

HHNews

December 2010 Issue



MESSAGE FROM THE CHAIR



It is hard to believe that another semester and year is coming to an end - where does the time go? This semester has seen the launch of our new first year biology course and by all accounts it has gone very well. This is no doubt due to the very hard work of Bill Bettger, his committee and all of the faculty and staff who are involved. It is wonderful to welcome both Steve Brown and David Wright to our faculty, and along with them come record numbers of undergraduates. Our enrolment figures for NANS, HK, Biomed Sci and Kin add to what some colleges report. While this brings tremendous challenges, it also allows us to continue to prosper. We also welcome Deborah Arsenault as our new Human Anatomy Laboratory Technician and Kerry Mullen as our Biology 1080 Teaching Technician. As I read this newsletter I am amazed by all we have accomplished - I think the only thing missing (for once) is any mention of new births!

I want to offer my congratulations to Jim Kirkland for his well-deserved award, to Breanne Anderson for her award and to Kyle Boorsma for his remarkable successes. I also want to thank the entire Department for their tremendous support for the United Way.

I look forward to the winter semester with our undergraduate student symposium and then in May we will be hosting the Canadian Nutrition Society conference. No doubt there will be many other achievements and reasons to celebrate our group. I wish everyone a very happy holiday and all the best in 2011.

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Terry Graham
Chair





HELLO FROM THE BMSSA, HKSA and NANSSA



The Bio-Medical Science Student Association had a busy and successful start this year during O-week, running four events including ultimate frisbee to lab coat decorating. The turn out of first year Bio-Medders was fantastic!

Since O-week, we've had lots of great volunteer opportunities for our students. The BMSSA participated in Project Serve, helping to build and repair the boardwalk in the Hanlon Creek Conservation Area, as well as having teams for Run for the Cure and Trick or Eat. Later in November we'll be having a team in the Tractor Tug for Tots.

Our annual Pizza and Prof took place in October at the Brass Taps, allowing Bio-Med students to meet each other and some of our faculty members. The BMSSA also took over the cannon for a night on November 3rd, turning it into a needle. Also, a brewery tour to Brick Brewery with the HKSA took place in November.

Next semester we're looking forward to a trip to Blue Mountain with HKSA, our annual Leadership Conference, and putting a team in for Relay for Life!

We've got a great exec set up and are looking forward to the rest of the year!

Cheers,
Shaun Pinder and Jessica McCann
Co-Presidents 2010/11
bmssa@uoguelph.ca

The Human Kinetics Student Association has planned many exciting activities for this upcoming 2010-11 school year. The semester started off with an extremely successful game of Kin Ball at Orientation Week, where many first year HK students were able to meet other students in this amazing program! We have also been to Wonderland's Halloween Haunt, and planned a Brewery tour and HK alumni Night in November. Our executive will continue to work hard in putting together many more successful events for next semester, such as a Blue Mountain Ski Trip, HHNS Symposium, and Storm Game! Please keep an eye out for any advertisements about upcoming events!

This year's Human Kinetics Students have also put together the Kin Games Team for 2011! This weekend-long conference consists of both athletic and academic challenges for Kin students all over Canada. The University of Guelph hosted it last year, and this year a group of 28 students from our program are headed to London to compete at Western. Stay tuned for fundraising events supporting the UofG Kin Games team!

For more information, please email us at hksa@uoguelph.ca, or come out to our meetings every Tuesday at 1:30pm in room 1504 SCIE.

Veronica Barber-Pin and Erika Howe
Co-Presidents HKSA

Hello Students!

We are the Nutrition and Nutraceutical Sciences Student Association! (NANSSA)
While our program is relatively small, we are the reason why great things come in small packages!

Our executive is made up by a group of great people this year, namely Anna Lytvyn and Kevin Prodan (Co-Presidents), Jeff Martineau (Vice President Internal), Jessica Simmons (Vice President External), Claire Chartrand (Communications Officer), Luke Harding (Treasurer), Eleanor Reid (Academic Commissioner), Katie Keenie and Kendra Robinson (Committee Members).

