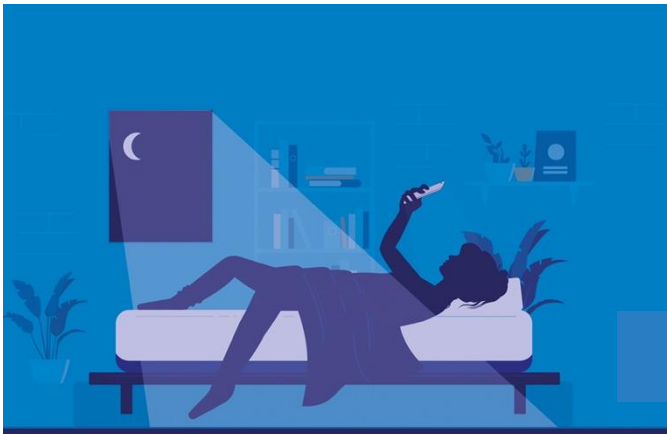

October 4, 2021

ANNUAL HEALH & SLEEP BENEFIT

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

PROGRAM

10:00 - 11:30 AM ET

HMS DSM Annual Faculty Meeting

10:00 - 11:30 AM ET

Introductory Meeting for HMS DSM Trainees with Prize Winners Ying-Hui Fu, Ph.D., and Louis Ptáček, M.D.

12:00 - 1:15 PM ET

Division of Sleep Medicine Annual Prize Lecture by Ying-Hui Fu, Ph.D., and Louis Ptáček, M.D.

"Insights from studying genetics and biology and human sleep behaviors"

Ying-Hui Fu, PhD
Professor of Neurology
Department of Neurology
Weill Institute for Neurosciences
University of California, San Francisco

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Louis Ptáček, MD
John C. Coleman Distinguished Professor of Neurology
University of California, San Francisco

1:15 - 1:30 PM ET
Awarding of 2021 Harvard Medical School Division of Sleep Medicine Prize to Ying-Hui Fu, Ph.D., and Louis Ptáček, M.D.

1:30 – 2:30 PM ET
Executive Council Meeting

2:30 - 4:30 PM ET
Data Blitz

Data Blitz Website
Password: SLEEP2021

4:30 - 5:30 PM ET
Reception

5:30 - 6:30 PM ET
Evening Public Lecture by Ying-Hui Fu, Ph.D., and Louis Ptáček, M.D.
"Serendipity, Ambition, and Delight: Insights from study of human sleep genetics."

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

DONOR RECOGNITION

Support for the 2021 Sleep and Health Benefit was generously provided by the following individuals and organizations:

Underwriter

VANDA PHARMACEUTICALS INC.

Benefactors

Eisai

sleep number

HARMONY BIOSCIENCES, LLC

Avadel

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Patron

the Wonderful company™

Sponsors

Charles Czeisler, M.D., Ph.D.
Francis J. Doyle III, PhD
Stefanos N. Kales, MD, MPH
Elizabeth B. Klerman, MD, PhD
Janet M. Mullington, Ph.D.
Frank A. J. L. Scheer, Ph.D., M.Sc.
Robert J. Thomas, M.D.

f.lux

Apnimed

dayZz

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Supporters

Richard A. Ferber, M.D.
Laila Goodman
Daniel Gottlieb, M.D., M.P.H.
Dara S. Manoach, PhD
James T. McKenna, Ph.D.
Stuart F. Quan, M.D.
Clifford B. Saper, M.D., Ph.D.
Robert E. Strecker, Ph.D.
John Winkelman, M.D., Ph.D.

TIMESHIFTER®

projectsleep

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Support in 2021 for the Harvard Medical School Division of Sleep Medicine Sleep Grand Rounds Program was generously provided by the following organizations:

Patrons

HARMONY BIOSCIENCES, LLC

Jazz Pharmaceuticals

NeuroCare CENTER FOR SLEEP

PHILIPS RESPIRONICS

Sponsor

Regional Home Care

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

For 23 years, support for the Harvard Medical School Training Program in Sleep, Circadian and Respiratory Neurobiology administered by the Brigham and Women's Hospital has been provided by a training grant from the **National Heart, Lung and Blood Institute.**

Support in 2021 for the Harvard Medical School Division of Sleep Medicine Sleep Matters Initiative was generously provided by the following organizations:

Sleep Cycle

Bryte

We would like to express our deepest appreciation for the support of these individuals and organization.

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

2021 Harvard Medical School Division of Sleep Medicine Prize Winners

Ying-Hui Fu, PhD

Professor of Neurology

Weill Institute for Neurosciences

University of California, San Francisco

Louis Ptáček, MD

Distinguished Professor of Neurology

University of California, San Francisco

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Dr. Ying-Hui Fu and Dr. Louis Ptáček are this year's Harvard Medical School Division of Sleep Medicine Prize winners. This award is being provided in recognition of their many contributions to understanding the genetic basis of wake-sleep and circadian disorders.

