Issue Highlights:

- From the Desk at the NIH: Review of Circadian and Sleep Applications at the Center for Scientific Review
- Skills for the Researcher
- Sleep Research Highlight: A Biochemical Basis for Human Cellular Circadian Rhythms
- Sleep Research Funding Advocacy Update
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DEAR COLLEAGUES,

As we approach the pinnacle of the year for our organization, the annual SLEEP meeting, it is my pleasure to update you on the flurry of activities the members of the SRS have undertaken in preparation for this event and in efforts to advance our field of research.

SLEEP 2011 – 25th Meeting of the APSS

SLEEP 2011 is a milestone for the SRS and AASM; it marks the 25th joint meeting of the groups via the Associated Professional Sleep Societies (APSS) Partnership. The first meeting in Columbus, Ohio in 1986 drew approximately 400 attendees. This year, we expect approximately 5,000 sleep professionals to attend the meeting. One of the highlights of the 25th Meeting of the APSS will be a Silver Jubilee reception that will be held on Sunday, June 12, 2011 from 6:00 p.m. to 7:30 p.m. in the Minneapolis Convention Center, Ballroom AB. Tickets for the event are $50 each and the proceeds benefit the Sleep Research Society Foundation and the American Sleep Medicine Foundation. I invite you to attend this event and help us celebrate and reflect on the success of the past 25 years while supporting future sleep research and networking with colleagues.

SRS Elections

Earlier this spring, the SRS held elections to fill the positions of President-Elect, Secretary/Treasurer, three open seats on the Board of Directors, and all four Section Heads. The field of candidates for these positions was impressive. I thank all candidates who ran for these leadership positions. The health and future success of a volunteer organization such as ours depends upon the hard work and sacrifice of dynamic individuals who are willing to step forward into leadership roles. I am pleased to announce the results of the elections and welcome the following members to their various new roles beginning in June:

President-Elect
Ronald S. Szymusiak, PhD

Secretary/Treasurer
Janet Mullington, PhD

Directors-at-Large
Elizabeth B. Klerman, MD, PhD
Jennifer L. Martin, PhD
Fred W. Turek, PhD

Section Heads
Basic Sleep Research – Marcos Frank, PhD
Sleep and Behavior Research – Michael Bonnet, PhD
Circadian Rhythms Research – Jeanne Duffy, PhD
Sleep Disorders Research – Ann Rogers, PhD, RN

Additionally, Megan Ruiter was selected as the Trainee Member-at-Large Elect. She will join the Board of Directors as the non-voting Trainee Member in 2012-2013.

Reconstituting the Government Relations Committee

Each year, the SRS Board of Directors reviews appointments to standing committees. As part of this process, the board evaluates the needs of the society and how the committees fit into the overall structure based upon those needs. After careful consideration, including a review of committee charges, the SRS Board of Directors voted to change the structure of the SRS Government Relations Committee to make sure time sensitive decisions regarding Congressional action could be acted upon in a judicious manner.

The new Government Relations Committee will be composed of the Executive Committee and three appointed members. The Secretary/Treasurer will be an ex-officio member and the Immediate Past President will act as Chair of the committee.

The Government Relations Committee will continue to be responsible for a variety of important societal activities including guiding grassroots Congressional Advocacy, working with the NIH Liaison Group to further develop the SRS relationship with NIH officials; and formulating and executing the overall strategy for the SRS Government Relations Program.

Career Development

SLEEP 2011 will host a variety of scientific sessions and career development sessions. For those looking for a session geared toward career development, I encourage you to attend the discussion group entitled “Navigating Successfully Through the Grant Review Process” on Tuesday, June 14th from 2:45 p.m. to 4:45 p.m. in room 101B of the Convention Center. This discussion group will be Co-Chaired by Janet Mullington, PhD and Phyllis Zee, MD, PhD. This session will be valuable to investigators at all levels especially in light of the ever evolving review process at NIH.

The Trainee Education Advisory Committee (TEAC) will again be hosting the Trainee Symposia Series over two half-days; the afternoon of Saturday, June 11th and morning of Sunday, June 12th at SLEEP 2011. The Trainee Symposia Series is a unique opportunity for students from undergraduate to post doctoral fellows to hear from many of the top scientists in the field of sleep and circadian research. Once again this year, Dr. Jennifer Martin and TEAC have assembled an outstanding program. In addition to the scientific and career development workshops, there will be a reception, datablitz and career fair for all participants Saturday evening.

Professional Education

The SRS will be presenting a half-day course, “Basic Science of Sleep for the Sleep Specialist,” August 11, 2011 in Denver, Colorado and September 8, 2011 in Reston, Virginia (a suburb of Washington, DC). This course will be held in conjunction with the American Academy of Sleep Medicine “Board Review for the Sleep Specialist” course. Course Chairs Ruth Benca, M.D., Ph.D. and Thomas Scammell, M.D. will be joined by Gary Richardson, M.D. and Ron Szymusiak, Ph.D. in presenting this course. Preliminary registration figures for the course are promising and indicate both sessions will be well attended. Look for more information on these courses in the near future on the SRS website and in the SRS Update.
NIH News

Over the past year the SRS members have provided ongoing input to the new NIH Sleep Disorders Research Plan that is anticipated to be finalized and released sometime during the summer. I would like to personally thank Richard Allen, Ruth Benca, Donald Bliwise, Daniel Buyse, Mary Carskadon, Ronald Chervin, Christopher Early, David Gozal, Christian Guilleminault, Kristen Knutson, Leszek Kubin, Carol Landis, Carole Marcus, Emmanuel Mignot, Judith Owens, Allan Pack, Susheel Patil, Clif Saper, Kingman Strohl, Fred Turek, Eve Van Cauter, Hans Van Dongen, Catherine Vena and Michael Vitiello for providing significant time and input into the draft Plan. A discussion session is planned for Sleep 2011 to review the process and current status of the Plan.

Also, members should be aware a new study section has been created at NIH to deal with sleep and circadian related grant applications. An article in this issue of the Bulletin will deal with this matter in more depth.

Final Thoughts and Acknowledgements

My term as President of the SRS will conclude with the end of SLEEP 2011. I would like to thank the many volunteers in the society who have spent considerable time and energy to strengthen our organization and our field. This year nearly 20 members of standing committees concluded their terms. I would like to extend my deepest gratitude to all of these volunteers for the efforts they have put forth over the several years. Among these dedicated committee members are Charles J. Amlaner, DPhil, the outgoing Chair of the Educational Programs Committee, and Jennifer L. Martin, PhD, the outgoing Chair of TEAC.

A special thank you is extended to Clif Saper, MD, PhD, as he concludes service on the Board of Directors. Dr. Saper served as President last year and is concluding his term as SRS Past-President and President of the SRS Foundation. Dr. Saper’s unique insight and thoughtful input will be missed on the Board of Directors.

Two other members of the Board of Directors will also be completing their terms this year, Terri Weaver, PhD, RN and Thomas Scammell, MD. During her term on the board, Dr. Weaver played a major role in launching the SRS Government Relations Program. Dr. Scammell served as the board liaison to the Research Committee and took the initiative to Co-Chair the SRS Basic Sleep Science for the Sleep Specialist Course, the proceeds of which have benefited the SRS Foundation. Dr. Scammell will continue to serve the SRS by being a representative to the APSS Program Committee.

I would also like to recognize Brant Hasler, PhD, Trainee Member-at-Large for service on the Board of Directors and for his extensive role in organizing the Trainee Symposia Series. Getting the perspective of trainees to the Board of Directors is valuable as the board makes decisions that may affect them. Additionally, Brant received early career exposure to the workings of a professional organization.

Lastly, I have enjoyed serving as President over the past year. It has been a great honor and privilege. I am hopeful that the SRS will continue to pursue the initiatives of collaborating with NIH representatives for the betterment of sleep and circadian research, and to represent sleep and circadian research on Capitol Hill. I also wish Phyllis Zee, MD, PhD the best of luck as she begins her term as President of the SRS. I am confident she will be an excellent leader and continue to move the SRS in a positive direction.

I look forward to seeing all of you in Minneapolis for SLEEP 2011.

Sincerely,

James K. Walsh, PhD
President

Welcome to this issue of the Sleep Research Society’s Bulletin. Spring has finally arrived and we are likely all in the midst of preparing for the SLEEP 2011 meeting in the fine state of Minnesota (youbecha). This issue contains a preview of different aspects of the upcoming meeting, including details of newly elected society positions in the President’s Message and details of Trainee Day in the Trainee Corner. We also have our regular updates on the activities and initiatives from the Educational Program Committee and Research Committee, and the Basic Sleep Research and Sleep Disorders Research Sections.

