FROM THE DIRECTOR

The Roman poet, Publius Ovidius Nasso, wrote in the epic poem *Metamorphoses*, “All things change; nothing perishes.” April 1st, 2009 marks the end of the name, School of Kinesiology and the beginning of the name, Department of Biomedical Physiology and Kinesiology, plus a move from the Faculty of Applied Sciences to the Faculty of Science. Our growth and breadth are acknowledged through these changes, as is the recognition that Kinesiology is both an applied and a pure science. We have changed, but we haven’t even come close to perishing. *Au contraire!*

We feel a profound sense of appreciation for those who led us to this point in our evolution. To thank but a few, let us begin by saluting our former Directors: **ERIC BANISTER, TOM CALVERT, ANDY HOFFER, JIM MORRISON, JOHN DICKINSON, and CHARLES KRIEGER.**

We also extend thanks on behalf of the School to our past Deans, particularly **BRIAN LEWIS,** who was an excellent leader and colleague of our School. Brian, along with his staff members, including **JOE VAN SNELLENBERG and LANA COOKE,** made it a pleasure to be a part of the Faculty of Applied Sciences.

Thanks also to our sister Schools in FAS: Engineering Science, Computing Science, Communications, and Resource and Environmental Management. We have had great interactions with members from these units and look forward to continued associations. We also wish them well in their moves to new faculties.

Although our name and faculty are changing, much remains unchanged, including our location and the high quality of our research and educational programs. We will have the same great faculty, staff and Co-op program.

We are excited about the path ahead while feeling a profound sense of pride and accomplishment about where we have travelled, all the obstacles we have surmounted, and the great heights we have reached. We look forward to many more such achievements from our new incarnation. We also look forward to your continued support.

**PETER RUBEN**

AWARDS

Congratulations to **MIRIAM ROSIN** who was presented the Award of Merit from the College of Dental Surgeons of BC in recognition of her significant contributions which have had an impact on the practice or profession of dentistry.

**DENISE LARonde** PhD candidate in the Cancer Prevention Laboratory (Miriam Rosin, Supervisor), has received the Alumni of Distinction Award from Vancouver Community College for outstanding achievement and community involvement, recognizing the work she is doing as part of her thesis to further develop an effective screening program to identify oral cancer earlier.

**FACULTY, GRADS, ASSOCIATES, ADJUNCTS, POST-DOCS & EMERITI**

**ARTHUR CHAPMAN,** Professor Emeritus, presented a seminar to the School on March 31st, 2009 titled, *Can Biomechanics Help with Skill Learning?* He was introduced by **TOM CALVERT,** Professor Emeritus and Former Director. It was very well attended and enjoyed by all.

Welcome to our 7 new Graduate students, who joined the School of Kinesiology in January 2009:

**RYAN CAWSEY, PhD**
Supervisor: **MAX DONELAN**
**JOSEPH CHOI, PhD**
Supervisor: **STEVE ROBINOVITCH**
**MARK SNATERSE, PhD**
Supervisor: **MAX DONELAN**
**PRABAKARAN DURAIHRAN,**
**COURSE WORK MASTERS**
**AVLEEN RANDHAWA,**
**COURSE WORK MASTERS**
**MING LEUNG, MSc**
Supervisor: **STEVE ROBINOVITCH**
**INDERJEET SAHOTA, MSc**
Supervisor: **VICTORIA CLAYDON**

Welcome also to 7 new faculty Associate Members in the School of Kinesiology, who join our 3 continuing Associate Members. The full list is:
Welcome to 4 new Adjunct Professors in the School of Kinesiology, now totalling 9:

Leif Hove-Madsen, cardiology; Michael Koehle, exercise, altitude & diving physiology; Pierre Lane, biophotonics for early detection of disease; Peter Pretorius, physiology of aging; Irene Rossberg-Gempton, health & wellness delivery to First Nations; William Sheel, environmental physiology; Robert Strath, optometry; Darren Warburton, environmental physiology; and Lewei Zhang, oral carcinogenesis.

Victoria Claydon recently returned from a field trip in Ethiopia, together with Inderejeet Sahota, where they looked at the different patterns of adaptation to permanent residence at high altitude in the highlands of Ethiopia in two distinct populations of Ethiopian highlanders. They went to villages in the Bale mountains and in the Simien Mountains National Park and completed a series of cardiovascular, respiratory, and haematologic analyses, as well as performing autonomic function testing in (literally) a field laboratory. The trip was an international collaboration with researchers from the USA, England, Canada and Ethiopia. Despite being cold and hypoxic for much of the time the trip was a resounding success, and they now eagerly anticipate examining the results of their studies.

