



**SOCIETY FOR RESEARCH ON BIOLOGICAL RHYTHMS**

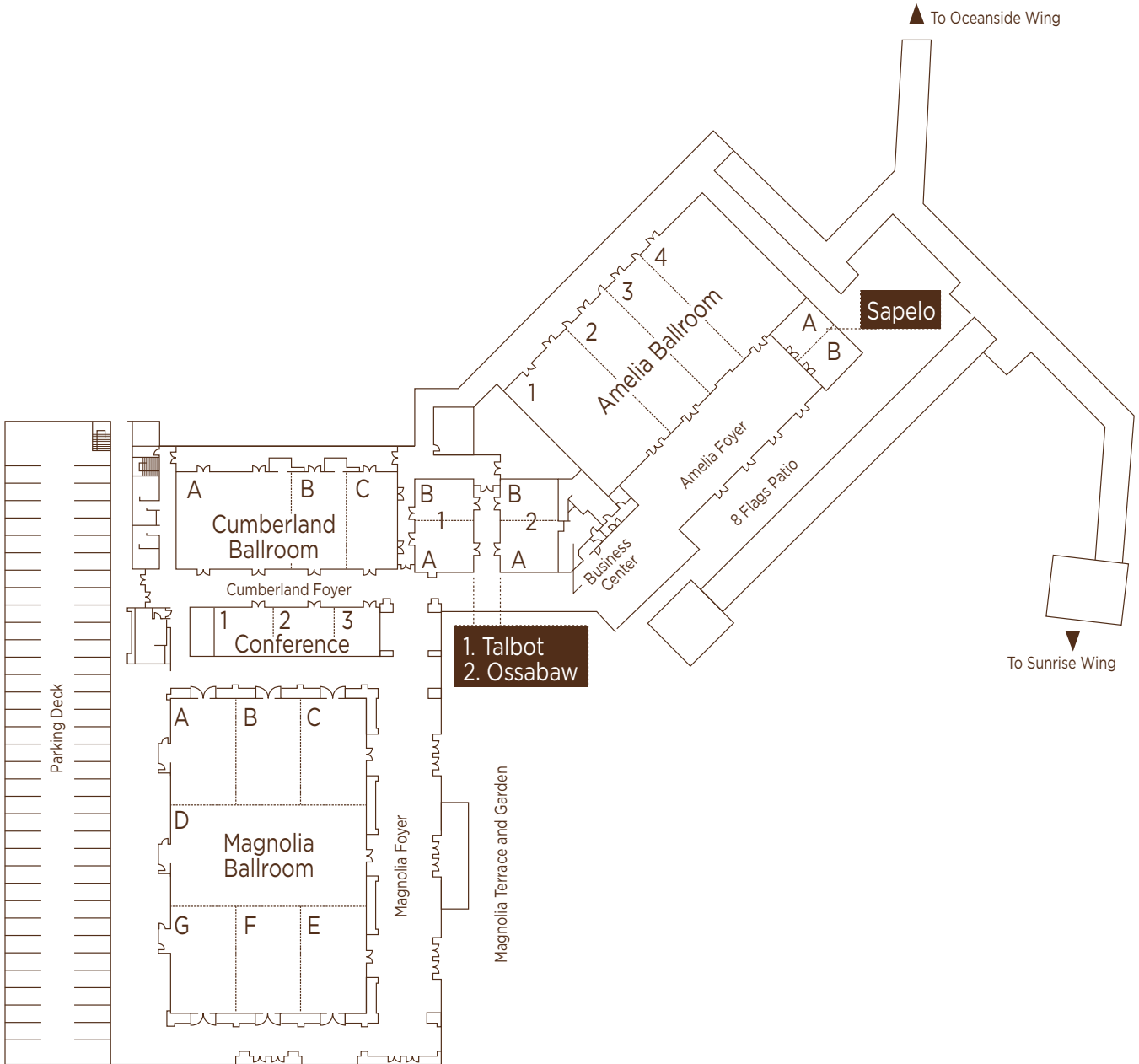
**MAY 12-16, 2018**

Amelia Island, Florida • Omni Amelia Island Plantation Resort

# RESORT MAP



*Amelia Island Conference Center*



SRBR would like to acknowledge the following funding agencies whose grants have contributed to the overall quality and diversity of the meeting.



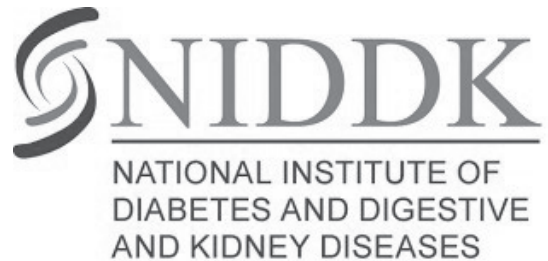
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## President's Welcome to SRBR 2018

It is my pleasure to welcome you back to warm, sunny Florida for the 2018 Biennial SRBR Conference! We are excited to return to Amelia Island, the site of SRBR for so many years early after its founding. SRBR was established 30 years ago, assembled by a group of visionaries whose commitment to research, education, and scientific exchange laid the foundation for SRBR to become a leading voice in propelling the biological rhythms field into the forefront of life science and medicine. To further this remarkable progress, SRBR 2018 promises to be an exceptional forum for hearing the latest cutting-edge research, reengaging with colleagues from years past, and exchanging ideas that will shape the future of the field with a talented and diverse group of chronobiologists from around the globe. Between scientific sessions be sure to take advantage of the hiking trails, golf courses, swimming pools, tennis courts, gym equipment and other amenities at Omni Amelia Island Plantation Resort, as well as nearby beaches and beautiful Amelia Island.

All the scientific discourse, personal interactions and leisure activities that we will soon experience would not be possible without many people working behind the scenes who helped organize this meeting. I wish to sincerely thank the SRBR 2018 Program Chair, Horacio de la Iglesia, and the Program Committee for assembling a wide-ranging and exciting scientific program for us to enjoy, our Professional Development Committee Chair, Iliia Karatsoreos, the Professional Development Committee, and the Junior Faculty Workshop Chair, Jennifer Evans, for kicking off the meeting with terrific educational and career development events, Laura Laughlin and the Parthenon Management Group team for their meticulous planning to keep this meeting running smoothly, and our Fundraising Chair, Nico Cermakian, who raised a record level of support from many generous government, corporate and individual sponsors. In addition to planning SRBR 2018, your SRBR Board of Directors made quiet progress on multiple fronts including initiating a Public Relations Committee that is striving to improve the broad visibility of SRBR as the expert on circadian rhythms, increasing our advocacy for circadian biology and sleep to governmental and private funding institutes, and continuing with efforts to honor excellence of our members with Directors' Awards and other travel awards including those specifically targeted to enhance diversity at our meeting. I am forever grateful for the time and hard work that all SRBR committees devoted to strengthening our Society and advancing the biological rhythms field.

Finally, I want to thank all of you for being here and sharing your insights, energy and passion for biological rhythms – which is really what makes this meeting such a success. These are exciting times in the biological rhythms field, and I hope you will take full advantage of the opportunities that await you at SRBR 2018.

Best wishes for a great meeting!

Carla Green  
SRBR President, 2016-2018

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University of California, San  
Diego

Kenneth Wright, Jr.  
University of Colorado

Takashi Yoshimura  
Nagoya University

# Award Winners

## Named Awards

Vanda Pharmaceuticals Excellence Awards – Samuel Bowers, Rebekah Brooks, Danyi Ma, and Gabriele Sulli  
Vanda Pharmaceuticals Merit Awards - Bharath Ananthasubramaniam and Louise Ince  
Condor Instruments Excellence Award – Charles Cassone  
Daylight Academy Excellence Award – Adam Seluzicki  
Procter and Gamble Merit Award - Victoria Acosta-Rodríguez  
Tecan Excellence Award – William Horton  
Konopka Excellence Awards – Antonio Meireles-Filho and Lisa Soyeon Baik  
Patricia DeCoursey Excellence Award – Samantha Iiams

## Excellence Awards

Samuel Bowers	William Horton	Antonio Meireles-Filho	Lisa Soyeon Baik
Rebekah Brooks	Samantha Iiams	Rebecca Northeast	Gabrielle Sulli
Charles Cassone	Danyi Ma	Adam Seluzicki	Huei-Bin Wang

## Merit Awards

Victoria Acosta-Rodríguez	Kinga Graniczowska	Jennifer Langel	Forrest Shaffer
Bharath	Azure Grant	Isara Laothamatas	Benjamin Smarr
Ananthasubramaniam	Ben Greenwell	Ying Li	Andrea Smit
James Bagnall	Meghana Holla	Xianhui Liu	Nicola Smyllie
Darius Becker-Krail	Sabrina Hunt	Aldrin Lugena	Alessandra Stangherlin
Franziska Brüning	Louise Ince	Anneke Olde Engberink	Jeff Swan
Zheng Chen	James Jaggard	Belinda Pinto	Lewis Taylor
Lauren DePoy	Jeff Jones	Lance Riley	Chelsea Vadnie
Baharan Fekry	Denise Kemler	Kayla Rohr	Megan Vaughan
Diego Fernandez	Kyle Ketchesin	Bala S.C. Koritala	Wanqi Wang
Lauren Foley	Dusan Kolarski	Luis Salazar	Tom Woelders
Jennifer Fribourgh	Ajay Kumar	Raymond Sanchez	Maria Yurgel
Vance Gao	Jacqueline Lane	Matthias Schlichting	Xianlin Zou

## Trainee and Young Faculty Diversity Enhancement (TYDE) Fellowships

Kathryn Abrahamsson Halter	Erin Hanlon	Emily Ricketts
Allison Clark	Atlantis Hill	Raymond Sanchez
Adam Contreras	Wesley Leigh	Joel Soler
Hannah De los Santos	Heather Mahoney	Naomi Wallace
Kinga Graniczowska	India Nichols-Obande	Andrew Villa

## Global Diversity Fellowship

Carlos Caldart	Alejandra Goity	Alexandre Tavartkiladze
Fernando Cázarez-Márquez	Anayanci Masis-Vargas	Luoying Zhang
Danilo Flôres		

## Exhibitors

Please take time to visit with our exhibitors in the Amelia Foyer!

They have provided generous support of the 2018 SRBR Meeting.

### Exhibitor Hours:

Sunday, May 13	7:00 am-6:30 pm
Monday, May 14	7:00 am-6:30 pm
Tuesday, May 15	7:00 am-6:30 pm
Wednesday, May 16	7:00 am-1:00 pm



# General Information

The SRBR Registration Desk is located in the Center Foyer.

Friday, May 11	3:00 pm – 7:00 pm
Saturday, May 12	8:00 am – 8:00 pm
Sunday, May 13	7:00 am – 6:30 pm
Monday, May 14	7:00 am – 6:30 pm
Tuesday, May 15	7:00 am – 6:30 pm
Wednesday, May 16	7:00 am – 1:00 pm

**Messages** can be left on the SRBR message board next to the SRBR Registration desk. Meeting participants may check the message board routinely for mail, notes, and messages.

**Hotel check-in** will be in the Hotel Main Lobby at the main entrance of the resort.

**Meals** Reception fare will be available for SRBR attendees at the Welcome Reception on Saturday, May 12 at 7:00 pm. Lunch will be available for registered attendees on Sunday, May 13 and Monday, May 14 in the Magnolia Foyer. SRBR attendees are encouraged to attend the Closing Awards Banquet on Wednesday, May 16. A cocktail reception will begin at 6:30 pm followed by dinner and awards at 7:00 pm. [For all other meals, please visit the many dining options that the resort has to offer.](#)

**The SRBR Mobile App** is now available in the App Store for iOS devices (e.g. iPhones) and in Google Play for Android devices. Search SRBR2018 and download today. View the latest schedule, attendee list and abstracts!

Don't forget to follow us on social media @SRBRHQ and use the hashtag #SRBR2018



## SRBR WiFi:

WiFi Network: srbr2018

Network Password: vanda2018

# Meeting Components

## Professional Development

### **Trainee Professional Development Day**

Saturday, May 12, 9:00 am – 5:30 pm

The Trainee Professional Development Day is an entire day devoted to scientific and career development activities for trainees. The day consists of a keynote address, an activity consisting of one-on-one blitz discussions, and a series of workshops on various topics. The goal of the Trainee Professional Development Day is to allow the next generation of biological rhythm researchers to learn from and interact with faculty members in a more informal and intimate setting than that allowed by the main conference.

### **Junior Faculty Workshops**

Saturday, May 12, 11:30 am – 5:45 pm

The goal of the Junior Faculty Workshops, which are open to investigators within 8 years of obtaining a faculty position, is to foster the growth and success rate of the next generation of biological rhythm researchers by learning from and interacting with established faculty members in a more informal and intimate setting than that allowed by the main conference. A panel of experienced members of the field will participate in each meeting, to provide tips and advice to junior faculty members and answer questions.

### **Meet the Professors**

Sunday, May 13 - Wednesday, May 16, 10:30 am - 11:00 am

Meet the Professor Sessions are meant to provide trainees (students and postdocs) the opportunity to interact with experienced faculty members in the field and to foster scholarly conversation. Each day several faculty researchers will be available to talk with trainees. Any trainee interested in meeting these investigators can go to the Conference Room 2 and take part in this informal gathering.

## Scientific Sessions

### **Symposia**

Sunday, May 13 - Wednesday, May 16, 8:15 am - 10:30 am

Sunday, May 13 and Tuesday, May 15, 4:15 pm - 6:30 pm

Symposium Sessions were designed by the 2018 Program Committee and invitations were extended to guest speakers.

### **Slide Sessions**

Sunday, May 13 - Wednesday, May 16, 11:00 am - 12:30 pm

Slide Sessions were selected by the 2018 Program Committee from abstracts submitted for the 2018 meeting.

## **Presidential Symposium**

Monday, May 14, 4:30 pm – 6:30 pm

The Presidential Symposium is a session of talks from special guests of the SRBR President.

## **Pittendrigh/Aschoff Lecture**

Wednesday, May 16, 5:30 pm – 6:30 pm

The Pittendrigh/Aschoff Lecture is a keynote lecture presented by a prominent researcher in the field of chronobiology. This year's lecturer is Dr. Charles Czeisler.

## **Datablitz**

Sunday, May 13, 8:00 pm - 8:55 pm

Datablitz will showcase the research of some of the trainees presenting posters, including many of the Award recipients. Each speaker will have one minute and one slide to introduce data that they will later present at their poster presentation.

## **Poster Sessions**

Sunday, May 13 - Tuesday, May 15

Posters will be available for viewing in the Magnolia Ballroom D-G starting at 8:00 am each day. All posters will remain up from Sunday, May 13 to Tuesday, May 15. Poster setup will be from 8:00 am to 4:00 pm on Sunday, May 13. Posters should be removed by Tuesday, May 15 at 11:00 pm. Each poster will be scheduled to be presented on a certain day:

Sunday, May 13, 9:00 pm – 10:30 pm	Poster numbers S1-S124
Monday, May 14, 9:00 pm – 10:30 pm	Poster numbers M1-M125
Tuesday, May 15, 9:00 pm – 10:30 pm	Poster numbers T1-T125

## **Coffee Table Discussions**

Sunday, May 13, and Monday, May 14, 1:00 pm – 2:00 pm

Coffee Tables Discussions will be informal discussions of selected chronobiology topics nominated from the membership. These tables are meant to bring together researchers with common interests for informal introductions and discussions. To prepare for a coffee table, think about questions that you would like to ask or resources you would like to share with your colleagues. Seats are limited for each researcher. Sign up sheets will be available at the Message Board next to the SRBR Registration Desk.



## **Special Meetings**

### **JBR Editors Meeting, SAGE Publishers**

Monday, May 14, 2:00 pm – 3:00 pm

### **SRBR Board of Directors Meeting**

Tuesday, May 15, 12:45 pm – 2:45 pm

### **General Meeting of SRBR Members**

Wednesday, May 16, 4:00 pm – 5:00 pm

This is the biennial meeting gathering the members of the Society. **All conference attendees are welcome to attend.** Members of the outgoing Board of Directors and representatives of the meeting organization team will do a brief report, and the new Board of Directors will be presented. Attendees will also be invited to comment and give ideas on the future of the Society.

## **Social Events and Ceremonies**

### **Welcome Reception**

Saturday, May 12, 7:00 pm – 9:00 pm

Come and meet other meeting participants and old friends in this official opening event of the meeting! Drinks and small bites served.

### **Cocktail Reception**

Wednesday, May 16, 6:30 pm - 7:00 pm

### **Closing Banquet and Awards**

Wednesday, May 16, 7:00 pm

Regular meeting registration includes participation in the banquet. For accompanying guest(s), banquet tickets need to be purchased in advance at the SRBR registration desk.

# Trainee Professional Development Day

**Saturday, May 12**

The Trainee Professional Development Day is an entire day devoted to scientific and career development activities for trainees. The day consists of a keynote address, an activity consisting of one-on-one blitz discussions, and a series of workshops on various topics. The goal of the Trainee Professional Development Day is to allow the next generation of biological rhythm researchers to learn from and interact with faculty members in a more informal and intimate setting than that allowed by the main conference.

Only those who have pre-registered will be allowed to participate. Registered trainees should attend the workshops they selected when registering. This information will be posted on the message board in the conference center prior to the first session.

**9:00 am – 9:20 am**      **Welcome | Magnolia D**  
*Iliia Karastoreos, Washington State University*  
*Carla Green, UT Southwestern Medical Center*

**9:20 am - 10:00 am**      **Keynote | Magnolia D**  
*Paul Hardin, Texas A&M University*

**10:10 am - 11:00 am**      **Trainee Day Session I**

**Chronobiology Bootcamp I: Foundations and Basic Concepts | Magnolia A**  
*Douglas McMahon, Vanderbilt University*

For those that are new to the field, this workshop will give an overview of the up-to-date model of “transcriptional/translational feedback loops” in cellular clocks and review major discoveries that lead to the formation of this model. Focus will be placed on the mammalian system but a brief comparison with the *Drosophila* system will also be included.

**Faculty Job Search: The Good, The Bad, and The (Sometimes) Ugly | Magnolia B**

*Jennifer Hurley, Rensselaer Polytechnic Institute*  
*Ryan Logan, University of Pittsburgh*

The process of obtaining a faculty position can be daunting and there can be many pitfalls along the way. This workshop will address some of the most challenging aspects of the academic job hunt, including guidance on where and when to apply, insight on the process itself, and tips on what to do after you have been offered the position. Questions will be welcomed throughout this 50-minute discussion.

### **Teaching Chronobiology: Strategies for Discovery-Based Learning |**

*Magnolia C*

*Mary Harrington, Smith College*

*Edward Weber, Rider University*

This workshop will describe approaches to incorporate current pedagogical principles in teaching chronobiology. We will describe our own experiences using zebrafish and mice as we engage students in discovery-based learning. We also will discuss approaches to teach principles of experimental rigor and reproducibility. The workshop will end with time to brainstorm new ideas for teaching chronobiology in diverse settings.

### **Publish or Perish: When, Where, and How to Publish and Review |**

*Magnolia E*

*William Schwartz, The University of Texas At Austin*

This workshop will be run by the Editor-in-Chief of the Journal of Biological Rhythms, Bill Schwartz, to discuss a range of topics with workshop participants about to publish their work, whether senior graduate students or junior post-docs. Topics include authorship; deciding when and what to write; writing review articles; how to organize your writing; choosing a journal; engaging the attention of the editor; review, revision, and rejection; and serving as a journal referee. Come prepared with questions and problems!

