



# SRS BULLETIN

A PUBLICATION OF THE SLEEP RESEARCH SOCIETY, USA

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# SRS BULLETIN

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# Message from the President's

This year has been a very active and exciting one for the SRS. In 2004, the Board of Directors and committee members dedicated their meetings to accomplishing the many goals identified in the strategic plan. One of the most exciting accomplishments came in November when our goal of attaining 1,000 members in 2004 was met - and surpassed. The Board established the Sleep Research Society Foundation that will administer the trainee travel awards as well as the newly established J. Christian Gillin, MD and the Elliott D. Weitzman, MD Research Grants. Additionally, the Sleep Research Society created the Basics of Sleep Guide; offered the Primer of Sleep Research, the first educational course separate from the APSS; developed a new award honoring education and mentorship contributions to the field of sleep; and oversaw the complete re-design of the SRS Web site. All I can say is whew!

One of the most widely talked-about goals was to grow our membership and attain 1,000 members in 2004. The membership committee began their recruitment campaign shortly after the 2004 APSS Annual Meeting and worked hard all year toward this goal, accomplishing it in November. The recruiting efforts the members of this committee put forth deserve accolades.

The SRS has a history and reputation of helping our trainees. But the SRS board felt it was particularly important to have something to offer our full members. Toward this end, the Sleep Research Society Foundation was recently established to administer grants. The two grants originally developed by the Research Committee are the J. Christian Gillin, MD and Elliott D. Weitzman, MD Research grants. Both are intended for early career and experienced career investigators; up to three, one-year grants will be awarded in each category; each grant carries a maximum of \$20,000.

The J. Christian Gillin, MD Research grant was developed to support beginning investigators in sleep research for the purpose of gathering pilot data to be used for future grant applications.

The Elliott D. Weitzman, MD Research grant was developed for investigators to gather additional pilot data for NIH or other federal grants that are scored but not funded (the SRS assumes that such grants have been reviewed by NIH). Grants that will be considered are those that have a sound plan but were noted for inadequate preliminary data or evidence of feasibility. The inaugural grant recipients will be announced in September.

Offering professional development was another top initiative identified during the strategic planning process. The Society was successful with its first-ever Primer of Sleep Research course, held this February in Miami. Michael Vitiello, PhD, course director, created an informative program and enlisted impressive speakers who provided insight on a number of relevant techniques and areas of sleep research. Course attendees consisted of SRS members, American Academy of Sleep Medicine members, and a number of industry representative as well. Information on the second annual Primer of Sleep Research will be forthcoming.

A second career development course was created this year by Janet Mullington, PhD and the Educational Programs Committee. Establishing a Career in Sleep Research and Developing Leadership Skills, a full-day course offered on Sunday, June 19 at the APSS Annual Meeting. The course, intended for early career investigators, focuses on providing useful information in navigating the road to building a strong and secure laboratory while also providing a forum for sharing knowledge, experience and vision to grow and develop in the sleep research field.

In an effort to provide more services to our members and diversify Society revenues, The Basics of Sleep Guide was developed. Mark Opp, PhD, Editor, and several Board members serving as Associate Editors and authors, put in a great deal of time and effort to make the first edition of the Guide available at the APSS Annual Meeting in Denver. The Basics of Sleep Guide is intended to serve as a study guide for those taking

the ABSM exam, offering an overview of sleep medicine, recommended readings, and notes pages to help you prepare for the exam.

There are so many outstanding researchers in our field, and for them to get where they are, they had to have wonderful educators and mentors. The Board reinstated the Awards Committee and changed them with developing additional awards to honor excellence in the field of sleep. This year, the Outstanding Educator Award was bestowed on a very worthy individual responsible for training and mentoring so many students who have gone on to be great contributors to the field as well as active members of the Sleep Research Society. Mary Carskadon, PhD was awarded the inaugural Outstanding Educator Award during the General Membership Meeting on Tuesday, June 21<sup>st</sup>.

Finally, the SRS Web site was launched in April with a new look. The Executive and Communications committees along with the Board of Directors, reviewed, made recommendations, and tested the site. The end result is what you have experienced over the last month. The site offers several new features, including: a discussion forum page, enhanced member resources, and additional search options. I encourage you to visit the site at [www.sleepresearchsociety.org](http://www.sleepresearchsociety.org).

This program year is coming to a close quickly and as I look back to the many goals I set for myself and my tenure as President, I feel a sense of accomplishment. The individuals on each committee, section and the Board of Directors have worked tirelessly this past year on moving the strategic plan goals forward. I hope each of them feels the same sense of pride I do when looking back on this past year; we accomplished great things together.

As a member of the Sleep Research Society, thank you for becoming one of 1,000. Our goal of attaining 1,000 members could not have been met without each and every one of you.



Sonia Ancoli-Israel, PhD  
*Past President*

# 2005 Elections

## Elections held for 2005-2006 Board of Directors

The Sleep Research Society held its elections in April to determine leadership for the 2005-2006 program year. The SRS requires strong leaders to continue to move the Society forward and implement programs that will benefit the members.

The Board of Directors is comprised of four Officers, seven Directors-at-Large and the Trainee Member-at-Large-Elect.

*Charles Czeisler, PhD, MD* will assume the President role as *Sonia Ancoli-Israel, PhD* becomes the Past President. *Mark Opp, PhD* was elected as President-Elect. Dr. Opp has served on the Board as the Secretary/Treasurer for the past three years and brings experience and knowledge of Board initiatives to his new role. *Thomas Kilduff, PhD* was elected to a three-year term as the Secretary/Treasurer. Dr. Kilduff has also served on the Board as a Director-at-Large and also has intimate understating of the Board of Directors and the Society.

Newly elected Directors-at-Large are *Sharon Keenan, PhD* and *James Walsh, PhD*; both will serve a three-year term on the Board. *Ronald Chervin, MS, MD* was appointed to a one-year term as Director-at-Large, filling the vacancy created by Dr. Kilduff's election to Secretary/Treasurer.

Rotating off the Board of Directors this year are *Roseanne Armitage, PhD, Anne Germain, PhD, Barbara Jones, PhD* and *Emmanuel Mignot, MD, PhD*; their hard work and dedication to the SRS is greatly appreciated.

*Fiona Baker, PhD* was recommended by the student members of the SRS for the Trainee Member-at-Large, a one-year term. In this capacity, Dr. Baker will represent the interests of the student members of the Society. She is a non-voting member of the Board and replaces *Anne Germain, PhD*. *Sabra Abbott* was elected as the Trainee Member at Large-Elect. She will serve on TEAC this year and is responsible for spearheading the Trainee Day planning efforts for 2006. Ms. Abbott will then rotate onto the Board for the 2006 program year and serve a one-year term as the Trainee Member-at-Large.

## Elections Held for 2005-2006 Section Heads

The Sleep Research Society Sections provide members the opportunity to establish an affiliation with colleagues who share common interests and ideas. Section Heads are elected annually by the members of their respective section, and elections were held concurrently with the election of the Board of Directors.

*Robert Greene, MD, PhD* was re-elected as the Basic Sleep Section Head. Dr. Greene's research interests are molecular, cell and systems neurobiology of central nervous system state control and function.

*Helen Burgess, PhD* was re-elected as the Circadian Rhythms Section Head. Dr. Burgess' research focus has been on the basic properties of human circadian rhythms with applications to jet lag and shift work.

*Daniel Taylor, PhD* was elected Section Head for Sleep & Behavior. Dr. Taylor previously served as the Trainee Member-at-Large. His main areas of interest are the epidemiology of sleep and sleep disorders, and cognitive behavioral therapy of primary and secondary insomnia.

*Christopher Drake, PhD* was elected Section Head for Sleep Disorders. Dr. Drake previously served on the Membership Committee. His research interests are in clinical psychobiology.

## EDITOR'S Column

by *Kenneth P. Wright Jr., PhD.*

This issue of the *Bulletin* announces the election results for the 2005-2006 Board of Directors and the Section Heads, and new members to our society. Readers of the *Bulletin* will notice the continuation of the new format for the laboratory spotlight section. Each issue will include descriptions of an international and a domestic laboratory so that SRS members can learn more about the research activities of their colleagues. Also included in this issue is a Message from the SRS Membership Committee, reports on the success of trainee day and the First Primer of Sleep Research course. Lastly, I provide an editorial on Research Funding.

