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Dear Virtual SLEEP 2020 Attendee,

Welcome to the 34th annual meeting of the Associated Professional Sleep Societies (APSS)! Thank you for joining us for the first-ever Virtual SLEEP meeting. I appreciate your patience as we have navigated the obstacles presented by the coronavirus pandemic, and I assure you that this meeting is going to be worth the wait!

The APSS is fortunate to be able to leverage the expertise of online meeting providers, our organizations’ staff, and our Program Committee to bring Virtual SLEEP 2020 directly to you. The meeting includes live and on-demand programming, virtual exhibit and poster halls, and access to event recordings for nearly a year. As a virtual attendee, you'll have access to all the sessions, speakers, presentations and exhibitors that make this the premier meeting in our field.

While adapting the SLEEP meeting to a virtual event, we took advantage of this opportunity to incorporate timely programming into the schedule. We are pleased to offer several presentations borne out of the pandemic, as real-time research has enabled us to study the effects of COVID-19 on sleep and circadian health, research, education, and the practice of sleep medicine. We'll also pay tribute to “the Father of Sleep Medicine,” Dr. William C. Dement, who passed away in June at the age of 91. His contributions are too numerous to list here, but his impact on the sleep field was vast, and his legacy will be long-lasting.

Our speakers have been understanding and accommodating as we have shifted to this online format, and the APSS is grateful for their eager participation. You'll be able to watch live and recorded general sessions, purchase access to all of the recorded postgraduate courses, and browse the poster hall and exhibit hall anytime during the virtual meeting. The online format also allows us to offer new features like a speaker Q&A and a product showcase featuring information from exhibitors about their products and services.

What makes SLEEP unique is the coming together of a diverse group of people with a shared passion for sleep and circadian science. Even though we aren't physically together, we'll still be able to interact with the leading researchers and clinicians in the sleep field. While you have a choice of when and where you access Virtual SLEEP, I hope you'll join us for the plenary session livestream on Thursday, Aug. 27, which will feature keynote speaker Dr. David Holtzman, who will discuss his research exploring the relationship between sleep and Alzheimer’s disease. We'll also honor this year’s recipients of awards from the American Academy of Sleep Medicine (AASM) and the Sleep Research Society (SRS).

This year has presented challenges to all of us, both personally and professionally. Now is the time for us to be refreshed and recharged as we learn from one another and celebrate the incredible work being done by our colleagues across the country and around the world. On behalf of the APSS Program Committee, I'm so glad you've joined us, and I'm excited for you to experience Virtual SLEEP 2020!

Sincerely,

Anne Germain, PhD
Chair, APSS Program Committee
The shift to a virtual SLEEP meeting gives attendees more opportunities to view presentations and the latest research, while still being able to interact with colleagues and friends from around the world. The 34th annual meeting of the Associated Professional Sleep Societies (APSS) goes virtual for 2020. From August 27-30, connect with sleep care providers and researchers in sleep medicine and circadian science. They might be down the street or halfway around the world, but their goal remains the same: to stay abreast of the latest research, developments and clinical applications in the sleep field.

Whether your interests lie in clinical sleep science and practice, basic and translational sleep and circadian science, or sleep technology, the virtual SLEEP meeting offers you an opportunity to delve into current developments in sleep medicine and new directions in sleep and circadian research.

“The APSS Program Committee took care to focus education sessions on innovations in the specialty and areas of increased awareness around sleep and circadian health,” said Chair Anne Germain, PhD, professor of psychiatry, psychology, and clinical and translational science at the University of Pittsburgh. “The quantity and quality of the work being presented is exceptional.”

Hot topics include sleep disparities, artificial intelligence in sleep medicine, adolescent sleep and circadian timing, and innovations in the management of hypersomnia. Dr. Germain said attendees won’t want to miss keynote speaker David Holtzman, MD, who will discuss his research into the relationship between sleep and Alzheimer’s disease during Thursday’s plenary session.

“A lot of Dr. Holtzman's work is looking at how sleep contributes to brain health and brain diseases,” she said. “There’s a lot of media attention on how sleep is really critical for brain health, for children's development and academic performance, and at the other end of aging. It seems like the better your sleep, the better your brain health, even long-term.”

The virtual plenary session also will include recognition of the AASM and SRS 2020 award recipients and special tributes to sleep leaders we lost in the past year, including William Dement, MD, PhD, Christian Guilleminault, MD, and Mark Mahowald, MD. A special musical guest also will give you a preview of the virtual Blues Night Tribute to Dr. Dement, which will be held Saturday evening, Aug. 29.

Shifting from an in-person to virtual meeting gave the APSS Program Committee an opportunity to incorporate the most current discoveries into sleep-related issues linked to the coronavirus. Three sessions will tackle how the pandemic has impacted sleep, mental health and sleep in health care workers, and sleep medicine services.

Poster presentations will be available for review throughout the meeting, and attendees can browse the virtual exhibit hall and schedule appointments to meet virtually with company representatives to learn more about their products and services.

Virtual SLEEP attendees can download the meeting app by searching for “SLEEP meeting” in your app store. There, you can review the Virtual SLEEP schedule of events, build a personal calendar and connect with other attendees.

Recorded sessions will be available until Aug. 1, 2021, so you can continue to view sessions well after the meeting has ended.
SLEEP is the premier world forum to present and discuss the latest developments in clinical sleep medicine and sleep and circadian science.

Program Committee
Anne Germain, PhD, Chair
University of Pittsburgh School of Medicine
(On leave)
PITTSBURGH, PA

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Department of Neurology
LOS ANGELES, CA

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NEW YORK, NY

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BOULDER,CO

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Wayne State University School of Medicine
DETROIT, MI

Steve Van Hout, Executive Director

What’s Inside
Virtual Sleep Store ........................................ 8
General Information ........................................ 9
Invited Lecturers ............................................. 13
Sponsors and Corporate Supporters ............ 16
Award Recipients ........................................... 18
In Memoriam .................................................. 23
Q&A with Dr. David Holtzman ...................... 26
Download the App .......................................... 29
Schedule at a Glance .................................... 30
Postgraduate Courses ................................... 36
Industry Supported Events ......................... 40
Late Breaking Abstracts ............................... 42
Exhibitors ..................................................... 46
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Ad Index

Avadel .......................................................... 28
Ectosense ...................................................... 17
Eisai - Corporate Advocacy ........................... 24, 56, 58
Fisher & Paykel Healthcare ............................... 10
Harmony Biosciences ........................................ 02
Itamar .......................................................... 56
Idorsia .......................................................... 57
Jazz Pharmaceuticals ......................................... 6, 12, 25
Merck ............................................................ 55
Nox Medical .................................................... 11, 35
Philips ............................................................ 34, 41
Sleep ISR ....................................................... 39
SleepTM ......................................................... 25
S.L.P./Sleep Sense ........................................... 43

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On our website at foundation.aasm.org and learn about our commitment to sleep health.
Visit the Virtual SLEEP 2020 Store!

» SAVE BIG on products at the Virtual SLEEP Store
» PURCHASE on-demand learning modules, textbooks, brochures and more at a discounted price
» 15% OFF all products in the store for Virtual SLEEP 2020 attendees
» SAVE 25% on pre-discounted SLEEP 2020 bundles

Check your email for daily specials.

Beginner’s Bundle
- The AASM Manual for the Scoring of Sleep and Associated Events v2.6 (Print)
- An Introduction to Sleep Disorders (Print/Online)
- A Provider’s Introduction to Sleep Medicine
  Member: $325 | $245  | Non-member: $550 | $400

Board Review Bundle
- 2020 Sleep Medicine Board Review Self-Assessment Exam
- Sleep Qs Board Review
- 2019 Sleep Medicine Essentials On-Demand
- 2018 Sleep Medicine Essentials On-Demand
- 2018 Intensive Scoring Review On-Demand
  Member: $1,275 | $955  | Non-member: $2,200 | $1,650

New Product Bundle:
- Sleep Qs: Board Review
- 2020 Sleep Medicine Board Review Self-Assessment Exam
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- EKG Interpretation
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CME/MOC Bundle:
- (68.75 CME and MOC – ABIM, ABOHNS, ABP)
- 2020 Sleep Medicine Trends On-Demand
- 2019 Sleep Medicine Essentials On-Demand
- 2019 Sleep Medicine Trends On-Demand
  Member: $1,400 | $1,050  | Non-member: $2,100 | $1,575

Sleep Tech Bundle
- SLEEP 2019 Tech Track On-Demand
- The AASM Manual for the Scoring of Sleep and Associated Events v2.6 (Print)
- Technologist’s Handbook for Understanding and Implementing the Scoring Manual (Print)
  Member: $490 | $370  | Non-member: $895 | $670

Sleep Study Scoring Exam 1, 2, & 3
- Electrode Placement: A Guide to an Accurate Sleep Study
- A Technologist’s Introduction to Pediatric Sleep Medicine
- EKG Interpretation

Don’t forget your souvenir!
SLEEP 2020 Plush Eagle
(Member: $10 | Non-member: $15; free with orders over $200 and a physical product)

Basics of Sleep Guide
(Member: $35 | $30  | Non-member: $50 | $40

*Discounted prices valid 8/27-8/30 and are reflected at checkout for SLEEP 2020 attendees. Discounts do not apply to membership, event registration or services. Discount is valid at the time of purchase only and cannot be combined with previous or future purchases. Other exclusions may apply.
Exhibit Hall
The Virtual SLEEP 2020 exhibit hall showcases virtual booth displays of pharmaceutical companies, equipment manufacturers, medical publishers, and software companies.

Exhibit Hall Hours
The Exhibit Hall will be open 24/7 with dedicated attendee engagement time scheduled from 12:15 PM - 2:00 PM Central and 4:45 PM - 6:00 PM Central, Friday (8/28) through Sunday (8/30).

Press
Members of the press are encouraged to utilize the virtual press room on www.sleepmeeting.org. The press room has resources to assist reporters with their stories, including detailed information on the participating organizations and study abstracts. Reporters can contact the APSS public relations staff for assistance in scheduling an interview with presenters and abstract authors. Corinne Lederhouse, Communications Coordinator, clederhouse@sleepmeeting.org

Virtual SLEEP 2020 Store
Visit the Virtual SLEEP Store where attendees can receive special discounts on AASM and SRS products to continue their education in sleep long after the meeting!

Terms of Use
Virtual SLEEP 2020 content is for individual use only and is not transferable.

Agreement to Online Conduct
SLEEP provides a welcoming environment to all participants. The Associated Professional Sleep Societies, LLC (APSS) reserves the right to rescind access for those who disrupt the meeting or diminish the learning environment for others.

