

Amita Sehgal

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**Education:**

1978-80 B.Sc. Delhi University, New Delhi, India  
1980-82 M.Sc. Jawaharlal Nehru University, New Delhi, India  
1983-88 Ph.D. Graduate School of Medical Sciences, Cornell University  
1988-93 Postdoctoral Associate, HHMI, Rockefeller University, New York

**Faculty Appointments:**

1993-97 Assistant Professor of Neuroscience, Univ of Pennsylvania School of Medicine  
1997-pres Investigator (initially Assistant & Associate), Howard Hughes Medical Institute  
1998-03 Associate Professor of Neuroscience, University of Pennsylvania  
2003-pres Professor of Neuroscience, University of Pennsylvania  
2008-18 Vice Chair, Department of Neuroscience, University of Pennsylvania  
2009-pres John Herr Musser Professor of Neuroscience  
2009-15 Co-Director, Penn Medicine Neuroscience Center, Perelman School of Medicine  
2013-19 Director, Penn Chronobiology program  
2019-pres Director, Chronobiology and Sleep Institute (CSI), Univ. of Pennsylvania

**Awards and Honors:**

1984 Vincent Astor scholarship, Cornell University  
1995 American Cancer Society Junior Faculty Research Award  
1997 Michael S. Brown Junior Faculty Research Award  
1997 Appointment to the Howard Hughes Medical Institute  
2006 Herman Beerman lecture, Society for Investigative Dermatology (SID)  
2006 Stanley Cohen Senior Faculty Research Award  
2006 AJ Carlson memorial lecture, Neuroscience symposium, University of Chicago  
2008 Bollum symposium lecture, University of Minnesota  
2009 Swerling lecture, Dana Farber Cancer Research Institute, Harvard  
2009 The Ramon and Victoria Lim lecture, University of Iowa  
2009 John Herr Musser Professorship  
2009 Elected to the National Academy of Medicine (NAM)  
2011 Elected to the American Academy of Arts and Sciences (AAAS)  
2012 Aschoff's Rule, conferred every two years in the circadian field  
2012 Edward Kravitz lecture, Woods Hole, MA  
2012 Ellison Senior Scholar Award in Aging  
2012 Picower 10<sup>th</sup> anniversary symposium lecture

2012 Distinguished Bauer lecturer, Brandeis University, Boston  
 2013 Outstanding Scientific Achievement Award, Sleep Research Society  
 2013 Eminent Women in Science lecture, Rutgers University  
 2013 Perspectives in Biology speaker, Wake Forest Univ, NC  
 2014 Distinguished Mentor Award, Biomedical Postdoctoral Programs, Penn  
 2015 Major Issues Lecture, UC Davis  
 2015 Javits Investigator award, NINDS  
 2016 Elected fellow, American Association for Advancement of Science (AAAS)  
 2016 Elected to the National Academy of Sciences USA (NAS)  
 2016 Glenn Award, The Glenn Foundation  
 2018 Nusbaum Award for graduate student mentoring  
 2018 ACES Distinguished Lecture, Case Western Reserve University  
 2018 Oliver Smithies symposium lecture, U Wisconsin, Madison  
 2019 Hackl Family Visiting Professor Lecture, Mayo Clinic  
 2020 President, Society for Research on Biological Rhythms  
 2020 Pittendrigh-Aschoff lecture, SRBR conference  
 2020 Switzer Prize, UCLA  
 2021 Mildred Trotter lecture, Washington University  
 2021 Mary Bunge Distinguished Women in Cell Biology lecture, Univ. Miami  
 2021 SRBR Pioneer  
 2022 Honma Prize, Japan  
 2022 Presidential lecture, SFN, San Diego

## Professional Activities

### Editorial Positions for Journals

1999-2000 Special Section editor, *Annual Review of Physiology*  
 2004-2009 Associate Editor, *The Journal of Neuroscience*  
 2007-2012 Associate Editor, *Journal of Clinical Investigation (JCI)*  
 2011-19 Guest Editor, *PLoS Biology/Genetics*  
 2012-2022 Consulting Editor, *Journal of Clinical Investigation (JCI)*  
 2012-13 Special Section Editor, *Current Opinion in Neurobiology*  
 2013-pres Editorial Board, *Journal of Biological Rhythms*  
 2013-2015 Editor, *Methods in Enzymology*, volume on circadian rhythms  
 2015-pres Editorial Board, *Neurobiology of Sleep and Circadian Rhythms*  
 2016-pres Editorial Board, *Current Opinion in Neurobiology*  
 2018-pres Board of Reviewing Editors, *eLife*  
 2020-pres co-Editor-in-Chief, *Current Opinion in Neurobiology*  
 2021-pres Editorial Board, *PNAS*

### Membership in national/international committees and advisory boards (since 2002)

2004, 2011 Nominating Committee, SRBR  
 2006-08 Elected Treasurer, Society for Research on Biological Rhythms (SRBR)  
 2007-08 Member, Nominating Committee, Genetics Society of America  
 2009-19 Program Advisory Committee for Neuroscience, Morehouse School  
 2009-2012 Program Committee, Society for Neuroscience  
 2011-15 Elected Member, Neuroscience Steering Group, AAAS