As in each issue of the Bulletin, we highlight the research and training opportunities available at a particular sleep research laboratory and provide a summary of a recent high profile report in our field – in this case the groundbreaking discovery of circadian rhythms in red blood cells. This issue also contains our regular Skills for the Researcher column, this time focusing on time management. New to this issue is a peek “Behind the Scenes” and a profile of Jon Wendling who painstakingly lays out all the publications from the Society, including the journal SLEEP, Journal of Clinical Sleep Medicine and the Bulletin.

As we are all keenly aware, we are in a time of great fiscal crisis. As outlined in the report on the Sleep Research Society Foundation, the need for the pilot grants it funds continues to grow. The Society has also embarked on a number of important initiatives to advocate for continued sleep research funding, which is described in the President’s report and the Funding Advocacy Update. How sleep and circadian grants are reviewed at NIH is also critically important to our success, and I am extremely grateful for the update provided by officials at NIH - particularly Dr Rene Etcheberrigaray at the Center for Scientific Review - who continue to work to maintain the ongoing communication between NIH and our membership.

I would also like to thank Nick Cekosh, the Sleep Research Society Coordinator, for his guidance and assistance in putting together this issue of the Bulletin, and of course I also give thanks to all who contributed to this issue (and kindly tolerated my persistent emails). As always, this Bulletin must serve the needs of all of the members of the Sleep Research Society. To that end I am very interested in receiving suggestions for new articles and/or suggested contributors. I would also like to hear from you if you would like your laboratory highlighted in one of the laboratory spotlights. Please email me at Helen_J_Burgess@rush.edu with all your ideas and suggestions. Finally, let us take a moment to recognize the hardships many of our colleagues have endured recently from the numerous natural disasters that have occurred around the world. Our thoughts are with you and we very much hope to see you soon, hopefully at SLEEP 2011.
The 16th Annual Trainee Symposia Series held at SLEEP 2011 will be in Minneapolis, Minnesota this year. The series will offer trainees the opportunity to network with peers and leaders in the field of sleep research and attend scientific and career development sessions. A big change to the program this year is that Trainee "Day" will be held across two days—the afternoon and early evening of Saturday, June 11, and the morning of Sunday, June 12. This schedule was selected to minimize conflicts with the SLEEP 2011 scientific program, which starts Sunday afternoon, while also permitting some trainees and faculty to travel to Minneapolis on Saturday morning and thus (hopefully) avoid an additional hotel night on Friday.

We anticipate another successful event with attendance of 290 trainees. This will put the workshops at maximum capacity and it will be of great importance to attend the workshop you registered for. In order to ensure this occurs, members of the SRS Trainee Subcommittee of the Trainee Education Advisory Committee (TEAC) will again collect tickets at each workshop to ensure trainees that registered in advance have a seat in their designated workshop.

The program will begin with a welcoming address by Dr. James K. Walsh, Sleep Research Society (SRS) President at 1 PM on Saturday afternoon. Following Dr. Walsh’s remarks, the keynote address will be given by Dr. Daniel Buysse. This year’s keynote will focus on how clinical practice, clinical research and experimental research can be integrated in a career in sleep research. Dr. Buysse continues to elegantly integrate these three areas via his sleep-oriented psychiatric practice, research in the neurobiology of insomnia, and insomnia treatment research, and will undoubtedly have many pearls of wisdom to share in his ever-entertaining speaking style. (Note: I’m not just saying this because Dr. Buysse is currently my primary mentor.)

Following Dr. Buysse’s keynote address, there will be two, 75-minute workshop sessions during Saturday afternoon. Workshops will range in topics from career advice to basic and clinical research. Topics were chosen (and listed on the registration form) to tailor to varying levels of training expertise. The Saturday portion of the Trainee Symposia program will conclude with a research datablitz, career development fair, and trainee reception. This event will start out with a 30-minute datablitz of research presented by fellow trainees. The trainees were selected based on the quality of their SLEEP abstracts, with an effort made to cover basic animal and human research, as well as clinical human research. The career fair will follow, and will provide trainees the opportunity to mingle with representatives from universities and research organizations, and to seek out potential job and training opportunities. Over 20 groups have reserved tables, and we anticipate another very successful event. Coinciding with the career fair will be an informal reception. The reception and career fair will give trainees the opportunity to socialize with your peers and colleagues.

The Trainee Symposia program will resume Sunday morning, beginning with a light breakfast provided by the SRS. Following breakfast, there will be two more 75-minute workshop sessions, again covering topics from career advice to basic and clinical research. Concurrent with these sessions, a two-and-a-half-hour Grant Writing workshop will occur, emphasizing NIH F and K mechanisms. The workshop will begin with a joint session after which, the group will split to discuss issues specific to F or K grants. These workshops will be similar to the F and K grant-writing workshops held two years ago—which received high praise from the attendees. The grant-writing workshops have been expanded this year to broaden their coverage (e.g. picking a mentor) and to allow for more individual attention to current grant-writing projects. Thus, in addition to didactic portions, the workshops will include meeting in small groups to review the specific aims of each workshop participants. Both past F and K awardees, as well as NIH program staff, will be present to further enhance the learning experience.

At the conclusion of the Trainee Symposia Series on Sunday, the SRS will have representatives available to distribute checks to the recipients of first-time travel awards and merit-based travel awards and to collect feedback forms from all attendees. As a reminder, you must turn in an evaluation form to receive a travel award check. We encourage all attendees to complete the survey related to the day’s events and provide feedback. Your feedback is carefully reviewed and used to improve the following year’s events.

Acknowledgements

The Trainee Education Advisory Committee is instrumental in the planning the Trainee Day Symposia Series and managing the trainee award programs. Thank you to members of TEAC: Jennifer Martin, PhD (chair), Philip Gehrman, PhD (Vice-Chair), Jeanne Duffy, PhD, Monique LeBourgeois, PhD, David Raizen, PhD, Mark Mahowald, MD, FAASM, Rachel Manber, PhD, Jonathan Wisor, PhD, Lisa Meltzer, PhD, and Janet Mullington, PhD (Board Liaison). Thank you to members of the Training Sub-Committee who helped select topics and speakers for the symposia, including: Allison Brager (Trainee Member-At-Large Elect), Jared Saletin, Tina Burke, S. Justin Thomas, Kay Orzech, PhD, Jean Humphries, Felicia Jefferson, Daniel Kay, Sinziana Seicean, PhD, Lori-McGee-Koch, Jennifer Goldschmied, Christine Gagnon, and Katherine Newman-Smith. A special thank you goes to Nick Cekosh, Annie Walker-Bright, and Anna Qunitanilla in the SRS office for their administrative support.

Brant P. Hasler, PhD
Trainee Member-At-Large
Committee Reports

Educational Program Committee

At APSS 2010 in San Antonio the Education Program Committee (EPC) had its most recent face-to-face meeting where they were joined by outgoing SRS President Dr. Clif Saper and our current President Dr. James Walsh. After exiting members were thanked and new members Drs. Chris Drake, Stephanie Crowley and Kathleen Sexton-Radek (Trainee Member) welcomed, the EPC began evaluating the road ahead and considering future projects. Reflecting on the successful roll out of the second edition of The Basics of Sleep Guide at APSS 2009 in Seattle, the Committee began to consider offering a full day Post Graduate Course at APSS 2011 in Minneapolis based upon the newly updated Basics of Sleep Guide. At a later EPC meeting a subcommittee, comprised of Drs. Charles Amlaner, James Shaffery and Stephanie Crowley, was appointed to convince ten of our most talented scientists to present a current overview of the information most important and timely for an audience of “Sleep clinicians and scientists seeking an enhanced background in the fundamental principles and findings that form the core knowledge of the sleep field.” The subcommittee was successful and the full day course will be presented on Saturday, June 11th, at APSS 2011. Based on chapters from the Guide, the ten speakers have been charged with providing the most up to date information possible. The ever expanding audience of new sleep disorders clinicians and researchers in attendance at the annual APSS meetings makes SLEEP 2011 the ideal venue for presenting the Basics of Sleep Guide Postgraduate Course. The course provides the opportunity for clinicians and basic scientists new to the field of sleep disorders medicine and sleep medicine research to obtain a ground-floor introduction to important knowledge and concepts that form the basic scientific information for understanding sleep and the changes in sleep that occur as a result of disease states.

