

6th Canadian Society for Chronobiology (CSC) Conference

Preliminary Program

“Timing is Everything”

University of Guelph, Ontario, Canada

June 14-15, 2023



Wednesday June 14 - CSC

7:30 – 5:00 PM	Registration – Rozanski (Roz)	Roz Atrium
7:30 – 8:30 AM	Continental Breakfast – Rozanski (Roz)	Roz Atrium
8:30 – 9:00	Photos, Land Acknowledgement, Opening Remarks, Introductions	Roz 103
9:00 – 9:45 AM	<p><u>Symposium 1 – CSC & CCVI</u></p> <p><u>Session Chairs</u> Tami Martino (University of Guelph) Philip Millar (University of Guelph)</p> <p><u>Speakers</u></p> <p>1) Martin Young (University of Birmingham at Alabama) <i>Circadian considerations for Optimizing Cardiovascular Health</i></p>	Roz 103
9:45 – 10:05 AM	<p>2) Frank Scheer (Harvard Medical School) <i>Impact of the human circadian system & circadian misalignment on cardiovascular function</i></p>	
10:05 – 10:25 AM	<p>3) Robert Shave (University of British Columbia) <i>The human cardiovascular phenotype - where have we come from, and what does this mean?</i></p>	
10:25 – 10:40	Coffee Break	Roz Atrium

	<p><u>Symposium 2 – CSC</u></p> <p><u>Session Chairs</u> Phillip Karpowicz (University of Windsor) Patricia Lakin-Thomas (York University) Konrad Schöttner (Concordia) Matthew Carlucci (University of Toronto)</p> <p><u>Speakers</u> 1) Ruifeng (Ray) Cao (University of Minnesota) <i>Translational control of the mammalian circadian clock and neurodevelopmental disorders</i></p> <p>2) Suzanne Hood (Bishop's University) <i>Treatments for circadian related sleep disturbances in older adults: results of a scoping review</i></p> <p>3) Marcus Ng (University of Manitoba) <i>The chronobiology of epilepsy</i></p> <p>4) Adam Stinchcombe (University of Toronto) <i>A Mathematical Model Reveals How Heterogeneous Food Entrainable Oscillators Mediate Food Anticipatory Activity</i></p>	Roz 102
10:40 – 11:00 AM		
11:00 – 11:20 AM		
11:20 – 11:40 AM		
11:40 – 12:00 PM		

	<p><u>Symposium 3 – CSC</u></p> <p><u>Session Chairs</u> Ralph Mistlberger (Simon Fraser University) Tobias Eckle (University of Colorado) Sarah Ferraro (Harvard)</p> <p><u>Speakers</u> 1) Christine Doucette (University of Manitoba) <i>Pancreatic insulin secretion and glucose homeostasis: it's all about the timing!</i></p> <p>2) Diana McMillan (University of Manitoba) <i>The circadian dilemma: Strategies to support shift workers</i></p> <p>3) Éric Paquet (Université Laval) <i>Understanding the interaction between the circadian clock and the cell cycle</i></p> <p>4) Nader Ghasemlou (Queens University) <i>Circadian Rhythms and pain: a neuroimmune connection?</i></p>	Roz 105
10:40 – 11:00 AM		
11:00 – 11:20 AM		
11:20 – 11:40 AM		
11:40 – 12:00 PM		

<p>12:00 – 1:00</p>	<p><u>Lunch Break with Special Networking Session - CSC</u></p> <p>Meet the Professors at Lunch</p> <p>TBD</p>	<p>Summerlee Science Atrium</p>
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	<p><u>Symposium 4 – CSC</u></p> <p><u>Session Chairs</u> Sabra Margaret Abbott (Northwestern) Petros Papagerakis (University of Saskatchewan) Joshua Krupp (University of Toronto)</p> <p><u>Speakers</u> 1) Jennifer Marie Hurley (Rensselaer Polytechnic Institute) <i>Intrinsic disorder in the highly ordered circadian clock: a tale of two isoforms</i></p> <p>2) Konrad Schöttner (Concordia University) <i>Clock genes in the striatum have a heterogeneous and sexually dimorphic function in the regulation of behavior</i></p> <p>3) Brian Altman (University of Rochester Medical Center) <i>Blood Clock Correlation Distance (BloodCCD) reveals molecular circadian rhythm disruption in cancer survivors with insomnia</i></p> <p>4) Valerie Mongrain (Université de Montréal) <i>Clock time shapes the electrophysiological and transcriptomic responses to the alkaloid rhynchophylline</i></p>	Roz 102
1:15 – 1:35 PM		
1:35 – 1:55 PM		
1:55 – 2:15 PM		
2:15 – 2:35 PM		

