



SEPTEMBER 12, 2017

INSIDE THIS ISSUE

- Message from the Chair
- Honours & Awards
- Physiology Seminar Series
- BRAIN Day 2017 – Mark your calendars
- News from the Vice-Chair, Research
- New Faculty Members
- Senior College
- News From GASP
- Faculty In the News

MESSAGE FROM THE CHAIR



To all our students, faculty, and staff, a warm welcome to the start of the new academic year. I hope everyone had a great summer.

Last week, the department hosted a very successful **Graduate Student Orientation**. Please join me in giving a warm welcome to the 30 new Graduate Students (PhD, MSc) joining the Department to pursue their graduate studies. I would like to thank our Graduate Coordinators, Dr. Douglas Tweed and Dr. Zhong-Ping Feng for spearheading the day, and all of those involved in making the orientation a great success. A special thank you to Melanie Markovic (GASP President), Scott Frendo-Cumbo (VP) and Vivian Szeto (VP). Together with their GASP team they organized a fantastic **BBQ at Christie Pitts**. Despite the on-and-off rainfall, everyone had a lot of fun and it was a great opportunity to meet new and old classmates. Stay tuned for bbq pictures in the next issue of PhysioLINK.

A reminder that this year's **Departmental Retreat** will be held at The Old Mill on Friday December 8th, 2017. I am looking forward to an excellent faculty turn-out and my office will be sending out more details in the coming months.

I look very much forward to another exciting year in Physiology!

Graham L. Collingridge, FRS, FMedSci, FRSB, FBPhS
Ernest B. and Leonard B. Smith Chair
Department of Physiology

HONOURS & AWARDS



Congratulations to **Ursula Nosi** (PhD candidate, Cox lab) on being nominated to attend this year's Canadian Student Health Research forum in Winnipeg (June 6-9), where she won an Award of Excellence at the CIHR national student research poster competition

Photo: Dr. Alysha Crocker, Sr. Advisor, Science policy, CIHR presenting the award.



Congratulations to **Nikhil Mistry** on winning the Richard Knill Award for the top scientific presentation at the annual meeting of the Canadian Anesthesiologists' Society (June 26, 2017) this year for his research entitled "Moderate Anemia is Associated with Renal Tissue Hypoxia and Increased Cerebrovascular Reactivity in Mice."

Nikhil completed this research as an MSc student within the Department of Physiology under the co-supervision of Dr. G. Hare and Dr. C. David Mazer. His research demonstrated that moderate degrees of anemia are associated with increased hypoxia signaling in the brain, kidney and liver. These outcomes are of translational significance as comparable degrees of anemia have been associated with acute renal injury and increased mortality in perioperative patients.

PHYSIOLOGY SEMINAR SERIES

Special Seminar, Tuesday September 19th at 11 a.m.

~ Eligible for PSL1000H/PSL2000H Course Seminar Attendance ~

Department of Physiology



Special Seminar

Victor KH Han, MD

Departments of Biochemistry,
Paediatrics and Anatomy and
Cell Biology, Children's Health
Research Institute, and
Lawson Health Research
Institute, Western University

The Role of IGF System in Fetal Growth: Paracrine or Endocrine?

Tuesday, September 19, 2017

11:00 a.m.

Medical Sciences Building

1 King's College Circle

Room 3227



Physiology
UNIVERSITY OF TORONTO

*****Eligible for the 1000/2000 Seminars In Physiology Course*****

BRAIN DAY 2017 – Mark your calendars!

Neuroscience Platform

PHYSIOLOGY BRAIN DAY 2017

Awards given for best oral & poster presentations

Wednesday, November 8, 2017

Poster Presentations and

Oral Presentations

Medical Sciences Building, Room 2170

Stone Lobby

12:00 - 1:00 p.m. - Lunch Reception

Call for abstracts from Principal Investigators, Post-Doctoral Fellows,
Graduate Students & Other Trainees

Any abstract submission from recent conferences is acceptable.
New abstracts are welcome!

SUBMISSION DEADLINE: October 27, 2017

Please email your submission to eva.eng@utoronto.ca



Physiology
UNIVERSITY OF TORONTO

NEWS FROM THE VICE-CHAIR, RESEARCH

Four Physiology Faculty Members are Awarded CIHR Foundation Grants in the Latest Competition.



