

***The 5th Annual***

**Sleep and Circadian Science Research Day**



**Thursday, November 21<sup>st</sup> 2019**

9:30 am – 5:15 pm  
University Club  
Ballroom B  
123 University Place  
Pittsburgh (Oakland)

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## Program Overview

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The 5th Annual Sleep and Circadian Science Research Day is a full-day inter-disciplinary event hosted by the University of Pittsburgh Center for Sleep and Circadian Science. The purpose of this conference is to bring together individuals from diverse disciplines from the University of Pittsburgh's Schools and area partners to disseminate innovative sleep-circadian research, promote the translation of basic science into clinical practice, and advance the science and practice of sleep medicine. This year's research symposia emphasize research on sleep, physical health, and mental health. The David J. Kupfer Lecture keynote lecture centers on sleep and oxidative stress.

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## Target Audience

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Clinicians, researchers, and students in fields relevant to sleep-circadian research or the practice of sleep medicine, including (but not limited to) psychiatry, psychology, sleep medicine, neurology, nursing, and pulmonary & critical care medicine.

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## Learning Objectives

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### Psychosocial Determinants of Sleep & Physical Health Symposium:

#### **Osea Giuntella, PhD:**

- Economic frameworks for understanding of sleep behavior
- Effects of sleep deprivation on human capital, health and economic performance
- Factors influencing sleep choice, examining the factors affecting the allocation of time to sleep and behavioral mechanisms that may explain suboptimal sleep choices.

#### **Rebecca Thurston, PhD:**

- Factors affecting sleep and vasomotor menopausal symptoms in midlife women
- Greater sleep disruption in midlife women is associated with poorer cardiovascular outcomes

#### **Sanjay Patel, MD, MS:**

- Racial differences in sleep
- Differentiating racial differences from disparities in sleep health
- How structural racism impacts sleep health

### David J. Kupfer Keynote Lecture

#### **Tired and Stressed: The impact of sleep and circadian regulation on oxidative stress and lifespan**

#### **Mimi Shirasu-Hiza, PhD:**

- Oxidative stress is associated with many human diseases, including cardiac disease, metabolic dysfunction, and neurodegenerative diseases
- Many of those diseases are also associated with defects in sleep or circadian regulation
- We hypothesize that one function of sleep and circadian regulation is to defend the brain and body against oxidative stress
- Using *Drosophila*, we will show one example of each: sleep is required for defense against oxidative stress and circadian regulated metabolism is required to modulate basal oxidative stress and regulate aging

## **Sleep & Mental Health Symposium:**

### **Zach Freyberg, MD:**

- Pancreatic dopamine is a powerful modulator of insulin release in pancreatic beta cells.
- Many components of the pancreatic beta cell dopaminergic machinery are under circadian control.
- Antipsychotic drugs may produce their metabolic side effects in part via their disruption of circadian expression of the beta cell dopamine machinery

### **Yanhua Huang, PhD**

- Understand the necessity of using animal models.
- Understand that changes in sleep may lead to changes in reward seeking behaviors.
- Identify a top-down control mechanism that is compromised by loss of sleep, and its impact on reward-elicited behaviors, including substance use.

### **Peter Franzen, PhD:**

- Understand the changes in developmental sleep-wake patterns during adolescence, and their links to mental health.
- Review experimental evidence that sleep loss alters neural systems underlying reward and emotion regulation.
- Review new evidence linking sleep to suicidality among ultra-high risk youth

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## **CME Accreditation and Designation Statement**

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In support of improving patient care, the University of Pittsburgh is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME) and the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

### **Physicians**

The University of Pittsburgh School of Medicine designates this live activity for a maximum of 3.75 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

### **Nursing (CNE)**

The maximum number of hours awarded for this Continuing Nursing Education activity is 3.75 contact hours.

### **Other health care professionals**

Other health care professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.

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## **Disclaimer Statement**

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**The following relevant financial relationships were disclosed:**

**Adam Bramoweth, PhD**

Consultant: Noctem LLC

**Daniel Buysse, MD**

Consultant: BeHealth, American Academy of Physician's Assistants, Bayer, CME Institute, Ebb Therapeutics, Eisai, Weight Watchers, International, Emmi Solutions

Other: Patent Copyright Issued: Author of the Pittsburgh Sleep Quality Index, Daytime Insomnia Symptoms Scale, Pittsburgh Sleep Diary, Insomnia Symptoms Questionnaire (copyright held by University of Pittsburgh). These instruments have been licensed to commercial entities for fees. Also co-author of the Consensus Sleep Diary (copyright held by Ryerson University), which is licensed to commercial entities for a fee.