	<p><u>Symposium 5 – CSC</u></p> <p><u>Session Chairs</u> Rae Silver (Columbia) Kai-Florian Storch (McGill) Aurelie Brecier (Queens University)</p> <p><u>Speakers</u> 1) Jibrán Khokhar (University of Western) <i>It's happy hour somewhere: impact of environmental and genetic circadian disruptions on alcohol drinking</i></p> <p>2) Giannina Descalzi (University of Guelph) <i>Astrocyte-neuronal metabolic coupling in the development of chronic pain</i></p> <p>3) Bettina Willie (McGill University) <i>Insights into the role of circadian rhythms in bone adaptation</i></p> <p>4) Petros Papagerakis (University of Saskatchewan) <i>Understanding the circadian pathophysiology of salivary glands and novel approaches to monitor rhythms in saliva</i></p>	Roz 105
1:15 – 1:35 PM		
1:35 – 1:55 PM		
1:55 – 2:15 PM		
2:15 – 2:35 PM		

<p>2:40 – 3:00 PM</p> <p>3:00 – 3:20 PM</p>	<p><u>Symposium 6 – CSC</u></p> <p><u>Session Chairs</u> Michael Antle (University of Calgary) Tami Martino (University of Guelph)</p> <p><u>Speakers</u></p> <p>1) Nicolas Cermakian (Douglas Research Centre, McGill University) <i>Malaria and leishmaniasis around the clock</i></p> <p>2) Martin Ralph (University of Toronto) <i>On the genesis of bio-circadian rhythms and the value for diagnosis and remediation of neuropsychiatric disorder</i></p>	<p>Roz 103</p>
<p>3:20 – 3:30</p>	<p>Coffee Break</p>	<p>Roz Atrium</p>

	<p>Symposium 7 – Cardiovascular</p> <p>Session Chairs</p> <p>Martin Young (University of Alabama at Birmingham); Robert Shave (University of British Columbia); Janan Shoja-Doost (University of Guelph)</p> <p>Speakers</p> <p>1) Brian Delisle (University of Kentucky) <i>Circadian regulation of cardiac electrophysiology</i></p> <p>2) Mina Rasouli (University of Guelph) <i>Shift work disrupts circadian rhythm and impairs autophagy control mechanisms in the MI heart.</i></p> <p>3) Lorrie Kirshenbaum (University of Manitoba) <i>Regulation of cell death mechanisms in the heart</i></p> <p>4) Peter Backx (York University) <i>Dissecting the role of the immune system in contributing to atrial changes induced by stretch</i></p> <p>6) Steffen-Sebastian Bolz (University of Toronto) <i>Time is a teacher – how microvascular circadian rhythms generate new insights into the molecular signalling underlying myogenic responsiveness</i></p>	Roz 102
3:30 – 3:50 PM		
3:50 – 4:10 PM		
4:10 – 4:30 PM		
4:30 – 4:50 PM		
4:50 – 5:10 PM		

	<p>Symposium 8 – CSC – One Health</p> <p>Session Chairs</p> <p>Mary Harrington (Smith College); Martin Ralph (University of Toronto); Ana Leticia Simal Dourado (University of Guelph)</p> <p>Speakers</p> <p>1) Deniz Top (Dalhousie University) <i>Distinct circadian transcription programs converge to regulate behaviour</i></p> <p>2) Barry Micallef <i>A case of “jet lag” in plants: photoperiodic injury in tomato</i></p> <p>3) Gregoy Bedecarrats <i>Extra-retinal photoreception in avian species and its implications for the control of reproduction</i></p> <p>4) Anna Kate Shoveller <i>Beyond nutrition: metabolic impact of feeding management in the obligate carnivore, the domestic cat</i></p> <p>5) Lee Niel <i>Circadian disruption & companion animal health and welfare</i></p>	Roz 105
3:30 – 3:50 PM		
3:50 – 4:10 PM		
4:10 – 4:30 PM		
4:30 – 4:50 PM		
4:50 – 5:10 PM		

