New look & new features!

Navigation buttons throughout the issue help you get to the articles you want to read. Wherever you see this button: ▶️ click it to jump directly to the article it appears next to. This button: ⏹️ will bring you to the table of contents, it appears following every article. Try them out below!

ISSUE HIGHLIGHTS

From The Desk At NIH:
Sleep Research at the NICHD

The National Sleep Research Network

Sleep Research Highlight:
Marital Instability and Infant/Toddler Sleep
SRS BULLETIN

VOLUME 17 | NUMBER 3 | WINTER 2012

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Editor
Helen J. Burgess, PhD
email: helen_j_burgess@rush.edu
Biology Rhythms Research Laboratory
Rush University Medical Center
1645 W. Jackson Boulevard, Suite 425
Chicago, IL 60612

Assistant Editor - Trainee News
Allison Brager, PhD
email: abrager@msm.edu
Morehouse School of Medicine
Dept of Neurobiology
720 Westview Dr.
Atlanta, GA 30310

SRS Leadership

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Phyllis C. Zee, MD, PhD

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Ronald S. Szymusiak, PhD

Past President
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Basic Sleep Research
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Circadian Rhythms Research
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Sleep Disorders Research
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Kathryn Reid, PhD
Research Chair
Andrew Krystal, MD
Trainee Education Advisory Chair
Phillip Gehrman, PhD

Executive Director
Jerome Barrett
Sleep Research Society
2510 North Frontage Road
Darien, IL 60561-1511

SRS Administrative Coordinator
Nicholas Cekosh
email: ncekosh@srsnet.org
Sleep Research Society
2510 North Frontage Road
Darien, IL 60561-1511

layout & Design
Jon Wendling

Contribute to the Future of Sleep & Circadian Research

Your support of the Sleep Research Society Foundation is crucial to fostering the continued growth and development of our field by funding deserving investigators in sleep & circadian research and training young investigators.

Please consider making a donation online and support sleep and circadian research in 2012 and beyond. The next generation of investigators is counting on your support.

DONATE NOW!
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**Sleep 2012**

**BOSTON**

**JUNE 9-13**

26th Annual Meeting of the Associated Professional Sleep Societies, LLC.  
A joint meeting of the American Academy of Sleep Medicine and the Sleep Research Society  
June 9-13, 2012  
John B. Hynes Veterans Memorial Convention Center Boston, MA

NEW FOR 2012!

- **Scientific and** policy focused keynote addresses
- **New** Morning Report: Challenging Cases for the Sleep Clinician session
- **New** Bench to the Bedside sessions
- **Patient-related and** business-related clinical workshops
- **Unopposed** poster viewing time and networking with cash bar in the evenings
- **New** case-report poster presentations for individuals in clinical training programs
- **Updated** postgraduate courses

*Also scheduled are several of the meeting’s most popular sessions from previous years including Meet the Professors, Lunch Debates, Discussion Groups and more!*

Learn more and register at [www.sleepmeeting.org](http://www.sleepmeeting.org).
Dear Colleagues,

As we close out 2011 and move into 2012, I would like to take this opportunity to wish you and your families a joyful holiday season and a happy, healthy and prosperous New Year. The New Year’s holiday is often a time to reflect on past successes and look forward to the opportunities and challenges that await us in the coming year. As the result of your strong commitment to sleep and circadian rhythm research, the SRS has many successes to reflect on and many great opportunities in 2012.

New NIH Sleep Research Plan

In early November, the Department of Health and Human Services in conjunction with the National Institutes of Health released a new NIH Sleep Disorders Research Plan. The plan was the culmination of over a year of work by the National Center on Sleep Disorders Research (NCSDR), the Sleep Disorders Research Advisory Board (SDRAB), and numerous volunteers from the SRS who provided valuable input on various aspects of the new plan, which can be read by clicking here.

Government Relations

In the months since my last President’s message, the SRS Government Relations Committee has been very active. Through visits to Congressional Offices by Dr. Walsh, Chair of the SRS Government Relations Committee, and follow-up work by the SRS lobbyist Dale Dirks of the Health and Medicine Council, the SRS was successful in working with members of Congress to include language related to sleep research in the committee report for the Appropriations Bill that funds the NIH. This language stresses the importance of the new NIH Sleep Research Plan and the role sleep disorders and circadian disturbances have on public health and safety. The Congressional language encourages the NIH to increase collaboration among each Institute and Center (IC) to enhance sleep research throughout the NIH.

Visits to NIH

In October, 14 members of the SRS and I visited 12 Institutes and Centers (NICHD, NCCAM, NIA, NCI, NIDDK, NIAAA, NIDA, NINR, NINDS, NIMH, NIMHD, and NHLBI). During the meetings the SRS members relayed the importance of sleep and circadian research to the mission of each IC, while looking for ways to increase their collaboration with scientists in our field. Additionally, the members of the SRS asked that the representatives from each IC review the new NIH Sleep Research Plan to determine how the plan related to the mission of the IC. I would like to thank Sonia Ancoli-Israel, Ruth Benca, Daniel Buysse, Charles Czeisler, David Dinges, David Kupfer, Emmanuel Mignot, Janet Mullington, Allan Pack, Clifford Saper, Fred Turek, Terri Weaver, James Walsh and Ken Wright for taking time out of their busy schedules to visit the NIH on behalf of the SRS.

New SRS Website

On December 2 the SRS launched a complete overhaul of the society’s website, which was the culmination of work that began early in the year. The Membership and Communications Committee provided valuable input on various novel features of the new website, including the novel Laboratory Directory, which is meant to foster collaboration in the field and provide information on training opportunities. There are several new features on the website:

- Improved, easy-to-use navigation
- Clean, attractive design
- Searchable Sleep Laboratory Directory (members only)
- Digital Dissertation Library for Trainees (members only)
- Improved Job Board - Members can now post for free!
- Online Member Directory (members only)

I encourage you to take advantage of the enhanced website and also provide new entries on the Dissertation Library and Laboratory Directory.

Committee Volunteers Needed

The SRS is currently accepting applications from members for positions on all five SRS standing committees, which do the vast majority of the work within the SRS. For more information on the committees, including an online volunteer interest form, use the following link: www.sleepresearchsociety.org/committees.aspx.

Spring Course on Wake-Promoting Drugs

The SRS will host a course April 11-12, 2012, in Bethesda, Maryland, focusing on The Development of New Wake-Enhancing Drugs. Top experts from across the United States will be presenting at the course as well as top officials from the Food and Drug Administration. This course will be of interest to a broad audience including academic, clinical and industry professionals. For more information on the course, click on the following link: www.sleepresearchsociety.org/event.aspx?id=381

Donation to the SRSF

I am pleased to announce that the SRS has made a contribution of $50,000 to the SRSF to support the J. Christian Gillin, MD, Junior Faculty Research Grant Program and the Elliot D. Weitzman, MD, Research Grant Program. The funds donated by the SRS are proceeds from three “Basic Science of Sleep for the Sleep Specialist” half-day courses the SRS hosted in conjunction with the American Academy of Sleep Medicine’s (AASM) Board Review Course.

Collaborations with Other Societies

As many of you know, the SRS partners with the AASM to present the annual SLEEP meeting, and as mentioned above the SRS partnered with the AASM to provide a basic sleep course

Continued on the following page →
for clinicians taking the ABMS exam to become a board-certified sleep specialist. Although the SLEEP meeting is the most visible joint endeavor between the SRS and AASM, throughout the past year the two organizations have worked together on a number of other initiatives.

**Taskforce on Sleep T32s** – The SRS and AASM have formed a joint Task Force with the goal of doubling the number of T32 training programs in sleep over the next five years. This initiative will help to build the pipeline of individuals in our field for years to come.

**White Paper on Sleep and Health** – The two organizations are currently drafting a paper on the impact of sleep on public health. The purpose of this paper is to be a reference for officials, researchers and clinicians on the need for healthy sleep and the impact that disturbed sleep has on the health of individuals.

**Academic Sleep Centers** – The SRS and AASM will be collaborating on a white paper related to developing Academic Sleep Centers in the United States.

**Input on NIH Initiatives** – The SRS and AASM continue to jointly provide input on various initiatives at NIH. The most recent example of this is comments submitted in response to an RFI on new NIH Common Fund initiatives. In the past the SRS and AASM have also provided input on various HHS health-promotion programs to ensure that sleep was included.

**Future Collaborations** – The SRS will continue to work with the AASM both on scientific and educational endeavors. In the coming years we hope to work with the AASM to develop new courses of interest to individuals in our organizations and also help develop interest in sleep and circadian rhythms research among members of other medical specialties.

**SLEEP 2012**

It is hard to believe that we are quickly gearing up for [SLEEP 2012](#) as the abstract submission deadline has passed and the preliminary program will be out in a matter of weeks. SLEEP 2012 will be held June 9-13 at the John B. Hynes Veterans Memorial Convention Center in Boston. There are several changes to the meeting in 2012 that should be noted. The meeting will feature several new session formats that will cater to the diverse interests of professionals in our field, and the poster sessions will be unopposed so that attendees and poster presenters will not have to miss a scientific session to view or present posters.

The APSS received 1,350 abstracts, which is a record for abstract submissions to the meeting. Additionally, the number of sessions submitted this year far surpassed submissions in the previous two years. The number of sessions and abstracts submitted are often an indicator of interest in the meeting. If the trend holds true, SLEEP 2012 promises to be one of the best meetings yet.

On behalf of the board of directors, I extend a heartfelt thank you to all of our members who volunteered and contributed so much to the organization over the past year, as well as our national office staff, and I look forward to continued success in 2012.

Sincerely,

Phyllis C. Zee, MD, PhD  
SRS President
By Helen J. Burgess, PhD

Welcome to the winter issue of the Sleep Research Society’s Bulletin! The Bulletin has been carefully redesigned to improve readability in the Bulletin’s new online format. Improvements include navigation buttons that allow readers to jump between the table of contents and specific articles, hyperlinks to websites embedded in the pdf file, and the use of color to better highlight these links. Many thanks to Jon Wendling our Layout Production Designer who spearheaded these great changes.

