Physiology
UNIVERSITY OF TORONTO

PhysioLINK

April 7, 2021

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MESSAGE FROM THE CHAIR

I hope this message finds everyone well. This is an exciting month for the Physiology Department as we gear up across the university, the Toronto research community, and the country to celebrate the 100th anniversary of the discovery of insulin. This is an opportunity for us to all share in the sense of pride that comes with being part of such a storied and important department in the history of science and medicine. I look forward to interacting with everyone at the commemorative scientific and public-facing events over the coming weeks. Stay tuned for information about our own departmental insulin 100 celebrations planned for later in the year.

Thanks everyone for your continued efforts to keep us healthy and safe.

Scott P. Heximer, PhD
Ernest B. and Leonard B. Smith Chair,
Department of Physiology

PHYSIOLOGY FACULTY & ALUM FEATURED - 100 Lives of Insulin Initiative

Mar 29, 2021

Professor Patricia Brubaker and recent alumna, **Dr. Krishana Sankar** are both featured as part of the 100 Lives of Insulin project. The project is part of the Insulin to Innovation initiative, a series of events celebrating the 100th anniversary of the discovery of Insulin organized by a consortium of charitable organizations.

Over the course of the year, Insulin to Innovation will share 100 stories of "how the discovery of insulin has affected people—and how it continues to drive change."

In her story, Professor Brubaker shares:

"My diagnosis with diabetes altered the trajectory of my entire career. As a graduate student, I had been interested in studying the endocrine stress system, but this changed after my diagnosis to a focus on diabetes and metabolism...

"I have also devoted a significant amount of time to educating both physicians and the public regarding what I refer to my own healthy lifestyle as a 'go-anywhere, do-anything diabetic.'"

Physiology Alum, Dr. Krishana Sankar

Dr. Sankar's story highlights her work on islet transplantation that she did in Professor Jonathan Rocheleau's lab as well as her work as a science communicator:

"[Her] research combined biology and engineering techniques to ensure the blood vessels of donated islets last long enough to connect to patients - vital for a successful transplant...

"Dr. Sankar uses social media to relay important messages to the public. She has been educating the public on diabetes research, dispelling myths surrounding diabetes, and raises awareness about the condition."

The 100 Lives project also profiles many other fascinating figures in the story of Insulin, including Professors Collip, MacLeod, Banting and Best who of course famously discovered insulin here in the Department of Physiology. Learn more about how we're celebrating right here.

THE DISCOVERY OF INSULIN AT U of T

An Exhibition in Celebration of the 100th Anniversary

In celebration of the centennial anniversary of the discovery of insulin at the University of Toronto, the Thomas Fisher Rare Book Library has mounted this online exhibition featuring

highlights from the Library's collection of original documents relating to the history of insulin research.

Photograph of C. H. Best and F. G. Banting ca. 1924," *Digitus - Online Exhibitions from the Thomas Fisher Rare Book Library*, accessed March 16, 2021, https://fisherdigitus.library.utoronto.ca/document/7268

PHYSIOLOGY SEMINAR SERIES

Please join us tomorrow!

"Non-Alcoholic Steatohepatitis: Liver Manifestation of Metabolic Disease"

~ Eligible for PSL1000H/PSL2000H/PSL4000Y Course Seminar Attendance ~

When: April 8, 2021 04:00 PM Eastern Time (US and Canada)

Speaker: Mamatha Bhat, MD, PhD, FRCPC

Staff Hepatologist and Clinician-Scientist, Multiorgan Transplant Program, University Health Network; Assistant Professor, Division of Gastroenterology & Hepatology, University Health Network and University of Toronto; Ajmera Transplant Program

Lab webpage (for further info):
https://www.uhnresearch.ca/researcher/mamatha-bhat

Join Zoom Webinar:
https://zoom.us/j/93385820955

Hosted by the Herb Gaisano Lab

Upcoming PSL Seminars

1. "Thalamocortical architectures for cognitive control and flexibility"

PHYSIOLOGY SEMINAR SERIES / CPIN EMERGING LEADERS IN NEUROSCIENCE

~ Eligible for PSL1000H/PSL2000H/PSL4000Y Course Seminar Attendance ~

When: Apr 15, 2021 04:00 PM Eastern Time (US and Canada)

Speaker: Michael Halassa , MD, PhD

Associate Investigator, McGovern Institute for Brain Research, Class of 1958 Career Development Professor, Massachusetts Institute of Technology Department of Brain and Cognitive Sciences