This year we want to continue our focus on helping the students within and outside of our program. We have held some great events to date including Hot Yoga at Bikram, Meet the Profs and an outing the CHFA tradeshow. We are hoping to provide more opportunities for students in the program to meet their peers, and our events will help us make that happen! We are just beginning our clothing sales so the students can wear their awesome NANS wear before they take their leave for Christmas break. We are planning to run more great events in the future such as Hot Yoga (Held bi weekly on Wednesday nights), College Royal, A Brewery tour, Academic events, and more.

Remember we are here for you. If you have an event you want to see run or if you have a question and don't know where to go, come to us! We hold regular meetings on Wednesday nights in the Science Complex, Room 1508 at 5:30pm-7:00pm. Just send us an email (nnssa@uoguelph.ca) if you want to sit in on a meeting or even want to help out. We are actively looking for students from first year and up, so don't be shy.

CONGRATULATIONS:

Prof. Jim Kirkland is the 2010 recipient of the College of Biological Science Distinguished Professor Award for his role in teaching and teaching innovations.

The HHNS / GFTC Big Bike for Heart and Stroke team raised \$1,700 on this year's ride, held August 18th. Thanks goes to **Laelie Snook**, who once again rode as Team Captain (and super recruiter).

Mira MacLennan, Breanne Anderson and **Lyn Hillyer** held a Bake Sale in HHNS on June 2nd with the proceeds going to Relay For Life. The Bake Sale raised \$82.00.

Laelie Snook, Nikki Bradley, Leslie Stefanyk and **Catherine Lowrey** also held a Bake Sale on September 30th and raised \$180 which was donated to the Run for the Cure. On October 3rd they also participated in the Breast Cancer Run for the Cure as part of the Moobs and Boobs team.

Kyle Boorsma, HK major, won the 2010 CIS Cross Country Championships men's individual gold medal at the Club de golf de Sherbrooke in November. Kyle completed the 10-kilometre race with a time of 31:53.0. He was named the 2010 CIS cross country athlete of the year and a first-team all-Canadian. This was his fourth first team all-Canadian honour. He also becomes the first male athlete to win five CIS team championships in a career after leading the Gryphons to a record setting sixth consecutive title, with the lowest team score since 1974.

Breanne Anderson, MSc graduate, HHNS, received the 2010 George Weston Foundation Graduate Student Scholarship (MSc) from the Canadian Institute of Food Science and Technology (CIFST). The award is valued at \$2,500 and recognizes Breanne's academic excellence. The title of Breanne's thesis was "The Effects of Omega-3 Fatty Acids from Fish Oils and Genetic Modification on Mouse Mammary Gland Development: Implications for Human Breast Cancer". Breanne's advisor was Dr. David Ma. The award announcement was made September 30, 2010.

Gaayathiri Jegatheeswaran, MSc candidate, HHNS (Advisors: J. Srbely/L. Bent) won 3rd prize for poster presentations at the Canadian Society for Life Science Research Conference held at McGill University, Montreal, August 13-14, 2010. The title of the poster was "Central Sensitization Reduces Activation Thresholds of Motoneurons"

Mira MacLennan, MSc candidate, HHNS was selected to receive the Catherine Peachey Oral Presentation Award, valued at \$250. The award required Mira to give a 10 minute oral presentation at the International Breast Cancer Prevention Symposium at Purdue University, Indiana on October 19th.

Ann Stride and **Premila Sathasivam** received their 25-year pins at the CBS Recognition Event held November 1, 2010.

Premila Sathasivam received the 2010 Gabrielle Hubert Award for outstanding contributions to the University of Guelph United Way campaign. It is the most prestigious individual award given by the University as part of its United Way efforts. The selection committee commended Premila for her -

- * dedication to the United Way campaign
- * enthusiasm in promoting the united way to their department
- * enormous amount of work in organizing events to raise awareness
- * obtaining an increase in participation via the pledge cards/payroll deduction
- * extra effort in speaking to co-workers on a one-to-one basis

After completing her MSc in the HHNS Department, **Rachel Rebry** (advisor – Dr. Terry Graham) accepted a position with Nutrasource Diagnostics Inc., located here in Guelph. As the Associate Director of the Nutrition and Nutraceutical Research Division, Rachel is responsible for working within the division team to guide clients through Canadian regulatory pathways to facilitate commercialization of natural health products [NHPs], food-type NHPs, foods and cosmetics. She employs the Natural Health Products Regulations to assist in the formal creation and submission of Product Licence Applications and Site Licence Applications to the Natural Health Products Directorate of Health Canada. She has also had the opportunity to work on several systematic scientific literature reviews investigating various food-health claim relationships on behalf of Agriculture and Agri-Food Canada.

