FROM THE CHAIR

Congratulations to our October 2009 Graduates! The best to you in either graduate school or your career start. Keep in touch with us!

Welcome to all new incoming undergraduate and graduate students! You will be spending the next few years in one of the finest academic units in Canada. My door is almost always open, so stop by and introduce yourself.

We recently had two highly successful events: the Welcome Lunch/Toonies for Terry and the first annual Research Day. Both events were well attended.

Congratulations to the following students at Research Day: CORAL-ANN LEWIS for best presentation by a PhD student (CHARLES KRIEGER’S Lab), HEATHER MORE for best presentation by an MSc student (MAX DONELAN’S Lab), and MONA JALILI best presentation by an undergraduate student (STEVE ROBINOVITCH’S Lab). Special thanks to TOM CLAYDON for organizing this event.

Congratulations to MATT WHITE on his tenure and promotion to Associate Professor, and to MICHAEL WALSH and ANNE-KRISTINA ARNOLD on their appointments to Lecturer.

Our Department is now in the process of filling two faculty positions: one in Motor Systems Physiology (candidate seminars on Oct 13, 20, 27 & Nov 5) and the other in Cardiovascular Physiology.

Just having finished the 2009 Terry Fox run, I have a glowing sense of pride for our Department. Maybe it’s just lactic acid. But maybe it’s because we had the largest turnout for the run of all the units at SFU. Of course now I need to run extra laps, but it will be worth the pain if my challenge actually brought folks out of the woodwork to run and walk the course. Or at least register...

PETER RUBEN

CONGRATULATIONS OCTOBER 09 GRADS!

BSc
YUKI ABE
BREE BEVERIDGE
SUHKEEPR BRAR
CHRISTINA BROGAN
MICHELLE BURNHAM
KATIE BUSH
BETSY CHAN
JENNY CHENG
LIVIA CHOW

MSC THESIS
TYLER GREWAL
CHRISTINA HOLMES
SUNG-IM KANG
DONNY LEE
PRISCILLA LEE
WINNIE LEE
GLORIA MAK
CURTIS MANNING
JOHN MANNING
AMANDA McMURRAY
TOMMY MERTH (HONORS)
NATHANIAL MUNDY
VICTOR NG
RENE RUSSO
AARON VAN SLYKE
ANDREW WONG
ALEXANDRA WRIGHT
ALISHA ZACHARIAS

MSC COURSEWORK
BRETT HOLLOWELL

TERRY FOX DAY

CONGRATULATIONS KINESIOLOGY!

We won the #1 Team Challenge for largest team with 123 participants, AND #1 for team fundraising – we raised $1,766 of the $10,500 raised by SFU, AND we placed 2nd in the challenge for the most spirited team -- we almost made a clean sweep of the Team Challenge awards! There were 31 teams with a total of 750 participants. The top 6 were:

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Thank you to all Kinesiology students, faculty and staff who participated in the walk/run, who worked as volunteers at the event, and who donated money to the Terry Fox Foundation.

KING CHAO took pictures at the Terry Fox Day. View them at: http://www.fas.sfu.ca/kin/terryfox/2009/

Other good news! PETER RUBEN, Chair of our Dept, has to run 23 laps around the track because he promised to run one lap around the track for every Kinesiology team member over 100! 😊

It’s not too late to make a donation to the Terry Fox Foundation on behalf of the Kinesiology team. Go to the fundraising section of the SFU Terry Fox Day website at www.sfu.ca/terryfox/fundraising.html#pledgeteam Under title, “Register and Collect Pledges as a Team” follow the directions in Step #2. There is a link to the Terry Fox Foundation website. Our team is registered on the Terry Fox Foundation website with the name, “Kinesiology.” Select city “Burnaby - Kinesiology”. Select “Make a donation directly to this team.”