The results from the 2016-2017 Foundation Grant Competition were released in July. We are pleased to announce that four faculty members in the Department of Physiology were among 76 successful applicants from across Canada who were awarded Foundation Grants in this cycle. The department extends its congratulations to the following faculty for their noteworthy achievement: **Graham Collingridge**, "Synaptic alterations underlying major brain disorders" (\$5,554,479/ 7 years); **Beverly Orser**, "Targeting GABA-A receptors to mitigate postanesthetic cognitive deficits" (\$3,579,083/ 7 years); **Michael Salter**, "Targeting neuronal and glial signaling in chronic pain" (\$3,654,374/ 7 years); and **Mei Zhen**, "Investigating Mechanisms for Synapse and Circuit Dynamics using the C. elegans Model" (\$3,013,515/ 7 years). With this, another round of success at the Tri-Council funding level, the department maintains its status within the University as a leader in research and scholarship.

Scott P. Heximer, Ph.D.

NEW FACULTY MEMBERS

We are delighted to welcome and introduce the following two faculty members to Physiology.



Dr. Helen Miliotis joined the Department on August 1st, 2017 as Assistant Professor for the **Graduate Professional Development Program**. Helen will be launching new courses related to career training for our graduate students. After completing her PhD in the Institute of Medical Science, Helen studied student development theory at the Ontario Institute for Studies in Education where she earned a certificate in Leadership in Higher Education. Helen has taught undergraduate physiology courses at both Trent University and the University of Toronto, and she is now expanding her teaching to our graduate students to complement their scientific training with professional skills to be successful after graduation. The goal of these courses is to empower graduate students by expanding their professional network and develop their core competencies in order for them to be market-ready for careers both within and outside of academia.



Dr. Mike Seed has been appointed as a status-only faculty member at the rank of Assistant Professor, beginning on September 1st. Mike Seed is the Division Head of Cardiology at the Hospital for Sick Children in Toronto and an Associate Professor of Paediatrics, Medical Imaging and Obstetrics and Gynecology at the University of Toronto. His research has involved collaborations with imaging science, reproductive and neuroscience and child development and has focused on the relationship between cardiovascular physiology and brain development in the fetus and newborn, particularly in the setting of congenital heart disease and intrauterine growth restriction.

The goal of this research is to develop neuroprotective strategies to mitigate against the adverse effects of abnormal perinatal cardiovascular physiology on the developing brain.

SENIOR COLLEGE

Incoming Principal of Senior College at the University of Toronto



Harold Atwood, Professor Emeritus in the Department of Physiology, was elected and installed as the second Principal of Senior College at the University of Toronto in June, 2017. He takes the place of the founding Principal, Peter Russell (Political Science), who stepped down after serving as Principal since 2009.

Senior College was founded by a group of retired faculty and librarians at the University of Toronto, and is multi-disciplinary. Recently, membership was extended to all retiring faculty members, who have the option of becoming Fellows (including membership in the Faculty Club, where many of the events take place) if they wish to contribute to the programs and direction of the College. Spouses of retired faculty members can join as External Fellows, and a number of them regularly attend the weekly meetings. Information about the College and its programs is available on its website: seniorcollege.utoronto.ca.