Also considered at the San Antonio meeting was the possibility of an update of the Basics of Sleep Guide Slide Sets, but the idea was tabled as being premature. The committee then turned to other areas where it might focus its efforts. The first of these was to develop lecture material from the existing Guide Slide Sets that would be appropriate for undergraduate psychology and/or high school biology courses. The NIH has existing guidelines for the high school curricula but does not yet have the course content. Thus, this is an ideal arena for the EPC to foster future sleep researchers. A number of other possible areas for future projects were discussed at the San Antonio meeting, including 1) developing basic sleep course content to coincide with ACGME Fellowship Curricula, and 2) offering a series of courses that would include content on Hypnotic Agents, Medical Devices and Wake Promoting Agents modeled after a previous, successful course on hypnotic agents, which involved representatives from the FDA. The committee also discussed the possibility of using the existing slide sets to create video lectures that could be streamed on the SRS website and/or sold on DVD. The Committee went on to consider alternative retail outlets for the Basics of Sleep Guide and the accompanying Slide Sets beyond the SRS website and APSS meetings. Discussion focused on the possibility of gaining a wider audience for these EPC publications by entering into an agreement with Amazon.com for assistance with marketing these. Progress in these areas will be updated in the next Committee Report.

In closing, members and especially those new to the field are encouraged to attend the Post Graduate Course at this year’s APSS meeting in Minneapolis. We look forward to seeing you there!

Respectfully submitted,

James Shaffery, PhD
Educational Program Committee

Research Committee

The primary responsibility of the Research Committee has been to review applications for the SRS Foundation’s small grants program. This highly successful program began 6 years ago when the Gillin and Weitzman grants were introduced. The Gillin grants support pilot studies by early career investigators, while the Weitzman grants provide funding for investigators who have a track record of funding but would like to pursue a novel line of research that differs from their previous funded research. Four years ago the SRS initiated a Young Investigator Award program as well. This year, the Committee received an excellent set of proposals which consisted of 13 Gillin applications and 3 Weitzman applications. Applications are reviewed by 2-3 reviewers with expertise in the area relevant to each application and rankings are forwarded to the SRS Foundation for funding decisions. The SRS also received 12 Young Investigator Award applications. These applications are reviewed by 2-3 reviewers and the Committee recommends recipients to the SRS Board of Directors for approval. Through these activities the Research Committee aims to aid the SRS to achieve its goal of advancing sleep research. I would like to thank our committee members, our outside reviewers, and the SRS staff for their hard work in advancing this worthy goal.

Andrew D. Krystal, MD, MS
Research Committee Chair
**Basic Sleep Research Section**

Meeting date APSS 6/8/2010  
In attendance: 11 members  
The Basic Sleep Research Section resolved that:  

a) We would like to inaugurate “Annual Allan Pack Trainee Awards” for best poster and best oral presentation at the Annual APSS meetings. These awards would be made following the APSS meeting, with a short description of the content of the winning poster and oral presentation to be included in the SRS Bulletin. A plaque and a small monetary award was considered ($100.00) for each, pending availability of funds and a decision from the Board. If funds are not available, a plaque would suffice. Similar awards could be made for each of the main sections, if there were general interest.  

b) We would like to find a means of gaining a more direct voice on the Board, either by having a member of the section attend the Annual Board Meetings with the option of presenting concerns and interests at some point during said meetings.  

c) We would like a forum to present a brief review of basic research highlights at the Annual APSS meetings. This could be presented in the SRS Bulletin, or if possible as a letter in SLEEP.

*Marcos Frank, PhD*  
*Basic Sleep Research Section Head*

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**Sleep Disorders Research Section**

The Sleep Disorders Research Section meeting at APSS has traditionally had low attendance and has discussed ways of attracting more members when we meet at APSS. This year, we anticipate highlighting the research of trainees and early career researchers during our annual section meeting. We are interested in additional ideas for increasing the relevance of the Sleep Disorders Research Section. Please send any ideas and/or suggestion to ann.e.rogers@emory.edu.

*Ann E. Rogers PhD*  
*Sleep Disorders Research Section Head*
Many members of the SRS do not realize that we have a Foundation which is actually a separate, free-standing organization. The SRS is organized in this way because it is part owner with the AASM of the APSS (Association of Professional Sleep Societies), which is a for-profit organization that organizes our meetings and runs the Sleep journal. SRS therefore spun off the SRS Foundation as a completely charitable organization, which can take in donations (see below) as well as make grants to deserving investigators.

The SRS Foundation and the SRS have the same Board of Directors, but the President of the SRS Foundation is the immediate Past President of the SRS. Funds raised by the SRS (by our courses, etc.) beyond our operating needs are deposited in the SRS Foundation, where they are used to fund Gillin and Weitzman grants each year. Typically we raise enough money to fund 3-4 such grants, which help our members to gather preliminary data necessary to achieve external grant funding. The Board of Directors of the SRS (and SRSF) feels that this usage maximally leverages the value of our funds.

Over the last six years, the SRSF has awarded 22 Gillin Awards to young investigators, many of whom have gone on to become independent investigators. The SRSF has also given four Weitzman Awards, all to distinguished senior investigators who have gone on to achieve external funding. The SRSF grants program has been a major and successful investment in the future of our field.

In the last few years, while more and more investigators have had difficulty meeting the very low pay lines for NIH grants, the number of applicants for Gillin and Weitzman grants has increased. This year, for example, we received 13 Gillin and 3 Weitzman Award applications, which is much more than we can fund. Each year the Research Committee of the SRS does the difficult job of evaluating these proposals, and prioritizing them for funding. The SRSF Board of Directors then approves funding for as many of these worthy applications as there are funds to support.

Clearly, we could do a better job if we had more money to distribute. The SRS Foundation is not well enough understood in our community. Please help the SRSF by making it your “favorite charity,” and asking friends and family and colleagues to make contributions. Remember that because the SRS provides the administrative support, 100% of every dollar donated to the SRSF goes to support sleep research, and is 100% tax deductible.

Clifford B. Saper, MD, PhD
President, SRS Foundation
WORLD ASSOCIATION OF SLEEP MEDICINE AND CANADIAN SLEEP SOCIETY CONGRESS, QUEBEC CITY, SEPTEMBER 10-15, 2011

The 4th Congress of the World Association of Sleep Medicine (WASM) will be held jointly with the Canadian Sleep Society (CSS) meeting in Quebec City from September 10-15, 2011.

The theme of this meeting is Sleep, Health, and Society. The main scientific program will open on Sunday night with a Presidential address/symposium and continue through Wednesday. There will be six keynote lectures addressing cutting-edge topics relevant to both sleep research and clinical sleep medicine:

- Charles Czeisler (USA), Sleep and work schedules in modern society;
- Pierre Philip (France), Sleep, sleepiness and safety on the road;
- Kevin Morgan (UK), Insomnia, therapy and health policies;
- Barbara Jones (Canada), Neural regulation of homeostatic sleep mechanisms;
- Colin Sullivan (Australia), Sleep-disordered breathing in pregnancy;
- Matthew Walker (USA), Sleep, learning and cognition.

The main program will also include 24 symposia, several debates on hot topics, and over 200 papers for oral and poster presentations.

As you read this note, please visit our website to check if there is still time to submit abstracts for oral or poster presentations. Prior to the scientific program, there will be a two-day pre-congress program that will offer several courses on topics of interest to clinicians and researchers (sleep-disordered breathing, pediatric sleep disorders, parasomnias, insomnia, movement disorders during sleep, ambulatory sleep recording techniques). There will also be a student/trainee day and a program for technologists that will run concurrently with the main scientific program.

Quebec City is a beautiful and romantic city that is ranked among the top 5 destinations in America (www.bonjourquebec.com). The local organizing committee is planning an exciting social program (Visit of the old city, St-Lawrence River Cruise, Banquet at the Chateau Frontenac) to complement the educational and scientific activities. Please mark your calendar for this international event and check our website for a preliminary program and periodic updates over the next few months. We look forward to meeting you in Quebec City.

Best regards,

Charles M. Morin, PhD
Richard Allen, PhD
WASM/CSS 2011 Program Co-Chairs
For the 12th, or maybe 13th time, the Neuroscience of Sleep and Circadian Biology DataBlitz occurred in sunny San Diego on Monday, November 15, 2010 as a satellite event associated with the annual meeting of the Society for Neuroscience.

The key part of the event is a series of fast-paced presentations of 20 abstracts selected from a pool of about 400 posters related to sleep, circadian rhythms and crossover fields that are a part of the main meeting. The presenters are challenged to present their material with one slide and in one minute. Impossible?! No. Indeed, there was once a presenter who finished his talk with about 10 seconds to spare and with a line: “Now, I can take a few questions.”

The event concludes with a two-slides/two-minutes “plenary presentation” that is intended to be motivational and of broad significance to our field. The DataBlitz Scientific Program Committee selects the abstracts based on their scientific merit and novelty, and with the goal to achieve a wide representation of topics, methods and geographic origins of the speakers. The Committee also invites the Plenary Speaker and the Master of Ceremony. The latter is asked to moderate the event with humor, tact and … an iron fist when enforcing the timing of presentations. The 2010 DataBlitz was blessed with having Dr. Marin Sarter of the University of Michigan for the plenary speaker, and Dr. Ronald E. Szymusiak for the moderator.