Online Recording and Visual Capture by the APSS
Webinars, virtual sessions, or courses may be recorded or captured by APSS or its agents in any form of media by and with the consent of APSS for eventual
resale or other commercial or non-commercial use. As a registered participant joining or attending a webinar, virtual session or course, you consent to such recording of the live event, which may include your participation and interaction.

**Recording and Visual Capture by Attendees**

No participant may make audio or video recordings of Virtual SLEEP sessions.

**Postgraduate Courses**

The SLEEP general registration fee does not include access to the on-demand Postgraduate Courses. You must purchase admission to access any SLEEP 2020 Postgraduate Courses. Postgraduate Course registrants will have access to purchased courses until August 1, 2021. Purchase a Postgraduate Course or all courses with a discounted bundle [here](#).

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**SLEEP 2020 Abstract Supplement**

All abstracts from SLEEP 2020 are published in an online abstract supplement of the journal SLEEP. To view these abstracts, visit [www.sleepmeeting.org/abstract-supplements](http://www.sleepmeeting.org/abstract-supplements).

**Claim Credit**

To claim credit from the meeting, complete the evaluation for each session you attend within the website or mobile app. The deadline to claim credit is August 6, 2021. Individuals who have not claimed their continuing education credits by this date will be unable to do so. More information is available at [sleepmeeting.org/continued-education](http://sleepmeeting.org/continued-education).

**We Want Your Feedback - Help Improve SLEEP**

All attendees are requested to evaluate the conference overall on August 30 after the close of the last session. The survey feature will close on September 12, 2020. The APSS Program Committee will use this information to plan future events.

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Virtual SLEEP 2020 ePosters are only available from August 28-30, so be sure to check them out before they're gone! Browse by title, author, track, keyword, or peruse the e-Poster Gallery! Authors were encouraged to record a brief elevator speech about their research, available to you on-demand at the simple click of a button.

ePosters are denoted with a document icon to the right of the abstract title. Audio presentations are denoted with a speaker icon to the right of the abstract title.

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Invited Lecturers

★ KEYNOTE SPEAKER

David M. Holtzman, MD
Professor and Chair of Neurology, Scientific Director of the Hope Center for Neurological Disorders, and Associate Director of the Knight ADRC, Washington University in St. Louis

Sleep and Alzheimer’s Disease: Bi-Directional Relationship With Amyloid-B and Tau

Some of Dr. Holtzman’s lab’s accomplishments include showing in part how apoE4 contributes to Alzheimer’s disease (AD), development of a method to measure protein synthesis and clearance in the CNS of animals and humans, development of CSF biomarkers for AD, and development of an anti-Aβ and an anti-tau antibody now in clinical trials for AD. Holtzman is a past president of the American Neurological Association and has trained more than 50 graduate students, post-doctoral fellows, and physician-scientists, many of whom have gone on to successful careers in academia and industry.

Richard B. Berry, MD
Professor of Medicine, University of Florida Medical Director, University of Florida Health Sleep Disorders Center

The Future of Scoring/PSG

Richard B. Berry, MD is a staff physician at the Malcom Randall VA and the director of the UF Sleep Medicine Fellowship. Berry served as a member of the AASM Board of Directors, as president of the AASM Foundation, and is the current deputy editor of the Journal of Clinical Sleep Medicine. He received the AASM Excellence in Education Award in 2010 and the Stuart Quan Award for Editorial Excellence in 2019. His research interests include home sleep apnea testing, treatments for obstructive sleep apnea including positive airway pressure, and facets of polysomnography technology.

Steven A. Brown, PhD
Professor of Chronobiology and Sleep Research, University of Zurich

Molecular and Circuit Aspects of Circadian Sleep Regulation

Steven A. Brown, PhD, conducted undergraduate research in yeast genetics and graduate studies on chromatin biochemistry at Harvard. He then moved to Geneva for postdoctoral work, where he first studied biological clocks and sleep in the laboratory of Ueli Schibler. After a stay at Charité Universitätsmedizin as a Humboldt fellow, Brown returned to Switzerland in 2007 as an assistant professor and then professor. Brown’s laboratory studies the molecular mechanisms and neural circuits underlying sleep and diurnal behavior, using human cells and mouse models. By biochemically fractionating cortical synapses, his lab has shown how sleep and circadian influences cooperate to regulate the synaptic dynamic.

Chandra L. Jackson, PhD
Earl Stadtman Investigator, National Institute of Environmental Health Sciences National Institute on Minority Health and Health Disparities

Sleep Disparities: Refining the Narrative to Ask Informative Research Questions

Chandra L. Jackson, PhD leads the Social and Environmental Determinants of Health Equity Research group in the Epidemiology Branch of the National Institute of Environmental Health Sciences with a joint appointment in the National Institute on Minority Health and Health Disparities. Jackson investigates physical and social environmental factors that impact disparities in sleep health and subsequent risk of cardiometabolic dysfunction, including obesity and type 2 diabetes. Her research has been presented at national scientific conferences and published in both academic journals like Lancet, JAMA Internal Medicine, the American Journal of Epidemiology, and SLEEP as well as major media outlets such as the US News & World Report and The New York Times.
Invited Lecturers

THOMAS ROTH
LECTURE OF EXCELLENCE

Mary A. Carskadon, PhD
Professor, Warren Alpert Medical School of Brown University
Director, Chronobiology and Sleep Research Laboratory at Bradley Hospital

Adolescent Sleep, Sleepiness, and Circadian Timing

Mary A. Carskadon, PhD’s early research with her graduate mentor, William C. Dement, culminated in the development and application of a standardized measure for daytime sleep tendency, the multiple sleep latency test. A major focus of Carskadon’s scientific activities is research examining interrelations between the circadian timing system and sleep/wake patterns of children, adolescents, and young adults. Carskadon has received awards from several national organizations recognizing her scientific, educational, and public policy contributions. She is an elected Fellow of the Association for Psychological Science and of the American Association for the Advancement of Science.

Rachel Manber, PhD
Professor, Stanford University
School of Medicine

Cognitive Behavioral Therapy for Insomnia: New Frontiers

Rachel Manber, PhD, DBSM has conducted clinical sleep research focused on cognitive behavioral therapy for insomnia (CBTI) in specific populations, including insomnia comorbid with depression, insomnia comorbid with sleep apnea and perinatal insomnia. She led the development of a nationwide dissemination project in the VA for training licensed mental health providers to deliver cognitive behavioral therapy for insomnia. Her current research focuses on issues related to enhancing broad implementation of CBTI, including the use of stepped care strategies.

Nita Shattuck, PhD
Professor, Naval Postgraduate School in Monterey, CA

Sleep in the Wild: Studying Sleep on the High Seas and Beyond

Nita Shattuck, PhD teaches courses in human factors engineering and human systems integration, directs thesis research, and pursues her research interests in human fatigue in operational settings, individual and team performance, decision-making, and military command and control. In her work with the military, Shattuck has studied the effects of fatigue, sleep deprivation, thermal stress, and acceleration in various operational and laboratory environments. She served as advisor to the President’s Emergency Operations Center of the White House, documenting improvements in sleep and morale following adoption of a novel watchbill. Her work has resulted in sweeping changes to U.S. Navy policy that now mandates the use of circadian-based watchbills and emphasizes benefits of crew rest practices.

Phyllis Zee, MD, PhD
Chief of the Division of Sleep Medicine, Northwestern University
Professor, Northwestern University
Director, Center for Circadian and Sleep Medicine

Circadian Medicine: Journey Through Time

Phyllis C. Zee, MD, PhD is the founder of the first circadian medicine clinic in the U.S., where innovative treatments are available for patients with circadian rhythm disorders. Zee is a past president of the Sleep Research Society, a fellow of the American Academy of Sleep Medicine, fellow of the American Academy of Neurology and member of the American Neurological Association. She is the recipient of the 2014 American Academy of Sleep Medicine William C. Dement Academic Achievement Award.
Go SLEEP Walking in the Exhibit Hall starting August 28!

» Scan exhibitor QR codes through the mobile app and correctly answer as many scavenger hunt questions as possible and see your name rise to the top of the leaderboard!

» Find the SLEEP Walking QR codes scattered around the Exhibit Hall, SLEEP Store and throughout the virtual meeting website.

» The top 3 contestants on the leaderboard will win the following prizes. Winners will be notified September 5th.

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$750 Amazon Gift Card & Free 2021 AASM or SRS Membership

2nd Place
$250 Amazon Gift Card & Free 2021 AASM or SRS Membership

3rd Place
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- Harmony Biosciences
- Med Learning Group
- REMfresh

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- Advanced Brain Monitoring
- American Academy of Sleep Medicine
- Arbor Pharmaceuticals, LLC
- BioSerenity, Inc.
- Brain Vision
- Cadwell Industries, Inc.
- CleveMed
- Compumedics
- Ectosense Group/Sleep Company
- EnsoData, Inc.
- General Sleep Corporation
- Inspire Medical Systems
- Jazz Pharmaceuticals
- Metro Health U of MI
- Nonin Medical, Inc.
- Oxford University Press
- Respica
- RhythmLink
- S.L.P./SleepSense
- Sizewise
- Sleep Research Society
- Sleep ISR
- SleepStation
- SleepTM
- SNU
- Mask Liners
- Somnoware Healthcare Systems
- SRS Foundation
- Virtuox, Inc.

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Meet Your 2020 SRS Award Recipients

The Sleep Research Society has selected three outstanding sleep and circadian scientists as recipients of the 2020 Sleep Research Society awards, which recognize excellence in sleep and circadian research.

**PHYLLIS C. ZEE, MD, PHD**

*Phyllis C. Zee, MD, PhD*

**RICHARD P. ALLEN, PHD**

*Richard P. Allen, PhD*

Dr. Zee is the Benjamin and Virginia T. Boshes Professor of Neurology and professor of neurobiology at Northwestern University in Chicago, Illinois. She is also the director of the Center for Circadian and Sleep Medicine (CCSM) and chief of the Division of Sleep Medicine at Northwestern University’s Feinberg School of Medicine. Dr. Zee is the founder of the first circadian medicine clinic in the U.S., where innovative treatments are available for patients with circadian rhythm sleep-wake disorders. She is a fellow of both the American Academy of Sleep Medicine and American Academy of Neurology, and she is a member of the American Neurological Association. She is the recipient of the 2014 American Academy of Sleep Medicine William C. Dement Academic Achievement Award.

“It is an immense honor to receive this award. It represents the recognition and appreciation of the significant role circadian rhythms have on sleep and nearly all biological functions, and especially how the work performed by the many talented scientists and distinguished collaborators in the field have helped translate this knowledge into clinical medicine. I want to thank members of my laboratory, the SRS board and my colleagues who nominated me for this award.”

