Commitment to DISCOVERY
FOR THE 2008 MEMBERSHIP YEAR!

The Sleep Research Society (SRS) is a member organization of more than 1,200 scientists that is committed to fostering scientific investigation on all aspects of sleep and its disorders, to promoting training and education in sleep research, and to providing forums for the exchange of knowledge pertaining to sleep.

Through its members and leadership, the SRS is organized exclusively for scientific, educational, and charitable purposes. We invite you again to commit and join the distinguished scientists that make up the SRS and the sleep research field. By committing yourself to discover the SRS you are committing yourself to success.

EDUCATION
• Attend the Development of Sleep Promoting Agents Course, a two-day course intended for individuals involved in any aspect of the development of sleep-promoting agents
• Participate in the more than 120 different sessions at SLEEP 2008.
• Examine the new study aid for sleep science, the Basics of Sleep Slide Set Series which serves as a tool for audiences from advanced high school programs to PhD/MD professionals.

TRAINING
• Take part in the SRS Trainee Symposia which is a full-day event FREE to SLEEP 2008 student registrants
• Utilize the online Trainee Manual which lists potential mentors and training laboratories and includes information on grant mechanisms and current job/career opportunities

GRANT OPPORTUNITIES
• Apply for the Gillin Grant made available for young investigators gathering pilot data to be used for future grant applications.
• Receive funding for the Weitzman Grant which is intended for researchers to gather additional pilot data for NIH or other federal grants that are scored but not funded.
• Become involved as the Sleep Research Society Foundation invites promising young postdoctoral investigators in the early stages of their careers to apply to the SRSF Sleep Fellowship Grant Program.

Renew online at www.sleepresearchsociety.org. For information or questions regarding membership, please contact the SRS membership department at (708) 492-1093 or srsmembership@srsnet.org
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Dear Members of the Sleep Research Society (SRS):

It is a pleasure and honor for me to serve and write to you as the President of the Sleep Research Society.

Let me briefly update you on some of the activities we have been involved with since I took office in June, 2007. While most activities continue the work of the society since its inception, some new activities have been initiated in response to some recent challenges that face the Society.

Since inception, the Sleep Research Society has served to bind like-minded individuals together in the spirit of academic collegiality. This includes the organization of an annual meeting and the production of a journal to communicate sleep research, both endeavors that are jointly shared with our clinical counterpart, the American Academy of Sleep Medicine. The SRS also has a long history of nurturing junior investigators to enter the field, manifested by the long running and highly successful Trainee Day and associated Travel Awards programs. All of these activities form the backbone of our society and continue unabated by the APSS staff, the APSS program committee, and the Training and Educational Activities Committee of the SRS.

Please register now to attend the annual SLEEP meeting in Baltimore, MD June 7-12, 2008.

With the growth of our society, we have been able to branch into other areas of service to our members. For example, the Educational Programs Committee has developed a successful educational slide series on key findings in Sleep Research. These can be used for an individual's education or for use in teaching larger groups. This committee has also successfully branched out into “webinars”, educational events over the internet, to reach a broad audience in key topics of sleep research. The Educational Programs committee is also designing career development courses to be considered by the APSS program committee for presentation at the 2008 annual SLEEP meeting to be held in Baltimore, MD. We hope that you will take advantage of some of these unique educational experiences throughout the year.

Details for all educational programs offered by the SRS can be found on our website: http://www.sleepresearchsociety.org.

For the past several years, the SRS has produced a mid-year specialty sleep research meeting. This year, the SRS will be sponsoring “The development of sleep-promoting agents” held April 3-4, 2008 in New York City. This represents a unique opportunity for the SRS to provide expertise in this area to a wide range of individuals interested in finding better solutions to the insomnia problems facing a large percentage of the population. Details regarding this course can be found at the following website:

The leadership of the SRS has recognized several challenges facing our members and has taken steps to address these challenges on behalf of our members.

First, the face of sleep in academic centers is evolving as these academic centers change. In 2006, the influential Institute of Medicine report made several recommendations for how academic sleep centers should look in the future. SRS leadership has recognized the need to be proactive in the development of these centers, ensuring roles for the promotion and training of basic sleep researchers, in addition to clinical sleep researchers in these centers. To further refine SRS positions in this area and to recommend action steps, I created the “SRS Presidential Task Force on Academic Sleep Centers”. Ruth Benca, M.D., Ph.D. has graciously agreed to chair this task force and initial recommendations from this task force have been received. This task force is now proceeding to the implementation step of their work.

Second, SRS leadership has recognized that one of the critical challenges facing our members at this time is the limited funding opportunities available for sleep research, in large part related to restrictions in funding for research at the federal level. The SRS needs to promote sleep research funding at all levels, both public and private, identify existing opportunities for funding that currently exist and disseminate that information to our members. This represents a serious challenge to our membership and field as a whole. As such, I created the “SRS Presidential Task Force on Research Funding”. I am pleased to report that Terri Weaver, Ph.D. has agreed to chair this task force. The members of this task force include:

Terri Weaver, Ph.D.
Craig Heller, PhD
Michael Irwin, MD
Daniel Lewin, PhD
Thomas Scammell, MD
Douglas Teti, PhD
David White, MD
Kenneth Wright, Jr., PhD
Susan Redline, MD

Please join me in supporting the efforts of this task force as they undertake this important mission for our society.

Finally, as our society has matured and our knowledge base has expanded to the point where our research findings have implications for public health, it is essential that we now translate our knowledge into policy statements of the SRS that can be used to influence the actions of public agencies at large. To guide us in these efforts, I have created the "SRS Presidential Task Force on Public Health". I am pleased to announce that Alan Pack, M.D., Ph.D. has agreed to chair the important work of this task force. The membership of this task force includes:

Allan Pack, MD, PhD
Charles Coizier, MD, PhD
Jodi Mindell, PhD
Barbara Phillips, MD
Kingman Strohl, MD

At every level, there are opportunities for our members to become involved in the activities of the society. The SRS is at a critical juncture in our development as an organization. We have now grown to the extent that we can now provide a much broader array of services to our members than at any point in the history of the SRS. Many of these services depend on individual members such as yourself joining committees and sections so that you can contribute in meaningful ways to the fulfillment of SRS missions and to the further growth and influence of our society.

Many thanks to all of you who have contributed to this point and to those of you who will consider contributing in the year ahead. The success of the SRS depends on you.

Best wishes in the months ahead,

Eric A. Nofzinger, M.D.
President, SRS
The closing of another year finds our society in a strong financial position and with a healthy membership. As of the end of November, the SRS boasts nearly 1300 members, with 120 new members joining during the second half of this year. Please see Secretary-Treasurer Dr. Tom Kilduff’s report for full details about SRS financial activities during FY2006 and newly implemented initiatives. The inaugural President’s Message by Dr. Nofzinger highlights upcoming SRS events and strategies the leadership is implementing to address the scope of challenges facing our members. It is clear that Dr. Nofzinger has hit the ground running in his new position. This issue additionally includes reports from the five SRS Section Heads describing activities of their section members over the past year and details on two SRS educational experiences: Webinars and a specialty course entitled “The Development of Sleep Promoting Agents” to be held in April 2008 at the Westin New York Times Square, New York, NY.

In addition to SLEEP 2007, sleep researchers were also fortunate this year to have the opportunity to attend the World Federation of Sleep Research and Sleep Medicine Societies (WFSRMS) worldsleep07, held this past September in beautiful Cairns, Queensland, Australia. The organizers provide a retrospective on this hugely successful international congress and look forward to the 2011 WFSRMS meeting in Japan. In addition to the meeting, worldsleep07 had a comprehensive and productive Trainee Program, sponsored in part by the Sleep Research Society Foundation. The details of this successful event and accompanying pictures showing the enthusiastic participants also appear in this issue.