### **Diversity in Chronobiology: Ways to Ensure a Vibrant Scientific Community |**

*Magnolia F*

*India Nichols-Obande, University of California, Los Angeles*

*Ketema Paul, University of California, Los Angeles*

In this workshop we will be discussing the challenges and the opportunities for women and underrepresented minorities in the life sciences generally, and chronobiology in particular. We hope to stimulate discussion about strategies to increase diversity in a field that has not been particularly diverse, and to share approaches that have (or have not) been successful. We will encourage participants to ask questions and also contribute their own stories.

**11:10 am - 12:00 pm**

### **Trainee Day Session II**

### **Chronobiology Bootcamp II: Molecular Clocks (From Plant to Animal) |**

*Magnolia A*

*C. Robertson McClung, Dartmouth College*

*Alex Keene, Florida Atlantic University*

This workshop will review our current understanding of the biochemical principles underlying molecular clocks by making a comparative analysis of new advances in different systems. We will discuss commonalities and highlight new technical approaches that might be taken to answer some of the most pressing questions.

### **Chronobiology Bootcamp III: History of Chronobiology | Magnolia B**

*Jay Dunlap, Geisel School of Medicine at Dartmouth*

This session will provide a brief sketch that describes the first observations and studies that pioneered the field of chronobiology and is tailored to introduce trainees to the people and key experiments that paved the way for research in circadian rhythms. A variety of models will be touched upon, ranging from plants to dinoflagellates to fiddler crabs to the current genetic models with an emphasis on how different systems defined the course of research on rhythms. A lecture will last for ~30-40 min, followed by a discussion of ~10-20 min.

### **Outreach and Communicating Science: Novel Outreach Strategies with Art | Magnolia C**

*Luis Larrondo, Pontificia Universidad Catolica De Chile*

Communicating our results, and reaching out to the wider community, is an incredibly important yet sometimes underestimated part of the job of scientists. There are many strategies to accomplish this, and this workshop will focus on some novel ways of reaching this important goal.

### **Research and the App Revolution | Magnolia E**

*Satchidananda Panda, Salk Institute for Biological Studies*

*Daniel Forger, University of Michigan*

This workshop delves into emerging mobile technology, and presents smart mobile devices, applications, and sensors which allow collection of big data on various behaviors and physiological variables. Besides highlighting opportunities associated with those novel approaches, it will also discuss limitations, especially with regards to circadian rhythm research.

### **The Next Generation: How to Find the Right Scientific Mentor | Magnolia F**

*Iliia Karatsoreos, Washington State University*

*Carla Finkielstein, Virginia Polytechnic Institute and State University*

While luck can play a big role in finding the right mentor, in this session we will discuss strategies that may maximize your ability to make informed decisions and hopefully tip the scale in your favor in finding the right fit. Participation from trainees at all levels (undergrad, grad, and postdocs) is encouraged.

### **Where to From Here? Alternatives to Academic Jobs | Magnolia G**

*David Ferster, Northwestern University*

*Annie Curtis, Royal College of Surgeons in Ireland*

There are a lot of opportunities for PhDs in biological sciences. Some opportunities start right after graduate school or a postdoctoral fellowship, while other opportunities arise after long and successful careers in academia. This session will discuss some of the experiences in making the transition from the academy to the business world.

**12:00 pm – 1:15 pm**      **Trainee Day Lunch** | *Magnolia D*

**1:15 pm – 2:00 pm**      **Positive Feedback Looping** | *Cumberland A-B*  
“Speed dating” for chronobiologists!

**2:10 pm - 3:00 pm**      **Trainee Day Session III**

**Chronobiology Bootcamp IV: The SCN: Past to Present** | *Magnolia A*

*Rae Silver, Columbia University*

*David Weaver, University of Massachusetts Medical School*

It is now easy to think that it was always known that the SCN was the master brain clock. But, this wasn't always the case – it was a long and winding road that led to this key finding of our field. What are the components that make the master clock tick? This introduction is designed as a brief background before the meeting so that new trainees will better understand new findings in SCN anatomy, inputs/outputs and interconnections.

**Dialogues in Chronobiology I: Diverse Organisms** | *Magnolia B*

*Christine Merlin, Texas A&M University*

*Kristin Tessmar-Raible, University of Vienna/ MFPL*

Though much recent work in chronobiology seems focused on drosophila and rodent models, our field has a rich history of using a wide variety of species which have illuminated important basic concepts. This workshop by two experienced researchers who use non-rodent species will explore the power, trials, tribulations, and incredible rewards of using these species.

**Collaboration: Strategies for Stable Collaboration** | *Magnolia C*

*Martha Gillette, University of Illinois Urbana-Champaign*

*Christopher Colwell, UCLA*

Modern science is inherently collaborative. “Team science” is not just a buzz word anymore, it's a fact of life.

This session will be led by two exceptional researchers who have forged new and exciting collaborations to push forward their research agendas. They will discuss strategies to not only find collaborators, but how to encourage a cordial, professional, and mutually beneficial long-term relationship with other scientists.

**Statistics and Modelling: Analysis of Genome Scale Circadian Data (A)** |

*Magnolia E*

*John Hogenesch, Cincinnati Children's Hospital Medical Center*

*Tanya Leise, Amherst College*

In this workshop, you'll learn about installing software to analyze genome scale circadian data. You'll apply this software to recent large-scale datasets. Along the way, you'll learn some key principles to design and analysis of these studies -- 'golden rules'.

**Experimental Design: Do's, Don'ts and Good Practice in Chronobiology | Magnolia F**

*Elizabeth Klerman, Brigham and Women's Hospital, Inc*

*Eric Bittman, University of Massachusetts at Amherst*

Part of the scientific pursuit is having the wisdom to ask the right questions. This workshop will focus on the process of identifying and refining a research question and optimizing experimental design to fit a hypothesis pertinent to rhythms research. Discussion of selecting appropriate controls, lighting conditions, the number of time points, and the means of measurement will also take place. Come with your own questions for how to design your experiments to align with best practices in our field.

**International Science: Training and Working in a New Country | Magnolia G**

*Shihoko Kojima, Virginia Tech*

*Diego Fernandez, National Institute of Mental Health*

Science has become an international endeavor. Each training stage brings with it the potential to move to a new and exciting place. But these moves aren't always easy, and the combination of both life and scientific "culture shock" can sometimes make things rough. Two investigators at different stages of their careers will share with you their experiences of being transplanted to a new environment, both the good and the not so good. Bring your own stories and questions to contribute to the discussion.

**3:00 pm – 3:30 pm**

**Breakout Session | Magnolia G**

**3:30 pm - 4:20 pm**

**Trainee Day Session IV**

**Chronobiology Bootcamp V: Human Clocks and Translation | Magnolia A**

*Phyllis Zee, Feinberg School of Medicine, Northwestern University, Chicago*

*Jeanne Duffy, Brigham & Women's Hospital, Harvard Medical School*

Translational research has been an area of emphasis, particularly given the funding climate. However, the nature and process of conducting translational research is often amorphous. This workshop will provide a collaborative discourse around the models and practices of translational chronobiology research. The workshop will provide a real world behind-the-scenes perspective of translational chronobiology research, and help trainees explore ways of engaging in this kind of research.

### **Debates in Chronobiology I | *Magnolia B***

This is a new and exciting format we are offering this year.

In this highly interactive session, teams of 5-7 participants will debate central topics in chronobiology.

You will randomly be assigned to a particular topic, and each team will work with a faculty “coach” in the lead-up to the meeting via Skype and/or other formats to get prepared to debate the other group.

Topic 1: Circadian rhythms are important in clinical translation.

Team 1 = Yes, timing matters. Team 2 = No, there’s lots of info out there showing timing doesn’t matter.

### **Effective Communication: How to (not) Give a Good Talk | *Magnolia C***

*Justin Blau, New York University*

We all know how pleasant it is to hear an exciting, engaging, and informative talk. But what makes a good talk?

This workshop by a very experienced speaker will use a highly interactive approach to help explain how to put together an engaging talk, and what pitfalls to avoid.

### **Statistics and Modeling: Analysis of Genome Scale Circadian Data (B) |**

*Magnolia E*

*John Hogenesch, Cincinnati Children’s Hospital Medical Center*

*Tanya Leise, Amherst College*

In this workshop, you’ll learn about installing software to analyze genome scale circadian data. You’ll apply this software to recent large-scale datasets. Along the way, you’ll learn some key principles to design and analysis of these studies -- ‘golden rules’. (This session is taken in conjunction with session #16)

### **Debates in Chronobiology II: Questions and Controversies in Chronobiology | *Magnolia F***

This is a new and exciting format we are offering this year.

In this highly interactive session, teams of 5-7 participants will debate central topics in chronobiology.

You will randomly be assigned to a particular topic, and each team will work with a faculty “coach” in the lead-up to the meeting via Skype and/or other formats to get prepared to debate the other group.

Topic 2: Evolutionarily speaking, the molecular clock arose via:

Team 1 = A single ancestor. Team 2 = Convergent evolution.

**Dialogues in Chronobiology II: Questions and Controversies in Chronobiology**  
| *Magnolia G*

*Maria Robles, Institute of Medical Psychology, LMU, Munich*

*Till Roenneberg, Institute for Medical Psychology*

Despite the apparent simplicity of the circadian phenomena, their interpretations at different levels of analysis are not yet congruous. Is there an oscillator outside the transcription-translation feedback loop (TTFL)? How are inputs and outputs defined? Do models add predictive power and explanatory value to our understanding of the circadian system? How useful is the PRC (phase response curve) for understanding entrainment? These are examples of the questions we will address and discuss in this 50-min workshop. Attending this workshop will make you rethink your “givens” and hopefully take your thinking outside the box - if successful, this workshop will make you leave with more questions than you had before.

**Interview Tips: Closing the Deal** | *Cumberland A*

*Lance Kriegsfeld, University of California, Berkeley*

You made it. You finally got that email inviting you to come to “University X” to give a talk or two and try to land a job. But, how do you transition from a successful job application that gets you in the door, to a job offer? This discussion will focus on tips and tricks for increasing your chances to nail the interview, and how to negotiate the entire job offer process.

**4:30 pm – 5:30 pm**

**“Back to the Future” Closing Panel** | *Magnolia D*

**7:00 pm – 9:00 pm**

**Opening Reception** | *Magnolia Garden*



# 2018 Junior Faculty Workshops

**Saturday, May 12**

The goal of the Junior Faculty Workshops is to foster the growth and success rate of the next generation of biological rhythm researchers by learning from and interacting with established faculty members in a more informal and intimate setting than that allowed by the main conference. A panel of experienced members of the field will participate in each meeting, to provide tips and advice to junior faculty members and answer questions.

Attendance is open to investigators within ~8 years of obtaining a faculty position. Only those who have pre-registered will be allowed to participate. A list of registered faculty will be posted on the message board in the conference center prior to the first session.

**11:30 am – 12:15 pm**      **Clock Networking** | *Cumberland A-B*

This is designed to facilitate interactions through “speed networking” among attendees. Attendees will form small groups and introduce themselves with their “elevator pitch”.

**12:30 pm – 2:00 pm**      **Panel Discussion 1** | *Cumberland C*

**Navigating the Funding Environment: How to Optimize Your Efforts**

*Jason DeBruyne, Morehouse School of Medicine*

*Orie Shafer, University of Michigan*

*Joanna Chiu, University of California Davis*

*Michael Selmanoff, Center for Scientific Review/NIH*

Obtaining funding can be challenging even in the best of times. This panel will discuss strategies to optimize efforts to obtain extramural funding. Topics will include how to identify different funding sources, how to target your proposals, and general advice for submitting successful applications.

**2:15 pm – 3:15 pm**      **Panel Discussion 2** | *Cumberland C*

**Effective Communication Strategies for Research Success.**

*Carrie Partch, University of California, Santa Cruz*

*William Schwartz, The University of Texas At Austin*

*Amita Sehgal, University of Pennsylvania*

*Samer Hattar, National Institute of Mental Health*

This panel will discuss strategies for broadcasting your research message. Topics will include: journal selection, how to write a compelling cover letter, when to accept invited talks, how to speak to a nonscientist audience, and strategies for public outreach.

**3:30 pm – 4:30 pm**

**Panel Discussion 3 | *Cumberland C***

**Managing a Successful Lab: Recruitment, Mentorship, and Conflict Resolution**

*Deanna Arble, Marquette University*

*Frank Scheer, Brigham and Women's Hospital, Harvard Medical School*

*Ketema Paul, University of California, Los Angeles*

Recruiting and training junior scientists is an essential skill that is rarely taught. This panel will discuss the management skills needed to grow and run a successful lab. Topics will include how to recruit talented people, how to effectively set the course for your team, how to resolve conflicts, and how to involve undergraduates effectively in research

**4:45 pm – 5:45 pm**

**Panel Discussion 4 | *Cumberland C***

**Juggling Research, Teaching, and Service Responsibilities in Academia: Can You Really Do It All?**

*Luis Larrondo, Pontificia Universidad Catolica De Chile*

*Paul Hardin, Texas A&M University*

*Nicolas Cermakian, McGill University*

*Carla Finkelstein, Virginia Polytechnic Institute and State University*

Even in heavy research-oriented institutions, a faculty member is expected to balance teaching, training, and research. This panel will discuss strategies to help achieve work-life balance.

**7:00 pm – 9:00 pm**

**Opening Reception | *Magnolia Garden***

# SRBR 2018 Program Details

## Saturday, May 12

- 9:00 am - 5:30 pm **Trainee Day**  
(see details on pages 17-23)
- 11:30 am - 5:45 pm **Junior Faculty Workshop**  
(see details on pages 24-25)
- 7:00 pm - 9:00 pm **Opening Reception**  
Magnolia Garden

## Sunday, May 13

- 7:30 am - 9:00 am **Morning Coffee**  
Amelia Foyer
- 8:15 am - 10:30 am **Concurrent Symposia**
- Symposium 1: Konopka Symposium: Time Keeping by Molecular and Neuronal Networks**  
Amelia 1 & 2  
Chair: John Hogenesch, Cincinnati Children's Hospital Medical Center
- 8:15 Introduction
- 8:30 **Molecular and Cellular Dissection of the Circadian Clock**  
Jennifer Loros, Geisel School of Medicine at Dartmouth
- 9:00 **The Ontogeny of Circadian Synchrony**  
Erik Herzog, Washington University
- 9:30 **Complementing the Circadian Clock**  
Elizabeth Maywood, MRC-Laboratory of Molecular Biology
- 10:00 **Molecular Genetics of Delayed Sleep Phase Disorder**  
Michael Young, The Rockefeller University
- Symposium 2: Redox Regulation Of and By Clocks: Implications for Aging, Metabolism and Heart Disease**  
Amelia 3 & 4  
Chair: Katja Lamia, The Scripps Research Institute
- 8:15 Introduction
- 8:30 **Redox Regulation of Photoperiodic Flowering**  
Takato Imaizumi, University of Washington
- 9:00 **EPAS1 Contributes to High-Altitude Adaptation and Cripples the Circadian Clock in Tibetan Pika**  
Erquan Zhang, NIBS, Beijing
- 9:30 **The NAD Redox Switch in Aging and Circadian Homeostasis**  
Clara Peek, Northwestern University
- 10:00 **Circadian Rhythms, MyoD1 and Muscle Metabolic Homeostasis**  
Karyn Esser, University of Florida

\*= Merit Award Winner \*\*= Excellence Award Winner += TYDE Fellowship Winner # = Global Diversity Fellowship Winner

***Symposium 3: Circadian Photoreception: How Does It Work and How Can We Apply What We Know to Improve Public Health***

*Cumberland B-C*

Chair: Rob Lucas, University of Manchester

8:15 Introduction

8:30 ***An Unexpected Role of the Suprachiasmatic Nucleus in Contagious Itch Behavior***

Zhou-Feng Chen, Director of Center for the Study of Itch

9:00 ***Re-Designing Visual Displays to Understand How Melanopsin Helps Us See***

Annette Allen, University of Manchester

9:30 ***Cell Autonomous Phototransduction in Circadian Neurons***

Todd Holmes, University of California at Irvine School of Medicine

10:00 ***Light and Sleep Signalling to the Molecular Clockwork***

Russell Foster, University of Oxford

**10:30 am - 11:00 am**

**Coffee Break**

*Amelia Foyer*

**10:30 am - 11:00 am**

**Meet the Professors**

*Conference 2*

Maria Fernanda Ceriani, *Fundacion Instituto Leloir*

Colleen McClung, *University of Pittsburgh*

Paul Taghert, *Washington University Medical School*

Charles Czeisler, *Harvard Medical School*

Phyllis Zee, *Feinberg School of Medicine, Northwestern University, Chicago*

Jay Dunlap, *Geisel School of Medicine at Dartmouth*

Carla Finkielstein, *Virginia Polytechnic Institute and State University*

Samer Hattar, *National Institute of Mental Health*

Tanya Leise, *Amherst College*

Gijsbertus van der Horst, *Erasmus University Medical Center*

- 11:00 am - 12:30 pm**      **Slide Session: Metabolism and Microbiome**  
*Amelia 1 & 2*  
*Chair: Shelley Tischkau, Southern Illinois University*
- 11:00**    **SS1. *Rhythmic Food Intake Drives Rhythmic Gene Expression More Potently Than the Hepatic Circadian Clock in Mice***  
 \*Ben Greenwell, Texas A&M University
- 11:15**    **SS2. *Absence of Melatonin Receptor 1 (MT1) Leads to Leptin Resistance in Mice***  
 Daniella do Carmo Buonfiglio, University of Sao Paulo
- 11:30**    **SS3. *Selective Disarrangement of Circadian Rhythmicity of Microglia in Obesity***  
 Chun-Xia Yi, Academic Medical Center, University of Amsterdam.
- 11:45**    **SS4. *Chronic Sleep Restriction Leads to Lasting Changes in the Fecal Microbiome and Fecal Metabolome in Mice***  
 \*\*Samuel Bowers, Vanda Pharmaceuticals Excellence Awardee, Northwestern University
- 12:00**    **SS5. *Gut Microbial Modulatory Diet Reduces the Impact of Chronic Circadian Disruption on Sleep and Facilitates Rhythm Realignment***  
 Monika Fleshner, University of Colorado at Boulder
- 12:15**    **SS6. *Temperature Entrainment of the Circadian Clock of the Enteric Bacterium *Enterobacter Aerogenes****  
 \*\*Charles Cassone, Condor Instruments Excellence Awardee, University of Kentucky Department of Biology

- 11:00 am - 12:30 pm**      **Slide Session: Beyond Transcription or Translation**  
*Amelia 3 & 4*  
*Chair: Justin Blau, New York University*
- 11:00**    **SS7. *Rhythmic Potassium Transport Regulates the Circadian Clock in Human Red Blood Cells***  
 John O'Neill, MRC Laboratory of Molecular Biology
- 11:15**    **SS8. *Ask Family Kinases are Key Enzymes for Circadian Clock Input***  
 Hikari Yoshitane, The University of Tokyo
- 11:30**    **SS9. *CK1 $\delta/\epsilon$  Protein Kinases Prime the PER2 Circadian Phosphoswitch***  
 Rajesh Narasimamurthy, Duke-NUS medical school, Singapore
- 11:45**    **SS10. *Distinct Phosphorylation Modes of CK1 Required for the Circadian Clock of *Neurospora****  
 Michael Brunner, Heidelberg University Biochemistry Center
- 12:00**    **SS11. *Monitoring Multisite Phosphorylation in the Circadian Clock Using Time-Resolved NMR***  
 \*Sabrina Hunt, University of California Santa Cruz
- 12:15**    **SS12. *The Disordered C-Terminal Tail of Mammalian CRY1 Interacts With its Photolyase Homology Region to Regulate Circadian Rhythms***  
 Gian Carlo Parico, UC Santa Cruz

