We have concluded two faculty searches. I am delighted to announce that one of the candidates has signed the Offer of Appointment from the President. Dr. Sam Doesburg will be joining our BPK faculty this Fall. He comes to us from The Hospital for Sick Children in Toronto, where he is MEG Clinical Associate in the Department of Diagnostic Imaging. Dr. Doesburg will be located primarily at the SFU Surrey campus, and in future will be teaching BPK 306 plus an imaging course. (see also Seminars)

Two of our long-standing faculty members have announced upcoming retirements: Dr. Josephine Anthony, Senior Lecturer, in Fall 2015, and Craig Asmundson, Senior Lecturer in Spring 2016. Both have been an integral part of our department for over 35 years, first in the former School of Kinesiology and currently in the Biomedical Physiology and Kinesiology Department. Dr. Anthony teaches BPK 325C, 326, 336, and 426, and Craig Asmundson teaches BPK 142, 142C, and 407.

Both Dr. Josephine Anthony and Craig Asmundson are being honored with the establishment of awards in their name. The Craig Asmundson Endowment Fund will support the Craig Asmundson BPK Engagement Award. The award is intended to recognize and provide funding to a BPK undergraduate student who has demonstrated positive contributions to the SFU community including university engagement, leadership, volunteerism, team work and/or ambassadorship of BPK to the external community.

Another award is in process of being established for Dr. Josephine Anthony.

Both faculty members will be deeply missed for the extent of their expertise and their excellence in teaching, as well as their collegiality as fellow faculty members.

Glen Tibbits, Chair

BPK RESEARCH DAY

We are pleased to announce that the 6th Annual BPK Research Day will take place on

Friday, March 27th, 2015
SFU Theatre / starting at 9:00 AM

Research Day is an excellent opportunity for students to showcase their research by participating in poster competitions or by giving an oral presentation.

Door prize and award winners will be announced during the social time at 4:00 pm. Click here to download booklet.

Schedule:
09:00 - 09:30 Registration and Coffee
09:30 - 09:45 Welcome and Introductions

Selected Student Oral Presentations:
09:45 - 10:00 Jessica Selinger, Shawn O’Connor, Jeremy Wong, Maxwell Donelan: Humans continuously optimize energetic cost during walking
10:00 - 10:15 Hadi Rahemi, Nilima Nigam, James Wakeling: Effect of adipose tissue on the performance of skeletal muscles: Numerical predictions using a validated muscle model
10:15 - 10:30 Chantelle Lachance, Alexandra Korall, Colin Russell, Fabio Feldman, Stephen Robinovitch, Dawn Mackey: Effects of Compliant Subflooring Systems and Resident Weight on Hand Forces when Pushing Floor-Based Lifts and Wheelchairs Among Long-Term Care Staff
10:30 - 10:45 Taylor Dick, Allison Arnold, James Wakeling: Can we measure in vivo tendon forces in humans? Combining ultrasound and motion capture to predict Achilles tendon forces during cycling.
10:45 - 11:00 Break
11:00 - 12:00 Keynote Speaker: Christina Thiele, Communications and Community Relations Manager at the Centre for Hip Health and Mobility
12:00 - 13:00 Lunch
13:00 - 14:30 Poster Session 1 (ODD numbered boards)
14:30 - 16:00 Poster Session 2 (EVEN numbered boards)
16:00 - 17:00 Awards and Social

50TH ANNIVERSARY BPK ALUMNI REUNION

The Biomedical Physiology and Kinesiology Department (formerly School of Kinesiology) invites our 4,000 alumni plus faculty and staff to celebrate SFU’s 50th Anniversary and almost 50 years of Kinesiology, now BPK, in September 2015. There will be food, beverages, and a chance to connect with your fellow alumni and alma mater.

Where: Diamond Alumni Centre
Date: Friday, September 11th, 2015
Time: Late Afternoon / Early Evening
(to be confirmed soon)

Save the Date!
The Careers in BPK Event was held on January 22nd, 2015. It was a huge success, and the best attended Careers in BPK event to date. Total registrants: 197, including 9 alumni. There were 15 exhibitors and 8 speakers.

Attendants' Majors

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Dr. D. A. Clarke was awarded a Canada Foundation for Innovation John R. Evans Leaders Fund/BC Knowledge Development Fund grant worth $220,000 to fund infrastructure for his research on skeletal muscle cell adaptations to exercise-related stressors.

Enjoy viewing all the photos at this link: http://www.sfu.ca/bpk/news_events/events/CareersinBPK2015Photos.html

Beating heart cells created in Simon Fraser University lab

Researchers hope cells created from blood and skin of patients will lead to lifesaving treatment. By MIKE CLARKE, CBC News Last Updated: Feb 13, 2015

“A team of Simon Fraser University researchers has created beating heart cells they hope to develop into potentially lifesaving treatment for heart disease.

