

News Pathology

Spring/Summer 2009

The University of British Columbia

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RESEARCH

The Ziltener Laboratory
Programming directional migration in
activated T cells

EDUCATION

New leaders of educational
programs in the
department

GRADUATION 2009

Smooth wind graduates



Features



Page 19



Page 21



Page 22

Contents

1 *Overview*

From The Department Head	3
New leaders of educational programs in the department	4
New Faculty Members	6

2 *Research Environment*

The Ziltener Laboratory	8
Pathology and Laboratory Medicine at the BC Centre for Disease Control	10
PHC Team Wins International Infection Prevention and Control Award	12
New Test Distinguishes Breast Cancer Subtypes	13

2 *Academic activities*

Residency Program	14
New Residents	16
Transition from Postdoc to Jr. Faculty: Surviving the Initial Years	18
Pathology Day	19
Graduate Programs	20
Bachelor of Medical Laboratory Science (BMLSc)	22

3 *Meet the people of pathology / creative interests*

Meet the People of Pathology	24
Recent Awards / Press Releases	26
Tyrolean Iceman 'Otzi' Hosts International Congress	27
Department's Distinguished Lecturer Series	28
Learning Centre Volunteer Opportunities at the David Hardwick Pathology	28
CMPT and the UBC Program Office for Laboratory Quality Management welcomed 4 visitors from China CDC	29
What's New with the BC BioLibrary?	30
Announcements	31

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Planning the Next Wave

With this edition of the Newsletter we welcome a number of new leaders of educational programs in the department; Haydn Pritchard as Program Director for Graduate Education (Graduate Advisor), Jason Ford as Program Director for Undergraduate Medical Education, and Diana Ionescu as Anatomic Pathology Residency Program Director. I would like to thank these individuals for stepping up and assuming these important roles, and assure them of departmental support moving forward. Dan Holmes is taking over from Tanya Nelson as departmental representative on the Clinical Faculty committee for the Faculty of Medicine. This is a very important committee, and I do hope that the clinical faculty can become more involved and have more of a sense of belonging within the university, Faculty of Medicine, and academic Department of Pathology and Laboratory Medicine in the years to come.

This is the beginning of the academic year for the residents, whose academic year runs from July 1 to June 30. This year we welcome a large group of new residents into the program, including Mircea Iftinca, Rohit Verma, Jason Morin, Amanda Wilmer, Ayesha Vawda, Joyce Leo, Alaa Samkari, Jingyang Huang, Salwa Al Malti, Ehsan Davani, Karla Pederson, Natasha Penner, Patrick Wong, Erin Chapman, and Ananta Gurung. In the cases of Drs. Wong, Chapman, and Gurung, we are welcoming them back to the Department of Pathology and Laboratory Medicine, as all graduated from the BMLSc program. We look forward to working with them in the years to come and wish them all success in their respective programs.

This newsletter also marks the end of my six month appointment as Acting Head. The highlights were undoubtedly the BMLSc graduation, and Pathology Day at the Life Sciences Center and River Rock Casino, celebrations of different aspects of our educational activities in the department. Serving as Acting Head was an interesting and enjoyable experience, personally. I particularly enjoyed reconnecting with department members on campus, where I worked for many years. I would like to end by thanking Maureen and the very capable and committed staff of the Department for all their work on behalf of the students and faculty. They are the glue that holds the enterprise together.



Serving as Acting Head was an interesting and enjoyable experience, personally. I particularly enjoyed reconnecting with department members on campus, where I worked for many years.

NEW LEADERS OF EDUCATIONAL PROGRAMS IN THE DEPARTMENT

HAYDN PRITCHARD, BSc (Hons), PhD
PROGRAM DIRECTOR FOR GRADUATE EDUCATION (GRADUATE ADVISOR)

Dr. Haydn Pritchard has been appointed as Program Director - Graduate Studies for the Department effective July 1st. Dr Pritchard has been with our Department for over 25 years after coming to UBC from England in 1978 as a Killam Fellow in Biochemistry. He received a BC Health Care Research Foundation Scholarship and established his laboratory in Pathology within the clinical units of the Lipid Clinic at the old Shaughnessy Hospital and subsequently in the Healthy Heart Program of St Paul's Hospital. Together with fellow Department member, Dr Jiri Frohlich, they established their research program in the area of genetic and environmental factors that control cholesterol metabolism. Their work rapidly established them as national and international opinion leaders in the discipline of lipoprotein metabolism. This blend of clinical and basic science lead Dr Pritchard to significant collaborations with the biotechnology industry. He is a co-inventor of VisuDyne from Quadralogics, and served as a Senior Vice President for Pharmaceutical Research at Forbes MediTech Inc. Dr Pritchard was promoted to full professor 1993. In 2001, Dr. Pritchard turned his attention to the health promotion needs of patients at risk for cardiovascular disease and co-founded the Healthy Heart Society of BC, again with Jiri Frohlich. This organization focuses on health care providers across the province to assist them in addressing and developing strategies for the