WHERE ARE THEY NOW?

Andrea Bielecki, BSc–Nutritional Sciences major '00 runs InVivo Communications, an interactive media company servicing the medical, pharmaceutical and biotechnology industries. She has also launched a joint venture called Spongelab Interactive—bringing science to life through interactive 3D digital games. Spongelab Interactive has been featured in Science magazine and received awards from the United Nations and the National Science Foundation.

Retired HHNS professor, **Brian Wilson**, is currently teaching in the Department of Biological Sciences, Northern Arizona University in Flagstaff, Arizona.



Jaclyn Shipp, Julie Kisch and Sabrina Sengupta (MSc coursework graduates) began working at the Natural Health Product Directorate (Health Canada) in Ottawa at the end of the summer as 'Assessment Officers' to review the applications for new/upcoming natural health product applications. The job focuses mainly on reading scientific articles to ensure the safety and efficacy of the applications/new products. Sabrina Sengupta comments "our one-year Masters really did give us the right background knowledge to come in here and be ready for the job – it also helps that there are a fair amount of Guelph grads from previous years that were here to help us get settled in".

Blair Cameron completed his MSc by coursework (advisor: Bill Bettger) in August 2010 with an internship at the Micronutrient Initiative in Ottawa. Since August, he has continued to work (from Guelph) with the Micronutrient Initiative, a global health and nutrition non-governmental organization specializing in finding solutions for "hidden hunger" (vitamin and mineral deficiencies). Recently, he presented at the Nestle Nutrition Conference in Mexico City on "Issues related to identifying iron deficiency and iron deficiency anemia in infants under two years old." Blair is currently developing a quantitative 24-hour dietary recall to be used in an upcoming national micronutrient survey in Kenya, amongst other projects. He is still maintaining his blog, the Fodder File (www.fodderfile.com), which he started during his MSc degree as a course project to highlight current research in nutrition and medicine.

Sun Life Human Health and Nutritional Sciences Research Award Recipients

Congratulations to the following HHNS graduate students who were this year's awardees:

Roberto Gulli, MSc candidate (D. Dyck, advisor)

Ian Ritchie, PhD candidate (D. Dyck, advisor)

Brennan Smith, PhD candidate (G. Holloway, advisor)

Leslie Stefanyk, PhD candidate (D. Dyck, advisor)

Amy Tucker, PhD candidate (A. Duncan, advisor)

The Sun Life award is valued at \$4,000 and is awarded to support interdisciplinary research into human lifestyle diseases such as cancer, obesity, cardiovascular disease, osteoporosis and type 2 diabetes, with an emphasis on how factors, especially nutrition (nutrigenomics) and exercise, alter the expression of an individual's genes in a manner that influences their health. Related investigations will have applications for both preventing and moderating chronic disease.

PRESENTATIONS

Dr. Bruce Holub -

INVITED LECTURES:

May 18, 2010—'DHA Omega-3s for Pre/Postnatal Health', presented at Vitafoods in Geneva, Switzerland.

May 27, 2010—'EPA, DHA and Cardiovascular Health', presented at International Symposium entitled 'A Celebration of DHA' at the Royal Society of Medicine in London, UK.

June 4, 2010—'Omega-3 Fatty Acids and Cardiovascular Health', presented at Symposium: 'Omega-3 Fatty Acids and Health Benefits' at CNS Annual Meeting in Edmonton, Alberta.

Dr. Terry Graham -

March 29, 2010—Seminar at University of Western Ontario "Regulation of Muscle Glycogen".

May 8, 2010—Public talk at YMCA Guelph for Science Rendezvous "Exercise and Nutrition: Make the Best of this Relationship".

INVITED LECTURES:

March, 2010—Queen's University Kinesiology and Health Studies Grad Student Day. "Life of an Exercise Scientist: Understood Looking Back and Lived Going Forwards"

May 27, 2010—Nestle, Luasanne, Switzerland. "Coffee, Caffeine and Insulin Resistance"

May 31, 2010—Purines 2010 at Teragona, Spain. "The Effect of Caffeine on Insulin's Actions on Skeletal Muscle".