As we look back on 2011, we acknowledge the hard work and important achievements of our Society’s committee members. In this issue we have reports from two SRS committees who have developed innovative strategies to increase membership in our Society and have continued an essential dialogue with NIH leadership. This issue also includes the yearly report from our Secretary-Treasurer detailing the improved financial status of our Society, as well as reports from the Circadian Rhythms and Sleep and Behavior research sections. We also look back on the important World Sleep 2011 meeting held in Kyoto, Japan and consider recent research on the interaction between martial conflict and infant sleep. As in each issue of the Bulletin, we highlight the research and training opportunities available at a particular domestic and an international sleep research laboratory.

We also take a look forward to exciting events planned for 2012. This includes details on new session formats in our Society’s annual SLEEP meeting to be held in Boston June 9-13, 2012. There are also interesting articles in this issue covering the continued development of sleep research networks, the latest news from the desk at NIH (this time from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)), and an interesting piece on how to best develop your elevator pitch.

As I sign off for 2011, I would again like to thank Nick Cekosh, the SRS Coordinator, for his guidance and help in putting together this issue of the Bulletin, and of course I also give thanks to all who contributed to this issue. As always, this Bulletin must serve the needs of all 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 domestic or international laboratory spotlights. Please email me at Helen_J_Burgess@rush.edu with all your ideas and suggestions. Wherever you may be, I wish you good health and time to rest and recharge over this holiday season.
Soon after the conclusion of another successful Trainee Symposia Series (TSS) at the 25th Annual APSS meeting, the Trainee Education Advisory Committee (TEAC) has begun to organize scientific and career development workshops for next year’s series to be held Saturday evening and Sunday morning on June 9-10, 2012 in Boston, MA. In order to ensure that the interests of the SRS trainees are well represented at TSS, TEAC has selected a diverse group of predoctoral, postdoctoral, and clinical trainees from domestic and international research institutions who have graciously volunteered their time to help develop the scientific and professional development program. Members of the TEAC Subcommittee include: Spencer Dawson (Univ Arizona), Andrea Goldstein (Univ Cal, Berkeley), Christina Nash (Drexel Univ), Jacqueline Fairley (Emory Univ), Christa Van Dort (Harvard, Massachusetts General Hospital), Roneil Malkani and Keith Summa (Northwestern Univ), Megan Crawford (Univ Glasgow), Abigail Garrity (Univ Michigan), Stuart Fogel (Univ Montreal), Valentina Gumenyuk (Henry Ford Hospital), Rachel Sharman (Northumbria Univ), Jared Minkel and Marishka Brown (Univ Pennsylvania), and Julie Woosley and Megan Ruiter, the Trainee Member-At-Large Elect (Univ Alabama). Numerous trainees from the SRS community were also in attendance at this year’s SRS-sponsored social (Club Hypnos) and the sleep and circadian rhythms datablitz at the Society for Neuroscience Meeting. At the datablitz, several SRS trainees gave excellent and informative talks on their work presented at the meeting all while adhering to the 1-minute, 1-slide rule of the session!

At last, I would like to emphasize that the Membership and Communications committee has recently provided the Society with online interactive and scientific and professional development resources, including the creation of a Sleep Research Society Facebook page and the addition of sleep and circadian rhythm-related articles on Scholarpedia. I encourage all trainees to take advantage of these resources. I additionally invite all master’s and doctoral students who have recently graduated to submit their theses and dissertations for archiving on the SRS website.

Until Boston, both TEAC and the subcommittee look forward to the finalization of another TSS schedule that, as I remind you, directly reflects trainee feedback received on the TSS program evaluations.

Allison Brager, PhD
Trainee Member-At-Large
I am pleased to take on the responsibilities as Secretary-Treasurer, and grateful to Dr. Ron Szymusiak for the fine job he did in this role prior to turning it over to me in June 2011.

While financial times are difficult around the world, the SRS is fortunate to have held steady in 2011. As of September 30, the unaudited financials for 2011 show that the total assets for the SRS remain unchanged from this time in 2010 at just over $3.017 million. The SRS has experienced a slight increase in expenses and decrease in investment income, which have been offset by significant revenue due to the success of the three half-day courses the Society hosted in conjunction with the AASM Sleep Medicine Board Review Courses in March, August and September 2011. This revenue will allow the SRS Board of Directors to make a donation to the Sleep Research Society Foundation (SRSF) in December.

Our financial viability in the future depends critically on our ability to sustain our growth as a society, which will require the generation of new revenue and additional activities to raise public awareness. Last year, the board recruited the help of a Washington, D.C.-based lobbyist to advocate for our organization. The hiring of an advocate has the long-term potential to promote increased funding opportunities in all areas of basic and clinical sleep research. Thanks largely to the collaborative efforts of lobbyist Dale Dirks and SRS members, the recent U.S. Senate Committee on Appropriations approved a bill that specifically mentioned sleep research and training (see Jim Walsh’s report on activities of the Government Relations Committee). This is an important step in broadening government awareness of the importance of sleep for health and public safety.

Membership dues are a major source of operating revenue for the SRS, and I urge you to renew your SRS membership if you have not yet done so, and to encourage your colleagues to join the SRS. In an effort to aid members in transition from post-doc to full member status, the Board recently voted to maintain membership fees at a reduced rate for the first 2 years as full members. For current post-doc members transitioning to full membership status in 2012, rather than paying $180, the fee will be $120 for the first and $150 for the second year of full membership. This change will begin with the 2013 membership year. We hope that this aids the professional development of our members as they enter the early independent phase of their career trajectories.

The SRS Board of Directors continues to work to secure the financial future of the SRS. In addition to identifying additional savings in the organizational budget, the Board of Directors will continue working to create new sources of revenue. Diversifying the revenue streams and increasing society membership remain high priorities that are vital to the long-term financial health of the SRS.

Janet Mullington, PhD
SRS Secretary/Treasurer
Membership and Communications Committee Report

In June of 2011 the Membership and Communications Committee was pleased to announce the launch of the Sleep Research Society (SRS) page on Facebook. Regular posting are made to the site to update members on upcoming meetings and recent events in sleep research. The committee believes that social networking sites such as facebook present a great opportunity to expand the presence of the SRS beyond the current online website format. At the time of writing this report, 188 people “like” the SRS on Facebook.

The Membership and Communications Committee meets several times a year to review and/or create innovative ways of communicating with members and for recruiting and retaining members to the society. If you have any suggestions or comments that may improve the activities of the committee feel free to contact me (email srsmembership@srsnet.org) and your comments can be raised at committee meetings for discussion.

Don’t forget, the renewal period is currently underway so I encourage all members to renew and to reach out to potential new members to join the society. Members can join or renew their membership online at www.sleepresearchsociety.org.

Kathryn J. Reid, PhD
Chair, Membership Committee

Government Relations Committee Report

SRS’ government relations activities continue to be directed toward raising the level of funding for sleep and circadian research. In 2009 the Board of Directors, under the leadership of Clif Saper, approved heightened government relations initiatives which include: 1) interacting with NIH leadership to explore and promote the role of sleep and circadian research in each institutes’ primary mission, 2) supporting the trans-NIH program in sleep and circadian research which has in the past supported interdisciplinary efforts; and 3) educating Congress to raise the consciousness of individual members about the relevance of sleep issues to national health and safety concerns, as Congressional oversight of the Institutes (and other federal agencies that support sleep and circadian research, such as NASA, the Department of Transportation, the Department of Defense, and many others) is key to influencing activities and initiatives.

On October 4 and 5, 2011, a working group of 15 senior members of the SRS who have had long histories of research funding and good relationships with the leadership of specific NIH institutes, visited the NIH. On behalf of the SRS membership, two to four members of the working group met with leaders from 12 Institutes (NHBLI, NCCAM, NIMH, NINDS, NIAAA, NIA, NINR, NIDA, NIDDK, NCI, NICHD, and NIMHD) to discuss their sleep and circadian research portfolio and key scientific opportunities related to their mission. During the meeting with Drs. Shurin, Kiley and Twery of NHLBI we discussed SRS strategies to support the upcoming release of the revised NIH Sleep Disorders Research Plan, to which dozens of SRS members contributed through interaction with the Sleep Disorders Research Advisory Board. On behalf of the membership, thank you Clif Saper, chair of the NIH Liaison Group, and to the following individuals for participating in the NIH visit activities this year: Sonia Ancoli-Israel, Ruth Benca, Dan Buysse, Charles Czeisler, David Dinges, David Kupfer, Emmanuel Mignot, Janet Mullington, Allan Pack, Clif Saper, Fred Turek, James Walsh, Terri Weaver, Kenneth Wright, and Phyllis Zee. Our appreciation also is extended to SRS coordinator, Nick Cekosh, who effectively scheduled all of these meetings and handled all logistical arrangements.

Throughout the past year, SRS leadership has been increasingly active in our efforts to educate Congressional members and their staffs about the significance of sleep research. This effort is supported by Mr. Dale Dirks and staff of the Health and Medicine Council of Washington, hired by SRS in December of 2010 to represent the interests of our membership to Congress and federal agencies. Since March of this year more than two dozen visits have been made to 20 separate Congressional offices. Most of the Senators and Representatives visited serve on the House/Senate Labor-Health and Human Services-Education Appropriations Subcommittee and/or the full House/Senate Appropriations Committee. As a result of these efforts, the FY12 Senate Labor-Health and Human Services-Education (L-HHHS) Appropriations bill contained the following statements in sections relevant to:

The National Heart, Lung and Blood Institute
Sleep Disorders: “The Committee awaits the imminent release of the National Sleep Disorders Research Plan by the National Center on Sleep Disorders Research, which will articulate priorities and opportunities NIH-wide for addressing the challenge of sleep disorders and circadian disturbances. The Committee is concerned by the growing body of knowledge demonstrating linkages between sleep disorders and a number of health conditions, including obesity, diabetes and cardiovascular disease, and the impact of sleep disturbances on safety at the workplace and in transportation. The Committee recommends more collaboration among ICs regarding sleep research and accelerated efforts in sleep research training.”

Centers for Disease Control and Prevention
Sleep Disorders: “The Committee is pleased with the activities of the National Sleep Awareness Roundtable and encourages CDC to continue to promote awareness of the importance of sleep and sleep disorders.”