# news Briefs

## *New SRS Coordinator Announced*

The SRS is pleased to announce John Slater as the new SRS Coordinator. John comes to the SRS from the American Academy of Sleep Medicine where he spent three years as the Accreditation Coordinator. He assumes this new role on July 1, 2005. John can be reached via e-mail at [jslater@srsnet.org](mailto:jslater@srsnet.org) and welcomes your questions and comments.

## *New Web Site Launched*

The SRS launched its expanded and redesigned Web site, which will serve as an invaluable resource for members. The Web site is now easier to navigate and features current updates and information to keep members abreast of SRS programs, events and initiatives. The interactive site also has several new features, including: a discussion forum page, enhanced member resources, and additional search options. Visit the site at [www.sleepresearchsociety.org](http://www.sleepresearchsociety.org).




## *Fund Raising*

Pictured above is a successful fund-raising event for SRS on the occasion of Sleep Awareness Week by Dick Bootzin's Sleep Research Laboratory at the University of Arizona. Shown (from left to right) are trainees *Keith Fridel, Matthew Douglas, and Jenne Breslin.*

SLEEP RESEARCH SOCIETY

# BASICS OF SLEEP GUIDE



S R S  
BASICS OF SLEEP  
GUIDE

The **SRS Basics of Sleep Guide**, a brand new resource brought to you by the Sleep Research Society, is intended to serve as a study aid for sleep science, providing information about aspects of sleep while indicating potential areas in which the reader may be deficient in knowledge of sleep.

**Topics, such as:**

- sleep across the life cycle
- sleep deprivation/restriction
- sleep physiology

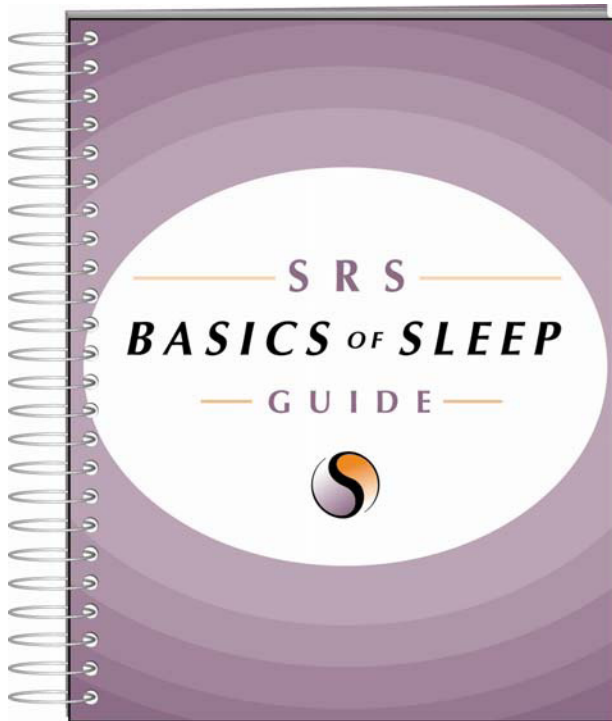
were selected for inclusion in the Guide on the basis of those historically represented in specialty board examinations. Each chapter contains Key Concepts and a Suggested Bibliography providing additional source material. This **NEW** sleep science guide is sure to prepare you for basic sleep science components found on specialty examinations or is a useful tool for the student of sleep research.

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# Basics of Sleep Guide Order Form



The SRS Basics of Sleep Guide is intended to serve as a study aid for sleep science, providing information about aspects of sleep while indicating potential areas in which the reader may be deficient in knowledge of sleep. Topics, such as sleep across the life cycle, sleep deprivation/restriction, and sleep physiology, were selected for inclusion in the Guide on the basis of those historically represented in specialty board examinations. Each chapter contains Key Concepts and a Suggested Bibliography providing additional source material. The goal of the editorial board was to facilitate preparation for the basic sleep science components of specialty examinations.

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# Sleep Research Society Foundation

*Quality research sets a solid foundation for sound medical practice. Your support of the Sleep Research Society Foundation not only advances the immediate understanding of the processes of sleep, but it also makes a dramatic impact upon the future of sleep medicine and research. You can make a difference by making a contribution to the Foundation today.*

**THE SLEEP RESEARCH SOCIETY FOUNDATION** was established by the SRS in 2005 to train and develop researchers and to be a proponent of research in the field of sleep. The foundation supports scientific investigations that shed light on the processes of sleep, provide insight into the workings of disorders of sleep and daytime alertness, and increase the knowledge of how these disorders can be prevented and treated.

## Your Support is Needed !

Your contribution allows the Sleep Research Society Foundation to extend its reach and influence, training more investigators and funding even more research in the years to come. By supporting sleep research, you are playing a vital role in advancing a comprehensive understanding of sleep. This leads to more effective medical care and improved health and quality of life for both sleep disorders patients and the general public.

The Sleep Research Society Foundation is a not-for-profit 501(c)(3) charitable/scientific organization and, as such, your contribution should be fully tax deductible. Please consult your tax advisor for additional information.

You can also contribute to the Foundation by purchasing SRS apparel and merchandise at [www.sleepresearchsociety.org](http://www.sleepresearchsociety.org). All proceeds from the sale of these items benefit the Foundation.

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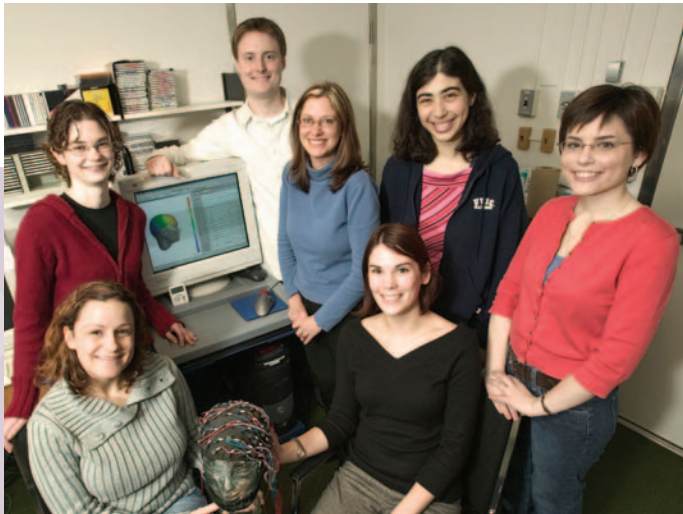
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# international Laboratory Spotlight



**Name of Laboratory:** Sleep Research Laboratory  
**Institution:** Brock University, Psychology Department  
**Address:** St. Catharines, Ontario, Canada, L2S 1A1  
**Phone:** 905-688-5550, ext 3795  
**Fax:** 905-688-6922  
**Website:** [www.brocku.ca/sleeplab/home.htm](http://www.brocku.ca/sleeplab/home.htm)

## Laboratory Director:

Kimberly A. Cote, PhD, Associate Professor of Psychology and Neuroscience, Brock University. [kcote@brocku.ca](mailto:kcote@brocku.ca)

## Current Trainees and Staff:

Adam Aubin (Third-year undergraduate student in Neuroscience); Meghan Baker (research assistant); Brielle Cuthbert (Second-year undergraduate student in Neuroscience); Rona Kertez (First-year master's degree student in Psychology); Cassandra Killman (Fourth-year undergraduate student in Psychology); Catherine Milner (First-year PhD student in Psychology); Brian Smith (First-year master's degree student in Psychology).

## History & Description of Laboratory

Brock University is situated along the Niagara escarpment, overlooking the city of St. Catharines, Canada. The Sleep Research Laboratory was founded by Dr. Robert Ogilvie in 1971, and is now directed by one of his former students, Dr. Kimberly Cote. The research facility includes 2 bedrooms off of a main sleep recording room, a washroom, a computer analysis room and a kitchen/lounge area. In 2001, an infrastructure grant from the Canadian Foundation for Innovation (CFI) facilitated the acquisition of state-of-the-art equipment for multiple channel recording of EEG and event-related potentials (ERPs) in sleep and wake states. More recently, as a result of a collaborative grant from CFI for a new Psychology building at Brock University, the Sleep Research Laboratory will soon be expanding to include: 4 bedrooms (each with the capability to record 64-channel EEG), larger washroom/shower facilities, isolated computer stations for performance assessment, and additional office space. These facilities are designed specifically for multiple-channel recording of electrophysiological data and performance assessment in humans.

At the Sleep Research Laboratory, we typically conduct basic research studies involving healthy, young adults; however, applied studies and collaborations with Sleep Disorders Clinics

are also on going. Dr. Ogilvie has established a tradition of excellence in sleep research at Brock University through his contributions to areas such as sleep onset/offset, insomnia, the psychophysiology of sleep, and behavioral sleep/wake monitoring. Dr. Kimberly Cote joined the lab in the summer of 2000 just prior to Dr. Ogilvie's retirement.