DataBlitz is sponsored by the NIH Center on Sleep Disorders Research directed by Dr. Michael Tweren, and the on-site organization is overseen by the Center staff (Dr. Aaron Laposky). Fiscal support for the event is provided, with no preconditions, by societies and commercial entities active in the field of sleep disorders. The American Academy of Sleep Medicine, the Sleep Research Society, the Society for Research on Biological Rhythms, Cephalon, Galleon Pharmaceuticals and Philips-Respironics supported the DataBlitz in 2010.

The current DataBlitz Abstract Selection Committee members are: Orfeu Buxton, Harvard Medical School; Paul Hardin, Texas A&M University; Leszek Kubin – chair, University of Pennsylvania; Gina Poe, University of Michigan; Tom Scammell, Harvard Medical School.

In recent years, the DataBlitz has been attended by 350-400 SFN meeting attendees. Of those a few always come from other fields; undoubtedly drawn by the scientific curiosity, friendship, humor, the great atmosphere of the social interactions, or all of those combined. See you on Monday, November 14 at 8 pm in Washington, DC.

Leszek Kubin, PhD
University of Pennsylvania
Peer review is key to the process the National Institutes of Health (NIH) uses to identify and fund the most meritorious grant applications in all fields of biomedical and behavioral sciences. A large portion of this process is entrusted to the Center for Scientific Review (CSR), which receives all NIH applications and assigns the majority to CSR review groups (study sections) with the scientific focus and expertise to assess them for scientific merit.

Need to Build a New Study Section for Circadian and Sleep Applications

Applications dealing with the topics of sleep and biological rhythms have been historically reviewed in numerous study sections across CSR. However, a handful of study sections handle a significant portion of these applications. During the integration of the neurosciences at CSR in 1998, the Biological Rhythms and Sleep (BRS) study section was created to review applications on circadian rhythms and sleep, primarily at the circuit level and primarily in animal models. While BRS had excellent expertise, its focus became too narrow and the number of applications it reviewed never reached a critical mass to develop appropriate scoring patterns, even after absorbing the more cellular/molecular applications and some of those less related to neuroscience. In addition, concentration of scientific topics in one study section led to excessive competition within the field and potentially lowered the proportion of funded applications in the scientific areas. Therefore, CSR staff, working with program officers from various Institutes and Centers, began discussions to restructure the review of the circadian and sleep applications. Subsequently, a working group was convened in February of 2010.

Study Section Realignments

The working group included leaders in the field who also represented the main sleep and circadian scientific societies, and/or were former members of relevant study sections. The resulting recommendations went to members of CSR’s advisory committee and CSR’s director prior to implementation. The main recommendation was to create a new study section based on BRS and the Neuroendocrinology, Neuroimmunology and Behavior (NNB) study section. NNB had compatible general research expertise and was already reviewing certain circadian topics. The new study section, Neuroendocrinology, Neuroimmunology, Rhythms and Sleep (NNRS), incorporated the majority of the topics previously reviewed in BRS and also integrated the necessary expertise for the new areas of review (including former members of BRS). This study section has already held two review meetings. The study section has achieved adequate numbers and expanded scientific areas without becoming overly diverse. Some applications (a fairly small number) that have a primarily molecular focus (including gene discovery and gene expression) have found a home in Neurodifferentiation, Plasticity and Regeneration (NDPR), which has also expanded its purview and incorporated circadian expertise (including former members of BRS). To reflect these changes, NDPR will be renamed Neurodifferentiation, Plasticity, Regeneration and Rhythmicity.

It is important to note that, even before the creation of NNRS, BRS accounted for the review of less than 20% of circadian and sleep applications. So, where else are those applications reviewed? Depending on topic, groups of applications have specific review homes. For instance, sleep applications in a clinical or mental disease context are reviewed in Neural Basis of Psychopathology, Addictions and Sleep Disorders (NPAS), applications focusing on sleep apnea are reviewed in Respiratory, Integrative Biology and Translational Research (RIBT), and Mechanisms of Emotion, Stress and Health (MESH) reviews applications on sleep/circadian in a behavioral context of stress mechanisms and responses. The three aforementioned study sections account for roughly 5% of sleep/circadian applications each. Still, the vast majority of sleep and circadian applications (over 60%) are assigned to various study sections based on parent topic. For instance, studies in non-neuronal tissues might be assigned to the cell biology cluster and those dealing with rhythms in cardiac cells to the cardiovascular cluster. Sleep studies dealing with memory consolidation might be assigned to the Neurobiology of Learning and Memory study section; large population studies would be assigned to the Cardiovascular and Sleep Epidemiology study section.

Need to Continually Monitor and Adjust

Review staff, with periodic input from program and study section members and chairs, continuously monitor trends in any given scientific field and adjust study section expertise and scope as necessary. We will therefore carefully monitor and evaluate the recent changes, described above. While we periodically conduct formal working groups and do presentations at scientific meetings or similar forums, we welcome input from the scientific community at anytime. More information and our contact information can be found at www.csr.nih.gov.

René Etcheberrigaray, MD
Christine L. Melchior, PhD
Michael Selmanoff, PhD
Division of Neuroscience, Development and Aging
Center for Scientific Review, NIH
Manage Your Time to Manage Your Career

Time once lost never bounces back and cannot be compensated for. Unfortunately there is nothing like ‘time debt’. There is no homeostatic regulation of time. However, self-control and management of time is the key to success in life.

In the video “Time Management from the Inside Out” Julie Morgenstern shows time management from a whole new angle. Most people view time as indefinable as we cannot see it or touch it as we do with space. As long as it remains hard to pin down, it is hard to manage. Morgenstern’s suggestion is to view time as tangible, visual, and measurable. When viewed in this new angle, managing time is similar to managing space—tasks become objects that must fit into our space.

Morgenstern’s method consists of analyzing our goals and determining what is most important to us. We should learn to strategize and regrouping our goals into categories of similar nature. We should then attack our goals by purging unimportant ones. Assigning a realistic time for completing important goals is critical. People always tend to underestimate the time required for a new task. In research, it is very critical to give enough time for surprises while estimating time on any project.

Whenever you are thrown off track due to some unforeseen emergency, you need to get right back on by deleting tasks that are not so important, delay tasks that could wait a little longer, diminishing certain tasks by worrying less about perfection and getting a quick fix. You should also learn the art of delegating tasks to others whenever possible.

These days many researchers are overwhelmed with various projects and grant submissions. You often gain disappointments instead of funding for research. It is true that you have no control over the reviewers’ comments or events that others throw at you but you have complete control over your next approach or strategy. The 80-20 law of the vital few, originally stated by the Italian economist Vilfredo Pareto noted that 80 percent of the reward comes from the 20 percent effort we put in. It is important to first identify that valuable 20 percent and prioritize our time and focus our work on those identified items with the greatest reward.

We should learn the art of selectivity- we cannot do everything at the same time. We need to be focused on a particular task. In this period of overwhelming information, the real difference between efficient and non-efficient people are based on the things they chose not to do rather than on things they do.

I would like to end this note by recommending another book worth reading "Making the Right Moves- A Practical Guide to Scientific Management for Postdocs and New Faculty” by the Howard Hughes Medical Institute and Burroughs Wellcome Fund.

Joshi John, PhD
Associate Research Neuroscientist
Dept. of Psychiatry, UCLA School of Medicine
VA Greater Los Angeles Healthcare System (VAGLHS)
Whether or not we fall asleep is the result of interactions between a cumulative homeostatic sleep drive ('Process S') and our endogenous daily biological clock, or circadian rhythm ('Process C'). Circadian rhythms are observed ubiquitously throughout eukaryotes and are defined by three criteria: first, they persist with a period of about 24 hours in the absence of external stimuli; second, the rhythm can be entrained by external stimuli (e.g. light, temperature) to synchronise with environmental cycles; third, period is robust over biologically-relevant temperatures (i.e. the clock does not run faster on hot days and slower on cold days). Circadian rhythms are thought to have evolved because of the advantage conferred by temporal co-ordination of physiology, metabolism and behaviour to cyclical changes in the environment imposed by the solar cycle (Pittendrigh, 1960).

In mammals, specialised 24-hour pacemaker cells are found in the hypothalamic suprachiasmatic nuclei (SCN), but it is now well understood that all cells have intrinsic time-keeping mechanisms that are synchronised by myriad signals from the SCN. When internal synchrony is disrupted, as exemplified by jetlag and shift work, then deleterious long-term health consequences can result, including an increased risk of certain cancers, metabolic disorders and cardiovascular disease (Reddy and O’Neill, 2009).

