, stroke, depression, or other debilitating conditions. It is reasonable to expect that researchers will someday understand the basic mechanisms underlying these problems, and how to treat and cure debilitating disorders that rob lives and reduce quality of life. Scientists are deeply committed to this goal, which will, one day, be reached. These medical advances, however, will require continued animal research. ■

Attention: An Eye-Opening Story

Animal research has been vital to understanding how the brain filters visual information.

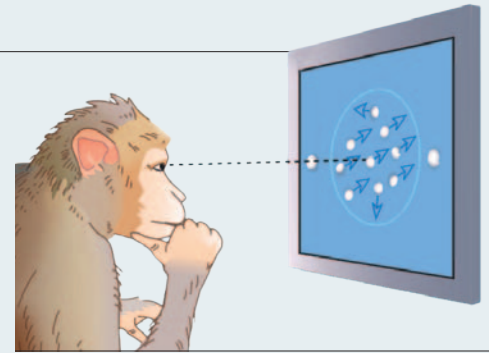
New blogs pop up every second. Each minute, more than 48 hours of video are uploaded to YouTube. With digital technology so commonplace, it is easy to drown in information.

For researchers studying visual attention, however, this is an old story. For decades, they have investigated how the brain manages and triages its own overwhelming data stream. Neuroscientists estimate that up to 100 megabits of information flow into each eye every second, comparable to the fastest broadband connections.

Now, using sophisticated new techniques — including complex computer simulations and live brain imaging — neuroscientists have begun to piece together a more complete picture of how we decide where to look.

Monkey See, Monkey Do

How does the brain select precisely which part of the world to focus on? In recent years, visual attention researchers have benefited greatly from single-cell recording techniques, which use tiny electrodes to track the activity of particular brain cells. Because individual cells in visual-processing areas often respond to specific aspects of a visual scene, this technique allows researchers to



Researchers study visual attention using a technique that tracks a monkey's visual focus and the resulting neural response.

closely track how the brain makes sense of the outside world.

Animal research has been vital to addressing this research question. Neuroscientists have developed an array of sophisticated techniques to study the responses of individual neurons in monkeys. These techniques can be used as the monkeys perform tasks that require focusing on important objects, while ignoring useless objects that appear and disappear and might distract the monkeys from performing the task well.

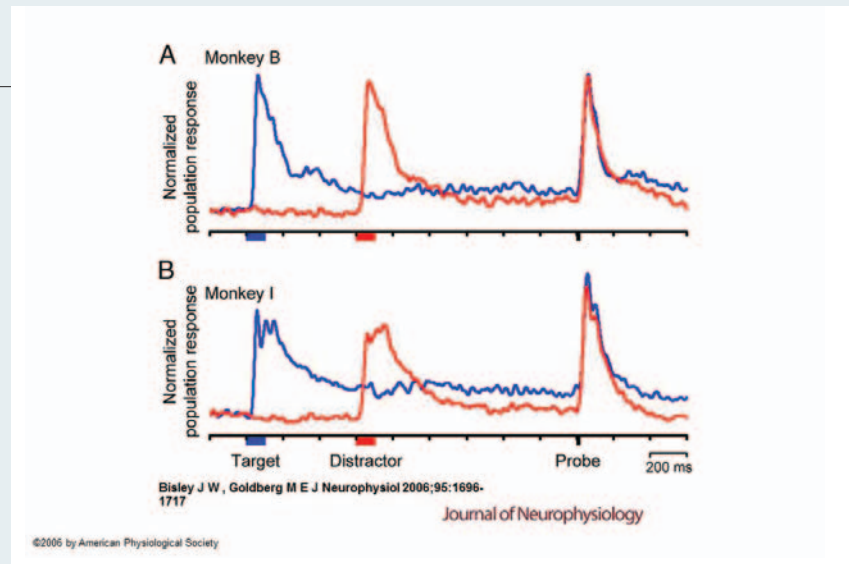
Using such tools, SfN Past President Michael E. Goldberg and others learned how the brain forms a visual “priority map.” According to the priority map theory, the brain determines the relative importance of different objects and then orders the eyes to focus on whichever rates the highest.

The brain processes information about an object's importance in two ways: "bottom-up" and "top-down." In "bottom-up" processing, the brain weighs an object's importance based on its inherent characteristics. Greater importance is assigned to features that signify something noteworthy, such as sudden movements, unusual color patterns, and strange shapes. In "top-down" processing, the brain weighs an object's importance based on previous experience — for instance, discounting brightly colored shirts in a crowded train while looking for the door. Researchers found bottom-up processes are faster than the more effort-intensive top-down ones.

Although visual information travels through several circuits once it reaches the brain, one brain region that may be particularly important in visual attention is the lateral intraparietal area. Goldberg and others showed that brain activity in this region indicates when an object has captured a monkey's attention.

Visual Bull's-Eye

Brain scientists continue to fill in many of the fine details of how visual attention works. Once an object has been viewed, brain cells representing its area of the visual field become inhibited (harder to activate). These findings suggest the things we look at are temporarily marked as unim-



Brain cells in the lateral intraparietal area respond when an object captures a monkey's attention. The graph shows how the cells respond when a known object (blue) or a distractor (red) appear in their visual field.

portant, so we do not continually fixate on the same thing — an idea summarized as "inhibition of return." Goldberg and others also have scrutinized "surround suppression," in which visual areas adjacent to an important object are inhibited. Such an effect enhances slight differences between areas of the visual field, highlighting motion and other unusual features and making object recognition easier.

Attention goes awry in many human disorders, such as attention deficit disorder, schizophrenia, and Alzheimer's disease. Understanding its basic nature may provide strategies for better diagnosis and treatment of these disorders. In

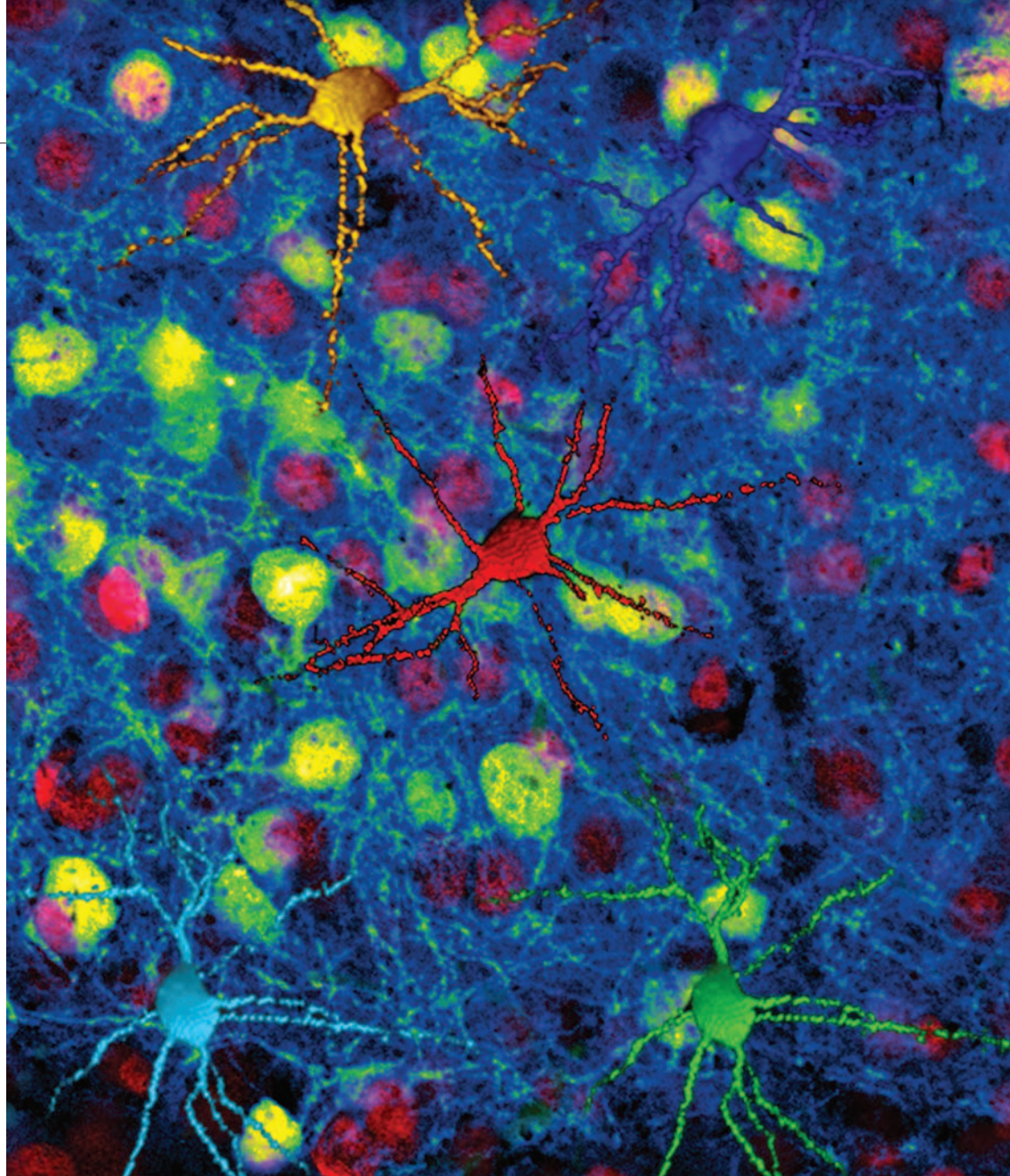
addition, attention findings may help engineers and computer scientists make progress on elusive technologies, including face-scanning and video-search software. Moreover, this research helps address a paradox of human vision: only two percent of the world falls onto the fovea — the sensitive eye cells responsible for sharp vision — but we perceive the world continuously and in vivid detail. With further research, scientists may be able to crack the mystery of how attention, eye movement, and experience combine to transform spotty data into silky smooth high-definition. ■

AXON GRASSROOTS BRAIN AWARENESS ANIMAL R
GLIA ONLINE DENDRITE ADVOCATING
SCIENCE LITERACY

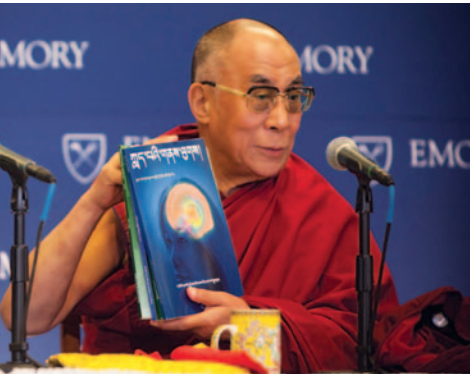
Educating AND Engaging



SfN launched several initiatives that provide global access to a range of multimedia education tools about the wonders of the brain, promote governmental investments in science, and support responsible animal research.