Conferences


Jesse Greiner and Sam Ghaffari are studying in the Lab for Exercise and Environmental Physiology (LEEP) and completing their undergraduate theses. They presented the following at international conferences:


Mike Koehle is a Postdoc from LEEP, who is a faculty member at UBC in Human Kinetics and Family Medicine, as of July 1st, 2008. He presented the following study from LEEP at an international conference:


The Neurostep, a device that assists walking in people with leg paralysis, is now approved for sale in Europe. That’s satisfying news to Andy Hoffer who led its design, development and initial patient testing.

The Neurostep is a pacemaker-like device that is implanted inside the thigh. It uses nerve cuff electrodes to sense and stimulate nerve activity in the paralyzed leg, providing greater mobility for those suffering from neurological disabilities such as stroke, multiple sclerosis, spinal cord injury or cerebral palsy. Andy Hoffer and his team pioneered the design and use of nerve-cuff electrodes and chip-based amplifiers. They created in 1997 a SFU spin-off company Neurostream Technologies, that was bought by Victhom Human Bionics in 2004. Andy remains active in Neurostep product development and validation and serves on Victhom’s Neurostep clinical advisory board, and in their new scientific advisory board announced Feb. 27.

Victhom’s CE-Mark approval for the Neurostep System is the first of its kind for a closed-loop electrical stimulation system that uses signals sensed directly from peripheral nerves. It paves the way for developing training activities for hospitals and physicians who will provide the Neurostep to patients in Europe.

Meanwhile, Andy Hoffer and his Neurokinesiology Laboratory students (Sheena Frisch, Bao Tran, Colin Francis, Jessica Tang, Caroline Chen, Mischa Snopkowski and David Lee) are testing in pigs a minimally invasive diaphragm pacing method. This research, funded
by an Idea-to-Innovation grant from NSERC, aims to develop a simple intravenous probe that activates the phrenic nerves. The objective is to restore natural breathing and prevent diaphragm muscle atrophy in critically ill patients who currently must depend on mechanical ventilation to remain alive.

In February, Andrew Blaber was interviewed on CBC’s “On The Coast with Stephen Quinn” discussing fainting in astronauts: the effects of weightlessness on cardiovascular physiology. The data collection segment of Andrew’s industry sponsored research with The Boeing Company was completed on March 14. This study used the EPU altitude chamber to investigate the effects of long duration exposure to aircraft cabin pressure on blood oxygen saturation during sleep.

Data was collected from 14 participants. Over 100 members of the general public turned out for information sessions on the project and received tours of the EPU. A second contract has now been approved for analysis, interpretation, and writing of the results for submission to peer reviewed journals. This project could not have been received or completed without the help of EPU staff, Sherri Ferguson, Facility Coordinator and Duncan Milne, Senior Research Engineer, both of whom worked many long days through the project. A number of students were also employed on the project: Danielle Balik (Kin Co-op work term), Solmaz Pourvali (MSc, Kin), Kai Yan Chak (BSc, Fac Science), and Celidh Boyd (visiting MSc student, Lakehead University).

As part of the Boeing project three new persons were qualified as Assistant Chamber Operators for the hypo / hyperbaric chamber. Two, James Mayall and Cameron Milne were employed for the project duration. The third, Alison Ma, was subsequently hired as the Dive Safety Officer at Florida State University. She credits her training in the EPU as significant to getting the position, with special thanks to our Facility Co-ordinator extraordinaire, Sherri Ferguson, for the training.

As part of an ongoing arrangement with the Southern Interior Flight Centre, the EPU continued its pivotal role in the high altitude training of airline pilots. A special course developed by Andrew on High Altitude Physiological training was conducted on March 26 and 27. Since he was away at Edwards AFB in California as back-up support for the STS-119 Shuttle landing, Philippe Souvestre (Adjunct nominee) conducted the ground school portion of the course and observed the high altitude flights in the chamber. He has agreed to train as an assistant chamber operator for the EPU.

Staff

Sherri Ferguson, EPU Facility Coordinator, was an invited Guest Speaker at the American Industrial Hygiene Association on March 11th, 2009 at the Simon Fraser Segal School of Business in Vancouver, where she gave a presentation entitled, “Under Pressure: Health and safety concerns working in pressurized environments.” The Conference was well attended.

Publications


Wakeling, JM (2009). The recruitment of different compartments within a muscle depends on the mechanics of the movement. Biology Letters 5, 30-34.