July 14, 2010—Annual Meeting of the Florida Dietetic Association. "The Health Pros and Cons of Caffeine and Coffee".

October, 2010—"Muscle Glycogen Metabolism in Exercise" - International Graduate Course in Exercise and Clinical Physiology, joint course with University of Copenhagen and Concordia University—held at Concordia U, Montreal.

November, 2010—Canadian Society for Exercise Physiology Annual Meeting. The J. Sutton Memorial Lecture: "Muscle Glycogen: Well Known But Poorly Understood".

Dr. Steve Brown -

November 10, 2010—Invited Lecture—World Congress on Low Back and Pelvic Pain, Los Angeles, CA.

Dr. David Mutch -

April 12-16, 2010—Invited under the Academic Leaders Program to teach nutrigenomics and related topics for one week, at the Tec de Monterey University, Queretaro, Mexico.

April 22, 2010—Royal Canadian Institute for the Advancement of Science Gala Fundraiser, MaRS Institute, Toronto, Ontario.

Table Topic—Nutrigenomics: Using Diet-Gene Interactions to Personalize Health Management.

November 17-20, 2010—4th Congress of the International Society of Nutrigenetics/Nutrigenomics (ISNN), Pamplona (Navarra), Spain. Title of Talk: Predicting Changes in Body Weight in Response to Diet using Transcriptomics.

Dr. Lindsay Robinson -

November 15, 2010—"Postprandial metabolism in obesity and diabetes: how can nutrition and exercise help or hinder?"

Presented at an event for "Diabetes Awareness Month", Cambridge Memorial Hospital, Cambridge, ON.

Dr. Arend Bonen—

November 26, 2010—Invited talk at the Lipid Protein Binding Conference in Maastricht, The Netherlands—"In vivo, CD36 regulates fuel selection, muscle performance and adaptation of fatty acid oxidation".

Thesis Defences



MSc

Kate Buddo (Advisor: A. Bonen) - March 30, 2010

Modest PGC-1 alpha overexpression is sufficient to reverse insulin resistance observed in four-week high fat fed rats

Graeme Ross (Advisor: C. Murrant) - July 8, 2010

Adenosine is involved in the initial and secondary vasodilatory response evoked by a single 250ms contraction

Breanne Anderson (Advisor: D. Ma) - July 13, 2010

The effects of endogenous and exogenous n-3 polyunsaturated fatty acids on mammary gland development and lipid composition in FVB mice

Kendra Brett (Advisor: K. Meckling) - August 4, 2010

The effects of a low fat, low glycemic index moderate carbohydrate diet on risk factors for metabolic syndrome

Kate Chiswell (Advisor: M. Bakovic) - August 12, 2010

Mechanisms of skeletal muscle insulin resistance in the CTP:phosphoethanolamine cytidyltransferase-deficient mouse

Tamara Itterman (Advisor: K. Meckling) - September 10, 2010

Effects of 1,25 dihydroxyvitamin D3 and involvement of 1,25 D3 MARRS protein in MCF-7 transplanted athymic BALB/c nude mice

Sarah Langmaid (Advisor: A. Wright) - December 3, 2010

Solid lipid nanoparticles stabilized with poloxamer 188 and Tween 20; beta carotene stability and bioaccessibility

Krista Madsen Baker (Advisor: L. Vallis) - December 7, 2010

Effects of sternocleidomastoid muscle fatigue on cervical spine kinematics and postural responses to trunk perturbation

Erik Prout (Advisor: J. Zettel) - December 10, 2010

Postural adjustments during visually triggered modulation of an ongoing focal action



PhD

Jennifer Monk (Advisor: B. Woodward) - February 24, 2010

Anti-inflammatory hormonal immune competence in the acutely malnourished weanling mouse

Kerry Mullen (Advisor: D. Dyck) - April 26, 2010

The development of high fat diet induced adiponectin resistance in rodent skeletal muscle

Livia Augustin (Advisor: D. Jenkins) - May 3, 2010

The dietary glycemic index and its implications in cancer risk, insulin-like growth factors and oxidative stress

Elizabeth Pask (Advisor: J. Kirkland) - May 10, 2010

The effects of consumption of cooked/cured meat and green tea catechins on xenobiotic metabolism and longevity in F344 rats