**Faith Luyster, PhD**

Grant/Research Support: Inspire Medical Systems, Inc

**Colleen McClung, PhD**

Grant/Research Support: Janssen Pharmaceuticals

Consultant: Janssen Pharmaceuticals

**Sanjay Patel, MD**

Grant/Research Support: Bayer Pharmaceuticals, Philips Respironics

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**Rebecca C. Thurston, PhD**

Consultant: Astellas Pharma, Pfizer, Procter & Gamble

No other planners, members of the planning committee, speakers, presenters, authors, content reviewers and/or anyone else in a position to control the content of this education activity have relevant financial relationships to disclose.

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**Program Schedule**

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9:00am - 9:40am <i>Lobby</i>	<b>Registration</b>
9:40 - 9:45am <i>Ballroom B</i>	<b>Welcoming Remarks</b>
	Introduction: <b>Adriane Soehner, PhD</b> Assistant Professor of Psychiatry
9:45am - 11:15 am <i>Ballroom B</i>	<b>Morning Symposium: Determinants of Sleep and Physical Health</b>
	Chair: <b>Marissa Bowman, MS</b> Graduate Student in Psychology University of Pittsburgh
	Panelists: <b>Osea Giuntella, PhD</b> Assistant Professor of Economics University of Pittsburgh
	<b>Rebecca Thurston, PhD</b> Professor of Psychiatry, Clinical and Translational Science, Epidemiology and Psychology University of Pittsburgh
	<b>Sanjay Patel, MD, MS</b> Professor of Medicine and Epidemiology Director, Center for Sleep and Cardiovascular Outcomes Research

Medical Director, UPMC Comprehensive Sleep Disorders Program  
University of Pittsburgh

Discussant: **Martica Hall, PhD**  
Professor of Psychiatry, Psychology, & Clinical & Translational Science  
University of Pittsburgh

11:15am - 11:30am  
*Ballroom Lobby*

**Coffee & Tea Break**  
**Exhibitor Session**

11:30am - 12:30pm  
*Ballroom B*

**DAVID J. KUPFER KEYNOTE LECTURE**  
**Tired and Stressed: The impact of sleep and circadian regulation on oxidative stress and lifespan**

Keynote **Mimi Shirasu-Hiza, PhD**  
Lecturer: Associate Professor of Genetics & Development  
Columbia University Medical Center  
New York, NY

12:30pm - 1:30pm  
*Ballroom A*

**Buffet Lunch**  
**Exhibitor Session**

1:30pm - 2:45pm  
*Ballroom B*

**Afternoon Symposium:**  
**Sleep, circadian rhythms, and mental health**

Chair: **Colleen McClung, PhD**  
Professor of Psychiatry and Clinical and Translational Science  
University of Pittsburgh

Panelists: **Zach Freyberg, MD, PhD**  
Assistant Professor of Psychiatry and Cell Biology  
University of Pittsburgh

**Yanhua Huang, PhD**  
Associate Professor of Psychiatry  
University of Pittsburgh

**Peter Franzen, PhD**  
Assistant Professor of Psychiatry  
University of Pittsburgh

Discussant: **Fabio Ferrarelli, MD, PhD**  
Assistant Professor of Psychiatry  
University of Pittsburgh

2:45pm - 3:00pm  
*Ballroom Lobby*

**Coffee & Tea Break**  
**Exhibitor Session**

3:00pm - 4:00pm  
*Ballroom B*

**Data Blitz** *No CME credit awarded*

Chair: **Marquis Hawkins PhD**  
Assistant Professor of Public Health  
University of Pittsburgh

4:00pm - 5:00pm  
*Ballroom B*

**Networking Cocktail Reception & Poster Session (No CME credit awarded)**

5:00pm - 5:15pm  
*Ballroom B*

**Awards & Closing Remarks**

Presenter: **Adriane Soehner, PhD**

5:15pm  
*Ballroom B*

**Adjournment**

Assistant Professor of Psychiatry  
University of Pittsburgh

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## PROGRAM FACULTY

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Name/Credentials, Academic title (or other appropriate title), Institutional affiliation, City and State

**Adam Bramoweth, PhD**

Research Health Scientist & Staff Psychologist  
VA Pittsburgh Healthcare System  
Pittsburgh, PA

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UPMC Professor of Sleep Medicine  
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PACCM Sleep Medicine Fellow  
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