Circadian rhythms have been studied in many different experimental organisms, including bread mould (Neurospora crassa), weeds (Arabidopsis thaliana), flies, mice and of course, humans. In each case, molecular models have been developed that converge on a common mechanistic logic: that of transcriptional-translational feedback loops. Such models exhibit varying degrees of complexity, but the central idea is that timed expression of “clock genes” facilitates delayed negative feedback whereby the encoded “clock proteins” eventually repress their own cognate promoter sequences. As these proteins are then degraded, the cycle begins again (because inhibition is released). This process takes approximately 24 hours, hence the term circadian (Latin: circa - about; diem - day).

Whilst these models have been able to successfully account for a large body of experimental evidence in the last 20 years, there have been a number of inconsistencies. For example, no “clock gene” over-expressing or knockout mouse/cell lines are convincingly arrhythmic at both the behavioural and/or tissue level. In addition, several ubiquitous enzyme activities, e.g. casein kinase II activity, and certain drug effects on cellular rhythms have been shown to exhibit far greater conservation across the kingdoms of life than any of the hitherto identified “clock genes” (O’Neill et al., 2011). This lead us to hypothesise that, whilst transcriptional regulation is clearly relevant to temporal coordination of organismal physiology (and life in general), the actual time-keeping mechanism might be entirely biochemical in nature. In order to test this, traditional approaches in the field proved ineffectual, since they generally use transcriptional reporters. In addition, drugs that inhibit gene expression for >24 hours tend to be highly cytotoxic.

In order to overcome these obstacles, we had to first identify a post-translational biomarker for cellular rhythms. We had noticed that, as part of a proteomics screen in mouse liver, PRX oxidation had a clear circadian rhythm (Reddy et al., 2006), and we could therefore now use this as a potential marker of the clockwork in other tissues and cells. Peroxiredoxin (PRX) proteins are highly conserved antioxidant proteins that scavenge cellular reactive oxygen species (ROS) – most notably hydrogen peroxide.

We then optimised a novel platform for assaying cellular rhythms in the absence of transcription using erythrocytes. Mature human red blood cells naturally possess no nucleus or other organelles, and therefore no DNA. They are readily purified, and express peroxiredoxins at high levels (~0.5% of total cellular protein) as a defence against ROS generated by haemoglobin auto-oxidation. We took purified erythrocytes and cultured them in a minimal media containing essentially only glucose, salts and a pH buffer. We then incubated aliquots of RBC cultures at constant temperature (37°C), sampling every 4 hours for up to 3 days. Western blots of the time-courses revealed clear circadian rhythms in PRX oxidation. Fur-
thermore, these rhythms could be entrained by temperature cycles, and were temperature-compensated (displaying approximately the same period at 32°C and 37°C). As such, these oscillations in red blood cells meet the classic criteria for circadian rhythms. We then extended our observations to include erythrocyte redox status and ATP levels, which also appear to display some circadian regulation. Thus, we showed that in the absence of transcription, upon which all previous models of the clockwork in higher organisms are based, circadian rhythms in basic biochemical reactions were still observed, signifying the presence of an endogenous clock within the red cells (O’Neill and Reddy, 2011).

Having shown that human cells remain competent to sustain circadian rhythms in the absence of gene expression, in vitro, it was imperative to determine the scope for cross-talk between this novel non-transcriptional oscillation and the canonical transcriptional clock mechanisms previously identified in nucleated cells. To accomplish this we used mouse embryonic fibroblasts from circadian mutant (cryptochrome-deficient) mice. These mice, and their cells, have been characterised as arrhythmic by known circadian clock gene assays previously. Although PRX oxidation rhythms were still observed, they were clearly perturbed with respect to wild type controls. This implies that whilst purely biochemical mechanisms are competent to sustain cellular rhythms, they must normally interact reciprocally with gene expression cycles.

In an accompanying paper, we further showed that rhythms in PRX oxidation persist in a pico-eukaryote, the alga Ostreococcus tauri, in the absence of gene expression (O’Neill et al., 2011). Taken together, the findings suggest an evolutionarily ancient biochemical timekeeping mechanism conserved across the eukaryotic lineage, and perhaps beyond. Our work suggests a new paradigm for understanding cellular timekeeping, and the way in which the cellular clock might result from rhythms in metabolism, rather than the other way round as had previously been thought. It remains to be seen to what extent biochemical processes such as PRX oxidation and cellular redox status are of relevance to understanding the changes that take place in cells when we sleep. Given the clearly established links between sleep, circadian rhythms and disease, however, an interesting possibility is that, rather than concerning ourselves with “clock genes”, perhaps chrono-pharmacological manipulation of metabolic and signalling pathways offer better opportunities for managing disease and promoting long term health.

Akhilesh B. Reddy & John S. O’Neill
Department of Clinical Neurosciences,
University of Cambridge Metabolic Research Laboratories,
Institute of Metabolic Science,
University of Cambridge, Addenbrooke’s Hospital,
Cambridge CB2 0QQ, UK

REFERENCES:
SRS MEMBER JEROME SIEGEL, PHD RECEIVES VA’S MOST PRESTIGIOUS RESEARCH AWARD

VA Greater Los Angeles Healthcare System (VAGLAHS) senior research scientist, Dr. Jerome Siegel, receives the William S. Middleton Award VA’s most prestigious award in Biomedical Laboratory Research and Development. Siegel accepted the award on May 4 at the VA National Research Week Forum in Washington, DC. The William S. Middleton Award is the highest award for Biomedical/Clinical Research in the VA.

Dr. Jerome Siegel, Chief of Neurobiology Research at VAGLAHS, focused his research on understanding sleep physiology including sleep apnea and narcolepsy. Dr. Siegel’s group, in parallel with a team from Stanford, discovered the cause of human narcolepsy, a loss of brain cells containing the peptide hypocretin. Dr. Siegel’s group also discovered that patients with Parkinson’s disease have reduced levels of the peptide. Dr. Siegel’s group is currently investigating the operation of this system at the neuronal level to better understand its role in health and disease.

Dr. Siegel has conducted all his research at VAGLAHS where he began as a Research Associate in 1976 after completing his post-doctoral work at the University of California, Los Angeles. Four years later, he became a Clinical Investigator, then in 1981 was appointed Senior Research Career Scientist. Siegel is now Chief of Neurobiology Research at VAGLAHS. He is also Professor of Psychiatry at UCLA.

As part of his Middleton award, Dr. Siegel receives a $5,000 cash award and an inscribed plaque commemorating his achievements. Siegel also receives $50,000 per year for 3 years in additional research support. To honor the recipient, VA Biomedical Laboratory Research and Development publishes the award announcement in a scientific journal related to Dr. Siegel’s field of research.

The William S. Middleton Award was established in 1960, to honor William S. Middleton, MD, distinguished educator, physician-scientist, and Department of Veterans Affairs Chief Medical Director from 1955 to 1963. One of his most significant contributions is the development of the VA research program; he was instrumental in initiating and stimulating VA medical research. By the time he retired in 1963, over 7,500 research projects, including VA cooperative studies had been undertaken by VA because of his interest and initiative.

DEPARTMENT OF DEFENSE GRANT FUNDING OPPORTUNITIES

The United States Department of Defense recently released three Requests for Applications on Gulf War Illness that address issues of interest to sleep and circadian researchers. Below are links to the three RFAs.

Gulf War Illness Innovative Treatment Evaluation Award Grant
http://www07.grants.gov/search/search.do?&mode=VIEW&oppId=90093

Gulf War Illness Investigator-Initiated Research Award Grant
http://www07.grants.gov/search/search.do?&mode=VIEW&oppId=90053

Gulf War Illness Clinical Trial Award Modification 1
http://www07.grants.gov/search/search.do?&mode=VIEW&oppId=90074

NHLBI POSTS EXECUTIVE SUMMARY FROM WORKSHOP ON SLEEP-DISORDERED BREATHING AND CVD

The National Heart, Lung, and Blood Institute (NHLBI) has posted an executive summary of the workshop, “Defining Molecular Pathways and Mechanisms that Predict Cardiovascular Disease (CVD) Risk Associated with Sleep Disordered Breathing (SDB),” which was held in September 2010. It outlines specific scientific priorities in the areas of sleep, circadian and neuroendocrine mechanisms of energy metabolism; cardiovascular and SDB pathophysiology; and intermediate molecular markers of CVD and SDB. The summary also indicates that there is a need for training and re-specialization opportunities for established investigators in sleep and circadian biology.