The cells were crafted from skin and blood tissue in a lab by graduate doctoral students ELHAM APSHIMANESH (left) and SANAM SHAFAATTALAB (right) under the supervision of project leader Dr. GLEN TIBBITS.

Glen Tibbits, the Canada Research Chair in Molecular Cardiac Physiology, says his team is currently working with St. Paul’s and Children’s hospitals on developing treatment for severe irregular heartbeats—arrhythmias that can often be fatal. But he says this type of research could ultimately be used to replace dead or damaged heart tissue in heart attack patients.

Tibbits says the heart cells are crafted by taking skin and blood cells from patients and turning them into stem cells using a technique pioneered in Japan. “They have the capability of being stem cells, and can be directed along different lineages becoming nerve cells, pancreatic cells and in our case heart cells.”

Technology could help heart attack victims

Tibbits says the stem cells, reprogrammed into beating heart cells, have the same genome as the patient from whom they were taken, which means they also exhibit the same kind of arrhythmia.

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Tibbits says the stem cells, reprogrammed into beating heart cells, have the same genome as the patient from whom they were taken, which means they also exhibit the same kind of arrhythmia.
Beating heart cells, visible only under a microscope, are collected in Petrie dishes in the Simon Fraser University molecular Cardiac Physiology Lab.

This will allow the team to tailor therapies to individual arrhythmia patients. Tibbits expects that within the next few months the team will be able to begin testing treatments. While the team is focused on irregular heartbeats, Tibbits says other teams are using the same technique to explore potential treatments for heart attack patients. Unlike normal heart cells, Tibbits says, the beating heart cells created in the lab can multiply. Regular heart cells do not replace themselves, which is why heart attacks can be debilitating even when they're not fatal. "When you have a heart attack many cells die and are not replaced or are replaced by scar tissue," says Tibbits.

"Researchers say that the average birth year of participants in the B.C. study is 1917. Of all the people born in that year, only about 10 per cent lived to 85 and of those, only two per cent are like Richards — free of diseases.

If scientists can isolate any protective ‘override switches’ in the study participants, they might be able to synthesize a protective drug. In short, healthy longevity in a pill.

It’s a tall order but study leader Angela Brooks-Wilson, a geneticist who’s just been granted another $200,000 in funding by donors through the Canadian Cancer Society, has been tenacious in her quest, especially now that gene analysis has become easier and less costly than when the study began about 14 years ago, when Richards first enrolled.

Brooks-Wilson, a genetics scientist with the BC Cancer Agency and Simon Fraser University, suspects longevity is largely attributable to good lifestyle habits while inherited factors account for about a quarter.

In one paper Brooks-Wilson and her co-authors published on the study participants, about 400 Super Seniors had an 11-per-cent frequency of a gene variant (called APOE4) that raises Alzheimer’s risk while a comparison group of middle-aged control subjects had a frequency of 15 per cent.

“Some people who live to an incredibly healthy old age do have gene sequences that can cause diseases like cancer but for some reason they don’t get cancer, so we think they must have something protective,” she said.

Identifying their ‘override switches’ might lead to the invention of anti-cancer pharmacological interventions which, combined with a healthy lifestyle, could help lower the risks of contracting the disease.

Seniors from across Canada (or around the world) who are 85 or older and have never been diagnosed with cancer, cardiovascular disease or stroke, dementia, major lung disease or diabetes, can join the study. Those over 100, regardless of health status, can also join.

Call 604-675-8151 or send an e-mail to rthomas@bcgsc.ca for more information.*

Professor, http://www.sfu.ca/bpk.html Simon Fraser University Distinguished Scientist, BC Cancer Research Centre, BC Cancer Agency


Excerpts from The Vancouver Sun article of March 16th, 2015, by Pamela Fayerman:
same class the following year. Her dream of competing in the first women’s Olympic wrestling tournament at Athens 2004 ended when she was beaten by her friend and training partner Lyndsay Belisle in the Canadian trials. In her determination to tread the big stage herself one day, Huynh put her studies to one side and decamped to Calgary to concentrate on wrestling full-time.

A Pan American champion in 2007, Huynh then achieved her aim of making the Canada team for Beijing 2008, where she turned in a performance full of energy, skill and determination to beat Japan’s Chiharu Icho by a score of 4-0 and 2-1 in the 48kg final. In the process she became her country’s first gold medallist of the Beijing Games and the first Canadian woman to win an Olympic wrestling title.

Further golds came Huynh’s way at the 2010 Commonwealth Games in Delhi (IND) and the 2011 Pan American Games in Guadalajara (MEX), with the Canadian then adding to her Olympic medal collection by winning bronze in the 48kg category at London 2012.

She then became president of the Athletes Commission of United World Wrestling, the sport’s governing body.

