Society for Research on Biological Rhythms

Newsletter

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In This Issue –

From the Editor –

Happy Holidays! Welcome to the winter edition of the revitalized SRBR Newsletter. It is a busy time of year, filled with the hustle and bustle of the holiday season. Thus, I would like to take this opportunity remind everyone that now is the time to renew your SRBR membership! Dues have been set by the Executive Board at $100 for regular members and $50 for trainee and emeritus members. Renew your membership today by logging on at http://www.srbr.org/Pages/new_member.aspx. This newsletter is just one of the many perks that you receive with your membership!

In this issue you will find our latest spotlight on research, highlighting the work of Matthieu Flourakis at Northwestern University, USA. We also have a section on newly awarded grants, a call for membership from the Canadian Society for Chronobiology and a couple of job opportunites for students who are finishing the PhD's and looking for postdoctoral opportunities in Chronobiology.

I would also like to take this opportunity to thank Frank Scheer for his service as chair of the Communications Committee. Frank is stepping down as chair and I will be assuming that position (see more on this below). As chair of the Communications committee, Frank, along with Ralph Mistlberger, Janis Anderson and myself successfully created a new SRBR website and initiated the publication of this newsletter.

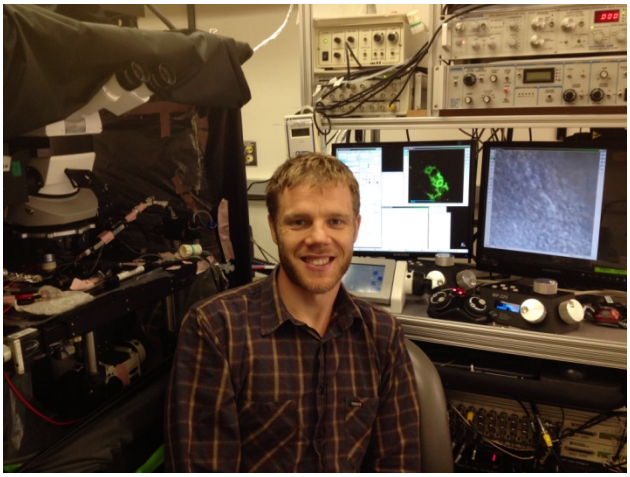
If you have materials appropriate for inclusion in the newsletter, please forward them to me at stischkau@siumed.edu. The next issue is slated for release in the Spring of 2013. As always, your feedback on the newsletter is welcomed!

Best Regards -

Chronobiology Research Spotlight

Editor's note: The research spotlight is a new feature of the newsletter that will highlight the work of young chronobiologists from around the world. The students chosen for these pieces were research award winners from the 2012 SRBR meeting. Congratulations to these students and all the award winners! For this issue, the spotlight is presented in interview format.

Matthieu Flourakis, Laboratory of Ravi Allada, Northwestern University, Evanston, IL, USA



ST: Where did you grow up? Tell me about your family.

MF: I have a multicultural family. My father is Greek and my mother is French. And I went to school in in Lille, France and had the chance to spend all my vacations in a small village in Crete, Greece called Sfendili.

ST: How did you get interested in Chronobiology?

MF: I started working on circadian rhythms when I joined Ravi Allada's lab in 2009. It is fascinating to try to understand how the regulation of the activity of a small of neurons can drive a specific circadian behavior.

ST: What are your hobbies?

MF: I am currently training for an Ironman triathlon in Madison, Wi. So when I am not in the lab patching I might be in the pool, on my bike or running.

ST: Do you have any pets?

MF: My wife and I adopted 2 small lionhead rabbits called Tchoutchou and Loulou.

ST: What is your favorite book?

MF: It's a French book called "La promesse de l'aube" (translated as "Promise at dawn"). It's an autobiography by novelist Romain Gary. He is writing about his childhood in Paris, France, and described how his love for his mother shaped his decision to be an aviator during the WWII and his relationship with other women.

ST: What kind of music do you like?