2011-2015 Advisory council, NINDS, NIH  
 2014 NIH Advisory Council to the Director working group for IRP  
 2012-2015 Achievement Awards Committee, Society for Neuroscience  
 2014-2018 Society for Women's Health Research Sleep Committee  
 2014-2020 Scientific Advisory Board (SAB), Max Planck Institute for Biophysical Chem  
 2016-2020 Government Affairs Committee, SRBR  
 2017-2019 Elected Member, Nominating Committee, AAAS  
 2017-pres Scientific Advisory Board (SAB), Picower Institute, MIT  
 2018-2024 President-elect/President/past-Pres., Society for Research on Biological Rhythms  
 2018-pres Scientific Advisory Board (SAB), Leon Levy Foundation for Neurosci, New York  
 2019-pres Scientific Advisory Board (SAB), Carney Institute for Neurosci, Brown Univ.  
 2020 NIH Strategic Plan, ORIP model organism committee  
 2020 Richard Lounsbury award committee, NAS  
 2021 Pradel award committee, NAS  
 2022 Chair, Pradel Award Committee, NAS  
 2022-pres Scientific Advisory Board (SAB), VIB Leuven Belgium  
 2022-pres Fundamental Neuroscience Working Group, NINDS

Major Review panels (since 2002)

2005, '06, '08 Reviewer, Pioneer Awards, NIH  
 5/07-11 Damon Runyon Cancer Research Foundation panel  
 7/07 & 2010 Reviewer, NIH New Innovator Awards  
 12/09 SFI Site Review, Trinity College Dublin, Ireland  
 2014 New York Stem Cell Foundation (Neuroscience awards)  
 2014-19 McKnight Neuroscience Scholar Awards  
 2015-21 Sloan Research Foundation, Neuroscience  
 2019 Review of Neuroscience Dept, Washington Univ, St. Louis  
 2019 Review panel, Swiss National Science Foundation, Bern  
 2019 Review panel, Center for Life Sciences, Tsinghua & Peking Universities, Beijing  
 2020 Chair, Review panel, Serrapiheira Institute, Brazil  
 2021 Review panel, VIB Leuven Belgium  
 2022 Chair, Review panel, CIHR

Outreach:

2003 Member, BSCS/NIH Board, "Biology of Sleep" module for high school students  
 2004 Workshop "Expand your Horizons" (6<sup>th</sup> grade girls)- American Chemical Society  
 12/1/10 Talk at SciCafe, American Museum of Natural History, New York  
 4/18/11 & 4/30/14 Public lectures at the Franklin Institute, Philadelphia  
 10/16/14 Public lecture organized by Neuroscience students, Univ. Penn  
 03/21/16 Lecture to high school seniors, Baldwin School  
 04/07/16 Wagner lecture (Biology of Bedtime), Wagner Institute, Philadelphia  
 07/02/21 Women's Forum, AAPI convention, Atlanta  
 Also participated in several outreach events organized by the Penn Development office (e.g YRO, medical school alumni and Penn to Houston)

PI/Laboratory has been featured in many venues in the popular press- e.g. TV shows (NOVA), documentary films (*BBC, Huffington Post*), newspapers (*Philadelphia Inquirer, Washington Post, New York Times*), radio shows (*NPR*) and magazines (*The Atlantic, Smithsonian*).

### **Current Grant Support (external only)**

Howard Hughes Medical Institute (PI)	7/16/97-10/31/24
1R01NS048471 (PI)	
NIH	03/01/22-2/28/27
Interaction between circadian and sleep circuits	
Volkswagen Stiftung (co-PI)	8/1/17-4/30/23
The Fourth Dimension: Integration of time to shape cooperativity and survival in the biosphere	
1 R01 DK120757-01A1 (Joint PI)	09/01/19-06/30/24
NIH	
Balance of sleep and circadian metabolic switches in <i>Drosophila</i>	

Members of the laboratory have also received many grants and awards, including fellowships (NRSAs), K08 and K99 grants from the NIH, Burroughs Wellcome awards and Damon Runyon Cancer Research Foundation and National Sleep Foundation fellowships. Researchers promoted to Research Assistant Professor have had NARSAD and R01 awards.