Dr. Cote's general area of research is sleep, performance, and cognition. The broad purpose of this program of research is to better understand the bi-directional relationship between sleep and waking cognitive function. To investigate the relationship between sleep and daytime functioning, we typically employ multiple measures, including EEG, ERPs and performance assessment batteries. Current projects include diverse areas such as the impact of sleep deprivation and restriction; the functional role of spindles and k-complexes; memory consolidation in sleep; the benefits of napping in young and older adults; sleep and waking function in individuals who have sustained a head injury; the physiological and behavioural processes associated with falling asleep and staying asleep in both good and poor sleepers; and the impact of sleep habits on academic performance in first-year university students.

## Research Focus

### 1. *The impact of sleep and sleep disruption on waking brain function and performance.*

The major area of study in the laboratory at the moment involves examining the impact of varying levels of sleep loss (eg, cumulative sleep restriction) and sleep disruption (eg, sleep fragmentation) on waking brain function and performance. Recently, we reported (2) that sleep fragmentation over two consecutive nights led to sustained reductions in CNS arousal level and impaired attention (especially early encoding processes). This work was important because it revealed:

1. There is impairment in brain functioning following *subtle* levels of sleep disruption;
2. Electrophysiological measures had greater sensitivity than more widely used behavioural measures; and
3. Short-term sleep fragmentation, without sleep restriction, impairs arousal and attention.

In addition, as pointed out in the accompanying commentary by Dr. Colrain (*Sleep*, 26, 650-1), the combination of EEG and ERPs measures is an excellent strategy to measure CNS function during daytime sleepiness.

In a subsequent study, we examined brain function and performance during sleep restriction (33% reduction of usual sleep time for 1 week), compared to a baseline and recovery week (*Sleep*, 26(Suppl.), A179). Consistent with the well-documented changes in neurobehavioural performance reported during sleep restriction, our data showed corresponding reductions in CNS arousal level. Interestingly, the EEG deficits were apparent at frontal-central sites after 1-3 days of sleep restriction; however, posterior brain regions were affected only later in the week, suggesting some cumulative or dynamic effects of sleep restriction over time. The current direction of research is to map the topography of changes in waking EEG and ERPs, and their relation to specific types of performance deficit, during varying levels of sleep loss.

Another interesting line of investigation has been to determine the benefits of napping for daytime performance and well-being. For her Masters thesis, Catherine Milner recently completed a dose-response investigation of napping to examine whether the benefits of short and long naps might depend on age and experience with napping. Data will be presented at the Associated Professional Sleep Societies Annual Meeting in June 2005.

## 2. Behavioural and physiological processes involved in falling asleep and staying asleep in good and poor sleepers.

During my doctoral studies at the University of Ottawa, Dr. Ken Campbell and I investigated the sleep onset period using behavioural response times, event-related potentials (ERPs) and EEG (5). We found that changes in ERPs paralleled the behavioural responses rather than the EEG-defined stages of sleep. This work was important in that it showed traditional measures of sleep staging by 30-second epoch are insufficient to characterize the moment-to-moment changes in awareness at sleep onset. At Brock University, my interest in exploring the sleep onset period has continued, in collaboration with a visiting post-doctoral scientist from Japan, Dr. Kiwamu Yasusa (now at the Saiseikai-Suita Hospital, Osaka). In 2 separate studies, we employed a Contingent Negative Variation (CNV) ERP paradigm (see Proceedings from the second scientific conference of the Canadian Sleep Society, 2004), and a modified version of the traditional CNV (*Psychophysiology*, 39(Suppl.1): S89), to characterize the loss of anticipatory attention at sleep onset in good sleepers. We are now employing these paradigms to compare attention processes during sleep onset in insomniacs and good sleepers. This work will have implications for understanding mechanisms of normal and abnormal sleep onset processes, and for evaluating the efficacy of behavioural and pharmacological treatment strategies for insomnia.

## 3. The role of sleep phasic events (k-complexes and spindles) in sleep efficiency and waking function.

Sleep spindles are thought to inhibit or gate information processing, while the role of the k-complex is less well understood. Some view the k-complex as a sleep protective mechanism, while others interpret it as an alerting response. Earlier studies carried out with Dr. Campbell at the University of Ottawa aimed to assess information processing in the presence and absence of phasic events using ERPs. We reported that stimuli were processed to a lesser extent when tones were delivered concurrently with spindles, supporting the idea that spindles have an inhibitory function (8). We also characterized precursors of the evoked k-complex through examining information processing of stimuli presented immediately prior to the k-complex (presented at ESRS, 1999). Recently, at Brock University, we have continued to investigate the character of these phasic events in a number of studies. We reported that sleep spindles and sigma power predicted improvements in a procedural motor learning task following a 20-minute nap in young adults (presented at APSS, 2004). In large a study carried out for his Master's thesis, Stuart Fogel (now a PhD candidate at Laurier University) investigated the role of spindles and k-complexes in the consolidation of procedural and declaratives types of learning (presented at ESRS, 2004). In addition, we have found that older adults have fewer K-complexes, spindles, and sigma power in a 60-minute daytime nap. We are now examining if these age differences in sleep phasic events predict post-nap performance differences between groups. Determining the function of these non-REM events will be important for understanding individual differences in sleep quality and age-related changes in sleep.

## Technical Capabilities of Laboratory

- 2 Sandman Elite / Spyder (Tyco) systems for the acquisition and analysis of EEG, sleep, and event-related potentials (ERPs)
- 2 64-channel Mizar digital amplifiers (Tyco)
- 2 32-channel Lamont digital amplifiers and Stellate software
- Actigraphy
- Portable RT monitors with computer interface
- EPRIME software for programming and administration of computerized performance assessment batteries

## Training Opportunities

Students may work towards MA or PhD degrees within the Behavioural Neuroscience stream of graduate program in Psychology. Consult the Web site for program information, admission requirements, and funding opportunities (<http://www.psyc.brocku.ca/graduate/index.htm>). International applications to the graduate program are welcome. Post-doctoral opportunities are also possible, usually with external funding (eg, NSERC, CIHR, NIH).

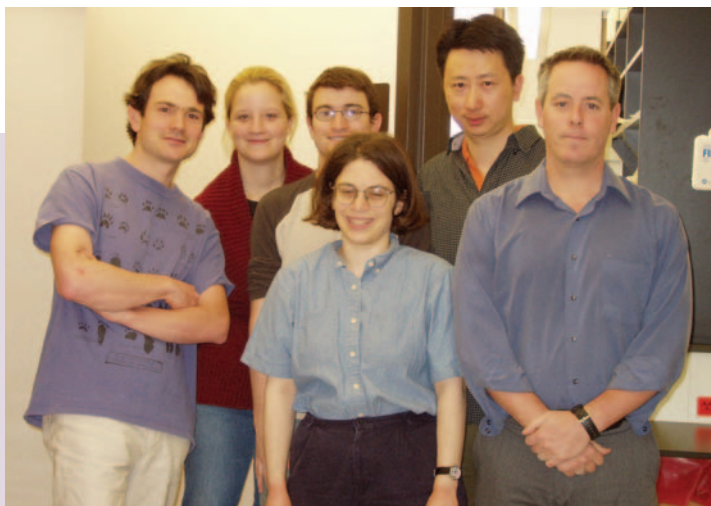
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The Brock University Sleep Research Laboratory is funded by the Natural Science and Engineering Research Council (NSERC) of Canada, the Canadian Foundation for Innovation (CFI) and Ontario Innovation Trust (OIT) fund, and the Premier's Research Excellence Award (PREA) program.

# domestic Laboratory Spotlight

**Name of Laboratory:** Sleep Research Laboratory  
**Institution:** Washington University in  
St. Louis School of Medicine  
**Address:** 660 S Euclid Ave, Campus Box 8108  
Saint Louis, MO 63110  
**Phone:** (314)362-2703  
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## About the labs:

Basic sleep research at Washington University in St. Louis School of Medicine is being conducted by Paul Shaw, PhD who is assistant professor in the department of anatomy and neurobiology and Laurent Seugnet, PhD who is a postdoctoral fellow. Research staff and trainees include Michael Qian, Yasuko Suzuki, Jordan Weitzner, Beth Epstein, Bryrony Dougherty, Lucy Vine and Whitney Phipps.