<p>5:30 – 6:30</p>	<p><u>Distinguished Public Lecture – CSC & CCVI</u></p> <p>Satchidananda Panda (Salk Institute) <i>Timing of diet, sleep, and exercise to optimize heart health</i></p>	<p>War Memorial Hall</p>
<p>6:30 – 7:30</p>	<p>Networking Reception / Dinner</p> <p>Art Gallery of Guelph</p> <p>CCVI Trainees - Award presentations</p> <p><i>Group Photo in front of Art Gallery after dinner?</i></p>	<p>Walk across the street to the Art Gallery of Guelph</p>
<p>7:30-9:30</p>	<p>Trainee's - Desert & Evening Event</p> <p><u>Careers Outside Academia</u></p> <p>Hailey Silver – Master's in Public Health Samantha Steinberg – Medical Affairs Rachel Manjos – Veterinary Medicine Nicole Campbell – Teaching Track in Universities Ari Mendell – Medical Writer Mina Rasouli – Biotech Industry Nursing? TBD Science Communication? TBD Other? TBD</p>	<p>Massey Hall Theatre</p>
<p>7:30-9:30</p>	<p>Faculty – Desert & Evening Event</p> <p>Dr Mark Lipton, Professor, School of English & Theatre Studies, Science Communication, Media Studies, University of Guelph</p>	<p>Massey Hall Theatre</p>

Thursday June 15 – CSC

7:30 – 8:20 AM	Continental Breakfast – Rozanski (Roz) <i>** Students: Please load your slides on the computer in the room with the volunteer technician during breakfast time**</i>	Roz Atrium
8:20 – 8:40 AM	<p>Symposium 9 Session Chairs Brian Delisle (University of Kentucky) Valérie Mongrain (Université de Montréal) Marcus Ng (University of Manitoba) Robert Lakin (York University)</p> <p>Speakers 1) Mary Harrington (Smith College, Editor-in-Chief Journal of Biological Rhythms) <i>Recording of bioluminescent rhythms from peripheral clocks: system properties following SCN ablation</i></p>	Roz 103
8:40 – 9:00 AM	2) Michael Antle (University of Calgary) <i>Casting a net over circadian plasticity: perineuronal nets in the SCN</i>	
9:00 – 9:20 AM	3) Tobias Eckle (University of Colorado Anschutz Medical Campus) <i>From bench to bedside: circadian principles applied</i>	
9:20 – 9:40 AM	Satchidananda Panda (Salk Institute) <i>Pleiotropic effects of time restricted feeding on multiple organs – from molecules to phenotypes</i>	
9:40 – 9:55 AM	Coffee Break	Roz Atrium

Symposium 10 STUDENTS Group A*Students: Please load your slides on the computer during the breakfast time***Session Chairs / Judges:** Inna Rabinovich-Nikitin; Deniz Top; Silvana Papagerakis; Bettina Willie; Jibrán Khokhar**Speakers – 10-minute talks:****10:00 – 10:10 AM****1) Matthew Carlucci** (University of Toronto)
*Repeated MRI scans of the human brain: diurnal oscillations in healthy adults and bipolar disorder patients***10:10 – 10:20 AM****2) Vania Carmona Alcocer** (University of Windsor)
*Time-restricted feeding reduces ulcerative colitis and improves colon regeneration***10:20 – 10:30 AM****3) Cassandra Goldfarb** (Concordia)
*Time your dopamine? Is the Habenula the pacemaker for nigrostriatal dopaminergic oscillations?***10:30 – 11:40 AM****4) Maria Kinasih** (University of Guelph)
*Feeding one versus four meals daily decreases postprandial respiratory quotient and increases rate of food consumption in domestic cats over twelve weeks***10:40 – 10:50 AM****5) Zainab Taleb** (University of Windsor)
*The epithelial clock in colonic regeneration***10:50 – 11:00 PM****6) Turner Silverthorne** (University of Toronto)
*With great (statistical) power comes great responsibility: multi-objective optimization of rhythm detection studies***11:00 – 11:10 PM****7) Darya Nematisouldaragh** (University of Manitoba)
*Nobiletin Rescues Cardiac Myocytes Cell Death by Upregulating Autophagy during Hypoxic Stress***11:10 – 11:20 PM****8) Katelyn Horsley** (University of Calgary)
*Non-photic phase shifting and IGL activity in mice: Orexin fibers communicate with active NPY cells***Speakers – 5-minute short talks:****11:20 – 11:25 PM****9) Ann Zhang** (University of Toronto)
*Dynamics of Dopamine-D2 Self-Regulation: A Mathematical Model for Ultradian Rhythms***11:25 – 11:30 PM****10) Ana Leticia Simal Dourado** (University of Guelph)
*Sex-specific neuropathic pain increases in astrocyte-neuronal metabolic coupling in the mouse ACC***11:30 – 11:35 PM****11) Jenna Gearey** (University of Calgary)
Investigating Cardiac Function in the BTBR Mouse