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- 11:00 am - 12:30 pm**     **Slide Session: Circadian Coding of Temperature and Photoperiod**  
*Cumberland A*  
*Chair: Monika Stengl, University of Kassel*
- 11:00**   **SS13. *A Role for the Nuclear Pore in Nucleocytoplasmic Partitioning and the Maintenance of Temperature Compensation***  
David Somers, Ohio State University
- 11:15**   **SS14. *A Phototropin-Based Light-Temperature Coincidence Detection System in Arabidopsis***  
\*\*Adam Seluzicki, Daylight Academy Excellence Awardee, Plant Biology Laboratory, Salk Institute for Biological Studies
- 11:30**   **SS15. *Chemical Integration of Circadian and Photoperiodic Clocks in Plants***  
Brian Zoltowski, Southern Methodist University
- 11:45**   **SS16. *Circadian Clock Control and Vitamin A Regulation of Photoperiodically-Induced Reproductive Diapause in the Monarch Butterfly***  
\*\*Samantha Iiams, Patricia DeCoursey Excellence Awardee, Texas A&M University
- 12:00**   **SS17. *Effects of Short T-Cycle Entrainment on Rodent Reproduction***  
Thijs Johannes Walbeek, University of California, San Diego
- 12:15**   **SS18. *Sex Differences in Seasonal House Sparrow Vocalizations and Pineal Gland Control***  
Clifford Harpole, University of Kentucky

- 11:00 am - 12:30 pm**     **Slide Session: Humans at Work and School**  
*Cumberland B-C*  
*Chair: Phyllis Zee, Feinberg School of Medicine, Northwestern University*
- 11:00**   **SS19. *Sleep-More in Seattle: Later High School Start Times are Associated With Better Student Sleep and Academic Performance***  
Gideon Dunster, University of Washington
- 11:15**   **SS20. *Evidence of Social Jetlag Among Elementary School Children***  
Jennette Moreno, Baylor College of Medicine
- 11:30**   **SS21. *Simulated Night Shift Work Induces Circadian Misalignment of the Human Peripheral Blood Mononuclear Cell Transcriptome***  
Laura Kervezee, McGill University
- 11:45**   **SS22. *Influences of Recovery Time and Time of Day on Sleep Duration Prior Work Shifts: Analysing Diary and Actigraphy Data From 14 Studies***  
John Axelsson, Karolinska Institutet
- 12:00**   **SS23. *A Multi-Component Lighting Intervention for Shiftworking Hospital Staff***  
Elizabeth Harrison, Center for Circadian Biology, UC San Diego
- 12:15**   **SS24. *Killing Two Birds With One Stone: How Averaging Obscures Individual Diurnal Performance Trends***  
Elise Facer-Childs, University of Birmingham

12:30 pm - 2:00 pm

**SRBR Group Lunch**

*Magnolia Foyer*

1:00 pm – 2:00 pm

**Coffee Tables Discussions**

*Magnolia B-C*

***Getting a Faculty or Industry Job***

Hosts: Katja Lamia, Christos Polymeropoulos

***Genome Wide Data Analysis***

Hosts: Michael Hughes, Felix Naef

***Lab vs. Nature Ideas***

Hosts: Roelof Hut, Charalambos Kyriacou

***The Role of Social Media***

Hosts: Satchidananda Panda, Joseph Takahashi

***Public Outreach & Talking to the Press***

Hosts: Diego Golombek, Till Roenneberg

***Women in Science***

Hosts: Mary Harrington, Jeanne Duffy

***Rhythms Analysis***

Hosts: John Hogenesch, Tanya Leise

***Circadian Phase Markers***

Hosts: \*Tom Woelders, Ravi Allada

***NIH Scientific Review***

Hosts: Michael Selmanoff, Colleen McClung, Janet He

***Mentoring: Seeking and Providing***

Hosts: William Schwartz, Erik Herzog

4:15 pm - 6:30 pm

**Concurrent Symposia**

***Symposium 4: SRS-SRBR Symposium: Sleep Molecules***

*Amelia 1 & 2*

Chair: Ying Xu, Soochow University

Co-Chair: Steven Shea, Oregon Health & Science University

4:15 Introduction

4:30 ***Sleep Loss Stirs Up a Tauopathy***

Sigrid Veasey, University of Pennsylvania School of Medicine

5:00 ***Regulatory Effects of Bmal1 on Sleep***

Ketema Paul, University of California, Los Angeles

5:30 ***Control of Sleep Duration and Timing by Taranis***

Kyunghee Koh, Thomas Jefferson University

6:00 ***An Evolutionarily Conserved Role for RFamide Neuropeptides in Sleep***

David Prober, California Institute of Technology

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***Symposium 5: New Insights Into Molecular Genetic Components Involved in Seasonal Timing***

*Amelia 3 & 4*

Chair: Bambos Kyriacou, University of Leicester

4:15 Introduction

4:30 ***Flowering in Trees***

Akiko Satake, Kyushu University

5:00 ***Seasonal Adaptation in Medaka***

Takashi Yoshimura, Nagoya University

5:30 ***Molecular Control of Migration Timing in Salmon***

David Hazlerigg, UiT The Arctic University of Norway

6:00 ***The Mechanisms Generating Long-Term Circannual Cycles in Mammals***

Andrew Loudon, University of Manchester

***Symposium 6: Circadian Rhythms and Psychiatric Disorders***

*Cumberland B-C*

Chair: Jeanne Duffy, Brigham & Women's Hospital, Harvard Medical School

4:15 Introduction

4:30 ***Roles of the Circadian Clock in ADHD and Depression - Insights from Zebrafish***

Han Wang, Soochow University

5:00 ***Light, Melanopsin-Containing Retinal Ganglion Cells, the Circadian System, and Mood/Affect***

Samer Hattar, National Institute of Mental Health

5:30 ***Chronobiological Basis of Mood Disorders in Women***

Diane B. Boivin, Douglas Mental Health University Institute, McGill University

6:00 ***Translational Research on the Use of Light Therapy in Psychiatric Patients***

Klaus Martiny, University of Copenhagen

8:00 pm - 8:55 pm

**Datablitz**

*Amelia 1 & 2*

Chairs: Roelof Hut, University of Groningen and Yong Zhang, University of Nevada Reno

***USING Optogenetics to Determine the Role of the Suprachiasmatic Nucleus in Mood Regulation***

\*Chelsea Vadnie, University of Pittsburgh

***A Tale of Two CRYs: Identifying the Biochemical Determinants of Their Differential Regulation of Circadian Timekeeping***

\*Jennifer Fribourgh, UCSC

***Participatory Chronobiology: Analyses of Skin Temperature Characterize Jetlag in the Qs Community***

\*Azure Grant, University of California, Berkeley

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***Spaceflight-Associated Changes in Mouse Gut Microbiome: An Indicator of Disrupted Sleep and Circadian Rhythms?***

Peng Jiang, Northwestern University

***The Glucocorticoid Receptor and REV-ERB Alpha Interact in the Circadian Regulation of Inflammation***

Polly Downton, University of Manchester

***Estrogen Regulation of Daily Metabolic Rhythms in Female Mice***

Oluwabukola Omotola, University of Kentucky

***An Acid-Responsive Circadian-Oscillating lncRNA***

\*\*Rebekah Brooks, Vanda Pharmaceuticals Excellence Awardee,  
U of Pennsylvania

***Circadian Clock Regulates Melanin Pigmentation in Mouse and Human***

Soumyadeep Sarkar, Washington State University

***Social Jet Lag Evokes Drosophila Circadian Neural Network Desynchrony***

Ceazar Nave, University of California Irvine

***Skin in the Circadian Game: Population Level Analysis of Transcriptional Rhythms in Human Skin***

Gang Wu, Cincinnati Children's Hospital

***Circadian Rhythms of Bioluminescence of Enterobacter Aerogenes in a Heterologous Host in Vivo***

Jiffin Paulose, University of Kentucky

***Circadian Variation of Neurometabolic Activity in the Prefrontal Cortex: Impacts of Aging and Circadian Disruption.***

+Naomi Wallace, Washington State University

***Associations Between Chronotype, Morbidity and Mortality in the UK Biobank Cohort***

Kristen Knutson, Feinberg School of Medicine, Northwestern University,  
Chicago

***A Novel in Vitro Model of Immune Consequences of Circadian Disruption***

Adam Stowie, Morehouse School of Medicine

***SCN Heterogeneity Revealed Through Developmental Patterning of Neuropeptide Expression***

Vania Carmona-Alcocer, Marquette University

***Circadian Clock of Enterobacter Aerogenes***

\*+Kinga Graniczowska, University of Kentucky

***Rest-Activity Cycles Drive Dynamics of Phosphorylation in Cortical Synapses***

\*Franziska Brüning, Max Planck Institute of Biochemistry

***Differential Effects of Circadian System and Circadian Misalignment on Insulin Sensitivity and Insulin Secretion***

Jingyi Qian, Brigham & Women's Hospital, Harvard Medical School

***Acute Effects of Blue Light on Eating Behavior and Glucose Metabolism of Mice***

#Anayanci Masis-Vargas, Institut des Neurosciences Cellulaires et  
Intégratives -CNRS- Strasbourg University

***Muscle Contraction as Novel Non-Photic Time Cue for the Circadian Clocks in Muscle***

\*Denise Kemler, University of Florida

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***Ecological Community Simulation Suggests Competition Can Drive Evolution of Circadian Rhythms***

\*Vance Gao, Northwestern University

***Quantitative Network Analysis of Circadian Clocks in Fibroblasts and SCN Organotypic Slices***

\*James Bagnall, University of Manchester

***A Novel Function of Gaba in the Mouse Suprachiasmatic Nucleus: Refinement of Circadian Output Rhythms***

Daisuke Ono, Nagoya University

***Paternal Cocaine Disrupts Offspring Circadian Clock Function in a Sex Dependent Manner in Mice***

Alexandra Yaw, Kent State University

***Distinct Circadian Rhythms of Circulating Endocannabinoids (eCB), 2-Arachidonoylglycerol (2-AG) and Anandamide (AEA)***

+Erin Hanlon, The University of Chicago

***Metabolic Input Regulates Circadian Physiology Through O-GlcNacylation***

\*Xianhui Liu, University of California, Davis

***Light Dosimetry: A Method for Conditional Adjustment of Circadian Period***

\*Dusan Kolarski, University of Groningen

***Regulation of the Hypoxic Response by Mammalian Cryptochromes***

\*Megan Vaughan, The Scripps Research Institute

***Inhibition of Casein Kinase 1 Enhances Hippocampal-Dependent Learning and Increases Expression of Plasticity Proteins in the Hippocampus and Amygdala***

+Heather Mahoney, University of South Florida

***Single-Cell Analysis of Circadian Clock Activity in the Drosophila Intestine***

Kathyani Parasram, University of Windsor

***Actogram-Style Eatograms Reveal Association Between Food-Intake-Timing Variability and (hypo)manic Symptoms in Bipolar Disorders***

Clément Bourguignon, McGill University

***Measuring Circadian Bioluminescence from Freely Behaving Mice***

\*Wanqi Wang, Columbia University Medical Center

***Timing of Feeding Behavior Affects Daily Rhythms in Body Temperature and Muscle Mitochondrial Metabolism***

Paul de Goede, Academic Medical Center Amsterdam (AMC)

***A Role for Biological Rhythms in Seasonal Adaptation and Speciation***

Andrew Nguyen, University of Florida

***How to Time Events With Multi-Site Phosphorylation***

Yining Lu, University of Michigan

9:00 pm - 10:30 pm

Poster Session I (S1-S124)

Magnolia Ballroom D-G

## Monday, May 14

7:30 am - 9:00 am **Morning Coffee**  
Amelia Foyer

8:15 am - 10:30 am **Concurrent Symposia**

### ***Symposium 7: Uncovering Hidden Principles in the Neuronal Organization of Clocks***

*Amelia 1 & 2*

Chair: Johanna Meijer, Leiden University Medical Center

8:15 Introduction

8:30 ***Organization of Master Clock Circuits at the Network Level***  
Jennifer Evans, Marquette University

9:00 ***Circadian Remodeling of Adult Networks***  
Maria Fernanda Ceriani, Fundacion Instituto Leloir

9:30 ***Signals of Oscillator Networks in the SCN: Postnatal Changes in Players***  
Sato Honma, Research and Education Center for Brain Science, Hokkaido University

10:00 ***The Connectome of the Adult Mouse Brain Clock: Today***  
Rae Silver, Columbia University

### ***Symposium 8: Evolution of Clocks and Sleep***

*Amelia 3 & 4*

Chair: Peter Meerlo, University of Groningen

8:15 Introduction

8:30 ***Molecular Insight into Circadian and Circalunar Clocks in the Bristle Worm *Platynereis****  
Kristin Tessmar-Raible, University of Vienna/ MFPL

9:00 ***Molecular Basis of Biological Rhythms in an Intertidal Crustacean***  
Bambos Kyriacou

9:30 ***Flexibility in Timing and Duration of Sleep in Great Frigatebirds Cycling Between Land and Air***  
Niels Rattenborg, Max Planck Institute for Ornithology

10:00 ***The Energy Allocation Model of Sleep Function: An Evolutionary Perspective***  
Markus Schmidt

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**Symposium 9: Microbes, Their Hosts and Their Clocks**

*Cumberland B-C*

Chair: Horacio de la Iglesia, University of Washington

8:15 Introduction

8:30 ***Circadian Dynamics in Gut Microbiome and Metabolic Homeostasis***

Satchidananda Panda, Salk Institute for Biological Studies

9:00 ***Circadian Rhythms in Early Divergent Parasites***

Luisa Figueiredo, Instituto de Medicina Molecular

9:30 ***Circadian Control of the Innate and Adaptive Immune Responses: Implications for Parasitic and Bacterial Infections***

Nicolas Cermakian, McGill University

10:00 ***Parasite Offence or Host Defense? the Role of Rhythms in Malaria Infection***

Sarah Reece, University of Edinburgh

**10:30 am - 11:00 am**

**Coffee Break**

*Amelia Foyer*

**10:30 am - 11:00 am**

**Meet the Professors**

*Conference 2*

Louis Ptacek, *UCSF*

Deborah Bell-Pedersen, *Texas A&M University*

Rob Lucas, *University of Manchester*

Elizabeth Maywood, *MRC-Laboratory of Molecular Biology*

Patricia DeCoursey, *University of South Carolina*

Justin Blau, *New York University*

Michael Rosbash, *HHMI/Brandeis University Biology*

Diane B. Boivin, *Douglas Mental Health University Institute, McGill University*

Nicolas Cermakian, *McGill University*

Jennifer Loros, *Geisel School of Medicine at Dartmouth*

11:00 am - 12:30 pm

**Slide Session: Assembling Central Clocks**

*Amelia 1 & 2*

Chair: Matthew Butler, Oregon Health & Science University

**11:00 SS25. *Genome-Wide Transcriptional Profiling of Circadian Oscillations in the Suprachiasmatic Nucleus***

Pin Xu, UT Southwestern Medical Center at Dallas

**11:15 SS26. *The Analysis of Distinctive Oscillators and Neuronal Networks in Mouse SCN***

Yongli Shan, UT Southwestern Medical Center

**11:30 SS27. *Coupling Between Subregional Oscillators Within the Suprachiasmatic Nucleus Determines Free-Running Period in the Rat***

Michael Schwartz, SRI International

**11:45 SS28. *Allatostatin C is a Novel Circadian Neuropeptide and Modulates Evening Locomotor Activity in Drosophila***

Madelen Diaz, Brandeis University

**12:00 SS29. *CRISPR-Mediated Deletions Reveal Surprising Features of Drosophila Gene Expression Regulation Within Circadian Neurons***

Dingbang Ma, HHMI/Brandeis University

**12:15 SS30. *Pigment-Dispersing Factor Functions in the Madeira Cockroach Circadian Clock***

Monika Stengl, University of Kassel

11:00 am - 12:30 pm

**Slide Session: Clocks and Immune Function**

*Amelia 3 & 4*

Chair: Diego Golombek, Universidad Nacional de Quilmes

**11:00 SS31. *Lux Arrhythmo Coordinates the Circadian Clock and Defense in Arabidopsis***

Hua Lu, University of Maryland Baltimore County

**11:15 SS32. *Circadian Regulation of Macrophage Phagocytosis is Mediated by a Rev-Erba Independent Bmal1/RhoA Pathway***

Gareth Kitchen, University of Manchester

**11:30 SS33. *Role of Inflammatory Signaling in Modulating the Macrophage Circadian Clock***

Shan Chen, Geisel School of Medicine at Dartmouth

**11:45 SS34. *Regulation of Neuroinflammation by REV-ERB $\alpha$***

Erik Musiek, Washington Univ. School of Medicine in St. Louis

**12:00 SS35. *Coordinated Immune Cell Oscillations Drive Diurnal Variation in Adaptive Immunity***

\*Louise Ince, Vanda Pharmaceuticals Merit Awardee, Ludwig-Maximilians-University, Walter Brendel Center of Experimental Medicine, Munich

**12:15 SS36. *Simulated Shift Work Schedules in Mice Increases Serum Levels of Immunomodulatory Cytokines***

Emily Collins, Rensselaer Polytechnic Institute

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11:00 am - 12:30 pm

**Slide Session: Omics Around the Clock**

*Cumberland A*

Chair: Louis Ptacek, University of California, San Francisco

- 11:00 SS37. *Integrated Omics Uncover Circadian Clock-Regulated Phosphorylation Landscapes in Drosophila***  
Ke Shui, Huazhong University of Science & Technology
- 11:15 SS38. *Circadian Proteomic Analysis Identifies Essential Mechanisms of Post-Transcriptional Regulation in the Circadian Clock***  
Jennifer Hurley, Rensselaer Polytechnic Institute
- 11:30 SS39. *Astrocyte-Focused Analysis of Single-Cell Transcriptomics Studies from Mouse Hypothalamus***  
Chak Foon Tso, Washington University in St. Louis
- 11:45 SS40. *Integration across Multi Omics Data Elucidates Metabolic Changes during Nocturnal Migration***  
\*\*William Horton, Tecan Excellence Awardee, Pennsylvania State University
- 12:00 SS41. *Effects of Nocturnal Light on the Liver Metabolome***  
Andries Kalsbeek, Netherlands Institute for Neuroscience
- 12:15 SS42. *Identification of Biomarkers for Acute and Chronic Insufficient Sleep in the Human Blood Transcriptome***  
Simon Archer, University of Surrey