FALL 2010 SEMINAR SERIES

September 27	Dr. Angela Tie Postdoctoral Fellow Dept. of Human Health & Nutritional Sciences University of Guelph	ER Stress and Chronic Disease: Carbohydrates vs. Lipids
October 4	1. John Paul Girardi and 2. Leanne Pereira MSc Candidates Dept. of Human Health & Nutritional Sciences	1. Autophagy in Health and Disease 2. LC3 and Lipid Droplet Formation
October 18	Dr. Greg Steinberg Dept. of Medicine McMaster University	Role of Skeletal Muscle AMPK/ACC2 Signalling in Regulating Metabolism: Insight from AMPK beta KO and ACC2 Knock-in
October 25	Dr. Vern Dolinsky Depts. of Pediatrics and Pharmacology	Resveratrol: A Nutraceutical Therapy for Cardiovascular Disease
November 1	Adeel Safdar PhD Candidate Dept. of Kinesiology	Endurance Exercise Rescues Premature Aging and Induces Systemic Mitochondrial Rejuvenation in Mitochondrial DNA Mutator Mice
November 8	1. Amir Malaki Nik PhD Candidate Dept. of Food Science University of Guelph and 2. Dr. Thangima Zannat Postdoctoral Fellow Dept. of Molecular & Cellular Biology	1. Influence of Emulsion Interface on Lipolysis and Release of Incorporated Molecules 2. Depletion of Cellular Poly(A) Binding Protein Prevents Protein Synthesis and Results in p53 Mediated Apoptosis in HeLA Cells
November 15	Dr. Tami Martino Dept. of Biomedical Sciences University of Guelph	Circadian Clocks: Emerging Roles in Cardiovascular Function and Dysfunction
November 22	Dr. Brenda Coomber Dept. of Biomedical Sciences	Factors Influencing Blood Vessel Phenotype in Solid Tumors
November 29	Dr. Robin Duncan Postdoctoral Fellow Dept. of Nutritional Sciences University of Toronto	Novel Lipases in Obesity Development: of Skinny Mice and Men



HHNS 2010 UNITED WAY CAMPAIGN ACTIVITIES

Once again, HHNS exceeded our departmental goal for the United Way Campaign—this year's goal was \$9,799 and we raised \$12,101!!!! 123% of our goal. Way to go HHNS!

This was attained through generous donations from our dept. members as well as our annual HHNS Italian Day luncheon and HHNS raffle draw for a variety of wonderful gifts. HHNS also ran, throughout the year, an ongoing book sale, with donations going to The United Way.

At the College level, HHNS grad students, Daniel Rapoport and Adam Toth, represented CBS in the University College Idol competition.

The student of HK*34012 and HK*35012 raised over \$700 by purchasing their lab group photo and donating the money to the HHNS United Way campaign. A big thank you to Caitlin McDonough for the great idea, and to Rebecca Halls and Mandy Core for assisting with all the photos.

Premila Sathasivam, United Way volunteer extraordinaire, was the 2010 recipient of the University of Guelph's Gabrielle Hubert Award for outstanding contributions to the University's United Way campaign.



Gaayathiri Jegatheeswaran, MSc candidate, HHNS (John Srbely, advisor) received third place for her poster presentation entitled "Effects of Central Sensitization on Motoneurone Excitability" at the 5th Annual CSLSR (Canadian Society for Life Science Research) conference held at McGill University, August 13-14, 2010.

UPDATE!



RENO UPDATE!!!!!!!!!!

from Prof. David Ma

The cage wash area is a major hub in the animal wing. To keep our facility up to date and modern, HHNS obtained an equipment grant to replace our aging cage washer from NSERC in April, 2010. Subsequently, additional matching funds were obtained from the Office of Research, CBS and HHNS to renovate the dirty and clean rooms. Plans for the renovation are nearing completion and it is anticipated that the installation and renovation of these rooms will begin early in the New Year. These changes will enable us to meet our animal needs and regulatory obligations for many years to come.