The bulletin is committed to highlighting notable research achievements by our members. This issue features an invited article by two prominent researchers in movement disorders, Drs. David Rye and John Winkelman, who review and speculate on the implications of recently published findings on the genetics of Restless Legs Syndrome and Periodic Limb Movement in Sleep. These important findings should spur additional clinical and basic research in this area, but the current funding challenges may influence the rate of scientific advances. Fortunately, NIH is soliciting input on critical aspects of their policies and procedures. Dr. Carol Everson represented the SRS at a recent town-hall style meeting on the NIH scientific peer review process and reports on this event, which was at times colorful and controversial. In addition to providing solicited and unsolicited input to NIH, many of us can have a more direct influence on the peer review process by volunteering our services. In this issue, Dr. Armitage, a highly experienced and committed NIH peer reviewer, offers some compelling arguments for serving in this capacity and appeals to eligible sleep researchers to “do your part” to ensure that sleep applications receive fair and proper consideration.

Comments about the bulletin and ideas for future issues can be submitted to me at tarnedt@med.umich.edu. Have a happy, healthy, and productive 2008.
The Sleep Research Society continues to grow and provide benefits to its members. This report briefly summarizes our financial position at the close of FY 2006 and provides current membership numbers. Most of this information was presented at the Annual Business meeting of the SRS held at the SLEEP2007 meeting in Minneapolis in June, 2007.

The SRS remains in good financial position. The audit of FY 2006 finances indicated that, as of December 31, 2006, total assets of the SRS were $2,473,612 with total liabilities of $129,539. As such, our net assets were $2,344,073. At the present time, our primary sources of revenues are membership dues and disbursements from the APSS LLC partnership, the governing body that oversees publication of the journal SLEEP and the annual APSS meeting.

**Assets as of October 31, 2007**

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<tr>
<td><strong>Total</strong></td>
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**Liabilities as of October 31, 2007**

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<tr>
<td><strong>Total</strong></td>
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Membership in the SRS grew during 2006 and continues to do so this year. As I reported at the June, 2007 SRS business meeting, total membership in the SRS was 1,171 as of May 31, 2007. Membership has continued to grow throughout 2007 and, as of November 27, 2007, stands at 1,290 total members. The majority of SRS members are Full members (837), with Trainee members (356) constituting the second greatest membership category. Of the Trainee members, 244 are pre-doctoral and 112 postdoctoral trainees. Of our 837 Full Members, 339 are also members of the American Academy of Sleep Medicine (AASM).

The increase in membership and our strong financial standing have provided the means to implement new initiatives that will benefit SRS members and the field of sleep research. Over the past year, the SRS Board has focused on implementing action items from the Strategic Plan that will directly benefit the SRS membership. A Presidential Task Force on Research Funding has recently been formed as a means of addressing the funding concerns of SRS members. One of the goals of this task force is to identify funding sources for the research projects of SRS members. The SRS continues to offer funding opportunities exclusively for its SRS members. The SRS Foundation, founded in 2004 to allow the receipt of charitable donations and disbursement of funds, awarded four grants in 2007: three J. Christian Gillin, M.D. Research Grants, intended for seasoned researchers to gather additional pilot data for NIH or other federal grants that are scored but not funded. Proposals considered for this award have been recognized by the NIH review process as having a strong foundation, but may lack adequate preliminary data or evidence of feasibility. The next application due date for the Gillin and Weitzman Awards was December 1, 2007. In addition to the Gillin and Weitzman grants established in 2005, this year the SRS Foundation is offering a grant sponsored by Takeda Pharmaceuticals called the SRSF Sleep Fellowship Grant. The deadline for this grant was also December 1, 2007. The recipients of these grants will be announced at SLEEP2008.

Resources to implement Foundation initiatives are derived in part from the “Discovering the Secrets of Sleep” fundraising dinner held as a joint venture with the AASM. The SRS share of the revenues from the 2007 dinner was $23,887 and these revenues were deposited in the SRS Foundation. We encourage all SRS members to attend this dinner with their lab members and to otherwise support the Foundation in its effort to help SRS members cope with the challenging funding environment expected in the coming years.

This year the SRS again offered a “Primer of Sleep Research” course. This year’s course was held on February 9-11, 2007 in La Jolla, California and was attended by 52 participants, 22 of whom were SRS members. In 2008, the SRS will offer a course entitled “The Development of Sleep Promoting Agents.” This course will be held at the Westin Times Square in New York City from April 3-4, 2008 and will focus on the nature of and treatments for insomnia.

The SRS continues to expand its programs to increase the visibility of the society. Club Hypnos, traditionally an event sponsored by the SRS at the Society for Neuroscience annual meeting, was held at the Manchester Grand Hyatt in San Diego, California on November 5, 2007. Another Club Hypnos event was held at the Association of Behavioral and Cognitive Therapy Meeting at the Philadelphia Marriott Downtown in Philadelphia, Pennsylvania on Friday, November 16, 2007.

Although the SRS is in good financial standing with new initiatives and programs, the SRS Board of Directors continues to work to identify sources of revenue independent of the APSS LLC partnership. Diversification of the revenue stream for the SRS and increasing society membership remain high priorities vital to the long-term financial health of our Society. At SLEEP2007, the SRS introduced the “SRS Basics of Sleep Slide Set.” A tool for members and non-members, the slide set, developed by the Educational Programs Committee, incorporates the information from the “SRS Basics of Sleep Guide” in ten slide sets that can be used as a training tool or as the basis for hour-long lectures. The SRS also plans to continue to offer courses that appeal to both members and non-members such as the “The Development of Sleep Promoting Agents” course mentioned above. Courses, educational products, and the research fundraising dinner also mentioned above are ongoing activities that were initiated to diversify our income stream beyond membership dues and the revenues from the annual meeting. The officers of the SRS Board of Directors are committed to managing the resources of the SRS to provide benefits of high value to the membership.

Respectfully submitted,

Thomas S. Kilduff, Ph.D.
SRS Secretary/Treasurer
Sleep research and sleep medicine have "gone global" in the past 20 years and are now recognised as mainstream components of scientific and clinical endeavour. Many of the mysteries of sleep are being solved and in many countries sleep medicine is now a separate subspeciality requiring training that is both specialised and interdisciplinary in nature. The impetus for these changes stems from recommendations from influential national bodies, including a recently published Institute of Medicine report in the US. Although national strategies are important, international coordination will ultimately prove critical for further progress in sleep research and clinical care.

The 5th congress of the World Federation of Sleep Research and Sleep Medicine Societies (WFSRSMS), WorldSleep07, was held from September 2-6 2007 to promote international dialogue and collaboration, to train developing sleep researchers, to showcase the world's best research and researchers and to raise the public, professional and academic profile of the value of sleep research. The congress was an organisational partnership between the Australasian Sleep Association (ASA) and WFSRSMS and featured representatives from all member societies (including the Sleep Research Society) and across scientists, technologists and clinicians from many seemingly separate disciplines such as neurology, endocrinology, physiology, molecular biology, and pulmonology. The congress was held in tropical Cairns, the 'gateway' to tropical North Queensland, one of the most naturally beautiful regions of Australia boasting some of the oldest rainforests on the planet, the Great Barrier Reef and miles of spectacular coastline. 1579 delegates travelled from 35 countries around the world to attend the congress.

A spectacular opening ceremony featuring performances by indigenous Australians, ballerinas, opera singers and acrobats was matched scientifically by a fascinating lecture delivered by Jerry Siegel (USA) 'Clues to the Functions of Mammalian Sleep'. His phylogenetic approach investigating monotremes (native Australian mammals that lay eggs and suckle their young) and higher mammals (such as dolphins) addressed the fundamental question as to why mammals sleep. This proved an ideal starting point for the four days of science, debate, education and socialising that followed. The comprehensive scientific program included themes in endocrinology and neuropharmacology, sleep and breathing, behavioural and clinical sleep medicine, sleep in children, circadian, sleep biology and sleep mechanisms. Attendees ranged from educators, distinguished scientists, students, physicians and ear-nose and throat surgeons. The congress featured both symposia and panel discussions to summarise the latest scientific breakthroughs or current debates with up to 9 parallel sessions running. Main themes emerging from the addresses of invited speakers included the functions of sleep, insomnia, circadian rhythms, the history and future of sleep research, real-world implications of sleepiness and respiratory and neurological based sleep disorders and functions. Particularly noteworthy was the Helen Bearpark Memorial Lecture, 'Selling Sleep', delivered by Mary Carskadon (USA) which addressed the urgency to conduct and document sleep research in a way that is socially responsible, innovative and creates knowledge useful to both fellow scientists but also to the public, those whom we are ultimately seeking to understand and help. Another highlight was the contribution of SRS members Cliff Saper, Emmanuel Mignot and Giulio Tononi to a memorable last day of the congress keeping attendees there till the "bitter end".