THE Public



Public Information and Outreach: *Expanding the Scope of Outreach*

This year, SfN engaged the public in new and meaningful ways to increase scientific literacy and “Brain Awareness.” Under the leadership of the Public Education and Communication Committee, new communication venues and novel approaches were rolled out to connect with educators, policymakers, the media, and the public.

The Spirit of Competition

In its ongoing science education outreach, SfN launched two contests challenging teachers and students to demonstrate their neuroscience knowledge, while at the same time lending support to the Brain Awareness campaign.

SfN sponsored the first annual Brain Awareness Video Contest in which entrants submitted original video clips up to five minutes long demonstrating a concept about the brain that could be used as a teaching tool or resource. Submissions included animations, songs, and skits — fun, dynamic clips that communicated the wonder of the brain and nervous system. Cash prizes will go to the top three winners, who will be announced during the lead up to Neuroscience 2011.

The Society also cosponsored and organized the local Brain Bee in Washington, DC. Nineteen high school students in the metro area competed in this quiz show-style test of neuroscience knowledge, held at the American Association for the Advancement of Science

headquarters in February. The winners of local Brain Bees from around the country competed at the U.S. National Brain Bee in Baltimore in March, cosponsored by SfN. Winners of National Brain Bees went on to compete in the International Brain Bee competition in Florence in July, held in conjunction with the International Brain Research Organization (IBRO) World Congress.

Both the Video Contest and the Brain Bee are part of SfN’s long-standing commitment to Brain Awareness, which culminated in the 16th annual Brain Awareness Week (BAW) campaign, March 14–20. In collaboration with The Dana Foundation, the founder of BAW, SfN and its members sponsored events worldwide to foster greater interest in brain science and health. SfN staff connected with more than 850 students during the BAW event at the National Museum of Health and Medicine in Washington.

Public Outreach and Education

SfN seized another new opportunity to reach the science-interested public at the inaugural USA Science and Engineering Festival in October 2010, a three-day celebration of science held on the National Mall in Washington. SfN staff and neuroscientist volunteers led hands-on activities to teach visitors about the brain, including a volunteer that gave demonstrations of a laser,

which she uses in her lab to study Parkinson's disease. The festival drew a reported half million visitors over three days.

SfN again reached out to science educators at the National Science Teachers Association meeting in San Francisco in March 2011. One volunteer member presented a seminar on "Neuromyth Busters," dispelling commonly held misperceptions about the brain through hands-on activities. Another member presented a new seminar, "The Wired Brain: What Research Tells Us About Attention," which proved popular among attendees.

Forging New Connections

This past year, SfN extended the reach of its signature publications. Because of effective online presentation, including downloadable chapters, SfN's primer on the brain and nervous system, *Brain Facts*, is now accessed online by more than 50,000 people each year. *Brain Facts* also was translated into German and Tibetan in 2010, expanding the international reach of this trusted educational tool.

SfN worked to increase the circulation of some of its key publications, getting accurate and accessible neuroscience information into many more hands — and minds. The distribution of *Brain Briefings* — which explain basic science concepts for the primary and secondary school audiences — increased by more than 40 percent. SfN also partnered with the Foundation for Biomedical Research to publish issues of the *Research & Discoveries* series, highlighting the importance



▲ SfN sponsors and participates in events that encourage students of all ages to become more "brain aware." The National Museum of Health and Medicine's 12th annual Brain Awareness Week event drew more than 550 students from the Washington, DC area.

of animal research, in *Research Saves* magazine, distributed to classrooms, doctors' offices, and hospitals.

New Media Connections

To reach the public with accurate information about the brain and nervous system, SfN continues to forge important relationships with the media. SfN engaged new technologies to get the word out about scientific findings from *The Journal of Neuroscience* and those presented at the SfN annual meeting.

Beyond just traditional print and broadcast outlets, consumers now get their news from a variety of sources. To access new audiences, SfN now reaches out to science bloggers to publicize exciting discoveries. And at Neuroscience 2010, SfN streamed live video of press conferences to registered reporters for the first time. This allowed reporters from

around the world to attend the press conferences virtually, and to report on breaking neuroscience news. SfN saw an 18 percent increase in media coverage of the annual meeting — continuing a four-year trend that has seen media placements of stories grow from about 300 to more than 1,300. In the ever-changing news and media environment, SfN continues to explore new ways to reach the public with accurate, compelling news about the brain.

LEARN MORE:
www.sfn.org/baw

Science Advocacy: *Influencing Public Policy, Protecting Researchers*

In January, the 112th U.S. Congress convened with 99 new members of the House and 13 new Senators. Many in the new Congress were swept into office on commitments to make drastic cuts in federal spending. The first bill introduced in the House of Representatives called for large budget cuts including a \$1 billion cut to the National Institutes of Health (NIH) and \$359 million in cuts for the National Science Foundation (NSF) — a big drop for U.S. investment in science and health.

In response, the Society activated its grassroots network and generated more than 6,300 letters to Capitol Hill supporting science. These efforts, combined with additional SfN outreach and coalition activities with

partner organizations, helped sway the final funding package enacted in April. In an exceedingly difficult budget climate where many national priorities experienced severe cuts, the community helped to minimize impact on NIH and NSF, which received approximately a 1 percent reduction in the final budgets for FY2011. With continued concern about federal spending, and specific agencies and programs targeted for cost-cutting, researchers have been called upon to play an active role in protecting historic investments in biomedical research from the chopping block.

SfN also continues to work closely with coalition partners such as Research!America, the Ad Hoc

Group for Medical Research, and the Coalition for National Science Funding, in making the case about the imperative of federal investment in scientific research.

This year saw the founding of the U.S. Congressional Neuroscience Caucus, chaired by Reps. Cathy McMorris Rodgers (R-WA) and Earl Blumenauer (D-OR). SfN, working with the American Brain Coalition, helped the caucus host an inaugural briefing for members of Congress and their staff in June on Capitol Hill.

Taking Neuroscience to Capitol Hill

The 2011 Capitol Hill Day, held on April 12, brought the Society's leadership and members

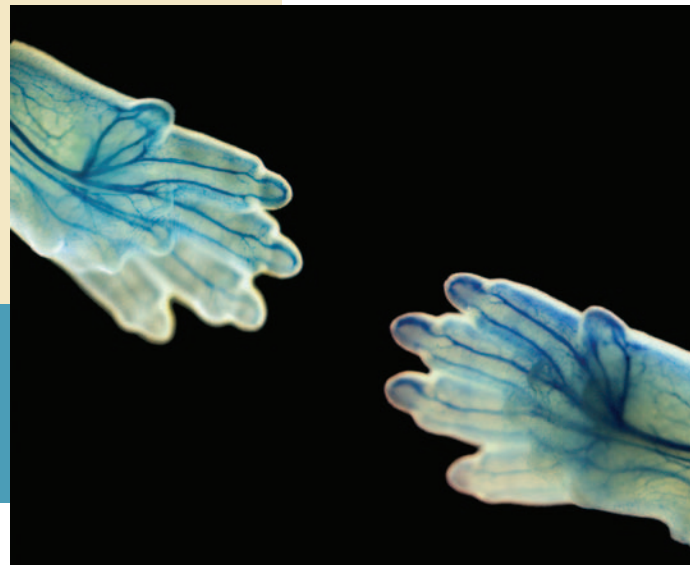


▲ During the 2011 Capitol Hill Day, SfN Past President Michael E. Goldberg (center), along with Government and Public Affairs Committee members Ken Miller (second from right) and Bill Martin (right) meet with Rep. Brian Bilbray (R-CA) (left), co-chair of the Congressional Biomedical Research Caucus.

“...Animal models are vital and irreplaceable for scientific progress and in combating the devastation of human neurological and psychiatric diseases, which affect more than 1 billion people worldwide, and for improving veterinary health. Animal models must be used appropriately and within humane guidelines, carrying out research that maximizes scientific advancement with the least amount of animal suffering. As scientists pursue these advances, we strive to replace and reduce the number of animals wherever scientifically justifiable, and continuously refine experimental procedures to improve animal welfare.”

— from the *Statement on the Use of Animals in Biomedical Research*

▲ Neuroscience societies worldwide are joining forces to speak out about the importance of responsible animal research. To read the full *Statement on the Use of Animals in Biomedical Research*, visit www.sfn.org/jointstatement.



of the Government and Public Affairs (GPA) Committee to Capitol Hill to visit more than 20 key congressional offices and advocate for strong and reliable funding for NIH and NSF in the FY2012 budget cycle. Hill Day participants highlighted their neuroscience research and its importance in ensuring America's health and competitiveness in the 21st century, and advocated for robust federal funding for scientific research through the NIH and NSF.

Expanding International Advocacy Efforts

In recent years, SfN has been looking for new ways to engage the international research community in building and expanding advocacy efforts. For example, SfN continues to support the Canadian Association for Neuroscience in its successful multi-organizational effort to establish a brain research fund in Canada, an effort that led to \$100 million in Canadian government funding devoted to brain research.

SfN also expanded its international advocacy efforts through a jointly sponsored advocacy grants program with Federation of European Neuroscience Societies (FENS). The grants will be made available to FENS' national societies

with a goal of strengthening their capacity for advocacy and public awareness efforts. In June, SfN and FENS kicked off the grants program in Brussels with an advocacy workshop attended by more than 60 representatives of European national societies. The workshop highlighted various advocacy strategies and materials from both European and North American constituencies, and featured a robust discussion about best practices for advocacy in different contexts to guide submissions to the grants program. SfN also supported IBRO's efforts to form a Global Advocacy Advisory Committee, a first foray into the advocacy area by IBRO.