11:00 am - 12:30 pm

**Slide Session: Interactions Between Clocks and Sleep**

*Cumberland B-C*

Chair: Jason DeBruyne, Morehouse School of Medicine

- 11:00 SS43. *A Novel Circadian Output Circuitry Regulates Sleep-Wake Arousal Threshold in Drosophila***  
Fang Guo, HHMI/Brandeis University
- 11:15 SS44. *Multimomics Analysis of Cardiovascular Protection Against Severe Sleep Loss in a Novel Model of Sleep Resiliency, the White-Throated Sparrow***  
Paul Bartell, Pennsylvania State University
- 11:30 SS45. *Scoring Sleep and Wake Using Raw Data From the Apple Watch***  
Olivia Walch, University of Michigan
- 11:45 SS46. *A Homeostasis Regulator SIK3 Directs Circadian Rhythms And Sleep Through Multiple Downstream Substrates***  
Naoto Hayasaka, Nagoya University
- 12:00 SS47. *Novel Animal Models for Under-Recognized Circadian Sleep Disorders***  
Choogon Lee, Florida State University
- 12:15 SS48. *A Population of Vipergic Clock Neurons in the Suprachiasmatic Nucleus Consolidate Daily Siesta Sleep***  
Ben Collins, University of Zurich

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- 12:30 pm - 1:30 pm**      **SRBR Group Lunch**  
*Magnolia Foyer*
- 1:00 pm – 2:00 pm**      **Coffee Tables Discussions**  
*Magnolia B-C*
- Getting Published***  
Hosts: Joseph Takahashi, William Schwartz
- Nocturnality/Diurnality***  
Hosts: Roelof Hut, Horacio de la Iglesia
- Finding the Right Collaborators***  
Hosts: Charalambos Kyriacou, Russell Foster
- Molecular Strategies to Regulate Amplitude***  
Hosts: Carrie Partch, John Hogenesch
- NIH Funding Strategies***  
Hosts: Corinne Silva, Michael Sesma, Michael Selmanoff
- Working with Vertebrates in Today's Lab***  
Hosts: Stuart Peirson, Satchidananda Panda
- Using Rhythms to Teach Science***  
Hosts: Mary Harrington, Michael Gorman
- From Grad Student to Postdoc***  
Hosts: \*Benjamin Smarr, Stephanie Padilla
- Administrative Service: The Good, the Bad, and the Ugly***  
Hosts: Karen Gamble, Jay Dunlap
- 2:00 pm - 3:00 pm**      **JBR Editors Meeting**  
*Magnolia A*
- 3:00 pm - 4:00 pm**      **Timeless Memories**  
*Cumberland A*
- Our field stands on the shoulders of friends and colleagues who have passed away but are still among us through their creativity, wisdom and shared stories. Join us to celebrate their lives.
- 4:30 pm - 6:30 pm**      **Presidential Symposium: Biological Timing from Atoms to Disease**  
*Amelia Ballroom*  
Chair: Carla Green, UT Southwestern Medical Center
- Why, Yes That \*Is\* a Clock in My Pocket and I \*am\* Happy to See You!***  
Andy LiWang, University of California, Merced
- Macromolecular Machines of the Mammalian Circadian Clock***  
Charles Weitz, Harvard Medical School
- Dissecting the Role of Physiologic and Metabolic Factors in Lung Cancer***  
Thales Papagiannakopoulos, NYU Langone Medical Center

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**8:00 pm - 9:00 pm**

**Just in Time**

*Amelia Ballroom*

Chair: Horacio de la Iglesia, University of Washington

Join us for three hot topic talks, The SRBR Program Committee

**Data Capture in the Wild - The Human Chronobiome**

Carsten Skarke, University of Pennsylvania

**Leveraging Our Understanding of Circadian Rhythms to Treat an Incurable Genetic Disorder**

Christopher Colwell, University of California, Los Angeles

**Dermal Photoreception of Circadian Clocks in the Mouse Ear**

Ethan Buhr, University of Washington

**9:00 pm - 10:30 pm**

**Poster Session II (M1-M125)**

*Magnolia Ballroom D-G*



**Tuesday, May 15**

**7:30 am - 9:00 am**      **Morning Coffee**  
*Amelia Foyer*

**8:15 am - 10:30 am**      **Concurrent Symposia**

***Symposium 10: Non-ATCG Clock Regulation***

*Amelia 1 & 2*

Chair: Charles Allen, Oregon Health & Science University

8:15    Introduction

8:30    ***The Circadian Clock Collaborates with 3D Genome Organizers to Regulate Oscillating Transcription***

*Carolina Diettrich Mallet de Lima, Karolinska Institutet*

9:00    ***Rapid Response and Slow Recovery of a Liver Epigenomic Marker to a Light-Mediated Phase Advance of the Circadian Clock***

*Mitch Turker, Oregon Health & Science University*

9:30    ***Insights Into Novel Roles of JmjC Proteins in the Oscillator***

*Luciano DiTacchio, University of Kansas Medical Center*

10:00    ***Post-Transcriptional Regulation of the Circadian System***

*Sebastian Kadener, Brandeis University*

***Symposium 11: Effects of Climate Change on Biological Timing Systems***

*Amelia 3 & 4*

Chair: Charlotte Helfrich-Förster, University Wuerzburg

8:15    Introduction

8:30    ***Nature's Best Predictions in a Quickly Changing World: Timing of Avian Migration***

*Barbara Helm, University of Groningen & University of Glasgow*

9:00    ***Sex-Dependent Phenological Plasticity in an Arctic Hibernator***

*Cory Williams, University of Alaska Fairbanks*

9:30    ***Biotic Responses to Rapid Climate Change***

*William Bradshaw, University of Oregon*

*Christina Holzappel, University of Oregon*

10:00    ***Circadian Modulation of Abiotic Stress Responses in Plants***

*C. Robertson McClung, Dartmouth College*

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**Symposium 12: Crosstalk Regulation of the Circadian and Cell Division Cycles**

*Cumberland B-C*

Chair: Carla Finkielstein, Virginia Polytechnic Institute and State University

8:15 Introduction

8:30 ***Crosstalk Between Circadian Rhythms and Cell Cycle in 3-Dimensional Organoids***

Christian Hong, University of Cincinnati College of Medicine

9:00 ***Maintaining Circadian Clock Precision in Growing and Dividing Cells***

David Lubensky, University of Michigan

9:30 ***Reconstructing the Phase Dynamics of Interacting Circadian and Cell Cycle Oscillators***

Felix Naef, EPFL

10:00 ***Central Role of NAD<sup>+</sup>-Dependent SIRT1 in Circadian Responses to Genotoxic Stress***

Mingzhu Fang, Rutgers University

**10:30 am - 11:00 am**

**Coffee Break**

*Amelia Foyer*

**10:30 am - 11:00 am**

**Meet the Professors**

*Conference 2*

Kristen Knutson, *Feinberg School of Medicine, Northwestern University, Chicago*

Luis Larrondo, *Pontificia Universidad Catolica De Chile*

Niels Rattenborg, *Max Planck Institute for Ornithology*

Takashi Yoshimura, *Nagoya University*

Celine Vetter, *University of Colorado at Boulder*

Michael Hastings, *MRC Laboratory of Molecular Biology*

Carl Johnson, *Vanderbilt University*

Andries Kalsbeek, *Netherlands Institute for Neuroscience*

Karen Gamble, *University of Alabama at Birmingham*

11:00 am - 12:30 pm

**Slide Session: Keeping the Clock in the Loop**

*Amelia 1 & 2*

Chair: David Weaver, University of Massachusetts Medical School

**11:00 SS49. *CK1/Doubletime Activity Delays Transcription Activation in the Circadian Clock***

Deniz Top, Rockefeller University

**11:15 SS50. *Yin-Yang Regulation and Conversion of the Circadian Gene Expression***

Yao Xu, Vanderbilt University

**11:30 SS51. *Multiple Feedback Loops Can Generate Tissue-Specific Circadian Rhythms***

Jan Patrick Pett, Humboldt University Berlin

**11:45 SS52. *Circadian Clock Regulation of Translation Initiation Through eIF2 $\alpha$  Phosphorylation***

Shanta Karki, Texas A&M University

**12:00 SS53. *Immunoprecipitation-Mass Spectrometry Reveals New Regulatory Paradigms in the ZTL Protein Complex***

Joshua Gendron, Yale University

**12:15 SS54. *Structural Divergence at the Secondary Pocket Underlies Functional Differences in CRY1 and CRY2***

Clark Rosensweig, Northwestern University

11:00 am - 12:30 pm

**Slide Session: Beyond the "Master" Oscillator**

*Amelia 3 & 4*

Chair: Alena Sumova, Institute of Physiology, Czech Academy of Sciences

**11:00 SS55. *An Integrative Approach to Dissect the Tissue-Specific Gene Regulatory Networks Controlling the Drosophila Circadian Clocks***

\*\*Antonio Meireles-Filho, Konopka Excellence Awardee, EPFL

**11:15 SS56. *Elucidating Sex Hormone-Sensitive Neurons That Can Influence locomotor, Temperature and Sleep Patterns***

Stephanie Padilla, HHMI at the University of Washington

**11:30 SS57. *Osmo and Thermosensitive OVLN1 Neurons Regulate SCN Vasopressin Neurons in Horizontal Slices of Mouse Hypothalamus***

Claire Gizowski, Research Institute of the McGill University Health Centre

**11:45 SS58. *Implicit Time/Place Conditioning Alters Per2 mRNA Expression Selectively in Dorsal Striatum but Does Not Shift its Circadian Clock***

Choden Shrestha, University of Toronto

**12:00 SS59. *A Fear-Entrained Oscillator in the Mouse***

\*Luis Salazar, University of Washington

**12:15 SS60. *Food Restriction Promotes Tissue-Specific Reprogramming of Circadian Gene Expression***

\*Victoria Acosta-Rodríguez, Procter and Gamble Merit Awardee, University of Texas Southwestern Medical Center

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- 11:00 am - 12:30 pm**      **Slide Session: Clocks and Neural Disorders**  
*Cumberland A*  
 Chair: Karen Gamble, University of Alabama at Birmingham
- 11:00 SS61. *Regulation of Amyloid-Beta Dynamics and Pathology by the Circadian Clock***  
 Geraldine Kress, Washington University School of Medicine
- 11:15 SS62. *Untangling the Etiology of Circadian Clock Dysfunction in Alzheimer's Disease***  
 Joshua Gamsby, USF Byrd Alzheimer's Institute
- 11:30 SS63. *Using Region-Specific Mutagenesis to Understand the Neural Basis of Circadian Deficits in Dravet Syndrome***  
 Ivana Bussi, University of Washington
- 11:45 SS64. *Circadian Regulation of Sleep in a Mouse Model of Dravet Syndrome***  
 \*+Raymond Sanchez, University of Washington
- 12:00 SS65. *Increased Phase Shifting Response to Light in Delayed Sleep-Wake Phase Disorder (DSWPD)***  
 Lauren A. Watson, Monash University
- 12:15 SS66. *Neuronal Hyperpolarization Activates Transcription of a Circadian Synaptic Plasticity Gene***  
 Justin Blau, New York University

- 11:00 am - 12:30 pm**      **Slide Session: Entrainment in Models and People**  
*Cumberland B-C*  
 Chair: Debra Skene, University of Surrey
- 11:00 SS67. *High-Resolution Analysis of Phase Responses and Clock Dynamics Utilizing a Live Canvas and Eidetic Memory***  
 Luis Larrondo, Pontifica Universidad Catolica De Chile
- 11:15 SS68. *Computational Model Predict a Novel Mechanism of Rapid Entrainment of Spider Circadian Clock***  
 Natalia Toporikova, Washington and Lee University
- 11:30 SS69. *A Light-Opin 3 Pathway in Adipocytes Regulates the Circadian Clock and Neonatal Energy Balance***  
 Richard Lang, Cincinnati Children's Hospital Medical Center
- 11:45 SS70. *Geniculo-Geniculate Signalling Imbues Unique Sensory Properties on a Subset of Neurons in the Intergeniculate Leaflet and Ventral Lateral Geniculate***  
 Timothy Brown, University of Manchester
- 12:00 SS71. *The Impact of Colour on Circadian Photoentrainment in Mice***  
 Josh Moulund, University of Manchester
- 12:15 SS72. *Greater Circadian Sensitivity to Moderate and Bright Light in Women***  
 Parisa Vidafar, Monash University

**12:30 pm - 4:15 pm**      **Lunch on Own and Free Time**

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12:45 pm - 2:45 pm **SRBR Board of Directors Meeting (Invitation Only)**  
*Magnolia A*

4:15 pm - 6:30 pm **Concurrent Symposia**

***Symposium 13: Rhythmic Properties of the Female Circadian System***  
*Amelia 1 & 2*

Chair: Shin Yamazaki, University of Texas Southwestern Medical Center

4:15 Introduction

4:30 ***Estrogen Regulation of Daily Metabolic Rhythms Underlying Diet-Induced Obesity***

Julie Pendergast, University of Kentucky

4:54 ***Sex Differences in the Impact of Circadian Desynchronization on Ischemic Stroke Outcomes***

David Earnest, Texas A&M University Health Science Center

5:18 ***How the Female Brain Sleeps***

Jessica Mong, University of Maryland Medical School

5:42 ***Interactions Between the Circadian and Neuroendocrine Systems in Female Reproductive Health***

Lance Kriegsfeld, University of California, Berkeley

6:06 ***Multiple Circadian Oscillators Control the LH Surge and Ovulation***

Eric Bittman, University of Massachusetts at Amherst

***Symposium 14: Time Keeping of Cellular Biology***

*Amelia 3 & 4*

Chair: Carrie Partch, University of California, Santa Cruz

4:15 Introduction

4:30 ***The Diurnal Kidney Transcriptome in Young and Aged Mice***

Pal Westermark, Leibniz Institute for Farm Animal Biology

4:54 ***Clock Control of mRNA Translation***

Deborah Bell-Pedersen, Texas A&M University

5:18 ***Post-Translational Mechanisms Regulating Circadian Biology***

Maria Robles, Institute of Medical Psychology, LMU, Munich

5:42 ***Cryptochromes Are Substrate Adaptors for SCF-FBXL3***

Katja Lamia, The Scripps Research Institute

6:06 ***The Interplay Between Oxygen Rhythms, HIF1 and Circadian Clocks***

Gad Asher, Weizmann Institute of Science, Israel

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**Symposium 15: Brain Clocks Outside SCN in Health and Disease**

*Cumberland B-C*

Chair: David Welsh, University of California, San Diego

4:15 Introduction

4:30 ***Organization and Potential Function of Extra-SCN Oscillators in the Epithalamus and Mediobasal Hypothalamus***

Hugh Piggins, University of Manchester

4:54 ***Circadian Timekeeping Within the Hippocampus: Cellular and System-Wide Oscillators, and Their Effects on Plasticity***

Karl Obrietan

5:18 ***Coordination Between Clock Gene Expression and Glucocorticoid Hormones in Prefrontal Cortex-Dependent Emotional Learning***

Robert Spencer, University of Colorado Boulder

5:42 ***The Circadian Oscillator of the Cerebral Cortex: From Rhythmic Neuronal Gene Expression to Depressive-Like Behavior***

Martin Rath, University of Copenhagen

6:06 ***Circadian Genes in the Cortico-Limbic System: Implications for Psychiatric Disorders***

Colleen McClung, University of Pittsburgh

**8:00 pm – 9:00 pm**

**A Celebration of the 2017 Nobel Awards**

*Amelia Ballroom*

Chair: Joseph Takahashi, UT Southwestern Medical Center

**9:00 pm - 10:30 pm**

**Poster Session III (T1-T125)**

*Magnolia Ballroom D-G*

## Wednesday, May 16

7:30 am - 9:00 am **Morning Coffee**  
*Amelia Foyer*

8:15 am - 10:30 am **Concurrent Symposia**

### ***Symposium 16: Non-Photic Entrainment***

*Amelia 1 & 2*

Chair: Roelof Hut, University of Groningen

8:15 Introduction

8:30 ***Anticipating Multiple Daily Meals: Circadian Mechanisms***

Ralph Mistlberger, Simon Fraser University

9:00 ***Food the Main Entraining Signal for the Circadian System?***

Carolina Escobar, Fac of Medicine, Universidad Nacional Autónoma de México

9:30 ***Links Between Rhythmic Feeding and the Central Clock in Flies***

Sheeba Vasu, Neuroscience Unit

10:00 ***Synchronizing the Drosophila Circadian Clock to the Daily Changes of Temperature***

Ralf Stanewsky, University of Münster

### ***Symposium 17: Synthetic Oscillators: Design Principles Underlying Molecular Clocks***

*Amelia 3 & 4*

Chair: Luis Larrondo, Pontifica Universidad Catolica De Chile

8:15 Introduction

8:30 ***Systems and Synthetic Biology of Mammalian Circadian Clocks***

Hiroki Ueda, RIKEN, Laboratory for Synthetic Biology, Quantitative Biology Center (QBiC)

9:00 ***How Mathematical Modeling Helps Solve Molecular Oscillators' Puzzles from Bacteria to Primates***

Jae Kyoung Kim, Korea Advanced Institute of Science and Technology

9:30 ***Limits on Clock Precision in Single Cells***

Johan Paulsson, Harvard Medical School

10:00 ***Copy Number Constraints on Bacterial Clocks and Timers***

Michael Rust, University of Chicago

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**Symposium 18: Therapeutic Strategies Targeting Circadian Rhythms**  
*Cumberland B-C*

Chair: Zheng (Jake) Chen, University of Texas Health Science Center at Houston

8:15 Introduction

8:30 **Targeting Rors and Rev-Erbs for Treatment of Chronic Diseases**  
Thomas Burris, Saint Louis University School of Medicine

9:00 **Tumor Suppression is a Clock-Controlled Physiological Function**  
Loning Fu, Baylor College of Medicine

9:30 **Zeitgebers, Entrainment, and Health?**  
Celine Vetter, University of Colorado at Boulder

10:00 **Discovery and Application of Small Molecule Cryptochrome Modulators**  
Steve Kay, University of Southern California

**10:30 am - 11:00 am** **Coffee Break**  
*Amelia Foyer*

**10:30 am - 11:00 am** **Meet the Professors**  
*Conference 2*  
David Hazlerigg, *UiT The Arctic University of Norway*  
David Weaver, *University of Massachusetts Medical School*  
Rebecca Prosser, *University of Tennessee Knoxville*  
Michael Young, *The Rockefeller University*  
Michael Menaker, *University of Virginia*  
Charlotte Helfrich-Förster, *University Wuerzburg*  
Sato Honma, *Research and Education Center for Brain Science, Hokkaido University*  
Carla Green, *UT Southwestern Medical Center*  
Ralf Stanewsky, *University of Münster*