Symposium 10 STUDENTS Group B

Students: Please load your slides on the computer during the breakfast time

Roz 105

Session Chairs / Judges: Steffen-Sebastian Bolz; Nicolas Cermakian; Jennifer Marie Hurley; Suzanne Hood; Anna Kate Shoveller

Speakers – 10-minute talks:

- 10:00 – 10:10 AM **1) Kathyani Parasram** (University of Windsor)
Birth of Rhythms in the Developing Gut
- 10:10 – 10:20 AM **2) Sepehr Abdolahi** (Laval University)
Investigating the differential disruption of the circadian clock and the cell cycle in cancer subtypes by co-expression analysis
- 10:20 – 10:30 AM **3) Molly Crandall** (University of Manitoba)
Clock Regulates Autophagy and Cell Survival of Cardiac Myocytes During Hypoxia Stress
- 10:30 – 11:40 AM **4) Amanda Zacharias** (Queens University)
Analyzing transcriptomics to discover circadian pathways and networks in the central nervous system
- 10:40 – 10:50 AM **5) Nasri Balit** (University of Toronto)
Influence of the circadian rhythm on CD8+ T cell signaling; a mathematical modeling perspective
- 10:50 – 11:00 PM **6) Janan Shoja Doost** (University of Guelph)
From small molecule modulators to Circadian Medicine: ROR γ targeting improves outcomes after myocardial ischemia-reperfusion
- 11:00 – 11:10 PM **7) Mia Schofield** (Dalhousie)
*Molecular clock interactions across the circadian neuronal network in *Drosophila**
- 11:10 – 11:20 PM **8) Rafael Pérez-Medina-Carballo** (McGill University)
Dampened circadian variation of delta and sigma EEG power in women after menopause
- 11:20 – 11:25 PM **Speakers – 5-minute short talks:**
- 9) Aurelie Brecier** (Queens University)
Contribution of circadian rhythms to sensory neuron activity in vitro and ex vivo
- 11:25 – 11:30 PM **10) Robert Lakin** (York University)
Targeting tumor necrosis factor (TNF) in atrial CARDIOMYOCYTES PREVENTS adverse atrial remodeling and valvular atrial fibrillation in a mouse model of aortic regurgitation
- 11:30 – 11:35 PM **11) Maram Albakri** (University of Windsor)
Investigating Circadian Rhythms in Human Intestinal Organoids
- 11:35 – 11:40 PM **12) Mahgol Darvish** (Concordia)
Accelerated re-entrainment to changes of the light-dark cycle in androgen receptor mutant mice