The congress included a specialised trainee program aimed at supporting the next generation of sleep researchers and encouraging community spirit. Ninety-one trainee merit and travel awards were distributed to support students and trainee breakfasts were shared between trainees and faculty each morning. The Trainee Professional Development Day was a particularly valuable aspect of the trainee program, with the keynote address 'Science is something that is done between friends' delivered by Anna Wirz-Justice (Switzerland) conveying the value in fostering academic friendships based on a mutual passion for research and thirst for knowledge. Educational workshops gave trainees the opportunity to interact with one another and with invited speakers about a number of topics, related to current research, professional development and lifestyle advice. Workshops included those delivered by David Dinges (USA) and David Gozal (USA) 'How to Get Published', 'Balancing your Career' with Sonia Ancoli-Israel (USA) and Josephine Arendt (UK), 'How to Establish and Maintain International Collaborations' with Allan Pack (USA) and Sean Drummond (USA) and 'Ethical Issues in Sleep and Circadian Research' with Doug McEvoy (Australia) and Hans Van Dongen (USA). Specific financial support was provided by some of the sleep societies to allow their trainees to participate and this included the SRS.

David Dinges' Presidential Plenary Lecture entitled 'Sleep Need - Science and Global Public Health: The Future is Now' was an inspiring way to conclude the conference, identifying the way forward for sleep research and identifying the investigation of individual differences as an area where current knowledge is sparse and needs greater consideration in future research.
Trainee Day Report

The World Federation of Sleep Research & Sleep Medicine Societies and the organisers of worldsleep07 are committed to supporting trainees in Sleep & Chronobiology, and placed particular importance on encouraging trainees in our fields to attend the worldsleep07 congress, providing them with the opportunity to meet their peers, present and discuss their current work and gain information about career development. As part of this commitment to trainees, an extensive Trainee Program, and Trainee Support package was organised for worldsleep07.

The Trainee Program consisted of the Trainee Professional Development Day, the Trainee Awards (Merit and Travel), Trainee Symposia, and Trainee Breakfasts.

The Trainee Program would not have been possible without the hard work of the Trainee Organising Committee, the speakers who gave their time for the Trainee Professional Development Day, the mentors who attended the Trainee Breakfasts, the sponsors, and of course the Trainees who enthusiastically participated in the trainee events.

Trainee Organising Committee

The Trainee Organising Committee, who kindly volunteered their time in the build up to the congress and during the congress, included representatives from various areas of the Sleep & Circadian field, from a number of countries. The Committee reviewed more than 100 abstracts submitted by trainees and ranked the trainees who received awards. During the congress members of the Committee presented workshops during the Trainee Professional Development Day.

Professional Development Day, chaired the Trainee Symposia and attended the Trainee Breakfasts.

Thank you to:

Monica Andersen, Brasil
Clare Anderson, United Kingdom
John Axelsson, Sweden
Lisa Chuah, Singapore
Sean Drummond, U.S.A.
Stuart Fogel, Canada
Nathanial Marshall, Australia
John Peever, Canada
Gina Poe, U.S.A.
Shantha Rajaratnam, Australia
Naomi Rogers, Australia
Tracey Sletten, United Kingdom
Masaya Takahashi, Japan
Cameron van den Heuvel, Australia
Kenneth Wright, Jr., U.S.A.

Trainee Professional Development Day

On Sunday 2nd December the Trainee Professional Development Day kicked off the Trainee Program. To start the day we enjoyed a wonderful Keynote Address from Prof. Anna Wirz-Justice who spoke about “Doing Science with Friends”. Everyone then split into groups to attend four workshops, which included topics such as: Year in Review, Balancing Your Career, Working Internationally, Grantmanship, Getting Published, Giving Presentations, Working with Industry, Giving a Job Talk, Putting Together your CV, Maintaining International Collaborations, Translational Research and Teaching a Sleep and Chronobiology Course. At the end of the day everyone moved into the Main Hall to attend the Opening Ceremonies, followed by the Welcome Party.

Trainee Breakfasts

Trainee Breakfasts were held each morning of the congress to provide trainees the opportunity to meet with their peers, make new friends and talk with mentors in the field (as well as start the day off with some food!). We had a great turnout on all the days, but with fewer people coming on the last morning following the congress part. Not sure why………

These breakfasts provided a relaxed forum for trainees to speak with mentors and meet their peers, with many of the mentors also saying how much they enjoyed the experience and the relaxed setting.

Trainee Symposia

Recipients of the Trainee Merit Awards were invited to present their abstracts as both posters and as 10-minute oral presentations in one of three Trainee Symposia. The quality of the presentations was outstanding and demonstrated the diversity of research that is being carried out in our field. From these presentations five trainees were awarded a Trainee Presentation Award -- a copy of Principles and Practice of Sleep Medicine.

Trainee Presentation Award Recipients

Sara Aton
Kerstin Hoedlmoser
Nicole Smith
Renate Wehrli
Keith Wong

Sponsors

We would like to thank the sponsors of the worldsleep07 Trainee Program, in particular the Trainee Merit Awards and Trainee Travel Awards: worldsleep07, Australasian Sleep Association, Sleep Research Society Foundation, Cephalon Inc. and Respironics for their generous support. Seventeen trainees were recipients of the Trainee Merit Awards, and more than 60 trainees received Trainee Travel Awards. We would also like to thank Elsevier for their support of the Trainee Presentation Awards.

Naomi Rogers, PhD
Kenneth P. Wright Jr., PhD
Sean P.A. Drummond, PhD
This past summer brought discovery of the first variant in the sequence of the human genome ever linked to risk of Restless Legs Syndrome (RLS) and Periodic Limb Movements of Sleep (PLMs) by a research team at deCODE Genetics in Reykjavik, Iceland and Emory University in Atlanta. The single-nucleotide polymorphism (rs3923809), or SNP, in the BTBD9 gene on chromosome 6 was associated in Icelandic families of those with RLS and U.S. RLS patients with an increased risk of PLMs of 70-80 percent for those carrying one copy compared to those without the variant (1). Genome wide association to PLMs and RLS of markers in the BTBD9 gene on chromosome 6p21.2 is the first substantive data for the genetic basis of RLS. This discovery is especially noteworthy because this single gene variant accounts for a substantial portion (~50%) of the population-attributable risk for RLS/PLMs - a level of risk unprecedented at this time for any gene associated to a common, complex disorder.

This single variant is not only exceedingly common (i.e., at least 68% of the Caucasian population carries at least one copy), it also accounts for much of what is known concerning the clinical features of the disorder: e.g., it is related in a ‘dose-dependent’ fashion to PLMs, decrements in iron stores, and ethnic differences in RLS prevalence. The variant is thus clearly implicated in the biology of the disorder. This genetic association was driven by PLMs (i.e., the SNP predominantly confers risk for PLMs, such that those with RLS without PLMs did not have an elevated risk, whereas individuals without RLS symptoms but with PLMs had the highest risk for the gene variant). At the same time as the Iceland/Emory study, Winkelmann et al. confirmed the association of RLS to the BTBD9 gene on chromosome 6 and reported additional association in German and French-Canadian RLS patient cohorts to the Meis1 gene on chromosome 2p14 and the MAP2K5/LBXCOR1 genes on chromosome 15q23 (2). These three variants together account for a very substantial proportion (> 80%) of the population-attributable risk for RLS/PLMs in individuals of European ancestry.

