

## Summer 2015 Training Activities in the Department of Physiology:

**Never a dull moment.**

### **Unique Physiology field course gives students hands on comparative physiology opportunity in Riviera Maya, Mexico.**

Every year for the past 5 years, after final exams in April, an enthusiastic group of undergraduate students participate in a very unique field course opportunity offered by the Department of Physiology (PSL 379) to see first-hand the importance of physiology to how various species adapt to their environment and get a half credit in the process. This is co-ordinated through the Oceanographic Environmental Research Society, who provides all the logistics for this opportunity. The location is in the most beautiful of settings in the Riviera Maya, a nature reserve in Mexico, where the students spend time having personal interactions with a variety of marine mammal species, including sea lions, manatee and dolphins. Students not only conduct their own physiology-based research but also get to spend time in the water with these amazing creatures and come away with a new found appreciation of how the facts learned in the classroom have relevance to daily life!

In early May 2015, we hosted the largest class ever, with 16 University of Toronto students from diverse backgrounds including physiology specialists as well as those from Human Biology and other departments within the Faculty of Arts and Science participating. Everyone took advantage of all this course has to offer and overcame their worries about being in the water with these large yet gentle creatures and it was hard to tell who was having more fun, the animals or the students. This is learning at its best both experiential and applied.

Dr Carin Wittnich, Course Director, PSL 379.



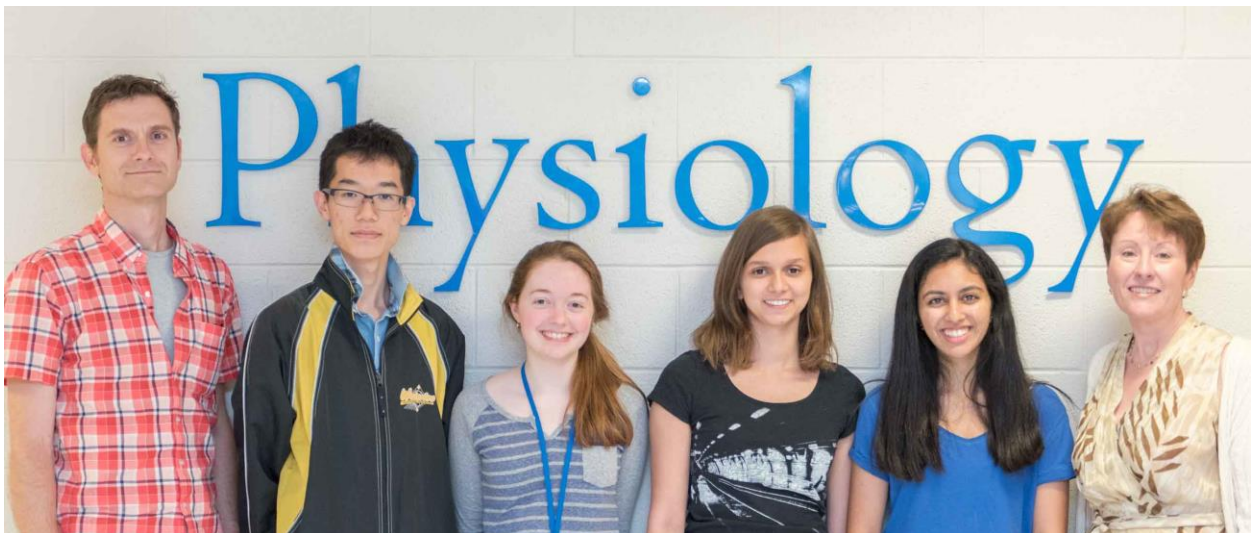
**Photo: PSL 379 - Class of 2015 with a gentle manatee! Course instructors Drs Carin Wittnich (far left front row) and Jim Goltz (far right back row).**

## **Research in the Medical Sciences: Three weeks for talented high school students in a scientist's lab at the University of Toronto.**

The research module is one of five unique medical science modules offered by the Faculty of Medicine Youth Summer Program (MED YSP). The three-week Research Module offers students the unique opportunity to experience firsthand what it is like to do research in a scientist's lab. It is open to students currently enrolled in grades 11 and 12. In this module, students will actively participate in research projects alongside a graduate student or researcher that will culminate in a poster presentation on MED YSP's Research Day.

Director: Chris Perumalla; MED YSP Coordinator: Artur Jakubowski; Research Module Co-Coordinators: Jastaranpreet Singh & Jabir Mohamed

In 2015, there are 18 students working in 7 different labs. In our Department of Physiology, Drs. Belsham and Cox have opened their lab to two high school students each.



**Photo: Dr. Cox and his two students, Yota and Megan (left);  
Dr. Belsham and her two students, Amna and Milena (right).**

**The UROP in the Department of Physiology is always a popular choice for our undergraduate students.**

In accordance with its mandate and with the aim to foster advanced research experiences for undergraduate students at the University of Toronto, an Undergraduate Research Opportunity Program (UROP) was established in 1973. This year the Department of Physiology has a record number of UROP Awardees working in 26 different labs. The experience is invaluable to allow students to get up close and personal with the happenings in a functioning biomedical research laboratory. This is often a stepping-stone towards the Research Course in Physiology, followed by a career in research. We hope to see all of our supervisors at the UROP Research Day on August 5, 2015. This year Dr. Steve Prescott has taken over as Director of the UROP Summer Seminar Series, and has done a superb job leading the group.



**Photo: The 2015 UROP Awardees attending one of their seminars in the Department of Physiology on July 22, 2015.**



## **Innovative High School Outreach Program: Delights students with Hands-on lab experience.**

Bright Lights in the Lab by Firefly Foundation is a unique educational outreach program that aims to bring hands-on research experience to students with a passion for neuroscience. This 2 weeks program provides the opportunity for students to develop their scientific curiosity and creativity, in the hopes of inspiring the next generation of neuroscientists to find a cure for Alzheimer's Disease.

This year, 48 high school students from grade 7 to grade 12 participated the program, which was hosted at the University of Toronto Schools. During the 2 weeks of the program, the high school students learned about the brain and conducted their own original research projects under supervision of the teachers from the University of Toronto Schools, and graduate students/post-doctorate fellows from the University of Toronto. Nancy Dong (M.Sc. student, Feng lab) has been involved in teaching and organizing the program over the past four years. The Firefly Foundation launched the program in 2012 in collaboration with Dr. Zhong-Ping Feng, who strongly supports high school outreach programs, and also directs the High School Brain Bee in collaboration with the Firefly Foundation.



**Photo: On July 17, 2015, Physiology faculty members, graduate student and summer students attended the Bright Lights in the Lab Symposium at the University of Toronto Schools.**