These statements reflect the interest in sleep research that can result from direct interaction with legislators and their support staff. We hope that SRS members will become active participants in these efforts by visiting with representatives in their district offices. In the district offices there is a better chance to meet personally with your Representative and Senators, and hopefully develop a relationship which will persist over time. About 11 months remain until the 2012 elections. Please let your representative know that support of biomedical research, in general, and sleep research in particular is important for our Nation’s health.

Continued on the following page →
and safety, and that the biomedical research community employs millions of their constituents.

Other recent activity in Washington included visits to representatives on the Transportation and Infrastructure Committee to draw further attention to the prevalence of drowsy driving and to offer expertise should a hearing on transportation safety be forthcoming. SRS representatives also met in March, 2011, with staff in the Department of Health and Human Services to support the inclusion of sleep health objectives in Healthy People 2020, the Nation’s agenda for improved health for all citizens, and to offer support for further sleep-related activities.

In closing, I encourage all SRS members to respond to Action Notifications issued by the national office related to our Government Relations program. To be successful a sustained effort over many years will be needed to grow federal support for the field. However, as noted by Clif Saper in the Bulletin a few months ago “…I cannot think of any single issue that is so critical to the health of our field.”

James K. Walsh, PhD
Chair, Government Relations Committee
SRS Past President

Renew Your SRS Membership for 2012!

The Sleep Research Society (SRS) is committed to fostering scientific investigation on all aspects of sleep and its disorders, promoting training and education in sleep research, and providing forums for the exchange of knowledge pertaining to sleep.

» Education
» Cutting Edge Information
» Advocacy and Service

» Training
» Members-Only Grant Opportunities
» Members-Only Lab Directory, Dissertation Library and Membership Directory

Renew your membership online at www.sleepresearchsociety.org

For information or questions regarding membership renewal, please contact the SRS membership department at 630-737-9702 or SRSmembership@srsnet.org
Circadian Rhythms Research Section Report

The SRS Circadian Rhythms Research section met in Minneapolis on Monday June 13th, 2011. At the meeting, we discussed the increased number of circadian-related symposia and workshops at the 2011 meeting, and introduced section members who are on SRS committees for 2011-2012.

Circadian Rhythms Research Section members are encouraged to submit symposia and workshop proposals for the 2012 meeting, to volunteer for SRS committee membership, and to contact me with ideas for discussion at next year’s section meeting in Boston. If you’re interested in becoming more involved in the SRS, volunteer now for SRS committee membership for 2012 by going to the SRS website and completing the volunteer form. If you’re an experienced/senior section member who is willing to mentor new section members, please let me know. Finally, please encourage your students and trainees to come to the section meeting with you in 2012.

Respectfully submitted,

Jeanne Duffy, PhD
SRS Circadian Rhythms Research Section Head

Sleep and Behavior Research Section Report

The meeting of the Sleep and Behavior Section at the Minneapolis SLEEP meeting focused on an explanation of how the sections help to determine SRS committee membership and program items. There are five SRS committees - educational program, membership & communication, research, government relations and trainee education advisory (TEAC) that serve as an entry point into the SRS administration, and any member can volunteer to serve on a committee of their choice by completing an application (choose the “Volunteer” option under the Member tab on the SRS website). SRS Sleep and Behavior Section members currently on committees described their experiences at the section meeting. There will also be a new section head for the Behavior Section in 2012. Anyone who is a member of the Sleep and Behavior Section can nominate themselves or another section member (if interested please send me an email at bonnetmichael@yahoo.com). Two members, Mathias Basner MD and Angela Randazzo PhD have volunteered but additional nominations can still be accepted. Thanks to the many members who attended the section meeting this year. Please try to attend the section meeting in Boston.

Michael H. Bonnet, PhD
Section Head
Sleep Research at the NICHD

The Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) is one of the 27 Institutes and Centers that make up the National Institutes of Health (NIH) (www.nichd.nih.gov). The mission of the NICHD is to ensure that every person is born healthy and planned, that women suffer no harmful effects from the reproductive process, that all children have the chance to fulfill their potential to live healthy and productive lives, and to ensure the health, productivity, independence, and well-being of all people through optimal rehabilitation. In pursuit of this mission, the NICHD conducts and supports scientific studies at all stages of human development, from preconception to adulthood, to better understand the health of children, adults, families, and communities. The vast majority of this research is carried out through grants made to scientists in universities and research institutions across America and around the globe.

The NICHD has a long history of supporting scientific research into sleep and its related disorders, beginning with its exploration into the prevention and causes of Sudden Infant Death Syndrome (SIDS). In the early 1990s, the NICHD funded several large-scale studies to investigate the safety and effectiveness of back sleeping as a preventative measure. The convincing results of this research spurred the American Academy of Pediatrics (AAP) to officially recommend that babies sleep on their backs to help reduce the risk of SIDS. In 1994, NICHD joined the AAP and other partners to launch the Back to Sleep campaign to help inform parents and other infant caregivers about the importance of safe sleep practices. While the overall SIDS rate has declined by more than 50 percent since the campaign was launched, African American and Native American infants are still two to three times more likely to die from SIDS than are white babies. In response, special outreach initiatives and materials have been developed by the NICHD to target the African American and Native American communities as a supplement to the general outreach campaign.

To this day, SIDS research remains an important component of the NICHD research portfolio. Current research in this area seeks to elucidate underlying mechanisms and causes of SIDS, identify vulnerable infants, and develop additional prevention strategies. Approaches include basic research with animal models, physiological studies of infants at risk, analyses of tissues from SIDS infants, and research on the incidence risk factors for SIDS, especially among certain portions of the U.S. population.

However, SIDS is not the only sleep-related research area of interest to NICHD. For example, the Institute is currently supporting a number of studies related to sleep in children and adolescents under its Child Development and Behavior Branch:

- One of the most important health risks for obese children is obstructive sleep apnea syndrome (OSAS), which has a prevalence rate of 46-59 percent in obese children, compared to two percent in the general pediatric population. In an NICHD-supported study, researchers will determine the anatomic and functional risk factors related to obesity and OSAS in inner city children aged 8-17 years. They will also determine how adenotonsillectomy and weight changes modify the mechanisms leading to OSAS in obese children.

- In another study, researchers are examining the short and long-term effects of a preventive intervention aimed at improving sleep, increasing physical activity, and enhancing emotion regulation in early adolescents. The researchers hypothesize that this approach will improve these primary outcomes as well as improve social, behavioral, and affective function.

- Chronic pain affects as many as 25 percent of adolescents, and over half of these young people report sleep disturbances. Using subjective survey measures, investigators leading another study will characterize the nature and impact of sleep-wake disturbances, identify behavioral and psychological factors associated with the pain/sleep relationship, and determine trajectories in sleep-wake disturbances over 12 months. This information could lead to the development of new interventions designed to decrease pain and sleep disturbances.

The NICHD’s Intellectual and Developmental Disabilities Branch is interested in research to address sleep disturbances or altered circadian rhythms experienced by people with developmental disabilities, such as Down syndrome, Fragile X syndrome, Rett syndrome, Cornelia de Lange syndrome, and autism spectrum disorder. Little is known about the nature of sleep disturbances or circadian rhythm disruptions that occur in these conditions and the impact they have on the individual and their family members. As a result, the NICHD is supporting studies and programs in an effort to more specifically define the sleep issues associated with developmental conditions:

- One of the Rare Disease Clinical Research Network consortia funded by the NICHD, the Angelman, Rett, and Prader-Willi Syndrome Consortium, conducted a longitudinal study of the natural histories of individuals with Rett syndrome and reported that sleep disruption occurred in over 70 percent of the participants. This consortium recently initiated a survey of sleep behaviors for individuals with these three developmental disorders in comparison to their healthy siblings.

- Estimates of obstructive sleep apnea vary from 55-97 percent in those with Down syndrome, but these individuals often do not respond well to ventilation during sleep. A recently funded fellowship will further explore and document the longitudinal history of sleep apnea in children with Down syndrome who are 3-18 years of age, and attempt to identify predictive factors for obstructive sleep apnea and to develop a screening tool that can be used by physicians before adenotonsillectomy in at-risk individuals.

- In addition, the NICHD is sponsoring three program announcements to encourage applications that study comorbid conditions found in adolescents with intellectual and developmental disabilities, including sleep disorders as a potential topic of study. (See www.nichd.nih.gov/funding/foa/foa.cfm?org_term=HNT53, PA-11-041).

According to the NICHD’s National Center for Medical Rehabilitation Research, research also is needed on the impact

Continued on the following page →
of sleep quality on recovery and rehabilitation in persons with physical and cognitive disorders, such as traumatic brain injury, spinal cord injury, and loss of limbs. The Center is exploring various areas of research, including:

- new treatment protocols to account for and minimize sleep disturbances where sleep quality is known to affect recovery and rehabilitation;
- possible correlations between sleep disturbances and outcomes of rehabilitation protocols and quality of life measures;
- improved rehabilitation treatment protocols resulting from knowledge gained about the interaction of sleep disturbance and a specific medical condition; and
- the effects of sleep quality on current standard of care treatments or research protocols (e.g. new exercise therapies, compliance to exercise and diet recommendations, cognitive functioning, and quality of life).

The research highlighted in this brief article represents only a sample of the sleep areas currently of interest; there are many additional NICHD-sponsored studies that include components of sleep, and the Institute often collaborates with other NIH Institutes and Centers when the science cuts across their missions. The National Center on Sleep Disorders Research within the National Heart, Lung, and Blood Institute (NHLBI) leads coordination of NIH-supported sleep research, training, and education. However, the NICHD also encourages researchers interested in sleep and its related disorders to apply for NIH grants and training programs. For more information on funding opportunities, grant application forms, instructions and policies, please visit www.grants.nih.gov, and to identify possible training opportunities, please see www.nichd.nih.gov/funding/training_career/by_levelorstage.cfm.