This work identifies PLMs as a critical endophenotype necessary for epidemiological studies in RLS (3), and the best example to date of how dissection of the human genome can impact disease classification. Endophenotypes are genetically mediated biological phenomena that are fundamentally related to the clinical condition of interest and can be reliably and objectively measured. It is the assumption that the genetics of such endophenotypes will be more straightforward than that of a complex clinical disorder. The results of the Emory/Iceland study offer insights into how RLS manifests, how it is identified and defined, and provide the critical first step to molecular and systems biological dissection of the pathophysiology of RLS/PLMs. Echoing a theme that is emerging from genome-wide association dissection of other common diseases, the identified variants do not yet provide a ready explanation for how and why RLS/PLMs manifests in only a subset of individuals carrying the at-risk gene variants. Certainly, yet to be elucidated interactions with other genes and environmental factors are likely to play a role. The at-risk SNPs in all three instances are common, present within non-coding, intronic or intergenic regions, and implicate genes that are widely expressed in the central nervous system and other organs. Very little is known about the normal function of these genes, let alone how they contribute specifically to the pathophysiology of RLS/PLMs (4).

Establishment of diagnostic criteria for RLS in the last 15 years provided enormous impetus for advances in epidemiology, pathophysiology and clinical therapeutic studies in this area. From a clinical perspective, we now know that RLS reliably produces sleep disruption and is associated with impaired health-related quality of life and higher cross-sectional rates of mood and anxiety disorders (5). On a systemic level, recent evidence demonstrates substantial nocturnal elevations of blood pressure time-locked to PLMs (6), which may be a mechanism for the association of RLS with both cardiovascular disease in the general population (7) and elevated mortality in patients with end-stage renal disease (8). Although the causal basis for these associations is not established, the potential risk of RLS is becoming increasingly clear. It is hoped that the additional information provided by the RLS/PLM genetic findings will be similarly productive in driving research and clinical care for the tens of millions of people suffering from RLS/PLMs.

REFERENCES


David Rye, MD, PhD
Emory University

John Winkelman, MD, PhD
Harvard Medical School
Report on NIH Review of Peer Review Meeting

On Monday, October 22, 2007, the National Institutes of Health (NIH) held a half-day town hall meeting to allow representatives of voluntary health organizations to voice opinions about changing the scientific peer review process. The agenda was led by Drs. Lawrence Tabak and Keith Yamamoto, co-chairs of the Working Group of the Advisory Committee to the NIH Director on NIH Peer Review. Other town hall meetings have solicited commentary from scientists, centers, congresspersons, industry, and scientific review committee members, among others. The gathering of viewpoints and sentiments is considered the diagnostic phase.

None of the issues and concerns raised about scientific peer review would be new to anyone in our society who has applied for grant funding and served as a peer reviewer. Dr. Tabak outlined the scope of issues already under discussion by the Advisory Committee, which included the broad areas of 1) review criteria and focus, 2) maximizing reviewer quality, and 3) mechanisms of funding. He enumerated many of the issues and considerations that already have been raised during this diagnostic phase. For example, should the NIH implement matrix scoring instead of issuing just one total score? Should NIH fund promising investigators or promising proposals? Should reviewers be trained or rated? Should better access be provided for nonacademic organizations? The bulk of the meeting was comprised of two sessions, each of which featured four speakers and follow up discussion and commentary by audience members à la town hall meeting style. The voluntary health organizations represented by speakers included the Arthritis Foundation, the Vestibular Disorders Society of America, the NIH Community Liaison, the Parkinson’s Disease Network, the American Breast Cancer Coalition, the National Pancreas Association, Committee for National Eating Disorders Association, and the National Tourette’s Syndrome Association. The views expressed by one or more speakers were numerous and far-ranging, without necessarily including specifics, such as the following:

There is too much negative scoring of clinical proposals and a bias toward basic research
Decrease emphasis on preliminary data because clinically-based approaches are perceived to be disadvantaged by this
There should be more nonacademics serving on peer review panels
Increase the following: the quality of the reviews, the number of senior investigators serving as reviewers, the relevant experience of those serving on study sections, and the missionary zeal for serving as a reviewer
Do away with blinded review process to force reviewers to take responsibility for comments made
Limit the number of grants or the amount of money awarded to one investigator
Fund the investigator and not the project; e.g., Howard Hughes-type fellowships
Strive for better balance between the number of people affected with a disorder vs. the funding for research of that disorder
Make funding decisions by lottery of all fundable proposals since not all can be funded
Increase the following: the quality of the peer review process and/or with regard to funding decisions. Here are some of the viewpoints expressed and comments heard, including some surprises:

Nonacademics are needed on peer review panels
A trained patient constituency should be involved as advocates in funding decisions and priorities
Physicians should serve on peer review study sections because they treat the disease and therefore can best determine relevance of a given proposal
There should be a separate review body of nonscientists to assess relevance of each project to society as a whole and therefore the use of tax dollars
Applicants should be made to address how proceeding with the research will [directly] optimize health through practice
Fund more practice-based applications, which would benefit the disabled and the elderly [by increasing their autonomy and promoting higher quality of life], which can have greater impact than knowledge of the latest medical advances
Loosen or eliminate conflict of interest clauses to allow co-investigators to review the proposals of co-worker colleagues, based on the notion that those individuals who best understand the field would be involved in the review process
Per the town meeting format, I spoke from the audience to reinforce comments made earlier by others regarding the need to get and retain senior investigators who have the necessary expertise to serve on review panels. I explained that the field of sleep research is quite small, relative to its large sleep medicine counterpart, and very broad—from basic research at the level of genetics and molecular biology to physiology to preclinical and translational research to clinical research. I indicated that one of our main concerns is under funding of key research that might fall between the cracks of the review process, in part because of insufficient reviewer expertise by individuals who may be called upon to assess research impact, significance, and innovation. I explained that service on review panels may cause hardship to certain investigators because of the need to devote weeks each year to the review of applications and preparation of critiques. Incentives to retain reviewers would not necessarily be monetary compensation or prestige, but some way to offset the effect of the time commitment effect on lab productivity.

Despite what seemed at times to be stodgy support for patient advocacy on the peer review panels, gauged by the timbre and number of similar comments, there clearly was not a consensus. Ronald Bartek, President of FARA (Friedreich’s Ataxia Research Alliance) eloquently cautioned against mixing patient advocacy in the peer review process. He suggested that scientists should make the call. He said that grouping proposals by functional similarities, such as mitochondrial dysfunction, might be beneficial because solving one mechanistic problem could have a great impact and advance solutions to understanding more than one disease. He said he felt that funding decisions based on advocacy would have become very narrow-minded [and political], since there are so many special interest groups. Whereas, he suggested, what is needed instead is a broadening of approaches to accommodate complex problems. During closing remarks, Dr. Yamamoto made several comments by way of reminders. Here are some of his points:

There appears to be support (beyond today) for a third tier review process with an eye toward finding ways to provide early identification of relevant applications to thereby allow efficient spending of attention and effort by all concerned
Relevance is difficult to assess. Who knew the impact of some seemingly obscure findings that have ended up forever changing the medical world?
Scientists shouldn’t be told what [funds] to study. For starters, you will have taken away a main incentive for being a scientist in bio-medicine. Scientists must have freedom [to be innovative].
There was not a hashing out of issues at this town hall meeting, just expression of viewpoints and concerns which, as indicated above, were numerous and sometimes colorful and controversial.

Carol A. Everson, PhD
The Medical College of Wisconsin
Milwaukee, WI

References


NIH also recognized that there were too few sleep researchers reviewing sleep grants. The SRS Research Committee prepared a list of potential sleep reviewers who met the NIH guidelines and were either SRS or AASM members. The list was circulated to those NIH staffers who requested it in 2004 and was updated in 2005. Scientific Review Administrators (SRAs) have been using the list to try and add sleep researchers to their rosters. Several of the SRAs have also been keeping track of who was asked, but declined, to participate as an ad-hoc reviewer or to sit on a standing study section. Unfortunately, very few of our colleagues have agreed, less than 30%. The most common reasons were over-commitment and no benefit to sitting on the committee. Both of these responses are inadequate and short-sighted. There is no basis for complaints about the current funding level and the grant review process if you are not willing to step up to the plate, make the time, and serve on review committees.

You’re probably wondering “All those meetings; all that work. What would be the benefit?”

The benefits of serving on a committee are numerous. For example, you will learn…

...about the NIH review and funding process and the relationship among different divisions within NIH.