- Phyllis C. Zee, MD, PhD

Dr. Allen is a professor in the department of neurology at the Johns Hopkins University School of Medicine. He founded and co-directed the Sleep Disorders Center and the Center for Restless Legs Syndrome at Johns Hopkins. He also served as chair of the medical advisory board for the Restless Legs Syndrome Foundation, chair of the International Restless Legs Syndrome Study Group, and president of the World Association of Sleep Medicine (now World Sleep Society). He had a central role in defining the current diagnostic standards for RLS and the new standards for iron treatments of RLS and scoring periodic limb movements. He has published more than 300 peer-reviewed articles on sleep disorders including pioneering work on RLS augmentation, dopamine and intravenous iron RLS treatments.

“I’m honored and humbled to receive this very prestigious award from the Sleep Research Society. I’ve spent the last 40 years with a singular focus, studying and thinking about restless legs syndrome. Maybe it seems tiresome to be so exclusively focused on only one sleep disorder, but rather than boring drudgery, it’s been a privilege and one hell of an exciting adventure in discoveries. I have had the privilege of working with many wonderful colleagues, particularly Diego Garcia-Borreguero and John Winkelman and others, far too many to name. But most important has been the uniquely close and remarkably productive 30-year collaboration I have had with Christopher Earley. The work would not have continued without him. I feel this award belongs as much to Chris as to me.”

- Richard P. Allen, PhD
Meet Your 2020 SRS Award Recipients

ALLAN I. PACK, MBCHB, PHD

Mary A. Carskadon Outstanding Educator Award for excellence in education related to the sleep and circadian research field.

Dr. Pack is the John Miclot Professor of Medicine at the University of Pennsylvania. He was the founding director of the Center for Sleep and Circadian Neurobiology and the Division of Sleep Medicine at the University of Pennsylvania. These are the first multidisciplinary, independent sleep research and clinical sleep medicine programs to be established at any medical school in the United States. Dr. Pack's current area of focus is on functional genomic approaches to sleep and its disorders. A major component of his research relates to the pathogenesis and consequences of the common disorder, obstructive sleep apnea. He is internationally recognized for his expertise in this area and has been listed in the Best Doctors in the United States and in the Philadelphia region (Philadelphia Magazine). Dr. Pack currently directs three T32 grants from NIH to support research training.

“One of the most important things an investigator can do is to take active steps to ensure the next generation of investigators. My colleagues and I at the University of Pennsylvania have made this a major focus of our activities over the last 30 years. Many individuals we have trained are in faculty positions in multiple institutions in the United States and Canada. We have sought to do our part to ensure a robust pipeline of new investigators.”

- Allan I. Pack, MBChB, PhD

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Why Join the SRS?

An SRS membership is not only a vital tool for your career growth, but also to help support and grow sleep and circadian research. For over 50 years, the Sleep Research Society (SRS) has equipped scientists to maximize their professional potential.

Today, the SRS continues to advance the investigation of sleep and sleep disorders, promote training and education in sleep research, and provide forums for the exchange of knowledge pertaining to sleep and circadian research.

Join the SRS and receive:

- Education and training opportunities with leaders in the field
- Significant discount on SRS meeting registration fees
- Full access to the archives of SRS publications including Journal SLEEP and SLEEP Advances
- Advocating for increasing NIH research dollars
- Opportunity to apply for grants and awards that recognize and support outstanding sleep research

sleepresearchsociety.org/membership/
Several leaders in the field of sleep medicine and two members of Congress are recipients of the 2020 American Academy of Sleep Medicine awards.

**RICHARD B. BERRY**  
**MD, FAASM**

**Nathaniel Kleitman Distinguished Service Award**  
for dedication to the sleep field and significant contributions in the areas of administration, public relations and government affairs.

Dr. Berry is professor of medicine at the University of Florida in Gainesville, medical director of the UF Health Sleep Center and director of the UF Sleep Medicine Fellowship. He also is a staff physician at the Malcom Randall VA Medical Center. Dr. Berry is deputy editor of the Journal of Clinical Sleep Medicine, past president of the AASM Foundation, and served on the AASM Board of Directors. He was chair of the AASM Sleep Apnea Definitions Task Force, the NPPV Titration Task Force and the AASM Scoring Manual Editorial Committee. Dr. Berry received the AASM Excellence in Education Award in 2010 and the Stuart Quan Award for Editorial Excellence in 2019. He served on the first American Board of Internal Medicine Sleep Medicine Test-Writing Committee and wrote “Sleep Medicine Pearls,” a popular sleep medicine textbook. His research interests include home sleep apnea testing, treatments for obstructive sleep apnea including positive airway pressure, and polysomnography technology.

“I am deeply honored to be selected for the AASM 2020 Nathaniel Kleitman Award. It has been my pleasure to work with many dedicated sleep physicians and AASM staff members over the years and to contribute to the growth of sleep medicine. I am fortunate to have practiced sleep medicine for over 35 years and continue to find it a challenging and rewarding experience.”

- Richard B. Berry, MD, FAASM

**ATUL MALHOTRA, MD, FAASM**

**William C. Dement Academic Achievement Award**  
for exceptional initiative and progress in the areas of sleep education and academic research.

Dr. Malhotra is a pulmonary, critical care and sleep medicine physician at the University of California San Diego School of Medicine. His research interests include the pathogenesis of obstructive sleep apnea and the pathophysiology underlying its complications. He runs a large NIH-funded laboratory and is the author of more than 500 research articles, books, chapters and reviews. A highly sought-after expert in sleep medicine, Dr. Malhotra has delivered hundreds of lectures in the U.S. and around the world and has appeared in dozens of media reports on sleep and sleep disorders.

“I am honored to receive this recognition, which I accept on behalf of my team including countless clever mentees and collaborators who have been the brains and energy behind the progress we have made. I often paraphrase Michael Jordan with, ‘There is no I in team,’ and Harry Truman with, ‘It is amazing what you can accomplish if you do not care who gets the credit.’ I feel like we are in the early stages of understanding sleep and sleep disorders, so I am excited to see what we all learn in the coming years.”

- Atul Malhotra, MD, FAASM
MADELEINE M. GRIGG-DAMBERGER, MD, FAASM

Excellence in Education Award for outstanding contributions in the teaching of sleep medicine.

Dr. Grigg-Damberger is professor of neurology at the University of New Mexico School of Medicine where she also serves as medical director of Pediatric Sleep Medicine Services, associate director of the Clinical Neurophysiology Laboratory and program director of the Clinical Neurophysiology Fellowship Training Program. A member of the editorial board of the Journal of Clinical Sleep Medicine, Dr. Grigg-Damberger also helped develop the AASM criteria for recording and scoring polysomnography in adults, children, and most recently, infants.

“I teach what I learn. The growing breadth, complexity, and intricacies of sleep medicine continue to captivate me. I study, put what I learn into clinical practice, see what works and makes sense, then teach what I learn to others. Observing the achievements, accomplishments and successes of those I have taught has given me pleasure and pride. I am grateful to the American Academy of Sleep Medicine, my favorite academic home for 35 years, a place of collegial colleagues, eager and earnest fellows, forward thinking, and congenial collaboration.”

- Madeleine M. Grigg-Damberger, MD, FAASM

REPRESENTATIVE ZOE LOFGREN AND REPRESENTATIVE RODNEY DAVIS

Mark O. Hatfield Public Policy or Advocacy Award for developing public policy that positively affects the healthy sleep of all Americans.

Representatives Zoe Lofgren (D-Calif.) and Rodney Davis (R-Ill.) are sponsors of the Sleep Health Caucus in the U.S. Congress. Their leadership will guide the prioritization of sleep health at the federal level to support the AASM in advancing sleep care and enhancing sleep health to improve lives. Rep. Lofgren also sponsored the “ZZZ’s to A’s Act,” a House Bill directing the U.S. Department of Education to study the relationship between school start times and adolescent health, well-being and performance. Studies show that later school start times help reduce tardiness, enhance academic performance and improve teen driving safety.

“Receiving adequate sleep is important to the health of individuals at all ages. I am grateful to receive the 2020 AASM Mark O. Hatfield Award and look forward to working with Chairperson Lofgren in leading the Sleep Health Caucus.”

- Representative Rodney Davis

Meet Your 2020 AASM Award Recipients

MEMBERSHIP HAS ITS ADVANTAGES

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The American Academy of Sleep Medicine (AASM) is the leading voice in the sleep field. The AASM sets standards and promotes excellence in sleep medicine health care, education, and research.

AASM.org/benefits

*Membership through 12/31/2021

With membership you gain access to invaluable benefits:

• Sleep medicine clinical practice guidelines.
• Free access to the online AASM Scoring Manual 2.6.
• Free members-only access to the Case Study of the Month.
• Earn MOC/CME/CEC through our FREE self-assessment exams, live events and coding education programs.
A TRIBUTE TO
Dr. Bill Dement
BLUES NIGHT
LIVESTREAM FROM 6 P.M. TO 8:30 P.M. CDT

Featuring the
Chicago Blues All-Stars

MORE INFO

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Eisai
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Brought to you by
American Academy of Sleep Medicine
Sleep Research Society
The American Academy of Sleep Medicine and Sleep Research Society remember the mentors, colleagues, and friends who have passed away in the time since we met last June in San Antonio for SLEEP 2019.

We are grateful for their many contributions to the fields of sleep medicine and sleep and circadian research.

William C. Dement, MD, PhD

“The Father of Sleep Medicine,” Dr. Dement was the founding president of the AASM, serving in the position for 12 years, and he played a pivotal role in establishing the SRS. His lifetime of sleep discoveries began at the University of Chicago in the 1950s, where he and physiologist Nathaniel Kleitman described the human sleep cycle and its sleep stages, and they explored the relationship between REM sleep and dream activity. At Stanford University, where he spent the entirety of his career, he opened one of the world’s first sleep disorders clinics in 1970. As a researcher, clinician, educator, and advocate, Dr. Dement helped build the sleep field with unrivaled passion, dedication, and enthusiasm.

Mark Mahowald, MD

Dr. Mahowald was the 1992 – 1993 AASM president, and he received numerous awards, including the 2010 SRS Outstanding Scientific Achievement Award. He was the medical director of the Minnesota Regional Sleep Disorders Center, and he identified several parasomnias along with his colleague, Carlos Schenck, MD.

Richard Kronauer, PhD

Dr. Kronauer was the Gordon McKay Professor of Mechanical Engineering, emeritus, at Harvard University. He was primarily known for his pioneering work in mathematical biology, especially research on human circadian rhythms, including his 1982 paper, “Mathematical model of the human circadian system with two interacting oscillators.”