MSc Coursework and Project Graduates

April 2010

Student

Harrison Bishop
 Julie Kisch
 Ashley Harris
 Jaclyn Shipp
 Laura Western

Advisor

Coral Murrant
Amanda Wright
Bill Bettger
El-Sayed Abdelaal/Alison Duncan
Mike Lindinger

August 2010

Connor Avery-Cooper
 Abbas Baig
 Blair Cameron
 Jenna Campbell
 Rebecca Forster
 Nicole Holland
 Scott Howitt
 Kristin Inch
 Katherine Krause
 Samantha Logan
 Lisa Maddalena
 Julie McCluskey
 Diana Merino
 Megan Monaghan
 Shannon O'Dwyer
 Vance Pegado
 Christine Pinto
 Sabrina Sengupta
 Kevin Sukhu
 Sulara Talpe Guruge

Jim Kirkland
Dan Ramdath/Alison Duncan
Bill Bettger
Alison Duncan
Kelly Meckling
Janis Randall-Simpson/Alison Duncan
Bill Bettger
Coral Murrant
Lori Vallis
Bill Bettger
Bill Bettger
Amanda Wright
David Mutch
Mike Lindinger
Krista Power/Alison Duncan
Alison Duncan
Alison Duncan
Bill Bettger
Lorraine Jadeski
Marica Bakovic

IN THE



The March/April 2010 issue of Best Health magazine's article "The Secrets Behind Canada's Largest Supermarket" featured HHNS MSc graduate, Sita Kacker, product developer, Loblaw's.

Associate Professor, Leah Bent, and her research team appear in the article "University of Guelph Researchers Conduct the Ultimate Tickle Test on Astronauts" in the May 26, 2010 issue of the Guelph Mercury. Dr. Bent's research, nicknamed "Project Hypersole" tests the changes in skin sensitivity on the bottom of astronauts' feet, before and after flight, to determine which balance receptors are more active when the body is in zero gravity. She hopes the research now underway will eventually help seniors who fall down because of balance problems.

This research project also received media attention including CTV, CBC and Yahoo News, At Guelph, and the Portico.

HHNS MSc students, Stephanie Bolliger and Rachel Rebry's work in conjunction with the Children's Museum in Kitchener, to develop new Grade 4, 5 and 6 health curriculum packages appeared in the March 10, 2010 issue of At Guelph.

"Fish Everyday Keeps the Doctor Away" - an article in the June 9, 2010 issue of At Guelph, featured PhD candidate, Justine Tishinsky and her studies in Lindsay Robinson's lab on the effects of fatty acids on release of adiponectin.

"Exercising Before Eating a Fatty Meal Has Benefits, New Study Finds" was the title of a U of G News Release, June 11, 2010 highlighting research by Dr. Lindsay Robinson and PhD student, Mark Dekker on whether exercising a day prior to eating a high-fat meal improves the way the body responds to fatty foods. This information was also featured in the Fall 2010 issue of The Portico.

Dr. Mike Lindinger's research on the effects of heat on horses was featured in the At Guelph June 22nd article "When the Rider is Hot, the Horse is Hotter".

"Making Sense of Nutrition—Via Blog" was the title of an At Guelph article highlighting the new online blog by Blair Cameron, MSc, HHNS. The blog "Fodder File" provides nutrition and health news and information to readers at (<http://fodderfile.com>). Diana Merino, MSc, HHNS was a recent "guest post" contributor to the Fodder File, sharing her insights from the 2nd Annual Canadian Obesity Network Student Meeting in Ottawa, June 9-12, 2010.

"Omega-3 Effects Under Study", At Guelph, February 10th issue, featured Dr. Lindsay Robinson's research on fish oil fatty acids and their immediate effect of inhibiting the body's ability to remove blood clots.

The NSERC website (February 23, 2010) contained an article under "Impact Stories" titled "A Sole Purpose: Maintaining a Good Balance" which focused on Dr. Leah Bent's NSERC supported research looking at sensors in the foot sole which send signals to the brain about the angle we stand at.

Kerry Mullen, PhD graduate, Teaching Technician for the new BIOL* 1080 course, and Guelph-Humber instructor was featured in a February 24th At Guelph article titled "Even Mom and Dad Can Learn—PhD student, Guelph-Humber instructor finds different audiences for message on healthful living". Kerry's thesis research was on how high-fat diets affect storage or use of fat in skeletal muscle.

Dr. John Srbely was interviewed on his latest research in the field of myofascial pain/fibromyalgia. For the April 2010 issue of Fibromyalgia Network. The article discusses and summarizes some of the novel concepts that Dr. Srbely and another researcher are developing in fibromyalgia research/therapeutics.