primary and secondary prevention of cardiovascular disease. More recently, he has founded a new organization, IMPACT BC, whose mandate is to deliver the quality improvement strategies of the BC Ministry of Health and BCMA with respect to primary care providers. These organizations have currently raised over \$20 million from governmental and corporate supporters. Outside of research, business and health promotion, Dr Pritchard has significant experience with not for profit societies. He has served as a Vice President for the Mountain Equipment Cooperative and has also played leadership roles in coaching and administration for several local youth and senior soccer clubs. He remains an active mountaineer and ocean kayaker.

In taking up his appointment, Dr Pritchard indicated that he is delighted to be given the opportunity but recognizes how hard it will be to follow in the footsteps of **Dr. David Walker** who served in this role for the past 7 years. Dr Pritchard stated that he is looking forward to working with the students and faculty alike to maintain and further develop a learning environment of choice that capitalizes on individual student strengths and provides a safe, tolerant and supportive environment that helps each student overcome challenges. Dr Pritchard will establish his office at UBC and he can be reached at: haydn@interchange.ubc.ca and (604) 551-2773. A good way to track him down is on iChat: haydnpritchard@mac.com.

JASON FORD, M.D. (BRIT. COL), FRCPC
PROGRAM DIRECTOR FOR UNDERGRADUATE MEDICAL EDUCATION

Jason Ford was born in Calgary and grew up in Victoria. He graduated from UBC medical school in 1996, and then completed a residency in General Pathology at the University of Ottawa. After fellowships in pediatric hematopathology (UBC) and adult hematopathology (Harvard), Jason returned to Vancouver to work at the Children's & Women's Hospital with Dr. Louis Wadsworth and Dr. Bonnie Massing. In 2006, Jason became head of the Division of Hematopathology at C&W, and a year later was appointed chair of the "Blood & Lymphatics" block in Year 2 of the UBC medical school. He also became Director of the David F. Hardwick Pathology Learning Centre. In 2008 he received both the Department of Pathology Education Award and a Killam Teaching Prize. Jason is married to Angela, and has four children: Malcolm (9), Beatrice (7), and Calvin and Oliver (4 months). Jason has dreams of a Stanley Cup being paraded down Granville Street, but enough insight to realize this is completely delusional.



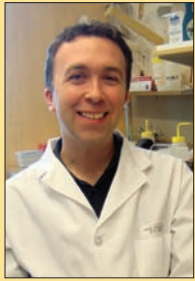
DIANA N. IONESCU, MD, FRCP(C), FCAP
ANATOMIC PATHOLOGY RESIDENCY PROGRAM DIRECTOR



Dr. Ionescu joined the BC Cancer Agency as a Consultant Pathologist and the UBC Faculty of Medicine as a Clinical Assistant Professor in 2006 and was promoted to Associate Professor in 2009. Dr. Ionescu graduated from the Univ of Medicine and Pharmacy "Iuliu Hatieganu" in Cluj Napoca, Romania and did her residency training in Anatomical and Clinical Pathology at the University of Pittsburgh Medical Center, followed by a Fellowship in Gynecological Pathology at Vancouver General Hospital. One of Dr. Ionescu's main interests is in Pulmonary Pathology. Prior to her residency training Dr. Ionescu did a Postdoctoral Fellowship in pulmonary research with Dr. J. Hogg at the iCAPTURE Center, and during her residency focused on gaining extensive diagnostic experience by collaboration with Dr. Yousem at UPMC and Drs. K. Leslie and T. Colby at the Mayo Clinic.

She is the recipient of several awards from the Pulmonary Pathology Society and the recipient of Donald King Fellowship from the AFIP. Dr. Ionescu's diagnostic interests are in pulmonary, gynecological and breast pathology and her research interests are in the implementation of molecular techniques in oncologic pathology. Dr. Ionescu is the Medical Director for Clinical Trials at BCCA from August 2008 and the UBC AP Residency Program Director since January 2009. In addition, Dr. Ionescu is actively involved in telepathology and web-based continuing medical education and enjoys promoting the role of the pathologist to the community. She is also involved in various educational activities for Clinicians, especially Medical Oncologists, and interested in the multidisciplinary approach to lung cancer classification and treatment.