Christian Guilleminault, MD

As both a clinician and scientist, Dr. Guilleminault played a foundational role in the establishment and development of the field of sleep medicine. In 1970 he opened one of the world’s first sleep disorders centers in Paris, and in the early 1970s he helped Dr. Dement establish the first full-service sleep disorders clinic in the U.S. at Stanford University. He helped the AASM and SRS develop the first Diagnostic Classification of Sleep and Arousal Disorders in 1979. A renowned sleep researcher, he made significant contributions to the understanding of the physiological and endocrinological changes that occur during sleep. He and Dr. Dement also were the founding editors of the journal Sleep.

Helio Lemmi, MD

Born in Sao Paulo, Brazil, Dr. Lemmi trained as a neurologist at the University of Alabama at Birmingham and became a global leader in sleep medicine and sleep research. In 1977 he founded and directed the Sleep Disorders Center at Baptist Memorial Hospital in Memphis, Tennessee. He also helped establish the Southern Sleep Society.
At Eisai, everything we do is guided by a simple principle: patients and their families come first. We spend time with them. We listen and we learn about their lives, their desires and their greatest needs. We call this human health care or hhc, giving first thoughts to patients and their families and helping increase the benefits health care provides.

Our hhc mission is what drives us to discover innovative solutions and therapies that help address unmet needs within the communities that we seek to serve.

Eisai is proud to support SLEEP 2020.
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Fly over to a special on-demand presentation available here from August 28, 2020 – August 1, 2021!

Presented by

Russell Rosenberg, PhD, D.ABSM
Atlanta, GA

Michael Strunc, MD
Norfolk, VA

Visit the AASM SleepTM booth in the virtual exhibit hall for an exclusive offer!

Register Today at sleeptm.com
SLEEP AND ALZHEIMER’S DISEASE: Q&A WITH DR. DAVID HOLTZMAN

A world-renowned neurologist, David M. Holtzman, MD, will deliver the keynote address at Virtual SLEEP 2020, Thursday, Aug. 27. Dr. Holtzman will speak about the bidirectional relationship between sleep and Alzheimer’s disease. We caught up with the professor and chairman of the department of neurology at the Washington University School of Medicine in St. Louis to learn more about his research and get a preview of his presentation.

Dr. Holtzman, thank you, we look forward to hearing your keynote address and are glad you’ll be a part of our virtual SLEEP meeting. Before we discuss your research and presentation, let’s spend just a moment on the current situation impacting all of us.

How have you been managing through the pandemic?

DH: In regard to research, between mid-March and the beginning of May, my lab was doing a lot of data analysis and writing from home and just coming into the lab for essential experiments of maintaining different colonies of mice that we have put years and years of effort into. By May, we started back to having all the scientists back in the lab but on a seven day a week schedule with two shifts a day to carry out work with all the appropriate social distancing and other precautions. In terms of performing research, we are back up to normal levels with the caveats listed here.

Are you shifting any of your research focus to COVID-19? It was thought to be mainly respiratory, but now we’re learning COVID may have long-term impacts on all parts of the body.

DH: My own lab is not working on the relationship between COVID-19 and the nervous system directly. However, a number of investigators both at Washington University and elsewhere are working on the potential direct and indirect effects of COVID-19 on the nervous system. We have been thinking about trying to study middle-aged and elderly people who developed COVID-19 and have gotten through it to determine if it might have any long-term effects on the brain.

Tell us about your interest in neurology and Alzheimer’s research. How did this become your life’s work?

DH: I started getting interested in neuroscience and Alzheimer’s disease (AD) when I was in medical school. I remember a lecture during my second year of medical school in 1982 about neurodegenerative diseases. At that time, we knew so little about AD, but it was around that time that the selective vulnerability of different parts of the brain in AD was just being described. Not only was that interesting, but it was becoming clear that for one of the most impactful diseases to humans, we knew so little. I remember thinking that this is really something I want to study as the potential impact was so great.
We’re learning more every day about the importance of sleep to our overall health, including brain health and function. Tell us a bit about what you’ve uncovered in your research into sleep and brain health.

DH: Well, I kind of stumbled into the work relating sleep to AD. There are two main proteins that aggregate and accumulate in the AD brain that are important in AD pathogenesis, amyloid-β (Aβ) and tau. My lab was studying what normally regulates the levels of these proteins in the normal brain because one of the things that drives them to aggregate and accumulate is the absolute level of the normal, soluble forms of these proteins. In the process of determining this, we ended up finding that both extracellular levels of both proteins are directly regulated by whether one is awake or asleep. Once we found this, we have been studying how manipulating the sleep-wake cycle both acutely and chronically could alter Aβ and tau levels, not as a consequence but as a cause of AD pathogenesis.

Can you give us a preview of the research you’ll discuss in the Virtual SLEEP keynote address—that’s there’s a bidirectional relationship between sleep and Alzheimer’s?

DH: I will discuss the findings just mentioned, which describe how manipulations of the sleep-wake cycle acutely and chronically regulate Aβ and tau levels as well as how the accumulation of these proteins appears to disrupt the sleep-wake cycle.

How can sleep scientists and researchers help the medical community better understand the role of sleep in Alzheimer’s and hopefully get us closer to a treatment?

DH: By understanding how the different aspects of sleep and wake influence the underlying pathology of AD, this has the potential to provide insights into novel ways to develop preventions and/or treatments for AD.

Thank you, Dr. Holtzman. We look forward to hearing your presentation during the Virtual SLEEP 2020 plenary session, which will be livestreamed at 7 p.m. CDT on Thursday, Aug. 27.
Advancing narcolepsy treatment. *Once* and for all.

Avadel is committed to the narcolepsy community.

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**Visit booth #413 to learn more.**
Download the SLEEP Meeting app to play SLEEP Walking and enjoy all of the benefits Virtual SLEEP 2020 has to offer.
Bench to Bedside Integrated Sessions focus on the latest advances in translational science and clinical applications on a specific topic.

COVID-19 and Sleep Sessions based around the impact of the COVID-19 pandemic on the fields of sleep medicine and circadian and sleep research.

Discussion Groups are forums for informal presentations of a specific topic, which may include conversations on controversial topics or pro/con discussions and presentations.

Rapid-Fire Symposia are fast-paced sessions led by junior-level investigators/clinicians focusing on the latest data and ideas in the field.

Invited Lectures feature senior-level investigators/clinicians presenting on their areas of expertise.

Oral Presentations feature investigators presenting their latest research and new ideas in the field.

Symposia focus on the latest data and ideas in the field.

Technologist Track is dedicated to sleep technologists and is designed to accommodate all levels of sleep technologists and is valuable to all members of the sleep team.

Clinical Workshops are reviews of patient-related and business-related aspects of sleep centers. Workshops address difficult clinical situations, business challenges, and trends that clinicians experience in their daily practices.

### Plenary Session

**Thursday, August 27, 2020, 7:00 PM – 9:00 PM CDT**

**Keynote Speaker: David M. Holtzman, MD**

Sleep and Alzheimer’s Disease: Bi-Directional Relationship With Amyloid-β and Tau
## Session Types:
- **B**: Bench to Bedside
- **D**: Discussion Groups
- **F**: Rapid-Fire Symposia
- **I**: Invited Lecturers
- **O**: Oral Presentations
- **S**: Symposia
- **COV**: COVID-19 and Sleep
- **W**: Clinical Workshops

### Live Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:30 AM - 11:15 AM</td>
<td>S-07: Broken Liver, Broken Sleep, Broken Thinking: Is the Key in the Clock? 9:30 AM - 11:15 AM</td>
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<tr>
<td>9:45 AM</td>
<td>S-08: Phenotyping OSA Based on EDS and Cardiovascular Morbidity: Age and Gender Effects 9:30 AM - 11:15 AM</td>
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<tr>
<td>10:00 AM</td>
<td>B-01: Mechanisms of Fatigue: From Cells to Humans 9:30 AM - 11:15 AM</td>
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<td>10:15 AM</td>
<td>S-09: Solutions for Childhood Insomnia: Diverse Approaches for Managing Disturbed Nights in Children to Improve Their Days 9:30 AM - 11:15 AM</td>
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<td>10:30 AM</td>
<td>T-06: Advanced Titration Protocols for the Sleep Lab 9:30 AM - 11:15 AM</td>
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<td>10:45 AM</td>
<td>B-02: Thinking Big with Sleep and Circadian Rhythms: Leveraging Open Source Algorithms, Wearable Technology, and Big Data 9:30 AM - 11:15 AM</td>
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<td>11:00 AM</td>
<td>S-10: Overlap of Insomnia, RLS, and Periodic Leg Movements During Sleep: Insights from Human Genetics 9:30 AM - 11:15 AM</td>
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<td>11:15 AM</td>
<td>T-08: Practical Anatomy and Physiology of Sleep-Disordered Breathing 9:30 AM - 11:15 AM</td>
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### On Demand Sessions

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<th>Session</th>
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<tbody>
<tr>
<td>9:30 AM - 11:15 AM</td>
<td>O-05: OSA: Epidemiology and Diagnosis 11:30 AM - 12:15 PM</td>
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<tr>
<td>11:30 AM - 12:15 PM</td>
<td>O-06: Sleep Deprivation Effects on Performance and Injury 11:30 AM - 12:15 PM</td>
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<tr>
<td>11:30 AM - 12:15 PM</td>
<td>I-05: Sleep Disparities: Refining the Narrative to Ask Informative Research Questions 11:30 AM - 12:15 PM</td>
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<td>11:30 AM - 12:15 PM</td>
<td>T-07: Sleep-Related Movement Disorders 11:30 AM - 12:15 PM</td>
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### Exhibit Hall IS OPEN!

Accessible 24 hours a day, you can watch presentations, send direct messages to exhibitors, have live interactions and “visit” booths at your leisure.