	<p>Symposium 10 STUDENTS Group C <i>Students: Please load your slides on the computer during the breakfast time</i></p> <p>Session Chairs / Judges: Brian Altman; Peter Backx; Petros Papagerakis; Diane Boivin; Rae Silver</p> <p>Speakers – 10-minute talks:</p> <p>1) Vina Li (Queens University) <i>Contribution of circadian rhythms to experimental autoimmune encephalomyelitis</i></p> <p>10:00 – 10:10 AM</p> <p>2) Romina Lopez Urbina (University of Montreal) <i>Circadian locomotor activity and responses to light in mice lacking Neuroligin-1 or Neuroligin-2</i></p> <p>10:10 – 10:20 AM</p> <p>3) Renée Gorman (York University) <i>The Effects of Daily Exercise Duration on Cardiac Responses and Atrial Fibrillation</i></p> <p>10:20 – 10:30 AM</p> <p>4) Yifan Yao (Columbia) <i>SCN vasculature: on pathways for transportation of diffusible output signals</i></p> <p>10:30 – 11:40 AM</p> <p>5) Philippe Boudreau (McGill University) <i>Sex differences in alertness levels of police officers working shifts</i></p> <p>10:40 – 10:50 AM</p> <p>6) Shahd Haddad (University of Windsor) <i>Circadian Control of a Time-Dependent Damage Response in Drosophila Melanogaster</i></p> <p>10:50 – 11:00 PM</p> <p>7) Eli Moser (McGill University) <i>The Metabolic Impacts of a Simulated Night Shift Protocol</i></p> <p>11:00 – 11:10 PM</p> <p>8) Mahtab Moshirpour (University of Calgary) <i>Orexinergic Activation of the Intergeniculate Leaflet in Nonphotic Entrainment</i></p> <p>11:10 – 11:20 PM</p> <p>Speakers – 5-minute short talks:</p> <p>9) Sarah Ferraro (Harvard University) <i>Circadian Biology of EHMT1 and Sleep-associated Neurodevelopmental Collapse in Kleefstra Syndrome</i></p> <p>11:20 – 11:25 PM</p> <p>10) Jessie MacDonald (University of Windsor) <i>Time-restricted feeding improves daily behavioural rhythms during colitis</i></p> <p>11:25 – 11:30 PM</p> <p>11) Hailey Gowdy (Queens University) <i>CircaHealth: examining the circadian control of biopsychosocial factors in chronic pain</i></p> <p>11:30 – 11:35 PM</p> <p>12) Hao Lin (University of Minnesota) <i>Circadian activities of the mTORC1 effector S6 kinases in the mouse brain contribute to diurnal rhythms of cognition</i></p> <p>11:35 – 11:40 PM</p>	Roz 106
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11:45 – 1:00

Lunch Break with Shiftworking Symposium

Creelman
Hall

Session Chairs

Tami Martino (University of Guelph);
Lorrie Kirshenbaum (University of Manitoba)
Philippe Boudreau (McGill University)

Panelists (to be confirmed)

Diane Boivin (McGill University)
Satchidananda Panda (Salk Institute)
Frank Scheer (Harvard)
Martin Young (University of Alabama at Birmingham)
Diana McMillan (University of Manitoba)
Ralph Mistlberger (Simon Fraser University)
Mary Harrington (Smith College)

General Questions (to be addressed by panel)

- In-vitro: How can we use cell culture to study circadian desynchrony?
- Small Animal Models: What are the most common “shift work” or “jet-lag” scenarios, and what is the science behind the desynchrony they cause?
- Humans: What are the key questions we should be addressing and how?

Questions from conference attendee’s

Communications Biology – Launch of Circadian/Shiftwork
Special papers

	<p>Symposium 11</p> <p>Session Chairs Ruifeng (Ray) Cao (University of Minnesota); Giannina Descalzi (University of Guelph); Molly Crandall (University of Manitoba)</p> <p>Speakers 1) Silvana Papagerakis (University of Saskatchewan) <i>Impact of circadian disruption due to lifestyle changes in rheumatoid arthritis</i></p> <p>2) Ilia Karatsoreous (University of Massachusetts Amherst) <i>Biological time as a critical modulator of immune responses</i></p> <p>3) Phillip Karpowicz (Windsor University) <i>Circadian rhythms in the intestine: insight from flies and mice</i></p> <p>4) Joshua Krupp (University of Toronto Mississauga) <i>cry-dependent and -independent pathways are required for photoentrainment of a peripheral clock in D. melanogaster</i></p> <p>5) Inna Rabinovich-Nikitin (University of Manitoba) <i>Interplay between clock genes and autophagy pathways in the heart</i></p>	Roz 105
1:15 – 1:35 PM		
1:35 – 1:55PM		
1:55 – 2:15 PM		
2:15 – 2:35 PM		
2:35 – 2:55 PM		