Lauren Gavin  
Presidential Management Fellow

Lisa Kaeser, JD  
Office of Program and Public Liaison  
Eunice Kennedy Shriver National Institute of Child Health and Human Development  
National Institutes of Health
World Sleep Federation 2011 Kyoto Meeting a Great Success

The 6th Quadrennial Congress of the World Sleep Federation (WSF) held in Kyoto, Japan, October 16-20, 2011, was by any measure a tremendous success. Held in conjunction with the 36th Annual Meeting of the Japanese Society of Sleep Research (JSSR), the combined meetings had a total attendance of 3344, including 2496 sleep scientists and scientist-practitioners from 37 countries. The success of the WSF Congress was made all the sweeter as it occurred despite the tremendous tragedy of the Great East Japan Earthquake of March 11th. Participation at the meeting took on special meaning for many as the attendees experienced not only a superb scientific congress but also the knowledge that they were providing a strong show of support to the Congress’ host country and scientific society in its recovery from a devastating loss of life, property and infrastructure.

The WSF Congress program was a very full one; marked by two Presidential, one Opening and thirteen Plenary lectures spaced throughout the rich five day program. Other program offerings included; numerous Plenary, Abstract and Industry symposia, a series of educational lectures, a series of lectures offered by the WSF’s Sleep Disordered Breathing, Insomnia and Genetics in Sleep Special Interest Groups, and a WSF Trainee Program and symposium. A final highlight of the conference was the poster sessions, where a total of 729 posters were displayed and open for discussion over four days.

The Kyoto International Conference Center provided an excellent venue in support of the meetings. Architecturally striking, it offered state of the art meeting rooms, a generous Event Hall for spacious poster sessions and exhibitor booths, and a magnificent natural setting including terraced gardens and ponds set in the hills of northern Kyoto. The Local Organizing Committee ensured that the program was equally rich in social opportunities, both in terms of providing room throughout the program to see a bit of Kyoto, with its astonishing wealth of World Heritage sites, and in offering opening and closing ceremonies and a Congress Party that made full use of the aforementioned gardens to stunning effect with a nighttime fashion show followed by more traditional offerings of a wonderful buffet dinner that ended with a cask of sake drunk from cedar boxes and the opportunity to be photographed with geishas.

The WSF’s International Organizing and Program Committees and the Local Organizing, Program and related committees under the able leadership of Dr. Ron Gurnstein, WSF President, Dr. Masaka Okawa, Chair of the Local Organizing Committee and President of the Asian Sleep Research Society, and Dr. Tetsuo Shimizu, President of the JSSR and Vice-Chair of the Local Organizing Committee all did themselves proud. The Kyoto meeting has maintained the high scientific and social standard that has been the mark of previous WSF Quadrennial Congresses. The Congress also saw a changing of the guard in WSF leadership, with Dr. Gurnstein passing the baton to Dr. Clete Kushida, who will shepherd the WSF for the next four years. The WSF (www.wfsrsms.org/index.aspx), which is a federation of the American Academy of Sleep Medicine, the Asian Sleep Research Society, the Australasian Sleep Association, the Canadian Sleep Society, the European Sleep Research Society, the Federation of Latin American Sleep Societies, and the Sleep Research Society, also determined that its 2015, seventh quadrennial, congress will be hosted by the European Sleep Research Society in a yet to be determined location. What is certain is that it will undoubtedly live up to the scientific and social standards of its antecedents. Stay tuned and be ready to mark you calendars.

Michael V. Vitiello, PhD
Sleep Research Society Representative to the WSF Governing Council
During the AGM at the 5th Conference of the Canadian Sleep Society (CSS) held in Quebec City, September 10-14 2011, the CSS honored various members of the society. These included winners of the different student competitions - the Abstract Award, Outstanding Student (based on a first-author paper) and the CSS/CIHR-ICRH Travel Awards. The Broughton Young Investigator Award winner was Dr. Robyn Stremler. The CSS was also proud to acknowledge the lifetime contribution to the field of sleep research and education of two Distinguished Scientist Awardees – Dr Meir Kryger and Dr Ben Rusak. The CSS wishes to again sincerely congratulate all 2011 recipients!
A Model for Promoting Cross-Institutional and Trans-Disciplinary Collaborations to Advance Sleep Medicine and Population Health

Background

Enormous advances in biomedical science provide unprecedented opportunities to address critical clinical and population health questions. The rigor, sophistication and scale of the research needed for both discovery and translation often require trans-disciplinary collaboration and access to highly sophisticated biomedical and informatics technologies and to large samples or populations. Since sleep medicine is a relatively recently established discipline, organized research initiatives supporting large multicenter studies and large-scale genotyping are much less developed than for other areas such as cardiovascular medicine, lung disease, and psychiatric disorders, which have benefited from significant federal and industry investments in networks and other infrastructure support.

Recognizing the advantages of cross-institutional collaboration and transdisciplinary research in sleep medicine, in 2008 investigators from the University of Pittsburgh spearheaded a “grass-roots” initiative that resulted in the creation of the National Sleep Research Network (SRN). Joined by leaders from 6 other academic institutions (Case Western Reserve University, Harvard University, Mayo Clinic, Stanford University, University of Pennsylvania, and University of Wisconsin-Madison), a vision was articulated for a network which would promote sustainable multi-institutional collaborations in clinical and translational sleep research, and thus address significant public health and mechanistic questions that require large-scale, coordinated, and multidisciplinary approaches. A priority also was placed on initiatives to attract and support the next generation of sleep medicine investigators. Given the overlap of these goals with those of the National Center for Research Resources (NCRR) Clinical and Translational Science Application (CTSA) program, the NCRR awarded the University of Pittsburgh a 5 year R13 Conference grant (R13 RR028183) to support an annual meeting of sleep researchers from CTSA-funded institutions.

The network is currently comprised of researchers representing 39 of the 60 CTSA institutions across the United States. The Steering Committee was expanded to include a pediatrician (University of Chicago) and an ex officio representative from the Academic Alliance for Sleep Research. Four working groups were assembled to help stimulate work in the areas of: Research to Inform Public Policy, Genetics and Genomics; Clinical Trials and Outcomes; and Pediatric Research. Several demonstration projects were developed which have been submitted to NIH for consideration of funding, including:

- A multi-center clinical trial testing of limiting resident work hours on ICU patient safety that seeks to test the effectiveness of reducing work hours by introducing a sleep and circadian science-based schedule.
- A multisite training grant in genetic/genomic approaches to sleep and its disorders.
- A study of the genetic determinants of variations in the EEG during sleep and wake cycles.
- A multisite clinical trial comparing zolpidem to cognitive behavioral therapy for treatment of insomnia in older adults.
- A feasibility study to assess the study design features needed for successfully conducting a randomized clinical trial evaluating CPAP use in pregnancy.

2011 SRN Conference

The most recent conference took place in Bethesda, MD on October 5-6, 2011 and was attended by 61 participants representing 43 institutions, officials from the National Institutes of Health (NIH), and representatives from partnering professional organizations including the Sleep Research Society (SRS) and the American Academy of Sleep Medicine (AASM). With funding from the AASM, 10 early stage investigators were able to participate in the SRN’s Diversity program. Each presented a research poster and was matched with a senior mentor who mentored them and provided input into his or her work, as well as career development advice.

Presentations at the 2011 conference included:

- Approaches for further improving CTSA communications and interactions, and for identifying ways to better leverage resources to support sleep research and training
- Perspectives from the NIH on the NCRR CTSA programs and NHLBI-funded networks
- An update on the NCSDR Sleep Research Strategic Plan
- Perspectives from the AASM and SRS on funding and other collaborative opportunities
- Updates on an initiative for a multicenter T32 (training grant) in sleep genetics
- Updates on an initiative to develop a National Sleep Research Resource (sleep informatics repository of large cohort studies)

In addition to these presentations, several interactive sessions were held, including:

- A demonstration of a NCRR-supported informatics platform (Physio-MIMI) for supporting multicenter sleep research informatics needs
- A panel discussion on existing databases amenable for collaborative sleep research
- A panel discussion on approaches for locally leveraging CTSA resources to support sleep research

Small groups also met and reported to the larger group. New projects discussed included a pediatric narcolepsy project and a heart failure clinical trial.

To enhance communications and to help participants learn how to leverage CTSA resources to promote local as well as multicenter sleep research, a request was made for volunteers to participate in two new SRN Committees:

Communications Committee, to:
- Identify ways to better bring people together and identify resources
- Pass along opportunities through their CTSA representative to make other investigators aware

Resource Development Committee, to:
- Identify national/local CTSA resources that could better support sleep research

Continued on the following page →
Identify mechanisms for further building infrastructure for sleep research

A position on the SRN Steering Committee will be opening as Dr. Allan Pack rotates off this committee. Nominations were solicited for a new member.

In Summary

The SRN represents an organized thematic special interests groups of the national CTSA initiative. Born as a “grass roots” response to a pressing need and desire for cross-institutional collaboration, the SRN provides an annual forum for sharing information and for catalyzing research in core priority areas. The network is dedicated to the training of the next generation of sleep researchers. In 2010, it developed a training award program to support the attendance of early stage investigators aimed at highlighting the work of researchers from historically under-represented groups (e.g. cultural or ethnic minorities, women, etc.) and providing this group an opportunity to network with senior scientists, government officials, and other young researchers. This trainee program was expanded in 2011 with support by AASM and the University of Pittsburgh, allowing 10 early stage investigators from under-represented backgrounds to attend the SRN 2011 annual meeting.

The SRN’s initial development phase focused on developing and implementing mechanisms to facilitate the exchange of information among participants, including identification of research resources as a starting point for future network projects and activities. In the second phase, network leadership utilized the small working groups to identify, prioritize and develop demonstration projects amenable to multicenter collaboration. It prioritized research in the core areas of genetics, clinical trials and outcomes, pediatric research, and public policy issues. The SRN will continue to seek funding for active projects in these areas, and such funding will serve as benchmarks for the success of the SRN.

The October 2011 meeting provided new opportunities for participants to interact on panels and to identify resources to enhance collaboration. In its next phases, the SRN seeks to further enhance communications and to better leverage resources to support sleep research through encouraging greater involvement of SRN participants in working groups and in the new Communication and Resource Committees. Important goals include the further identification or development of shared resources in informatics, biological specimen repositories and assays, data repositories and research tool kits. New multicenter initiatives identified by the broad SRN constituency will be encouraged.