### **Academic Committees at the University of Pennsylvania (since 2002)**

2000-02	Member, Selection committee for Awards of Excellence for faculty members
2000-03	Member-Admissions committee for MD/PhD students
2001-02	Member, adhoc tenure committee, Medical School
2001-03	Member, COAP Sub-committee for teaching evaluation
2001-02	Chair, Search Committee for faculty recruits, Dept. of Neuroscience
2002-05	Chair, Selection Committee for Awards of Excellence
2002	Member, Strategic Planning Committee for Neuroscience
2002	Member, Committee to approve faculty recruitment
2003-06	Member, Gender Equity Committee
2003	Member, University Faculty Senate Nominating Committee
2003-06	Member, University Faculty Senate Economic Affairs Committee
2003-07	Member, Committee for Appointments and Promotions at the School of Medicine
2004	Member, adhoc promotions committee, School of Arts and Sciences
2004-06	Member, Search Committee for Chairperson of the Genetics Department
2004-10	Member, BPP (Office of Biomedical postdoctoral Programs) Advisory panel
2005	Member, Seminar committee, INS
2005	Member, Space committee, Dept. of Neuroscience
2005	Member, Committee for selection of HHMI Professor nominees
2005-07	Member, Medical Faculty Senate Committee on Academic Freedom
2005	Member, Search Committee for Chairperson of the Cell and Dev. Biol. Dept.
2005	Adhoc member, RAC
2005-07	Member, Research Coordinating Council (RCC), Univ. of Penn. Medical School

2005	Member, Search committee for faculty recruit in the Dept. of Psychiatry
2005-06	Member, Search Committee for faculty recruit in the Dept. of Biology
2006-2007	Member, Faculty Climate Survey Committee
2007-pres	Member, adhoc committees for tenure recommendations, SOM
2007-17	Member, Selection Committee for the Stanley Cohen Research Award
2007-pres	Member, Bridge Funding Committee
2007-08	Member, Search Committee for Chair of Cancer Biology
2008-09	Member, review committee, Genomics and Comp. Biology graduate program
2009-10	Co-Chair, Neuroscience group of the Strategic Planning Initiative
2010-13	Chair, Neuroscience PIK Recruitment Committee
2011-12	Member, Search Committee for Chair of Neurology
2012-13	Member, Search Committee, Behavioral Neuroscience Initiative
2012-13	Member, Search Committee for Chair of Animal Biology
2013-16	Chair, Search Committee for Chronobiology faculty member
2014	Adhoc tenure/promotion committees
2015	Chair, Search Committee for Chair of Cell & Developmental Biology
2016	Member, Systems Pharmacology Search Committee
2017	Member, SPATT Chair, search committee
2017	Member, Academic Engagement and Advancement Committee
2019	Member, Review committee for Institute of Regenerative Medicine
2020	Chair, Review of Genetics Department
2021-pres	Member, Portrait Committee
2022-pres	Member, Space planning committee
2023-pres	Member, review of the biochemistry and Biophysics department

## **Major Teaching Responsibilities at the University of Pennsylvania**

### Graduate education

Co-Director, Cell & Molecular Neuroscience (core graduate Neurosci course) 1994-97, 2000.  
 Co-Director, Behavioral Genetics 2006  
 Lecturer (or discussion leader) in other courses (Behavioral Neuroscience, Sleep and Circadian Rhythms, Genetic Systems, Behavioral Genetics, Neuropharmacology, Neuropsychopharmacology, Molecular Neuropharmacology, Mammalian Genetics)  
 Mentor, students' Journal Club in Neuroscience  
 Co-Director, Journal Club in Neuroscience, 2007-08  
 Lecturer, PREP students (2015)  
 Served on ~40 prelim committees and >50 thesis committees.

### Medical Education

Lab Instructor, Neuroanatomy lab for Brain and Behavior 1999, 2000 and 2003  
 Occasional lectures in grand rounds  
 Lecturer, Sleep Education lecture series (2000-2003)  
 Lecturer, Frontiers course for medical students (2004-06)  
 Lecture, potential Neurology residents (2015)

### Undergraduate Education

Lectures (2-3) in Biological basis of Behavior (BBB) courses, 1997-99  
 Lecture in Genetics class, 2007

Lecture (annual) in Sleep and Chronobiology

Mentoring (other than lab members)

Speaker on careers in academia- For postdoctoral fellows (5/99, 2/02) and students (9/99)  
Panel member, "Success strategies in the tenure track", workshop for junior faculty 9/04, 4/06  
Panel member, "Tips on running a laboratory", FOCUS group session for female faculty, 1/06  
Panel member, "Journal Editors Panel" 12/10, 11/13 and 4/16  
Speaker on work:life balance, GI Division (5/20)  
Mentor to many faculty, especially junior women  
Training sessions at the SRBR meeting (2010, 2012 and 2014), HHMI meeting and others  
NEI panel for postdocs "Transitioning to the next stage of your career" (2021)

Number of Trainees in the Laboratory

Graduate Students: 27 (5 currently in the laboratory), additional >30 rotation students  
Postdoctoral (including clinical) fellows: ~40 (7 currently in the laboratory)  
Visiting Professor on sabbatical: 2 (Joan Hendricks and Ana Lia Obaid)  
PREP (program to prepare minorities for graduate school) student: 1  
HHMI-funded medical students: 2; Masters' students: 3; Undergraduates: 24 (3 HHMI and 9 URM); high school students: 13