	<p>Symposium 12</p> <p>Session Chairs Éric Paquet (Université Laval); Diana McMillan (University of Manitoba); Lorrie Kirshenbaum (University of Manitoba); Vania Carmona Alcocer (University of Windsor)</p> <p>Speakers 1) Kai-Florian Storch (McGill University) <i>Towards the neural substrate of infradian rhythms</i></p> <p>2) Ralph Mistlberger (Simon Fraser University) <i>Behavioural adaptations to daily feeding schedules</i></p> <p>3) Martin Young (University of Birmingham at Alabama) <i>The cardiomyocyte circadian clock: what does it do?</i></p> <p>4) Philip Millar (University of Guelph) <i>Morning and evening high intensity interval exercise on blood pressure in males and females</i></p>	Roz 102
1:15 – 1:35 PM		
1:40– 2:00PM		
2:00 – 2:20 PM		
2:25 – 2:45 PM		
2:50 – 3:00 PM	Coffee Break	Atrium

<p>3:00– 3:45 PM</p>	<p><u>Symposium 13</u></p> <p><u>Session Chairs</u> Tami Martino (University of Guelph) Deniz Top (Dalhousie)</p> <p><u>Speaker</u></p> <p>Frank Scheer – Nicholas Mrosovsky Lecture (Professor of Medicine, Harvard Medical School (HMS) Director, Medical Chronobiology Program, Brigham and Women’s Hospital (BWH))</p> <p><i>It’s about time to eat your heart out! The human circadian system and meal timing impact cardiometabolic health</i></p>	<p>Roz 103</p>
<p>3:45 – 4:15 PM</p>	<p>CSC – Annual General Meeting – All attendee’s invited All CSC members encouraged to attend for quorum</p>	<p>Roz 103</p>
<p>4:15 – 4:25 PM</p> <p>4:25 – 4:45 PM</p> <p>4:45 – 5:05 PM</p> <p>5:05 – 5:25 PM</p>	<p>Symposium 14 - The Final Lectures</p> <p><u>Session Chairs</u> Nader Ghasemlou (Queens University) Ilia Karatsoreos (University of Massachusetts Amherst) Hao Lin (University of Minnesota)</p> <p><u>Speakers</u></p> <p>1) Diane Boivin (McGill University) <i>Sex matters in rhythms</i></p> <p>2) Patricia Lakin-Thomas (York University) <i>The TOR (Target of Rapamycin) pathway and circadian rhythmicity in neurospora</i></p> <p>3) Rae Silver (Columbia University) <i>Circadian rhythms in SCN outputs contribute to understanding diffusible signals in the brain</i></p> <p>4) Sabra Margaret Abbott (Northwestern University, Feinberg School of Medicine) <i>Practicing circadian medicine: from bench to bedside</i></p>	<p>Roz 103</p>

<p>5:30 – 5:40 PM</p>	<p>University of Guelph Bus loop – busses waiting to take attendees to Dinner</p>	<p>UofG Bus Loop to Quebec/Wyndham stop</p>
<p>6:00 – 8:00 PM</p>	<p>Dinner</p> <p><i>Transportation to dinner: Busses will be waiting at the UofG Bus Loop and will drop conference attendee's off at Quebec/Wyndham streets (2-minute walk to restaurant)</i></p>	<p>Mijidaa Restaurant</p>
<p>8:00 PM - 12:00 AM</p>	<p>Networking & Social Event</p> <p><i>Walk from Mijidaa Restaurant over to the Red Brick Café (2-minute walk)</i></p> <p>Trainee Awards Presentations</p> <p>Musicians - Kent MacMillan Trio</p>	<p>Red Brick Cafe</p>
<p>9:30 PM – 12:10 AM</p>	<p><i>Transportation back: Busses will be at Quebec/Wyndham starting at 9:30 PM and will shuttle loop back to the Delta Hotel and the University of Guelph residences every approx. 30 minutes between 9:30 PM and 12:00 PM</i></p>	<p>Quebec/Wyndham drop-off spot is the pick up spot.</p>