...a great deal about the review committee process, including how committee members opinions can be changed through review discussions.

...how to identify essential components of budgets, data analytic detail, grantsmanship and, overall, how to write a better grant.

...how to get your own applications reviewed by those with more expertise in your area by going to a conflict of interest panel.

...doing your bit to ensure that the field moves forward.

...good karma for your fulfilling your nobiles oblige.

Recently, the Center for Scientific Research (CSR), the division at NIH that establishes grant review policy and procedures, has announced plans to waive submission deadlines and expedite reviews (within 90 days of submission) for grant applications from standing committee members (Peer Review Notes, October 2007). This is perhaps the most tangible reward for service.

Individuals interested in serving as reviewers or learning more about how reviewers are selected should consult CSR’s Website: http://cms.csr.nih.gov/PeerReviewMeetings/StudySectionReviewers.

The audience members should bear in mind that there is a move toward more translational applications, so sentiments regarding separate reviews of clinical vs. basic research is becoming moot.

Incentivizing reviewers is problematic

Separate study sections for new investigators? Then there would be a need for twice as many experts, and everyone agrees that reviewer expertise is a problem

Shorter applications? Not necessarily a disadvantage to young investigators who get hired based on abstracts, 2 to 3 page curriculum vitae, and other brief forms of information.

WANTED: NIH Grant Reviewers with Sleep Expertise

Must possess one part altruism, two parts expertise over your last grant review

Research funding has been a hot topic for as long as I can remember. I had the misfortune of moving to the US during one of the leanest times in funding and here we are again. All of us have our complaints. However, the nature of the complaints seems to have changed dramatically in the past 5-10 years. Peer review in sleep is not what it once was.

The NIH guidelines for standing committee members is that they be at the rank of Associate Professor or higher, have held federal funding in the past 3-5 years, have a solid publication record, and be recognized as a leader in the field. These guidelines are not always met.

A few years ago, under the direction of David Dinges, the SRS Board discussed some of the problems that had arisen in the peer review process. One of the most common complaints was that Sleep grants were not being reviewed by those who had expertise in sleep. In return, NIH review and program officers complained that they had no source from which to identify potential sleep reviewers. The SRS Board and Research Committee sought to identify what committees review sleep grants.

We found 6 standing Integrated Review Groups (IRGs) that listed sleep in their titles or descriptions. Aside from the Biological Rhythms and Sleep committee, there were fewer than 10 sleep researchers serving as members on IRGs. The Institute of Medicine Committee on Sleep Medicine and Research conducted a more detailed analysis including Special Emphasis Panels.
High levels of interest continue regarding how to best promote the teaching of sleep and the formation of sleep communities in colleges and universities across the country. The goal is to enhance the training of new sleep researchers and foster a greater sense of community and better retention of the trainees once they complete their degrees.

University of Texas graduate student Kris Singleton made a suggestion for the general SRS membership that was met with high interest. In order to promote the basic sleep training experience and introduce more graduate and undergraduate students to sleep, the SRS should form local chapters, much like the local chapters of the Society for Neuroscience, with some funds to invite local sleep researchers as speaker and lecturers. A membership list and occasional meetings would allow trainees to meet those with whom they could consult, invite to be on their committees, and invite for local seminars on basic sleep for graduate colloquia, etc. The local chapters could form a list of who would be willing to serve on a local speaker’s bureau where speakers could come and return home within the same day, requiring less time and expense on all sides. Many institutions do not offer sleep classes or programs at the undergrad or graduate levels. Students would benefit from the supplemental instruction, seminars, and networking that a local branch could provide. The SRS would benefit from increased membership; such publicity would afford and members would benefit from meetings where more collaborators could be established. The SRS could get more people involved and integrated from every level, even colleges and universities that do not currently house sleep researchers. Local branches could also offer trainees intensive workshops to help students learn sleep concepts they haven’t yet been exposed to. When new trainees join, the local branch could do a survey of what concepts they know and what further background they need in order to better plan the trainee day workshop at the SLEEP conference. At the very least, a simple list of local members would facilitate interaction, collaboration, scientific progress in the field, and a sense of community.

There also continues to be high enthusiasm for the idea that the SRS could sponsor a lectureship series modeled on the Grass Lectureship in order to present intriguing research findings, promote the field, and get more great undergraduates applying to graduate and medical schools for training in the field of sleep and sleep research.

The Basic Sleep section members have expressed concern as to whether the combined American Society of Sleep Medicine (AASM) and Sleep Research Societies are doing enough to promote and protect animal research. On the SRS web page is the report of the C.A.R.E. committee, headed by Dr. Adrian Morrison, which contains a major statement on the ethics of the care and use of animals. Our society has produced a concise, accurate brochure called “Animal Research Ethics” to inform patients, the public, and health care personnel about the critical role of animal research in understanding and treating of sleep disorders. In his 2007 SLEEP meeting keynote speech, Dr. Mark Mahowald, a clinician and one of the major voices in the sleep field, brought out 3 or 4 points highlighting the importance of basic animal research. Yet the AASM, the main clinical portion of our combined societies, failed to sign an endorsement of the statement and promote dissemination of the brochure. The American Society of Neurologists has disseminated materials explicitly describing the contribution of animal research to advances in the practice of Neurology, and the brochure can be seen in many Neurologist offices throughout the country. Basic research has most certainly similarly informed the practice of Sleep Medicine. We urge our savvy brothers and sisters in the AASM to speak up on behalf of animal research and the contributions it makes to the practice of Sleep Medicine. Please urge your leadership to endorse the C.A.R.E. statement and support dissemination of the Animal Research Ethics brochure (found at http://www.sleepresearchsociety.org/PDFS/CAREBrochure.pdf). Familiarize yourself with the brochure. Additional materials are also needed and may be better suited for certain venues. Kris Singleton and other Sleep trainees suggest that the SRS could formulate a team to do research on an effective message that the public wants to hear and how to deliver the truth about animal research without offense, addressing the issues of animal rights activists before they can attack. The Society for Neuroscience has held very successful information campaigns in the past that we could model, complete with the production of high quality, effective posters and buttons.

Those who attended the Basic Sleep section meeting at the SLEEP 2007 conference were treated to a lunch of pizza, chips and sodas, compliments of the SRS and the University of Michigan Department of Anesthesiology. Spread the word that lunch is planned for next year, so come to your Basic Sleep section meeting to eat and make your voice heard.

Three action items for the SRS from the Basic Sleep Section for 2007 are:
1. Generate local chapters of the Sleep Research Society.
2. Generate an SRS Speaker’s bureau.
3. Urge our colleagues at the AASM to endorse the C.A.R.E. committee report and promote prepared materials for distribution to the AASM, SRS, ADSM and APT members.

Gina R. Poe, Ph.D. Section Head
Members of the Circadian Rhythms Research Section have research interests in interactions between sleep and biological rhythms. These interests range from elucidating the molecular, genetic, neural and physiological nature of these interactions to understanding how these processes interrelate across development and aging. Research also includes human circadian studies in healthy individuals and circadian rhythm sleep disorder patients. There are 172 Circadian Rhythms Research section members, including 27 predoctoral students/postdoctoral fellows. Our membership in the section has increased by 8% since this time last year. The last meeting of the Circadian Rhythms Research section was held at the SLEEP 2007 meeting in Minneapolis. Section meetings are designed to discuss ideas and make suggestions to promote Circadian Rhythms Research as part of the SRS mission. At the last meeting, members made a number of suggestions for consideration: for example, an evidenced-based review of circadian medicine and the treatment circadian sleep disorders. At that time it was discussed that an American Academy of Sleep Medicine Task Force that included members of the SRS Circadian Rhythms Section was charged by the Standards of Practice Committee with reviewing the scientific literature on the evaluation and treatment of circadian rhythm sleep disorders, employing the methodology of evidence-based medicine. Two review articles and one practice parameter paper that summarize the evidence gleaned through this process and place the evidence regarding clinical issues in the context of current circadian science were recently published in SLEEP:


Members desire to see more postgraduate courses and scientific symposia related to Sleep and Circadian Rhythms research at SLEEP 2008. Members were encouraged to submit such proposals and several courses and symposia were submitted to be considered for SLEEP 2008. As a result of other discussions regarding circadian rhythm educational materials, I have informed the Educational Program Committee that members of the Circadian Rhythms Research section would be interested in helping to create a SRS Circadian Slide Set as part of the educational materials available to the SRS membership. The following proposals were also discussed at the meeting and progress is being made to move forward with some of the proposals this year: to encourage Section Members to submit symposia on Circadian Rhythms at related conferences (e.g., endocrinology and medical association conferences); to consider development of webcasts for a circadian rhythms rounds series; to consider development of a special circadian issue of the Journal SLEEP; to facilitate development of standard and reliable circadian phase markers; to inquire what types of circadian issues are included in the Board Exams for Sleep Medicine and Behavioral Sleep Medicine. Please feel free to contact me with additional issues and suggestions at Kenneth.Wright@colorado.edu. Our next meeting will be held at the SLEEP 2008 meeting June 7-12, 2008 in Baltimore, Maryland. I encourage members to attend section meetings to promote circadian issues in the SRS.