**Organizing Role in Scientific Meetings (session chair listed if it included organization role)**

10/99 Organizing committee, APS symposium, "Determinants of Vigilance", Ft Lauderdale, FL.  
10/03 Session chair, "Behavior" session, Neurobiology of Drosophila meeting, CSHL, NY  
10/07 Co-organizer, "Neurobiology of Drosophila" conference, Cold Spring Harbor Laboratory  
3/08 Organizer, Keystone Symp, "Genetics and Biochemistry of Sleep", Lake Tahoe CA  
6/09 Co-Organizer, Meeting on "Non-mammalian models for sleep", Janelia Farm, HHMI  
11/09 Co-Chair, Mini-symposium on circadian rhythms, annual ASCB meeting, San Diego, CA  
2009-12 Member, Program Committee, Society for Neuroscience  
6/10 Chair, Workshop on circadian rhythms and aging, NIA, Bethesda, MD  
5/11 Session chair (fitness and clocks), Intl Congress of Chronobiology, Puebla, Mexico.  
7/13 Session chair (sleep), Gordon Conference on Chronobiology, Newport, RI  
12/13 Organizer, symposium on Neural Repair, Univ Penn.  
6/14 Program Committee, Society for Research on Biological Rhythms  
5/15 Organizer, symposium on Genetics of neural disease, Univ. Penn  
6/15 Vice Chair, Chronobiology Gordon Conference  
9/15 Co-Organizer, "Hypothalamic Circuits for Control of Survival Behaviors", Janelia HHMI  
11/15 Organizer, "Translation of Circadian Biology: Implications for the Clinic", Univ. Penn  
7/17 Chair, Chronobiology Gordon Conference  
4/19 Session Chair and organizer, Circadian symposium, ASBMB conference, Orlando FL  
11/19 Sleep in Drosophila meeting, Janelia Farm HHMI  
11/20 Co-organizer, NY Academy Sciences, conference on circadian rhythms  
11/20 Chair, symposium on circadian rhythms, Gerontological Society of America  
09/23 Program Committee, IBRO, Spain

**Selected Invited Talks (since 2002)**

Feb. 19, '02 Seminar, National Institute of AIST, Tsukuba, Japan  
 May 25, '02 "Clock Output" symposium, SRBR meeting, Amelia Island, Florida  
 June 10, '02 "Mechanisms for Circadian Regulation of Arousal", APSS meeting, Seattle, WA  
 June 11, '02 NFFF Consortium for Molecular and Cell Biology of NF1 and NF2, Aspen, CO.  
 July 31, '02 Seminar, Aventis Pharmaceuticals  
 Sept. 3, '02 Discussant, Novartis symposium on Molecular Clocks, London, England  
 Nov. '02 "Mechanisms of Circadian Output" symposium, SFN meeting, Orlando, FL.  
 Jan. 27, '03 Seminar, N. Carolina State University, Raleigh, NC  
 Feb. 6, '03 Seminar, Neuroscience program, UMass Medical School, Worcester, MA  
 Apr. 29, '03 Seminar Northwestern University, Evanston, Il  
**2003** **Plenary lecture, Annual Drosophila meeting, Chicago**  
 May 6, '03 Duhring lecture, Dept. of Dermatology, Univ. Penn  
 May 13, '03 Seminar, Rockefeller University, New York  
 July 7, '03 Seminar, Dartmouth University, NH  
 Aug., '03 Seminar, Gladstone Institute, UCSF, CA  
 Oct. 10, '03 Symposium of the Jane Coffin Childs Foundation, NY  
 Jan. 11, '04 Seminar, Neuroscience program, Washington University, St. Louis  
 Feb. 10, '04 Session Chair, "Genes and Behavior" Gordon Conference, Ventura, CA  
 May 10, '04 Seminar, Thomas Jefferson University, Philadelphia  
 May 17, '04 Seminar, Oregon Health Sciences University, Portland, OR  
 May 24, '04 Seminar, University of Maryland Medical School, MD  
 June 4, '04 APSS meeting, Philadelphia  
 Oct. 15, '04 Seminar, Dept of Biology, Univ. of Pennsylvania  
 Nov. 10, '04 Seminar, Univ. of Michigan, Ann Arbor, MI  
 Jan. 21, '05 "Sleep" symposium, sponsored by Merck Laboratories, Bluebell, PA  
 May 9, '05 Seminar, Oregon State Univ., Corvallis, OR  
 Aug. 3, '05 Chronobiology Gordon Research Conference, Newport, RI  
 Oct. 15, '05 Developmental Biology Symposium, Univ. of Pennsylvania  
 Nov.13, '05 Sleep and Circadian Rhythms symposium at the SFN meeting Washington DC.  
 Jan. 29, '06 Seminar, Dept. of Physiology, Southwestern Medical Center, Dallas  
 Mar. 2, '06 Seminar, Dept. of Pharmacology, Robert Wood Johnson, UMDNJ  
 May 5, '06 Board of Trustees, Institute of Aging, Univ. Penn, Philadelphia.  
 Nov. 7, '06 Seminar, Mayo Clinic, Rochester, MN  
 Nov. 14, '06 Seminar, Dept. of Biological Chemistry, Johns Hopkins University, Baltimore  
 Nov. 30, '06 Seminar, UMKC, Kansas City, MO  
 May 30, '07 Opening night talk, Cold Spring Harbor Symp. of Quant. Biology, NY  
 May 31, '07 Session Chair, CSHL Symp. of Quant Biology on Clocks and Rhythms, NY  
**2007** **Keynote, Develop Biology retreat, Washington University, St. Louis**  
 July 17, '07 Lecture in CSHL course on Neurobiology of Drosophila, NY  
 Sept. 21, '07 Seminar, Neonatology Division, Children's hospital of Philadelphia  
 Sept. 25, '07 "Circadian Rhythms & Sleep" symposium, Polish Neuroscience Society, Krakow  
 Jan. 11, '08 Seminar, Center for Neurodegenerative Disorders, Univ. of Penn  
 Jan. 22, '08 Seminar, Dept. of Physiology, Columbia University, NY  
 Feb. 7, '08 Seminar, Dept. of Neuroscience, Johns Hopkins Univ, Baltimore  
 Mar. 8, '08 Session Chair, Keystone conf "Genetics and Biochemistry of Sleep", Lake Tahoe.  
 Mar. 20, '08 Seminar, Center for Molecular Studies in Digestive and Liver Disease, Penn  
 Apr. 10, '08 Sleep Gene-chip workshop sponsored by NIH, Bethesda, MD.