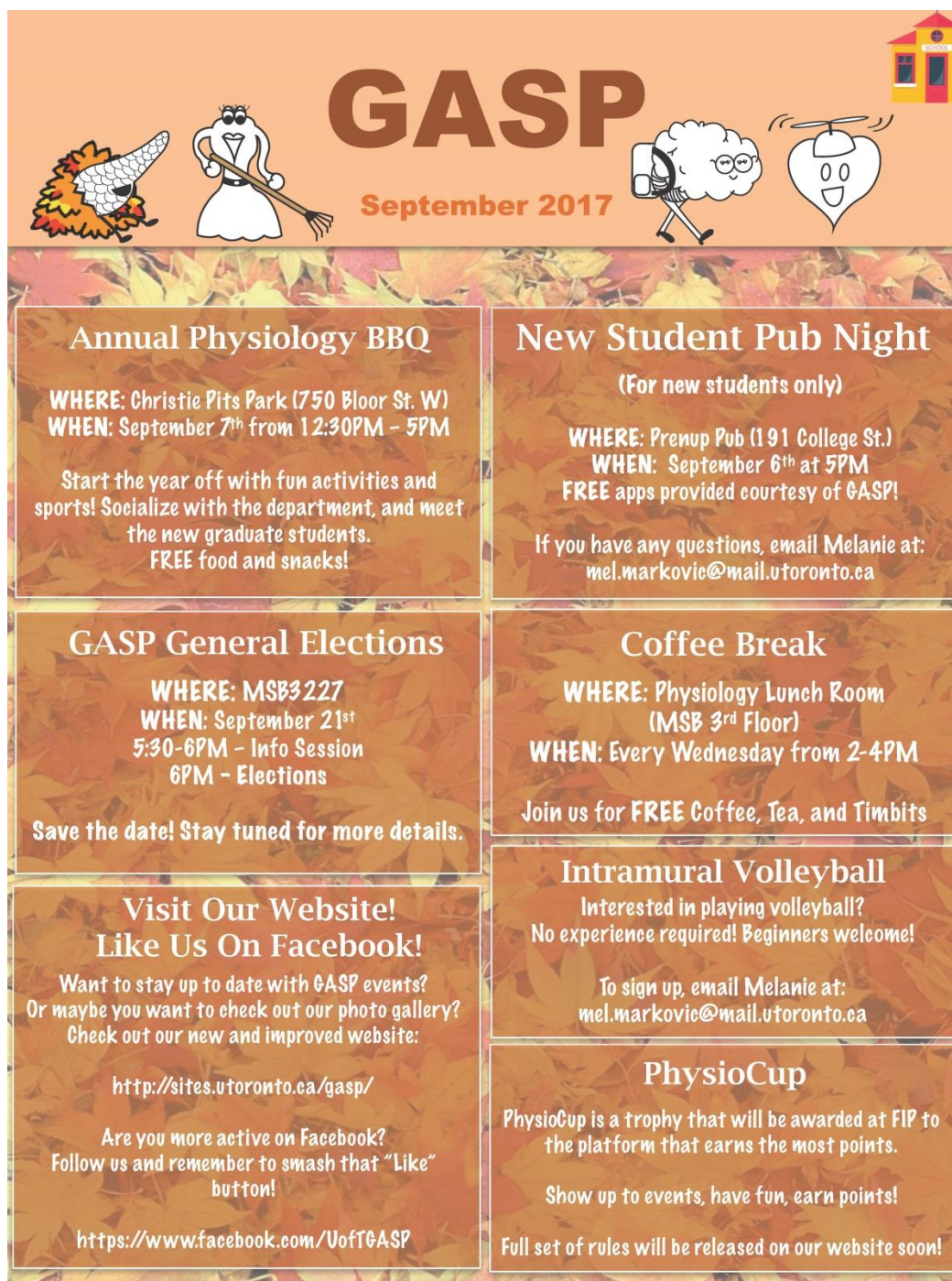
Senior College has the interests of retirees in mind and aims to contribute to the educational, social, and cultural values of the University community, and where possible to the community at large. (In passing, note that all current faculty members will eventually become retirees!)

[Keep reading to learn about the College's objectives, planned seminars and field trips.....](#)

NEWS FROM GASP

GASP (Graduate Association for Students in Physiology) would like to welcome all new students to the Department!

Please make sure you check out our FB page (<https://www.facebook.com/UofTGASP/>) and website (<http://sites.utoronto.ca/gasp/index.html>) to stay up-to-date with all GASP activities. We look forward to seeing everyone at our events.



GASP
September 2017

Annual Physiology BBQ
WHERE: Christie Pits Park (750 Bloor St. W)
WHEN: September 7th from 12:30PM – 5PM
Start the year off with fun activities and sports! Socialize with the department, and meet the new graduate students.
FREE food and snacks!

New Student Pub Night
(For new students only)
WHERE: Prenup Pub (191 College St.)
WHEN: September 6th at 5PM
FREE apps provided courtesy of GASP!
If you have any questions, email Melanie at: mel.markovic@mail.utoronto.ca

GASP General Elections
WHERE: MSB3227
WHEN: September 21st
5:30-6PM – Info Session
6PM – Elections
Save the date! Stay tuned for more details.