Kenneth P. Wright Jr., Ph.D., Section Head

Circadian Rhythms Research

Sleep Disorders Research

An impromptu and informal meeting of the Sleep Disorders Section of the SRS occurred in Hershey, Pennsylvania on November 2. The occasion, which was coincident with the Third Annual Penn State Sleep Disorders Medicine Symposium, focused on the Epidemiology of Sleep Disorders. Individuals represented at the meeting included: Drs. Ed Bider, Susan Calhoun, Thorarinn Gislason, Kristen Knutson, Duanping Liao, Susan Mayes, Maurice Ohayon, Naresh Punjabi, Stuart Quan, Alex Vgontzas, Terry Young and myself, as well as others. A major topic involved the types of populations that may be valid targets for study from an epidemiologic framework. A broad age range was discussed from school-aged children residing in the community to institutionalized older adults. Sampling frames include those which offer true population-based studies (such as the Wisconsin Sleep Cohort and the Pennsylvania Children’s Cohort), studies which are community-based but may otherwise be less representative (Tucson Children’s Assessment of Sleep Apnea Study [TuCASA], Bay Area Sleep Cohort [BASC], Sleep Heart Health Study [SHHS]) to studies involving institutionalized populations (San Diego and Stanford nursing home studies). Studies involving clinical populations with identified patients, such as the Hershey Child Psychiatry cohort and the Iceland Sleep Apnea Cohort (ISAC) were also acknowledged to represent valuable populations for which relevant descriptive studies and familial linkage and genome wide association (GWA) studies, respectively, can be undertaken. The overall theme of the discussion was that no single population afforded the “best” approach, though certain elements of generalizability may favor those cohorts with more representative sampling. Nonetheless, GWA approaches probably depend less on this issue and more on availability of markers and large, thoroughly phenotyped populations capable of being genotyped.

The Sleep Disorders Section welcomes input from individuals with converging interests in topics outlined above or those with other interests bringing structured research approaches to diagnostic, prognostic and therapeutic issues in clinical aspects of sleep medicine. There will be a meeting scheduled for the 2008 Baltimore APSS meeting, and we would welcome your attendance.

Donald Bliwise, Ph.D. Section Head
The Developmental Research Section has had an exciting first six months of existence. First, I want to take this opportunity to again thank those who helped in the effort to give birth to this section of the Sleep Research Society. I also want to remind those who have been meaning to change their section affiliation to do so when they renew their SRS membership for 2008. We need to grow as a section in order to remain viable in the eyes of the SRS Board.

Our mission is to provide a section of the SRS designed specifically for researchers who study sleep and/or circadian rhythms in the context of development. A specific goal is to provide a forum for all researchers who study development in any species to come together in the interest of sharing, incubating, and disseminating common developmental techniques, designs, and data.

A small, but mighty, group of about 30 new section members and friends of the section gathered at the Sleep 2007 meeting in Minneapolis. We identified several initiatives, which are currently in varying stages of discussion or completion. A few of these will be highlighted below:

There was intense discussion, and almost universal agreement by members, that they be allowed to join multiple sections of the SRS. It was pointed out that people studying development can be found in every section of the society, and dual membership makes particular sense for such a multidisciplinary area of research. There are several ways this could be done, with primary and secondary affiliations as one possibility. The idea of allowing members to join multiple sections was brought to the SRS Board of Directors during the 2007 general membership meeting, and the President agreed that he would be willing to look into this idea further. Members of the Society with thoughts regarding this initiative are encouraged to share their ideas with the Board of Directors.

A second initiative was to develop a collaborative relationship with the AASM Pediatric Sleep Disorders section to begin the process of identifying and pursuing shared interests. One specific idea to this end was to propose a meeting of the two sections during Sleep 2008. The best way to fulfill this goal is still being considered, and any ideas from members are welcome.

A third initiative was to make an attempt to have developmentally relevant posters, presentations, and symposia clustered at Sleep 2008. Although we were not successful in getting a “Developmental” category added to the selection options when submitting an abstract, this year we are planning to generate a list of 2008 presentations of potential interest to Developmental section members for internal distribution.

A dynamic group of trainees took an active role in the section meeting, and proposed to work with the Trainee Day planning committee to increase developmentally-relevant topics presented at Trainee Day. They also indicated a desire to be counted as members of the section, and presented this to the Board of Directors at the 2007 meeting.

One other major initiative this year was to increase membership in the section. Without an influx of new members, the future of the section will be jeopardized in the coming years. To this end, reminders were sent to SRS members, indicating how section affiliation could be changed.

Other ideas for increasing section membership are welcome.

The section began strong and is full of dynamic, creative, energetic individuals who represent the entire spectrum of the career span, from trainees to senior investigators. We are excited to provide a venue for developmentalists to share ideas and help further the interests of the Sleep Research Society. We look forward to growing in number and strength in the coming years, and thank our section members for their support.

Feel free to contact me with any questions, comments, or ideas regarding the Developmental Research Section: mburnham@unr.edu.

Melissa M. Burnham, Ph.D., Section Head

The main activity of the Sleep and Behavior Research Section this year involves operationalizing an idea that section members have long discussed. That is, we would like to provide trainees with a targeted opportunity to present and discuss their work with section members. We will devote much of the annual Sleep and Behavior Research Section business meeting to presentations by trainee members of the Sleep and Behavior Research Section. We will select up to 6 section member trainees to give 5-minute oral presentations, followed by a question-and-answer session for the panel of trainees. Presentations will be selected to reflect the diversity and breadth of research disciplines represented in the Sleep and Behavior Research Section. This “data blitz” will provide trainees with the opportunity to present their work orally to a wider audience than may generally be the case. Section members will, similarly, benefit from hearing about the diverse and cutting-edge research being conducted by future leaders of the Sleep and Behavior Research Section. Finally, it is our hope that this informal session will stimulate discussion and networking among junior and senior members of our section.

We will send out a reminder to section members in advance of SLEEP 2008 to attend this exciting section meeting.

If you would like to be involved in organizing the Sleep and Behavior Research Section Trainee Data Blitz, please contact me directly via email at hallmh@upmc.edu.

I look forward to seeing you in Baltimore!

Martica Hall, Ph.D., Section Head
On behalf of the Sleep Research Society (SRS) you are invited to a course entitled “The Development of Sleep Promoting Agents” to be held 3-4 April 2008 at the Westin New York at Times Square, New York, N.Y.