Finally, despite the excitement and activity generated through support of an annual meeting, the SRN will need to identify opportunities to support its own infrastructure, expanding beyond basic secretariat functions and an annual meeting to support pilot studies and possibly, infrastructure for coordinating collaborative research. These challenges occur in a time of limited resources but rich in exciting scientific opportunities unimaginable just a few years ago. It will be critical to demonstrate the efficiency, effectiveness and impact of the SRN in catalyzing high impact research that otherwise would not be done, or be done less efficiently or robustly. SRS members—whether or not from a CTSA institution—are encouraged to join in these efforts or otherwise provide input. Further information can be obtained at: www.sleepresearchnetwork.com.

Respectfully,

Susan Redline, MD, MPH
Chair, Steering Committee
CTSA Sleep Research Network
Developing and Mastering Your Elevator Pitch

In our hyperactive digital world, full of iPhones, iPads, Blackberries, Facebook, Twitter, etc., it is easy to forget the utility of effective face-to-face communication. The proliferation of handheld devices and simplicity of electronic communication have made it ever easier to avoid opportunities to engage others in direct conversation. In the business world, a critical skill impressed upon students and entrepreneurs is the “elevator pitch”—a short description of yourself and your product/service that can be understood by your grandmother and completed during an elevator ride. This is a skill that trainees and young investigators in the life sciences should also master, as it may provide an avenue to link your name and face with a future mentor or the best inroads to future collaborations.

While the literature on elevator pitches is inevitably geared towards the business world, there are a few key principles that are applicable and can be used as a framework in crafting your own research-oriented pitch. First and foremost, you must know your audience. This is critical regardless of whether you are soliciting investors for a new business venture, introducing your product to a new market or explaining to senior faculty how your experience and expertise would add unrivaled value to his or her research program. Given the precious little time afforded to an elevator pitch, you must be sensible in how you shape the pitch to your audience. Chris O’Leary, author of Elevator Pitch Essentials, lists “Customized” as one of his nine Cs of an effective elevator pitch, noting that an effective pitch “addresses the specific interests and concerns of the audience.” For example, you do not want to waste time discussing background information that your target is already familiar with. Instead, you need to stimulate their interest by introducing a provocative concept or idea based on the intersection of mutual research pursuits and goals.

By taking this approach you will differentiate yourself. What is unique about you, your background, your idea and/or your research? Why should your audience remember you? A successful elevator pitch will highlight the particular qualities that separate you from the rest of the crowd; helping you establish a connection with the person you are talking to. As Marie Dellamy states in her article, “How to Write an Effective Elevator Pitch,” you must “describe your competitive advantage. What is it that sets you, your company or your product apart from all the rest?” Unless you articulate this distinction, you risk being forgotten once your audience gets out of the elevator and walks away.

In addition to formulating the content of the pitch, you need to pay attention to its style and delivery to maximize the impact of your message. A number of sources provide different strategies of ensuring effective elevator pitch presentation. My reading of the various suggestions (see Recommended Resources) can be distilled down to three points: be clear, be concise and be confident. An elevator pitch is not the place to get bogged down with technical details or obscure jargon. Maintain a broad perspective and focus on the conceptual ideas you want to get across in the pitch—which you can then use to springboard into a more detailed and nuanced conversation if your audience is receptive. Be brief: assume that the person you are talking to is looking for a way out of the conversation, and design your pitch to succinctly introduce yourself and your research without demanding excessive time or attention. And, although you can certainly use these ideas over email, remember that the elevator pitch is designed for a face-to-face encounter. This is your opportunity to make an impression and establish a connection with your audience. Be confident in yourself and the work you put into creating a pitch that cleverly summarizes your interests and research background. Finally, establish and maintain eye contact, speak clearly, smile and conclude by thanking your audience for their time and consideration.

As with most things in life, the best way to create and deliver a successful elevator pitch is to practice. Give your pitch to colleagues, classmates, mentors, friends and relatives. Perhaps even dedicate a lab meeting to working on and practicing your pitch; the experience as well as the immediate feedback and constructive criticism will help you strengthen your pitch and gain confidence. A useful exercise may be the interactive online Elevator Pitch Builder (www.alumni.hbs.edu/careers/pitch), which was developed by Harvard Business School. However, be forewarned that this site is heavily geared to the business pitch, so take any suggestions, especially the buzz words, with a grain of salt. Indeed, you want to avoid being too glib—in science, substance is absolutely critical and you need to genuinely represent your work without exaggerating or being superfluous.

With practice, you can develop a set of pitch templates that can be rapidly employed in a wide variety of settings. The interpersonal and communication skills that go into making and giving an elevator pitch will undoubtedly be improved with practice and, just as importantly, will reap additional benefits more broadly for any career in science or medicine. Thus, you should get started today so that you’ll always be ready—after all, you never know who is going to join you in that elevator….

Keith C. Summa
MD/PhD Candidate, Laboratory of Fred W. Turek
Northwestern University Feinberg School of Medicine

Recommended resources:
1. Elevator Pitch Essentials. Chris O’Leary. See also: www.elevatorpitchessentials.com
2. Give Your Elevator Pitch a Lift! Lorraine Howell.
3. How to Get Your Point Across in 30 Seconds or Less. Milo O. Frank.

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Predicting Infant and Toddler Sleep Problems: Associations with Marital Instability


Sleep problems, including bedtime resistance and difficulties initiating and maintaining sleep, affect between 34% and 45% of children age 6 years and younger.1-2 Without intervention, sleep problems that emerge during early childhood tend to persist3-4 and predict problems across multiple developmental domains, including early brain development.5-7 Thus, early identification of the processes that contribute to child sleep problems is critical.

Relationship instability between parents is one aspect of the family environment that could influence child sleep. Research indicates that marital problems can have negative effects on family and child well-being.8-11 Investigators have recently focused on how family distress may impact the functioning of stress-responsive brain systems involved in sleep regulation.7,12-13 Children who experience the environment as predictable and free of potential threats are better able to achieve deep sleep.14 Marital problems may be perceived by children as a threat to the family system and could interfere with children feeling safe at bedtime and throughout the night. In support of this hypothesis, increases in marital conflict have been shown to predict concurrent and subsequent child sleep problems.5,13,15

We extended prior work in three ways. First, the majority of previous research has been conducted during middle childhood.5,13,15 Child sleep problems and parenting stress are likely to be highest during infancy and early childhood16-18 when children’s sleep patterns undergo marked change.16-21 Thus, we examined associations when children were 9 and 18 months of age. Second, there is a dearth of research which directly addresses reciprocal associations between the marital relationship and child sleep problems during early childhood. Previous studies have examined changes in the marital relationship during the transition to parenthood22-23 or the relationship between child sleep problems and marital satisfaction in clinical samples,24-25 but data in non-clinical samples are lacking. Given that child sleep problems predict increases in parent reports of fatigue, depression, and parenting stress,26-28 child sleep problems in early childhood could potentially contribute to marital instability. We employed a longitudinal design to examine the reciprocal and cross-lagged relationships between marital instability and child sleep problems. Third, prior research on family influences on child sleep has typically been conducted in biologically-related families. This introduces potential confounds that may arise from parents and children sharing genes that may affect the magnitude of associations between parent and child behaviors. In the present study, we used an adoption design in which children were adopted at birth by genetically unrelated parents, thus allowing for the examination of associations between family processes and child sleep problems without the potential influence of shared genes between parents and children.

We first examined whether marital instability predicted child sleep problems or vice versa over time. Controlling for initial levels of each variable, this approach allows examination of the bidirectional and reciprocal interplay between marital instability and child sleep problems across time. The data were derived from interviews with 357 adoptive mothers and fathers who participated in Cohort 1 of the Early Growth and Development Study (EGDS), an ongoing multisite study of 561 adoptive families and birth parents.29-30 The children were 9 and 18 months old, respectively, at the Time 1 (T1) and Time 2 (T2) assessments. Details on the EGDS study recruitment procedures, sample, and assessment methods can be found in Leve et al. (2007).29

At T1 and T2, both parents independently completed the Marital Instability Index,31 which assesses behaviors such as contemplating divorce, and the Bedtime Resistance subscale from the Sleep Habits Questionnaire,32 which assesses the child’s difficulty initiating or maintaining sleep. Analyses proceeded in two stages. First, we specified cross-lagged and reciprocal effects models for the combined sample of parents and children to assess the link between marital instability and child bedtime resistance over time. Second, we repeated these analyses separately for mothers and fathers to examine if differences existed in the pattern of results based on parent gender.

Both marital instability and child sleep problems showed a high degree of stability ($r^2$’s ranged from .45–.65). As shown...
in Figure 1, we found that marital instability at age 9 months predicted increased child sleep problems at age 18 months. Conversely, child sleep problems at 9 months did not predict marital instability at 18 months. There were no significant differences between boys and girls in the pattern of effects observed. Moreover, the relationship between marital instability and child sleep problems remained even after taking difficult child temperament, parent anxiety levels, and birth order into account.

Our results identify marital instability as a risk factor in the emergence of child sleep problems early in development and inform theory by demonstrating that this association is significant even when parents and children do not share genes. Future studies should assess child sleep via actigraphy in addition to parent report and examine associations in more demographically diverse samples. In addition, our results cannot speak to other mechanisms whereby genetic influences might affect family systems. For example, genetically-influenced child characteristics might elicit specific kinds of reactions from parents.

Although we did not examine this possibility directly, our findings are consistent with the hypothesis that marital instability may environmentally impact child sleep through its influence on children’s felt security in the family system. Given the lack of previous research, we limited our focus to examining direct associations between marital instability and child sleep problems; however, there is evidence for parenting-mediated effects on sleep problems in older children. Negative thoughts and emotions associated with marital instability may spill over into parents’ interactions with their children, perhaps leading to less sensitive or more hostile parent-child interactions. Further research is needed to examine whether the association between marital instability and child sleep problems is direct, indirect via more proximal parenting behaviors, or a combination of both processes.