- 11:00 am - 12:30 pm**      **Slide Session: Molecular Clocks**  
*Amelia 1 & 2*  
 Chair: Ravi Allada, Northwestern University
- 11:00**    **SS73. *Role of Plekho1 in Circadian Rhythms and Pathways***  
 Steven Walsh, University of Oxford
- 11:15**    **SS74. *Translation Stress Signaling to Cell Cycle and Circadian Clock via Checkpoint Kinase 2 in Neurospora Crassa***  
 Axel Diernfeller, Heidelberg University Biochemistry Center
- 11:30**    **SS75. *Magnesium Regulates the Circadian Oscillator in Cyanobacteria***  
 Yong-Ick Kim, New Jersey Institute of Technology
- 11:45**    **SS76. *Testing Circadian Regulation of WNT Signalling***  
 Kyle Stokes, University of Windsor
- 12:00**    **SS77. *Single-Molecule Visualization of Clock Protein Interactions Reveals Dynamic Intermolecular Mechanisms of Resilience***  
 Tetsuya Mori, Vanderbilt University
- 12:15**    **SS78. *Structure-Guided Engineering of mCRY1 to Elucidate the CRY1 Quality Control that Determines the Clock Speed***  
 Koji Ode, The University of Tokyo
- 
- 11:00 am - 12:30 pm**      **Vanda Pharmaceuticals Slide Session: Clock Genes and Disease**  
*Amelia 3 & 4*  
 Chair: Aarti Jagannath, University of Oxford
- 11:00**    **SS79. *NPAS2 Mutation Increases Intravenous Cocaine Self-Administration During the Light Phase***  
 \*Lauren DePoy, University of Pittsburgh
- 11:15**    **SS80. *A Human Encyclopedia for Circadian Medicine***  
 Marc Ruben, Cincinnati Children's Hospital
- 11:30**    **SS81. *Pharmacological Activation of Rev-Erbs is Lethal in Cancer and Oncogene-Induced Senescence***  
 \*\*Gabriele Sulli, Vanda Pharmaceuticals Excellence Awardee, Salk Institute for Biological Studies
- 11:45**    **SS82. *Active Time-Restricted Feeding Restores the Blood Pressure Circadian Rhythm via Sympathetic Nervous System in Type 2 Diabetic db/db Mice***  
 Tianfei Hou, University of Kentucky
- 12:00**    **SS83. *Circadian Dysregulation of G1/S Cell Cycle Progression Impacts Cancer Cell Proliferation and Time-Dependent Response to Anti-Cancer Drug***  
 Yool Lee, University of Pennsylvania
- 12:15**    **SS84. *Identification of CRY1/CRY2 Selective Compounds***  
 Tsuyoshi Hirota, Nagoya University

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- 11:00 am - 12:30 pm**      **Slide Session: Entrainment, Treatment and Performance**  
*Cumberland A*  
 Chair: Eve van Cauter, University of Chicago
- 11:00**    **SS85. *Designing a Critical Resetting Protocol for Achieving Large Phase Shifts in Humans***  
 John Abel, Harvard University
- 11:15**    **SS86. *Tasimelteon Demonstrates Efficacy to Treat Jet Lag Disorder in an 8 Hour Phase Advance Clinical Study***  
 Christos Polymeropoulos, Vanda Pharmaceuticals
- 11:30**    **SS87. *Broad-Spectrum White Light Does Not Induce Dose-Dependent Improvements in Alertness During Daytime***  
 Renske Lok, University of Groningen
- 11:45**    **SS88. *A Model of Human Circadian Rhythms for the Real World***  
 Yitong Huang, Dartmouth College
- 12:00**    **SS89. *The Endogenous Circadian System Contributes to a Morning Rise in Aldosterone in Humans***  
 Steven Shea, Oregon Health and Science University
- 
- 11:00 am - 12:30 pm**      **Slide Session: Bioinformatics and Behavioral Approaches**  
*Cumberland B-C*  
 Chair: Gisele Oda, Universidade de São Paulo
- 11:00**    **SS91. *The ECHO App: An Application Utilizing Extended Harmonic Oscillators to Identify Non-Harmonic Circadian Oscillations in Large Datasets***  
 †Hannah De los Santos, Rensselaer Polytechnic Institute
- 11:15**    **SS92. *Emergent Properties Due to Coupling of Circadian Oscillators***  
 Hanspeter Herzel, Institute for Theoretical Biology
- 11:30**    **SS93. *BodyTime: Highly Accurate Determination of Internal Circadian Time From a Single Blood Sample***  
 \*Bharath Ananthasubramaniam, Vanda Pharmaceuticals Merit Awardee, Charite Universitaetsmedizin Berlin
- 11:45**    **SS94. *Novel Findings on Natural Variations of the Circadian Clock and Fitness***  
 \*Bala S.C. Koritala, Rutgers, The State University of New Jersey
- 12:00**    **SS95. *Circadian Modulation of Uv Light Avoidance Behavior in Drosophila***  
 \*\*Lisa Soyeon Baik, Konopka Excellence Awardee, University of California, Irvine
- 12:15**    **SS96. *Do Melatonin and Corticosterone Vary With Solar and Activity Cycles in a Seabird Under the Midnight Sun?***  
 Nicholas Per Huffeldt, Wake Forest University & Aarhus University
- 
- 12:30 pm - 4:00 pm**      **Lunch on Own and Free Time**

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- 4:00 pm - 5:00 pm**      **General Meeting of the Members**  
*Amelia Ballroom*
- 5:30 pm - 6:30 pm**      **Pittendrigh/Aschoff Lecture: Charles Czeisler**  
*Amelia Ballroom*  
Chair: Horacio de la Iglesia, University of Washington  
Charles Czeisler, Harvard Medical School
- 6:30 pm - 7:00 pm**      **Cocktail Reception**  
*Magnolia Foyer*
- 7:00 pm - 11:45 pm**      **Closing Banquet and Awards**  
*Magnolia Ballroom*

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# Poster Titles

**Sunday, May 13**

- S1.** CIRCADIAN DISRUPTION IN ADOLESCENCE INCREASES ADULT ALCOHOL INTAKE IN C57BL/6J MICE  
Danielle Gulick, University of South Florida
- S2.** SOCIAL MODULATION OF THE CIRCADIAN RHYTHM IN TWO WILD NEOTROPICAL FISH SPECIES ADAPTED TO EXTREME ENVIRONMENTAL CONSTRAINTS  
Ana Silva, Laboratorio De Neurociencias, Facultad De Ciencias
- S3.** DIURNALLY ACTIVE RODENTS FOR LABORATORY RESEARCH  
Roberto Refinetti, Boise State University
- S4.** BEHAVIORAL RHYTHMICITY IS ABERRANT IN THE MPER2LUC CIRCADIAN REPORTER MOUSE  
Martin Ralph, University of Toronto
- S5.** DAILY BEHAVIOURAL RHYTHMS IN THE FRUIT PEST DROSOPHILA SUZUKII AND THEIR IMPORTANCE FOR CROP PROTECTION  
Bethan Shaw, University of Southampton
- S6.** NOT ALL CIRCADIAN DISRUPTION PROTOCOLS ARE CREATED EQUAL  
Angus Fisk, University of Oxford
- S7.** MEASURING CIRCADIAN BIOLUMINESCENCE FROM FREELY BEHAVING MICE  
\*Wanqi Wang, Columbia University Medical Center
- S8.** SEX DIFFERENCES IN CIRCADIAN FOOD ANTICIPATORY ACTIVITY ARE NOT ALTERED BY INDIVIDUAL MANIPULATIONS OF SEX HORMONES OR SEX CHROMOSOME COPY NUMBER IN MICE  
Maya Ogawa-Okada, California Polytechnic State University Pomona
- S9.** DIURNAL RHYTHMIC BEHAVIOR OF FREE-RANGING BROWN-THROATED THREE-TOED SLOTHS (BRADYPUS VARIEGATUS) IN A REMNANT OF THE BRAZILIAN ATLANTIC FOREST.  
Giles Duffield, University of Notre Dame
- S10.** A 10.5:10.5 PHOTOPERIOD ALTERS BOTH CIRCADIAN AND NOVELTY-INDUCED LOCOMOTOR ACTIVITY IN MALE C57BL6/J MICE  
Joseph Seggio, Bridgewater State University
- S11.** CLOCK PROPERTIES AS A FUNCTION OF THE FREE-RUNNING PERIOD  
Manishi Srivastava, JNCASR
- S12.** ANALYSIS OF CIRCADIAN RHYTHMS IN A PROGRESSIVE MODEL OF BREAST CANCER  
Hui-Hsien Lin, University of Massachusetts Amherst
- S13.** SUBMISSION WITHDRAWN
- S14.** INVESTIGATING THE ROLE OF CRYPTOCHROME 2 IN HUMAN CANCER  
Alanna Chan, The Scripps Research Institute
- S15.** A NOVEL IN VITRO MODEL OF IMMUNE CONSEQUENCES OF CIRCADIAN DISRUPTION  
Adam Stowie, Morehouse School of Medicine
- S16.** SLEEP/WAKE DISRUPTION IN A MOUSE MODEL OF DEVELOPMENTAL DISABILITIES  
Cristina Ghiani, David Geffen School of Medicine at UCLA

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- S17.** DAILY RHYTHMS IN SUBSTANTIA NIGRA DOPAMINERGIC NEURONS ARE DISRUPTED IN MOUSE MODELS OF PARKINSON'S DISEASE.  
Jodi Paul, University of Alabama at Birmingham
- S18.** PHARMACOLOGICAL MODULATION OF CIRCADIAN RHYTHMS MAY MODULATE MOOD  
Harshmeena Sanghani, University of Oxford
- S19.** CHRONOPHARMACOLOGICAL STUDY OF THE NOVEL DRUG 1A FOR GLIOBLASTOMA TREATMENT.  
Luciano Marpegan, Comisión Nacional de Energía Atómica
- S20.** DOES EXPOSURE TO LIGHT AT NIGHT INCREASE ATHEROSCLEROSIS?  
Robert Wendroth, University of Kentucky
- S21.** CIRCADIAN CLOCK PROTECTS AGAINST RADIATION-INDUCED DERMATITIS AND CARDIOMYOPATHY IN MICE  
Kenneth Porter, Washington State University
- S22.** D-SER2-OXYNTOMODULIN AMELIORATES A $\beta$ 31-35 INDUCED CIRCADIAN RHYTHM DISORDER  
Li Wang, Shanxi Medical University
- S23.** ENVIRONMENTAL CIRCADIAN DISRUPTION ACCELERATES HEMORRHAGIC STROKE ONSET IN SPONTANEOUSLY HYPERTENSIVE STROKE-PRONE RATS (SHRSP)  
Anne Ramsey, Morehouse School of Medicine
- S24.** CAN CIRCADIAN HYGIENE BE USED TO TREAT HUNTINGTON'S DISEASE?  
Christopher Colwell, UCLA
- S25.** A 5XFAD TRANSGENIC MOUSE MODEL FOR PHOTOPERIOD TREATMENT OF CIRCADIAN REST/ACTIVITY DISRUPTION IN ALZHEIMER'S DISEASE  
Bernard Possidente, Skidmore College
- S26.** ALIGNMENT OF HOST-PATHOGEN BIOLOGICAL RHYTHMS: THE MALARIA PARASITE PLASMODIUM VIVAX IS PHASE-CORRELATED TO ITS HUMAN HOST'S CIRCADIAN RHYTHM  
Lauren Smith, Duke University
- S27.** PILOT CASE SERIES OF WEARABLE SHORT WAVELENGTH LIGHT THERAPY IN ADULTS WITH PERSISTENT TIC DISORDERS  
+Emily Ricketts, University of California, Los Angeles
- S28.** ABNORMAL NIGHTTIME BLOOD PRESSURE PATTERNS AMONG YOUTH EVALUATED FOR HYPERTENSION  
David Smith, Cincinnati Children's Hospital Medical Center
- S29.** MOLECULAR RHYTHMS IN THE HUMAN PREFRONTAL CORTEX AND NUCLEUS ACCUMBENS IN SUBJECTS WITH SCHIZOPHRENIA  
\*Kyle Ketchesin, University of Pittsburgh
- S30.** ARE CHRONOTYPES FLEXIBLE, IN FRUIT-FLIES?  
Abhilash Lakshman, Jawaharlal Nehru Centre for Advanced Scientific Research
- S31.** PHOTIC AND THERMAL CIRCADIAN ENTRAINMENT OF CAENORHABDITIS ELEGANS  
#Carlos Caldart, Universidad Nacional de Quilmes
- S32.** BEYOND THE LIMITS OF CIRCADIAN ENTRAINMENT: COMPUTATIONAL MODELING AND ANALYSIS OF SHIFT WORK, SOCIAL JET LAG, AND NON-24-HOUR SLEEP-WAKE DISORDER  
Casey Diekman, New Jersey Institute of Technology
- S33.** GENOME WIDE CHANGES IN DNA METHYLATION MARK THE CHANGING SEASONS IN MAMMALIAN CALENDAR CELLS  
Matthew Hindle, The Roslin Institute

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- S34.** A NEW PERSPECTIVE ON OLD DATA: CHARACTERISING PHOTORECEPTORS' CONTRIBUTION FROM MELATONIN SUPPRESSION BY LIGHT IN HUMANS  
Claude Gronfier, Inserm (French National Institute of Health and Medical Research)
- S35.** T-CYCLE ENTRAINMENT REVEALS HETEROGENEITY OF NEURONAL CLOCK NETWORK IN DROSOPHILA MELANOGASTER  
Koustubh Vaze, University of Wuerzburg
- S36.** PHOSPHORYLATION OF MELANOPSIN SER-398 INFLUENCES THE LIGHT MEDIATED FOS AND EGR1 RESPONSE.  
Birgitte Georg, Bispebjerg Hospital, University of Copenhagen
- S37.** ROLE OF TREK-1 TWIN PORE K+ CHANNELS IN THE PHOTOPERIODIC PROGRAMMING OF THE DORSAL RAPHE SEROTONIN NEURONS  
Manuel Giannoni-Guzmán, Vanderbilt University
- S38.** A MUTATION THAT ALTERS CIRCADIAN CIRCUITRY REDUCES JET LAG.  
Eric Bittman, University of Massachusetts at Amherst
- S39.** ZEITGEBERS OF THE CIRCADIAN CLOCK IMPACT MICROBIAL DIVERSITY IN VITRO  
\*Zheng Chen, Ludwig-Maximilians-University Munich
- S40.** PUPIL RESPONSES TO COLOR: AN INSIGHT INTO THE WIRING OF THE HUMAN RETINA  
\*Tom Woelders, University of Groningen
- S41.** LIGHT DOSIMETRY: A METHOD FOR CONDITIONAL ADJUSTMENT OF CIRCADIAN PERIOD  
\*Dusan Kolarski, University of Groningen
- S42.** CIRCADIAN VARIATION OF NEUROMETABOLIC ACTIVITY IN THE PREFRONTAL CORTEX: IMPACTS OF AGING AND CIRCADIAN DISRUPTION.  
+Naomi Wallace, Washington State University
- S43.** THE INTERVERTEBRAL DISC CONTAINS CIRCADIAN CLOCKS THAT ARE REGULATED BY AGE AND CYTOKINES AND LINKED TO DEGENERATION  
Qing-Jun Meng, University of Manchester
- S44.** THE DEVELOPMENT OF THE INTESTINAL CIRCADIAN CLOCK: FROM STEM CELLS TO HUMAN INTESTINAL ORGANIDS  
Drew Rosselot, University of Cincinnati
- S45.** CIRCADIAN DISTURBANCES IN THE HIPPOCAMPUS OF THE TG-SWDI MOUSE MODEL OF ALZHEIMER'S DISEASE.  
Allison Manuel, University of Alabama at Birmingham
- S46.** BEHAVIOURAL CONSEQUENCES OF DISRUPTING THE CIRCADIAN CLOCK IN THE STRIATUM  
Konrad Schoettner, Concordia University
- S47.** INVESTIGATING TIME OF DAY VARIATION IN HIPPOCAMPAL CA1 INHIBITION AND CLOCK GENE EXPRESSION WITHIN PARVALBUMIN-CONTAINING INTERNEURONS  
Lacy Goode, University of Alabama Birmingham
- S48.** SINGLE-CELL ANALYSIS OF CIRCADIAN CLOCK ACTIVITY IN THE DROSOPHILA INTESTINE  
Kathyani Parasram, University of Windsor
- S49.** DEFINING THE MINIMAL DOPAMINE CIRCUIT MEDIATING CIRCADIAN ENTRAINMENT TO SCHEDULED FEEDING IN MICE  
Jose Monroy, California Poly Pomona University
- S50.** TIMING OF FEEDING BEHAVIOR AFFECTS DAILY RHYTHMS IN BODY TEMPERATURE AND MUSCLE MITOCHONDRIAL METABOLISM  
Paul de Goede, Academic Medical Center Amsterdam

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- S51.** MISALIGNED MEALS COMPROMISE REPRODUCTIVE SUCCESS  
Matthew Butler, Oregon Health & Science University
- S52.** THE PHYSIOLOGICAL EFFECTS OF PYY IS DEPENDENT UPON TIME OF DAY  
Marissa Maroni, Bridgewater State University
- S53.** CONSTITUTIVE AND CONDITIONAL DELETION OF TYPE 1 DOPAMINE RECEPTOR (DRD1) TO STUDY FOOD ANTICIPATORY BEHAVIOR IN MICE  
Dina Assali, California State Polytechnic University, Pomona
- S54.** EFFECTS OF TIMED EXERCISE ON CIRCADIAN RHYTHMS IN HUMANS  
Matthew Thomas, University of Kentucky
- S55.** USING MATHEMATICAL MODELING TO PREDICT CIRCADIAN PHASE IN NIGHT SHIFT WORKERS  
Philip Cheng, Henry Ford Health System
- S56.** MINING MILLIONS OF REAL-WORLD UNIVERSITY LOGINS TO FIND SOCIAL JETLAG'S IMPACT ACROSS DEMOGRAPHICS.  
\*Benjamin Smarr, University of California, Berkeley
- S57.** SUBMISSION WITHDRAWN
- S58.** HEMODYNAMICS REGULATION IN SURGEONS DURING 24-HOUR DUTIES  
Natalia Bobko, Kundiiev Institute of Occupational Health of NAMS, Kyiv, Ukraine
- S59.** A CUSTOMISED LED LIGHTING SYSTEM UTILISING DAYTIME POLYCHROMATIC WHITE LIGHT AND NIGHT-TIME RED LIGHT INFLUENCES BODY COMPOSITION AND CIRCADIAN CLOCK GENE EXPRESSION IN HORSES IN TRAINING.  
Barbara Murphy, University College Dublin
- S60.** EPIDEMIOLOGY OF OBJECTIVELY MEASURED BEDTIME AND CHRONOTYPE IN US ADOLESCENTS AND ADULTS  
Vadim Zipunnikov, Johns Hopkins Bloomberg School of Public Health
- S61.** THE NEGATIVE IMPACT OF SOCIAL JETLAG ON SLEEP QUALITY AND CARDIAC CONTROL DURING SLEEP  
Ágnes Sűdy, Semmelweis University
- S62.** INTRINSIC FUNCTIONAL ARCHITECTURE OF THE MOTOR NETWORK IN CIRCADIAN PHENOTYPES, TIME OF DAY AND THE LINK WITH PHYSICAL PERFORMANCE  
Elise Facer-Childs, University of Birmingham
- S63.** SUBMISSION WITHDRAWN
- S64.** MATHEMATICAL MODEL OF NETWORK PLASTICITY OF THE CIRCADIAN CLOCK  
Michael Antle, University of Calgary
- S65.** THE PHASE-SHIFTING EFFECT OF BRIGHT LIGHT ON THE HUMAN CIRCADIAN TRANSCRIPTOME  
Laura Kervezee, McGill University
- S66.** MORNING CAFFEINE AND THE HUMAN CIRCADIAN CLOCK  
Tina Burke, University of Colorado - Boulder
- S67.** THE DAILY RHYTHM OF HUMAN PHYSIOLOGICAL SLEEPINESS IN RESPONSE TO 40 H CONTINUOUS WAKEFULNESS REMAINS INTACT FOLLOWING BRAIN INSULT.  
Maria St Pierre, Walter Reed Army Institute of Research
- S68.** THE ASSOCIATION OF MTNR1A POLYMORPHISMS WITH INCREASED LOW-DENSITY-LIPOPROTEIN LEVELS IN AFRICAN AMERICANS: FINDINGS FROM THE JACKSON HEART STUDY  
Cynthia Tchio, Morehouse School of Medicine