The target audience for this course includes individuals and organizations interested in understanding the nature of current and future insomnia therapeutics, in conducting insomnia clinical trials, and in the development of sleep promoting agents. Conference speakers will bring expertise from a variety of backgrounds, including basic and clinical research, clinical trials methodology, sleep efficacy evaluation, safety of hypnotics, and regulatory considerations. These invited speakers will address topics dealing with sleep physiology, insomnia pathophysiology, insomnia diagnoses, insomnia epidemiology, insomnia morbidity, and insomnia therapeutics. Therapeutic focused topics will address current practices, current and future therapeutic targets, the design, analysis, and interpretation of individual studies, as well as the development of overall drug development programs. These development programs will be discussed from the point of view of industry, academia, and regulatory bodies. Course speakers include:

- Daniel Buysse, MD, University of Pittsburgh
- Clifford Saper, MD, PhD, Harvard Medical School
- Thomas Kilduff, PhD, SRI International
- James Walsh, PhD, St. Luke’s Hospital, Saint Louis University
- Russell Katz, MD, Food and Drug Administration
- D. Elizabeth McNeil, MD, Food and Drug Administration
- Philip Jochelson, MD, Somaxon Pharmaceuticals, Inc.
- Eugene Laska, PhD, Nathan S. Kline Institute for Psychiatric Research
- Andrew Krystal, MD, Duke University
- Thomas Roth, PhD, Henry Ford Hospital
- David Greenblatt, MD, Tufts University School of Medicine
- Timothy Roehrs, PhD, Henry Ford Hospital

In addition to individual lectures, there will be several panels to address specific questions from participants. Finally, there will be a reception on the first day to facilitate interactions between participants and speakers.

For additional course details and information on registration, please visit the SRS website at www.sleepresearchsociety.org/EventInfo.aspx. ID=116.

Thomas Kilduff, PhD
SRI International
Menlo Park, CA

Thomas Roth, PhD
Henry Ford Sleep Disorders Center
Detroit, MI
Course Chairs

SRS Webinars

The overarching mission of the Educational Program Committee (EPC) is to develop sleep research related programs, materials, and products that meet the continuing education needs of the membership and to advise the SRS Board of Directors regarding such continuing education activities. The EPC strives to continually increase its educational contributions to the greater SRS community.

Examples of recent EPC activities include the development of the SRS New Basics of Sleep Slide Set Series (http://www.sleepresearchsociety.org/Products.aspx), the development of a Career Development Program at SLEEP meetings and, most recently, the creation of web-based seminars or ‘webinars’. Similar to one-way webcasts, webinars are used to deliver workshops and lectures over the web, but also allow for real-time interactions between the presenter and the remote audience. Thus, for example, each participant can log into a website, view and listen to the presenter’s slide-show through a standard browser, and submit their questions to a host moderator who then provides these questions to the speaker during the interactive question period.

The webinars will be hosted approximately quarterly by internationally-recognized experts (some authors of The SRS New Basics of Sleep and Arousal Regulation), and are intended to provide “hot content” lectures in the field.

The inaugural webinar, entitled “Mechanisms of Sleep and Arousal Regulation”, was held on October 24, 2007 and featured Ron Szymusiak, PhD of the University of California, Los Angeles. Dr. Szymusiak’s talk was lauded for its contemporary pedagogic approach. One attendee commented “I think the Webinar was excellent. The speaker was awesome. Clear, concise and to the point. This helped me for the board exam and I answered all the questions correctly thanks to you guys.”

Fostering professional education is a cornerstone of the SRS mission, and the EPC is confident that webinars, as a distance learning initiative, will enhance the advancement of our field by providing an on-demand, interactive and up-to-date source of educational material. Indeed, the webinar represents an exciting and distinctive forum through which professional education at all levels in sleep science and sleep medicine can be addressed. If you have a suggestion for speakers and/or topics, please send your suggestions to Drs. Charlie Amlaner, chair of the EPC (camlaner@indstate.edu) or Orfeu Buxton, vice-chair (Orfeu@HMS.Harvard.edu).

Other new educational initiatives in the development “pipeline” include the launch of The New SRS Basics of Sleep Slide Sets in a single-lecture format, available soon!

Finally, in an effort to enable an even broader array of educational activity development, the EPC has recently expanded its committee membership by five members, who include: Alon Avidan (UCLA Medical School), Patrick Fuller (Harvard Medical School), Helen Burgess (Rush University Medical Center), Colleen Carney (Duke University Medical Center) and Naomi Rogers (University of Sydney). Welcome aboard!

Charlie Amlaner, PhD, EPC Chair
Indiana State University

Orfeu Buxton, PhD, EPC Vice-Chair
Harvard Medical School
**NHLBI Announces New Strategic Plan**

The National Heart, Lung, and Blood Institute (NHLBI) recently made available “Shaping the Future of Research: A Strategic Plan for the National Heart, Lung, and Blood Institute.” This new strategic plan is intended to set the course for the next decade of research, training, and education to reduce the national burden of cardiovascular, lung, blood and sleep disorders. The plan introduces three overarching goals: Form to Function: To increase understanding of the molecular and physiologic underpinnings of health and disease; Function to Causes: To develop better approaches for improved diagnosis, treatment, and prevention; and Causes to Cures: To translate research results into everyday practice for medical care, health systems, communities, and individuals. Download the strategic plan by visiting the NHLBI Web site: www.nhlbi.nih.gov/strategicplan.

**NIH Launches Extensive Open-access Dataset of Genetic and Clinical Data**

The National Institutes of Health (NIH) has launched one of the most extensive collections of genetic and clinical data ever made freely available to researchers worldwide. Called SHARe (SNP Health Association Resource), the Web-based dataset enables qualified researchers to access a wealth of data from large population-based studies, starting with the landmark Framingham Heart Study. The goal of SHARe is to accelerate discoveries linking genes and health, thereby advancing scientists’ understanding of the causes and prevention of cardiovascular disease and other disorders. Framingham SHARe includes data on more than 9,300 participants spanning three generations, including over 900 families, who had their DNA tested for 550,000 genetic variations (single nucleotide polymorphisms, or SNPs). In addition, the participants’ clinical data gathered during the study, such as test results or weight, are included. SHARe will enable researchers to relate study participants’ genetic variations with their clinical and laboratory test results.


**CDC Unveils New Web site Dedicated to Sleep and Sleep Disorders**

On Thursday, Nov. 1, 2007, CDCs Division of Adult and Community Health unveiled a new Web site dedicated to Sleep and Sleep Disorders at www.cdc.gov/sleep. The Web site highlights CDCs recognition of sleep as an important public health issue, particularly as it relates to chronic diseases.

**Sleep Apnea Included in WHO Report**

The World Health Organization (WHO) has published a report on respiratory diseases that includes a comprehensive section on sleep apnea. According to “Global Surveillance, Prevention and Control of Chronic Respiratory Diseases: A Comprehensive Approach,” the WHO concludes sleep apnea, which it estimates affects 100 million people world-wide, is preventable, a chronic respiratory disease and the most common organic sleep disorder. Further, the report includes estimates on the global economic cost of untreated sleep apnea, prevalence of sleep apnea, and impact on morbidity and mortality. Log on to www.who.int/gard/publications/GARD%20Book%202007.pdf to download the report.

**Call for Nominations for SRS Young Investigator Award**

The Young Investigator Award recognizes an outstanding research effort by a new investigator in the field of sleep research. Application requirements is online at www.sleepresearchsociety.org/Awards.aspx. The deadline for receipt of applications for the Young Investigator Award is Friday, January 25, 2008. Nominations and applications for SRS awards should be sent to John Slater via e-mail at jslater@srsnet.org, or to his attention at One Westbrook Corporate Center, Suite 920; Westchester, IL 60154.

**First Time Trainee Travel Awards Program offered again for SLEEP 2008**

The SRS will again offer First Time Travel Awards for SLEEP 2008. Trainees who have never attended previous Annual Meetings of the APSS may apply for a limited number of First Time Trainee Travel Awards. To apply for a First Time Trainee Travel Award, applicants must submit the following:

- Applicant CV: Including current mailing and email address (preferable) and fax number, educational history, relevant employment history, honors and awards, research funding and publications.
- Applicant letter (maximum 3 pages): Including certification that the applicant has never attended an APSS Annual Meeting, a brief description of current research activities, a statement expressing how attendance at SLEEP 2008 will be beneficial to the applicant. 
- Mentor letter (maximum 2 pages): A letter from the applicants mentor or departmental advisor documenting the applicants eligibility (including trainee status), describing the trainees involvement in sleep research, and describing the applicants future promise in sleep research is also required.