### Live Networking Events

- **4:45 PM - 6:00 PM**: Hot Topic Discussions, Exhibit Hall | Poster Hall

### After Hours Event

- **6:00 PM**: Blues Night Tribute to Dr. Dement
**Session Types:**
- B: Bench to Bedside
- D: Discussion Groups
- F: Rapid-Fire Symposia
- I: Invited Lecturers
- O: Oral Presentations
- S: Symposia
- COV: COVID-19 and Sleep
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**Live Sessions**

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<tbody>
<tr>
<td>9:30 AM</td>
<td>D-02: Sleep Medicine Around the World: A Session from the AASM International Members Taskforce 9:30 AM - 11:15 AM</td>
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<tr>
<td>9:45 AM</td>
<td>O-11: Mechanisms and Function of Sleep on Memory 9:30 AM - 11:15 AM</td>
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<tr>
<td>10:00 AM</td>
<td>W-02: Tailoring RLS Treatment Throughout the Next Decade: From Bench to Bedside 9:30 AM - 11:15 AM</td>
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<td>10:30 AM</td>
<td>S-11: From the Lab to the Real World: Sleep as a Mechanism and Intervention Target for Mood Symptoms and Suicidality in Adolescents 9:30 AM - 11:15 AM</td>
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<td>11:15 AM</td>
<td><strong>Break 11:15 AM - 11:30 AM</strong></td>
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<td>11:30 AM</td>
<td>F-03: Sleeping with Our Emotions: Novel Insights Regarding Sleep-Associated Emotion... 11:30 AM - 12:15 PM</td>
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<td>11:45 AM</td>
<td>I-07: Circadian Medicine: Journey Through Time 11:30 AM - 12:15 PM</td>
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<td>12:00 PM</td>
<td>O-12: Eyes Wide Open: Pediatric Insomnia 11:30 AM - 12:15 PM</td>
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<td>12:15 PM</td>
<td>O-13: OSA and Comorbid Overlap 11:30 AM - 12:15 PM</td>
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<td>12:30 PM</td>
<td>O-14: Physical Activity, Physical Symptoms, Mental Symptoms, and Sleep Quality 11:30 AM - 12:15 PM</td>
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<td>12:45 PM</td>
<td><strong>Break 12:15 PM - 2:00 PM</strong></td>
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<td>2:00 PM</td>
<td>S-12: Advances in Light Exposure Measurement and Optimal Lighting for Promoting Sleep, Wakefulness, and Circadian Health 2:00 PM - 3:45 PM</td>
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<td>2:15 PM</td>
<td>F-04: The Impact of Sex as a Biological Variable in Health: Sex Differences in Sleep Regulation, Light Sensitivity, Cognition, and Insomnia 2:00 PM - 3:45 PM</td>
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<tr>
<td>2:30 PM</td>
<td>COV-02: Navigating Sleep Medicine Services During the Pandemic: Realities, Challenges and Potential Solutions 2:00 PM - 3:45 PM</td>
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<td>2:45 PM</td>
<td>W-03: Behavioral Interventions for Adult Parasomnias: Methods, Evidence, and Case Examples 2:00 PM - 3:45 PM</td>
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<td>3:00 PM</td>
<td>D-04: Value-Based Sleep in the Real World: Alternate Payment Models and Sleep Medicine Practice 2:00 PM - 3:45 PM</td>
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<td><strong>Break 3:45 PM - 4:00 PM</strong></td>
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<td>3:45 PM</td>
<td>COV-03: Sleep and Mental Health in Healthcare Workers During the COVID-19 Pandemic... 4:00 PM - 4:45 PM</td>
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<td>4:00 PM</td>
<td>O-15: Determinants and Outcomes of Sleep and Circadian Health Disparities 4:00 PM - 4:45 PM</td>
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<td>4:15 PM</td>
<td>R-01: Trainee Challenging Cases 4:00 PM - 4:45 PM</td>
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<td>4:30 PM</td>
<td>I-08: Adolescent Sleep, Sleepiness, and Circadian Timing 4:00 PM - 4:45 PM</td>
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<tr>
<td>4:45 PM</td>
<td>O-16: Neurobehavioral Mechanisms and Outcomes of Sleep/Circadian Perturbations 4:00 PM - 4:45 PM</td>
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**On Demand Sessions**

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**Live Networking Events**

4:45 PM - 6:00 PM

Assemblies
Exhibit Hall | Poster Hall

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**Virtual Sleep 2020 Guide** | 33 | Table of Contents
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Satellite Symposium
Telemedicine & Beyond the AHI

At the Virtual SLEEP meeting, Nox Medical will host a satellite symposium titled “Telemedicine & Beyond the AHI” on some of the main challenges in today’s sleep medicine. The discussions will be made available by three excellent speakers:

• Jeffrey S. Durmer, MD, PhD
• Prof. Dr. Christoph Schöbel, MD
• Dennis Hwang, MD
### C-01: Year in Review 2020

*This annual course discusses new perspectives and recent findings in translational science from the past year.*

Content access through August 1, 2021  
**CME** Hours Available: 6.25  
Course Co-Chairs: Romy Hoque, MD and Sigrid Veasey, MD

<table>
<thead>
<tr>
<th>Length</th>
<th>Lecture Title</th>
<th>Speaker</th>
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<tr>
<td>15 min</td>
<td>Introduction</td>
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<tr>
<td>45 min</td>
<td>Telemedicine is Here</td>
<td>Samuel T. Kuna, MD</td>
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<td>45 min</td>
<td>Surgery for the CPAP Intolerant: Are We There Yet?</td>
<td>Raj C. Dedhia, MD</td>
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<td>45 min</td>
<td>Hypersomnia: New Meds, New Phenotypes</td>
<td>David Plante, MD</td>
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<td>45 min</td>
<td>Obesity Hypoventilation: An Update</td>
<td>Atul Malhotra, MD</td>
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<td>Sleep and Stroke: An Update</td>
<td>Romy Hoque, MD</td>
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<td>Emerging Technologies in Sleep Medicine</td>
<td>Jacob Colien, MD</td>
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<td>Putting the Teen Brain to Sleep</td>
<td>Judy Owens, MD</td>
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<td>45 min</td>
<td>Insomnia: New Drugs, New Treatment Modalities</td>
<td>Andrew Krystal, MD</td>
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### C-02: Trends in Sleep Medicine

*This annual course focuses on topics that are important to the practice of clinical sleep medicine.*

Content access through August 1, 2021  
**CME** Hours Available: 6.25  
Course Co-Chairs: Daniel Barone, MD and Shalini Paruthi, MD

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<thead>
<tr>
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<td>Introduction</td>
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<tr>
<td>45 min</td>
<td>Good Night, Sleep Tight: Pediatrics</td>
<td>Shalini Paruthi, MD</td>
</tr>
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<td>45 min</td>
<td>2020 Legal Update: Stark Law, Telemedicine, and Medicare Audits are Trending Now</td>
<td>Daniel Brown, JD</td>
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<tr>
<td>45 min</td>
<td>After ‘The Snap’: Integrating Telehealth into your Sleep Clinic</td>
<td>Loretta Colvin, APRN</td>
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<tr>
<td>45 min</td>
<td>How to Stay Up to Date in Sleep</td>
<td>Nathaniel Watson, MD</td>
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<td>45 min</td>
<td>RBD: You Should Not Always Live Out Your Dreams</td>
<td>Daniel A. Barone, MD</td>
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</table>

### C-03: 2020 State of the Art for Clinical Practitioners

*This annual course focuses on the best practices for evaluating, diagnosing, and treating the most common sleep disorders in clinical practice.*

Content access through August 1, 2021  
**CME** Hours Available: 6.25  
Course Co-Chairs: Julio Fernandez-Mendoza, PhD and Anne Germain, PhD

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<th>Length</th>
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<td>15 min</td>
<td>Introduction</td>
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<tr>
<td>45 min</td>
<td>Insomnia: New Practice Parameters and Treatment of Specific Populations</td>
<td>Colleen E. Carney, PhD</td>
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<tr>
<td>45 min</td>
<td>An Updated Practical Approach to Circadian Rhythm Sleep-Wake Disorders</td>
<td>Bjørn Bjorvatn, MD, PhD</td>
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<td>45 min</td>
<td>New Assessment Methods in Sleep Medicine: Wearables in Clinical Practice</td>
<td>Kelly Baron, PhD</td>
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<td>45 min</td>
<td>Assessment of Daytime Sleepiness and Wakefulness: Updated Protocols for the MSLT and MWT</td>
<td>Donna Arand, PhD</td>
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<td>45 min</td>
<td>Central Hypersomnolence Disorders: Best Practices and Management</td>
<td>Yves Dauvilliers, MD, PhD</td>
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<td>45 min</td>
<td>Obstructive and Central Sleep Apnea Syndromes: Current and Future Therapies</td>
<td>Vsevolod Polotsky, MD, PhD</td>
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<td>45 min</td>
<td>First Line Treatments for RLS: Iron vs. Medications</td>
<td>Diego Garcia-Borreguero, MD, PhD</td>
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<tr>
<td>45 min</td>
<td>Current Approaches to Sleep in Neurological Disorders and Alzheimer’s Disease</td>
<td>Lynn Marie Trotti, MD</td>
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</table>
**C-04: The Basics of Sleep**

*This course provides clinicians and scientists with a background in the fundamental principles and findings that form the core knowledge of the sleep field.*

Content access through August 1, 2021  
**CME Hours Available:** 6.25  
**Course Chair:** James Shaffery, DPhil

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<td>45 min</td>
<td>Normal Human Sleep Across the Life Cycle</td>
<td>Mary Carskadon, PhD</td>
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<tr>
<td>45 min</td>
<td>Neurobiology, Neurochemistry, and Biochemistry of Sleep</td>
<td>Thomas Kilduff, PhD</td>
</tr>
<tr>
<td>45 min</td>
<td>Sleep Physiology: Autonomic Nervous System and Thermoregulation</td>
<td>Ronald Szymusiak, PhD</td>
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<td>45 min</td>
<td>Sleep Physiology: Endocrinology and Immunology</td>
<td>Mark Opp, PhD</td>
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<tr>
<td>45 min</td>
<td>Circadian System and Chronobiology</td>
<td>Kenneth Wright, Jr., PhD</td>
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<tr>
<td>45 min</td>
<td>Genetics of Sleep in Animals and Humans</td>
<td>Paul Shaw, PhD</td>
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<td>45 min</td>
<td>Sleep Deprivation in Humans: Effects on Brain and Behavior</td>
<td>Namni Goel, PhD</td>
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<tr>
<td>45 min</td>
<td>Sleep Disorders and Pharmacology</td>
<td>Andrew Krystal, MD</td>
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*This postgraduate course provides a comprehensive evaluation of healthy and disturbed sleep in pediatrics with a specific focus on the implications on physical, mental, and cognitive health, well-being, and performance.*

Content access through August 1, 2021  
**CME Hours Available:** 6.25  
**Course Co-Chairs:** Sanjeev Kothare, MD and Anne Morse, DO

<table>
<thead>
<tr>
<th>Length</th>
<th>Lecture Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>5 min</td>
<td>Introduction</td>
<td></td>
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<tr>
<td>45 min</td>
<td>Is Infant and Toddler Sleep an Early Predictor of Neurodevelopment and Cognition?</td>
<td>Rebecca M. Spencer, PhD</td>
</tr>
<tr>
<td>45 min</td>
<td>Impact of Poor Pediatric Sleep on Families: What to Recognize and When to Intervene?</td>
<td>Shelly Weiss, MD</td>
</tr>
<tr>
<td>45 min</td>
<td>Understanding Relationships Between Adolescent Sleep Disorders, Anxiety, Depression, Suicide and Substance Abuse</td>
<td>Anna Ivanenko, MD, PhD</td>
</tr>
<tr>
<td>55 min</td>
<td>Sudden Death in Sleep in Childhood: Myth or Reality</td>
<td>Sanjeev Kothare, MD</td>
</tr>
<tr>
<td>45 min</td>
<td>Delayed School Start Times: How to Help When it is Not an Option</td>
<td>Judith Owens, MD</td>
</tr>
<tr>
<td>45 min</td>
<td>Make Real Life Happen for People with Narcolepsy: Nonpharmacological Behavioral and Lifestyle Choices</td>
<td>Anne Morse, DO</td>
</tr>
<tr>
<td>45 min</td>
<td>Impact of Sleep and Circadian Synchrony on Athletic Performance in Adolescents</td>
<td>Madeleine Grigg-Damberger, MD</td>
</tr>
<tr>
<td>45 min</td>
<td>Pediatric and Adolescent OSA: Roles of Diet, Exercise and Appetite</td>
<td>Eliot Katz, MD</td>
</tr>
</tbody>
</table>
## C-06: Behavioral Sleep Medicine: The Latest Trends and Promising Developments Shaping Our Practice in the Future

This course trains attendees in the delivery of evidence-based and cutting-edge behavioral sleep medicine assessment and intervention strategies for various patient subgroups, with consideration of future developments.