Coffee Break
WHERE: Physiology Lunch Room (MSB 3rd Floor)
WHEN: Every Wednesday from 2-4PM
Join us for **FREE** Coffee, Tea, and Timbits

Intramural Volleyball
Interested in playing volleyball?
No experience required! Beginners welcome!
To sign up, email Melanie at: mel.markovic@mail.utoronto.ca

PhysioCup
PhysioCup is a trophy that will be awarded at FIP to the platform that earns the most points.
Show up to events, have fun, earn points!
Full set of rules will be released on our website soon!


Visit Our Website!
Like Us On Facebook!
Want to stay up to date with GASP events?
Or maybe you want to check out our photo gallery?
Check out our new and improved website:
<http://sites.utoronto.ca/gasp/>
Are you more active on Facebook?
Follow us and remember to smash that “Like” button!
<https://www.facebook.com/UofTGASP>

PhysioCup Presented by GASP

Awarded to those whose efforts and dedication strengthen the Department of Physiology Earn points for participating in GASP-run events. Each points goes towards your platform!

Check our [website](#) for monthly standings.

Winning platform will be announced at FIP.



PhysioCup
Presented by GASP

Awarded to those whose efforts and dedication strengthen the Department of Physiology

Earn points for your platform by participating in GASP events.
The platform with the most points is awarded the trophy at FIP, and bragging rights for the year!

Possible ways to earn points:

Activity	Points
General participation	5
Winning an activity	5
Attending Elections	2
Liking our FB posts (within a week)	1
Sharing our FB posts (within a week)	2
Being on the FIP organizing committee	5
Volunteering for academic activities	10+

Please check our website for a complete list of ways to earn points and to find out how your platform is doing (<http://sites.utoronto.ca/gasp/index.html>)

Questions? mel.markovic@mail.utoronto.ca

FACULTY IN THE NEWS



Min Zhuo is *IT*

By **KRISTEN THOMPSON** Special to the Star
Thu., Sept. 7, 2017

Thinking of watching *It* with your kids? Research looks into childhood trauma caused by horror movies.

Twenty-seven years after literature's most terrifying clown made his TV debut, Pennywise is back, this time on the big screen. And many of us who had no business watching the world's scariest miniseries as kids in 1990 now have seeming heart attacks whenever the trailer for the new movie comes on.

It's probably safe to say that thousands of 30-somethings who watched *Stephen King's It* as children have grown up traumatized not only of the story — about a child-killing demon that takes the form of a clown named Pennywise — but of clowns in general. And maybe even storm drains. I can't be the only one afraid of storm drains.

According **Min Zhuo**, a professor of physiology at the University of Toronto who specializes in fear and anxiety, this isn't hyperbole.

That's because watching a horror movie really can cause trauma, and the effects of that trauma — especially when experienced in childhood — can last into adulthood.

"Younger brains are more plastic, thus the negative impact (of watching something scary) will be more dramatic"

Keep Reading.....

Could Running When Young Help Protect the Aging Brain?

Aug 14, 2017

Author:

Heidi Singer

University of Toronto researchers have discovered that rats who run a great deal in youth have better memories in old age, a finding that could shed light on why exercise – both physical and cognitive – seems to protect against Alzheimer's disease in people.



Left to right: DR. OLGA SHEVTSOVA, PROF. MARTIN WOJTOWICZ, YAO-FANG TAN

"We found that for these rats, exercise was a very strong stimulus for the formation of new neurons in the adult brain, or neurogenesis," says Professor **Martin Wojtowicz**, a neuroscience researcher in the Department of Physiology. "Most of our cells are formed in the fetus. The running benefit occurred with a small group of adult-born cells. The more we understand why an intervention works on memory, whether it's crossword puzzles, exercise or learning a language, the closer we get to an effective treatment for dementia and Alzheimer's."

Wojtowicz published his findings August 14 in the journal eNeuro, along with postdoctoral fellows **Olga Shevtsova** and **Christina Merkely**, **Gordon Winocur**, a professor of geriatric psychiatry at U of T, and colleague **Yao-Fang Tan**.

Keep reading.....

We want to hear about the great things happening in Physiology.

Please share your accomplishments, awards...
Send news items to the Chair's Office
c/o e.katsoulakos@utoronto.ca