Supporting Responsible Animal Research

SfN's Committee on Animals in Research (CAR) continues to advocate for responsible animal research and provide support to researchers. CAR led the SfN response to the Eighth Edition of the *Guide for the Care and Use of Laboratory Animals (Guide)*. The comments recognized the importance of a program to ensure the responsible use of laboratory animals while expressing concern about the lack of scientific justification for many of the provisions and for the growing regulatory burden posed by the new *Guide*. The comments also aligned SfN with organizations such as the National Association for Biomedical Research and the American College of Neuropsychopharmacology in an effort to unite the biomedical research community.

Internationally, SfN partnered with FENS and the Japan Neurosci-

ence Society (JNS) to create a new global document, the *FENS-JNS-SfN Joint Statement on the Use of Animals in Research*, providing a united global statement of support for responsible animal research. Moving forward, the intent is to circulate the document more broadly to raise awareness, garner support, and foster collaboration around animal research issues internationally.

Advancing Public Understanding of Animal Research

SfN has been awarded \$180,000 in funding to launch the *Engaging the Public about Animal Research* (EPAR) project, a three-year project to expand public awareness about the vital role of animal research in scientific and medical progress. The funding, provided by the Esther A. & Joseph Klingenstein Fund Inc., will go toward creating online educational resources aimed at key

audiences and the general public. EPAR builds on SfN's commitment to provide facts, dispel myths, and promote dialogue with the public, educators, and policymakers on a range of neuroscience topics. Working in collaboration with partners such as the Foundation for Biomedical Research and the American Brain Coalition, resources created through the project will be housed on *BrainFacts.org*, a public information initiative of The Kavli Foundation, The Gatsby Charitable Foundation, and SfN, scheduled to launch in spring 2012.

LEARN MORE:
www.sfn.org/gpa

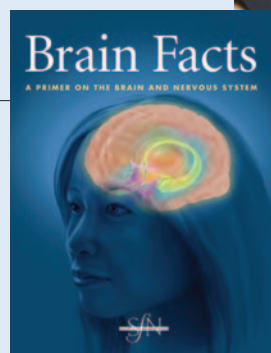


STRATEGIC Opportunity

Embracing Opportunities: Informing the Public with *BrainFacts.org*

SfN has been awarded \$1.53 million in funding over six years to create and maintain *BrainFacts.org*, a public information initiative of The Kavli Foundation, The Gatsby Charitable Foundation, and SfN. A unique nonprofit online source for authoritative public information about the progress and promise of brain research, the Web site will launch in spring 2012 to communicate with the public, educators, and policymakers about revolutionary advances in understanding the brain and mind.

BrainFacts.org will ultimately provide a wide range of multimedia information about basic and clinical brain research; facts about brain diseases and disorders; strategies to



promote brain health and wellness; promising discoveries and key concepts such as neuroplasticity; and the growing role of neuroscience in societal discussions on health, education, ethics, law, and more. High-quality teaching tools for primary and secondary level educators will be included and the site will use multimedia and social media to foster learning and dialogue with public audiences.

Teens, Neuroscience, AND Society

Research finds the adolescent brain is still in active development. How does this inform what we think about teen lifestyles and experiences?

Adolescence is a time of significant changes for both the body and the brain. Conflicts with authority figures, mood swings, and other behavioral problems are often normal during the teen years, and scientists are starting to figure out why.

Imaging research shows the brain continues to develop into a person's 20s and 30s. And while current research suggests the teenage brain is positioned for maximum learning and growth, it also may make adolescents particularly vulnerable to impulsive actions, irritability, and performance problems. Teen brain development comes into play in many facets of their young lives.

The Adolescent Brain: Still Developing

During childhood, the brain busily forms new cells and fibers between these cells, which is thought to contribute to the impressive rates that children learn new knowledge. The rate of formation of synapses, or connections, between brain cells peaks during childhood but is still higher in teens than adults. Also, the brain begins pruning excess or unused cells and their connections around puberty — a period that coincides with increased reasoning capabilities.

The branches of brain cells also undergo major changes as they become encased by a fatty material called myelin, facilitating fast-paced movement of electrical signals between brain regions. While this process, known as myelination, begins in infancy, it is not complete until adulthood, suggesting that the teen brain processes information at a slower pace than the adult.

This remodeling of the brain takes place at different stages, with the back of the brain maturing before the front. The frontal lobe — the brain's self-control and judgment center — is the last to complete development, concluding sometime in the mid- to late-20s. This may set the stage for common teenage behaviors like risk-taking and novelty-seeking.

Sleep, Learning, and Memory

As all of these developmental changes are occurring, many behavioral shifts also are at work. Sleep patterns, for instance, are shifting. Sleep's role in learning and memory is a major topic of active research, and these links may influence the developing teen.

Even before puberty, sleep and wake periods begin to shift. One study showed that unlike adults and younger children, 10-12 year-olds experience periods of wakefulness at

Why do most 16-year-olds drive like they're missing a part of their brain?

BECAUSE THEY ARE.



EVEN BRIGHT, NATURAL TEENAGERS SOMETIMES DO THINGS THAT ARE "STUPID."

But when that happens, it's not really their fault. It's because their brain hasn't finished developing. The underdeveloped area is called the dorsal lateral prefrontal cortex. It plays a critical role in decision-making, problem solving and understanding future consequences of today's actions. Problem is, it won't be fully mature until they're into their 20s.

It's one reason 16-year-old drivers have crash rates three times higher than 17-year-olds and four times higher than 18-year-olds. Car crashes injure about 300,000 teens a year. And kill nearly 6,000. Is there a way for teens to get their driving experience more safely—giving their brains time to mature as completely as their bodies? Allstate thinks so.

Graduated Driver Licensing (GDL) laws are one approach that's been proven effective at reducing teen

crashes. These laws restrict the more dangerous kinds of driving teens do, such as nighttime driving and driving with teen passengers. Since North Carolina implemented one of the most comprehensive GDL laws in the country, it has seen a 25% decline in crashes involving 16-year-olds.

To find out what the GDL laws are in your state, visit Allstate.com/teen. Help enforce them—and if they aren't strong enough, ask your legislator to strengthen them.

Let's help our teenagers not miss out on tomorrow just because they have something missing today.

It's time to make the world a safer place to drive. THAT'S ALLSTATE'S STAND.

Allstate.
You're in good hands.

Auto
Home
Life
Business

In light of teens' ongoing development and maturation, some states have introduced graduated driver licensing laws to restrict their actions behind the wheel.

These programs may reflect the fact that teens are more prone to distraction. Driving simulation studies suggest that unlike older drivers, who were not affected by additional passengers, younger drivers make riskier decisions in the presence of their peers. This may explain why car accident rates for 16 and 17 year-old drivers increase with each additional passenger.

Other research shows teen brains work harder to assess whether a scenario is dangerous, showing increased activity in the dorsolateral prefrontal cortex. This greater effort translated into longer reaction times, which could lead to trouble behind the wheel.

While graduated driving licensing laws treat teens differently than adults, some laws do not. Although teen offenders are generally processed through the juvenile court system, the Office of Juvenile Justice and Delinquency Prevention indicates that 22 U.S. states fail to specify a minimum age for transferring adolescents to adult criminal court. Ongoing research may help inform the legal system to determine the degree of culpability of teens, who may lack maturity and impulse control. ■

night, after they have already been awake for a full day. During the teen years, levels of the hormone melatonin, which promotes sleep, rise later in the evening and fall later in the morning than those of children and adults.

These findings may explain why many teens stay up late and have difficulty rising. Most teens report getting significantly less sleep than the nine hours per night encouraged for this age group. Many education advocates worry that sleep deficits and daytime drowsiness pose problems for learning and attention in the classroom. Some U.S. school systems have used this research to

support later start times for high schools, which traditionally begin before 7:30 in the morning.

Teens and the Law

In the United States, some laws and regulations acknowledge that teenagers are still developing maturity and responsibility. For example, many states have graduated driver licensing systems, allowing teens a learning period to develop the decision-making skills necessary for driving. Many of these programs require supervised driving experiences and limit the number and ages of passengers.

Teen Brain: Vulnerability Exposed

The changes taking place in the adolescent brain lead to increased vulnerability to drug abuse and may also contribute to the emergence of psychiatric disorders.

Experiences mold and change the brain, but never more so than during childhood, when the brain is rapidly building connections between brain cells. This process can be modified by all kinds of experiences, and is called synaptic plasticity. Although the brain is less “plastic” in adolescence than in childhood, the changes occurring in the teen brain increase its susceptibility to both good and bad stimuli in the environment. Scientific advances are helping researchers better understand this critical time period in development, which often coincides with the emergence of drug and alcohol addiction and the onset of psychiatric disorders.

Reward Hungry

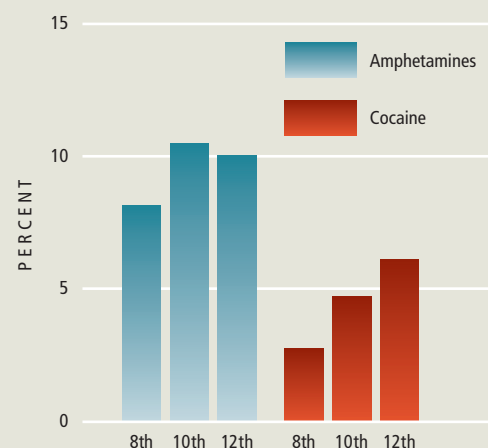
The remodeling of the brain takes place at different stages, with the back of the brain maturing ahead of the front. While the teen brain’s impulse control center has yet to reach full maturity, its reward circuitry is not only ready to go,

it is on overdrive, according to a growing body of data. This may help explain why the percentage of teenagers who try an illicit substance more than doubles between 8th and 12th grades, from 21.4 percent to 48.2 percent, according to the National Institute on Drug Abuse.