Well done everyone! CRAIG ASMUNDSON
Kinesiology Team Captain

Welcome Lunch / Toonie for Terry BBQ

Thank you to all who joined our Welcome Lunch / Toonie for Terry event on September 22nd. It was a huge success with one of our biggest turnouts ever! We raised a total of $355.96 from the BBQ with all proceeds going to the Terry Fox Foundation.

A special thank-you to the office staff, student association, and expert BBQers, DAN MARIGOLD, JAMES WAKELING and VAN TRUONG.

RESEARCH DAY

The 1st Annual Biomedical Physiology and Kinesiology Research Day took place on September 22nd, and was a huge hit! The event kicked-off by treating an audience of over 100 students, faculty and staff to an excellent series of research seminars from current graduate and postdoctoral trainees.

After refreshments, attendees were involved in a stimulating poster session with more than 40 presentations from our current graduate and undergraduate students involved in BPK research.

The day wrapped up with information sessions on how to write a successful external graduate award application and prizes for the best undergraduate (MONA JALILI), M.Sc. (HEATHER MORE) and Ph.D. (CORAL-ANN LEWIS) student presentation of the day. The event proved to be an exciting showcase of the depth and breadth of current BPK research, and created the opportunity for undergraduate students to learn more about the strength of current research within the department. Next year proves to be just as exciting – don’t miss out!

Tom Claydon

SFU Media Release: "Lungpacer on New Ventures top 10" (reprinted with permission below)
http://www.sfu.ca/pamr/media_releases/media_releases_archives/media_09220902.html

“A new therapeutic device that will accelerate and improve the recovery time of critically ill patients on mechanical ventilators is a top 10 finalist in New Ventures B.C.’s annual competition. The Lungpacer system was conceived and developed by SFU biomedical physiologist Andy Hoffer and is being commercialized via a new spin-off company, Lungpacer Medical Inc. The device is comprised of intravenously placed electrodes that work to rhythmically activate the diaphragm – a process called pacing – in patients who require a ventilator to survive.

“Pacing prevents or reverses the rapid diaphragm muscle-disuse atrophy that is a typical consequence of mechanical ventilation. Atrophy and weakness of the diaphragm are main reasons why many patients fail to wean from ventilators and must remain hospitalized, thus increasing their risk for catching hospital-borne infections and causing their hospitalization costs to escalate,” says Hoffer.

“Other diaphragm pacing systems are unsuitable for fragile intensive care unit (ICU) patients, since they require full anesthesia for permanent surgical attachment of...
electrodes to nerves or muscle,” Hoffer notes.

“Lungpacer’s disposable electrodes are temporarily introduced intravenously with only local anesthesia, and can be easily removed once the patient recovers the ability to breathe independently,” he explains. The minimally invasive Lungpacer system leads to faster patient recovery, shorter stays in intensive care, lower hospitalization costs and greater patient access to scarce mechanical ventilators.

“This new method to facilitate and accelerate patient weaning from mechanical ventilators will help cycle patients off ventilators much faster, allowing the existing complement of ventilators to serve many more patients, for example, if H1N1 or another pandemic surges,” says Hoffer.


**Miriam Rosin** has partnered with Kitty Corbett (Faculty of Applied Science) to develop a population-based initiative to reduce disparities with respect to oral cancer and oral health needs throughout BC. She received a CIHR Catalyst Grant in March 2009 to begin the process of assessing and planning interventions for four vulnerable communities: South Asian immigrants, the Vancouver Downtown Eastside, Aboriginal communities and groups who are in rural and remote regions of BC so are far from cancer control services.

An early offshoot of this CIHR award was the acceptance this month of a proposal submitted to the Provincial Health Service Authority (PHSA), Centres for Population and Public Health (CPPH). This award will fund the development, in partnership with urban and rural First Nations communities, of new strategies to reduce chronic disease through primordial and primary prevention, focusing on the use of an integrated risk factor approach that will target multiple diseases at the same time. This project will bring into partnership many of the institutes and centres of the PHSA (Centre for Aboriginal Health Centre for Child and Youth, Centre for Chronic Disease Prevention, BC Children’s, BC Renal Agency, Cardiac Services BC, BC Cancer Agency).