Dr. Ying-Hui Fu and Dr. Louis Ptáček's notable areas of scientific contributions include:

- Identifying the first Mendelian variants affecting human circadian functions, including genetic mutations responsible for short circadian periods in humans that underlie familial advanced sleep phase syndrome and their relationship to the function of biological clock genes
- Elucidating the role of post-translational modification of clock genes in modifying the rhythms of life
- Demonstrating the role of clock gene mutations under short photoperiod relating to seasonal mood disorders
- Discovery that mutations of DEC2 gene, a transcriptional repressor for the expression of orexin, can cause familial natural short sleep and increase the expression of orexin

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

DATA BLITZ

View all of our presentations at:
https://poster.bwh.harvard.edu/sleep2021/
Password: SLEEP2021

Basic Science	
Name	**Title**
Sydney Aten, PhD	SynGAP is expressed in the murine suprachiasmatic nucleus and regulates circadian-gated locomotor activity and light-entrainment capacity
Ilaria Barone, PhD	Phosphorylation regulates synaptic BMAL1 and synaptic vesicles dynamics
Jessica Brooks, BA	CLOCK as a prion-like stress sensor
Roberto De Luca, PhD	Noradrenaline and acetylcholine inhibit sleep-promoting neurons of ventrolateral preoptic area through a local GABAergic circuit
Bridget Fitzgerald, BA	Norepinephrine Tone Across Sleep/Wake States in Medial Prefrontal Cortex
Michael Gulledge, BA	Determining the Behavioral and Neurobiological Effects of Oxycodone Withdrawal on Sleep in Rats
Adam Joyal	The Role of Oxytocin in the Lateral Hypothalamus
Peter Kalugin	Dynamic tracking of cerebrospinal fluid composition in vivo
Jonathan Lipton, MD, PhD	Synaptic BMAL1 Phosphorylation Regulates Diurnal Vesicle Dynamics
Torrey Mandigo, PhD	A conserved role for the N-glycosylation pathway in sleep and seizures

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Clinical Sleep Disorders	
Name	**Title**
Margaret Blattner, MD PhD	REM sleep distribution in patients with prolonged sleep duration
Joon Chung, PhD	Multidimensional sleep health - concepts and approaches
Danielle Clarkson-Townsend, MPH, PhD	Associations between shift work, sleep, and adverse pregnancy outcomes in the Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-to-be (nuMoM2b
Larissa Engert PhD	The effect of glucocorticoids on inflammatory marker expression in human monocytes during sleep restriction and recovery
Wolfgang Ganglberger, MSc.	Sleep in the Intensive Care Unit: Staging Sleep with Heart Rate Variability, Breathing, and Artificial Intelligence
Michael Goldstein, PhD	Interactive effects of slow-paced breathing and mindfulness on sleep and overnight heart rate variability: A three-arm pilot RCT
Seyni Gueye-Ndiaye, MD	Environmental factors affecting pediatric sleep
Gonzalo Labarca, MD	Association between Obstructive Sleep Apnea delta heart rate with incident Atrial fibrillation in a community-based cohort
Kiran Maski, MD, MPH	Development and Validation of Pediatric Hypersomnia Screening Survey
Edward Pace-Schott, PhD	Generalized Anxiety Disorder with and without Insomnia Disorder: Sleep quality, anxiety and neural activations accompanying fear conditioning and extinction
Alicia Stokes, PhD	Thought Control Strategies and Insomnia Severity in Young Adult African Americans
Michael Vazquez	Sleep Hygiene as an Intervention to Lower Blood Pressure
Heming Wang, PhD	Upregulated heme biosynthesis increases obstructive sleep apnea severity: a pathway-based mendelian randomization study