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References

Anne M. Mannerling
Oregon Social Learning Center, Eugene, OR

Gordon T. Harold
University of Leicester, Leicester, United Kingdom

Leslie D. Leve
Oregon Social Learning Center, Eugene, OR

Katherine H. Shelton
Cardiff University, Wales, United Kingdom

Daniel S. Shaw
University of Pittsburgh, Pittsburgh, PA

Rand D. Conger
University of California at Davis, Davis, CA

Jenae M. Neiderhiser
The Pennsylvania State University, University Park, PA

Laura V. Scaramella
University of New Orleans, New Orleans, LA

David Reiss
Yale Child Study Center, New Haven, CT

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NIH Releases Updated Sleep Disorders Research Plan

The National Institutes of Health has released the 2011 NIH Sleep Disorders Research Plan. The plan identifies research opportunities to be pursued over the next three to five years in order to spur new approaches to the prevention and treatment of sleep disorders. Recommended research initiatives include looking at the connection between sleep and circadian systems, studying the influence of genetic and environmental factors that could influence a person’s sleep health, and conducting more comparative effectiveness trials to improve treatments for sleep and circadian disorders. This is the first update to the plan since 2003.

Call for Committee Volunteers

The Sleep Research Society invites members to volunteer to serve on a standing committee. Committee members provide an invaluable service to the organization and members by contributing to initiatives and projects that are critical to the continued development of the field. Committee volunteers also gain professional enrichment through the diverse activities of a committee.

The five standing committees engage in diverse activities such as organizing the Trainee Symposia Series, strengthening membership within the organization and developing educational materials and programs. To view the mandate for each committee, visit the Committee Page on the SRS Website at: www.sleepresearchsociety.org/Committees.aspx.

Please note that service on a committee is a three-year appointment. All new committee terms take effect in June at SLEEP 2012, the 26th Annual Meeting of the Associated Professional Sleep Societies, which will be held in Boston, Massachusetts.

Members interested in serving on one of the SRS standing committees should complete the new online Committee Volunteer Interest Form, which is available at www.sleepresearchsociety.org/volunteer.aspx.

The SRS has a conflict of interest policy with which all committee members must comply. Interested applicants should review the Conflict of Interest Policy and complete the Conflict of Interest Disclosure Form. These documents are available at www.sleepresearchsociety.org/PDFs/COIDisclosurePolicy.pdf.

In addition to submitting the online Committee Volunteer Interest Form, please also complete the Conflict of Interest Disclosure Form and provide a CV summary (no longer than two pages) to Nick Cekosh via e-mail at ncekosh@srsnet.org or fax to (630) 737-9790 by February 17, 2012.

Materials may also be sent via postal mail to:
Sleep Research Society
Attn: Nick Cekosh
2510 North Frontage Road
Darien, IL 60561

Call for Applications: SRS Young Investigator Award

The Sleep Research Society Young Investigator Award recognizes an outstanding research effort by new investigators in the field of sleep research. The basis for evaluation of candidates is a single publication in a peer-reviewed journal. The candidate should be the first author, and the article must be published or officially accepted for publication by the application deadline. On the application deadline, the candidate must be within seven years of obtaining a terminal degree. Exceptions to this criterion will be considered for those applicants who feel that extenuating circumstances warrant such consideration. A letter detailing these considerations must be included with the application.

The award includes a plaque and a travel honorarium to be applied toward travel to SLEEP 2012. The plaque will be presented during a ceremony at SLEEP 2012.

To apply for the SRS Young Investigator Award, candidates must submit the following: a copy of their paper; a current CV; documentation of the date of receipt of terminal degree; and, if applicable, a letter outlining extenuating circumstances of why they should be considered for the award if they receive their terminal degree more than 7 years prior to the deadline for the award application. These documents should be submitted in a single PDF or MS Word file to Nick Cekosh, SRS Coordinator, at ncekosh@srsnet.org. If a paper is in press at the time of application, a copy of the written notification of the paper’s acceptance for publication must also be included.

Applicants must provide the name of a senior investigator who will provide a letter of recommendation. The senior investigator does not need to be an author on the paper or abstract, but should be familiar with the candidate’s role on the research project. The candidate is responsible for ensuring that the letter of recommendation from the senior investigator arrives by the application deadline. Additionally, a candidate must be a member in good standing of the SRS or must include a completed application for membership and fee with the award application. Repeat applications from unsuccessful applicants from previous years are allowed.

Candidates are welcome to apply for both the Young Investigator Award and the Sleep Research Society Trainee Award Based on Scientific Merit, but in the event the candidate receives the Young Investigator Award, he or she will receive only this award. Multiple Young Investigator awards may be recognized, dependent on the quality of applications.

The deadline for receipt of the Young Investigator Award is Friday, February 10, 2012.

SLEEP 2012 to Feature New Session Formats

New this year are the following session proposal types:

- **Bench to Bedside Integrated Sessions:** These sessions will present attendees with the latest advances in translational science and clinical applications on a specific topic.
- **Business-related Clinical Workshops:** The topics covered will focus on the business aspects of running a sleep center, including economic, legal, political and social aspects.

Also new this year, the Morning Report Case Session. During this session, an expert panel will review and discuss challenging cases submitted in advance by SLEEP 2012 attendees.

Get complete details on SLEEP 2012 meeting’s website at www.sleepmeeting.org. SLEEP 2012 will be held June 9-13, 2012, at the John B. Hynes Veterans Memorial Convention Center in Boston, Mass.

**SRS Undergraduate Trainee Travel Award Offered for SLEEP 2012**

In an effort to reach out to outstanding Undergraduate Train-
NEWS & ANNOUNCEMENTS

First Time Trainee Travel Awards offered for SLEEP 2012

The SRS will be offering travel awards to help offset travel expenses for SLEEP 2012 to SRS Trainees who have not previously attended a SLEEP Annual Meeting of the APSS. Go to www.sleepresearchsociety.org/articles.aspx?id=2790 for more details on how to apply for this award.

Renew Your SRS Membership for 2012

You can now renew your Sleep Research Society (SRS) 2012 membership online! Renew today to continue receiving a complimentary subscription to SLEEP, opportunities for education and training, members only discounts on professional resources, national representation, and much more!

To renew your membership, log in or register an account on the SRS website and submit an online payment. Renewal invoices were mailed to members in late October and are currently available for download online, giving you the option of renewing via mail or fax.

Please contact the SRS membership department with questions regarding your membership at 630-737-9756 or SRSMembership@srsnet.org.

Maternal Nutrition and Pre-pregnancy Obesity: Effects on Mothers, Infants and Children (R01)

A Funding Opportunity Announcement (FOA) issued by the NIH’s National Institute of Nursing Research (NINR) calls for Research Project grant (R01) applications for Maternal Nutrition and Pre-pregnancy Obesity: Effects on Mothers, Infants and Children. The FOA will facilitate research focused on improving health outcomes for women, infants and children. The FOA states that this can include interventions that target modifiable factors in the maternal pre- and post-natal environment which may modulate genetic susceptibility to obesity, such as sleep habits. For more information see the complete RFA by clicking here.

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.

Unfunded NIH Grant?

The National Health Council (NHC) announced a site that will help unfunded NIH applicants find potential funders. Called “Health Research Funding.Org,” the database will allow unfunded NIH applicants to enter some basic information about their unfunded NIH grant applications in order to make that application information available to other potential funding organizations.

Initially, members of the NHC will have access to the database to be able to peruse ideas for potential funding. These members include more than 40 patient advocacy organization representing a diverse group of potential funders who are looking to take advantage of the tremendous rigor of the NIH peer review process to efficiently identify fundable proposals. Ultimately, the NHC plans to expand access to their database to include other types of funders as well.

Ways of Managing NIH Resources

A new analysis/presentation labeled “Ways of Managing NIH Resources” is available on this website:
http://report.nih.gov/budget_and_spending

The presentation features “interactive” figures!
has been minimally leveraged in the service of developing highly efficacious and effective treatments.

We have a 15-year track record in treatment development research including the NIH-funded treatment studies we are currently running for: teens with depression and insomnia; teens with an anxiety disorder and insomnia; adults with bipolar disorder and sleep disturbance; and adults with chronic insomnia.

Our approach to treatment development is to use a multi-systems and mechanisms-focused framework in which (a) cognitive, affective, biological, behavioral and developmental contributors are emphasized as the source for deriving novel interventions and (b) intervention research is used to develop hypotheses about and/or confirm mechanisms.

Most of the treatments we have/are developed/ing focus on inspiring behavior change relating to sleep, diet, exercise and emotion regulation. As such, we have a deep interest in the growing science of behavior change. http://obssr.od.nih.gov/scientific_areas/health_behaviour/behaviour_changes/index.aspx

To read more take a look at:


2. Sleep and Comorbidity.

Chronic insomnia
a) We are interested in uncovering the processes that contribute to the cause and/or maintenance of chronic insomnia. In particular we are interested in the interaction between cognitive processes (e.g., worry/rumination, attention, memory, reasoning), emotional processes (measured by psychophysiology, FACS coding, subjective ratings) and biological processes (measured by ERP and fMRI and analysis of DNA).

b) We are conducting an NIH-funded randomized controlled trial comparing three psychological treatments for chronic insomnia. This is a two-site study conducted in collaboration with Dr. Charles Morin at the University of Laval.

c) We collaborate with Dr. Matthew Walker’s lab (Go Bears!) on studies that include detailed analyses of the sleep EEG of insomnia patients as well as the impact of insomnia on daytime processing of emotions.

To read more take a look at:


Sleep disturbance across other psychiatric disorders: A transdiagnostic approach

Working across a range of psychiatric disorders, we have been struck by the similarities in the processes that maintain different disorders. Although the dominant approach taken has been ‘disorder focused’ (i.e., researchers tending to specialize in one disorder, seeking to systematically illuminate its phenomenology, cause, maintenance, and treatment), we are interested in the viability and benefits of shifting the perspective away from a
‘disorder focus’ and toward elucidating the common mechanisms across disorders. Among the advantages of taking an across-disorder approach is that it may help explain the high rates of comorbidity observed among patients with psychiatric disorders. Our focus so far has been on showing that cognitive and behavioral processes of thought (worry/rumination), attention, memory, reasoning and avoidance are transdiagnostic, but it is possible that the same approach could be taken for emotional and biological processes.

We are particularly interested in sleep disturbance as a transdiagnostic process. The rationale is that (a) chronic insomnia is a symptom of most disorders and (b) longitudinal epidemiological studies indicate that chronic insomnia is a risk factor for the development of several psychiatric disorders.

To read more take a look at:

Our group has begun to test the relevance of research on chronic insomnia to other psychiatric disorders known to be characterized by sleep disturbance. One current focus is on bipolar disorder.