The deadline for receipt of the First Time Trainee Travel Award applications is February 1, 2008. Send complete applications (all information requested must be submitted together) via e-mail only to the Carolyn Winter-Rosenberg, Assistant SRS Coordinator at cwinter-rosenberg@srsnet.org. No late applications will be considered. or SLEEP 2008, First Time Travel Awards will be judged competitively based on the impact of the award to the applicants career development and on the applicants promise as a future independent sleep researcher. The dollar amount of these Awards depends on the type of the award. Historically, there are more Travel Awards based on Scientific Merit issued than First Time Travel Awards. Award winners will be notified by e-mail (or fax if e-mail address is not provided) prior to the advance registration deadline for the SLEEP 2008 Meeting.

**Briefs**

**Sleep and Sleep Disorders**

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**Research Interests**

The NCCU Sleep Research Laboratory, located in the Department of Psychology at the National Cheng-Chi University (NCCU) in Taiwan, is dedicated to basic research in sleep science as well as clinical research in behavioral sleep medicine. The laboratory is also affiliated with the Research Center for Mind, Brain, and Learning at NCCU. It adopts not only the traditional behavioral and psychophysiological approaches, but also a neurocognitive point of view in investigating sleep-related phenomena. There are three major focuses of research interests: 1) the etiologies and treatment for insomnia, 2) information processing during sleep, and 3) sleep and its relationship to daytime functioning. In addition, the laboratory cooperates with several sleep disorder centers in hospitals devoted to studies investigating pediatric sleep disorders and neurocognitive functioning in patients with sleep apnea syndrome.

On-going research projects in the laboratory include: 1) information processing during sleep in normal sleepers and insomnia patients, with the aim of understanding neurocognitive mechanisms during sleep as well as the etiologies of insomnia with the recording of event-related potentials (ERPs); 2) cognitive and behavioral factors in insomnia, designed to clarify their roles in contributing to the development of insomnia; 3) cognitive-behavioral therapy for insomnia (CBTI), aiming to examine the effective components in CBTI and the predictors of successful treatment; 4) hypnotic withdrawal procedures, with the goal of developing effective ways to facilitate the tapering of sleep medication; 5) subjective experience during the sleep onset process, to understand the mechanisms underlying the changes of consciousness state while falling into sleep; 6) sleep patterns in adolescents and young adults, with the purpose of understanding the determinants of their sleep patterns and association with daytime function; 7) smart sleeping space, collaborating with faculty from the Computer Science Department to create an intelligent sleep environment that can monitor and facilitate nighttime sleep and enhance morning alertness.

**Technical Capabilities**

- The facilities and technical capacities of the NCCU Sleep Laboratory include: Two sound attenuated rooms with computerized polysomnography equipment for standard sleep recordings.
- Six actigraphy units for longer-term monitoring of sleep and light exposure.
- A 40-channel EEG system that is capable of conducting ERP recording and analysis.
- Two biofeedback systems that are capable of conducting various physiological recordings, including EEG, EMG, GSR, respiratory rate, pulse, and finger temperature, as well as training patients to regulate these physiological states.
- Various neuropsychological tests to measure different domains of neurocognitive function.

**Training Opportunities**

The NCCU sleep research laboratory offers training opportunities for Ph.D. students, Masters’ students, and undergraduate students. Postdoctoral opportunities may also be arranged.

**Selected Recent Publications**

Laboratory Spotlight

Research Interests

The overarching research focus of our lab is on better understanding the influence of sleep and sleep loss on cognition and brain function. One strength of our lab is that each faculty (and often graduate student) brings a unique interest to this focus. Thus, our research follows several parallel paths under this larger rubric. For example:

Effects of sleep deprivation on brain function (Drummond)

This line of research manipulates (total and partial) sleep deprivation experimentally, and examines brain function with functional magnetic resonance imaging (fMRI) and cognitive testing. We have conducted a number of studies in young adults and are currently investigating sleep loss in older adults. The cognitive domains we have examined include verbal learning, sustained attention, inhibition, specific components of working memory, and specific aspects of decision making.

The role of sleep in memory consolidation (Mednick)

This line of work examines the influence of sleep, particularly daytime naps, on memory consolidation. We have examined a variety of types of memory, including perceptual, declarative, motor, and spatial. We have also compared pharmacological interventions to naps for enhancing both memory consolidation and new learning. One unique feature of these studies is that they typically examine the potential benefits of naps in well-rested individuals, rather than during sleep restriction or deprivation. The newest work in this area examines the neuropharmacology of memory consolidation during sleep.

Cognitive function in obstructive sleep apnea (Ayalon)

This research uses fMRI and cognitive testing to examine cognition in newly diagnosed OSA patients compared to healthy controls. We also have a developmental perspective, asking how aging interacts with OSA to impact cognitive function.

Interaction of sleep and marijuana abuse in adolescents (Cohen-Zion)

These projects examine how sleep and marijuana use influence one another in teens. One study examines objective and subjective changes in sleep across a 28-day abstinence period as well as the relationship between such changes and neuropsychological function. A second study seeks to tease apart the impacts of active marijuana abuse and sleep loss on mood and cognition.

Neuropsychological function in primary insomnia (Orff)

This study seeks to better understand why subjective complaints of cognitive and performance difficulties are ubiquitous in insomnia, yet objective deficits are difficult to consistently document. This project utilizes fMRI as well as cognitive and neuropsychological assessments.

Stress resiliency in military personnel (Taylor)

This line of work aims to better understand resiliency to a variety of stresses faced by military personnel (including, among others, sleep loss). These projects have a major emphasis on identifying individual difference variables that predict resiliency to stress. Such variables include personality factors, metabolic and physiological variables, and amygdalar responses as measured with fMRI.

Technical Capabilities

- 4 bedroom laboratory, plus patient lounge and faculty and staff offices
• Functional Magnetic Resonance Imaging (FMRI) as well as related data storage and analysis facilities
• Cognitive testing - including formal neuropsychological assessment tools, computerized cognitive tasks, pencil&paper tests, etc
• EEG/PSG (kind of goes without saying, huh?)
• Power Spectral Analysis
• Actigraphy

Clinical Activities
Dr. Drummond has an active clinical role in the Veterans Affairs San Diego Healthcare System as the Associate Director of the Cognitive Behavioral Interventions Program. In that clinic, we treat insomnia and nightmares in a variety of patient populations, including PTSD, mood disorders, and primary care patients.

Training Opportunities

Postdoctoral Fellows

We are affiliated with or have access to a number of formal fellowships, both research and clinical. Most notable are: The Biological Psychiatry and Neuroscience T32 NRSA Fellowship, the MIRECC Fellowship through the VA, a clinical fellowship through the VA, and others.

Graduate Students

We typically work with graduate students in the SDSU-UCSD Joint Doctoral Program in Clinical Psychology. However, we also serve on students’ committees from several other UCSD departments, including Psychology, Neuroscience, and Computational Biology. We also work with UCSD medical students and have been known to host visiting students from other labs for extended visits.

Undergraduates

We have welcomed undergraduate research assistants from a variety of UCSD departments, as well as other local university and college campuses.

Representative Publications

22nd Annual Meeting of the
Associated Professional Sleep Societies, LLC
A JOINT VENTURE BETWEEN THE AMERICAN ACADEMY OF SLEEP MEDICINE
AND THE SLEEP RESEARCH SOCIETY

SLEEP 2008 WILL FEATURE:

- The opportunity to earn more than 40 CME credits for physicians
  and CE credits for psychologists.
- Educational sessions covering a wide variety of sleep medicine
  and sleep research topics through the following formats:
  - Postgraduate Courses
  - Symposia
  - Discussion Groups
  - Clinical Workshops
  - Meet the Professors
  - Invited Lecturers
  - Scientific Oral Presentations
  - Scientific Poster Presentations
- A state-of-the-art exhibit hall with representation from the leading
  companies in the industry.
- Multiple networking opportunities through the world’s largest
  annual gathering of sleep scientists and sleep medicine
  professionals.
- And much more!

For the latest information about SLEEP 2008, visit the
meeting’s official Web site at www.sleepmeeting.org,
or contact the APSS meeting department at
708-492-0930. Registration for SLEEP 2008 will
be open in February 2008.