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

Circadian, Memory and other aspects of Sleep Physiology	
Name	**Title**
Sara Abbaspour, PhD	"The effect of time of day of COVID-19 vaccination on side effects".
Bryan Baxter, PhD	Measuring the temporal coupling of slow oscillations, spindles, and hippocampal ripples in relation to procedural memory in humans
Ryan Bottary, MA	Age and Chronotype Associated with Sleep Timing Changes During COVID-19-Related Lockdowns in the US
Maia Feik Reinhart	Associations of sleep-wake and circadian timing with dietary fat, cholesterol, and caloric intake."
Chenlu Gao, PhD	Validation of the ezActi application for scoring daytime and nighttime sleep using actigraphy
Chenlu Gao, PhD	Sleep disturbance and incident Alzheimer's Disease: a UK Biobank study of 502,402 middle-aged to older participants
Kevin Jiang	Light exposure and its association with neurobehavioral capabilities and self-reported well-being
Raphael Knaier, PhD	Diurnal variation in physical performance: a meta-analysis
Celina Pluim, MS	Sleep and Cognition in Older Adults: Examining the Role of Circadian Rhythms
Enmanuelle Pardilla-Delgado, PhD	Laboratory-controlled circadian disruption decreases ability of actigraphy to accurately measure sleep
Jingyi Qian, PhD	Longitudinal Changes in Glycemic Control by Timing of Physical Activity in The Look AHEAD Study
Rachel Soemedi, PhD	Sex-biased genetic landscape associated with sleep disorders
Aaron Strong	Urinomics markers for predictions of neurobehavioral performance in response to sleep loss
Hui-Wen Yang, PhD	Polygenetic risk score and integrated biomarker of motor activity for the risk of AD

DIVISION OF SLEEP MEDICINE
HARVARD MEDICAL SCHOOL

PUBLIC LECTURE

Serendipity, Ambition, and Delight: Insights from study of human sleep genetics.

By Ying-Hui Fu, Ph.D. and Louis Ptáček, M.D.; both Professors of Neurology, Department of Neurology, Weill Institute for Neurosciences, University of California, San Francisco

Considering how important sleep is to our well-being, it is astonishing how little we know about normal sleep and how it is regulated. In this lecture, we will discuss synchronicities leading to our transition into sleep research and ongoing discoveries and serendipity that motivate our continued interest and work. This work represented an ambitious paradigm shift from conventional disease-genetics (identifying and studying genes/mutations causing human diseases) to studies of genetic contributions leading to normal variation in this fascinating human behavior. Studying humans presents many challenges and exciting possibilities. There is great hope that increasing understanding will ultimately present unique opportunities to develop better treatments for sleep disorders. In addition, improving normal sleep is likely to help to promote healthier aging.

Opening Remarks: Charles A. Czeisler, MD, PhD
Moderator: Jeanne F. Duffy, MBA, MS, PhD

Jessie Adeyemi0, M.D.

Daniel Aeschbach, Ph.D.

Argyll P. Ahn, M.D.

Stephen A. Amira, Ph.D.

Lenis Louise Anderson, Ph.D.

Elda Arrigoni, Ph.D.

Stanley W. Ashby, M.D.

Joshua August, M.D.

Ali Azarbarzin, Ph.D.

Jessie Patricia Balzer, Ph.D.

Laura Burger, Ph.D.

Bethany L. Bartley, M.D.

Radhika Basheer, Ph.D.

Salma Batool-Anwar, M.B.,B.S.

Ronald E. Becker, M.D.

Suzanne Michele Bertisch, M.D., M.P.H.

Neil Bhattacharyya, M.D.

Marta Blanco, Ph.D.

Giorgio Bonmassar, Ph.D.

In memoriam: Edward Barry Brownell, M.D.

Emery Neal Brown, Ph.D., M.D.

Ritchie Edward Brown, Ph.D.

Chin J. Bulotsk, M.D.

Rohit Budiraja, M.B.,B.S.

Nicolas Y Bussola, M.D.

Brian E. Cade, Ph.D.

Jacqueline C. Chang, M.D.

Elena Chartoff, Ph.D.

Catherine Chu, M.D.

Charles A. Czeisler, M.D., Ph.D.

Carolyn M. D'Ambrosio, M.D.

Hassan Saeed Dashti, Ph.D., R.D.

Bojeen Indrajit Desai, Ph.D.

Ivo Djonlagic, M.D.

Michael H. Do, Ph.D.

Ada Dobrowski, M.D.

Francis J. Doyle III, Ph.D.

Joanne F. Duffy, M.B.A., M.S., Ph.D.

Lawrence Epstein, M.D.

Olaitonpe S. Fasiano, M.B.,Ch.B.

Richard A. Farber, M.D.

Patrick M. Fuller, Ph.D.

Lei Gao, M.D.

Rizu Gelaye, Ph.D.

Dmitry Gerashchenko, M.D., Ph.D.

Fermin Gipson, M.D.

Ary Louis Goldberger, M.D.

Daniel Gottlieb, M.D., M.P.H.

Leilah K. Grant, Ph.D.

Monika Haack, Ph.D.

David G. Harper, Ph.D.

In memoriam: J. Woodward (Woody) Hastings, Ph.D.

Zhigang He, Ph.D., D.M.

Eric Hockman, M.D.

Tobias Karl Hoesch, Ph.D.

In memoriam: J. Allan Hobson, M.D.

Sandra Horowitz, M.D., C.M.

Kun Hu, Ph.D.