Clinical sleep research is directed by Stephen Duntley, MD who is associate professor in neurology and director of Multidisciplinary Sleep Medicine Center. The sleep center is 14-bed diagnostic, teaching and research laboratory located in newly renovated hotel. Medical staff involved both research and clinical activities include:

*Jaime Boero, MD, PhD, neurology; Beth Ward, MD neurology; Jay Piccirollo, MD, ENT; and Amy Bertelson, PhD, psychology. Research staff and trainees include Michael Morrissey, PhD Janine Kampelman, RN, MS, Jenniver Svoboda, MS, RPGST and Christina Doerr, RPGST.*

## Research Focus & Long Term Research Goals

The primary goal of my laboratory is to identify and describe molecular pathways that are relevant for our understanding of mammalian sleep and sleep homeostasis, and to determine if these pathways impact motivated waking behaviors. Pathways are currently being identified by evaluating convergent data sets derived from traditional approaches (mutant screens and selection experiments) as well as the creative application of cDNA microarrays in the model organism *Drosophila melanogaster*. Select candidate genes are subsequently evaluated to determine if they play a role in human sleep, which is conducted in collaboration with Dr. Steven Duntley, director of Multidisciplinary Sleep Medicine Center in the neurology department at Washington University. Our goal is to identify genes that activate homeostatic mechanisms and to identify molecular markers that can be used to detect sleep propensity in flies and possibly humans.

## *Drosophila melanogaster* can be used as an effective model system to study sleep.

We and others have shown that the fruit-fly, *Drosophila melanogaster*, can be used as an effective model organism to study sleep (Hendricks *et al.* 2000; Shaw *et al.* 2000). We identified sleep in the fly using behavioral criteria that were established in the days before the electroencephalogram became the standard for identifying sleep in mammals and birds (Campbell and Tobler 1984). The criteria include: 1) Prolonged periods of quiescence 2) Reduced responsiveness to external stimuli 3) Rapid reversibility, which distinguishes sleep from hibernation or coma and 4) Homeostatic regulation – the increased need for sleep that follows sleep deprivation (Tobler 1983). Another striking similarity between sleep in mammal and flies is that the young need more sleep than the old and sleep is reduced and fragmented in aged flies. Moreover, adenosine antagonists such as caffeine increase waking (Hendricks *et al.* 2000; Shaw *et al.* 2000) while antihistamines increase sleep and reduce its latency (Shaw *et al.* 2000). Altogether,

behavioral, ontogenetic, pharmacological, molecular and genetic studies indicate that quiescence in *Drosophila* shares many of the critical features of mammalian sleep (Shaw *et al.* 2000).

## Lines of Research

1) Sleep is controlled by two processes: a homeostatic drive that increases during waking and dissipates during sleep and a circadian pacemaker that controls its timing. Although these two systems can operate independently, recent studies suggest a more intimate relationship. Indeed, none has been as dramatic as that found for the canonical loss-of-function clock mutant *cycle* (*cyc<sup>01</sup>*). *cyc<sup>01</sup>* mutants showed a disproportionately large sleep rebound and as a group, begin to die when kept awake for as little as 10 hours. Our data indicate that the pathology is characterized by an acceleration of the detrimental effects of waking and furthermore, suggests that these processes subsequently increase the need for sleep (Shaw *et al.*, 2002). Given the speed with which *cyc<sup>01</sup>* flies die from sleep loss, we believe they provide a unique

model for elucidating the vital role of sleep. Using cDNA microarrays and oligonucleotide Affymetrix arrays, we have begun to identify functional targets of sleep homeostasis and its molecular mechanisms. These results have been confirmed using quantitative real-time PCR (qPCR). Thus we know of 100 genes that are modulated by prolonged wakefulness. We have acquired more than 110 mutant lines representing approximately 60 of the 100 genetic loci of interest and have begun to evaluate their sleep parameters and responses to sleep deprivation.

2) If insomnia results, in part, from predisposing factors that cause either hyperarousal or misalignment of circadian rhythms with the sleep-wake cycle, then the identification of the underlying pathophysiological mechanisms should be feasible using genetic strategies. Given the complexity of human insomnia, we undertook a selection screen to identify natural variants in a population of wild-type *Drosophila*. In contrast to single gene mutations, the phenotypic variation in these individuals is likely the result of minor changes in many genes and as a consequence is more likely to reflect the diversity of a complex human disorder (Greenspan 2001). The natural polygenic variation in these individuals can be amplified over successive generations using laboratory selection, a model of natural selection. Once amplified, these changes in gene expression are then amenable to molecular-genetic and genomic strategies such as Affymetrix arrays, suppressor screens, genetic mapping, etc. By selecting over several generations flies that sleep significantly less than average, we have isolated a population of animals that show a number of phenotypes associated with insomnia: increase in sleep latency, shorter sleep bouts, hyperarousal, and gene expression profiles suggestive of sleep deprivation.

3) In order to accelerate information transfer between the lab and the clinic, we have established a close working relationship with Dr. Duntley at the Multidisciplinary Sleep Medicine Center. Dr. Duntley participates in clinical research trials that test the latest therapies for various types of sleep disorders. The many research studies conducted at the sleep center are aimed at answering scientific questions and defining better ways to diagnose and treat sleep disorders.

## Technical Capabilities of Laboratory:

- Molecular genetics
- Real-time Quantitative PCR
- cDNA microarrays
- Oligonucleotide Affymetrix arrays
- Genomics
- Immunohistochemistry
- In Situ Hybridization

## Training Opportunities in the Labs:

Dr. Shaw is assistant professor in the department of anatomy and neurobiology at Washington University in St. Louis School of Medicine. The neuroscience program at Washington University offers an outstanding neuroscience education for PhD students and exciting research opportunities for postdoctoral scientists. More information about the program can be found at:

<http://neuroscience.wustl.edu/home/home.html> or by contacting Dr. Shaw.

Dr. Duntley is associate professor of neurology and director of the Sleep Medicine Center. The department of neurology at Washington University School of Medicine offers clinical neurological training in a four-year residency program approved by the American Board of Psychiatry and Neurology and leading to certification in neurology. Fellowship training leading to certification by the American Board of Sleep Medicine is available and can be structured to meet the specific clinical and research interests of the candidate. More information about the program can be found at:

<http://neuro.wustl.edu/sleep/>.

Sleep Medicine Center  
212 N. Kingshighway  
Suite 237  
St. Louis, MO 63108  
Campus Box 8111

## Representative Publications:

Andretic R and Shaw, PJ (In Press) Essentials of sleep recordings in *Drosophila*: moving beyond sleep time. *Methods in Enzymology*.

Shaw PJ (2003) Awakening to the behavioral analysis of sleep in *Drosophila*. *Journal of Biological Rhythms*, 18:4-11.

Shaw PJ and Franken P (2003) Perchance to dream: Solving the mystery of sleep through genetic analysis. *Journal of Neurobiology* 54:179-202.

Shaw PJ, Tononi G, Greenspan RJ, Robinson DE (2002) Stress response genes protect against the lethal effects of sleep deprivation in *Drosophila melanogaster*. *Nature*, 417:287-91.

Greenspan RJ, Tononi G, Cirelli C, Shaw PJ. (2001) Sleep and the fruit fly. *Trends Neurosci* 24:142-145.

Shaw PJ, Cirelli C, Greenspan RJ and Tononi G (2000) Correlates of sleep and waking in *Drosophila Melanogaster*. *Science* 287:1834-1837.