Lab webpage (for further info): https://mcgovern.mit.edu/profile/michael-halassa/

Join Zoom Webinar:
https://zoom.us/j/93651302866

Hosted by the Bill Hutchison Lab

2. "Circadian Medicine. Rhythms in the Neuro, Endocrine, and Immune Systems & Impact on Cardiovascular Health"

PHYSIOLOGY SEMINAR SERIES / CPIN DISTINGUISHED LECTURE

~ Eligible for PSL1000H/PSL2000H/PSL4000Y Course Seminar Attendance ~

When: Apr 22, 2021 04:00 PM Eastern Time (US and Canada)

Speaker: Tami A. Martino, PhD

Distinguished Chair in Molecular Cardiovascular Research, University of Guelph
Director, Centre for Cardiovascular Investigations (CCVI)
Career Investigator Heart & Stroke Foundation: Circadian Medicine & Heart Health
Professor, Biomedical Sciences, University of Guelph
Lab webpage (for further info):
https://ovc.uoguelph.ca/biomedical-sciences/people/faculty/Tami-Martino

Join Zoom Webinar:
https://zoom.us/j/92502191889

Hosted by the Richard Horner Lab

3. “Genetics of Obesity: Can an old dog teach us new tricks?”

PHYSIOLOGY AND CITY WIDE ENDOCRINE ROUNDS JOINT SEMINAR

~ Eligible for PSL1000H/PSL2000H/PSL4000Y Course Seminar Attendance ~

When: April 23, 2021 08:00 AM Eastern Time (US and Canada)

Speaker: Giles Yeo, PhD

Principal Research Associate, Programme Leader at the MRC Metabolic Diseases
Institute of Metabolic Science
University of Cambridge, UK
Member of the Order of the British Empire
Lab webpage (for further info):
https://www.mrl.ims.cam.ac.uk/research/principal-investigators/giles-yeo/

https://www.theguardian.com/food/2019/jan/20/giles-yeo-gene-eating-obesity-interview-fad-diets-pork-scratchings

Zoom Link: TBA

Hosted by the Denise Belsham Lab

4. “TBA”

PHYSIOLOGY SEMINAR SERIES

~ Eligible for PSL1000H/PSL2000H/PSL4000Y Course Seminar Attendance ~

When: May 6, 2021 04:00 PM Eastern Time (US and Canada)

Speaker: Kelsey McLaughlin, PhD

Lead Scientist at Conscious Pregnancy & Scientific Associate at Sinai Health System, Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital Toronto

Webpage (for further info):
https://www.sinaihealth.ca/news/clinical-research-team-advances-obstetric-care-with-new-blood-test/

Join Zoom Webinar:
https://zoom.us/j/94540765688

Hosted by the John Kingdom Lab

5. “Control of Synaptic Plasticity by Calcium Dynamics: Role of Inhibition and Spatial Input Patterns”

PHYSIOLOGY SEMINAR SERIES

~ Eligible for PSL1000H/PSL2000H/PSL4000Y Course Seminar Attendance ~

When: May 20, 2021 04:00 PM Eastern Time (US and Canada)

Speaker: Kim “Avrama” Blackwell, VMD, PhD

Professor, Molecular Neuroscience Department
Department of Bioengineering, Volgenau School of Engineering,
George Mason University, Virginia

Lab webpage(for further info):
https://krasnow1.gmu.edu/CENlab/index.html

Join Zoom Webinar:
https://zoom.us/j/93357801990

Hosted by the Frances Skinner Lab

HONORS & AWARDS

Congratulations to following faculty members on their recent successes in the **CIHR Fall 2020 Project Grant competition**:

Levitan Robert D – Centre for Addiction and Mental Health
Matthews, Stephen G
Using Precision Medicine to Study Maternal Inflammation in Pregnancy as a Cause of Early Childhood Depression
$768,825, 5 yrs

Palmert Mark R - Hospital for Sick Children (Toronto)
Nieman, Brian J
Using imaging to understand how parental diet programs offspring brain structure
$843,730, 5 yrs