Studies in humans and animals show adolescents react more strongly to reward than adults and children. Teens display greater activity in the nucleus accumbens — a component of the brain’s reward system — than adults or children when completing a simple task for a reward. Neuroscientists believe both the revved-up response to reward and the under-developed impulse control center lead teens to greater thrill-seeking.

Some students in grades 8–12 report using amphetamine and cocaine. Changes occurring during normal brain development may make teens particularly vulnerable to addictive drugs.

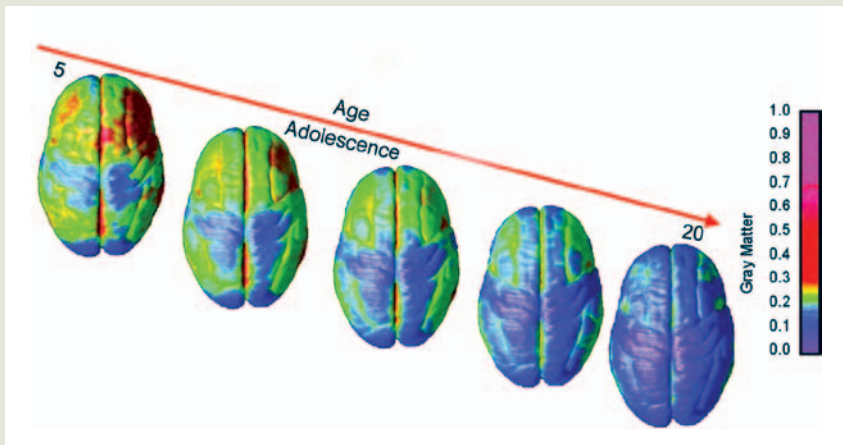
TEEN VULNERABILITY



SOURCE: MONITORING THE FUTURE
(JOHNSTON ET AL., 2010)

SCIENCE *in* PROGRESS

THE TEENAGE BRAIN



◀ The brain continues to develop well beyond childhood. These images of the human brain show the loss of brain cells between the ages of 5 and 20 (warmer colors indicate more cells, cooler colors indicate less). Brain cell “pruning” is an active developmental process that results in increased reasoning skills.

Animal research suggests drugs and alcohol exploit teens’ weakness to resist rewards, and can lead to changes in the brain that last long into adulthood. Juvenile rats work harder than adults to access drugs like cocaine and amphetamine, and consume more drugs overall. As adults, the rats exposed to drugs as adolescents show memory deficits and permanent changes in brain cells in the reward center.

Exposure to large quantities of alcohol during adolescence can also permanently alter how the body responds to stress during adulthood, other animal studies show. The implications of these findings are particularly disturbing given the prevalence of binge-drinking — the consumption of more than four or five drinks at one time — among teens. According to the Substance Abuse and Mental Health Services Administration, 36 percent of teens aged 18 to 20 reported at least

one binge-drinking episode in the previous 30 days.

Troubled Mind

In addition to increased vulnerability to drug and alcohol abuse, mental illnesses often first emerge in the teen years. Neuroscientists continue to look to the changes taking place in the teen brain for clues about why this period often marks the manifestation of mental disorder symptoms, particularly for schizophrenia and bipolar disorder. While genetic studies suggest early brain development may play a key role in schizophrenia, some of the symptoms of the disease — such as hallucinations and delusions — often remain hidden until late adolescence or early adulthood.

Imaging studies in humans suggest the emergence of schizophrenia may be the result of an accelerated or abnormal pruning of the connections between neurons during adolescence. Children

diagnosed with a rare, early onset form of schizophrenia have roughly four times as much pruning of brain cells and their connections during adolescence compared with other teens. Research also suggests that impairments in myelination — the insulation that wraps nerve fibers — in people with schizophrenia could alter the connectivity between regions of their brains. Myelination actively occurs during the teen years.

The ability of researchers to better understand how changes taking place in the teen brain affect mental illness may guide efforts for early intervention and prevention. Similarly, understanding teens’ vulnerability to drugs and alcohol may offer new insights for caregivers and teachers about how to steer adolescents from danger. ■

RESERVES

ENVIRONMENT

STEWARDSHIP

TECHN

FUNDERS

STABILITY

INVESTMENT

DIV

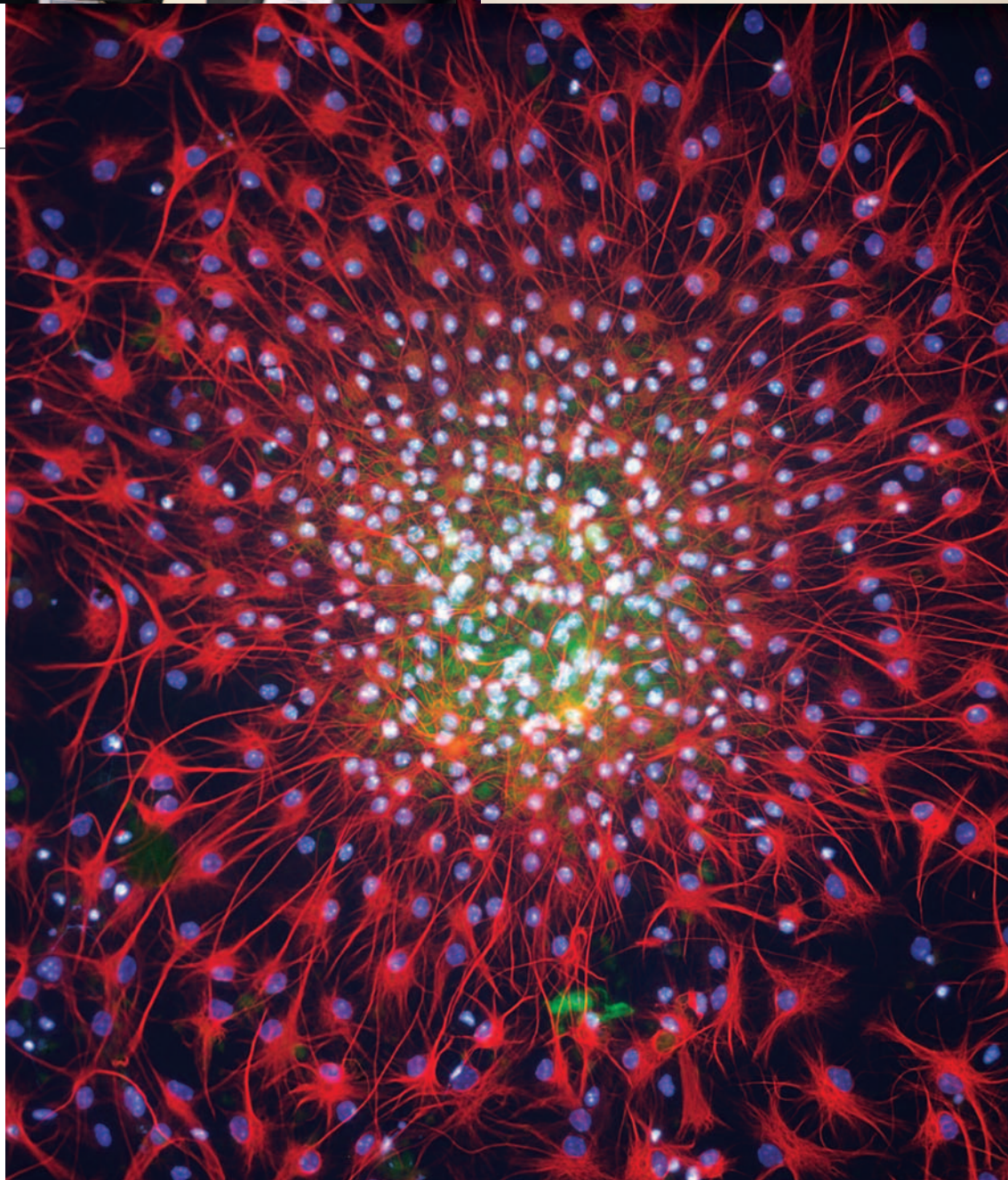
SUPPORT

SUCCESSFUL

Financial AND Organizational



SfN's financial strength makes it possible to develop and deliver programs and activities that add member benefit and support the growing and diverse membership.



Highlights



Finance and Development: *Strength in Numbers*

Guided by the Society's strategic plan and the thoughtful diligence of Council, Committees, and staff, the Society ended another financially successful year in FY11. Led by *The Journal of Neuroscience* and Neuroscience 2011, the Society completed FY2011 with \$1.73 million in net operating revenue. Combined with strong investment returns, net assets increased by approximately \$10.2 million.

Though the Society's growth and vitality is evident in its financial success, SfN's strength is grounded in its members and the dynamism of the field. The continued engagement and growth of the membership has helped to drive the Society's financial stability.

- Membership reached an all-time high of more than 41,440.
- Articles published in *The Journal* grew and the publishing operation continued to realize cost savings.
- Attendance of almost 32,000 at the annual meeting was the third-highest ever.
- Abstract submissions totaled 16,506.
- More than 570 exhibitors displayed at Neuroscience 2010.
- \$1.53 million in external grant funding was secured for *BrainFacts.org*.
- 1121 Properties LLC, SfN's office building and headquarters, remained more than 95 percent leased.

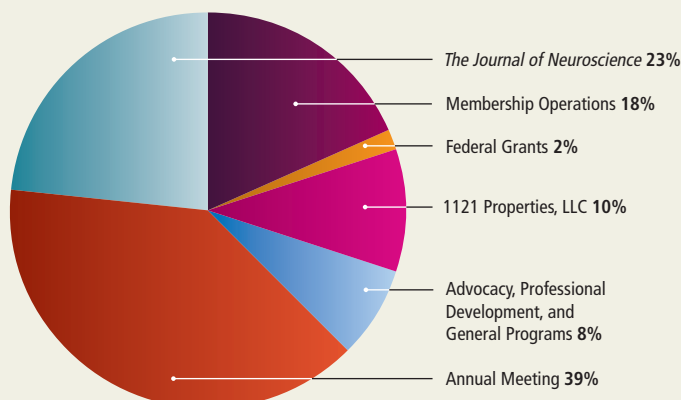
Long-term investments grew by \$6.7 million in FY2011, a 24 percent increase, totaling \$36.4 million as of June 30, 2011. The Society's investment strategy continues to be overseen by the Investment Committee, which includes three outside financial experts who give their time pro bono to ensure the appropriate diversification and discipline to achieve the goals established by Society leadership.