Content access through August 1, 2021
CME Hours Available: 6.25
Course Co-Chairs: Jack Edinger, PhD and James Wyatt, PhD

<table>
<thead>
<tr>
<th>Length</th>
<th>Lecture Title</th>
<th>Speaker</th>
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<tr>
<td>15min</td>
<td>Introduction</td>
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<tr>
<td>45min</td>
<td>Consideration of Circadian Rhythms Across Behavioral Sleep Medicine</td>
<td>James Wyatt, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>CBT-I and Hypnotics: Strategies for Combining Treatments and Aiding in Hypnotic Discontinuation</td>
<td>Jack Edinger, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>The Challenge of Treating Insomnia Patients with Objective Short Sleep Duration</td>
<td>Julio Fernandez-Mendoza, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>e-Health Interventions for Insomnia and Related Sleep Disorders</td>
<td>Lee Ritterband, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>Considerations for BSM Interventions in Women</td>
<td>Jennifer Martin, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>Veterans: Special Considerations and BSM Treatment Approaches</td>
<td>Philip Gehman, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>Insomnia with Comorbid Obstructive Sleep Apnea</td>
<td>Jason Ong, PhD</td>
</tr>
<tr>
<td>45min</td>
<td>Using Actigraphy for the Assessment of Sleep/Wake Disorders</td>
<td>Lisa Meltzer, PhD</td>
</tr>
</tbody>
</table>

## C-07: Consumer Sleep Technology: Friend or Foe?

This course explores the ever-changing sleep-related technologies marketed towards patients, with reviews from members of the AASM Clinical and Consumer Sleep Technology Committee.

Content access through August 1, 2021
CME Hours Available: 3.25
Course Chair: Seema Khosla, MD

<table>
<thead>
<tr>
<th>Length</th>
<th>Lecture Title</th>
<th>Speaker</th>
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<tr>
<td>15min</td>
<td>Introduction</td>
<td></td>
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<tr>
<td>45min</td>
<td>Consumer Sleep Technology: What is it and What are We Supposed to do with it?</td>
<td>Scott Ryals, MD</td>
</tr>
<tr>
<td>45min</td>
<td>Sensors and Algorithms: What is Inside the Black Box?</td>
<td>Daniel O’Hearn, MD</td>
</tr>
<tr>
<td>45min</td>
<td>Validation of Consumer Sleep Technologies: How Good is Good Enough?</td>
<td>Cathy Goldstein, MD</td>
</tr>
<tr>
<td>45min</td>
<td>CST from an Industry Perspective: How and Why Sensors are Chosen and How We Approach Validation</td>
<td>Jagdeep Bijwadia, MD</td>
</tr>
</tbody>
</table>

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Speakers: Asim Roy, MD and Patrick Strollo Jr., MD
This activity is supported by an independent educational grant from Jazz Pharmaceuticals, Inc.

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LBA 1

Sleeping While Diving: First Non-Invasive Recording of Sleep in Freely Swimming Marine Mammals

Kendall-Bar, J.M.1; Pitman, J.K.2; Field, C.L.3; Johnson, S.P.3; Vyssotski, A.L.4; Costa, D.P.1; Williams, T.M.1

1Ecology and Evolutionary Biology, University of California Santa Cruz, CA
2Sleep Health MD, Santa Cruz, CA
3The Marine Mammal Center, Sausalito, CA
4University of Zurich, Switzerland

Introduction: Studies examining sleep in marine mammals have traditionally relied on either behavioral observation exclusively or invasive surgical procedures. Our study represents the first non-invasive electroencephalogram (EEG) investigating the neurophysiology of sleep in freely swimming elephant seals, using surface-mounted Genuine Grass gold-cup electrodes.

Methods: After developing our methods with anesthetized animals (N=11), we ruggedized and waterproofed a Neurologger3 (©Evolocus) device to record several days of polysomnography, motion, and environmental data for a juvenile elephant seal, on land and diving in a 5-foot pool under temporary human care. Heart rate artifacts during submersion were removed from polysomnography signals using Independent Components Analysis from the MATLAB EEGLAB toolbox. We identified sleep stage transitions visually and quantified spectral power (δSP) in the delta frequency range (0.5-4 Hz) with fast Fourier transform (Hanning window; resolution 1024) in LabChart (©ADInstruments).

Results: For the 32.5 hours during which the animal had access to water, the animal spent 72.5% under the water holding its breath, in apneas lasting up to 18.5 minutes and 3.8 minutes on average (SD= 4.3 minutes). It spent 11% of that time in slow wave sleep across 60 episodes lasting 3.6±2.8 minutes. In water, the seal slept in short cycles tied to apneas with a stereotypic pattern from quiet waking (QW: δSP baseline ~38.7uV2 – animal prone at bottom of pool) to slow wave sleep (SWS: δSP 3.8xQW – animal often supine at bottom of pool). It sometimes entered a brief period of very slow wave sleep (SWS: δSP baseline ~38.7uV2 – animal prone at bottom of pool) before returning to quiet or active waking (AW, δSP>200xQW baseline due to motion artifacts while animal swims).

Conclusion: This stereotyped pattern closely matches certain drift diving patterns observed in wild, migrating elephant seals. It suggests these animals survive on short (~10 minute) apneic naps over 600 feet below the ocean’s surface for over 7 months at a time.

Support: This project received support from the Office of Naval Research Defense University Research Instrumentation Program, National Geographic, and UCSC’s Committee on Research. We declare no competing interests.

LBA 2

The Unfolded Protein Response Sensor IRE1 is Required for Sleep

Ewa Strus and Nirinjini Naidoo

Division of Sleep Medicine, Chronobiology and Sleep Institute, Perelman School of Medicine, University of Pennsylvania

Introduction: The maintenance of protein homeostasis – or proteostasis – is vital to the proper functioning of the organism. One of the effects of sleep deprivation is an activation of pathways in the cell that regulate proteostatic balance, such as the inositol requiring element (IRE1) pathway. IRE1 activation increases chaperone transcription and the degradation of unwanted mRNA transcripts in response to misfolded protein accumulation and endoplasmic reticulum (ER) stress. Given our recent findings that proteostasis mechanisms do influence sleep we examined the role of IRE1 in sleep.

Methods: Using pharmacological and genetic approaches, we investigated the effect of manipulating the IRE1 pathway on sleep in Drosophila melangaster. We used the small molecule inhibitors STF to inhibit IRE1 pathway activity in the fly. We also employed the Drosophila GAL4/UAS system to transgenically knockdown and increase IRE1 pathway activity in Drosophila neurons.

Results: Oral administration of STF, significantly reduced nighttime sleep in wildtype flies compared to vehicle controls. Constitutive transgenic expression of IRE1 RNAi in neurons also reduced sleep. Furthermore, acute genetic expression of IRE1 RNAi in adult neurons also reduced sleep in Drosophila. Finally, we demonstrate that knockdown of IRE1 in wake-promoting clock neurons enhances the transcription of the wake-promoting pigment dispersing factor (PDF) neuropeptide thus revealing a mechanism through which proteostatic pathways may affect sleep/wake behavior.

Conclusions: Together, these results demonstrate that IRE1 is a regulator of sleep and wake that that changes in IRE1 signaling may be an upstream regulator of sleep- and clock-relevant neuropeptide signaling. Our results have important implications for understanding the cross talk between sleep regulation and protein homeostasis in the brain. Furthermore, since proteostasis is regulated by both circadian and homeostatic processes, our findings provide a critical juncture from which to further examine the relationship between sleep and the clock.
Sleep Duration and Plasma Metabolites: A Metabolome-Wide Association Study in US Women

Josef Fritz, Tianyi Huang, Oana Zeleznik, Kathryn Rexrode, Christopher M. Depner, Elizabeth M. Cespedes Feliciano, Wenjun Li, Katie L. Stone, JoAnn E. Manson, Clary Clish, Tamar Sofer, Eva Schernhammer, Susan Redline, Céline Vetter, Katie L. Stone, JoAnn E. Manson, Clary Clish, Tamar Sofer, Eva Schernhammer, Susan Redline, Céline Vetter

Introduction: Short and long sleep duration are associated with adverse health outcomes, such as type 2 diabetes, and cardiovascular disease. To delineate potential underlying biological mechanisms, we examined the association of self-reported short and long sleep duration with human plasma metabolites.

Methods: We analyzed 313 annotated metabolites profiled via liquid chromatography-mass spectrometry. The discovery data consisted of 6,210 women from the Nurses' Health Study (NHS; blood collection 1989-1991, mean age 57.0±6.9) and 3,185 women from the Nurses' Health Study II (NHSII; 1996-2000, mean age 44.6±4.5). We tested the replication of findings in an
independent study of 2,294 women from the Women’s Health Initiative (WHI; 1994-1998, mean age 67.0±6.9). We used linear regression models to cross-sectionally evaluate differences in metabolites levels between women with short (<7h), adequate (7-8h), and long (≥9h) self-reported sleep duration, adjusted for age, body mass index, physical activity, diet quality, alcohol consumption, signs of depression, smoking, fasting, and case-control status. Statistical significance was based on P<0.05, false-discovery rate adjusted for both discovery and replication.

**Results:** The prevalence of long sleep was low and similar across cohorts (NHS: 4.4%, NHSII: 5.6%, WHI: 4.6%). Short sleep occurred frequently (NHS: 27.8%, NHSII: 25.8%, WHI: 40.6%). In the NHS/NHSII, 38 metabolites were significantly associated with short sleep duration. Of these, 8 were replicated in the WHI: 5 triglycerides, 2 diglycerides, and 1 glycolithocholate. In long sleep duration analysis, 5 metabolite associations were identified, but none were replicated.