# research Funding

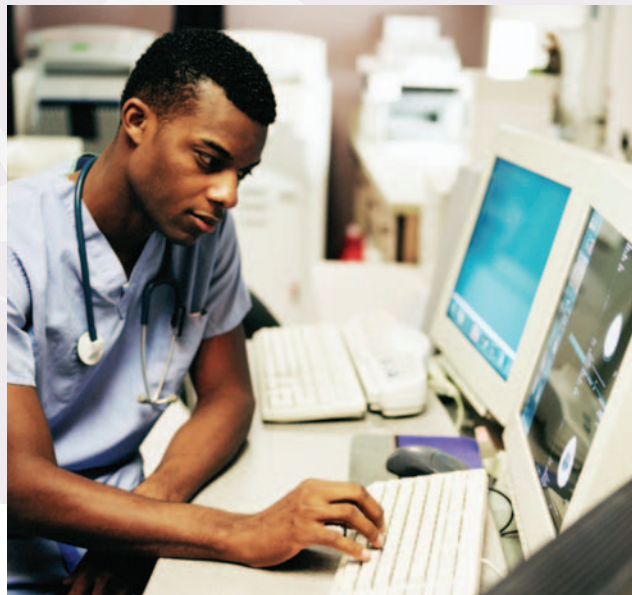
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*"In the last several years the growth in funded sleep research has been faster than the increase in NIH funding overall."*

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## Obtaining Research Support In Today's Competitive Climate

It is to our advantage as researchers of sleep and sleep disorders to capitalize on the integrative nature of our science. In addition, grantsmanship is more important than ever. Based on discussions with NIH program staff, research colleagues and personal experience, these issues can be addressed in several ways: 1) sleep researchers should distribute their grant applications across as many NIH study sections and other funding agencies as possible. There is one study section at the NIH devoted to Sleep: Biological Rhythms and Sleep Study Section (BRS) formally known as IFCN-3. However, if the grant would fit just as well in another study section then the other study section should also be considered. See the NIH Center for Scientific Review (CSR) study section webpage for detailed descriptions of the types of proposals each study section reviews: [http://www.csr.nih.gov/Roster\\_proto/sectionI.asp](http://www.csr.nih.gov/Roster_proto/sectionI.asp). In addition, you can search the Computer Retrieval of Information on Scientific Projects (CRISP) database of federally funded biomedical research projects to look for grants funded by various study sections: <http://crisp.cit.nih.gov/> 2)

collaborate with colleagues. Often collaboration with colleagues outside of our discipline will lead to investigations into new areas and novel approaches to old problems. 3) Be proactive. Request that your grant application be sent to specific study sections and NIH institute(s). 4) Consider what peer review wants. If you are responding to a Requests for Applications (RFA), be sure to indicate how your application addresses the aims of the RFA. After obtaining your summary statements for an unfunded grant proposal, carefully respond to each point of the review in the revised application. An argumentative or incomplete response will often lead to negative reviews of the revised application. 5) When was the last time you looked at the NIH webpage? There are a lot of new resources available to help investigators successfully obtain grant funding. See the accompanying piece on NIH resources for a brief overview of some important resources.

Discussions with Carl E. Hunt, MD, Director of the NIH National Center on Sleep Disorders Research (NCSDR) provided

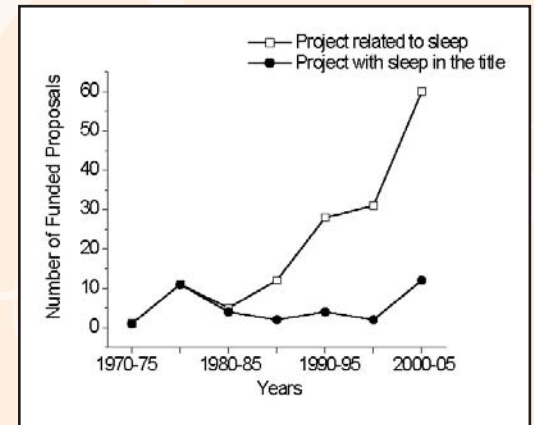
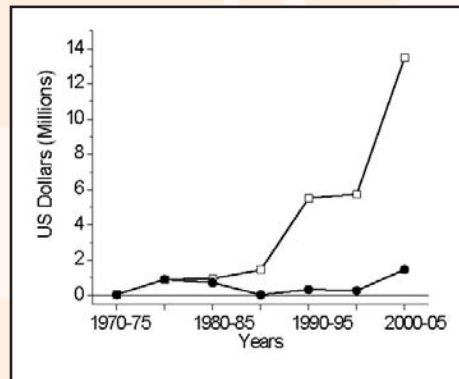
the following perspective on the status of sleep research funding by the NIH: Sleep research made up approximately 1.1% of the NIH budget in 2003 and no change is expected for the 2004 figures, although growth has doubled across the last 10 years. In the last several years the growth in dollars of funding for sleep research has been faster than the increase in NIH funding overall. However, there is still a lot of room for growth.

The NIH is the largest supporter of biomedical sleep research. Researchers are encouraged to review the NCSDR sleep research plan from 2003 since it is still currently used as a source of advice on matters related to planning, conduct, support, and evaluation of research in sleep and sleep disorders: [http://www.nhlbi.nih.gov/health/prof/sleep/res\\_plan/index.html](http://www.nhlbi.nih.gov/health/prof/sleep/res_plan/index.html)

Most sleep funding is given to the most meritorious investigator initiated grants. There is no mandate for the percentage of NIH funds that fund sleep, unless there is a RFA where funds are set aside up front. Keep on submitting grant applications. If you do not apply, you will certainly not obtain funding.

## Funding History of Sleep By the National Science Foundation (NSF)

Considerable increases in sleep research funding by the NSF has occurred in the last 30 years. A search of the NSF awards webpage <http://www.nsf.gov/awardsearch/> for projects that included the keyword sleep and for projects with sleep in the title produced the following data for grant funding of sleep studies from 1973 to present. As seen in the figures, the number of funded projects and the total funding of sleep grants in US dollars (millions) have steadily increased across the last two decades.



## Spotlight on Several NIH Resources

### Get Your Summary Statements Early by Joining NIH eRA Commons

The NIH has developed an electronic system to facilitate the exchange of information between the NIH, applicant organizations and Principal Investigators (PIs). Summary statements are posted on this site weeks before they are received by investigators in the mail. eRA commons allows PIs to review the current status of all their grant applications and review detailed information associated with their grants. Also at this site you will find your personal profile that you can update (e.g., personal information, education, publications, and grant applications). Contact the Sponsored Research Office (or equivalent) at your institution to obtain an account. <https://commons.era.nih.gov/commons/>

Israel Lederhendler, Ph.D., was recently appointed the director of the new Office of Electronic Research and Reports Management (OERRM). <http://era.nih.gov/>

The paperless transfer of extramural research grant application and administrative data is the NIH's vision for the 21st century.

### Recent Funding Announcement for Sleep and Sleep Disorders Research

Title: Research on Sleep and Sleep Disorders  
<http://grants2.nih.gov/grants/guide/pa-files/PA-05-046.html>

Expiration Date: June 1, 2008

### Join NIH LISTSERV – SLEEP RFA-L and receive email announcements about grant opportunities

Michael J. Twery, Ph.D., Leader of the Sleep and Neurobiology Scientific Research Group and NHLBI Division of Lung Diseases National Center on Sleep Disorders Research provides a valuable resource to researchers and organizations by sending out email notifications of federal activities of potential interest to sleep and circadian biology research. To join go to: <http://list.nih.gov/cgi-bin/wa?SUBED1=sleeprfa-l&A=1>

### Resources for New NIH Investigators

“Entry of new investigators into the ranks of independent, NIH-funded researchers is essential to the health of this country’s biomedical research enterprise.” New investigators go to the following webpage for information on competing successfully for NIH funding: [http://grants1.nih.gov/grants/new\\_investigators/index.htm](http://grants1.nih.gov/grants/new_investigators/index.htm)

### NIH Loan repayment programs

NIH will repay up to \$35,000 per year of your qualified educational debt. In Fiscal Year 2002, this program was restricted to researchers with NIH grants. Since FY 2003, NIH broadened eligibility to all doctoral-level clinical researchers with a domestic nonprofit or U.S government (Federal, state or local) funding. <http://www.lrp.nih.gov/>

### National Center on Sleep Disorders Research

Visit the NIH National Center on Sleep Disorders Research  
<http://www.nhlbi.nih.gov/about/ncsdr/>