NIH FISCAL POLICY FOR GRANT AWARDS – FY 2011

The NIH recently released its plan to administer grants for Fiscal Year 2011 (FY 2011) based upon funding received from Congress. The NIH Fiscal Operations Plan for FY 2011 implements the Department of Defense and Full-Year Continuing Appropriations Act of 2011 (P.L. 112-10). The Act provides NIH with $30.9 billion or nearly 1 percent less than the total FY 2010 budget authority level of $31.2 billion. The NIH will continue to manage its portfolio in biomedical research investments in a manner similar to that described in the FY 2010 Fiscal Policy Notice. This includes continuing to address the need for a highly productive pool of researchers by providing support for new investigators. To view the entire announcement, please visit http://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-068.html.

MESSAGE REGARDING JAPAN EARTHQUAKE & TSUNAMI IMPACT ON WORLD SLEEP 2011

Below is a link to a letter from the World Sleep Federation regarding the impact of the recent earthquake and tsunami on the upcoming World Sleep 2011 meeting in Kyoto, Japan, October, 16-20, 2011. The meeting will continue as planned as Kyoto was not affected by the devastating earthquake and tsunami.

http://www.sleepresearchsociety.org/pdfs/wfskyotoearthquake.pdf

Please note: The deadline to submit abstracts and applications for travel awards for the WorldSleep2011 meeting has been extended to June 17, 2011. Advanced registration has also been extended to September 30, 2011.
Two Additional Conversations with Our Founders Videos Now Available
Two new videos in the SRS Conversations with our Founders Project are now available on the SRS Website. The new interviews are with Ernest Hartmann, MD and Robert McCarley, MD, PhD.
You may access the interviews via the following link:
http://www.sleepresearchsociety.org/ConversationsWithFounders.aspx

NIH Funding Announcements

Program Announcement: Education Research in Sleep Health and Sleep-Circadian Biology (R25)
A new initiative invites educational research (R25) grant applications focused on scientific advances in sleep health and circadian and sleep biology. The goal is to stimulate development of innovative, well-validated education tools, platforms and programs that will transfer health information and scientific advances in sleep and circadian biology to research scientists, health care providers, and educators, to specific populations including youth, older adults, women, racial and ethnic minorities, and veterans. Proposals are to address plans for future partnerships with appropriate stakeholder communities that could potentially facilitate dissemination and implementation. Applications from interested educational and outreach researchers partnering with appropriate expertise are encouraged.

There are multiple receipt dates for applications throughout the year. For more information on the funding opportunity, go to the following link: http://grants.nih.gov/grants/guide/par-files/PAR-11-098.html
NOTE: The new initiative is aimed at educational research development. Strong teams of researchers with existing, well-validated approaches for dissemination of sleep and circadian biology advances should consider whether the NHLBI “Demonstration” R18 program would be appropriate. R18 information can be found via the following link: http://grants.nih.gov/grants/guide/par-files/PAR-10-114.html

Short Term Research Career Enhancement Opportunities for Established Veterinarians (K18)
The National Center for Research Resources has announced a new career program for established veterinarians (DVM/VMD or equivalent at associate/full professor levels) offering protected time (6-24 months) to achieve a shift in the focus of their research direction or to learn new research techniques and/or procedures relevant to their ongoing research projects and to the NCRR mission.
This RFA may be of interest to established veterinarians seeking support to acquire skills/techniques in sleep/circadian research that is well-coupled to the NCRR mission.

View the complete announcement at the URL listed below. Applicants should contact the NCRR staff listed to assess eligibility and relevance of research plans to NCRR mission.

Call for Applications: Anchoring Metabolomic Changes to Phenotype (P20)
The National Heart, Lung, and Blood Institute has announced a new initiative to facilitate the capture of molecular information that is most proximal to a cardiovascular or lung disease phenotype of interest and use that to gain mechanistic understanding of the pathways and mediators involved in the expression of the phenotype.
Selected goals of potential interest to sleep/circadian researchers may include the need for multidisciplinary teams; the identification of candidate metabolites characteristic of a specific cardiovascular or lung disease phenotype; identification and mapping of genes and putative pathways responsible for NHLBI disease mechanistic studies, and metabolomic phenotyping discovery.
NOTES
1) It is essential that potential applications be closely coupled to the NHLBI mission and address the specific goals of this RFA.
2) This RFA has special organizational features and requirements, you must read the original full text of the FOA and address questions to the NHLBI staff listed under “Contacts”
For more information, please see the full announcement via the following link: http://grants.nih.gov/grants/guide/rfa-files/RFA-HL-12-009.html

Circadian Rhythms and Alcohol-induced Tissue Injury (R01 & R21)
This Funding Opportunity Announcement (FOA) encourages applications that propose to conduct mechanistic studies of the circadian rhythms involved in alcohol-induced organ damage. The circadian system comprises of a complex feedback network that involves interactions between the central nervous system and peripheral tissues. The effects of alcohol on circadian rhythm and how alcohol’s action is modulated by circadian rhythms have key implications for alcohol research. The central and peripheral oscillators, either individually or together, may play an important role in alcohol-induced tissue injury. The objective of this FOA is to understand the molecular mechanisms of alcohol-induced tissue damage that involve central and peripheral circadian rhythms, particularly their connection with metabolism and metabolic disorders.
Read the full announcements via the links below:

Centers for Disease Control and Prevention Announcements

Unhealthy Sleep-Related Behaviors – 12 States, 2009
An estimated 50–70 million adults in the United States have chronic sleep and wakefulness disorders. Sleep difficulties, some of which are preventable, are associated with chronic diseases, mental disorders, health-risk behaviors, limitations of daily functioning, injury, and mortality. The National Sleep Foundation suggests that most adults need 7–9 hours of sleep per night, although individual variations exist. To assess the prevalence and distribution of selected sleep difficulties and behaviors, CDC analyzed data from a new sleep module added to the Behavioral Risk Factor Surveillance System (BRFSS) in 2009. This report summarizes the results of that analysis, which determined that, among 74,571 adult respondents in 12 states, 35.3% reported having <7 hours of sleep on average during a 24-hour period, 48.0% reported snoring, 37.9% reported unintentionally falling asleep during the day at least 1 day in the preceding 30 days, and 4.7% reported nodding off or falling asleep while driving in the preceding 30 days. Continued public health surveillance of sleep quality, duration, behaviors, and disorders is needed to understand and address sleep difficulties and their
impact on health. As a first step, a multifaceted approach that includes increased public awareness and education and training in sleep medicine for appropriate health-care professionals is needed; however, broad societal factors, including technology use and work policies, also must be considered.

BRFSS is a state-based, random-digit-dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥18 years, conducted by state health departments in collaboration with CDC. Based on Council of American Survey and Research Organizations (CASRO) guidelines, response rates for 12 states that used the optional sleep module in 2009 ranged from 40.0% (Maryland) to 66.9% (Nebraska). Cooperation rates ranged from 55.5% (California) to 83.9% (Georgia).

See the full report at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6008a2.htm?s_cid=mm6008a2_w.

Effect of Short Sleep Duration on Daily Activities – United States, 2005 – 2008

Little is known about the extent to which insufficient sleep affects the ability of U.S. adults to carry out daily activities. The National Sleep Foundation suggests that adults need 7–9 hours of sleep per night; shorter and longer sleep durations have been associated with increased morbidity and mortality. To assess the prevalence of short sleep duration (<7 hours on weekday or workday nights) and its perceived effect on daily activities, CDC analyzed data from the 2005–2008 National Health and Nutrition Examination Survey (NHANES). This report summarizes the results, which found that 37.1% of U.S. adults reported regularly sleeping <7 hours per night, similar to the 35.3% reporting <7 hours of sleep in a 24-hour period in another report using self-reported data. Short sleep duration was more common among adults aged 20–39 years (37.0%) or 40–59 years (40.3%) than among adults aged ≥60 years (32.0%), and more common among non-Hispanic blacks (53.0%) than among non-Hispanic whites (34.5%), Mexican Americans (35.2%), and persons of other races/ethnicities (41.7%). Among six sleep-related difficulties assessed, the most prevalent was not being able to concentrate on doing things, reported by 23.2% of U.S. adults. Perceived sleep-related difficulties were significantly more likely among persons reporting <7 hours of sleep than among those reporting 7–9 hours of sleep. Based on these findings, at least one third of U.S. residents do not get enough sleep on a regular basis, and this impairs their ability to perform daily tasks. Chronic sleep deprivation also has a cumulative effect on mental and physical well-being and can exacerbate chronic diseases.

See the full report at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6008a3.htm?s_cid=mm6008a3_w.

PHILIPS CONSUMER LIFESTYLE RESEARCH GRANT ON LIGHT AND WELL BEING

Philips Consumer Lifestyle is offering a research grant up to $100,000 to further the understanding of the effects of light on well being. Although all applications will be considered, particular attention will be directed towards areas related to sleep, circadian regulation, alertness, learning and cognition.