Apr. 25, '08 MINS retreat, Univ. of Penn  
 May 20, '08 Clocks and Sleep symposium, SRBR, Sandestin, FL  
 May 20, '08 Chair, session on Molecular Clocks, SRBR, FL  
 July 7, '08 GPCR Symposium, International Congress of Entomology, Durban, South Africa  
 July 9, '08 Keynote, Circadian Clock symp, Intl Cong of Entomology, Durban, South Africa  
 July 22, '08 NIMH workshop on rhythms and neuropsychiatric disorders, Bethesda  
 Sept. 10, '08 "Genomic Days" symposium, Lausanne, Switzerland  
 Sept. 13, '08 "Horizons in Molecular Biology" symposium, Gottingen, Germany  
 Oct. 2, '08 "Model Organisms and Disease Mechanisms", HUGO satellite, Bangalore, India  
 Oct. 7, '08 Seminar, Jawaharlal Nehru University, New Delhi, India  
 Oct. 14-18, '08 Lectures, Chronobiology course, SERC, Lucknow, India  
 Nov. 3, '08 CNC Trustees, Univ. of Pennsylvania  
 Nov. 10, '08 Seminar, MRDDRC, CHOP  
**2008** **Special Lecture, Society for Neuroscience, Washington DC**  
 Dec. 4, '08 Seminar, Duke University, Durham NC  
 Jan. 8, '09 Seminar, IISER, Pune, India  
 Feb. 18, '09 Seminar, Univ. of Wisconsin, Madison WI  
 Mar. 11, '09 Seminar, Buck Institute, Novato, CA  
 Mar. 12, '09 Seminar, UCSF, San Francisco CA  
 Apr. 3, '09 Interurban Clinical Club symposium, Philadelphia  
 Apr. 7, '09 Seminar, Institute for Diabetes, Obesity and Metabolism, Univ Penn  
 June 7, '09 Trainee Day symposium at annual APSS meeting, Seattle  
 June 10, '09 Symposium on sleep function, APSS, Seattle  
 July 22, '09 Session Chair, Gordon Conference on Chronobiology, Newport  
 Oct. 21, '09 Symposium – "Biochemistry of Behavior," Osaka, Japan  
 Oct. 22, '09 Seminar, Hiroshima University, Hiroshima, Japan  
 Dec. 7, '09 Seminar, The Salk Institute  
 Dec. 18, '09 Seminar, University of Puerto Rico, San Juan, PR  
 Feb. 2, '10 Seminar, University of Texas Southwestern Medical Center, Dallas, TX  
 Mar. 8, '10 Department of Biology, Temple University, Philadelphia, PA  
 Apr. 8, '10 Vollum seminar series, Vollum Institute, Portland, OR  
 Apr. 12, '10 NIDDK Circadian Rhythms and Metabolic Disease Workshop, Bethesda  
 May 22, '10 Trainee workshops (two), SRBR meeting Sandestin, FL  
 May 23, '10 Symposium SRBR meeting, Sandestin FL  
 Sept. 6, '10 EMBO Meeting, Barcelona, Spain  
 Apr. 12, '11 Seminar, Columbia University  
 May 4, '11 Latin American Society for Chronobiology, Cholula, Mexico  
 May 5, '11 World Congress of Chronobiology, Puebla, Mexico  
 May 23, '11 Asian Pacific Drosophila Research Conference, Taipei, Taiwan  
 June 15, '11 Gordon Conference in Chronobiology, Barga, Italy  
 June 24, '11 American Diabetes Association annual meeting, San Diego  
 July 30, '11 RASopathies meeting, Chicago  
 Sept. 23, '11 Grand Rounds, Stanford Univ, CA  
 Nov. 7, '11 Seminar, NYU, New York  
 Dec. 13, '11 Seminar, Okayama University, Japan  
 Dec. 16, '11 Symposium, Molecular Biology Society of Japan, Yokohama  
 Jan. 20, '12 Gordon Conference on Photoreceptors, Galveston, Texas