# n ew Members

November, 2004 – May 17, 2005

## Regular Members:

<b>Joseph A. Bukhalt</b>	Auburn Univ., Auburn, AL
<b>Mona El-Sheikh</b>	Auburn Univ., Auburn, AL
<b>Christopher P. Landrigan</b>	Brigham & Women's Hosp., Boston, MA
<b>Paul A. Rosenberg</b>	Children's Hosp., Boston, MA
<b>Judy A. Wells</b>	Emory Univ., Atlanta, GA
<b>Yohannes Endeshaw</b>	Emory Univ., Atlanta, GA
<b>Janelle M. Hardisty</b>	Cor Specialty Associates of North Texas
<b>Maurice Dematteis</b>	Grenoble Univ. Sch. of Med., France
<b>Ritchie E. Brown</b>	Harvard Med. Sch. & VA Med. Ctr., Brockton, MA
<b>Meeta Singh</b>	Henry Ford Hosp., Detroit, MI
<b>Paola Lanfranchi</b>	Hopital Sacre Coeur, Montreal, Canada
<b>Timothy W. Lovenberg</b>	Johnson & Johnson, San Diego, CA
<b>Ryan G. Wetzler</b>	Kentucky Research Group, Louisville, KY
<b>David Winslow</b>	Kentucky Research Group, Louisville, KY
<b>Clare Anderson</b>	Loughborough Univ., UK
<b>Apoor S. Gami</b>	Mayo Clinic College, Rochester, MN
<b>Beth Goodlin-Jones</b>	MIND Inst., Sacramento, CA
<b>Ralph Greenspan</b>	Neurosciences Inst., San Diego, CA
<b>Ravi Allada</b>	Northwestern Univ., Evanston, IL
<b>George W. Rodway</b>	Ohio State Univ., Columbus, OH
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<b>Barbara Harris</b>	PsyPharma Clinical Res., Inc., Phoenix, AZ
<b>Raymond E. Bourey</b>	Regional Ctr. Sleep Med., Toledo, OH
<b>Donald E. Watenpaugh</b>	Sleep Consultants, Inc., Fort Worth, TX
<b>Scott Conrad</b>	Tiena Health, Irving, TX
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<b>Judi Profant</b>	Univ. of California, Irvine, CA
<b>Dalia Lorenzo</b>	Univ. of Miami, Miami, FL
<b>Kirk J. Brower, Alon Avidan</b>	Univ. of Michigan, Ann Arbor, MI
<b>Flavia Consens</b>	Univ. of Michigan, Ann Arbor, MI
<b>Luca Imeri</b>	Univ. of Milan Sch. of Med., Italy
<b>Michael J. Hensley</b>	Univ. of Newcastle, Newcastle, Australia
<b>Jane F. Gaultney</b>	Univ. of North Carolina, Charlotte, NC
<b>J.-C. Chen</b>	Univ. of North Carolina, Chapel Hill, NC
<b>Nirinjini Naidoo</b>	Univ. of Pennsylvania, Philadelphia, PA
<b>Martica Hall</b>	Univ. of Pittsburgh, Pittsburgh, PA
<b>Derk-Jan Dijk</b>	Univ. of Surrey, Guildford, UK
<b>Lynn M. Veatch</b>	VA Med. Ctr., Charleston, SC

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<b>Richard E. Conley</b>	ALPCO Diagnostics, Windham, NH
<b>Thomas Kazlauskys</b>	Ambulatory Monitoring, Inc., Ardsley, NY
<b>Henry Arantes</b>	Bradley Hosp., Providence, RI
<b>Peter T. Hu,</b>	Harvard Med. Sch., Boston, MA
<b>Eva Stroynowski</b>	Harvard Med. Sch., Boston, MA
<b>Regine Denesle</b>	Hopital Sacre Coeur, Montreal, Canada
<b>Leonid Zabezhinsky</b>	Lakeland Health Services, Golden Valley, MN
<b>Heather M. Purnell</b>	Massey Univ. Wellington, New Zealand
<b>Jessica Hovorup</b>	Sleep Clinic Kitchener, Kitchener, Canada
<b>David A. Ehrmann</b>	Univ. of Chicago, Chicago, IL
<b>Annette Miller</b>	Univ. of Chicago, Chicago, IL
<b>Aliuddin M. Khaja</b>	Univ. of Kansas Med. Ctr., Kansas City, KS

## Postdoctoral Student Members:

<b>Preetam Bandla</b>	Children's Hosp., Philadelphia, PA
<b>James T. McKenna</b>	Harvard Med. Sch., and VA Med. Ctr., Brockton, MA
<b>Jaime Tartar</b>	Harvard Med. Sch., and VA Med. Ctr., Brockton, MA
<b>Georgina Cano</b>	Harvard Med. Sch., Boston, MA
<b>Nayantara Santhi</b>	Harvard Univ. and Brigham & Women's Hosp., Boston, MA
<b>Robyn Stremler</b>	Hosp. for Sick Children, Toronto, Canada
<b>Stephen Gorman</b>	Lahey Clinic Med. Ctr., N. Chelmsford, MA
<b>Elliott Lee</b>	Mayo Clinic, Rochester, MN
<b>Sandor Kantor</b>	National Inst. of Psychiatry & Neurol., Budapest, Hungary
<b>Jason Rihel</b>	NYU Med. Ctr.
<b>Victoria Revell</b>	Rush University Med. Ctr., Chicago, IL
<b>Sara C. Mednick</b>	Salk Inst., La Jolla, CA
<b>Preethi Dendi</b>	St. Barnabas Medical Ctr., Livingston NJ
<b>David Prober</b>	Skirball Insit. Biomol. Med., NY
<b>Tara L. Crowder</b>	SRI, Int., Menlo Park, CA
<b>Robin LeWinter</b>	SRI, Int., Menlo Park, CA
<b>Hagit Schwimmer</b>	Stanford Univ., Palo Alto, CA
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<b>Mona Shattell</b>	Univ. of Alabama, Birmingham, AL
<b>Swarna Viegas</b>	Univ. of Arkansas, Little Rock, AK
<b>Ulf Holmback</b>	Univ. of Chicago, Chicago, IL
<b>John Harrington</b>	Univ. of Michigan, Ann Arbor, MI
<b>Mihaela Teodorescu</b>	Univ. of Michigan, Ann Arbor, MI
<b>Christopher J. Watson</b>	Univ. of Michigan, Ann Arbor, MI
<b>Siobhan Banks</b>	Univ. of Pennsylvania, Philadelphia, PA
<b>Susan T. Harbison</b>	Univ. of Pennsylvania, Philadelphia, PA
<b>Irma Rukhadze</b>	Univ. of Pennsylvania, Philadelphia, PA
<b>Daniel Bushey</b>	Univ. of Wisconsin, Madison, WI
<b>Reto Huber</b>	Univ. of Wisconsin, Madison, WI
<b>Elliott Paletz</b>	Univ. of Wisconsin, Madison, WI
<b>Kyu In Jung</b>	VA Healthcare System, San Diego, CA

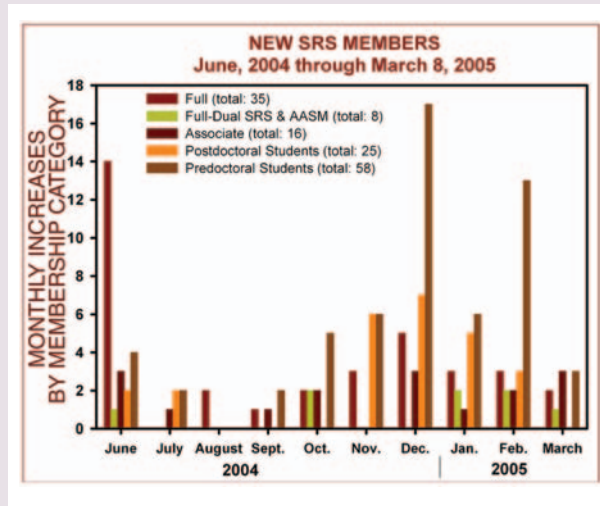
# Predoctoral Student Members:

Bradley Sleep Hospital, Lewiston, ME: **Caitlin Hager**  
Brock Univ., St. Catharines, Canada: **Rona Kertesz**  
Brown Univ., Providence, RI: **Paul M. Krueger, Amanda C. Tow, Emily Stephen, Whitney Mostafiz, Anita Batra**  
Children's Natl. Med. Ctr., Washington, DC: **Lauren Daniel, Melanie Eisner, Tamara Michachidus, Robert Werthwein**  
College of the Holy Cross, Worcester, MA: **Allison Hayes, Eric Butler, Amy L. Daigle, Kelly Naku**  
Cornell Univ., NY: **Christine Tang**  
Delhi Univ., Delhi, India: **Amit Bansal**  
Drexel Univ., Philadelphia, PA: **Deepa Avinash**  
Duke Univ., Durham, NC: **Meredith Rumble**  
Emory Univ., Atlanta, GA: **Andrea M. Landis, Amy L. Valderrama**  
Hopital Sacre Coeur, Montreal, Canada: **Anna Kawinska, Rebecca Robillard, Melanie Vendette**  
John Hopkins Univ., Baltimore, MD: **Nathan Parker**  
Laval Univ.: **Isabelle Turcotte, Meagan Daley, Vincent Moreau**  
Massey Univ., Wellington, New Zealand: **RIdvan Firestone, Sarah-Jane Paine**  
Montreal Neurological Inst., Canada: **Pablo Henny**  
Northwestern Univ., Evanston, IL: **Jena Pitman**  
Princeton Univ., Princeton, NJ: **Lauren Costa**  
Rush Univ. Med. Ctr., Chicago, IL: **Mark R. Smith**  
Stanford Univ., CA: **Jennifer S. Huang**  
Univ. du Quebec, Montreal: **Cathy Leveille**  
Univ. of Arizona, Tucson, AZ: **Jennifer H. Breslin, Benjamin McKenna, Megan E. Ruiter**  
Univ. of California, San Diego, CA: **Travis H. Turner**  
Univ. of California, San Francisco, CA: **Teresa M. Ward, Milagros I. Figueroa, RN**  
Univ. of Colorado, Boulder, CO: **Laurie Pompper, Chandra Lloyd, Chris Jung, Marissa E. Moritz, Jennifer Hageman**  
Univ. of Florida, Gainesville, FL: **Natalie Dautovich**  
Univ. of Hartford, West Hartford, CT: **Christopher J. Spelman**  
Univ. of Kentucky, Louisville, KY: **Karen Heaton**  
Univ. of Michigan, Ann Arbor, MI: **Erin Koffel**  
Univ. of Mississippi Med. Ctr., Jackson, MI: **Jorge Lopez**  
Univ. of Montreal, Canada: **Marie-Josée Dubuc, Amelie Morin**  
Univ. of Pennsylvania, Philadelphia, PA: **Jared Minkel, Rachel Gorman, Lichuan Ye, Janna Hoffman**  
Univ. of Pennsylvania, Philadelphia, PA: **Farid Razavi, Allison Stakofsky, Adrienne Tucker**  
Univ. of Pittsburgh, Pittsburgh, PA: **Suzanne Goldman**  
Univ. of Queensland, Queensland, Australia: **James P. DiPasquale**  
Univ. of S. Mississippi, Hattiesburg, MS: **Aaron D. Arkin**  
Univ. of Sydney, Australia: **Keith Wong**  
Univ. of Szeged, Hungary: **Eva Szentirmai**  
Univ. of the Sciences, Philadelphia, PA: **Gina Diana, Allison Impastato**  
Univ. of Wisconsin, Madison, WI: **Ugo Faraguna, Korey Wylie**  
Washington State Univ., Kent, WA: **Vian Yousify**  
Washington State Univ., Pullman, WA: **Kelly Blindheim, Michael Falter, Christopher J. Davis, Xin Guan**  
Washington State Univ., Walla Walla, WA: **Lisette Jimenez**

# a message from the SRS Membership Committee

The main charge of the Membership Committee is to ensure a steady growth of our membership. For the past two years, our ranks have been increasing by 10% annually (see graph for the last 10 months). We attract new members by: (1) sending individual invitations to join the Society to selected groups with an interest in sleep, such as authors publishing in sleep research journals and NIH/NSF grantees receiving funding for sleep-related research; (2) distributing information packets about the SRS when individual committee members attend scientific conferences; (3) making the membership drive a part of other SRS activities, such as Club Hypnos (at the meetings of the Society for Neuroscience and the Association for the Advancement of Behavior Therapy) and the dinner co-sponsored by the SRS at the annual meeting of the American Thoracic Society. However, the most effective of all are individual referrals by current SRS members. Therefore, the Committee periodically contacts current full members with requests that they encourage their collaborators, associates and students to join the SRS. Indeed, some labs are extremely effective in this role and deserve our special gratitude.

As of March 8, 2005, SRS had 1091 members (~44% women). The breakdown among different membership categories was: 628 Full or Full-Dual (SRS and AASM), 33 Emeritus, 38 Associate, 13 Complementary, 102 Postdoctoral Students, and 227 Predoctoral Students. The existing membership loyalty was



also gratifying. Near the end-period of annual membership renewals, the renewal rates were: 86% for Full and Full-Dual, 94% for Emeritus, 61% for Associate, 68% for Postdoctoral Student, and 57% for Predoctoral Student members.

The last part of our message is a call for volunteering and getting involved in the daily operation of our Society. Both our Web site and the electronic *SRS Update* contain announcements about opportunities for membership involvement. When annual ballots for vacant Society positions are distributed, please be sure to take the opportunity to impact the future of our Society.

The SRS Membership Committee (Leszek Kubin, PhD - Chair; Eileen Chasens, DSN; Carol Landis, RN, DNSc; Patricia Murphy, PhD; Susan Redline, MD, PhD; Robert Strecker, PhD; Jacqueline Vazquez, PhD; Carole Marcus, MB, BCh, Board Liaison) To contact the Committee, send e-mail to: "Brooke Fairchild" [BFairchild@aasmnet.org](mailto:BFairchild@aasmnet.org)

# srs hosts Trainee Room

## SRS Hosts Trainee Room at APSS

This has been a very busy year with regards to trainee activities. Once again, the Training and Education Committee (TEAC) of the SRS has been very supportive of trainee activities, and several changes have been made to continue to improve Trainee Day and other training-related activities and resources.

## Trainee Day

The purpose of Trainee Day is to educate, inspire, and motivate trainees, as well as provide a rare opportunity for them to interact with the leaders from their respective sleep research fields. This year, Dr. Carl Hunt presented the keynote address. In addition, Trainee Day featured 31 workshops, eight lunch sessions including oral presentation by trainees, and the Career Fair and Trainee Reception, which had 35 participating institutions.

Trainee Day is organized by the Trainee Day subcommittee, which is composed of SRS trainees, with the help of the TEAC. More than 20 trainees volunteered for one of the eight positions available on the Trainee-Day subcommittee. In an effort to ensure that the Trainee Day committee reflected the diversity of this multi-disciplinary field, committee members were selected who came from diverse fields. The members of the Trainee Day 2005 sub-committee were: Anne Germain, Chair; Fiona Baker, Chair-elect; Sabra Abbott; Tracy Rupp; Cameron Good; Katherine Davis Finns; Henry Orff; Wynne Chen; Krishna Jhaveri and Milena Pavlova. In addition, a survey of research interests was conducted among trainees by e-mail in November 2004 to ensure that all areas of interest were covered and included in the list of suggested workshops for 2005. Thank you to those who responded to this survey! If you feel that your area of interest is not adequately represented, I encourage you contact Fiona Baker, the incoming Trainee Member-at-Large, to share your suggestions. You can also talk to Fiona Baker if you want to volunteer for next year's Trainee Day subcommittee. Her e-mail address is [fiona.baker@sri.com](mailto:fiona.baker@sri.com).

Once again, Trainee Day was a great success and we got positive feedback from trainees. We also received suggestions for improvements, which we will try to implement for the 2006 program. We hope that you found Trainee Day 2005 a valuable and enjoyable learning experience! We extend our gratitude to the presenters who participated in Trainee Day, we couldn't do it without you!

## Luncheons at Trainee Day: Trainees in Action!

Past and present heads of the SRS Sections led discussions at the trainee lunch sessions again this year. To further pursue the education orientation of Trainee Day, trainees who submitted top-notch abstracts for the Associated Professional Sleep Societies Annual Meeting were invited to give 10-minute oral presentations during each lunch session. Oral presentation of research and clinical work is one of the numerous academic tasks that all trainees have to complete at some point in their career. During the lunch sessions, you were able to see your peers in action presenting their research data using the standard presentation format in a friendly, education-oriented environment.

## Career Fair

The Trainee Day subcommittee organized the Career Fair to be held in conjunction with the Trainee Day reception again this year. The goal of the career fair is to give trainees the opportunity to meet with representatives of different academic institutions, programs and representatives of industry that have openings for advanced training opportunities. This year we had 35 institutions participate. Encourage your mentors, institutions, and/or program directors to attend the career fair and reception in 2006.

## The Trainee Hospitality Suite is back this year!

The goal of the Trainee Hospitality Suite is to provide a space where trainees can gather and interact among themselves and with leaders in their area of sleep research. Some of you will remember that SRS trainees used to have the privilege of having a room dedicated to them during the three full days of the APSS Annual Meeting, known as the Trainee Room. For

budgetary reasons, the Trainee Room has not been available for the last two years, but it was available again in Denver.

In addition to socializing and networking, the Trainee Room was used for meeting potential mentors, interviews, and research discussions. Representatives who participated in the career fair were encouraged to leave information material in the Trainee Room. A poster board was also available to advertise training and job positions.