Applications are due June 13, 2011. For more information, go to http://www.sleepresearchsociety.org/PDFs/Grants/philipsgrant.pdf.

REGISTER FOR THE SLEEPRFA-L LISTSERV

Are you interested in receiving the most up-to-date sleep-related grant offerings from Federal Agencies? If so, consider signing up for the SleepRFA-L Listserv. Signing up is easy and can be done via the following link, https://list.nih.gov/cgi-bin/wa.exe?A0=SLEEPRFA-L, then click on the “subscribe” button in the right-hand margin.
Make plans to attend the **SILVER Jubilee RECEPTION** from 6:00pm–7:30pm on the evening of Sunday, June 12, 2011. This casual event will celebrate the silver anniversary of the SLEEP Annual Meeting and will provide you with the opportunity to network with other SLEEP 2011 attendees.

Tickets are only $50 per person and include:

<table>
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<tr>
<th><strong>Food</strong></th>
<th>An extensive selection of hors d'oeuvres will be available throughout the evening.</th>
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<tr>
<td><strong>Drinks</strong></td>
<td>Each admission includes two drink tickets good for wine, beer or soda (cash bar will also be available).</td>
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<tr>
<td><strong>Entertainment</strong></td>
<td>Live jazz music will serve as a backdrop for the anniversary celebration.</td>
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<tr>
<td><strong>Donation</strong></td>
<td>The proceeds from this event will support the Sleep Research Society Foundation (SRSF) and the American Sleep Medicine Foundation (ASMF); these foundations aim to promote the advancement of knowledge in the fields of sleep research and sleep medicine.</td>
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To attend the **SILVER Jubilee RECEPTION**, purchase your tickets at the SLEEP 2011 registration area before noon on Sunday, June 12, 2011.
BACKGROUND

Our research group is a part of the Monash Sleep Network, established in 2007 to combine scientific and clinical expertise in sleep research within the Faculty of Medicine, Nursing and Health Sciences and Faculty of Education at Monash University, the Clinical Sleep Laboratories at Monash Medical Centre, the Alfred, Box Hill, Peninsula and Epworth Hospitals, and the Monash University Accident Research Centre (MUARC). The Network enables multidisciplinary approaches to sleep research and education including paediatric and adult sleep medicine, chronobiology, pharmacology, psychology and physiology.

CURRENT RESEARCH

1. Understanding the clinical applications of melatonin and melatonin agonists for sleep-wake disorders

   **Leader:** Shantha Rajaratnam

   There is considerable evidence that melatonin is involved in the circadian regulation of sleep-wakefulness. We previously examined the effects of melatonin on sleep and circadian rhythms in healthy young male volunteers under laboratory-controlled conditions (University of Surrey, UK), and unequivocally demonstrated that melatonin is able to shift the timing of sleep and more strongly endogenous rhythms such as plasma melatonin and cortisol and core body temperature, without affecting pituitary-gonadal hormone levels. We also quantified the direct, sleep-promoting effects of melatonin. These studies were extended to examine in randomised controlled trials the efficacy of a melatonin agonist (tasimelteon) for improving sleep following an abrupt (phase-advance) shift of the sleep-wake cycle (Brigham and Women's Hospital, USA). Our current work is building upon these previous studies to characterise circadian rhythm and neurobehavioural impairments in sleep disorder and other patient groups (e.g. traumatic brain injury), and to examine the efficacy of melatonin for sleep disturbance in a variety of neuropsychiatric patient groups.

2. Alerting effects of light following sleep loss and circadian rhythm disruption

   **Leaders:** Shantha Rajaratnam, Tracey Sletten

   In addition to its circadian resetting effects, light has a direct arousing effect, improving alertness and neurobehavioural performance. While the alerting effects of light have been thought to be mediated by suppression of melatonin synthesis, this cannot explain the effects of light during daytime, when melatonin is not produced. We previously demonstrated that, compared to dim light, exposure to broad spectrum bright light (~1000 lux) during the daytime reduced subjective sleepiness, improved reaction times, and decreased slow eye movements following two nights of sleep restriction. Over recent years, there have been significant advances in understanding the photoreceptor system and neuroanatomy through which light mediates its circadian effects. We have been funded to examine the wavelength-sensitivity of the acute alerting effects of light in healthy volunteers (collaboration with Brigham...
and Women’s Hospital, USA), and to examine the efficacy of novel light interventions for shift workers (collaboration with University of Sydney, University of South Australia, and University of Adelaide) and individuals who have experienced traumatic injury (collaboration with Monash-Epworth Rehabilitation Research Centre).

3. Attentional impairment associated with sleep loss, circadian rhythm disturbance and distractive environment
Leader: Clare Anderson
It is well known that fluctuations in vigilance and alertness due to homeostatic and circadian mechanisms results in parallel changes in the loss of attention. What is perhaps less well understood is the cause of these episodes of inattention beyond simply ‘falling asleep’. This program of work evaluates the causes of inattention and describes the incidence, duration and time course of lapses in inattention which result from different mechanisms. We have previously shown (Loughborough University, UK) that lapses in attention increase during acute and partial sleep loss which is further exacerbated when performing in a distractive environment. Furthermore, lapses in attention caused by distraction-seeking behaviour were shorter in duration and less frequent than those caused by microsleep. Current laboratory-controlled studies utilizing eye tracking technologies are now assessing changes in distractibility due to homeostatic and circadian fluctuations in alertness, and field-studies are examining the incidence of distraction-seeking behaviour while driving following overnight, extended duration work shifts (Brigham and Women’s Hospital, USA). Our program of work ultimately aims to understand the interactions between sleep loss, circadian timing and environmental factors which may enhance or inhibit sleep-related inattention.

4. Novel pharmacological approaches to the treatment of OSA
Leader: Russell Conduit
Current treatment of obstructive sleep apnoea (OSA) is effective but has limitations. For many, invasive anatomical-based surgery and dental appliances typically do not alleviate obstruction at an acceptable rate, and compliance to continuous positive airway pressure (CPAP) devices can be suboptimal. Neurotoxinological treatment approaches are widespread in the field of medicine, but as yet have not been evaluated as a treatment for sleep-disordered breathing. Our research is exploring such interventions aimed at enhancing UA neuromuscular tone and/or reflexes as an alternative treatment for OSA.

Technical Capabilities
Methodology and Techniques: Polysomnography, actigraphy, neurocognitive assessment, light measurement exposure (including monochromatic light), saliva and urinary hormone assessments, constant routine and constant posture protocols, temporal isolation protocol, driving simulator, objective drowsiness measurement.

Facilities: We currently use a purpose-built sleep research laboratory, with two isolated suites each consisting of bedroom, kitchen, and bathroom (Monash University Caulfield Campus). The Monash Sleep Network is currently developing a new research laboratory for sleep, chronobiology, respiratory, and neuroendocrine investigations. We conduct clinical trials through our partnerships with Monash-affiliated hospitals, in particular the Monash Alfred Psychiatry Research Centre.

Training Opportunities
Honours (Psychology, Behavioural Neuroscience, Biomedical Science, or Medical Science), PhD (Psychology or Neuroscience), DPsych, Post-doctoral.

Representative Publications
The Sleep Research Society (SRS) recognizes the importance of increased advocacy and grassroots efforts during this time of fiscal uncertainty and budget cuts. Working with the Health and Medicine Counsel of Washington (HMCW), SRS will be increasing efforts to educate Members of Congress on sleep related issues as well as advocating for research funding at the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC).

The 112th Congress convened in January with Republicans holding a 49 seat majority in the House of Representatives. The GOP wasted little time following through on their campaign pledge to cut federal spending. Initially, the House passed an appropriations package for FY11 that cut $60 billion in discretionary spending, including significant cuts to the NIH and CDC, which eliminated the sleep program at CDC. The bill was rejected by the Senate. Over the next few months as Congress struggled to find a compromise on an appropriations package to fund the remainder of FY11, SRS worked with HMCW to meet with numerous members of the House and Senate, including members of the Appropriations Committees. During these meetings SRS President James Walsh underscored the importance of funding for research at NIH and the sleep program at CDC, and emphasized a better understanding of sleep and sleep disorders is important to the health and safety of their constituents. SRS also issued several membership advocacy action alerts.

On April 11th, Congress passed, and President Obama signed, a continuing resolution (CR) that will fund the government for the remainder of the fiscal year. The CR cuts $38 billion from the FY10 funding level government-wide, but prevents drastic cuts to life-saving medical research. The legislation includes funding for NIH at a level of $30.7 billion, a 0.8% reduction from FY10.