**Conclusion:** Metabolites associated with short and with long sleep duration did not overlap, suggesting that mechanisms underlying disease-specific associations may be different between short and long sleepers. The low replication rate may be explained by marked differences in cohort profiles between discovery and replication cohorts and, for long sleep, by insufficient power.

**Support:** R21HL145421; Max-Kade-Foundation; NHS/NHSII: UM1CA186107, P01CA49449, R01HL034594, R01HL088521, UM1CA176726, R01CA67262, R01HL35464; WHI: HHSN268201300008C, HHSN268201600018C, HHSN268201600001C, HHSN268201600002C, HHSN268201600003C, HHSN268201600004C.

**LBA 4**

**A Phase 3, Multi-Center, Double-Blind, Randomized, Placebo-Controlled, Polysomnography Study to Assess Efficacy and Safety of Daridorexant in Adult and Elderly Insomnia Patients**

Thomas Roth¹, Gary Zammit², Emmanuel Mignot³, Damien Leger⁴, Claudio Bassetti⁵, Scott Pain⁶, Viktoria Hermann⁶, Dalma Seboek Kinter⁶

¹Division of Sleep Medicine and Research Center, Henry Ford Health System, Detroit, USA
²Clinilabs Inc., New York, USA.
³Stanford Medicine, Center for Narcolepsy, California, USA
⁴Université Paris Descartes AP-HP, Paris, France
⁵Inselspital Universitätsklinik für Neurologie, Bern, Switzerland
⁶Idorsia Pharmaceuticals Ltd., Allschwil, Switzerland

**Introduction:** Insomnia affects sleep and daytime functioning. Treatment of insomnia should address both; enabling sleep and improving daytime functioning, an outcome lacking in many trials. The first phase-3 trial of daridorexant, a dual orexin receptor antagonist was completed in April 2020 (NCT03545191).

**Methods:** In this phase-3, double-blind, placebo-controlled, parallel-group study, 930 patients with insomnia were evenly randomized to daridorexant 25mg, 50mg or placebo, administered nightly for 3-month (M), after a week placebo baseline and followed by a week placebo run-out. Primary endpoints were change from baseline in polysomnography sleep parameters wake time after sleep onset (WASO) and latency to persistent sleep (LPS) at 1M and 3M. Secondary endpoints were change from baseline in subjective total sleep time (sTST) and daytime functioning using the validated Insomnia Daytime Symptoms and Impacts Questionnaire (IDSIQ) sleepiness score (assessing energy, sleepiness, mental and physical tiredness).

**Results:** WASO improvement from baseline (minutes) at 1M for placebo, 25mg and 50mg was -6.20, -18.40, and -28.98 and at 3M -11.11, -22.97 and -29.41, respectively. For LPS, improvement from baseline at 1M for placebo, 25mg and 50mg was -19.85, -28.17 and -31.20 and at 3M, -23.13, -30.73 and -34.80, respectively (all p values vs. placebo <0.002).

sTST increase from baseline (minutes) at 1M for placebo, 25mg and 50mg was 21.56, 34.18(p=0.0013), and 43.62(p<0.0001), and at 3M 37.90, 47.85(p=0.0334), 57.67(p<0.0001), respectively. Daytime functioning improved at 1M for placebo, 25mg and 50mg: -2.02, -2.77(p=0.0547) and -3.77(p<0.0001), and at 3M: -3.79, -4.78(p=0.0534) and -5.70(p=0.0002) for placebo, 25mg, and 50mg, respectively p-values vs placebo).

The most frequent AEs, nasopharyngitis and headache, were balanced between arms. Six, 11, and 5 subjects experienced somnolence on placebo, 25mg and 50mg daridorexant, respectively.

**Conclusions:** This study showed that daridorexant improved objective and subjective sleep parameters, and daytime performance using a validated instrument, with an acceptable safety profile.
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Palo Alto, California  | jazzpharma.com
(650) 496-3777

Jazz Pharmaceuticals plc (Nasdaq: JAZZ) is a global biopharmaceutical company dedicated to developing medicines for people with serious diseases — often with limited or no options. We have a diverse portfolio of marketed medicines and novel product candidates, from early-to late-stage development, in key therapeutic areas. Our focus is in neuroscience, including sleep medicine and movement disorders, and in oncology, including hematologic and solid tumors. We actively explore new options for patients including novel compounds, small molecule advancements, biologics and innovative delivery technologies.

Med Learning Group

Booth 207
New York, New York  | medlearninggroup.com
(908) 875-1118

MLG will be showcasing our virtual reality room and providing participants with point of care tools to foster patient education within their own practice. Upon entering the cylinder, seated participants are provided 3D-powered glasses for complete immersion in a 360-degree, 4K VR experience, exploring the pathogenesis, treatment and perspective of patients affected by DR and AMD. This innovative, educational initiative provides unparalleled interaction to truly engage with the information.

Merck & Co., Inc.

Booth 222
Kenilworth, New Jersey  | merck.com
(800) 444-2080

For more than a century, Merck has been inventing for life, bringing forward medicines and vaccines for many of the world’s most challenging diseases. Today, Merck continues to be at the forefront of research to deliver innovative health solutions and advance the prevention and treatment of diseases that threaten people and animals around the world.

Metro Health - University of Michigan Health

Booth 206
Wyoming, Michigan  | metrohealth.net/recruiting
(616) 252-5283

Metro Health is dedicated to positively supporting today’s clinicians, while also influencing the physicians of tomorrow. Our commitment to research, technology and medical education keeps us on the forefront of medicine with the latest capabilities and procedures. We strive to be thought leaders in the industry and believe that while we can learn from others, others can also learn from us. We invite you to learn more.

NightOwl

Booth 511
Rotselaar, Belgium | nightowl.care
(786) 458-8990

NightOwl® is the latest FDA-cleared HSAT device. Only the size of your fingertip, NightOwl® is based on Peripheral Arterial Tonometry (PAT) according to the AASM guidelines, and clinically validated against PSG. The fully-disposable NightOwl® Mini is packed with sufficient power for 10 nights of testing, allowing you to finally capture the inter-night variability of the AHI as well as continue testing even beyond the initial diagnosis. Our NightOwl® Companion app guides patients throughout their testing journey while capturing clinically relevant context. Get your first FREE disposable NightOwl® Mini by visiting signup.nightowl.care/SLEEP2020. NightOwl® is brought to you by Ectosense (Belgium).
Exhibitor Descriptions

**Nonin Medical, Inc.**  
*Booth 108*  
Plymouth, Minnesota | [nonin.com](http://nonin.com)  
(763) 577-2633

Since 1986, Nonin Medical has developed reliable technologies and manufactured durable noninvasive patient monitoring devices for healthcare professionals and consumers. Nonin pulse oximeters, cerebral and tissue oximeters, capnographs, sensors, and software deliver dependable performance day after day—even in challenging environments. Nonin solutions are used extensively in sleep apnea screening and polysomnography.

**Nox Medical**  
*Booth 121*  
Reykjavik, Iceland | [noxmedical.com](http://noxmedical.com)  
(354) 570-7170

Nox Medical is a global leader in the sleep diagnostic technology space. The company provides sleep specialists with patient-friendly diagnostic devices and robust, reliable data collection. With easy-to-use medical device technology, Nox Medical eliminates common diagnostic pain points by prioritizing patient comfort and reliability of results, allowing providers to better assess, diagnose and treat the entire range of sleep health issues.

**Oxford University Press**  
*Booth 607*  
New York, New York | [academic.oup.com/journals](http://academic.oup.com/journals)  
(919) 677-0977 ext. 5161

Oxford University Press publishes some of the most respected, prestigious books and journals in the world, including *SLEEP®* and *SLEEP Advances*. *SLEEP®* is the benchmark international journal for sleep and circadian science and is the official publication of the Sleep Research Society (SRS). *SLEEP Advances* is an online-only, fully Open Access publication of the SRS; the journal is new in 2020. Explore both journals via their websites below: https://academic.oup.com/sleep https://academic.oup.com/sleepadvances

**Pear Therapeutics**  
*Booth 611*  
Boston, Massachusetts | [peartherapeutics.com](http://peartherapeutics.com)  
(617) 932-7108

Pear Therapeutics is a leader in prescription digital therapeutics (PDT). We aim to redefine medicine by delivering clinically validated software-based therapeutics to provide better outcomes for patients and tracking tools for clinicians. Our product SomrystTM is the first FDA market authorized PDT intended to treat patients ages 22 years of age and older with chronic insomnia.

**Philips**  
*Booth 301*  
Murrysville, Massachusetts

Philips is a leading health technology company focused on improving people’s health and enabling better outcomes across the health continuum from healthy living and prevention, to diagnosis, treatment and home care, by leveraging advanced technology and deep clinical and consumer insights to deliver integrated solutions. Headquartered in the Netherlands, Philips is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care.
Physician’s Seal, the innovator of REMfresh®, was founded in 2013 by former pharmaceutical executives who wanted to design, develop and deliver non prescription sleep aids to help consumers sleep and live better. We have developed our products with patented delivery technologies to help ensure those ingredients work smarter and better, without any compromise to our customers. Unlike other melatonin products, REMfresh’s patented technology releases melatonin continuously for up to 7 hours, mimicking the body’s natural release of melatonin. This may help you fall asleep faster, stay asleep longer, and experience better quality sleep.

Respicardia® is a leader in innovative technologies that address the unmet needs in respiratory and cardiovascular disease with safe and effective therapies. Founded in 2006 and headquartered near Minneapolis, Minnesota, Respicardia is dedicated to improving patient outcomes, quality of life and overall cardiovascular health via novel transvenous neurostimulation therapies.

Rhythmlink® International, LLC wants to enhance patient care by transforming the medical device technology that links patients to machines. Through innovative design and quality manufacturing, we provide superior products and the highest level of customer service in the industry, without wavering in our commitment to fair pricing.

The Instant Comfort® Sleep Lab Bed provides a unique advancement for your sleep center—pairing an air-adjustable number bed with a medical-grade top cover. Most sleep lab beds utilize quilted fabric top covers that absorb fluids, odors, and colors. The Instant Comfort® Sleep Lab Bed is designed with an extreme polycarbonate fabric, which resists cleaning chemicals—supporting CDC cleaning guidelines and higher level of infection control and prevention.