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- S69.** INHALATION OF FINE PARTICULATE AIR POLLUTION EXACERBATES METABOLIC INJURY IN DYSSYNCHRONY.  
Petra Haberzettl, University of Louisville
- S70.** THE NEUROSPORA CIRCADIAN CLOCK REGULATES GLYCOGEN METABOLISM VIA A COMBINATION OF TRANSCRIPTION FACTORS.  
Christian Hong, University of Cincinnati College of Medicine
- S71.** ESTROGEN REGULATION OF DAILY METABOLIC RHYTHMS IN FEMALE MICE  
Oluwabukola Omotola, University of Kentucky
- S72.** DEPOT AND FRACTION-SPECIFIC OSCILLATIONS DEFINE THE WHITE ADIPOSE TISSUE CIRCADIAN CLOCK IN VIVO  
Aleix Ribas, The University of Texas Health Science Center at Houston
- S73.** CIRCADIAN RHYTHMS OF BIOLUMINESCENCE OF ENTEROBACTER AEROGENES IN A HETEROLOGOUS HOST IN VIVO  
Jiffin Paulose, University of Kentucky
- S74.** EFFECTS OF CHRONIC CIRCADIAN CHALLENGE ON CORTICOSTEROID REGULATION IN MICE.  
Harish Appiakannan, Rider University
- S75.** DIFFERENTIAL EFFECTS OF CIRCADIAN SYSTEM AND CIRCADIAN MISALIGNMENT ON INSULIN SENSITIVITY AND INSULIN SECRETION  
Jingyi Qian, Brigham & Women's Hospital, Harvard Medical School
- S76.**  $\alpha$ - AND  $\beta$ -CELLULAR CLOCKS IMPACT ON GLUCAGON AND INSULIN SECRETION IN MOUSE AND HUMAN MODELS  
Charna Dibner, University of Geneva
- S77.** GENETIC PERTURBATION OF GLYCOLYTIC PATHWAY ALTERED CIRCADIAN RHYTHMS IN DROSOPHILA  
SangHyuk Lee, Ajou University School of Medicine
- S78.** LINKING THE CIRCADIAN CLOCK AND METABOLISM  
Rima Siauciunaite, University of Heidelberg
- S79.** SUR-8 COOPERATES WITH PP1-87B TO REGULATE PERIOD ABUNDANCE AND CIRCADIAN BEHAVIOR IN DROSOPHILA  
Yongbo Xue, University of Nevada, Reno
- S80.** DEGRADATION OF THE CLOCK PROTEIN REVERB $\alpha$  BY THE E3 LIGASE SPSB4  
Tsedey Mekbib, Morehouse School of Medicine
- S81.** NUTRIENT SENSING THROUGH THE RNA HELICASE PRD-1 IN REGULATION OF CIRCADIAN RHYTHMICITY IN NEUROSPORA CRASSA  
Milad Falahat Chian, York University
- S82.** ALTERATION IN GLUCOSE HOMEOSTASIS AND PERSISTENCE OF THE PANCREATIC CLOCK IN AGED MPER2LUC MICE  
Alena Sumova, Czech Academy of Sciences
- S83.** PERIOD 2 EXPRESSION IN EARLY CLEAVING MOUSE EMBRYOS AND EMBRYONIC STEM CELLS  
Ann Kiessling, Bedford Research Foundation
- S84.** KAIB: LINKING ATP-HYDROLYSIS TO TIMEKEEPING AND OUTPUT SIGNALING IN THE CYANOBACTERIAL CLOCK  
\*Jeff Swan, UC Santa Cruz

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- S85.** RHYTHMIC PHASE CONTROL AND PERIOD COMPENSATION BY A CIRCADIAN TRANSCRIPTION FACTOR NETWORK  
Jennifer Jung, Texas A&M University
- S86.** AMP-ACTIVATED PROTEIN KINASE (AMPK) REGULATES CIRCADIAN RHYTHM VIA AFFECTING CLOCK IN DROSOPHILA  
Miri Kwon, Ajou University School of Medicine
- S87.** POST-TRANSCRIPTIONAL MRNA REGULATION IN DROSOPHILA CIRCADIAN NEURONS  
Katharine Abruzzi, Howard Hughes Medical Institute; Brandeis University
- S88.** THE ROLE OF CA<sup>2+</sup> IN REGULATING CIRCADIAN RHYTHMS  
Dorota Nawrot, University of Oxford
- S89.** MYOD1 FUNCTIONS SYNERGISTICALLY WITH CIRCADIAN TRANSCRIPTION FACTORS BMAL1/CLOCK TO AMPLIFY CIRCADIAN GENE EXPRESSION IN SKELETAL MUSCLE  
Xiping Zhang, University of Florida
- S90.** COMMON AND DISTINCT CIRCADIAN EXPRESSION OF CLOCK AND PHAGOCYTOSIS GENES IN ARPE-19 MONOLAYERS AND DISSOCIATED CELL CULTURES  
Nemanja Milicevic, Academic Medical Center (AMC) Amsterdam
- S91.** CIRCADIAN CLOCK ACTIVITY OF CRYPTOCHROME RELIES ON TRYPTOPHAN-MEDIATED PHOTOREDUCTION  
Changfan Lin, Cornell University
- S92.** CIRCADIAN CLOCK REGULATES MELANIN PIGMENTATION IN MOUSE AND HUMAN  
Soumyadeep Sarkar, Washington State University
- S93.** TRANSLATIONAL SWITCHING OF PROTEIN EXPRESSION USING GENETIC CODE EXPANSION CAN CONTROL MOUSE CIRCADIAN BEHAVIOUR.  
Elizabeth Maywood, MRC-Laboratory of Molecular Biology
- S94.** REMOVAL OF BMAL1 ALTERS VIABILITY OF CONE PHOTORECEPTOR LIKE CELL LINE  
Kenkichi Baba, Morehouse School of Medicine
- S95.** HITS-CLIP REVEALS NONCODING RNAs AS TARGETS OF NOCTURNIN  
Peng Gao, UT Southwestern Medical Center
- S96.** MOLECULAR CIRCADIAN TIMEKEEPING IN MAMMALIAN CELLS WITHOUT CRYPTOCHROMES  
David Wong, University of Cambridge
- S97.** REGULATION OF MITOCHONDRIAL RESPIRATION BY THE CIRCADIAN DEADENYLASE NOCTURNIN  
\*Isara Laothamatas, UT Southwestern Medical Center
- S98.** NUTRIENT SENSITIVE O-GLUCOSYLATION OF PERIOD REGULATES ITS INTERACTION WITH CLOCK AND PREVENTS PREMATURE INITIATION OF TRANSCRIPTIONAL REPRESSION IN CIRCADIAN RHYTHMS  
\*Ying Li, UC Davis
- S99.** BUILDING A PICTURE OF THE NEUROSPORA CRASSA CIRCADIAN CLOCK AT THE ATOMIC LEVEL.  
Daniyal Tariq, Cornell University
- S100.** REGULATION OF PERIOD 2'S ACCUMULATION VIA THE E3 UBIQUITIN PROTEIN LIGASE MDM2 INFLUENCES CIRCADIAN OSCILLATION  
\*Xianlin Zou, Virginia Tech

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- S101.** PHOSPHORYLATION OF SLIMB BY MINIBRAIN/DYRK1A PROMOTES SLIMB-MEDIATED CIRCADIAN CLOCK PROTEIN DEGRADATION  
+Adam Contreras, University of California, Davis
- S102.** THERMAL CONTROL OF CIRCADIAN RHYTHMS  
Swathi Yadlapalli, University of Michigan
- S103.** NON-PHOTIC SHIFTS WITH A COCKTAIL OF NPY AND CARBACHOL  
Naila Jamani, University of Calgary
- S104.** CALCITONIN RECEPTORS ARE ANCIENT MODULATORS FOR RHYTHMS OF PREFERENTIAL TEMPERATURE IN INSECTS AND BODY TEMPERATURE IN MAMMALS  
Fumika Hamada, Cincinnati Children's Hospital Medical Center
- S105.** TEMPERATURE-AMPLITUDE COUPLING FOR STABLE BIOLOGICAL RHYTHMS  
Gen Kurosawa, Theoretical Biology Lab, RIKEN
- S106.** LIMORHYDE: A FLEXIBLE APPROACH FOR DIFFERENTIAL ANALYSIS OF RHYTHMIC TRANSCRIPTOME DATA  
Jacob Hughey, Vanderbilt University School of Medicine
- S107.** GENOME-WIDE DISCOVERY OF THE DAILY TRANSCRIPTOME, CIS-REGULATORY ELEMENTS AND TRANSCRIPTION FACTOR FOOTPRINTS IN THE MONARCH BUTTERFLY BRAIN  
\*Aldrin Lugena, Texas A&M University
- S108.** MODELING SPATIAL INFORMATION PROCESSING IN THE SUPRACHIASMATIC NUCLEUS  
Adam Stinchcombe, University of Toronto
- S109.** MORTALITY RATE OF AGED WILD-TYPE AND V1A-/-V1B-/- MICE UNDER A CHRONIC JET LAG CONDITION  
Yoshiaki Yamaguchi, Kyoto University
- S110.** SCN HETEROGENEITY REVEALED THROUGH DEVELOPMENTAL PATTERNING OF NEUROPEPTIDE EXPRESSION  
Vania Carmona-Alcocer, Marquette University
- S111.** THE ROLE OF SUPRACHIASMATIC VIP NEURONS ON THE CIRCADIAN PROFILE OF PARAVENTRICULAR HYPOTHALAMIC NEURONS  
Sarika Paul, University of Manchester
- S112.** EFFECTS OF THE ISOLATION OF SUPRACHIASMATIC NUCLEUS ON CIRCADIAN RHYTHMICITY  
Takahiro Nakamura, Meiji University
- S113.** THE ARCHITECTURE OF MAMMALIAN MASTER CIRCADIAN CLOCK SCN  
Lucheng Xie, Institute of Neuroscience, Chinese Academy of Sciences
- S114.** DOPAMINE SIGNALING IN THE CENTRAL PACEMAKER REGULATES CIRCADIAN PHASE OF ENERGY DENSE FOOD CONSUMPTION  
Ryan Grippo, University of Virginia
- S115.** THE SCN STABILIZES AROUSAL EPISODES DURING HIBERNATION OF GOLDEN-MANTLED SQUIRRELS.  
Patricia DeCoursey, University of South Carolina
- S116.** DAYTIME SLEEP FOLLOWING NIGHT SHIFTS-THE IMPACT OF LIGHT INTENSITY  
Torhild Pedersen, University of Bergen
- S117.** STATISTICAL NOISE IN SLEEP-REGULATING NEURAL NETWORKS CAN REPRODUCE THE FRAGMENTARY NATURE OF HUMAN SLEEP  
Amenah Asgari-Targhi, Brigham and Women Hospital

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- S118.** METABOLIC RECOVERY AFTER 8 DAYS OF SLEEP RESTRICTION: ADVERSE IMPACT OF CIRCADIAN MISALIGNMENT  
Rachel Leproult, Université libre de Bruxelles
- S119.** GLYMPHATIC FLUID INFLUX IS UNDER DIURNAL CONTROL.  
Lauren Hablitz, University of Rochester
- S120.** THE ROLE OF LIGHT IN REGULATING ALERTNESS AND PERFORMANCE IN MICE  
Stuart Peirson, University of Oxford
- S121.** A TWO-PROCESS MODEL OF SLEEP IN DROSOPHILA MELANOGASTER  
Nathaniel Hermann, University of Miami
- S122.** ASSOCIATION OF SINGLE-NUCLEOTIDE POLYMORPHISMS IN PERIOD 1 AND PERIOD 2 WITH RESILIENCY OF NEUROBEHAVIORAL PERFORMANCE AND CAFFEINE SENSITIVITY UNDER REPEATED CYCLES OF TOTAL SLEEP DEPRIVATION  
Lillian Skeiky, Center for Military Psychiatry and Neuroscience, Walter Reed Army Institute of Research
- S123.** ACTIVE TIME-RESTRICTED FEEDING RESTORES THE BLOOD PRESSURE CIRCADIAN RHYTHM VIA SYMPATHETIC NERVOUS SYSTEM IN TYPE 2 DIABETIC DB/DB MICE  
Tianfei Hou, University of Kentucky
- S124.** ROLE OF INFLAMMATORY SIGNALING IN MODULATING THE MACROPHAGE CIRCADIAN CLOCK  
Shan Chen, Geisel School of Medicine at Dartmouth

### Monday, May 14

- M1.** PATERNAL COCAINE DISRUPTS OFFSPRING CIRCADIAN CLOCK FUNCTION IN A SEX DEPENDENT MANNER IN MICE  
Alexandra Yaw, Kent State University
- M2.** DISTINCT CIRCADIAN RHYTHMS OF CIRCULATING ENDOCANNABINOIDS (ECB), 2-ARACHIDONOYLGLYCEROL (2-AG) AND ANANDAMIDE (AEA)  
\*Erin Hanlon, The University of Chicago
- M3.** AGING AND CIRCADIAN DISRUPTION INCREASE THE BEHAVIORAL SENSITIVITY TO ALCOHOL AND ALCOHOL-INDUCED PATHOLOGIES.  
Aliza De Nobrega, Florida State University
- M4.** NEURAL ACTIVITY DURING METHAMPHETAMINE ANTICIPATION IN A NON-INVASIVE SELF-ADMINISTRATION PARADIGM  
Rae Silver, Columbia University
- M5.** MODELING PHOTOPERIOD PROCESSING IN A SUBTERRANEAN RODENT  
#Danilo Flôres, University of Sao Paulo
- M6.** EFFECTS OF NEONICOTINOID PESTICIDES ON CIRCADIAN LOCOMOTOR RHYTHMS OF HONEY BEE FORAGERS  
Douglas McMahan, Vanderbilt University
- M7.** THE EFFECT OF GENERAL ANESTHESIA ON LOCOMOTOR RHYTHMS IN MICE  
Alma Orts-Sebastian, University of Auckland
- M8.** CIRCADIAN SYSTEM ORGANIZATION IN THE DIURNAL FOUR-STRIPED GRASS MOUSE, RHABDOMYS PUMILIO  
Beatriz Bano-Otalora, University of Manchester

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- M9.** EFFECTS OF AGING ON THE CIRCADIAN CLOCKWORKS AND ITS OUTPUTS IN THE COLON OF THE AGED LABORATORY MOUSE  
Vincent Cassone, University of Kentucky
- M10.** ENVIRONMENTAL TIME CUES INFLUENCING CIRCADIAN EMERGENCE RHYTHMS OF A SPRING-EMERGING SOLITARY BEE (*OSMIA BICORNIS*)  
Charlotte Helfrich-Förster, University Wuerzburg
- M11.** QUANTIFYING CIRCADIAN CHARACTERISTICS OF HUMAN BREAST CANCER CELLS  
Stephanie Taylor, Colby College
- M12.** SUBMISSION WITHDRAWN
- M13.** INCOMPATIBILITY OF BMAL1 AND HNF4 $\alpha$  IN HEPATOCELLULAR CARCINOMA  
\*Baharan Fekry, Institute of Molecular Medicine the University of Texas Health Science center
- M14.** CHEMICAL MODULATION OF CIRCADIAN RHYTHMS FOR THE STUDY OF CANCER  
Michelle Farkas, University of Massachusetts Amherst
- M15.** AGING DISRUPTS DIURNAL RHYTHMS IN CORE HOMEOSTATIC FUNCTIONS OF MACROPHAGES  
Connie Tsai, Stanford University
- M16.** DIFFERENTIAL THERMOREGULATORY AND INFLAMMATORY PATTERNS IN THE CIRCADIAN RESPONSE TO LPS-INDUCED SEPTIC SHOCK  
Diego Golombek, Universidad Nacional de Quilmes
- M17.** BMAL1 IN FIBROBLAST LIKE SYNOVIOCYTES IS CRITICAL FOR MAINTAINING JOINT HEALTH AND REGULATING CHRONIC INFLAMMATION.  
Julie Gibbs, University of Manchester
- M18.** REGULATION OF STEADY STATE PLASMA HISTAMINE LEVELS BY THE MAST CELL CLOCK  
Yuki Nakamura, University of Yamanashi
- M19.** THE CIRCADIAN TRANSCRIPTION FACTOR NPAS2 REGULATES OPIOID REWARD  
Gabrielle Kaplan, University of Pittsburgh
- M20.** REDUCED CIRCADIAN LIGHT SENSITIVITY IN MAJOR DEPRESSION.  
Elise McGlashan, Monash Institute of Cognitive and Clinical Neurosciences, School of Psychological Sciences, Monash University, Melbourne, Australia
- M21.** CIRCADIAN DISRUPTION DECREASES CELLULAR DETERRENCE OF HIV INFECTION  
+Atlantis Hill, Morehouse School of Medicine
- M22.** BIOLOGICAL RHYTHMS IN ASTHMA: IMPLICATIONS FOR CLINICAL PRACTICE.  
Hannah Durrington, University of Manchester
- M23.** CONSTANT LIGHT EXPOSURE INCREASES ATHEROSCLEROSIS IN A LIPOPROTEIN-DEFICIENT MICE  
Jeffrey Chalfant, University of Kentucky
- M24.** DISRUPTING A CIRCADIAN CLOCK MECHANISM THAT REGULATES MYOGENIC REACTIVITY MITIGATES CARDIAC INJURY IN HEART FAILURE  
Jeff Kroetsch, University of Toronto Faculty of Medicine
- M25.** ME: HANDSOME MALARIA PARASITE. YOU: PUNCTUAL HOST THAT EXERCISES INFREQUENTLY & LOVES DINNER. LET'S GET TOGETHER.  
Aidan O'Donnell, University of Edinburgh
- M26.** DIURNAL NATRIURETIC RESPONSE TO ENAC INHIBITION IN SPRAGUE DAWLEY RATS  
Reham Soliman, University of Alabama at Birmingham