Across all functions, SfN's financial performance reflected modest growth, driven by strong *The Journal* and annual meeting operations. The success of the Society programs result in a healthy balance sheet, with nearly \$74.1 million in assets.

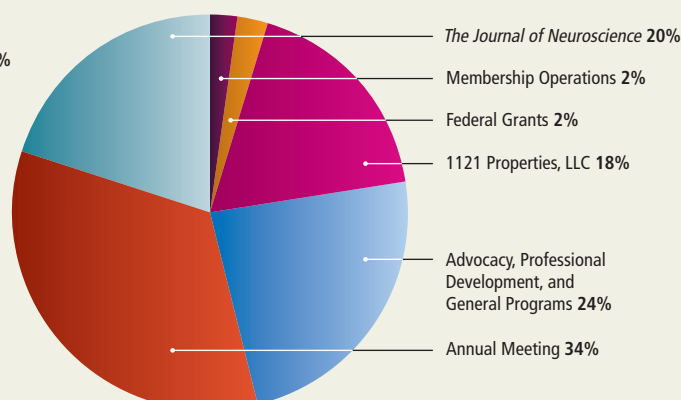
In 2010, Council approved a set of financial planning principles that help position the Society to reinvest in its diverse and growing membership. These principles include striving to achieve at least a \$1 million net surplus each year and reaching a reserve level that will cover 115 percent of identified annual expenses and liabilities, in order to protect the Society from an economic downturn. The planning principles aim to ensure support for long-term investment in enhanced member programs. This year's financial results have contributed to that goal in a positive respect.

CURRENT AND PAST FISCAL YEAR REVENUE AND EXPENDITURES BY ACTIVITY

FY2011 Revenue - \$28,778,638*
(excluding investment gain or loss)



FY2011 Expense - \$25,302,401



*DATA INCLUDES THE FULL RECOGNITION OF MULTI-YEAR GRANTS

Green Initiatives

In 2011, SfN's headquarters building earned the LEED Gold Existing Buildings: Operations & Maintenance certification by the U.S. Green Building Council. The Society's building, located in downtown Washington, DC, is one of only a dozen buildings in the District of Columbia to achieve LEED Gold status.

SfN is committed to environmental responsibility in all areas of its business. Whether conserving resources through the purchase and use of recycled products, limiting consumption of raw materials, reducing the generation of waste, or developing member and employee awareness of environmental stewardship, SfN strives to minimize its impact on the environment. The investment in a green headquarters building is just one example of SfN's commitment to sustainability, as part of a larger effort to minimize the organization's environmental footprint through energy efficiency, recycling, and other initiatives.

Human Capital

SfN believes staff members are one of its most valuable assets. For this reason, SfN is committed to attracting and retaining quality staff and motivating, developing, and maximizing their short-term and long-term successes. SfN strives to sustain an exemplary work environment that is trusting and productive by fostering open communication, involving staff in decision-making, and affording them a chance to learn and develop new skills. SfN is constantly seeking staff members who best fit its diverse needs and interests, and who believe in its mission and the value of its important work. The Society fosters an environment where staff members genuinely care about their work and its outcome, and where staff members remain excited, passionate, and committed about what SfN is doing for members and the field of neuroscience.

Ongoing Investment in Technology

SfN has continued to seek new and innovative ways to utilize technology in ongoing activities to better serve members and

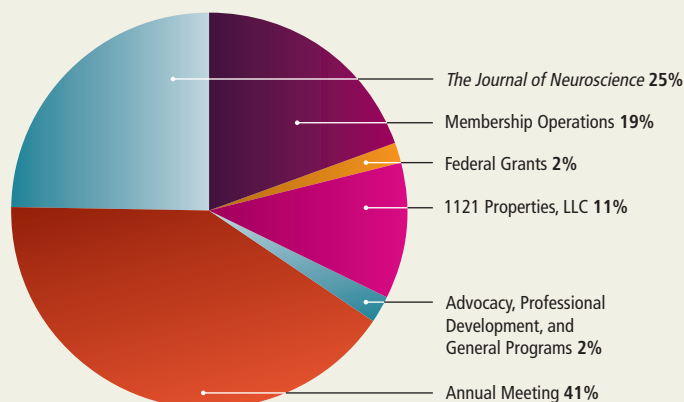
manage the growing size of SfN's membership and annual meeting. Social technologies were a primary focus for the past year, namely the launch of *NeurOnLine* (see page 15). Preliminary work has begun in the areas of mobile technologies and online education.

Efforts continue to ensure SfN is prepared to maintain operations in the event of business disruptions caused by natural or other types of disasters. The Society invests in core systems and infrastructure to ensure operations have robust redundancies and backups. Additionally, SfN has a business continuity plan to help respond quickly to disruptions in key business operations and provide guidelines for timely recovery and restoration of the critical processes. The plan is updated periodically and contains policies for staff to follow in the event of a disaster.

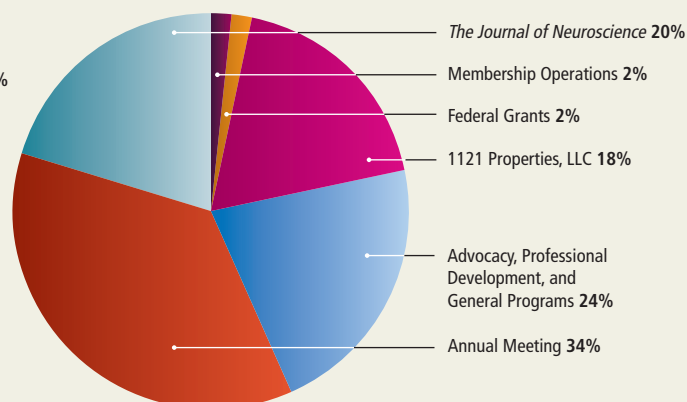
Leveraging Resources to Drive Growth

SfN's priority is to support members and the field with diverse and mission-driven programs and services. For this reason, it is vital

FY2010 Revenue - \$25,298,183
(excluding investment gain or loss)



FY2010 Expense – \$25,095,117



to move forward with an eye toward growth and the development of new endeavors and bold initiatives that deliver value and meet the priority needs of a growing and diverse membership. In challenging economic circumstances when many organizations struggle to maintain core services, SfN has maintained a posture of modest expansion and continues to leverage external funding to move the organization in ambitious and exciting new directions that build member value.

SfN's diverse portfolio of external funding sources ensured that total annual grant and sponsorship revenues remained steady at just over \$1.1 million in FY2011, despite a contraction in funding from corporate supporters. This downturn in corporate funding was offset by strong gains in the three other areas of the development portfolio: private funders, federal grants, and individual donations.

This year, SfN was successful in cultivating key private funders to move from transactional funding to transformational funding partners, who reflect a strong and enduring commitment to the success of the

Society. Revenue generated from private grant funders increased by 41 percent over the previous fiscal year. Much of this increase was attributable to two major, multi-year awards from The Gatsby Charitable Foundation and The Kavli Foundation, supporting the foundational platform for *BrainFacts.org* (see page 37). SfN also received a multi-year award from the Esther A. and Joseph Klingenstein Fund to fund public education learning modules focused on animals in research. These funding partners continue the trend of increasing funding from private sources to support significant initiatives that reflect the Society's mission.

The Society increased its external funding from ongoing federal grants by approximately 6 percent from the previous year. The addition of a new mid-size grant from the National Science Foundation to fund Educational Resources in Neuroscience (ERIN) will further enhance the field by funding

an online resource that provides tools and best practices to assist faculty who teach undergraduates. SfN continues to pursue large-scale federal funding opportunities that support the Society's mission and strategic priorities.

Individual donations to the Society grew more than 32 percent in FY2011, and support travel awards to the annual meeting. SfN also began to build capacity for its planned giving efforts — another area of expected growth in the coming years.

Throughout FY2011, SfN was at the forefront in supporting the advancement and understanding of neuroscience and in supporting members with key benefits and programs. SfN is proud of the success it has created together with volunteer leadership, staff, membership, and partners, and looks forward to enhancing the Society's preeminence as the leading neuroscience membership society.



GELMAN, ROSENBERG & FREEDMAN
CERTIFIED PUBLIC ACCOUNTANTS

INDEPENDENT AUDITORS' REPORT

To the Council
Society for Neuroscience and 1121 Properties, LLC
Washington, D.C.