Sleep in bipolar disorder
Sleep disturbance is a prominent feature of bipolar disorder. It escalates just before an episode and worsens during an episode. Moreover, there is empirical evidence indicating that sleep disturbance may be one causal pathway that leads to relapse in bipolar disorder. Our ongoing research aims to (1) identify the mechanisms that cause sleep to be so pervasively disturbed in those affected by bipolar disorder, (2) identify the mechanisms that cause sleep disturbance to trigger an episode and (3) develop interventions that reduce sleep disturbance in individuals affected by bipolar disorder. We have funding from NIMH to study sleep in bipolar disorder, collaborating with Drs. Dan Buysse (Pittsburgh), Tom Neylan (UCSF), Descartes Li (USCF) and Terence Ketter (Stanford).

To read more take a look at:

Sleep and health
The links between sleep, exercise, diet and overall health are increasingly core interests, particularly among teens but also for adults with psychiatric disorders. To give just one example, it has been surprising for the field to realize that the suffering associated with bipolar disorder is not limited to the psychiatric symptoms. Bipolar disorder is associated with a wide range of medical problems with the most common being cardiovascular disease, diabetes mellitus and thyroid disease (Krishnan, 2005). The etiology of these concerning conditions will likely be complex and multi-factorial. Side effects of medications are one possible cause of the observed health effects. But there are likely to be many other contributors. We are interested in the possibility that sleep disturbance may be one additional, but currently unrecognized, contributor given it’s known role in cardiovascular, metabolic, and immune system functioning. Our ongoing research investigates how sleep disturbance, namely insomnia, relates to biological (autonomic, immune) and behavioral (diet, physical activity, substance use) mechanisms underpinning poor health outcomes.

To read more take a look at:

Sleep disturbance across the age range
Sleep across other phases of the lifespan is fascinating.

a. Infancy. In collaboration with the Oxford Parents Project (PI: Dr. Alan Stein) based in the Department of Psychiatry at the University of Oxford, we are investigating sleep disturbance in infancy as an index of developing emotion regulation skill.

b. Adolescence. We are conducting investigations to identify the impact of sleep disturbance in adolescence. We have been developing interventions for adolescents with insomnia that is comorbid with an anxiety disorder and/or depression and for teens who are ‘owls’ (go to bed late and wake up late). This arm of our work has included an NIH funded two-site study conducted in collaboration with Dr. Greg Clark at Kaiser, Oregon.

To read more take a look at:

Granting Agencies: NIMH, NARSAD.

Training Opportunities: Dr. Harvey is a core faculty member for the UC Berkeley APA-accredited training program in Clinical Psychology. We host and supervise trainees in Behavioral Sleep Medicine and treatment development at the undergraduate, graduate and post-doctoral levels. Several sleep-related courses are offered at the undergraduate and graduate levels each year.

Methodology and Techniques: Actigraphy, polysomnography, DLMO and the BIOPAC MP150 system to record 10 specific measures that have been selected to provide a broad index of five systems especially important to emotional responding. The purpose-built sleep research laboratory is comprised of a six-room suite located on the ground floor of Tolman Hall, which houses the Department of Psychology. We conduct treatment within a two-room suite located in the Psychology Clinic wing on the second floor.
Background and History

The Molecular Sleep Physiology Laboratory is part of the Center for Advanced Research in Sleep Medicine (CARM) of the Hôpital du Sacré-Coeur de Montréal, which is located at the extreme North side of the beautiful city of Montréal in the province of Québec (Canada). The CARM was founded by the pioneering sleep researcher and clinician Dr. Jacques Montplaisir more than 30 years ago. The CARM is currently composed of 11 researchers each having a unique expertise in sleep research, of about 15 research assistants, and of more than 35 research trainees. Among this group, Dr. Valérie Mongrain’s specific competencies concern the molecular genetics of sleep and circadian rhythms. After performing a PhD thesis on interindividual differences in sleep regulation in humans (supervised by Dr. Marie Dumont [Université de Montréal]), and two postdoctoral formations on the molecular regulation of sleep and circadian rhythms (supervised by Drs. Nicolas Cermakian [McGill University] and Paul Franken [University of Lausanne, Switzerland]), Dr. Mongrain established the Molecular Sleep Physiology Lab of the CARM in February 2010. The Lab is more precisely located in the Biomedicine Center of the Hôpital du Sacré-Coeur de Montréal. The Lab uses electrophysiology, behavioral methodologies and molecular biology to understand the links between sleep regulation and neuronal functioning.

Current Research Focus

1. Evaluate the role of synaptic adhesion molecules in the recovery process of sleep regulation.

Co-Investigators: Drs. Paul Franken (University of Lausanne), Julie Carrier (Université de Montréal), and Marcos G. Frank (University of Pennsylvania).

Students involved: Janine El Helou (MSc candidate in biomedical sciences), Marlène Freyburger (PhD candidate in neurological sciences)

In modern societies, there is unfortunately a drastic rise of chronic sleep loss, as exemplified by reduced sleep duration in children and adolescents, and an increasing prevalence of insomnia and night work. However, the mechanisms underlying its adverse effects on mental health, vigilance, learning, and mood are still poorly understood. It is known that sleepiness increases with the duration of wakefulness. Moreover, the longer the duration of wakefulness, the more intense/deep the subsequent sleep. Recent work supports the involvement of synapses, the functional unit of communication between neuronal cells, in this process. Adhesion molecules are elements that bind to each other and act as physical anchor of the synapse. Importantly, these proteins control synaptic strength and many of these are required for plasticity. The main research hypothesis of the lab posits that specific synaptic adhesion molecules are underlying both the deleterious effects of sleep loss and the regulation of sleep intensity.

In the first part of our research program, financed by CIHR and NSERC, the contribution of synaptic adhesion molecules to sleep regulation is investigated. First, markers of sleep intensity (i.e. EEG spectral activity, slow wave properties and gene expression) are evaluated in mice where specific adhesion molecules are absent (KO) or decreased (siRNA). Second, the effect of the duration of time awake on adhesion molecules will be examined by measuring gene (i.e. qPCR, in situ hybridization) and protein (i.e. Western blot, IHC) expression and function (co-IP) in the mouse brain after sleep deprivation of various durations. Lastly, because
we observed that the expression of adhesion molecules could be modulated by specific transcription factors, we will identify the functional DNA sequences for their transcription within their gene by in vivo (in mice) and in vitro methodologies.

Some preliminary results of this program were presented at the SLEEP2011 meeting in Minneapolis and have been awarded during the joint WASM/CSS2011 meeting in Québec city (Québec, Canada). These results tend to indicate that sleep loss decreases the mRNA and protein expression of one family of synaptic adhesion molecules involved in glutamatergic transmission, and that mice lacking a specific adhesion molecule from this family are impaired in their capacity to maintain wakefulness.

2. Understand the involvement of synaptic adhesion molecules in the molecular wiring of the circadian timing system.

Co-Investigator: Dr. Guy Doucet (Université de Montréal)
Student involved: Marlène Freyburger (PhD candidate in neurological sciences)

According to current models, sleep is orchestrated by two mechanisms: a circadian process and a homeostatic process. In mammals, the circadian process originates from the biological clock located in the suprachiasmatic nuclei (SCN) of the hypothalamus and generates an about 24-h rhythm in various physiological functions as the rhythmic changes in body temperature and alertness, among many others. The homeostatic process is this abovementioned hourglass mechanism regulating sleep intensity according to the duration and quality of prior wakefulness (i.e. the sleep recovery process). The functioning of the circadian timing system also seems to depend on rhythmic changes in neuronal communication properties. Moreover, these plastic neuronal changes seem to reflect at the level of neuro-oglial structural plasticity in the SCN.

Consequently, a second part of the research program specifically aims at understanding the role of synaptic adhesion molecules in the regulation of endogenous circadian rhythms (NSERC grant). First, the properties of the circadian timing system (e.g. the synchronization with the light/dark cycle of the environment, the length of the endogenous circadian period in constant darkness and the phase-shift response to light stimulus) will be evaluated in mice in which synaptic molecules are downregulated using RNA interference as well as in mice lacking specific synaptic adhesion molecules. The rhythmic expression of clock genes in the SCN will also be quantified in the same mice, where a blunted rhythm is expected both at the behavioral and at the molecular levels. In a parallel project, we hypothesized that the role of synaptic adhesion molecules in circadian rhythms would be reflected at the level of structural neuro-oglial plasticity in the SCN where adhesion molecules would be required for the daily retraction of astrocytic elongations covering neurons and for the consequent formation of new synapses (CIHR grant submitted). These results will advance our understanding of sleep physiology and its dependency upon neuronal functions.

3. Investigate the impact of sleep on the neuronal plasticity following traumatic brain injury.

Co-Investigators: Drs. Nadia Gosselin and Éric Beaumont (Université de Montréal).

Student involved: Pierre-Olivier Gaudreault (BSc candidate in psychology)

Traumatic brain injury (TBI) is the major cause of both mortality and invalidity in young adults. On the one hand, main hallmarks of these injuries reside in sleep/wake disturbances and fatigue. On the other hand, TBI patients are often provided with wake-promoting agents in acute care units to prevent sleep at inappropriate times. Even if the role of sleep in brain plasticity is increasingly recognized, its role in the plasticity mechanisms occurring following TBI remains elusive.

Therefore, lastly, a highly promising developing program in the lab regards the study of the involvement of sleep in the plasticity observed following TBI. This represents an exclusive area of research in animals with powerful clinical implications. After having developed a suitable mouse model for TBI, we are currently assessing how a brain trauma affects sleep in mice and what is the effect of sleep deprivation on the recovery of brain plasticity markers.

Technical Capabilities: The laboratory is currently equipped with the latest technology for rodent electrophysiology and telemetry which allow continuous recording of EEG/EMG (Lamont amplifiers, Natus Harmonie Software), and of locomotor activity and body temperature (Data Science International) simultaneously for 12 animals. Two behavioral recording rooms each of about 100 sq ft with controlled light and temperature are adjacent to a control room (~50 sq ft) to permit an optimal scheduling of sleep and circadian experiments. This part of the lab is also equipped with behavioral apparatus for assessment of both social interaction and the neurological severity scale. The lab also shares common animal facility installations of the Biomedicine Center of the Hôpital du Sacré-Cœur de Montréal notably including a surgery room (used to perform EEG/EMG and/or cannula implantation surgeries, traumatic brain injuries, etc.), an anesthesia room, and housing rooms for breeding and colony maintenance. A shared technical team for animal health also contributes to the success of the lab.