Mike Koehle from LEEP had the following paper accepted for publication in the following journal Respiratory Physiology & Neurobiology; Koehle, MS, Giles, LV, Curtis, AN, Walsh, ML, White, MD. Performance of a compact end-tidal forcing system. Respiratory Physiology & Neurobiology, In Press

Careers in Kinesiology

Over 80 students come out to this year’s Careers in Kinesiology event, making it a huge success! The event was held in the ASB Atrium on March 11th, 2009. Kinesiology students were able to enjoy an evening full of networking, good food and great discussions with industry professionals. Organized by the Kinesiology Student Association (KSA) in conjunction with the School of Kinesiology Co-op Program, the aim of the event was to give Kinesiology students the opportunity to interact with experts in a variety of...
Kinesiology-related fields to help provide insight and inspiration for what they can do with their degree after graduation.

Something new offered to students this year was the opportunity to take part in exclusive guided lab tours of various Kinesiology faculty research labs. The feedback from students and faculty alike was overwhelmingly positive and it served as a great way to get students excited about the research being conducted here at SFU. Following the lab tours, students were able to mingle and talk with 14 different exhibitors about the various opportunities available to them both now and once they graduate.

This year we had 16 speakers from 5 different Kinesiology-related fields participate. Students were able to attend 4 different breakout sessions, which consisted of self-led discussions where they could ask questions and speak with industry professionals in a small group setting. Speakers were:

**Occupational Therapy**
- **RACHELLE THOMAS** (Occupational Therapist)
- **KELSEY MCCLOY** (MOT Student)

**Kinesiology and Ergonomics**
- **LOUISE WYNN** (Director of Environment Health and Safety)

Antonio Zivanovic (Kinesiologist & CEO of Corporate Occupational Solutions)

- **RICK KASELJ** (Kinesiologist & Founder of Healing Through Movement)
- **CONNOR BORSA** (Kinesiologist)

**Athletic Therapy**
- **AL BEST** (SFU Athletic Therapist)
- **DON GRIFFIS** (SFU Athletic Therapist)

**Medicine**
- **BRITTANY TURKO** (Medical Student)
- **DR. PAUL GROSS** (Resident Physician)
- **JOHN KOEHN** (Medical Student)
- Dr. Kimberly Shaw (Physician)

**Physiotherapy**
- **GREG RIZZARDO** (Physiotherapist)
- **SHEREE PALMER** (MPT Student)
- **MARGHERITA CIRILLO** (MPT Student)
- **CHRIS FRANKS** (Physiotherapist & SFU Instructor)

We extend a huge thank you to the Faculty of Applied Science Dean’s Office, the School of Kinesiology Director’s Office, Kinesiology Co-op, the Simon Fraser Student Society and the Kinesiology Student Association for their sponsorship and support of this event.

A special thank you to everyone who made this event a success! In addition to the invited guests above, thank you also to:

Careers in Kines Committee:
- **ALISHA ZACHARIAS**, **CANDACE CORMIER**, **BRENT FLODIN**, **BLAINE DIGGENS**, **STEPHANIE HENDY**, **HEATHER GERRETS** (all students).

**AARON VAN SLYKE** – Tour Guide
**DAVE JONES** – Tour Guide
**LAURA DEWAR** – Tour Guide
**SOULMAZ POURVALI** – Tour Guide

**RYAN WOODLAND**, Kinesiology Student Association (KSA) President; **LAURA THEOBALD**, **CHARLOTTE MAH**, **LAUREN TINDALE**, **NAOMI SANDHU** (Kinesiology students), and **SARAH MILLER** (Kines/Arts Co-op student).

**JAMES WAKELING** and the students in his Neuromuscular Mechanics Lab.

**MAX DONELAN** and the students in his Locomotion Lab.

**ANGELA BROOKS-WILSON** and the students in her Cancer Genetics Lab.

**SHERRI FERGUSON**, EPU Facility Coordinator, and **SOULMAZ POURVALI**, graduate student, of the Environmental Physiology Unit (EPU).

**TOM CLAYDON, PETER RUBEN**, and **GLEN TIBBITS** and the students in the Molecular Cardiac Physiology Group Lab.

**DARLEEN BEMISTER**, Kinesiology Co-op Coordinator; **CHERI FIEDLER** – Kines Co-op Program Assistant; and **LAURIE KLAK**, Kinesiology Main Office.

Thank you also to **CHEMISTRY LAB C8023** for letting us use their helium for our balloons!

Submitted by **HEATHER GERRETS**
FAS Project Assistant
(Co-op Student)

**JUNE CONVOCATION**

School of Kinesiology students will have their Convocation Ceremony on June 5th, 2009 at 2:30 p.m. A reception will be held beforehand to acknowledge and congratulate our graduands.

**Plan now to attend the Kinesiology Convocation Reception**
June 5th, 2009
(around 12 noon – TBA)
Halpern Centre