Explaining the challenges she has faced away from the mat, Huynh says: “Throughout my career I have experienced some people who make comments about how women shouldn’t wrestle. Those comments were more like fuel. When I heard those kinds of doubts or those kinds of negative comments, it made me want to do better, to train harder, to show people that women belong in this sport and that we can be really great at it. So it kind of helped me.”

**DEFENCE**

**DANIJELA GASEVIC**  
PhD  
Friday, December 19th, 2014  
“The association of perceived and objective built environment features with physical activity, adiposity and blood glucose.”

Examinining Committee:  
**DR. TOM CLAYDON**, Chair  
**DR. SCOTT LEAR**, Senior Supervisor  
**DR. DIANE FINEGOOD**, Supervisor  
**DR. MICHAEL HAYES**, Supervisor, Dept of Geography, U Victoria  
**DR. MEGHAN WINTER**, SFU Faculty of Health Sciences, Internal Examiner  
**DR. JOHN SPENCE**, Faculty of Physical Education and Recreation, U Alberta, External Examiner

**BPK SEMINARS**  
**2014/2015**

Since Fall 2014, the following speakers gave talks for the BPK Seminar presentations. [http://www.sfu.ca/bpk/news_events/seminarsandpresentations.html](http://www.sfu.ca/bpk/news_events/seminarsandpresentations.html)

**JAQUES ABRIANI, PhD**  
University of Caen and French Armed Forces Health Services Biomedical Research Institute  
**Title:** “Neuroprotective Properties of Inert Gases in Models of Acute Ischemic Stroke: Basic and Preclinical Findings.”

**KOUSHYAR TAVAKOLIAN, PhD, PENG**  
Assistant Professor, Electrical Engineering University of North Dakota, USA  
Friday, March 20th, 2015  
**Title:** “Cardiac Vibration Signals: Old Techniques New Applications.”

**JEREMY WONG, PhD**  
POSTDOCTORAL FELLOW  
Locomotion Laboratory Biomedical Physiology and Kinesiology Simon Fraser University  
Tuesday, March 17th, 2015  
**Title:** “Cellular mechanism of hERG quality control.”

**ALVIN SHRIER, PhD**  
McGill University  
Tuesday, March 3rd, 2015  
**Title:** “Cellular mechanism of hERG quality control.”

**SCOTT DIXON, PhD**  
Department of Biology Stanford University  
Tuesday, January 13th, 2015  
**Title:** “My Small Molecule Does What?! How Chemical Biology Helped [and Hindered] the Discovery of a Novel Cell Death Phenotype.”

**SAM DOESBURG, PhD**  
MEG Clinical Associate  
Department of Diagnostic Imaging  
The Hospital for Sick Children, Toronto  
Wednesday, October 15th, 2014  
**Title:** “Imaging neurophysiological network connectivity in typical and atypical development.”

**DAVID FRANKLIN, PhD**  
Wellcome Trust Research Career Development Fellow  
Department of Engineering University of Cambridge  
Thursday, October 2nd, 2014  
**Title:** “Feedforward and Feedback Learning in Human Sensorimotor Control.”

**BPK YEAR END PARTY**

BPK Faculty, Staff and Students are cordially invited to an evening of food, fun, and pleasant company. The BPKSA would love it if you’d join us in celebrating the end of the year. A delicious buffet meal and non-alcoholic drinks will be provided.

**Location:** Club Illia at Cornerstone  
**Date:** April 2nd, 2015  
**Time:** 5:30 p.m.

Tickets are $15 and will be available in the BPK Main Office and from BPK reps.

**LORYN BOHNE**  
BPK Student Association / www.bpksa.org

**NEWCOMERS**

**CALIA WINTER DONELAN-CLOUD**, 7 lbs 12 oz daughter, born to VICTORIA and MAX DONELAN-CLOUD (Associate Professor) on January 5th, 2015. Sister to doting older sisters, NORAH and AMELIA.

**RHYSS THOMAS HUNTER-POBURKO**, 6 lbs 15 oz son, born two weeks early to ARWEN HUNTER and DAMON POBURKO (Assistant Professor) on March 6th, 2015. Brother to SIMONE who is excited to be a big sister to her healthy and thriving little brother.

**DYLAN COOKE, PhD**  
Assistant Project Scientist  
Dept of Psychology & Center for Neuroscience  
University of California-Davis  
Tuesday, September 30th, 2014  
**Title:** “How the brain controls the hand: Plasticity on a scale of minutes to lifetimes.”

**SIMON OVERDUIJN, PhD**  
Postdoctoral Fellow  
University of California-Berkeley  
Thursday, September 25th, 2014  
**Title:** “Motor primitives, micro-stimulation, and brain-machine interfaces.”