Tianyi Huang, D.Sc.

Philip A. Huynh, M.D.

Sogol Javaheri, M.D.

Nadine Jolly, M.D.

Jared W. Johnson, M.D.

Leonard B. Kaban, M.D., D.M.D.

Stefanos N. Kales, M.D., M.P.H.

Sivakanth A. Kalwa, M.B.B.S., M.D.

Satvinder Kaur, Ph.D.

Mahesh S. Kaushal, M.D.

Ronald Kessler, Ph.D.

Sat Bir Singh Khalsa, Ph.D.

Thomas Bernard Kinsen, Mh.B.ch.Bao

Hannah C. Kinney, M.D.

Katherine Klein, D.M.D.

Elizabeth B. Klerman, Ph.D., M.D.

Bernat Kocsis, M.D., Ph.D.

K

Bruce Kristal, Ph.D.

In memoriam: Richard E. Kronauer, Ph.D.

L

Christopher Landrigan, M.D., M.P.H.

Jacqueline Lane, Ph.D.

Peng Li, Ph.D.

Jonathan Lipton, M.D., Ph.D.

Steven W. Lockley, Ph.D.

Tobias Luckhenkemper, M.D.

Jun Lu, M.D., Ph.D.

M

Joseph A. Majzoub, M.D.

Dora S. Mamsch, Ph.D.

Kiran P. Maini, M.D.

Jean K. Matheson, M.D.

Paul Mathew, M.D.

In memoriam: Robert W. McCarley, MD

James T. McKenna, Ph.D.

James M. McNally, Ph.D.

Emmanuel Jean-Marie Mignot, Ph.D., M.D.

Janet Mullington, Ph.D.

N

Christa Nehs, Ph.D.

O

Judith A. Owens, M.D.

P

Edson Franz Pace-Schott, M.D., M.A., Ph.D.

Milena K. Pavlova, M.D.

Zachary S. Peacock, M.D., D.M.D.

Wanda Phipatanakul, M.D., M.S.

Michael J. Prerau, Ph.D.

Shaun Purcell, Ph.D.

Q

Jeryl Qian, Ph.D.

Stuart F. Quan, M.D.

R

Shadab A. Rahman, Ph.D.

David Ramey, MD

Shanthakumar M. W. Rajaratnam, Ph.D.

Venkatesan Ramalingam, Ph.D.

Gautam Rao, Ph.D.

Susan Redline, M.D., M.P.H.

Quentin R. Regestein, M.D.

Rebecca Robbins, Ph.D.

Joseph M. Rondi, M.Sc

Dennis Rosen, M.D.

Paul A. Rosenberg, M.D.,Ph.D.

Jeffrey M. Rothschild, M.D., M.P.H.

S

Scott A. Sands, Ph.D.

Clifford B. Saper, M.D.,Ph.D.

Ravi Sarkis, M.D., M.Sc.

Nicho Sassen, Ph.D.

Thomas E. Scammell, M.D.

Frank A.J.L. Scheer, M.Sc., Ph.D.

Eva Schernhammer, M.D., M.P.H., Dr.PH

Alexander F. Schier, Ph.D.

Rachel Sosenski ,Ph.D.

Tamar Sofer, Ph.D.

Li-M. Saint, Ph.D.

Mahesa A. Sri-Hatan, Ph.D.

Robert Stickgold, Ph.D.

Robert C. Stones, M.D.

Robert E. Strecker, Ph.D.

Lee Sullivan, M.D.

Filip K. Swirski, Ph.D.

T

Kutayan Taner, M.D.

Elsa M. Taveras, M.D., M.P.H.

Stephen Thankachan, Ph.D.

Robert J. Thomas, M.D.

Peter V. Tishler, M.D.

V

Daniel Paul Vena, Ph.D.

Richard Verrier, Ph.D.

Aristidis Veves, D.Sc., M.D.

Angeliki Vgontzas, M.D.

Aleksandar Videnovic, M.D.

W

Heming Wang, Ph.D.

Rui Wang, Ph.D.

Wei Wang, Ph.D.

Matthew D. Weaver, M.P.H., Ph.D.

J. Woodrow Weiss, M.D.

Charles Weitz, Ph.D., M.D.

D. Andrew Wellman, Ph.D., M.D.

W

Michael Brandon Westover, M.D., Ph.D.

David P. White, M.D.

David Williams, Ph.D.

Michelle A. Williams, Sc.D.

John Winkelman, M.D., Ph.D.

Jeremy Wolfe, Ph.D.

Y

Chun Yang, Ph.D.

Huan Yang, Ph.D.

Z

Eric Zhou, Ph.D.

Mark Zielinski, Ph.D.

Kirsi-Marja Zitting, Ph.D.