Feb. 28, '12 Workshop, Diversity, evol. & mech. controlling activity patterns, Ein Gedi, Israel  
 Mar. 2, '12 Symposium on circadian rhythms, Tel Aviv University  
 May 3, '12 1st exploratory symposium on Biology of Sleep, Max Planck Institute, Munich  
 May 21, '12 Symposium on circadian clocks and metabolism, SRBR, Sandestin, FL  
 July 8, '12 Biogenic amines in Insects symposium, Freie University, Berlin  
 July 12, '12 Seminar, Ohio State University, Columbus  
 Oct 6, '12 Plenary lecture, International Congress of Chronobiology, New Delhi  
 Oct 10, '12 Cell Press Symposium, "Neuromodulatory Mechanisms", New Orleans  
 Nov 3, '12 Plenary session, Hellenic Society for Neuroscience, Athens, Greece  
 Nov 13, '12 Seminar, City College, New York  
 Feb 13, '13 UCSD Chronobiology symposium, La Jolla, CA  
 Feb 28, '13 Seminar, Cell and Developmental Biology, Harvard University  
 Apr 3, '13 Keystone symp, Circadian clocks and cardiovascular physiology, Lake Tahoe  
 Apr 10, '13 Seminar, Shriners' Institute, Philadelphia  
 May 2, '13 London Drosophila meeting  
 May 1, '13 Seminar, Emory University, Atlanta  
**2013** **Keynote, Comprehensive Neuroscience Center Retreat, UAB, AL**  
 June 4, '13 Cell press symposium on Genes, Circuits and Behavior, Toronto  
 June 26, '13 International Society for Behavioral Neuroscience meeting, Dublin, Ireland  
 July 14, '13 Chair, behavior session at the Gordon Research Seminar, Newport, RI  
 July 18, '13 Gordon Research Conference in Chronobiology, Newport RI  
 July 24, '13 Circadian symposium at the IUPS meeting, Birmingham, UK  
 Aug. 12, '13 Gordon Conference on the Biology of Aging, Il Ciocco, Italy  
 Sept 23, '13 Seminar, Carnegie Institute, Baltimore  
 Nov. 8, '13 Perspectives in Biology Symposium, Wake Forest University, NC  
 Nov. 13, '13 FOCUS Talk, Penn Medicine  
 Dec 12, '13 Seminar, Univ. of Maryland  
 Jan 30, '14 Symposium on Biological Complexity, Salk Institute, La Jolla, CA  
 Feb 6, '14 Seminar, Brown University, Providence, RI  
 Feb. 11, '14 Seminar, Texas A&M, College Station, TX  
 Mar. 19, '14 Sleep Gordon conference, Galveston, Tx  
 Mar. 24, '14 Seminar, Washington Univ, St. Louis  
 Apr 2, '14 Seminar, Cincinnati Children's Hospital, Oh  
 Apr 8, '14 Seminar, Peking University, Beijing  
 Apr 9, '14 Seminar, Chinese Academy, Shanghai  
 May 20, '14 Seminar, Thomas Jefferson University  
 June 14, '14 Chairperson, Metabolism session, SRBR conference, Montana  
 June 14, '14 Talk in Aging session, SRBR conference, Montana  
 July 27, '14 Honma symposium on Chronobiology, Sapporo  
 Aug 26, '14 GPCR Workshop, Leiden, Netherlands  
 Sept 1, '14 FEBS/EMBO Conference, Paris  
 Sept 28, '14 "Homeodynamics in Clocks, Sleep and Metabolism", Fujihara symposium, Japan  
 Oct 10, '14 Rutgers University, New Brunswick, NJ  
 Oct 21, '14 PASEF lecture, Univ of Pennsylvania  
 Oct 31, '14 CIFAR meeting on Child and Brain Development, Montreal, Canada  
 Nov 3, '14 Genetics symposium, Univ. of Pennsylvania  
**2014** **Special Lecture, Society for Neuroscience, Washington DC**