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- M27.** NEONATAL MONOSODIUM GLUTAMATE TREATMENT ALTERS THE OUTCOME TO REPETITIVE MILD TRAUMATIC BRAIN INJURY IN ADOLESCENT RATS: BEHAVIORAL, CIRCADIAN, AND EPIGENETIC CHANGES.  
Glenn Yamakawa, University Of Calgary
- M28.** CIRCADIAN DISRUPTION LINKAGES TO ORAL HEALTH CONDITIONS  
Petros Papagerakis, University of Saskatchewan
- M29.** SOCIAL JET LAG EVOKES DROSOPHILA CIRCADIAN NEURAL NETWORK DESYNCHRONY  
Ceazar Nave, University of California Irvine
- M30.** THE ROLE OF THE FOREBRAIN AROUSAL SYSTEM IN NONPHOTIC ENTRAINMENT  
Mahtab Moshirpour, University of Calgary
- M31.** RESTRICTED FEEDING ALTERS DAYLIGHT SENSITIVITY OF THE CIRCADIAN CLOCK  
Jens Hannibal, University of Copenhagen, Bispebjerg Hospital
- M32.** ADDITIVE CONTRIBUTIONS OF MELANOPsin AND BOTH CONE TYPES TO MOUSE PUPILLARY CONTROL  
Edward Hayter, University of Manchester
- M33.** THE EFFECT OF SEASONAL CUES ON PHOTORECEPTOR GENE EXPRESSION IN MICE  
Kousuke Okimura, Nagoya University
- M34.** OME INTERACTS WITH ACTIN AND ENHANCES EYE-MEDIATED LIGHT SENSITIVITY OF THE CIRCADIAN CLOCK IN DROSOPHILA MELANOGASTER  
Gabriella Mazzotta, Università di Padova
- M35.** PHOTIC SYNCHRONIZERS IN POPULATIONS  
Michael Herf, f.lux Software LLC
- M36.** IPRCG PHOTOTRANSDUCTION COMPONENTS DIFFERENTIALLY INFLUENCE MELANOPsin-DEPENDENT LIGHT MEDIATED BEHAVIORS  
\*Jennifer Langel, National Institute of Mental Health
- M37.** ECOLOGICAL COMMUNITY SIMULATION SUGGESTS COMPETITION CAN DRIVE EVOLUTION OF CIRCADIAN RHYTHMS  
\*Vance Gao, Northwestern University
- M38.** CHRONOBIOLOGY AND THE DESIGN OF MARINE BIOLOGY EXPERIMENTS  
Audrey Mat, Université de Bretagne Occidentale
- M39.** A ROLE FOR BIOLOGICAL RHYTHMS IN SEASONAL ADAPTATION AND SPECIATION  
Andrew Nguyen, University of Florida
- M40.** DIURNAL HETEROGENEITY OF GLIA IN THE MOLECULAR LAYER OF HIPPOCAMPAL DENTATE GYRUS  
Martha Gillette, University of Illinois Urbana-Champaign
- M41.** REST-ACTIVITY CYCLES DRIVE DYNAMICS OF PHOSPHORYLATION IN CORTICAL SYNAPSES  
\*Franziska Brüning, Max Planck Institute of Biochemistry
- M42.** THE MUSCLE CLOCK ALTERS MUSCLE STRENGTH THROUGH CHANGES IN TITIN SPLICING AND SARCOMERE LENGTH  
\*Lance Riley, University of Florida
- M43.** CIRCADIAN LOCOMOTOR ACTIVITY IS ALTERED BY SELECTIVE KNOCKDOWN OF BMAL1 IN SKELETAL MUSCLE  
†India Nichols-Obande, University of California, Los Angeles

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- M44.** THE TIME DEPENDENCE OF FIRING BEHAVIOR AND ITS RELATION TO INTERNAL CLOCK IN DISASSOCIATED HIPPOCAMPAL NEURONS  
Sinem Sertel, IMPRS - University of Göttingen
- M45.** A ROLE FOR THE ASTROCYTE CIRCADIAN CLOCK IN STROKE RECOVERY  
Jeremy Stubblefield, UT Health San Antonio
- M46.** CORTICOSTERONE AS A POTENTIAL SYNCHRONIZER OF DIURNAL RHYTHMS IN A BRAINSTEM FEEDING CIRCUIT  
\*Forrest Shaffer, Washington State University
- M47.** THE FREQUENCY OF TH17 CELLS IN THE SMALL INTESTINE EXHIBITS A DAY-NIGHT VARIATION DEPENDENT ON CIRCADIAN CLOCK ACTIVITY  
Ha Le, University of Yamanashi
- M48.** IMPACT OF DIET ON TIME-OF-DAY DEPENDENT RHYTHMS IN SHORT-TERM MEMORY  
Jennifer Davis, University of Alabama at Birmingham
- M49.** PREBIOTIC TREATMENT STIMULATES CHANGES IN THE MICROBIOTA ALTERING THE LOCOMOTOR ACTIVITY AND FREE RUNNING PERIOD OF MICE IN A FIBER-TYPE DEPENDENT MANNER  
Fabian Preuss, University of Wisconsin-Parkside
- M50.** CIRCADIAN CLOCK OF ENTEROBACTER AEROGENES  
\*\*Kinga Graniczowska, University of Kentucky
- M51.** TIME-RESTRICTED FEEDING IS A PROMISING STRATEGY TO ALLEVIATE EFFECTS OF CIRCADIAN RHYTHM DISTURBANCES ON ATHEROSCLEROSIS  
Martijn Dollé, National Institute of Public Health and the Environment (RIVM)
- M52.** ANIMAL MODEL SYSTEMS TO STUDY THE IMPACT OF SHIFT WORK AND SOCIAL JET LAG ON SLEEP PATTERNS AND HEALTH OUTCOMES  
Astrid Streng, Erasmus MC / RIVM
- M53.** MILLISECOND LIGHT FLASHES TO SHIFT CIRCADIAN PHASE  
Daniel Joyce, Stanford University
- M54.** ASSOCIATIONS BETWEEN CHRONOTYPE, MORBIDITY AND MORTALITY IN THE UK BIOBANK COHORT  
Kristen Knutson, Feinberg School of Medicine, Northwestern University, Chicago
- M55.** MOLECULAR CHARACTERIZATION OF THE EFFECTS OF SHIFT WORK AND FOOD CONSUMPTION ON METABOLIC AND CARDIOVASCULAR FUNCTIONS IN THE RAT  
Alexandra Trott, Texas A&M University
- M56.** LOWEST PERCEIVED EXERTION IN THE LATE MORNING IS DRIVEN BY THE CIRCADIAN SYSTEM.  
Maya Herzig, Oregon Health & Science University
- M57.** MATHEMATICAL MODELING FOR PACEMAKER-NEURON-DEPENDENT MOLECULAR RHYTHM ALTERATION BY DROSOPHILA CLOCK MUTANT  
Euimin Jeong, KAIST
- M58.** LOW DIMENSIONAL MODELS FOR HUMAN CIRCADIAN RHYTHMS  
Kevin Hannay, Schreiner University
- M59.** PARTICIPATORY CHRONOBIOLOGY: ANALYSES OF SKIN TEMPERATURE CHARACTERIZE JETLAG IN THE QS COMMUNITY  
\*Azure Grant, University of California, Berkeley

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- M60.** PATIENTS WITH DELAYED SLEEP-WAKE PHASE DISORDER (DSWPD) SHOW INCREASED CIRCADIAN PHASE VARIABILITY  
Lauren A. Watson, Monash Institute of Cognitive and Clinical Neurosciences, School of Psychological Sciences, Monash University, Melbourne, Australia
- M61.** SLEEP WITH AND WITHOUT ACCESS TO ARTIFICIAL LIGHT ON TANNA ISLAND, VANUATU  
\*Andrea Smit, Simon Fraser University
- M62.** IMPACT OF NIGHT-TO-NIGHT VARIABILITY IN SLEEP PARAMETERS ON SLEEP COMPLAINT AND SLEEP QUALITY  
Hylton Molzof, University of Alabama
- M63.** DESIGN OF DIURNAL LIGHT CONDITIONS FOR IMPROVED SLEEP IN DEMENTIA - AN INTERVENTION STUDY  
Gunnhild Hjetland, University of Bergen/Bergen Municipality
- M64.** THE IMPACT OF LIGHT DURING SLEEP ON SYMPATHETIC FUNCTION IN OLDER ADULTS  
Virginie Gabel, Department of Psychiatry and Behavioral Sciences, Stanford School of Medicine
- M65.** TRAIT-LIKE INDIVIDUAL DIFFERENCES IN PAIN AND CARDIOVASCULAR REACTIVITY FOLLOWING DAYS OF SLEEP RESTRICTION AND CIRCADIAN MISALIGNMENT  
Kate Sprecher, University of Colorado Boulder
- M66.** LEUCOKININ NEURONS ARE CELL-AUTONOMOUS NUTRIENT SENSORS THAT REGULATE SLEEP-METABOLISM INTERACTIONS  
\*Maria Yurgel, Florida Atlantic University
- M67.** THE EFFECTS OF MATERNAL OBESITY ON DAILY RHYTHMS IN FEMALE OFFSPRING  
Josie Llanora, University of Kentucky
- M68.** CHRONIC HIGH FAT DIET DISRUPTS RENAL MOLECULAR CLOCK  
Dingguo Zhang, University of Alabama at Birmingham
- M69.** REQUIREMENT FOR NEURONAL CLOCK IN DAILY APPETITE RHYTHMS AND LIVER GLUCOSE METABOLISM  
Jonathan Cedernaes, Northwestern University
- M70.** HYPOTHALAMIC REPRODUCTION CIRCUITS ALSO REGULATE BODY MASS IN THE SIBERIAN HAMSTER, PHODOPUS SUNGORUS  
#Fernando Cázarez-Márquez, Institut des Neurosciences Cellulaires et Intégratives (INCI), Netherlands Institute for Neuroscience (NIN), Academic Medical Center (AMC)
- M71.** METABOLIC INPUT REGULATES CIRCADIAN PHYSIOLOGY THROUGH O-GLCNACYLATION  
\*Xianhui Liu, University of California, Davis
- M72.** CONSTANT LIGHT ALTERS SERUM HORMONE LEVELS RELATED TO METABOLISM IN MALE CD-1 MICE  
Madison Chasse, Bridgewater State University
- M73.** REV-ERB $\alpha$  MODULATION OF ADIPOSE TISSUE FUNCTION DURING DIET INDUCED OBESITY  
Charlotte Pelekanou, University of Manchester
- M74.** MAMMALIAN CIRCADIAN PERIOD, BUT NOT PHASE AND AMPLITUDE, IS ROBUST AGAINST REDOX AND METABOLIC PERTURBATIONS  
Marrit Putker, Hubrecht Institute
- M75.** SPHINGOLIPIDS AROUND THE CLOCK: THE IMPACT OF SPHINGOSINE KINASE 1 ON THE ADIPOCYTE CIRCADIAN TRANSCRIPTION COMPLEX  
Andrea Anderson, Medical University of South Carolina/Virginia Commonwealth University

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- M76.** DAILY RHYTHMS OF EATING BEHAVIOR ARE NOT AFFECTED BY HIGH-FAT DIET FEEDING IN OBESITY-RESISTANT MALE MICE  
Tiffany Buckley, University of Kentucky
- M77.** CIRCADIAN DISRUPTION CAUSES METABOLIC DEFICITS AND ALTERED HORMONAL SIGNALLING  
Nathan Skinner, The University of Otago
- M78.** RAS-MEDIATED PATHWAYS IN THE METABOLIC REGULATION OF THE CIRCADIAN CLOCK  
Anita Szőke, Semmelweis University
- M79.** BROWN ADIPOSE TISSUE THERMOGENESIS OSCILLATIONS REQUIRE CNS CIRCADIAN CLOCKS  
Georgios Paschos, University of Pennsylvania
- M80.** MELATONIN AGONIST TREATS REPETITIVE BEHAVIORAL DEFICITS IN THE CNTNAP2 MOUSE MODEL OF NEURODEVELOPMENTAL DISORDERS.  
\*\*Huei-Bin Wang, UCLA
- M81.** UNDERSTANDING THE MOLECULAR MECHANISMS UNDERLYING PHOTOPERIODIC TIME MEASUREMENT IN DROSOPHILA MELANOGASTER  
Antoine ABRIEUX, UC Davis
- M82.** PSI CONTROLS TIM SPLICING AND CIRCADIAN PERIOD IN DROSOPHILA  
\*Lauren Foley, University of Massachusetts Medical School
- M83.** POSITIVE FEEDBACK KEEPS CIRCADIAN RHYTHMS TICKING.  
\*Matthias Schlichting, Brandeis University
- M84.** SUBMISSION WITHDRAWN
- M85.** DAYTIME CHANGES OF ARCUATE NUCLEUS ELECTRICAL OUTPUT ARE DRIVEN BY A LOCAL CLOCKWORK AND ARE ACCOMPANIED BY CHANGES IN GABAERGIC NETWORK ACTIVITY.  
Adam Watson, University of Manchester
- M86.** THE GLUCOCORTICOID RECEPTOR AND REV-ERB ALPHA INTERACT IN THE CIRCADIAN REGULATION OF INFLAMMATION  
Polly Downton, University of Manchester
- M87.** RHYTHMIC ION FLUXES AND CELLULAR TIMEKEEPING  
\*Alessandra Stangherlin, MRC Laboratory of Molecular Biology
- M88.** CISPLATIN-DNA ADDUCT REPAIR OF TRANSCRIBED GENES IS CONTROLLED BY TWO CIRCADIAN PROGRAMS IN MOUSE TISSUES  
Yanyan Yang, University of North Carolina at Chapel Hill
- M89.** CHARACTERIZATION OF TISSUE-SPECIFIC BMAL1 CHROMOSOMES REVEALS NEW ROLES FOR ENHANCER-ENHANCER INTERACTIONS IN REGULATING RHYTHMIC TRANSCRIPTION  
Joshua Beytebiere, Texas A&M University
- M90.** REGULATION OF POL II PAUSING IS INVOLVED IN DAILY GENE TRANSCRIPTION IN THE MOUSE LIVER  
Xiaodong Li, Wuhan University
- M91.** CIRCADIAN REGULATED PROTEIN INTERACTION NETWORKS LINKED TO DNA REPAIR AND CELL CYCLE REGULATION  
Christopher Depner, University of Colorado Boulder
- M92.** CHARACTERIZATION OF DIURNAL SODIUM HANDLING IN THE BMAL1 KNOCKOUT RAT  
Jermaine Johnston, University of Alabama at Birmingham

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- M93.** A TALE OF TWO CRYSTALS: IDENTIFYING THE BIOCHEMICAL DETERMINANTS OF THEIR DIFFERENTIAL REGULATION OF CIRCADIAN TIMEKEEPING  
\*Jennifer Fribourgh, UCSC
- M94.** TGF $\beta$  INHIBITS THE SYNCHRONIZATION OF CIRCADIAN TRANSCRIPTION BY REPROGRAMMING 3D GENOME ORGANIZATION  
Carolina Diettrich Mallet de Lima, Karolinska Institutet
- M95.** A NOVEL RNA-BINDING PROTEIN CONTRIBUTES TO THE CIRCADIAN PERIOD LENGTH OF THE NEUROSPORA CLOCK  
Christina Kelliher, Geisel School of Medicine at Dartmouth
- M96.** CIRCADIAN CHARACTERISTICS AND A POSSIBLE MECHANISM OF A DAMPED TRANSCRIPTIONAL OSCILLATION WITHOUT KAIA  
Naohiro Kawamoto, Waseda University,
- M97.** CIRCADIAN CONTROL OF UV-RESISTANCE IN CYANOBACTERIA, POSSIBLY BASED ON A TRADE-OFF BETWEEN ENERGY PRODUCTION AND STRESS RESPONSE  
Koji Kawasaki, Waseda University
- M98.** CHARACTERIZING THE ROLE OF NOCTURNIN AS A DEADENYLASE  
Anushka Wickramaratne, University of Texas Southwestern Medical Center
- M99.** AKT PHOSPHORYLATION RHYTHMS AS A MOLECULAR LINK BETWEEN HYPOXIA AND THE CIRCADIAN CLOCK  
Rona Aviram, Weizmann Institute of Science
- M100.** IDENTIFICATION OF NOVEL KINASES/PHOSPHATASES REGULATING PERIOD LENGTH AND TEMPERATURE COMPENSATION  
Adrienne Mehalow, Geisel School of Medicine at Dartmouth
- M101.** SKIN IN THE CIRCADIAN GAME: POPULATION LEVEL ANALYSIS OF TRANSCRIPTIONAL RHYTHMS IN HUMAN SKIN  
Gang Wu, Cincinnati Children's Hospital
- M102.** SUBMISSION WITHDRAWN
- M103.** THE CORTICAL SYNAPTIC TRANSCRIPTOME: ORGANIZED BY CLOCKS, DRIVEN BY SLEEP  
Sara Bernardez Noya, University of Zurich
- M104.** TIMED RESTRICTED FEEDING IN MICE ALTERS GENE EXPRESSION IN THE SCN.  
Timothy Niepokny, Kent State University
- M105.** INDUCING OLIGODENDROCYTE PROGENITOR CELLS FROM THE ADULT MOUSE SUPRACHIASMATIC NUCLEUS TO UNDERGO NEUROGENESIS IN VITRO  
Michael Geusz, Bowling Green State University
- M106.** LOOKING OUTSIDE THE CLOCK: EXPRESSION AND LOCALIZATION PATTERNS OF EXTRACELLULAR MATRIX MOLECULES IN THE SUPRACHIASMATIC NUCLEUS.  
+Kathryn Abrahamsson Halter, University of Tennessee
- M107.** PROBING THE CIRCADIAN FUNCTIONS OF THE VIP-VPAC2 MICRO-CIRCUIT OF THE MOUSE SUPRACHIASMATIC NUCLEUS  
\*Nicola Smyllie, MRC Laboratory of Molecular Biology
- M108.** MTOR SIGNALING REGULATES CIRCADIAN CLOCK SYNCHRONY VIA VIP NEURONS  
Ruifeng Cao, The University of Minnesota
- M109.** SKELETON PHOTOPERIOD IS SUFFICIENT TO ENCODE DAY LENGTH IN THE SCN  
\*Anneke Olde Engberink, Leiden University Medical Center

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- M110.** LOCALIZATION OF PHOTOPERIOD SENSITIVE CIRCADIAN OSCILLATORS IN THE MOUSE SUPRACHIASMATIC NUCLEUS  
Tomoko Yoshikawa, Kindai University Faculty of Medicine
- M111.** BEHAVIORAL AND MOLECULAR RHYTHMS IN A MOUSE MODEL LACKING VIP  
Deborah May, Marquette University
- M112.** TRACING CONNECTIONS AND INPUTS/OUTPUTS OF THE DROSOPHILA CLOCK  
Edgar Buhl, University of Bristol
- M113.** PHOTOPERIOD-INDUCED NEUROTRANSMITTER SWITCHING IN THE SUPRACHIASMATIC NUCLEUS  
Alessandra Porcu, University of California, San Diego
- M114.** A NOVEL FUNCTION OF GABA IN THE MOUSE SUPRACHIASMATIC NUCLEUS: REFINEMENT OF CIRCADIAN OUTPUT RHYTHMS  
Daisuke Ono, Nagoya University
- M115.** SLEEP AND CIRCADIAN PHENOTYPES ASSOCIATE WITH INCREASED REWARD-RELATED BEHAVIOR DURING ADOLESCENCE  
Mariah Hildebrand, University of Pittsburgh
- M116.** THE ROLE OF SLEEP IN MODULATING ALCOHOL SENSITIVITY AND TOXICITY IN DROSOPHILA  
Eric Noakes, Florida State University
- M117.** EFFECTS OF CHRONIC SLEEP RESTRICTION ON STRESS-INDUCED ALTERATIONS IN SLEEP ARE MITIGATED BY PRE-IMMUNIZATION WITH MYCOBACTERIUM VACCAE NCTC11659  
\*\*Samuel Bowers, Vanda Pharmaceuticals Excellence Awardee, Northwestern University
- M118.** DEC2 MODULATES OREXIN EXPRESSION AND REGULATES SLEEP  
Louis Ptacek, UCSF
- M119.** DECODING THE SLEEP HOMEOSTAT ARCHITECTURE  
Andrey Lazopulo, University of Miami
- M120.** OREXIN ALLEVIATES COGNITIVE IMPAIRMENTS INDUCED BY DAYTIME DIM LIGHT IN THE DIURNAL NILE GRASS RAT (ARVICANTHIS NILOTICUS).  
+Joel Soler, Michigan State University
- M121.** INVESTIGATING THE MOLECULAR BASIS OF SLEEP DYSREGULATION IN MYOTONIC DYSTROPHY  
\*Belinda Pinto, University of Florida
- M122.** GENERATION OF A CONDITIONAL REPORTER MOUSE LINE BY MODIFICATION OF THE DBP LOCUS  
David Weaver, University of Massachusetts Medical School
- M123.** AN INTEGRATIVE APPROACH TO DISSECT THE TISSUE-SPECIFIC GENE REGULATORY NETWORKS CONTROLLING THE DROSOPHILA CIRCADIAN CLOCKS  
\*\*Antonio Meireles-Filho, Konopka Excellence Awardee, EPFL
- M124.** A HOMEOSTASIS REGULATOR SIK3 DIRECTS CIRCADIAN RHYTHMS AND SLEEP THROUGH MULTIPLE DOWNSTREAM SUBSTRATES  
Naoto Hayasaka, Nagoya University
- M125.** CIRCADIAN ADAPTATION AFTER CONSECUTIVE NIGHT SHIFTS IN POLICE OFFICERS ON A ROTATING SCHEDULE  
Laura Kervezee, McGill University