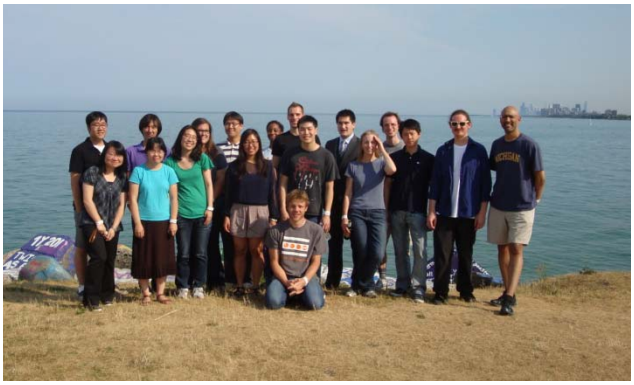
MF: Rock music. I am listening to old bands like The Clash, Pixies, The Who, The Smith, Joy Division... and I also enjoy Muse, Kaiser Chiefs, Sonic youth, Arcade Fire...

ST: Tell me about the research you are doing in the Allada lab.

MF: Our lab studies circadian rhythms and sleep in *Drosophila*. As an electrophysiologist, I am particularly interested in the precise ion channels responsible for the control of pacemaker neuron activity via the rhythmic control of membrane potential and firing frequency in both mammals and *Drosophila.* To define the ionic basis for daily rhythmicity in *Drosophila*, I perform patch clamp electrophysiology on circadian pacemaker neurons. I found that a subset of dorsal circadian pacemaker neurons demonstrate remarkable rhythms in membrane potential and firing. These rhythms seem to be driven by diurnal regulation of the sodium leak channel NARROW ABDOMEN (NA). I have also started to examine the function of the NA

homolog, NALCN, in mammalian suprachiasmatic neurons.

Fruit flies also exhibit sleep-like states. I am particularly interested in understanding synaptic plasticity occurring during a normal wake/sleep cycle and during sleep deprivation. To study synaptic plasticity, I am performing live imaging of the Drosophila brain using a range of genetically encoded sensors like GCamp3.0 (for calcium), Akar and Epac (for PKA/ cAMP pathway) and synaptoPhluorin (to measure synaptic release). Using these tools, I have preliminary data examining changes in synaptic function during sleep deprivation.



The Allada Lab, summer 2012.

Join the Communications Committee!

The Communications Committee (CC) is seeking energetic people to help with a variety of projects. This is an opportunity to get involved with SRBR! Over the next year, the committee will undertake several projects.

A major emphasis for the CC will be to develop a consensus statement describing the importance of chronobiology in health and well-being. This statement will be placed on "disease'-related websites (such as AHA, see http://my.americanheart.org/professional/StatementsGuidelines/ByTopic/By-Topic_UCM_316895_Article.jsp to be used as a resource for grant writers and grant reviewers to highlight the emerging links between circadian rhythms and disease, including metabolism, cancer, drug abuse, and others. A second project will also explore the use of social media to educate the public on the importance of chronobiology. Finally, we will be updating the website. If YOU are interested in being a part of the CC, please contact me (stischkau@siumed.edu) for more information. I look forward to working with an energetic new group to increase awareness of the importance of Chronobiology.

Thanks,

Shelley Tischkau
Chair, CC

Creation of the Canadian Society for Chronobiology

Hello!

Are you working on biological rhythms in a Canadian institution? Are you a Canadian chronobiologist presently in another country? Are you a Canadian researcher with interest in chronobiology and in sharing with others in this field? If you answered "yes" to any of these questions, we invite you to become a member of the new Canadian Society for Chronobiology!

With an increasing number of Canadian researchers with interest in chronobiology, it was felt that a new society would facilitate networking among researchers, organization of scientific meetings, fostering collaborations, and enrichment of training of young Canadian chronobiologists. For more information or to receive the membership form, please write to chronobio.canada@gmail.com.

Regards,

Nicolas Cermakian, President
Michael Antle, Vice-President
Valérie Mongrain, Secretary
Canadian Society for Chronobiology
chronobio.canada@gmail.com

Looking for a Job?

Check out the SRBR website at www.srbr.org for more details about the following job openings.

Postdoctoral Position

A postdoctoral position is available in the laboratory of Elliott Albers at Georgia State University in Atlanta, Georgia, USA to study the role of GABA in the entrainment of circadian rhythms. The successful candidate will have a strong background in molecular, anatomical and behavioral approaches and interest in the neurobiology of circadian rhythms. The position is available immediately and all applications will be considered until the position is filled. Inquires about the position can be sent to Elliott Albers at biohea@gsu.edu.