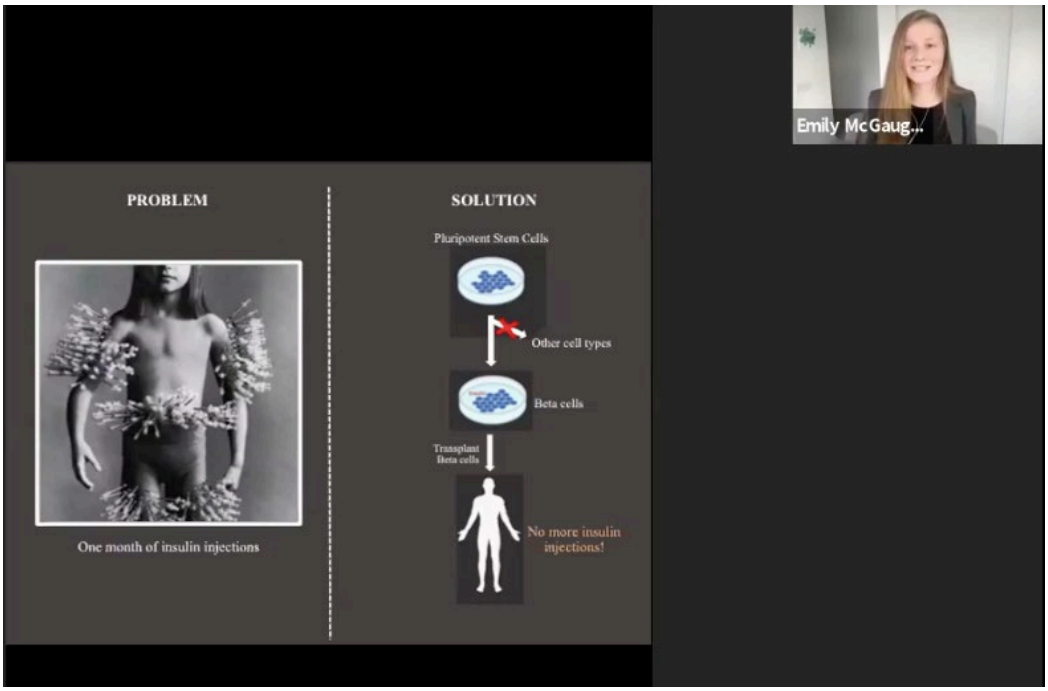
Congratulations to **Dr. Evelyn Lambe** on being awarded a **Pathway Grant** in the competition as her CIHR Project Grant submission ranked within the top three unfunded proposals in the Fall 2020 competition.

CONGRATULATIONS TO OUR TRAINEES

Many congratulations to the trainees below on the successful completion of their Graduate Programs. We wish them continued success in the next stage of their careers!

Student	Program	Supervisor
Alexandra Chatzikalymniou	PhD	F Skinner
Yilin Tian	MSc	N Rosenblum
Eily Shaw	MSc	S Bolz

Emily McGaugh (Nostro lab) wins People's Choice in 3MT Competition!



Emily McGaugh presenting her thesis in three minutes.

Congratulations to **Emily McGaugh**, a PhD candidate in Professor Cristina Nostro's lab, who won the People's Choice Award at the 2021 U of T Three Minute Thesis (3MT®) finals on Wednesday March 31st.

The 3MT competition is open to all graduate students enrolled in Canadian universities with competitions held at local, provincial, and national levels. Participants have three minutes or less to present their research to a panel of non-specialist judges. The challenge is to present complex research information in an engaging, accessible, and compelling way.

In three minutes, McGaugh was able to explain the work she does in her lab toward creating beta-like cells from pluripotent stem cells -- cells that have the ability to undergo self-renewal and give rise to all cells of the tissues of the body.

Keep reading!

NEW Faculty Member

We are delighted to welcome **Dr. Milad Lankarany** as Physiology's newest status-only faculty member effective February 1st, 2021!

Dr. Lankarany is a Scientist at the Krembil Brain Institute – UHN, an Affiliate Scientist at KITE-UHN, and an Assistant Professor at the Institute of Biomedical Engineering & Department of Physiology, University of Toronto. He is an early career investigator with a unique combination of knowledge: he has a Ph.D. in electrical engineering and expertise in theoretical and computational neuroscience, as well as advanced signal processing and information theory. His work has contributed to various publications in peer-reviewed journals (e.g, *PNAS*, *Brain Stimulation*, *Cerebral Cortex*, *Frontiers in Computational Neuroscience* and *Neurocomputing*). Dr. Lankarany has significant experience in Computational Neuroscience and developing modern Machine Learning algorithms to infer the hidden states and parameters of neuronal and biological models using limited observations. He has 10+ years of experience working with digital and analog circuits.

Stay safe everyone!

Please continue to visit the central COVID-19 hub for the U of T community