"Vitamin D Shows Potential in Natural Chemotherapy" was the title of a news release, April 29, 2010 on Dr. Kelly Meckling's MARRS research. The MARRS protein is a receptor or "gatekeeper" for vitamin D signaling. Dr. Meckling's research has shown that breast cancer cells become hypersensitive to the nutrient and are easier to kill.

A focus on this research was also in a front page article in the Guelph Mercury, May 5, 2010 in an article titled "Research Deepens Vitamin D's Anti-Cancer Role"

Dr. Terry Graham was interviewed for an article in the Guelph Mercury, May 10, 2010 "Professor Says Exercise is Still the Best Drug - Exercise and Simple Changes in Diet Can Have Big Benefits".

A profile on Dr. David Mutch and his research in nutrigenomics was featured in the Fall 2010 issue of the Portico (U of G Magazine for Alumni and Friends). Dr. Mutch's work involves studying genetic data, metabolomics, nutrition and bioinformatics.

AROUND THE DEPARTMENT

Many thanks to **Diana Philbrick, Lyn Hillyer, Andy Huang, Mehrnoosh Kashani** and **David Ma**, as well as the many others who helped before and during the recent Animal Wing inspection. These inspections are vital to the research efforts of HHNS and these folks deserve our appreciation.

The HHNS Career Seminar was held on May 31st, organized by **Dr. Alison Duncan**. Three HHNS MSc graduates spoke at the seminar:

Paddy Murphy—Scientific Documentation Coordinator, Nestle Nutrition Canada

Kelly Ferriera—Assessment Officer, Bureau of Product Review and Assessment, Natural Health Products Directorate, Health Canada

Amanda MacNaughton—Advisor, Scientific & Regulatory Affairs, Food & Nutrition Policy, Food and Consumer Manufacturers of Canada.

The 2010 Kin Games were hosted by the University of Guelph this year. 400 kinesiology students from across Canada participated in this year's games. There were 16 teams that competed in both athletic and academic events including an Amazing Race and an academic challenge, as well as road hockey, water polo.

Coral Murrant received a \$25,000 grant from the Preeclampsia Foundation. The awards provide initial funding for novel research pertaining to the causes, diagnosis and treatment of hypertensive disorders in pregnancy. Dr. Murrant will be investigating the lack of appropriate communication pathways that link blood flow needs and its potential for inhibiting fetal development and intrauterine growth.

The Celebration of Life and Learning—the annual donor tribute service held by the human anatomy program was held on April 7th in War Memorial Hall. The attendance at this year's service was excellent, and the ceremony itself was once again an outstanding and moving event.

Katie Krause (MSc coursework student, Lori Vallis, advisor) was awarded a \$7,000 stipend for the summer 2010 term from the Ontario Neurotrauma Foundation (2010 Summer Internship Research Program in Injury Prevention) to support her MSc research (title of project: Examining the relationship between falls risk and sarcopenia in institutionalized older adults".

Adam Toth and **Daniel Rapoport** (MSc candidates, HHNS) represented the College of Biological Sciences at the University of Guelph College Idol competition on October 28th. Adam and Daniel gave an excellent performance, playing guitar and singing.

Chris Gerling (MSc candidate) is the new HHNS Grad Student Rep for 2009/2010. Chris takes over the duties from Jay McFarlan.

Terry Graham's 10-year term as Chair of HHNS comes to an end on July 31, 2011. A search committee has been formed and will begin the search for a new Chair in January 2011.

A Canadian research project that explores sudden changes in skin sensitivity experienced by some astronauts in space is unlocking down-to-earth secrets of the role played by our feet in the way we age. The six-member research team from the University of Guelph; including Dr. Leah Bent, Catherine Lowrey, Nick Strzalkowski, Chris Lam and Stephanie Muise (with one member from Wilfrid Laurier University- Dr. Stephen Perry) has been conducting a series of tests to collect balance and hypersensitivity data from the foot soles of astronauts scheduled to travel aboard three NASA's shuttle missions. The first session took place during STS-132 on May 14, 2010. Six additional astronauts from the crews of the Discovery mission in December 2010 and Endeavour in February 2011 will participate in identical trials before the launch of their shuttles and immediately upon their return to Earth. Using vibration devices and filaments to 'tickle' responses from the eight astronauts, researchers are documenting, for the first time, any changes