We have audited the accompanying consolidated statement of financial position of the Society for Neuroscience and 1121 Properties, LLC (collectively, the Society) as of June 30, 2011, and the related consolidated statements of activities and change in net assets and cash flows for the year then ended. These consolidated financial statements are the responsibility of the Society's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. The prior year summarized comparative information has been derived from the Society's 2010 consolidated financial statements and, in our report dated September 24, 2010, we expressed an unqualified opinion on those statements.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Society's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Society as of June 30, 2011, and its consolidated change in net assets and its consolidated cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Gelman Rosenberg & Freedman

September 21, 2011

4550 MONTGOMERY AVENUE • SUITE 650 NORTH • BETHESDA, MARYLAND 20814
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Consolidated Statement of Financial Position *(as of June 30, 2011)*

With Summarized Financial Information for 2010

ASSETS	2011	2010
Current Assets		
Cash and cash equivalents	\$ 2,275,888	\$ 736,515
Accounts receivable	142,897	214,930
Grants receivable (Note 3)	620,160	155,436
Prepaid expenses	779,842	912,492
Total current assets	3,818,787	2,019,373
Non-current Assets		
Investments (Notes 2, 12 and 15)	36,439,719	28,209,700
Grants receivable - long-term (Note 3)	929,494	-
Property, furniture, equipment and improvements, net of accumulated depreciation and amortization of \$8,507,005 for 2011 (Notes 4, 9 and 10)	32,073,454	33,541,446
Deferred rent receivable (Note 7)	801,909	708,137
Deposits	3,630	3,892
Total non-current assets	70,248,206	62,463,175
Total Assets	\$ 74,066,993	\$ 64,482,548
LIABILITIES AND NET ASSETS		
Current Liabilities		
Current portion of notes payable (Note 9)	\$ 563,333	\$ 550,000
Line of credit (Note 12)	-	494,497
Accounts payable and accrued liabilities	1,511,557	1,553,134
Deferred revenue	6,811,091	6,305,580
Total current liabilities	8,885,981	8,903,211
Non-current Liabilities		
Notes payable, net of current portion (Note 9)	17,478,334	18,041,667
Bonds payable (Note 10)	12,000,000	12,000,000
Tenant deposits	17,584	17,584
Interest rate swap obligation (Notes 11 and 15)	5,992,911	6,236,969
Total non-current liabilities	35,488,829	36,296,220
Total liabilities	44,374,810	45,199,431
Net Assets		
Unrestricted	26,842,174	18,176,151
Temporarily restricted (Note 5)	2,850,009	1,106,966
Total net assets	29,692,183	19,283,117
Total Liabilities and Net Assets	\$ 74,066,993	\$ 64,482,548

See accompanying notes to consolidated financial statements.

Consolidated Statement of Activities and Change in Net Assets for the Year Ended June 30, 2011

With Summarized Financial Information for 2010

			2011	2010
	Unrestricted	Temporarily Restricted	Total	Total
REVENUE				
Membership dues	\$ 5,256,746	\$ -	\$ 5,256,746	\$ 4,920,257
Journal of Neuroscience	6,752,182	-	6,752,182	6,254,572
Annual meeting	11,374,221	-	11,374,221	10,450,765
Investment income (Note 2)	6,468,643	220,128	6,688,771	3,653,778
Property management revenue (Note 7)	2,909,390	-	2,909,390	2,850,602
General program revenue	636,365	1,849,734	2,486,099	821,987
Net assets released from donor restrictions (Note 6)	326,819	(326,819)	-	-
Total revenue	33,724,366	1,743,043	35,467,409	28,951,961
EXPENSES				
Program Services:				
Journal of Neuroscience	5,076,545	-	5,076,545	5,085,582
Annual Meeting	8,540,561	-	8,540,561	9,156,612
Grants	632,184	-	632,184	417,456
General Programs	6,013,684	-	6,013,684	5,408,473
Total program services	20,262,974	-	20,262,974	20,068,123
Supporting Services:				
Membership Development	524,600	-	524,600	388,126
Property Management Expenses	4,514,827	-	4,514,827	4,638,868
Total supporting services	5,039,427	-	5,039,427	5,026,994
Total expenses	25,302,401	-	25,302,401	25,095,117
Change in net assets before other items	8,421,965	1,743,043	10,165,008	3,856,844
OTHER ITEMS				
Unrealized gain (loss) on interest rate swap (Note 11)	244,058	-	244,058	(1,823,357)
Transfer of ANDP	-	-	-	108,104
Total other items	244,058	-	244,058	(1,715,253)
Change in net assets	8,666,023	1,743,043	10,409,066	2,141,591
Net assets at beginning of year	18,176,151	1,106,966	19,283,117	17,141,526
Net Assets at End of Year	\$ 26,842,174	\$ 2,850,009	\$ 29,692,183	\$ 19,283,117

See accompanying notes to consolidated financial statements.

Consolidated Statement of Cash Flows for the Year Ended June 30, 2011

With Summarized Financial Information for 2010

CASH FLOWS FROM OPERATING ACTIVITIES

	2011	2010
Change in net assets	\$ 10,409,066	\$ 2,141,591
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Loss on disposal of equipment	16,331	2,403
Depreciation and amortization	1,770,803	1,771,535
Realized gain on investments	(1,317,368)	(115,434)
Unrealized gain on investments	(4,546,314)	(2,788,706)
Unrealized (gain) loss on interest rate swap	(244,058)	1,823,357
(Increase) decrease in:		
Accounts receivable	72,033	140,715
Grants receivable	(1,394,218)	(86,359)
Prepaid expenses	132,650	13,411
Deferred rent receivable	(93,772)	(50,146)
Deposits	262	-
Increase (decrease) in:		
Accounts payable and accrued liabilities	(41,577)	(179,604)
Deferred revenue	505,511	109,272
Net cash provided by operating activities	5,269,349	2,782,035

CASH FLOWS FROM INVESTING ACTIVITIES

Sales and maturities purchases of investments, net	(2,366,337)	(573,040)
Purchase of property, furniture, equipment and improvements	(319,142)	(602,180)
Net cash used by investing activities	(2,685,479)	(1,175,220)

CASH FLOWS FROM FINANCING ACTIVITIES

Proceeds from line of credit	-	1,117,936
Payments on line of credit	(494,497)	(2,225,000)
Payments on note payable	(550,000)	(500,000)
Net cash used by financing activities	(1,044,497)	(1,607,064)
Net increase (decrease) in cash and cash equivalents	1,539,373	(249)
Cash and cash equivalents at beginning of year	736,515	736,764

Cash and Cash Equivalents at End of Year	\$ 2,275,888	\$ 736,515
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SUPPLEMENTAL INFORMATION:

Interest Paid	\$ 1,508,057	\$ 1,554,692
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See accompanying notes to consolidated financial statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND GENERAL INFORMATION

Organization -

The Society for Neuroscience (SfN) is a non-profit organization, incorporated in the District of Columbia. The primary purposes of SfN are to advance the understanding of the brain and nervous system, including the part it plays in determining behavior, by bringing together scientists of various backgrounds and by facilitating the integration of research directed at all levels of biological organization; to promote education in the field of neuroscience; and to inform the general public on the results and implications of current research in this area.

The 1121 Properties, LLC (the LLC) is a limited liability company, incorporated in the District of Columbia on July 7, 2005. The primary purpose of the LLC is to engage in the business of performing services as directed by SfN for leasing and maintaining the leases of offices and other retail space in the premises known as 1121 14th St., NW, Washington, D.C. 20005.

The accompanying consolidated financial statements reflect the activity of the Society for Neuroscience and 1121 Properties, LLC (collectively, the Society) as of June 30, 2011. The financial statements of the two organizations have been consolidated because they are under common control. All intercompany transactions have been eliminated during consolidation.

Basis of presentation -

The accompanying consolidated financial statements are presented on the accrual basis of accounting, and in accordance with FASB ASC 958-010, *Not-for-Profit Entities, Consolidation*.

The consolidated financial statements include certain prior year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the Society's consolidated financial statements for the year ended June 30, 2010, from which the summarized information was derived.

Cash and cash equivalents -

The Society considers all cash and other highly liquid investments with initial maturities of three months or less to be cash equivalents.

At times during the year, the Society maintains cash balances at financial institutions in excess of the Federal Deposit Insurance Corporation (FDIC) limits. Management believes the risk in these situations to be minimal.

Investments -

The Society invests in shares held in individual securities or investment funds, which include bonds, stocks, money market funds held for investment purposes, and limited partnerships. Investment fund managers trade in various domestic and foreign financial markets, which carry a certain amount of risk of loss.

Investments are stated at their readily determinable fair value based on quoted market prices at the reporting date, or in absence of such quoted market price, a reasonable estimate of fair value as approved by management. Realized and unrealized gains and losses are included in investment income in the Consolidated Statement of Activities and Change in Net Assets.

The fair value of financial instruments is determined by reference to various market data and other valuation techniques as appropriate. Credit risk from financial instruments relate to the possibility that invested assets within a particular industry segment may experience loss due to market conditions.

The Society has diversified its financial instruments to help ensure that no one industry segment represents a significant concentration of risk.

Although management uses its best judgment at estimating fair value of the underlying assets for its investments, there are inherent limitations in any valuation technique. Therefore, the value is not necessarily indicative of the amount that could be realized in a current transaction. Future events will also affect the estimates of fair value, and the effect of such events on the estimates of fair value could be material.

Grants and accounts receivable -

Grants and accounts receivable are stated at their fair value. Management considers all amounts to be fully collectible.

Property, furniture, equipment and improvements -

Property, furniture, equipment and improvements are stated at cost. Property, furniture, and equipment are depreciated on a straight-line basis over the estimated useful lives of the related assets, generally three to ten years. The building and building costs are recorded at cost and are depreciated over thirty-nine years, while leasehold and tenant improvements are depreciated over fifteen years and the life of the tenant lease, respectively.

Expenditures for major repairs and improvements with useful lives greater than one-year and in excess of \$3,000 are capitalized, and expenditures of lesser amounts for minor and maintenance costs are expensed when incurred.

Income taxes -

The Society is exempt from Federal income taxes under Section 501(c)(3) of the Internal Revenue Code. In addition, the Society qualifies for the charitable contribution deduction under Section 170(b)(1)(A) and has been classified as an organization that is not a private foundation under Section 509(a)(2) of the Code. Accordingly, no provision for income taxes has been made in the accompanying consolidated financial statements. The Society is required to report unrelated business income to the Internal Revenue Service and the appropriate state taxing authorities.

The Society leases office space to several unaffiliated tenants. The activity is considered to be unrelated business activity under Internal Revenue Service regulations. Defined net income from the operations is taxable. To date, there has been a loss from unrelated business activities.

As of June 30, 2011, there were net operating loss carryforwards of approximately \$525,303. No deferred tax asset has been recognized due to uncertainty realization. The net operating losses expire between 2028 and 2029.

In June 2006, the Financial Accounting Standards Board (FASB) released FASB ASC 740-10, *Income Taxes*, that provides guidance for reporting uncertainty in income taxes. For the year ended June 30, 2011, the Society has documented its consideration of FASB ASC 740-10 and determined that no material uncertain tax positions qualify for either recognition or disclosure in the consolidated financial statements.

For the purpose of corporate tax reporting for the LLC, all financial transactions are reported under SfN's filing status.