Postdoctoral Position

A postdoctoral position is available in the laboratory of Eric M. Mintz at Kent State University. I seek an individual with a strong background in behavioral neuroscience with knowledge of basic molecular biology techniques. The focus of the laboratory is on the role of the suprachiasmatic nucleus in regulating rhythmic behavioral endpoints. The postdoctoral researcher will work on projects relating to the link between circadian output signaling, locomotor activity, and feeding.

Questions about the position can be addressed to emintz@kent.edu. To apply, please submit a cover letter indicating your research interests along with a CV and the names and contact information for three references. Review of applications will begin immediately and continue until the position is filled.

Congratulations!!!! Recently Funded Grants

This segment highlights recent grant awardees. The information was gathered by searching publicly available databases (for the period from June 2012 to early November 2012).

National Institutes of Health, USA

R01

PI: Albers, Elliott H / Georgia State University
Title: Communication within the suprachiasmatic neural circadian network
Agency/PO: NINDS/ Mitler, Merrill
Review Cmte: neuroendocrinology, neuroimmunology, rhythms and sleep study section (NNRS)

PI: Dong, Xinnian / Duke University
Title: The interplay between the circadian clock and plant immune mechanisms
Agency/PO: NIGMS/ Tompkins, Laurie
Review Cmte: cellular signaling and regulatory systems study section (CSRS)

PI: Emery, Patrick / Univ of Massachusetts Med Sch Worcester
Title: The role of RNA binding proteins in the control of drosophila circadian rhythms
Agency/PO: MIGMS/ Tompkins, Laurie
Review Cmte: neurodifferentiation, plasticity, and regeneration study section (NDPR)

PI: Figueiro, Mariana / Rensselaer Polytechnic Institute
Title: Individually tailored lighting system to improve sleep in older adults
Agency/PO: NIA/ Mackiewicz, Miroslaw
Review Cmte: special emphasis panel [ZRG1-SBIB-V (58)]

PI: Golden, Susan S / University of California San Diego
Title: Circadian gating of cell division by the cyanobacterial oscillator
Agency/PO: MIGMS/ Tompkins, Laurie
Review Cmte: special emphasis panel [ZRG1-CB-R (02)]

PI: Harvey, Allison G / University of California Berkeley
Title: Triple vulnerability? Circadian tendency, sleep deprivation and adolescence
Agency/PO: NICHD/ Haverkos, Lynne
Review Cmte: child psychopathology and developmental disabilities study section (CPDD)

PI: Heller, H Craig
Title: Suprachiasmatic nucleus output pathway for learning and memory
Agency/PO: NIMH/ Vicentic, Aleksandra
Review Cmte: neuroendocrinology, neuroimmunology, rhythms and sleep study section (NNRS)

PI: Kilduff, Thomas S / SRI International
Title: Functional connectivity of the hypocretin/orexin system
Agency/PO: NINDS/ Mitler, Merrill
Review Cmte: neuroendocrinology, neuroimmunology, rhythms and sleep study section (NNRS)

PI: Knutson, Kristen / University of Chicago
Title: Home sleep and circadian phase: mediators of racial disparities in diabetes risk
Agency/PO: NIDDK/ Staten, Myrlene A
Review Cmte: health disparities and equity promotion study section (HDEP)

PI: Palczewski, Krzysztof / Case Western Reserve University
Title: Photoreceptor renewal by retinal pigmented epithelium phagocytosis
Agency/PO: NEI/ Neuhold, Lisa
Review Cmte: special emphasis panel [BVS]

PI: Reeder, Scott B. / University of Wisconsin Madison
Title: Quantitative hemodynamics of the liver with 4d flow MRI
Agency/PO: NIDDK/ Serrano, Jose
Review Cmte: medical imaging study section (MEDI)

PI: Spencer, Rebecca / University of Massachusetts Amherst
Title: Sleep-dependent memory processing in older adults
Agency/PO: NIA/ Mackiewicz, Miroslaw
Review Cmte: cognition and perception study section (CP)