Nov. 13, '14 Circadian Symposium, American Society for Nephrology, Philadelphia  
 Dec 6, '14 "Time for metabolism and hormones", IPSEN symposium, Paris, France  
 Dec 10, '14 "Timelines in Biology" symposium, Weizman Institute, Israel  
 Dec.17, '14 Seminar, Univ of Illinois, Chicago  
 Jan 13, '15 Seminar, CalTech, Pasadena, CA  
 Feb 26, '15 Grand Rounds in Neurology, Northwestern University, Chicago  
**2015**  
 June 23, '15 Seminar, Lausanne, Switzerland  
 July 2, '15 Chronobiology Gordon Conference, Girona, Spain  
 July 6, '15 Seminar, Munich, Germany  
 July 9, '15 Neural Circuits and Behavior, EMBO-Kavli conference in Crete, Greece  
 Aug. 6, '15 European Society for Biological Rhythms conference, Manchester UK  
 Oct 11, '15 The Brain conferences, FENS, Copenhagen, Denmark  
 Nov 13, '15 "Light and Life" symposium, Royal Swedish Academy of Sciences, Stockholm,  
 Nov. 20, '15 Seminar, Virginia Tech, Blackwell VA  
 Feb 23, '16 Seminar, Dept of Genetics, Yale University, New Haven CT  
 April 6, '16 WALIS lecture, NIH  
 Apr 11, '16 Distinguished speaker lecture, University of Southern California, LA  
 Apr 21, '16 Seminar, Center for Brain Science, Harvard University, Cambridge  
 May 4, '16 Keystone, "Epigen. & Metab. Reg. of Aging and Age-rel. diseases, Santa Fe, NM  
**2016**  
 May 30, '16 Seminar, UCLA, CA  
 July 11, '16 Aging and Metabolism conference, Cell Press, Barcelona, Spain  
 Sept 23, '16 Brain mosaic conference, VIB, Leuven, Belgium  
 Sept 27, '16 Seminar, Cambridge University UK  
 Sept 29, '16 Seminar, IMP Vienna, Austria  
 Oct 11, '16 Seminar, Max Planck Institute (Biochem), Munich, Germany  
 Jan. 9, '17 Seminar, Scripps Institute, Florida  
 Jan 24, '17 Seminar, IDOM, Penn  
 Feb 23, '17 Biological Timing & Health Issues in the 21<sup>st</sup> century symposium, Delhi, India  
 Mar 27, '17 Seminar, Univ. of Washington, Seattle  
 Apr 4, '17 Seminar, Northwestern University, Evanston  
 Apr 22, '17 Lecture, AAP/ASCI/APSA Joint meeting, Chicago  
**2017**  
**2017**  
 June 6, '17 Seminar, Yale University, New Haven  
 June 9, '17 Seminar, Duke-NUS, Singapore  
 July 6, '17 Seminar, Cold Spring Harbor Laboratory, NY  
 Aug 24, '17 SACNAS Women in science seminar, Penn  
 Sept 1, '17 Konopka symposium, ICIRD conference, Florence, Italy  
 Sept 12, '17 Keynote lecture, Genetics retreat, Univ Penn  
 Sept 22, '17 Seminar, Groningen University, Netherlands  
 Oct 5, '17 Biological Clocks: mechanisms and applications, IEBMC, Rijeka, Croatia  
 Oct 22, '17 Guest speaker, Life Sciences Research Foundation meeting, Baltimore, MD  
**2017**  
**Plenary lecture, Latin American Chronobiology Society, Chile**  
 Dec 13, '17 Workshop on Fatigue, Univ Penn  
 Jan 12, '18 Seminar, Georgia State University, Atlanta, GA

Jan 22, '18 Salk/Ipsen symposium on Biological Complexity, La Jolla, CA  
 Feb 12, '18 Workshop on plasticity in circadian rhythms and sleep, Hebrew Univ, Jerusalem  
 Mar 01, '18 Seminar, Villanova University, PA  
 Mar 06, '18 Seminar, Neuroscience Dept, Scripps Research Institute, La Jolla CA  
 Mar 21, '18 Seminar, Genetics, Case Western Reserve University, Cleveland OH  
 Apr 4, '18 Seminar, Buck Institute, Novato, CA  
 Apr 5, '18 Seminar, UC Berkeley, CA  
 Apr 11, '18 Seminar, Neuroscience, McGill University, Montreal, Canada  
 May 7, '18 Symposium organized by Dresden students, Lwocek Slasee, Poland  
 May 30, '18 Seminar, Calico Research Labs, San Francisco, CA  
 May 31, '18 Seminar, Stanford University, Palo Alto, CA  
 June 1, '18 CSHL Symp Quant Bio "Brain and Brain Disorders", NY  
 Sept 18, '18 Circadian symposium, FISV Conference, Rome, Italy  
**2018**  
 Oct 14 '18 **Keynote lecture, Neurobiology of Drosophila, Krakow, Poland**  
 Nov 10 '18 Cell Press-Fondation Ipsen meeting, Biology of Time, Phoenix AZ  
 Nov 11, '18 Keynote lecture, Peking Univ-Penn joint sleep symposium, Beijing, China  
 Sleep and Psychosomatic Medicine conference, Beijing, China  
**2018**  
**Frontiers in Neuroscience plenary session, American Acad of Neurology, LA**  
 Feb 18, '19 Seminar, QCB program, Princeton University, NJ  
 Feb 22, '19 Seminar, Neuroscience, Baylor College of Medicine, Houston, TX  
 Mar 6, '19 Seminar, Developmental Bio, Univ. Colorado, CO  
 Mar 13, '19 Seminar, Microbiology, Rutgers University, NJ  
 Apr 4, '19 Talk and session chair, Blood Brain Barrier meeting, CSHL NY  
 Apr 9, '19 Talk and session chair, ASBMB conference, Orlando, Fl  
**2019**  
**Keynote lecture, World Congress of Chronobiology, Suzhou, China**  
 Apr 30, '19 Lecture, IBRO course, Trivandrum, India  
 May 28, '19 GRC Neural Circuits, Les Diableret, Switzerland  
 June 8, '19 Workshop on circadian-sleep interaction, APSS San Antonio, Tx  
**2019**  
**Keynote lecture, APSS conference, San Antonio, Tx**  
 June 24, '19 GRC Chronobiology, Barcelona, Spain  
 July 24, '19 Seminar, SUIP program, Univ. of Penn  
**2019**  
**Plenary lecture, European Biological Rhythm Society conference**  
 Sept 25. '19 Seminar, NIBS, Beijing, China  
 Oct 15, '19 Advances in metabolic communication, Nature conference, Rio de Janeiro, Brazil  
 Oct 24, '19 Grand Rounds, Otolaryngology, Penn  
 Nov. 19, '19 Drosophila sleep meeting, HHMI Janelia Farm  
 Dec. 12, '19 Seminar, Oxford University, UK  
 Jan 29, '20 Seminar (student-invited), Stowers Institute, Kansas city  
 Feb 26, '20 Honors Lecture, NYU, New York  
 Mar 5, '20 Seminar (Fellows-invited), Joslin Diabetes Center, Boston  
 April 15, '20 Seminar, Ludwig Maximilian Univ, Munich, Germany (virtual)  
 June 8, '20 Neurozoom, hosted by A. Gitler and Z.Qiu  
 June 12, '20 Keynote lecture, NIAMS retreat (virtual)  
 July 10, '20 Seminar, CNCB, Univ. Coimbra, Portugal (virtual)  
 Sept 15, '20 Seminar, Univ of Arizona, Tuscon (virtual)  
 Oct 6, '20 "Internal States of the brain" symposium, Picower Institute, MIT (virtual)  
 Nov 2, '20 "Circadian Medicine" symposium, NYAS (virtual)