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- T1.** DIURNAL VARIATION IN REWARD-RELATED AND LEARNING BEHAVIORS  
Taylor Stowe, Wake Forest School of Medicine
- T2.** MODELLING AGE RELATED CHANGES IN THE CIRCADIAN SYSTEM USING DROSOPHILA MELANOGASTER  
Jack Curran, University of Bristol
- T3.** DISTINCT NEURONAL BASIS FOR MOTIVATIONAL LOCOMOTOR ACTIVITY: THE CIRCADIAN AND DOPAMINERGIC SYSTEMS  
\*Meghana Holla, HHMI/Brandeis University
- T4.** APPROACHING PHOTOPERIODISM IN A SUBTERRANEAN SOUTH AMERICAN RODENT  
Gisele Oda, Instituto de Biociencias, Universidade de São Paulo
- T5.** CIRCADIAN ALIGNMENT OF THE MOTHER PREVENTS DEVELOPMENT OF THE OFFSPRING'S PATHOLOGICAL PHENOTYPE  
Alena Sumova, Institute of Physiology, Czech Academy of Sciences
- T6.** MICE LACKING THE GLUA1 GLUTAMATE RECEPTOR SUBUNIT (GRIA1) SHOW REDUCED AMPLITUDE ACTIVITY RHYTHMS WITH INCREASED FRAGMENTATION.  
Laurence Brown, University of Oxford
- T7.** HETEROGENEITY IN THE PINEAL INDOLE METABOLISM AMONG DOMESTIC BIRDS  
Bogdan Lewczuk, University of Warmia and Mazury in Olsztyn, Poland
- T8.** DIEL CHANGES IN THE MOLECULAR PHYSIOLOGY OF FRESH WATER FISH GILL  
Laura-Ana Cuciureanu, York University, Toronto, Canada
- T9.** IDENTIFICATION OF QTL DETERMINING DIEL FLIGHT ACTIVITY IN MALE CULEX PIPIENS MOSQUITOES FROM AUTOGENOUS AND ANAUTOGENOUS STRAINS  
Giles Duffield, University of Notre Dame
- T10.** DIURNAL VARIATION OBSERVED IN RESPONSE TO THE AVERSIVE EFFECTS OF ALCOHOL  
+Allison Clark, Oregon Health & Science University
- T11.** CONTRIBUTION OF THE CIRCADIAN CLOCK IN CANCER-INDUCED HYPERSOMNOLENCE - A ZEBRAFISH MODEL  
Ghislain Breton, University of Texas Health Science Center
- T12.** ONCOGENIC MYC DISRUPTS CIRCADIAN TRANSCRIPTIONAL AND METABOLIC OSCILLATION  
Brian Altman, The Wistar Institute
- T13.** SUBMISSION WITHDRAWN
- T14.** THE CIRCADIAN CLOCK PROTEIN BMAL1 REGULATES IL-1 $\beta$  IN MACROPHAGES VIA NRF2  
Annie Curtis, Royal College of Surgeons in Ireland
- T15.** PHENOTYPING SLEEP AND CIRCADIAN RHYTHMS IN APP/PS1 AND APP/PS1XPER2::LUC MOUSE MODELS OF ALZHEIMER'S DISEASE.  
Mateusz Michalik, Simon Fraser University
- T16.** SLEEP AND EEG POWER SPECTRAL ANALYSIS IN THREE TRANSGENIC MOUSE MODELS OF ALZHEIMER'S DISEASE: APP/PS1, 3XTGAD, AND TG2576  
Brianna Kent, University of British Columbia
- T17.** SLEEP AND CIRCADIAN DISRUPTION IN DEPRESSION - A MARKER AND PREDICTOR FOR THERAPEUTIC SUCCESS?  
Anna Biller, Institute for Medical Psychology

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- T18.** CHARACTERIZATION OF CIRCADIAN BEHAVIOUR IN THE BTBR MOUSE MODEL OF AUTISM SPECTRUM DISORDER  
Jhenkruthi Vijaya Shankara, University of Calgary
- T19.** USING OPTOGENETICS TO DETERMINE THE ROLE OF THE SUPRACHIASMATIC NUCLEUS IN MOOD REGULATION  
\*Chelsea Vadnie, University of Pittsburgh
- T20.** ACTOGRAM-STYLE EATOGRAMS REVEAL ASSOCIATION BETWEEN FOOD-INTAKE-TIMING VARIABILITY AND (HYPO)MANIC SYMPTOMS IN BIPOLAR DISORDERS  
Clément Bourguignon, McGill University
- T21.** SYMPTOMS OF UNMEDICATED MAJOR DEPRESSIVE DISORDER ARE ASSOCIATED WITH CIRCADIAN MISALIGNMENT  
Michelle Coleman, Monash University
- T22.** GENOMIC PROFILING OF PHOTIC-REGULATED GENES IN TWO SPECIES OF THE MALARIA MOSQUITO ANOPHELES GAMBIAE COMPLEX  
Giles Duffield, University of Notre Dame
- T23.** CIRCADIAN-BASED TREATMENT STRATEGY EFFECTIVE IN THE BACHD MOUSE MODEL OF HUNTINGTON'S DISEASE.  
Yu Tahara, UCLA
- T24.** MODELING STRENGTHENS MOLECULAR LINK BETWEEN CIRCADIAN POLYMORPHISMS AND MAJOR MOOD DISORDERS  
Krista Ingram, Colgate University
- T25.** THE CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR AS A POTENTIAL LINK BETWEEN THE MYOGENIC RESPONSE AND THE CIRCADIAN CLOCK  
Chloe Ng, University of Toronto
- T26.** ENDOGENOUS CIRCADIAN RHYTHM IN NEGATIVE AFFECT  
Alec Berman, Oregon Institute of Occupational Health Science / OHSU
- T27.** DISTINCT RETINAL OUTPUT PATHWAYS MEDIATE LIGHT-INDUCED MOOD AND COGNITIVE DEFICITS  
\*Diego Fernandez, National Institute of Mental Health
- T28.** THE SSRI CITALOPRAM INCREASES THE SENSITIVITY OF THE HUMAN CIRCADIAN SYSTEM TO LIGHT.  
Elise McGlashan, Monash University
- T29.** PROLONGED PHOTOPERIOD AND SPECTRAL INTENSITY – EFFECTS ON CIRCADIAN RHYTHMICITY AND GENE EXPRESSION IN THE RAT BRAIN  
Andrea Marti, Bergen Stress and Sleep Group
- T30.** HISCL1 HISTAMINE RECEPTOR SUPPORTS COMMUNICATION BETWEEN PHOTORECEPTORS TO ENTRAIN REST-ACTIVITY RHYTHMS IN DROSOPHILA  
Francois Rouyer, Université Paris Sud - CNRS
- T31.** A TIMELESS MUTATION ALTERS PHASE RESPONSIVENESS AND CAUSES FAMILIAL ADVANCED SLEEP PHASE  
Louis Ptacek, UCSF
- T32.** DOPAMINE 2 RECEPTOR SIGNALING CONTROLS THE DAILY RHYTHM IN PHAGOCYTIC ACTIVITY BY THE RETINAL PIGMENTED EPITHELIUM  
Varunika Goyal, Morehouse School of Medicine
- T33.** BETA-A3/A1-CRYSTALLIN AFFECTS CIRCADIAN RHYTHM OF THE RETINAL PIGMENTED EPITHELIUM THROUGH REGULATION OF GSK3BETA EXPRESSION  
Nadezda Stepicheva, University of Pittsburgh, School of Medicine

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- T34.** CONE PHOTORECEPTORS CONTRIBUTE TO THE LIGHT RESPONSE OF THE MAMMALIAN BIOLOGICAL CLOCK  
Robin Schoonderwoerd, Leiden University Medical Center
- T35.** TIME-MEMORY ASSAY REVISITED, OPTOGENETICALLY  
Emi Nagoshi, University of Geneva
- T36.** SINGLE CELL RNA SEQUENCING DEFINES CELLULAR BINARY SWITCHING MECHANISM DRIVING CIRCADIAN REGULATION OF MAMMALIAN PHOTOPERIODISM IN MELATONIN-TARGET CALENDAR CELLS.  
Yasutaka Mizoro, University of Manchester
- T37.** THE ROLE OF CRYPTOCHROME IN THE REGULATION OF DAILY STRUCTURAL CHANGES OF SYNAPSES IN THE DROSOPHILA VISUAL SYSTEM.  
Milena Damulewicz, Jagiellonian University
- T38.** INVESTIGATING THE ROLE OF THE SALT-INDUCIBLE KINASES IN THE REGULATION OF THE MOLECULAR CIRCADIAN CLOCK  
\*Lewis Taylor, University of Oxford
- T39.** EVOLUTION OF DNA REPAIR SYSTEMS IN AN EXTREME ENVIRONMENT.  
Nicholas Foulkes, Karlsruhe Institute of Technology
- T40.** HYPOCRETIN UNDERLIES THE EVOLUTION OF SLEEP LOSS IN THE MEXICAN CAVEFISH  
\*James Jaggard, Florida Atlantic University
- T41.** PHOTIC INFLUENCES ON NEURAL ACTIVITY IN SCN TARGET REGIONS.  
Lauren Walmsley, The University of Manchester
- T42.** INDUCIBLE SKELETAL MUSCLE-SPECIFIC KNOCKOUT OF BMAL1 LEADS TO ALTERED EXPRESSION OF CRITICAL KIDNEY FUNCTION GENES  
Collin Douglas, University of Florida
- T43.** INHIBITION OF CASEIN KINASE 1 ENHANCES HIPPOCAMPAL-DEPENDENT LEARNING AND INCREASES EXPRESSION OF PLASTICITY PROTEINS IN THE HIPPOCAMPUS AND AMYGDALA  
+Heather Mahoney, University of South Florida
- T44.** CLOCK $\Delta$ 19 MUTATION LEADS TO INCREASED OXIDATIVE DAMAGE TO PARVALBUMIN INTERNEURONS AND SLOWS PERINEURONAL NET DEVELOPMENT  
Jennifer Burns, University of Pittsburgh
- T45.** TIME FOR A DRINK? NOVEL OSCILLATOR PROPERTIES IN THE THIRST CENTRES OF THE BRAIN  
\*\*Rebecca Northeast, University of Manchester
- T46.** HUMAN CIRCADIAN SYSTEM INCREASES THE HUNGER HORMONE GHRELIN IN THE BIOLOGICAL EVENING INDEPENDENT OF THE BEHAVIORAL CYCLE  
Jingyi Qian, Brigham & Women's Hospital, Harvard Medical School
- T47.** THE SEX DIFFERENCE IN FOOD ANTICIPATORY ACTIVITY IN MICE IS ELIMINATED BY EXPOSURE TO RESTRICTED FEEDING AS JUVENILES.  
Ashutosh Rastogi, Kent State University
- T48.** EXPLORING STRAIN BACKGROUND AS A MODULATOR OF FOOD ANTICIPATORY ACTIVITY IN MICE  
David Cun, Cal Poly Pomona
- T49.** DOES RESTRICTED DAYTIME FEEDING IMPAIR HIPPOCAMPAL MEMORY PROCESSES IN NOCTURNAL MICE?  
Sarah Power, Simon Fraser University

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- T50.** THE REGULATION OF SLEEP INTENSITY BY NUTRIENT AVAILABILITY IN DROSOPHILA MELANOGASTER  
Elizabeth Brown, Florida Atlantic University
- T51.** MECHANISMS OF MULTIPLE MEAL ANTICIPATION IN RATS  
Christian Petersen, Simon Fraser University
- T52.** TIME-RESTRICTED FEEDING NORMALIZES OBESITY-INDUCED ALTERATIONS IN HEPATIC CLOCK GENES AND STEATOSIS IN MICE  
Jennifer Valcin, University of Alabama at Birmingham
- T53.** USING SIMULATED SHIFT WORK AND METABOLOMICS TO SEPARATE CIRCADIAN- AND BEHAVIOR-DRIVEN METABOLITE RHYTHMS IN HUMANS  
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- T54.** LATER SCHOOL STARTTIMES ALLEVIATE SLEEP DEPRIVATION AND SOCIAL JETLAG IN ADOLESCENT HIGH SCHOOL STUDENTS.  
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- T55.** PHYSICAL ACTIVITY CAN MODIFY CHRONOTYPE INDEPENDENT OF PER3 VNTR GENOTYPE  
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Ben Greenwell, Texas A&M University

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- T68.** UNDERSTANDING THE EFFECTS OF EPIGENETIC MODULATION WITHIN CIRCADIAN RHYTHMS  
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- T69.** CIRCADIAN INDUCTION OF METABOLIC AND STRESS-RESPONSIVE GENE OSCILLATION REQUIRES NAD<sup>+</sup> IN YOUNG AND OLD MICE  
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- T70.** VOLUNTARY TRAINING REVEALS TIME-OF-DAY DIFFERENCES IN EXERCISE PERFORMANCE AND INTRAMUSCULAR GLYCOGEN ACCUMULATION.  
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- T71.** THE METABOLIC COST OF DAILY ENTRAINMENT UNDER HIGH FAT DIET IN MICE  
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- T74.** AN ACID-RESPONSIVE CIRCADIAN-OSCILLATING LNCRNA  
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- T75.** ACUTE EFFECTS OF BLUE LIGHT ON EATING BEHAVIOR AND GLUCOSE METABOLISM OF MICE  
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- T77.** REGULATION OF THE HYPOXIC RESPONSE BY MAMMALIAN CRYPTOCHROMES  
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\*Darius Becker-Krail, University of Pittsburgh
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Yasuko Abe, The University of Tokyo

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- T95.** MIR-210 REGULATES EVENING PEAK ACTIVITY AND FAS2 EXPRESSION IN DROSOPHILA MELANOGASTER  
\*Wesley Leigh, University of Nevada, Reno
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- T97.** JMJC PROTEIN JMJD5 REGULATES ACTIVITY-COUPLED DEGRADATION OF CRY1 TO INFLUENCE THE CIRCADIAN CLOCK  
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- T99.** TWO INTERACTIVE CASEIN KINASE 1 DELTA ISOFORMS REGULATED BY M6A METHYLATION.  
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Chuan Xiao, University of Texas at El Paso
- T101.** TOR PATHWAY COMPONENTS IN THE CIRCADIAN SYSTEM OF NEUROSPORA CRASSA  
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- T102.** MUSCLE CONTRACTION AS NOVEL NON-PHOTIC TIME CUE FOR THE CIRCADIAN CLOCKS IN MUSCLE  
\*Denise Kemler, University of Florida
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Yuta Shinohara, RIKEN
- T104.** MELATONIN RESPONSE TO SPIRIT POSSESSION: EXPLORING AN INTRIGUING PUTATIVE ROLE OF THE PINEAL GLAND  
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Jennifer Mitchell, University of Illinois at Urbana-Champaign
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- T109.** MOLECULAR MECHANISMS OF STRUCTURAL PLASTICITY IN DROSOPHILA PACEMAKER NEURONS  
Seana Lymer, New York University
- T110.** MATHEMATICAL MODELING OF NEURON-ASTROCYTE INTERACTIONS IN THE SUPRACHIASMATIC NUCLEUS  
Natthapong Sueviriyapan, University of Massachusetts Amherst
- T111.** NEUROPEPTIDERGIC ENCODING OF CIRCADIAN RHYTHMS AND LIGHT  
\*Jeff Jones, Washington University in St. Louis
- T112.** GENETIC DISSECTION OF CIRCADIAN NETWORKS IN THE SUPRACHIASMATIC NUCLEUS  
Mariko Izumo, UT Southwestern Medical Center
- T113.** 3-D RECONSTRUCTION OF NEURONS DRIVING CIRCADIAN RHYTHMS  
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- T114.** CLOCK FUNCTION IS NECESSARY AT MULTIPLE NODES OF A HYPOTHALAMIC NEUROENDOCRINE CIRCUIT FOR AN APPROPRIATELY TIMED PREOVULATORY LH SURGE.  
\*Ajay Kumar, University of Massachusetts Amherst

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**\*\***Danyi Ma, Vanda Pharmaceuticals Excellence Awardee, Institute of Neuroscience
- T116.** QUANTITATIVE NETWORK ANALYSIS OF CIRCADIAN CLOCKS IN FIBROBLASTS AND SCN ORGANOTYPIC SLICES  
 \*James Bagnall, University of Manchester
- T117.** PHOTOPERIODIC ENCODING WITHIN THE SCN  
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 \*Kayla Rohr, Marquette University
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 Aarti Jagannath, University of Oxford
- T123.** SLEEPING SICKNESS IS A CIRCADIAN DISORDER  
 Filipa Rijo-Ferreira, University of Texas Southwestern/Howard Hughes Medical Institute
- T124.** CIRCADIAN CLOCK CONTROL AND VITAMIN A REGULATION OF PHOTOPERIODICALLY-INDUCED REPRODUCTIVE DIAPAUSE IN THE MONARCH BUTTERFLY  
 \*\*Samantha Iiams, Patricia DeCoursey Excellence Awardee, Texas A&M University
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 Rubia Aparecida Carvalho Mendes, University of São Paulo

# Notes

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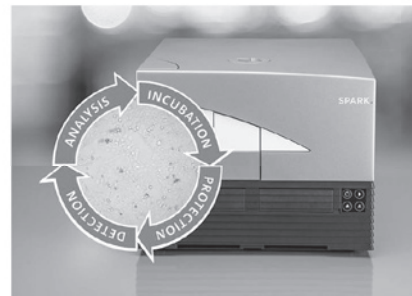
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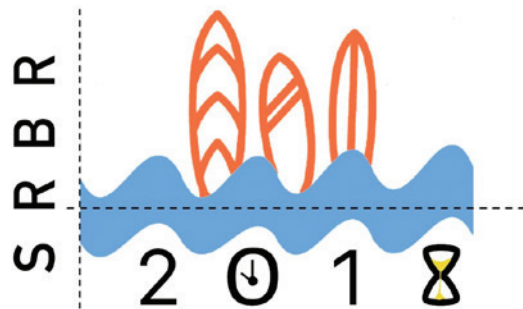
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