**Denise Laronde** (Miriam Rosin, Supervisor) received the CDHA’s Leading Poster Presentation Award (CIHR and Hu-Friedy) and the CHA’s Graduate Student Travel Bursary (CDHA, CIHR, GlaxoSmithKline Inc) for her presentation on the “Strengthening of Quality of Oral Cancer Screening,” at the North American Dental Hygiene Research Conference (NADHRC) in June 2009.

**Parveen Bawa and Curtis Manning** attended the Alberta Motor Control Meeting held in Jasper, September 24 to 26. Curtis presented (co-authors: C. Murnaghan, M. Burnham, T. Miller, P. Bawa) “Do Motoneurons get tired?” Parveen also presented a speech on her career accomplishments entitled, “Glad I switched to motor control.”

The CDSM (Chronic Disease Systems Modelling) Lab (Diane Finegood) congratulates Ozge Karanfil (PhD student) for her two year appointed term as Vice president for the Health Policy Special Interest Group of the International System Dynamics Society for 2009-10. She also attended several scientific meetings recently where she presented her work, including the First Annual Workshop on Dynamic Modeling for Health Policy: Obesity & Obesity Related Chronic Disease, where she presented A System Dynamics Model of Body Weight Regulation and Obesity.

Congratulations **Tommy Merth** (MSc student) for convocating this Fall. His honors thesis was titled Using Network Analysis Tools to Assess System Level Variables in the Obesity System Map. His ambitious plans to continue with research in the complexity of obesity resulted in his decision to immediately begin his graduate studies in Diane Finegood’s lab. In his first contest as a graduate student, he was the winner of the MoCSSy (Modelling of Complex Social Systems) poster competition held September 14 at the IRMACS Centre. The award was given for his work Using Network Analysis Tools to Assess System Level Variables in the Obesity System Map. Great job and welcome (back)!!

Congratulations to **Diane Finegood** of the Chronic Disease Systems Modelling (CDSM) Lab, who received a special national honour – the 2009 Distinguished Lecturer Award from the Canadian Obesity Network at the National Obesity Summit for her outstanding contributions to the obesity research community in Canada. Several lab members attended, presented their work, and shared in the award ceremony dinner and reception in Kananaskis, Alberta.

In the spirit of collaborative obesity research, the CDSM Lab in partnership with Scott Lear’s CHAMF (Community Health Assessment and Management Facility) Lab is proud to host the launch of the SFU Canadian Obesity Network Student and New Professional Chapter (SFU-CON-SNP). The SFU-CON-SNP initiative serves as the conduit through which students and young professionals can connect across disciplines for the advancement of obesity...
education, research, treatment and management. On Tues, Oct 20th at 3 PM in TASC2 room 8460, we will have a presentation from the President of SFU-CON-SNP, DANIELA GASEVIC (PhD candidate, Kinesiology), and afterwards a discussion about obesity research in numerous labs at SFU, and end with a journal club highlighting important new research in the area.

VICTORIA CLAYDON was invited symposium speaker at the International Soc for Autonomic Neuroscience Conference in Sydney, Australia. The talk was entitled, “Cardiovascular autonomic assessment in spinal cord injured rats and humans” and a short summary of the presentation has been published in the Journal Autonomic Neuroscience: Basic and Clinical 149:57-58.

RIANNE RAVENSBERGEN and INDERJEET SAHOTA (VICTORIA CLAYDON, Supervisor) have had a journal club article accepted for publication in the J of Physiology entitled “Broken sleep: a new chronic intermittent hypoxia model for obstructive sleep apnea.”


ANDREW BLABER is a member of a Canadian team of scientists studying the effects of long term spaceflight on cardiovascular physiology. It is hoped that this work will also have medical applications for elderly people who experience fainting spells that can lead to falls.