PI: Spencer, Rebecca / University of Massachusetts Amherst
Title: the benefit of naps on cognitive, emotional and motor learning in preschoolers
Agency/PO: NHLBI/ Twery, Michael
Review Cmte: cognition and perception study section (CP)

PI: Wu, Mark N / Johns Hopkins University
Title: Genetic analysis of sleep regulation
Agency/PO: NINDS/ Mitler, Merrill
Review Cmte: neurodifferentiation, plasticity, and regeneration study section (ndpr)

R21

PI: Sassone-Corsi, Paolo / University of California Irvine
Title: Not only sirt1: a role for nuclear sirt6 in circadian control
Agency/PO: NIA/ Velazquez, Jose M.
Review Cmte: cellular mechanisms in aging and development study section (CMAD)

PI: Worthman, Carol Marie / Emory University
Title: Effects of culture change on adolescent sleep and health agency/PO: NICHD/ King, Rosalind B
Review Cmte: special emphasis panel [ZRG1-BBBP-l (51)]

PI: Epel, Elissa S / University of California San Francisco
Title: Stress-induced poor sleep: sex differences, vulnerability & resilience factors
Agency/PO: NHLBI
Review Cmte: special emphasis panel [ZRG1-BBBP-l (51)]

PI: Van der linden, Alexander Martinus / University of Nevada Reno
Title: Temperature control of the C. elegans circadian clock
Agency/PO: NINDS/ Mitler, Merrill
Review Cmte: neurodifferentiation, plasticity, and regeneration study section (NDPR)

PI: Hardin, Paul E / Texas A&M University
Title: developing cell lines from clock neurons in drosophila
Agency/PO: NINDS/ Mitler, Merrill
Review Smte: special emphasis panel [ZRG1-MDCN-G (02)]

R03

PI: Roecklein, Kathryn A / University of Pittsburgh
Title: The melanopsin-driven pupillary light reflex in seasonal affective disorder
Agency/PO: NIMH/ Muehrer, Peter R.
Review Cmte: adult psychopathology and disorders of aging study section (APDA)

PI: Cano, Georgina / University of Pittsburgh
Title: Effects of an angiotensin II antagonist in a rat model of insomnia
Agency/PO: NIMH /Winsky, Lois M.
Review Cmte: neuroendocrinology, neuroimmunology, rhythms and sleep study section (NNRS)

National Science Foundation, USA

PI: Harmer, Stacey and Benjamin Blackman
University of California-Davis
Title: Investigating the mechanistic basis and adaptive significance of the coordination of plant growth by external and internal cues
Agency/PO: NSF/ IOS Diane Jofuku Okamuro
Review Cmte: plant genome research project

PI: Tarrant, Ann and Adam Reitzel / Society for Integrative and Comparative Biology
Title: Meeting: Keeping time during animal evolution: conservation and innovation of the circadian clock, (SICB); Jan. 3-7 2013, SF, CA
Agency: NSF/ IOS William E. Zamer
Review Cmte: Processes Strucs & Integrity

PI: Tonge, Peter / SUNY at Stony Brook
Title: International collaboration in chemistry: mechanism of operation of the bluf domain: blue light sensitive biosensors
Agency: NSF/CHE David B. Berkowitz
Review Cmte: chemistry of life processes

PI: Dickinson, David and Todd McElroy
Appalachian State University
Title: Sleep restriction and circadian mismatch effects on differential decision processes
Agency: NSF/BCS Lawrence Robert Gottlob
Review Cmte: perception, action & cognition|decision risk & management sci

PI: Buck, Charles and Cory Williams / University of Alaska Anchorage
Title: Collaborative research: persistence, entrainment, and function of circadian rhythms in arctic ground squirrels
Agency: NSF/IOS William E. Zamer
Review Cmte: organism-enviro interactions

PI: Barnes, Brian University of Alaska Fairbanks
Title: collaborative research: persistence, entrainment, and function of circadian rythms in arctic ground squirrels
Agency: NSF/IOS William E. Zamer
Review Cmte: organism-enviro interactions

PI: Burstyn, Judith / University of Wisconsin-Madison
Title: Allostery in heme-dependent gas-sensing transcription factors
Agency: NSF/CHE Julio C. De Paula
Review Cmte: chemistry of life processes

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