WELCOME NEW FACULTY MEMBERS



Kevin L. Bennewith, PhD
Clinical Assistant Professor
Research Scientist
Medical Biophysics Dept
BC Cancer Research Centre

Dr. Kevin Bennewith received his PhD in Pathology and Laboratory Medicine at UBC in 2004 under the supervision of Dr. Ralph Durand. During his PhD training, he studied the physiology of solid tumours with particular emphasis on quantifying changes in tumour perfusion and oxygenation over time. Dr. Bennewith was a post-doctoral scholar at Stanford University from 2004–2008 working with Dr. Amato Giaccia. His post-doctoral work included studying the role of connective tissue growth factor in pancreatic tumour growth and using an orthotopic pancreatic tumour model to study the efficacy of chemotherapeutics designed to target poorly oxygenated tumour cells. He also helped discover a central role for lysyl oxidase in breast cancer metastasis through recruitment of bone marrow-derived cells to metastatic target organs. Dr. Bennewith is currently a Research Scientist in the Department of Medical Biophysics at the BC Cancer Research Centre, and a Clinical Assistant Professor in the Department of Pathology and Laboratory Medicine at UBC. His research interests include the use of chemotherapeutics to modify solid tumour response to radiation therapy, understanding the effects of transient tumour hypoxia on tumour progression and response to cancer therapy, and studying the role of bone marrow-derived cells in enhancing metastatic tumour growth.



Jacqueline Quandt, PhD
Assistant Professor
UBC Hospital

Dr. Jacqueline Quandt joined the department in April 2009 as an Assistant Professor. Jackie completed her undergraduate degree (Microbiology & Immunology) and doctoral degree in neuroimmunology (Pathology) at UBC where she focused on lymphocyte trafficking at the level of the blood-brain barrier. In 1999 she set off for a post doctoral fellowship at the National Institutes of Health in Bethesda, MD to work on animal models of multiple sclerosis. Over the last four years leading an Animal Models Unit her research focused on immunological and genetic parameters in autoimmunity as well as the development of novel therapeutic applications.

Jacque's research at UBC continues to focus on immunological damage and repair related to multiple sclerosis and other diseases of the nervous system. When not at the lab, she's busy racing after her 2 boys and enjoying beautiful British Columbia again.



Tanya L. Gillan, PhD, FCCMG
Clinical Cytogeneticist
Cytogenetics Laboratory,
Vancouver General Hospital
Clinical Assistant Professor,
UBC

Dr. Tanya Gillan received her undergraduate degree (BSc) from Saint Mary's University, Halifax, Nova Scotia, where she majored in biology and first became interested in the field of genetics. She then went on to complete a Master's degree at Dalhousie University where she worked as part of the team that identified the gene responsible for Niemann-Pick Disease Type D (Nova Scotian variant). Dr. Gillan decided to shift her focus to cancer genetics and moved to Edmonton, AB to pursue a PhD in Oncology at the Cross Cancer Institute/University of Alberta, where she researched the genetics of Wilms tumor. Upon completion of her PhD, Dr. Gillan was accepted into the Canadian College of Medical Geneticists (CCMG) fellowship program in molecular genetics in Calgary, AB. After finishing her molecular genetics specialty, she then undertook a second specialty in cytogenetics with the college. In September 2008, Dr. Gillan successfully completed her CCMG licensing examinations and is a dual certified clinical molecular geneticist and cytogeneticist. Dr. Gillan is currently working as a clinical molecular cytogeneticist at the Vancouver General Hospital and is very happy to be in Vancouver and living next to an ocean again! Her research interests lie in cancer genetics with particular emphasis on hematopoietic malignancies.



Angelica Oviedo, BA, MD
Clinical Assistant Professor,
Children's & Women's Health
Centre of BC

Dr. Angelica Oviedo began working at BCCH in February 2009. She came from the Children's Hospital Los Angeles where she was working for one year. Prior to that, she worked at Kaiser Oakland for 5 years. Dr. Oviedo completed her residency at University of Washington, Neuropathology training at University of Washington / University of Alabama at Birmingham and her Pediatric Pathology Fellowship at Children's Memorial Hospital in Chicago. Dr. Oviedo did some locums work here in 2007, when she was helping to cover a maternity leave. She practice pediatric surgical pathology, perinatal pathology and neuropathology.

Dr. Murray Savard grew up in Edmonton, graduated from the University of Alberta as a MD in 1981 and worked in the Canadian Armed Forces as a physician until returning to General Pathology at UBC. He graduated in 1991 with General Pathology certification and worked in Ottawa at National Defense Medical Centre as Chief of Laboratories, and was on staff at Queensway Carleton Hospital in Nepean, and Laboratory Director of Gamma Dynacare Laboratory of Eastern Ontario until 1997. Dr. Savard then returned to Alberta where he worked for 9 years at David Thompson Regional Health Center in Red Deer. In Nov 2007 Dr. Savard began work at the Kelowna General Hospital. His family love skiing and bicycling in their spare time.