- Nov. 6, '20 "Circadian rhythms and aging" symposium GSA conference (virtual)  
 Dec 2, '20 Seminar, Neuroscience, Biological Sci/Cell&Mol Medicine, UCSD (virtual)  
 Jan 20, '21 Seminar, Biomedical Sciences series (virtual), UCSF  
 Jan 27, '21 Seminar, PASEF, Univ, Penn (virtual)  
**2021**  
 Mar 31, '21 Seminar, Cardiovascular Institute, Penn (virtual)  
 Apr 7, '21 Seminar, Neuroscience program, Vanderbilt University (virtual)  
**2021**  
 May 14, '21 Presidential symposium, Association of Univ. Anesthesiologists (virtual)  
 June 1, '21 Opening session talk, CSHL symp of Quant Biology, Circadian Clocks (virtual)  
 June 4, '21 Chair, session on sleep, CSHL symp Quant Biol. Circadian Clocks (virtual)  
 July 12, '21 Seminar in the Brain Body series, organized by Champalimaud, Portugal (virtual)  
 July 16, '21 Indo-US symposium on Chronobiology, Bangalore (virtual)  
 July 27, '21 Session on Cognition of Time, CogSci2021 Vienna (virtual)  
**2021**  
 Oct 5, '21 NAS/NAM Forum, "Genes First approach to Sleep" (virtual)  
 Nov 12, '21 American Neurological Association, Focus on sleep and rhythms (virtual)  
 Dec 7, '21 Switzer Prize lecture, UCLA  
 Dec 9, '21 Amgen Science Lecture series (virtual)  
 Feb 24, '22 Clinical Neuroscience Conference, CHOP  
 Mar 14, '22 Chair, Genetics of circadian disorders, World Sleep, Rome  
**Mar 15, '22** **Keynote, World Sleep Congress, Rome**  
 Mar 31 '22 Photosensory receptors and signal transduction Gordon Conference, Ventura CA  
**Apr 3 '22** **Keynote, Life Sciences Research Foundation, Philadelphia**  
 Aug 12, '22 Award lecture, Honma symposium, Sapporo, Japan (virtual)  
 Sept 14, '22 Seminar, Biology of Aging series, Columbia University (virtual)  
 Oct 6 '22 Neurology Grand Rounds, Northwestern University (virtual)  
 Oct 19, '22 Seminar, University of Michigan  
**Nov. 2, '22** **Keynote, National Academy of Medicine NeuroForum workshop on sleep**  
**Nov 14, '22** **Plenary, Circadian Sleep Data Blitz. SFN**  
**Feb 20, '23** **Plenary session, Advances in Sleep and Circadian Science, Clearwater FL**  
**Mar 21, '23** **Plenary lecture, American Society for Neurochemistry, Lexington Ky**  
**Mar 29, '23** **Simons Foundation Presidential Lecture, NYC, NY**  
 Apr 3, '23 Sleep Grand Rounds, Harvard Medical School

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### Inventions

Patent # 5,885,831, “Nuclear localization factor associated with circadian rhythms”

Patent # 7,053,121, “Compositions and methods for regulating circadian rhythms”