## Election of the Trainee Member-at-Large-Elect

Sabra Abbott was nominated by the Trainee constituency to serve as the Trainee Member-at-Large-Elect. The duties of the Trainee Member-at-Large include participating in SRS Board meetings, coordinating APSS trainee-related activities and contributing a trainee-related article for publication in the SRS Bulletin. The Trainee Member-at-Large gains invaluable experience working closely with the members of the SRS Board and providing input regarding Society initiatives and programs. This position is also the connection between trainees and SRS

TEAC Committee and between trainees and the Board of Directors. This means that you can address your request, questions, and suggestions directly to the Trainee Member-At-Large, who will present your comments for consideration in planning future trainee activities, and will take your ideas to the TEAC and the SRS Board of Directors. The Trainee Member-at-Large for 2005-2006 is Fiona Baker ([fiona.baker@sri.com](mailto:fiona.baker@sri.com)).

If you are interested in volunteering for the Trainee Member at Large in the future, it is strongly recommended that you first become involved in the Trainee Day sub-committee. Involvement with the sub-committee will allow you to demonstrate your ability as well as give you a better understanding of the structure and efforts of the SRS. Volunteering for the trainee sub-committee is also an excellent way to become acquainted with the tasks involved, and constitutes a unique career development tool. *Congratulations again to Sabra and Fiona.*

## Trainee Manual

The trainee manual is a resource for trainees to determine what advance training opportunities are available in every possible field

of sleep research and medicine. Although past manuals have been superbly developed and were exhaustive, they are now out of date.

The SRS had previously allocated funds and space on its Web site to update the manual and keep it current for the foreseeable future. All institutions, laboratory, and programs will be contacted by e-mail to direct them to the Web site, where they will be able to upload information regarding their program and training opportunities. This is an immensely important undertaking, for without this manual, many of our current trainees might not have been able to locate their current mentors and training programs. The Trainee Manual will be publicized through the SRS Update as well as the SRS Web site.

Anne Germain, PhD  
*SRS Trainee Member-at-Large*

The Trainee Room is a section of the SRS Bulletin reserved for issues pertaining to trainees involved in sleep research. Undergraduate, graduate, or postdoctoral trainees are welcome to submit articles for this section of the Bulletin. Please contact John Slater, [JSlater@srsnet.org](mailto:JSlater@srsnet.org) for upcoming deadlines and information.

# Renewing Your SRS Membership is A Greater Value to You Than Ever Before!

*The Sleep Research Society fosters scientific investigation, professional education, and career development in sleep research and academic sleep medicine.*

**The Sleep Research Society** exists for and because of you. With over 1,100 members from a broad range of medical disciplines, we are strategically placed to take the lead in promoting an understanding of the processes of sleep and its disorders. As grand as that goal may sound, at its core it all comes back to solid research. That research begins with you. As the 2005 year quickly approaches the end, it is time once again to renew your membership. The SRS has a very exciting year planned for 2006, below are a few of the new initiatives the SRS has been working on.

**The Sleep Research Society Foundation (SRSF)** established to award two grants: the J. Christian Gillin, MD Research Grant and the Elliott D. Weitzman, MD Research Grant. The Gillin grant is intended for beginning investigators in sleep research for the purpose of gathering pilot data to be used for future grant applications.

**A Primer of Sleep Research** course provides an insight on a number of relevant techniques and content areas of sleep research. The Society was successful with its first-ever Primer of Sleep Research course, held in Miami in February. The Second Primer of Sleep Research Course is set for February 10-12, 2006. The course will be held at the beautiful oceanside resort location of the Hilton LaJolla Torrey Pines just north of San Diego, CA. From this world famous resort you can take in the panoramic views of the gardens, Torrey Pines Golf Course and the Pacific Ocean just beyond from the balcony or patio of your room. Begin marking your calendar now to be part of this course. Information on specifics of the course and how to register will be available within the next month or so at the SRS website at [www.sleepresearchsociety.org](http://www.sleepresearchsociety.org).

**Sleep & Public Safety Task Force** created to respond to articles and issues and make recommendations to the legislature concerning sleep and public safety.

**SRS/AASM Joint Mentorship Program** goals of this program are to match up young researchers with accomplished researchers in the field of sleep. Eventually this program will be facilitated on line.

*For more information concerning your SRS membership please contact the membership department at [bfairchild@aasmnet.org](mailto:bfairchild@aasmnet.org) or (708) 492-1093.*

# A PRIMER OF SLEEP RESEARCH

# A Success!



*Primer of Sleep Research, Day 1*  
Drs. Terry Young, Mark Opp, Eric Nofzinger, Chiara Cerelli & Donald L. Bliwise.



*Primer of Sleep Research, Day 2*  
Drs. Narong Simakajornboon, Michael V. Vitiello, Carole L. Marcus, Sonia Ancoli Israel, Mary Carskadon & Donald L. Bliwise.



*Primer of Sleep Research, Day 3*  
Drs. Gregory Belenky, Michael V. Vitiello, Sonia Ancoli-Israel, Jack D. Edinger & Donald L. Bliwise

## First Primer of Sleep Research Course a Great Success!

The Sleep Research Society held an extremely successful sleep research course, “A Primer of Sleep Research” on February 4-6, 2005, in Miami Beach, Florida. The Primer is one of the most recent efforts of the Society to provide significant service to its membership while carrying out its core mission of fostering scientific investigation, professional education and career development in sleep research and academic sleep medicine.

The Primer was a two and a half day interactive course designed for anyone who wanted to develop a better understanding of a number of the important techniques and content areas of sleep research. Day one of the course included presentations that reviewed the basic concepts of genetics, physiology, immunology, circadian rhythms, neuroimaging and epidemiology as they relate to sleep and the sleep literature. Day two took a more developmental focus and included reviews of the unique challenges of studying sleep in special populations across the human lifespan, including infants, children, adolescents and older adults and in certain medical conditions, specifically Alzheimer and Parkinson diseases. Finally, presentations on day three examined the advantages and limitations of non-laboratory techniques to evaluate sleep quality, including actigraphy, in-home polysomnography and field studies. Each topic was addressed by a recognized expert in that specific area. Presentations included a one-hour formal presentation of the material and a dedicated quarter hour question and answer period to ensure faculty-participant interaction.

The Primer’s distinguished faculty included Drs. Sonia Ancoli-Israel, Gergory Belenky, Donald L. Bliwise, Mary Carskadon, Chiara Cerelli, Charles Czeisler, Jack D. Edinger, Carole L. Marcus, Eric Nofzinger, Mark Opp, Jerome Siegel, Narong Simakajornboon, Michael V. Vitiello, and Terry Young. In addition to formal didactic presentations, Primer participants had the opportunity to interact with faculty during question and answer periods, group lunches and session breaks.

A total of 34 attendees participated in course, including: 16 SRS members, two dual SRS/AASM members, six AASM members, and 10 non-members. Course participants were a mix of academics, including both junior faculty and pre and post-doctoral students, sleep medicine practitioners and a number of

industry representatives. This mix of participants indicated that the course successfully served both its principal constituency, the SRS, while also addressing the needs of other groups interested in gaining sleep research expertise, specifically sleep medicine practitioners and members of industry, who also sought to benefit from the in depth presentations on specific sleep research topics that the Primer provided.

Course evaluations indicated that this inaugural “Primer of Sleep Research” was very well received. Participants rated both the course as a whole and the various individual presentations in the very good to excellent range on three different evaluative scales examining content and presentation, audiovisuals and applicability of information presented.

Participants’ written comments were similarly positive and included such sentiments as; “Excellent idea, looking forward to future meetings.”, “...good mix of basic/applied science.”, “...very thought provoking.”, “...overall curriculum was good.”, “...speakers were experts in their fields...”, “... topics were excellently presented...” and “Thanks for all the preparation and a great conference.”. But perhaps more importantly participants’ written comments contained a number of useful suggestions that will be considered in planning next year’s Primer. These suggestions included a variety of potential new presentation topics as well as comments regarding shortening presentations to an hour, the use of breakout sessions, and increasing access to Primer faculty.

Overall, the course was a remarkable success, especially considering it was a first-time effort. As Course Director, I want to thank the Primer faculty who gave generously of their time and effort in presenting state-of-the-art material to an engaged and diverse audience. I would also like to recognize the excellent efforts of the SRS and AASM staff, whose exemplary logistical skills were indispensable in making the Primer a success. And finally, I would like to thank the course participants, who brought their enthusiasm and scientific curiosity to the Primer.

Based on this extremely encouraging initial success the SRS has every intention of making the Primer an annual event. Sound like something you might be interested in attending? Keep it in mind for next year.

**Michael V. Vitiello, PhD**

Course Director, Primer of Sleep Research  
Professor, Psychiatry & Behavioral Sciences  
University of Washington