Deferred revenue -

Deferred revenue consists of member dues, journal subscriptions, and annual meeting-related fees. The Society recognizes member dues and journal subscriptions on a pro-rata basis over an annual period, while annual meeting fees are recorded at the time the annual meeting occurs.

Net asset classification -

The net assets of the Society are reported in two self-balancing groups as follows:

■ **Unrestricted net assets** include unrestricted revenue and contributions received without donor-imposed restrictions. These net assets are available for the operation of the Society and include both internally designated and undesignated resources.

■ **Temporarily restricted net assets** include revenue and contributions subject to donor-imposed stipulations that will be met by the actions of the Society and/or the passage of time. When a restriction expires, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the Consolidated Statement of Activities and Change in Net Assets as net assets released from restrictions.

Revenue recognition -

Membership dues and journal subscription revenues are recorded as revenue in the year to which the revenue is related. Contributions and grants are recorded as revenue in the year notification is received from the donor.

Contributions and grants are recognized as unrestricted support only to the extent of actual expenses incurred in compliance with the donor-imposed restrictions and satisfaction of time restrictions. The Society recognizes annual meeting fees when the related event has occurred.

Contracts and grants received from departments or agencies of the United States Government are considered to be exchange transactions (as opposed to contributions) and are not recorded as revenue until related costs are incurred.

Rental income is recognized on a straight-line basis. The leases call for rent abatement and/or annual rental payment escalations.

The difference between rental income received and rental income recognized on the straight-line basis is recorded as deferred rents receivable in the accompanying Consolidated Statement of Financial Position. Deferred revenue is recognized for rental payments received in advance of the period earned.

Use of estimates -

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Accordingly, actual results could differ from those estimates.

Functional allocation of expenses -

The costs of providing the various programs and other activities have been summarized on a functional basis in the Consolidated Statement of Activities and Change in Net Assets. Accordingly, certain costs have been allocated among the programs and supporting services benefited.

Risks and uncertainties -

The Society invests in various investment securities. Investment securities are exposed to various risks such as interest rates, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the accompanying consolidated financial statements.

Fair value measurements -

The Society adopted the provisions of FASB ASC 820, *Fair Value Measurements and Disclosures*. FASB ASC 820 defines fair value, establishes a framework for measuring fair value, establishes a fair value hierarchy based on the quality of inputs (assumptions that market participants would use in pricing assets and liabilities, including assumptions about risk) used to measure fair value, and enhances disclosure requirements for fair value measurements. The Society accounts for a significant portion of its financial instruments at fair value or considers fair value in their measurement.

2. INVESTMENTS

Investments consisted of the following at June 30, 2011:

	Cost	Market Value
U.S. Government obligations	\$ 3,021,897	\$ 3,034,438
Fixed income	7,708,128	8,202,575
Equities	20,328,513	24,423,067
Cash	779,639	779,639
TOTAL LONG-TERM INVESTMENTS	\$ 31,838,177	\$ 36,439,719

Alternative investments are comprised of the following at June 30, 2011:

Investment Type	Amount	Liquidity
Cayman Islands Exempted Company	\$ 2,955,245	Quarterly with 90 days prior notice
Vintage Fund V Offshore LP	553,930	None until dissolution or transfer to another party
	\$ 3,509,175	

As of June 30, 2011, the Society has \$466,070 in uncalled commitments. Included in investment income are the following at June 30, 2011:

Interest and dividends	\$ 825,089
Net appreciation of investments	5,863,682
TOTAL INVESTMENT INCOME	\$ 6,688,771

The investment management fee expense totaled \$225,453 for the year ended June 30, 2011, which is included in general programs expense.

Included in equities are alternative investments with an estimated market value of \$3,509,175. The sale of these investments is subject to certain conditions.

At August 31, 2011, the total market value of long-term investments was \$34,506,944.

The Society has resolved to use available funds and future earnings thereon to establish a strategic reserve pool that represents at least one-year of operating expense budget. Based upon the intent of the Society, assets of the strategic reserve pool are classified as long-term.

3. GRANTS RECEIVABLE

As of June 30, 2011, contributors to the Society have made written promises to give totaling \$1,580,160.

Grants due in more than one-year have been recorded at the present value of the estimated cash flows, using a discount rate of 0.85%.

Grants are due as follows at June 30, 2011:

Less than one-year	\$ 620,160
One to five years	830,000
Beyond five years	130,000
Total	1,580,160
Less: Allowance to discount balance to present value	(30,506)
Grants Receivable	\$ 1,549,654

Notes to Consolidated Financial Statements *June 30, 2011*

4. PROPERTY, FURNITURE, EQUIPMENT AND IMPROVEMENTS

At June 30, 2011, property, furniture, equipment and improvements consisted of the following:

Land	\$ 7,150,400
Building	23,086,859
Building improvements	5,867,853
Furniture	1,154,224
Computer equipment	1,999,670
Leasing commissions	1,097,803
Other	223,650
	40,580,459
Less: Accumulated depreciation and amortization	(8,507,005)
Property, Furniture, Equipment and Improvements, Net	\$ 32,073,454

Depreciation and amortization expense totaled \$1,770,803 for the year ended June 30, 2011.

5. TEMPORARILY RESTRICTED NET ASSETS

Temporarily restricted net assets consisted of the following at June 30, 2011:

Julius Axelrod Prize	\$ 538,031
Donald B. Lindsley Prize	14,368
Ricardo Miledi Neuroscience Training Program	84,187
Jacob P. Waletzky Award	621,434
Bernice Grafstein Award	2,400
Engaging the Public About Animal Research	178,487
BrainFacts.org	1,411,102
Total Temporarily Restricted Net Assets	\$ 2,850,009

6. NET ASSETS RELEASED FROM RESTRICTIONS

The following temporarily restricted net assets were released from donor restrictions by incurring expenses, which satisfied the restricted purposes specified by the donors:

Julius Axelrod Prize	\$ 33,115
Ricardo Miledi Neuroscience Training Program	168,284
Jacob P. Waletzky Award	33,115
Bernice Grafstein Award	2,400
BrainFacts.org	89,905
Total Net Assets Released from Restrictions	\$ 326,819

7. LEASE COMMITMENTS

The LLC currently has a total of nine tenants leasing office space within its premises. The period of the leases range from August 14, 2006 to May 31, 2018. Rental income from these leases is included in the accompanying Consolidated Statement of Activities and Change in Net Assets in property management revenue. Rental income from these leases totaled \$2,361,544 for the year ended June 30, 2011, and is included in the accompanying Consolidated Statement of Activities and Change in Net Assets in property

management revenue. Property management revenue totaled \$2,909,390, and includes income for garage and storage leasing fees and operating expense recoverables.

Rental income is recognized on a straight-line basis. The difference between rental income received and rental income recognized on the straight-line basis is recorded as deferred rent receivable in the accompanying Consolidated Statement of Financial Position. As of June 30, 2011, the deferred rent receivable totaled \$801,909.

The following is a schedule of future minimum rental payments to be received by the LLC:

Year Ended June 30,	Tenants
2012	\$ 2,163,899
2013	1,424,744
2014	1,468,395
2015	1,374,586
2016	1,397,508
Thereafter	2,110,495
	\$ 9,939,627

8. RETIREMENT PLANS

The Society maintains two defined contribution plans for employees meeting certain eligibility requirements. The 403(b) Retirement Plan allows for eligible employees to contribute a percentage of their salary, subject to the maximum contribution as per the applicable IRS regulation. The Society will match up to 5% of a participating employee's salary, depending upon the percentage of contribution made by the employees. The 401(a) Retirement Plan provides a non-matching employer contribution of 5% to all eligible employees (members of senior management receive a 9% nonmatching contribution).

The Society's contributions to the plans for the year ended June 30, 2011 totaled \$634,850, with \$267,214 contributions to the 403(b) plan and \$367,636 to the 401(a) plan, respectively.

The Society also has a deferred compensation plan under Section 457 of the Internal Revenue Code for certain executive level employees. Contributions to this plan totaled \$33,000 for the year ended June 30, 2011.

9. NOTES PAYABLE

On February 1, 2006, the Society entered into an agreement to purchase the property at 1121 14th Street, N.W., Washington, D.C. The purchase was financed through a \$20,000,000 note payable from Bank of America, N.A.

The note called for interest-only payments until the building reaches stabilization of tenant income or once a period of eighteen months has elapsed since the closing. As of August 1, 2007, the latter criteria was met. The Society entered into a swap agreement to artificially fix the interest rate (see Notes 11 and 16).

Future minimum principal payments are as follows:

Year Ended June 30,	
2012	\$ 563,333
2013	592,500
2014	622,500
2015	656,667
2016	687,500
Thereafter	14,919,167
	18,041,667
Less: Current portion	(563,333)
Non-Current Portion	\$ 17,478,334

10. BONDS PAYABLE

On February 1, 2006, the District of Columbia agreed to issue its Variable Rate Revenue Bonds (Society for Neuroscience Issue) Series 2006 in the aggregate principal amount of \$12,000,000, for the benefit of the Society through Bank of America, N.A., in order to finance a portion of the costs of acquiring, constructing, and furnishing the office building, including parking garage, located at 1121 14th Street, N.W., Washington, D.C. The Society agreed to pay the principal and interest on the bonds. The bonds carry a fluctuating rate of interest per annum that approximates the BMA index (a national index of seven-day floating tax-exempt rates). As of June 30, 2011, the interest rate was 0.19%. Principal payments shall begin February 1, 2030.

11. INTEREST SWAP AGREEMENT

To minimize the effect of changes in the variable rate, the Society entered into an interest rate swap contract with a commercial bank for both the note and bonds payable, which it pays interest at a blended fixed rate of 5.2%. The interest rate swap contract is considered a derivative financial instrument, because it derives its value from the interest rate paid on the DC Bonds.

The fair value of the interest rate swap contract has been included as a liability in the amount of \$5,992,911 in the Consolidated Statement of Financial Position as of June 30, 2011. The unrealized gain on the interest rate swap of \$244,058 is shown as an other item in the Consolidated Statement of Activities and Change in Net Assets. The liability amounts represent an estimate of what the Society would have to pay if the agreement was cancelled as of June 30, 2011.