**BPK PULSE**  
March/April 2015 Vol 17 No 4 Edition
Another year of the KinCup has come and gone. As tradition dictates we started with the basketball game. The faculty, graduates and staff (FGS) raced out to a big lead early on, and despite a small, but ultimately futile, surge at the beginning of the 2nd half, the undergraduates could not match the power and skill of our team and they succumbed 28 – 18. 1 – 0 to the good guys 😊

The 2nd event was dodgeball. The undergrads somehow found a few students with very supple muscles and workable shoulders (something I personally can't remember ever having!). These individuals could throw bombs! If you doubt the validity of this statement, just ask Darleen "I can't remember my leg being that red" Bemister! Unfortunately, this allowed them to take two straight games in the best-of-three series. 1-1. 😆

So onto the main event. The soccer game started, tied 1-1 and just like the basketball game, the FGS team raced out to an early lead. We soon built up a 4 – 1 lead and carried that into the 2nd half. In fairness to the undergraduates it was not a situation where they were not creating scoring chances. However, our superb goalkeeper Dave "is it a plane? is it a bird?" Clarke was in outstanding form. He even skillfully allowed one or 2 shots to go through his legs only to strike his heel and deflect wide. This was deliberately done to further demoralize our opponents -- brilliant skill!

Now comes the real skill. Drum roll please Maestro! We lead 4 – 1 and had already missed a few golden opportunities to stretch our lead, and then, with only 7 or 8 minutes left in a game we had totally dominated, we managed to SNATCH DEFEAT FROM THE JAWS OF VICTORY! Oh, I will grant you that the undergrads sensing imminent defeat started to press hard and closed down our passing lanes on the crowded court. I will also grant you that after they scored their first goal, they scored a quite beautiful goal with a quick thinking back heel. But in truth the talent was still ours – how do you lose a 3-goal lead with 7 or 8 minutes left? – sheer skill is how! It was now 4 – 3 and the undergrads sensed blood and pressured yours truly into coughing up the ball for their tying goal!

Time was up and so on to a shootout. Undergrads to shoot first, 1 – 0. Tony "how long ago did I retire from this game?" Leyland had his shot saved. Undergrads shoot, saved by DC. Tom "twinkle toes" Claydon scores (after an excellent game BTW). Shootout tied 1 – 1. Note: I think Tom was spurred on by his family cheering section, which by strange coincidence was our team’s only cheering section! Hint, hint. Undergrads score, 3 – 2 and we have one shot to tie. Matt "damn I was killing it until that happened" Lloyd strikes the ball and ……. and ……. and it is “off the post“ we lose by 3 inches…….what drama!

So the undergrads win the cup and promptly have their photograph taken with it. BUT THEN WE WIN! Cue twilight zone music. Suddenly we found ourselves being photographed with the cup as the 2014 winners. Apparently, the undergrads have conceded the 2014 cup accepting their culpability in last year's dubious timekeeping methodology…… OR ….maybe there was a black hole close by the gym last year causing a weird time dilation and we are really back in 2014? Or maybe that black hole was what made Steve McGee's watch run slow that fateful day in 2014? I know this all sounds very strange, but don’t ask me, you would have to take that up with Neil Degrasse Tyson. Until someone really nails down quantum theory we will probably never know what truly happened.

So the upshot of it all is that you now have some vague understanding of why in the coming days, you will see photographs on the web of both teams with the cup (along with winning smiles).

Tony Leyland
Senior Lecturer

The newly formed Behavioural Neuroscience Student Society (BNSS) has been busy since its inception in November 2014. They recently held two events.

On March 19th, 2015 a “Brain Awareness Week” was held aimed at promoting neuroscience to the general community. Dr. Bryan Jones lectured on Sex, Drugs, and Rock and Roll. There was a great turnout of 75 people who enjoyed pizza while learning a lot about the brain.

The second event was a “Neuroscience Networking Night” held on March 24th, 2015. This gave Behavioural Neuroscience (BNEU) students opportunity to engage with faculty and other students. The professors in attendance gave short introductions to their academic background and research interests, after which students had the opportunity to talk one-on-one with the professors. BPK Professors in attendance were: Dr. Dan Marigold (co-chair of the BNEU program), and Dr. Charles Krieger.

Dr. Charles Krieger

Also in attendance were: Dr. Neil Watson (Chair of Psychology), Dr. Urs Ribary (Director of SFU’s Behavioural and Cognitive Neuroscience Institute), Dr. Ralph Mistleberges, Dr. John McDonald (co-chair of the BNEU program), and Dr. Mario Liotti.

Here’s a link to some photos of the event: https://www.dropbox.com/sh/lgy3xgh5nloho9m9/AAAzPSuLncFmQZxfw-1ElQia?dl=0

Dr. Dan Marigold

for newsletter submissions
Marianne Lazaro lazaro@sfu.ca