The lab also importantly benefits from a wet lab area (~200 sq ft) efficiently organized for a wide range of molecular biology protocols (e.g. genotyping, quantification of mRNA and protein expression, assessment of protein-protein and protein-DNA interactions). Accordingly, this part of the lab accommodates horizontal and vertical electrophoresis systems, thermal cycler, thermomixer, rocking platform, tissue homogenizer, sonicator, centrifuges, freezers, etc. Again, common equipments (e.g. real-time cycler, cryostat, fluorescent microscope, autolab) and facilities (e.g. culture room, cold room, radioactivity room, chemical room) from the Biomedicine Center are also required for our research and conveniently shared between research groups.

Training Opportunities: Local and international motivated students are welcome to apply for either an undergraduate trainee or a graduate student position and join our young and dynamic team. Graduate students have the possibility of enrolling in MSc and PhD programs in Neurological Sciences or Biomedical Sciences (option psychiatric sciences) at the Université de Montréal (www.umontreal.ca).

Continued on the following page →
Representative Publications


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).

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  Forenap Pharma, Rouffach, France
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  George Washington University, Washington, DC
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  University at Buffalo, Buffalo, NY
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  German Aerospace Center, Cologne, Germany
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  DPT Physiological Sciences, Pisa, Italy
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- **Megan E. Knoch, PhD**
  Indiana University of Pennsylvania, Indiana, PA
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  National Institute of Mental Health, Kodaira, Tokyo Japan
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  Medical College of Wisconsin, Milwaukee, WI
- **Ken Solt, MD**
  Massachusetts General Hospital, Boston, MA
- **Aleksandar Videnovic, MD**
  Northwestern University, Chicago, IL

**ASSOCIATE MEMBERS**

- **Victor Altunin**
  Moscow, Russia
- **Lauren Pierpoint**
  University of Colorado, Boulder, CO

**POST DOCTORAL FELLOWS**

- **Mironova E. Ceide, MD**
  Brooklyn, NY
- **Massimiliano de Zambotti, PhD**
  University of Padova, Padova, Italy
- **Heather L. Gamble, PhD**
  Saint Jude Children’s Research Hospital, Memphis, TN
- **Robert Havekes, PhD**
  University of Pennsylvania, Philadelphia, PA
- **Valerie Hinard, PhD**
  University of Lausanne, Lausanne, Switzerland
- **Camilla M. Hoyos**
  Forrestville, NSW Australia
- **Akifumi Kishi, PhD**
  Jersey City, NJ
- **Michael L. Lee**
  Brigham and Women’s Hospital, Harvard Medical School, Boston, MA
- **Yanping Li, PhD**
  Brookline, MA
- **Amy E. Lowery, PhD**
  Memorial Sloan-Kettering Cancer Center, New York, NY
- **Mohsin Maqbool, MD, MBBS**
  Wayne State University, Detroit, MI
- **Stacey L. Simon, PhD**
  Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
- **Rodolfo Soca, MD**
  Henry Ford Hospital, Detroit, MI
- **Andrew Westwood, MD**
  Boston University School of Medicine, Boston, MA

**PREDOCTORAL STUDENTS**

- **Lameese D. Akacem**
  University of Colorado at Boulder, Boulder, CO
- **Devon M. Ambler**
  National Jewish Health, Denver, CO
- **Arindam Bagchi, MBBS**
  SUNY Downstate Medical Center, Brooklyn, NY
- **Amy T. Bascom**
  John D Dingell VA Medical Center, Detroit, MI
- **Nabanita Bhunia, MBBS**
  SUNY Downstate Medical Center, New York, NY
- **Andree-Anne Bouvette-Turcot**
  MAVAN Project, Verdun, QC Canada
- **Lenette C. Bradley**
  Gillin Sleep and Chronomedicine Research Center, La Jolla, CA
- **Chantalle L. Briggs**
  Dalhousie University, Halifax, NS Canada
- **Tijana Ceklic**
  Sherbrooke, QC Canada
- **Julia Chan**
  The University of Melbourne, Melbourne, VIC Australia
- **Marjolaine Chicoine**
  Hospital Riviere-des-Prairies, Montreal, QC Canada
- **Ella A. Cooper**
  Brighton and Sussex Medical School, Falmer, East Sussex United Kingdom
- **Charles B. Corbit**
  Carneys Point, NJ
- **Tony Cunningham**
  University of Notre Dame, Notre Dame, IN
- **Danielle M. Cusmano**
  University of Maryland, Baltimore, MD

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**NEW MEMBERS**

**PREDOCTORAL STUDENTS (continued)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
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<tbody>
<tr>
<td>Francesco N. Dandekar</td>
<td>La Jolla, CA</td>
</tr>
<tr>
<td>Michael R. Dolsen</td>
<td>Saline, MI</td>
</tr>
<tr>
<td>Claire L. Dowdle</td>
<td>San Francisco, CA</td>
</tr>
<tr>
<td>Catherine Duclos</td>
<td>Hopital du Sacre-Coeur de Montreal, Montreal, QC Canada</td>
</tr>
<tr>
<td>Justin Duncan</td>
<td>Gatineau, QC Canada</td>
</tr>
<tr>
<td>Katia Gagnon</td>
<td>Hopital du Sacre-Coeur de Montreal, Montreal, QC Canada</td>
</tr>
<tr>
<td>Iuliana Hartescu</td>
<td>Loughborough University, Loughborough, United Kingdom</td>
</tr>
<tr>
<td>Kevin G. Kan</td>
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<td>Bournemouth, United Kingdom</td>
</tr>
<tr>
<td>Dana M. Kraus</td>
<td>Brigham and Women’s Hospital, Boston, MA</td>
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<tr>
<td>Angela M. Lachowsk</td>
<td>Toronto, ON Canada</td>
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<tr>
<td>Leanna C. Lubinski</td>
<td>University of Pittsburgh, Pittsburgh, PA</td>
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<td>Annemarie I. Luik</td>
<td>Erasmus University Medical Center, Rotterdam, Netherlands</td>
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<td>Flushing, NY</td>
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<td>Stephen M. Mattingly</td>
<td>South Bend, IN</td>
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<tr>
<td>Michel O. Melancon</td>
<td>University Institute of Geriatrics of Sherbrooke, Sherbrooke, QC Canada</td>
</tr>
<tr>
<td>Rebecca S. Nader</td>
<td>Peterborough, ON Canada</td>
</tr>
<tr>
<td>Donguk Nam</td>
<td>Brooklyn Health Disparities Center, Brooklyn, NY</td>
</tr>
<tr>
<td>Lauren C. Nisbet</td>
<td>Croydon North, VIC Australia</td>
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<tr>
<td>Christine C. Norton</td>
<td>University of Michigan, Ann Arbor, MI</td>
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<td>Radhika M. Reddy</td>
<td>Houston, TX</td>
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<tr>
<td>Katharine C. Reynolds</td>
<td>University of Houston, Houston, TX</td>
</tr>
<tr>
<td>Alicia J. Roth</td>
<td>University of Florida, Gainesville, FL</td>
</tr>
<tr>
<td>Ashley N. Seiger</td>
<td>Brigham and Women’s Hospital, Boston, MA</td>
</tr>
<tr>
<td>Charlie T. Simpkin</td>
<td>University of Colorado at Bouler, Boulder, CO</td>
</tr>
<tr>
<td>Andrea M. Spaeth</td>
<td>Philadelphia, PA</td>
</tr>
<tr>
<td>Kelly L. Speiran</td>
<td>Columbia, SC</td>
</tr>
<tr>
<td>Laura D. Strauss</td>
<td>VA San Diego Healthcare System, San Diego, CA</td>
</tr>
<tr>
<td>Bronwyn M. Sweeney</td>
<td>Lyall Bay, Wellington New Zealand</td>
</tr>
<tr>
<td>Ivan Vargas</td>
<td>University of Michigan, Ann Arbor, MI</td>
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<tr>
<td>Karlyn E. Vatthauer</td>
<td>Gainesville, FL</td>
</tr>
<tr>
<td>Jennifer L. Vriend</td>
<td>Ottawa, ON Canada</td>
</tr>
<tr>
<td>Elizabeth A. Waldron</td>
<td>Philadelphia, PA</td>
</tr>
</tbody>
</table>

**UNDERGRADUATE STUDENTS**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Julie Avanzino</td>
<td>University of California at San Diego, La Jolla, CA</td>
</tr>
<tr>
<td>Janeeka B. Benoit</td>
<td>Brooklyn, NY</td>
</tr>
<tr>
<td>Eneida Beqiri</td>
<td>Philadelphia, PA</td>
</tr>
<tr>
<td>Andrew S. Carbungco</td>
<td>San Diego, CA</td>
</tr>
<tr>
<td>Kate E. Cavanaugh</td>
<td>Glendale, WI</td>
</tr>
<tr>
<td>Hannah J. Craven</td>
<td>University of Colorado, Boulder, CO</td>
</tr>
<tr>
<td>William A. Filbey</td>
<td>University of Michigan, Ann Arbor, MI</td>
</tr>
<tr>
<td>Pierre-Olivier Gaudreault</td>
<td>Baie-Saint-Paul, QC Canada</td>
</tr>
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<td>Jack C. Hodges</td>
<td>Spokane, WA</td>
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<tr>
<td>Elizabeth Mavromatis</td>
<td>Philadelphia, PA</td>
</tr>
<tr>
<td>Emese Nemeth</td>
<td>Brookline, MA</td>
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<tr>
<td>Vitalis C. Osuji</td>
<td>Beth Israel Deaconess Medical Center, Boston, MA</td>
</tr>
<tr>
<td>Anna Shatsman</td>
<td>University of Michigan, Ann Arbor, MI</td>
</tr>
<tr>
<td>Carly D. Stone</td>
<td>Allegan, MI</td>
</tr>
<tr>
<td>Kristina Zottola</td>
<td>Blairsville, PA</td>
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