The recorded amount of the liability or asset representing the fair value of the swap contract will vary from year to year as (1) the variable rate received changes in relation to the fixed rate paid, (2) the principal amount is paid down, which reduces the corresponding amount of the swap contract and (3) the remaining time until maturity of the swap contract which terminates in 2030 for the note payable and 2037 for the bond payable.

12. LINE OF CREDIT

The Society has a line of credit with Citigroup Global Market, Inc. in the amount of \$5,000,000, with a fixed interest rate based on the applicable floating rate, which was 0.85% at June 30, 2011. As of June 30, 2011, there were no outstanding draws on the line of credit. The line of credit is collateralized by investments held by Citigroup.

13. REVOLVING CREDIT NOTE

The Society has a revolving credit note with Bank of America, N.A. in the amount of \$400,000, with an interest rate per annum equal to the applicable floating daily rate of the British Bankers Association (BBA), LIBOR plus 120 basis points. As of June 30, 2011, the revolving credit note had no outstanding borrowings.

14. COMMITMENTS

The Society is committed under an agreement for conference space in 2012 and 2013. The total commitment under the agreement is not determinable, as it depends upon attendance and other unknown factors. There is a cancellation penalty that would be due if the agreement was canceled prior to the event date. The amount of the cancellation penalty increases through the date of the event.

15. FAIR VALUE MEASUREMENTS

In accordance with FASB ASC 820, *Fair Value Measurements and Disclosures*, the Society has categorized its financial instruments, based on the priority of the inputs to the valuation technique, into a three-level fair value hierarchy. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure

the financial instruments fall within different levels of hierarchy, the categorization is based on the lowest level input that is significant to the fair value measurement of the instrument.

Investments recorded in the Consolidated Statement of Financial Position are categorized based on the inputs to valuation techniques as follows:

Level 1. These are financial instruments where values are based on unadjusted quoted prices for identical assets in an active market the Society has the ability to access.

Level 2. These are financial instruments where values are based on quoted prices in markets that are not active or model inputs that are observable either directly or indirectly for substantially the full-term of the investments.

Level 3. These are financial instruments where values are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. These inputs reflect assumptions of management about assumptions market participants would use in pricing the investments. These investments include non-readily marketable securities that do not have an active market.

Financial instruments recorded in the Consolidated Statement of Financial Position are categorized based on the inputs to the valuation technique as follows for the year ended June 30, 2011:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments	\$ 32,930,544	\$ -	\$ 3,509,175	\$ 36,439,719
Liability:				
Interest Rate Swap Obligation	\$ -	\$ -	\$ 5,992,911	\$ 5,992,911

Level 3

The following table provides a summary of changes in fair value of the Society's financial assets for the year ended June 30, 2011:

	Investments	Interest Rate Swap Obligation
Beginning balance as of July 1, 2010	\$ 1,870,802	\$ 6,236,969
Unrealized and realized gains	231,431	(244,058)
Purchases	1,406,942	-
Balance As Of June 30, 2011	\$ 3,509,175	\$ 5,992,911

16. SUBSEQUENT EVENTS

Subsequent to year-end, the Society entered into an agreement to refinance its current swap agreements, bonds payable and notes payable. PNC agreed to accept and assume the swap agreements, bonds, and notes payable from Bank of America.

The Society agreed to a modified novation mark-up arrangement with PNC on August 1, 2011, which resulted in lower swap rates than under the applicable terms of the Commitment Letter.

In preparing these consolidated financial statements, the Society has evaluated events and transactions for potential recognition or disclosure through September 21, 2011, the date the consolidated financial statements were issued.

Photography Credits

Page 1: New methods in microscopy and image reconstruction allow neuroscientists to trace the connections between brain cells. This image is a three-dimensional rendering of two pyramidal neurons in the mouse cortex.

Courtesy, with permission: Lu J, Fiala JC, Lichtman JW (2009) Semi-Automated Reconstruction of Neural Processes from Large Numbers of Fluorescence Images. *PLoS ONE* 4(5): e5655

Page 2: The social world of humans is complex and places great processing demands on the brain. The cover illustrates an individual's social network, generated by the Facebook application Nexus. Each white node in the graph represents a person, and the edges connecting them are colored to emphasize differential social closeness—blue edges, clustered around the enlarged white center node, represent close social bonds, while bonds with those who are less socially close are colored orange. In their paper, Krienen et al. find that brain systems including medial prefrontal cortex (MPFC) are preferentially responsive when making inferences about others who are socially close to us, even if we believe we do not share their views.

Courtesy, with permission: Fenna M. Krienen, Pei-Chi Tu, and Randy L. Buckner, 2010, *The Journal of Neuroscience*, 30: 13906-13915

Page 3, 6, 11, 17, 20, 21, 27, 32, 33, 37, 42, 43: Copyright 2010, Society for Neuroscience. All rights reserved. Photos by Joe Shymanski.

Page 3, 30: Adapted by permission from Macmillan Publishers, Ltd: *Nature Neuroscience*, 9(7)861-863, 2006.

Page 3, 41: Image adapted from Gogtay N, et al. Dynamic mapping of human cortical development during childhood through early adulthood. *PNAS* 2004, 101(21): 8174-79, Fig. 3.

Page 5: Embryonic (day 17) retinal ganglion cells (RGCs) require contact-mediated signals from neighboring cell types to become synaptically receptive. Here embryonic neurons are plated on top of a confluent layer of mixed retinal cells, which are sufficient to induce synapse formation. Dendrites are stained with MAP2 (green), and synaptic puncta are shown as an overlap synaptotagmin (blue) and PSD-95 (red).

Courtesy, with permission: Alison J. Barker, Selina M. Koch, Jamian Reed, Ben A. Barres, and Erik M. Ullian, 2008, *The Journal of Neuroscience*, 28: 8150-8160

Page 6: A neuronal glutamate transporter clusters at post-synaptic sites. Confocal image of 11 day old cultured hippocampal neurons co-transfected with constructs expressing soluble cyan fluorescent protein (blue) and a full-length glutamate transporter, EAAT3, fused to a yellow fluorescent protein (yellow). EAAT3 is seen in clusters on the dendritic surface and on spines and filopodia, whereas the soluble cyan fluorescent protein fills the entire cell.

Courtesy, with permission: C. Cheng, G. Glover, G. Banker, and S.G. Amara, 2002, A novel sorting motif in the glutamate transporter EAAT3 directs its targeting in Madin-Darby canine kidney cells and hippocampal neurons. *The Journal of Neuroscience* 22:10643-52

Page 7: Derived from Golgi's drawing of a cerebellar Type II cell. Credit: Golgi, C. (1885). Sulla fina anatomia degli organi centrali del sistema nervosa. *Revista sperimentale di Freniatria*. Reprinted in: Golgi, C. *Opera Omnia*. Milano, Hoepli: 1903.

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Page 10: Calcium imaging in a living cerebellar Purkinje cell loaded with the calcium-sensitive dye Oregon Green BAPTA-2 in a mouse cerebellar slice. This picture shows in false colors the projection of the resting level of fluorescence acquired by a confocal laser microscope on multiple planes of the cell. Variations of calcium intensity can be detected in spines in response to climbing fiber stimulation. This calcium signaling is partly mediated by NMDA receptors in adult rodents and plays a key role in synaptic gain control.

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Page 19: Courtesy of Robert S. Fisher, MD, PhD, Stanford Neurology and Jaimie Henderson, MD, PhD, Stanford Neurosurgery.

Page 20: Image overlay of fluorescently labeled cultured mouse hippocampal neurons transfected with green fluorescent protein and $Ca_v1.3$ Ca^{2+} channels (background; green and red), or densin-GFP (foreground; blue), which colocalizes with PSD-95 (red) in dendritic spines (white). Together with Ca^{2+} /calmodulin-dependent protein kinase II, densin mediates a novel form of Ca^{2+} -dependent facilitation.

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Page 28: Courtesy of Foundation Fighting Blindness

Page 31: Courtesy, with permission: James W. Bisley and Michael E. Goldberg, *Journal of Neurophysiology* 2006, 95: 1696-1717.

Page 31: The background is an immunohistochemical stain of cells expressing β -galactosidase (red) under the control of a κB promoter and medium spiny neurons (MSNs) expressing green fluorescent protein under control of dopamine D2 receptor (blue) in the nucleus accumbens (NAc) shell. In the foreground are 3-D reconstructions of Lucifer yellow-filled NAc MSNs artistically rendered by the authors.

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Page 33: Courtesy, with permission: Emory University Photo/Video, 2010.

Page 36: Whole-mount X-gal staining of sensory axons innervating the limbs of an embryonic day 15.5 mouse carrying the LacZ gene driven by the sensory neuron promoter of Brn3a.

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Page 42: Differentiated astrocytes, expressing glial fibrillary acidic protein (red), migrating outwards from a neurosphere after treatment of neural precursors with bone morphogenetic protein 4. Nuclei are stained blue. Transplantation of such cells is neuroprotective in a mouse model of tauopathy. Image copyright 2010 Daniel Webber.

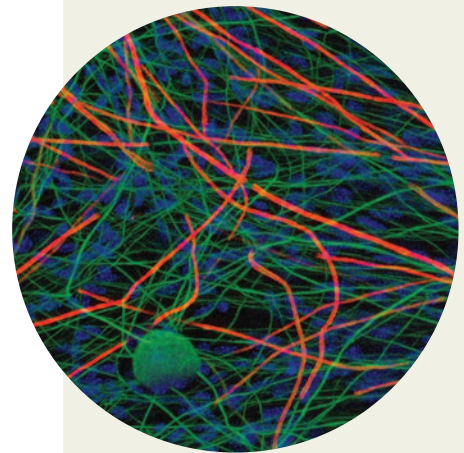
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Page 54: Cocultures of myelin-forming Schwann cells and dorsal root ganglion neurons. Green, Sensory neurons and neurites; red, myelinated fibers stained for myelin basic protein; blue, Schwann cell nuclei.

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