The National Heart, Lung, and Blood Institute, which houses the National Center on Sleep Disorders Research, is funded at $3.07 billion, a 0.8% decrease from FY10. CDC is funded at $5.649 billion, an 11.7% decrease from FY10 levels. CDC is developing a plan to implement this reduction, and is expected to continue the sleep program, although it could be reduced.

In February the Obama administration sent its FY12 budget request to Congress. The plan supports NIH and CDC; NIH funding is increased by $745 million, and CDC funding is increased by $371 million over FY10 levels. In April, the House of Representatives passed its non-binding FY12 budget resolution introduced by House Budget Committee Chairman Paul Ryan (R-WI). The plan cuts $6 trillion over 10 years and includes significant changes to federal health care programs including Medicare, Medicaid, the health insurance exchanges established by the Affordable Care Act, and cuts the NIH and CDC budgets. The Senate has not yet considered its FY12 budget resolution, but is expected to do so in the near future.

With a 2012 budget cycle likely to be defined by further partisan positioning and all parties focused on reducing spending, it is critical to continue communicating the importance of research funding for sleep and sleep related disorders at NIH and CDC to members of Congress. In March SRS began meeting with congressional offices to advocate for support of sleep research and awareness at NIH and CDC for the FY2012 appropriations cycle. SRS is also exploring collaborative opportunities with federal agencies, such as the Department of Transportation, to advance the goals of the Sleep Research Society.

**Dale Dirks and Meaghan Pilarcik**

*Health and Medicine Council of Washington*
Profile of Jon Wendling,
Layout Production Designer

What do you do?
My title is Layout Production Designer for the American Academy of Sleep Medicine. My primary responsibilities are the layout and design of the journal SLEEP and the Journal of Clinical Sleep Medicine. Aside from the journals, I work on other publications of the AASM and the societies that are affiliated with the AASM (SRS, AAST, AADSM). The SRS Bulletin is one such publication. My job also entails graphic design of marketing materials, logos, stationary, product packaging, books, and websites for the AASM and its affiliated societies.

Best parts of job, worst parts of job
The worst part of my job is the tedium of repetitive tasks that come with laying out medical journals. That said, working for the AASM and all the specialty societies has offered me a lot of opportunity to do creative graphic design work. I find the variety and challenge of each new design project to be the most enjoyable part of my job.

Something SRS members may not know about you?
I’m responsible for the redesigned article layout in the Journal of Clinical Sleep Medicine that began in the February 15, 2010 issue. I also designed the new journal SLEEP website.

How long on average does it take to layout an issue of SLEEP and the SRS Bulletin?
On average, an issue of SLEEP probably takes about a week of uninterrupted work to layout. However, it is rare that I can devote an entire week to just the journal, and it can be as long as a month from when I start to work on an issue to when it’s complete and ready for publication. The SRS Bulletin lays out much more quickly, and the layout is done in a day or two on average.
Early 6,000 sleep medicine and sleep research professionals are expected to attend SLEEP 2011, the 25th Anniversary Meeting of the Associated Professional Sleep Societies, LLC (APSS). Join your colleagues at this historic event where the field will celebrate the successes of our past and discuss the latest research and clinical developments that will influence our future.

Visit www.sleepmeeting.org for program details or to register online.
The Sleep Research Society welcomes members who recently joined the organization. Our membership continues to grow — help us strengthen the impact of the profession by encouraging your colleagues to join. Information regarding membership can be found on the Society website (www.sleepresearchsociety.org).

**Full Members**

Andrew L. Chesson, MD  
Rebecca Gomez, PhD  
Jinkwan Kim, PhD  
Taku Miyagawa, PhD  
Remo S. Mueller, PhD  
David T. Plante, MD  
Bhavin R. Sheth, PhD  
Sarah E. Tom, PhD  
Yang Wang, MD, PhD  
Paul Whitney, PhD  
Gregory W. Yelland, PhD  
Shelley Zhang, MD  

Louisiana State University Health Sciences Center, Shreveport, LA  
The University of Arizona, Tucson, AZ  
University of Chicago, Chicago, IL  
The University of Tokyo, Tokyo, Japan  
Brigham and Women’s Hospital, Boston, MA  
Wisconsin Sleep, Madison, WI  
University of Houston, Houston, TX  
University of Texas Medical Branch, Galveston, TX  
University of Chicago, Chicago, IL  
Washington State University, Pullman, WA  
Monash University, VIC Australia  
University of Chicago, Chicago, IL

**Associate Members**

Kevin B. Gregory  
Jaime M. Hughes  
Karen R. Josephson  
Kelly Lichty  

Alertness Solutions, Cupertino, CA  
VA Greater Los Angeles Healthcare System, North Hills, CA  
VA Sepulveda Ambulatory Care Center, North Hills, CA  
The Center for Sleep and Wake Disorders, Chevy Chase, MD

**Post Doctoral Fellows**

Gordon F. Buchanan, MD, PhD  
Matthew Carter, PhD  
Jaime E. Heiss, PhD  
Roneil Malkani, MD  
Marta Moraleda-Cibrian, MD  
Ingrid L. Nieuwenhuis, PhD  
Ju Lynn Ong, PhD  
Fadi Seif, MD  
Sooyeon Suh, PhD  
Haibo Yuan, MD  

Yale University, New Haven, CT  
Stanford University, Stanford, CA  
SRI International, Menlo Park, CA  
Northwestern University, Chicago, IL  
University of Michigan, Ann Arbor, MI  
University of California, Berkeley, CA  
Singapore  
University Hospitals Case Medical Center, Cleveland, OH  
Stanford University, Redwood City, CA  
The Children’s Hospital of Philadelphia Sleep Center, Philadelphia, PA
Predoctoral Students

- Erika Belanger-Nelson, Hopital du Sacre-Coeur de Montreal, Montreal, QC Canada
- Erla Bjornsdottr, Landspitali, Reykjavik, Iceland
- Ashley G. Bruce, Aubrey, TX
- Natalie Bryant, Bloomington, IL
- Celene H. Chang, Beth Israel Deaconess Medical Center, Boston, MA
- Ivy N. Cheung, Northwestern University, Chicago, IL
- Naima Covassin, University of Padova, Padova, Italy
- Earl C. Crew, Anchorage, AK
- Sharon R. Driscoll, Utica, NY
- Alexandra Duchesne Perusse, Universite Laval, Quebec, QC Canada
- Greg J. Elder, Northumbria Centre for Sleep Research, Newcastle, United Kingdom
- Abigail G. Garrity, University of Michigan, Ann Arbor, MI
- Maya Gibbes, Kingston, RI
- Michael R. Goldstein, University of Wisconsin, Madison, WI
- Kathryn A. Jewett, Washington State University, Spokane, WA
- Salome Kurth, Children’s Hospital, Zurich, Switzerland
- Chanliny Lim, Providence, RI
- Rahim S. Makani, Sugar Land, TX
- Amanda L. McBean, West Virginia University, Morgantown, WV
- Alexandra Morgan, Beth Israel Deaconess Medical Center, Boston, MA
- Caterina Mosti, Sarasota, FL
- Nam D. Nguyen, Beth Israel Deaconess Medical Center, Boston, MA
- Rachel L. Sharman, Northumbria Centre for Sleep Research, New Castle, United Kingdom
- David Sholtes Rush, University Medical Center, Chicago, IL
- Denise M. Werchan, Tucson, AZ
- Allison K. Wilkerson, Keller, TX
- Michael A. Winser, West Virginia University, Morgantown, WV
- J. Marina Yoder, University of Minnesota, Minneapolis, MN
- Xuan Zhou, Centre for Sleep Research, Adelaide, SA Australia

Undergraduate Students

- Omar F. Bayomy, Pullman, WA
- Brittany N. Berry, University of Arkansas, Little Rock, AR
- Danielle L. Dunbrasky, Pullman, WA
- Janine El Helou, Montreal, QC Canada
- Elizabeth A. Harkins, Worcester, MA
- Lauren R. Hill, Flat Rock, MI
- Kimberly A. Honn, Pullman, WA
- Michaela C. Johnson, Worcester, MA
- Alexis Kington, Philadelphia, PA
- Christina N. Kyriakos, College of the Holy Cross, Worcester, MA
- Stephanie B. Lazar, University of Michigan, Ann Arbor, MI
- Kristina M. Lukowski, Providence, RI
- Meagan C. May, Hattiesburg, MS
- Kriste Nemanis, University of Michigan, Ann Arbor, MI
- Priya Puliyampet, New York, NY
- James V. Rutigliano, Saint Joseph's University, Philadelphia, PA
- Elizabeth A. Schopfer, Cherry Hill, NJ
- Thomas J. Shea, SAVAHCS, Tucson, AZ
- Gianne Souza, Washington State University, Spokane, WA