The Sleep Research Society Foundation is committed to the growth and development of the field of sleep and circadian research through education and research funding opportunities.
Exhibitor Descriptions

SLEEP LAB.COM / PAP ASSESSMENTS
Booth 437
Toronto, Ontario | sleeplab.com
(647) 725-7756
Sleeplab.com is a preeminent tele-sleep support services provider utilizing advanced methodology and cutting-edge technology to facilitate virtual patient care in an efficient and cost effective manner while adhering to all applicable medical standards. During the COVID-19 pandemic our positive airway pressure assessment program offers enhanced safety for routine PAP follow up, identification and treatment of therapeutic problems and monitoring out of lab auto PAP titration. Prior to their timely telehealth visit, the patient and physician download the assessment report correlating data download findings with the corresponding clinical history reflecting compliance and response to therapy.

SleepSense
Booth 514
Elgin, Illinois | sleepsense.com
(888) 757-7367
For over 25 years SLP has been introducing innovative and high quality sleep diagnostic sensors into sleep markets worldwide. The SleepSense line of sleep diagnostic sensors is designed to offer more accurate signal readings, higher durability and better patient compliance. View our full product line at www.SleepSense.com which includes many Reusable or Disposable options for nearly all PSG systems and several HST systems.

Sleepstation
Booth 614
Newcastle upon Tyne, England | sleepstation.org.uk

SNEUGZ Mask Liners
Booth 100
Calverton, Maryland | snugz.com
(240) 790-0598
Introducing Snugz, a cool new partner in the bedroom. Snugz Mask Liners for CPAP Machines are machine washable, one-size-fits-mostliners designed for either full-face or nasal CPAP masks. They help reduce noisy leaks, prevent redness and irritation, and feel great against your skin. If you suffer from sleep apnea, you’re going to love them.

Somnoware Healthcare Systems
Booth 601
Santa Clara, California | somnoware.com
408-758-2259
Somnoware is an end-to-end sleep health management platform that unifies data from all in-lab and HST diagnostic devices, EMR applications, and CPAP machines to accelerate diagnosis of OSA and improve patient treatment outcomes. Our cloud-based solution enables care providers to estimate population risk, automate diagnosis workflow, better manage chronic care, and optimize patient outcomes. Our customer base includes leading health systems, independent sleep centers, and sleep services companies.

SRS
Booth 412
Darien, Illinois | sleepresearchsociety.org
Sleep Research Society membership has grown to all levels and disciplines in sleep and circadian science across the globe. Membership includes mentoring opportunities, additional resources, and advocacy. Further your career in the field of sleep medicine through SRS.
Takeda Pharmaceuticals Intl., Co.

Booth 335
Cambridge, Massachusetts | takeda.com

Takeda has been driven by the unmet needs of patients, since our founding in 1781. Our mission is to bring innovative medicines to individuals with diseases for whom there are limited or no treatments available, including those with sleep-wake disorders.

UCLA Health

Booth 438
Los Angeles, California | uclahealthcareers.org
(310) 267-3292

UCLA Health defines greatness by the quality of the patient experience we are able to deliver. Each and every time. To every single patient. If that's where your ambitions lie, UCLA is where you belong. We offer unequalled challenges and opportunities to further your education, training and career.

Vanda Pharmaceuticals, Inc.

Booth 136
Washington, DC | vandapharma.com

Virtuox, Inc.

Booth 501
Coral Springs, Florida | virtuox.net

World Sleep Society

Booth 436
Rochester, Minnesota | worldsleepsociety.org
(507) 316-0084

World Sleep Society (WSS), representing both individual sleep professionals and sleep societies operates programs of education, awareness, and member services. The World Sleep Society’s mission is to advance sleep health worldwide.
Learn how BELSOMRA could help your patients

Visit MerckConnect.com/belsomra for more information
Itamar Eisai
• An advanced, fully disposable solution
• Achieves a stunning 98% study completion rate\(^1\)
• Diagnoses REM-related apnea with sleep architecture\(^2\)
• Delivers unparalleled patient convenience

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- Achieves a stunning 98% study completion rate\(^1\)
- Diagnoses REM-related apnea with sleep architecture\(^2\)
- Delivers unparalleled patient convenience

Visit Itamar Medical booth #313 for a live video chat to learn more

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Infection exposure?  
AHI compromised by TRT?  
Unsure if it’s central?

When you visit Itamar Medical booth #313,  
earn “Sleepwalking” points to put toward a raffle entry for a prize from SLEEP 2020.

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**DAYVIGO™ (lemborexant)**  
5mg, 10mg tablets

**Discover DAYVIGO at the Eisai booth**

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Get to know us at www.idorsia.com

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Discovering DAYVIGO: The Science and Data Behind an Orexin Receptor Antagonist for Adult Patients with Insomnia

Expert opinions presented by:
Alon Y. Avidan, MD, MPH
Professor, UCLA Department of Neurology
Director, UCLA Sleep Disorders Center
David Geffen School of Medicine at UCLA

Click here to view the presentation
Visit the virtual Eisai booth

INDICATION
DAYVIGO (lemboorexant) is an orexin receptor antagonist indicated for the treatment of adult patients with insomnia, characterized by difficulties with sleep onset and/or sleep maintenance.

IMPORTANT SAFETY INFORMATION
CONTRAINDICATIONS
• DAYVIGO is contraindicated in patients with narcolepsy.

WARNINGS AND PRECAUTIONS
• Central Nervous System (CNS) Depressant Effects and Daytime Impairment:
DAYVIGO can impair daytime wakefulness. CNS depressant effects may persist in some patients up to several days after discontinuing DAYVIGO. Prescribers should advise patients about the potential for next-day somnolence. Driving ability was impaired in some subjects taking DAYVIGO 10 mg. Risk of daytime impairment is increased if DAYVIGO is taken with less than a full night of sleep remaining or at a higher than recommended dose. If taken in these circumstances, patients should not drive or engage in activities requiring mental alertness. Use with other classes of CNS depressants (e.g., benzodiazepines, opioids, tricyclic antidepressants, alcohol) increases the risk of CNS depression, which can cause daytime impairment. Dosage adjustments of DAYVIGO and concomitant CNS depressants may be necessary when administered together. Use of DAYVIGO with other insomnia drugs is not recommended. Patients should be advised not to consume alcohol in combination with DAYVIGO.

Because DAYVIGO can cause drowsiness, patients, particularly the elderly, are at a higher risk of falls.
• Sleep Paralysis, Hypnagogic/Hypnopompic Hallucinations, and Cataplexy-Like Symptoms:
Sleep paralysis, an inability to move or speak for up to several minutes during sleep-wake transitions, hypnagogic/hypnopompic hallucinations, including vivid and disturbing perceptions can occur with DAYVIGO. Prescribers should explain these events to patients. Symptoms similar to mild cataplexy can occur with DAYVIGO and can include periods of leg weakness lasting from seconds to a few minutes, can occur either at night or during the day, and may not be associated with identified triggering event (e.g., laughter or surprise).

• Complex Sleep Behaviors:
Complex sleep behaviors, including sleep-walking, sleep-driving, and engaging in other activities while not fully awake (e.g., preparing and eating food, making phone calls, having sex), have been reported to occur with the use of hypnotics such as DAYVIGO. Events can occur in sleep-fragmented and hypnotic-experienced persons. Patients usually do not remember these events. Complex sleep behaviors may occur following the first or any subsequent use of DAYVIGO, with or without the concomitant use of alcohol and other CNS depressants. Discontinue DAYVIGO immediately if a patient experiences a complex sleep behavior.

• Patients with Compromised Respiratory Function:
The effect of DAYVIGO on respiratory function should be considered for patients with compromised respiratory function. DAYVIGO has not been studied in patients with moderate to severe obstructive sleep apnea (OSA) or chronic obstructive pulmonary disease (COPD).

• Worsening of Depression/Suicidal Ideation:
Incidence of suicidal ideation or suicidal behavior, as assessed by questionnaire, was higher in patients receiving DAYVIGO than placebo (0.3% for DAYVIGO 10 mg, 0.4% for DAYVIGO 5 mg, and 0.2% for placebo).

In primarily depressed patients treated with hypnotics, worsening of depression and suicidal thoughts and actions (including completed suicides) have been reported. Suicidal tendencies may be present in such patients and protective measures may be required. Intentional overdose is more common in this group of patients; therefore, the lowest number of tablets that is feasible should be prescribed at any one time. The emergence of any new behavioral sign or symptom of concern requires careful and immediate evaluation.

• Need to Evaluate for Comorbid Diagnoses:
Treatment of insomnia should be initiated only after careful evaluation of the patient. Reevaluate for comorbid conditions if insomnia persists or worsens after 7 to 10 days of treatment. Worsening of insomnia or the emergence of new cognitive or behavioral abnormalities may be the result of an unrecognized underlying psychiatric or medical disorder and can emerge during the course of treatment with sleep-promoting drugs such as DAYVIGO.

ADVERSE REACTIONS
• The most common adverse reaction (reported in 5% of patients treated with DAYVIGO and at least twice the rate of placebo) with DAYVIGO was somnolence (10% for DAYVIGO 10 mg, 7% for DAYVIGO 5 mg, 1% for placebo).

DRUG INTERACTIONS
• CYP3A Inhibitors: The maximum recommended dose of DAYVIGO is 5 mg no more than once per night when co-administered with weak CYP3A inhibitors. Avoid concomitant use of DAYVIGO with strong or moderate CYP3A inhibitors.

• CYP3A Inducers: Avoid concomitant use of DAYVIGO with moderate or strong CYP3A inducers.

USE IN SPECIFIC POPULATIONS
• Pregnancy and Lactation: There is a pregnancy exposure registry that monitors pregnancy outcomes in women who are exposed to DAYVIGO during pregnancy. Healthcare providers are encouraged to register patients in the DAYVIGO pregnancy registry by calling 1-888-274-2378. There are no available data on DAYVIGO use in pregnant women to evaluate for a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. There are no data on the presence of lemborexant in human milk, the effects on the breastfed infant, or the effects on milk production. Infants exposed to DAYVIGO through breastmilk should be monitored for excess sedation.

• Geriatric Use: Exercise caution when using doses higher than 5 mg in patients ≥65 years old.

• Renal Impairment: Patients with severe renal impairment may experience an increased risk of somnolence.

• Hepatic Impairment: The maximum recommended dose of DAYVIGO is 5 mg in patients with moderate hepatic impairment. DAYVIGO is not recommended in patients with severe hepatic impairment. Patients with mild hepatic impairment may experience an increased risk of somnolence.

DRUG ABUSE AND DEPENDENCE
• DAYVIGO is a Schedule IV-controlled substance.
• Because individuals with a history of abuse or addiction to alcohol or other drugs may be at increased risk for abuse and addiction to DAYVIGO, follow such patients carefully.

For more information about DAYVIGO, please see the full Prescribing Information at the virtual booth.
Save the Date

SLEEP

JUNE 12-16, 2021
SEATTLE, WA

Learn more at sleepmeeting.org

A JOINT MEETING

American Academy of Sleep Medicine
Sleep Research Society

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