In September Andrew traveled to Edwards AFB in the Mohave Desert. He was among researchers waiting at the Edwards Air Force Base in California when the space shuttle was diverted to land there on September 11th, 2009 due to bad weather in Florida. Moments after watching the shuttle land, Andrew collected critical blood pressure and blood flow readings from astronaut Tim Kopra.

Researchers are tracking the effects of long-duration space flight on crew members’ heart functions and the blood vessels that supply the brain. “We hope to produce countermeasures that enable astronauts to maintain sufficient blood pressure after their long duration missions, and improve the safety of future astronauts.” The University of Waterloo is leading the study in collaboration with NASA, the Canadian Space Agency and a team of other university researchers.

Since 2007, astronauts from a number of missions have participated in experiments in space to further the study. Canadian astronaut Bob Thirsk, who is still at the space station, is among participants. Nearly 80 per cent of astronauts experience the phenomenon of the ‘fainting astronaut.’ Andrew will be presenting these data and other facts on the effects of weightlessness to high school students as part of the Faculty of Science “A taste of Pi” series on October 17th, 2009.


PUBLICATIONS


DEFENCES

Successfully defended:

JIE (SARAH) CHEN MSc August 24th, 2009
“Physiological Mechanisms of Nutrient Transport: Vitamin A and Retinol-Binding Protein.”
Senior Supervisor: AMANDIO VIEIRA
Supervisory Committee: ALAN DAVISON

HEATHER PARROTT MSc July 13th, 2009
“Src Homology 2 Domain-Containing Inositol-5’ Phosphatase in Murine Model of Amyotrophic Lateral Sclerosis.”
Senior Supervisor: CHARLES KRIEGER
Supervisory Committee: PETER RUBEN

BERNA SALMAN MSc July 24th, 2009
“Changes in patterns of EMG activity in post-stroke subjects following robot-assisted hand rehabilitation.”
Senior Supervisor: TED MILNER
Committee: JAMES WAKELING CAROLINE SOO MSc August 7th, 2009
“Mechanics and energetics of step-to-step transitions.”
Sr Supervisor: MAX DONELAN
Supervisory Committee: STEVE ROBINOVITCH

BRETT HOLLOWELL MSc COURSEWORK
“Efficacy of combined HVR and HCVR tests for assessment of individual physiological oxygen and carbon dioxide sensitivity.”
Senior Supervisor: STEVE ROBINOVITCH
Supervisory Committee: ANDREW BLABER

UNDERGRAD HONORS THESSES

JESSICA TANG BASc (Hons) April 2009
“Transvascular Electrode Modeling and Stimulation Parameter Estimation”
Senior Supervisor: ANDY HOFFER
Supervisory Committee: ANDREW RAWICZ

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“Transvascular Electrode Modeling and Stimulation Parameter Estimation”
Senior Supervisor: ANDY HOFFER
Supervisory Committee: ANDREW RAWICZ

MISCHA SNOWPOWSKI BSckin (Hons) April 2009
“Enhancing Control of a Minimally Invasive Intravascular Phrenic Nerve Stimulator”
Senior Supervisor: ANDY HOFFER

Mischa is now a first year medical student at the University of Alberta.

Co-op News

ALISHA ZACHARIAS reports on her co-op work term this summer:

“After having completed two Co-op work terms closely related to Kinesiology, for my last Co-op semester, I decided to dabble in a completely new field – the exciting realm of business. For a couple of months this past summer, together with six other SFU students, I was part of the Encouraging Dynamic Global Entrepreneur program (EDGE). This unique Co-op placement brought together students from Scottish universities and high schools, plus international universities, giving us the opportunity to work together on projects with Scottish businesses.

This work term has been both most challenging and most rewarding. Not only did I learn a lot about business while strengthening my skills in many areas, I also had opportunity to travel and meet people from all over the world. The EDGE program has been one of the highlights of my education at Simon Fraser University and has helped to shape my career path.”