in the skin sensitivity of each astronaut's foot sole in order to identify which receptors may be influenced by a period of weightlessness. Coupled with functional balance tests, these measures will help establish how hypersensitivity contributes to balance control. Anecdotal evidence from astronauts suggests that the tingling sensation some feel in their feet while in space and for short periods back on Earth may be the response of different sensory systems that naturally compensate for the re-weighting of sensory information due to the decreased input from the vestibular, or inner ear, system in an environment of microgravity. Project results are expected to add significantly to existing studies of the aging process, which includes reductions in information relayed by skin sensors that lead to a loss of balance control and, among the elderly especially, a greater incidence of falls. The data will also provide knowledge that benefits astronauts as they perform their in-flight and post-flight duties.



Pictured above: Nick Strzalkowski (PhD candidate, HHNS), Dr. Dave Williams (astronaut, and currently the Director of Surgery at St. Joseph's Hospital, Hamilton, faculty member at McMaster University and inspiration for hypersole), Dr. Leah Bent (Associate Professor, HHNS), and Catherine Lowrey (PhD candidate, HHNS).



The Cannon was painted this past July in honour of HHNS graduate student, Breanne Anderson's successful MSc defence.



ONTARIO GRADUATE SCHOLARSHIP IN SCIENCE AND TECHNOLOGY (OGSST)

The following HHNS graduate students will be receiving an OGSST scholarship, valued at \$5,000 for the Winter 2011 semester:

Shannon Clarke, MSc candidate—David Ma, advisor

Roberto Gulli, MSc candidate—David Dyck, advisor

Catherine Lowrey, PhD candidate—Leah Bent, advisor

Jessica Monteiro, MSc candidate—David Ma, advisor

Jessica Ralston, MSc candidate—David Mutch, advisor



A large crew of 21 children related to HHNS faculty enjoyed a fun Christmas party of their own on Friday, December 10th at the brand new Royal Distributing Athletic Performance Centre just north of Guelph where they blew off steam by running every which way with soccer balls on the amazing indoor field and then ate pizza and other treats (including vegetables) in the party room. Kelly Kirkland was on hand to read Christmas stories and gifts then magically appeared for each child.



Mark Your Calendars Now

41st Annual Human Health and Nutritional Sciences Symposium

Saturday, January 22, 2011

“A Widening Concern”



Tickets Now on Sale—see Anne Lovett-Hutchinson, main office, HHNS

WELCOME

Steve Brown —joined the HHNS faculty as Assistant Professor in September. Steve researches the causes and consequences of low back pain. Specifically he uses biomechanical techniques to study function, injury, adaptation and rehabilitation of the spine and related skeletal muscle. Steve received his undergraduate and Masters degrees from the University of Windsor, his PhD from the University of Waterloo, and completed a post-doctoral Fellowship at the University of California San Diego.

David Wright —joined the HHNS faculty as Associate Professor and tier II Canada Research Chair in Lipids, Metabolism and Health in September. David moved to Guelph this past August from Edmonton. From 2006-10 he was an Assistant Professor in the Department of Agriculture, Food and Nutritional Sciences at the University of Alberta. David's wife Heidi and 2 boys Josh (6) and Sam (3) love their new home in Ontario. David's research is centred on understanding how exercise regulates adipose tissue and skeletal muscle gene expression and metabolism, and in turn how these changes can be used to treat and prevent type 2 diabetes .

Deborah Arsenault—joined HHNS in December 2010 as Human Anatomy Laboratory Technician. Deb began her career as a lab technician in Clinical Hematology and then studied to achieve registration as a Medical Lab Technologist in Hematology and Transfusion Medicine, working at the St. Catharines General Hospital, the trauma centre for Niagara. An opportunity to be involved with international high school students led to teaching high school sciences; Biology, Chemistry and Physics. She has since earned a BSc in Molecular Biology and taught at Everest College in the Medical Laboratory Technician, Massage Therapy and Physio Therapy programs. Her current position in the Anatomy Lab, HHNS, has her facilitating the workshops and taking care of the Lab.

Kerry Mullen—joined HHNS as the Teaching Technician for the new first-year course, Biology 1080 in September. Kerry received her PhD in HHNS in April 2010, and has been teaching at Guelph-Humber in the BASc Kinesiology program for the last three years.

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