Dr. Joanna Wegrzyn was born and raised in Poland where she received her Master degree in Biotechnology and Molecular Biology in 2003. She obtained her PhD in Biochemistry in October 2007 at The Jagiellonian University in Krakow, Poland. Dr. Wegrzyn's dissertation thesis research project focused on the role of Stat3 transcription factor in the regulation of cellular respiration and was entirely done in the Department of Immunology at The Lerner Research Institute in The Cleveland Clinic Foundation in Cleveland, USA. After completion of her PhD she relocated to the Department of Biochemistry and Molecular Biology at Virginia Commonwealth University, Richmond, VA where she was working as a post-doctoral fellow on the completion of her manuscript, which was accepted by Science. That was the culmination of her graduate work. Most recently, Dr. Wegrzyn accepted a postdoctoral position in Dr. Aly Karsan's lab at the BC Cancer Agency in Vancouver. Her main interest is to investigate the role of new genes, including microRNAs in the etiology of premalignant disorders called myelodysplastic syndromes (MDS).

Dr. Koji Kinoshita started studying Biophysics with Dr. Masahito Yamazaki at the Shizuoka University in Japan in 1994. After two years, he received his MSc in Physics. He then focused further on studying "Biomembrane Structure and Stability" until he completed his PhD in Material Science in 1999. Working at McMaster University, UBC and Boston University for the last decade has developed his career and research skills. In April of 2009, he joined forces with Dr. Evan Evans in the Dept of Pathology & Laboratory Medicine at UBC. His current focus is the study of "Adhesion Force of Single Molecule on a Cell" using single molecular force spectroscopy.

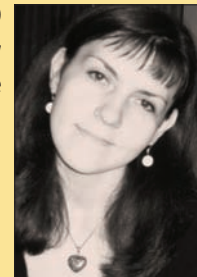
Dr. Kai Yu received his PhD from Changchun Institute of Applied Chemistry in polymer chemistry and physics, China. In March 2008, he joined Professor Donald Brooks's lab at the Centre for Blood Research as a postdoctoral fellow. His studies are concentrated on the development of carbohydrate based polymer brushes and their interactions with plasma proteins and blood cells.

Dr. Gulisa Turashvili, Research Associate, Molecular Oncology and Breast Cancer Program, BC Cancer Research Centre. Dr. Turashvili is a licensed pathologist from Georgia. She received her MD from Tbilisi State Medical University in Georgia, followed by residency training in Anatomical Pathology at Tbilisi State Medical University and PhD program, Dept. of Pathology, Palacky University, Czech Republic. Her PhD project involved collaboration with the Institute of Cancer Studies, University of Birmingham, UK, and focused on the analysis of gene expression profile of normal luminal cells and its relevance to the histopathological classification of ductal and lobular breast carcinomas. She defended her PhD and passed Georgian pathology board examination in Spring, 2007. From June 2007 to May 2009, Dr. Turashvili has joined the CIHR Training Program "Clinician-Scientists in Molecular Oncologic Pathology" under the supervision of Drs Samuel Aparicio and Peter Watson at BC Cancer Agency, Vancouver. Her main research activities include work on METABRIC (Molecular Taxonomy of Breast Cancer International Consortium) project as well as columnar cell lesions and early risk for breast cancer..

Murray L. Savard, MD
Clinical Instructor
General Pathologist
Kelowna General Hospital



Joanna Wegrzyn, MSc, PhD
Postdoctoral Research Fellow
BC Cancer Research Centre



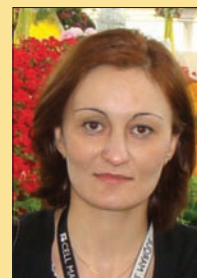
Koji Kinoshita, MSc, PhD
Research Associate
UBC Hospital



Kai Yu, PhD
Postdoctoral Research Fellow
Centre for Blood Research



Gulisa Turashvili, MD, PhD
Research Associate
Molecular Oncology
BC Cancer Research Centre



MEDIA RELEASE | APRIL 22, 2009

UBC research finds molecular "key" to successful blood stem cell transplants

University of British Columbia researchers have discovered a "molecular key" that could help increase the success of blood stem cell transplants, a procedure currently used to treat diseases such as leukemia, Hodgkin's lymphoma and aplastic anemia.

During a blood stem cell transplant, donor blood stem cells - which can produce red and white blood cells and platelets - are injected into the recipient to produce new blood. The stem cells then need to travel to the thymus - an organ near the heart - and produce T-cells, a type of white blood cell that orchestrates the body's immune system.

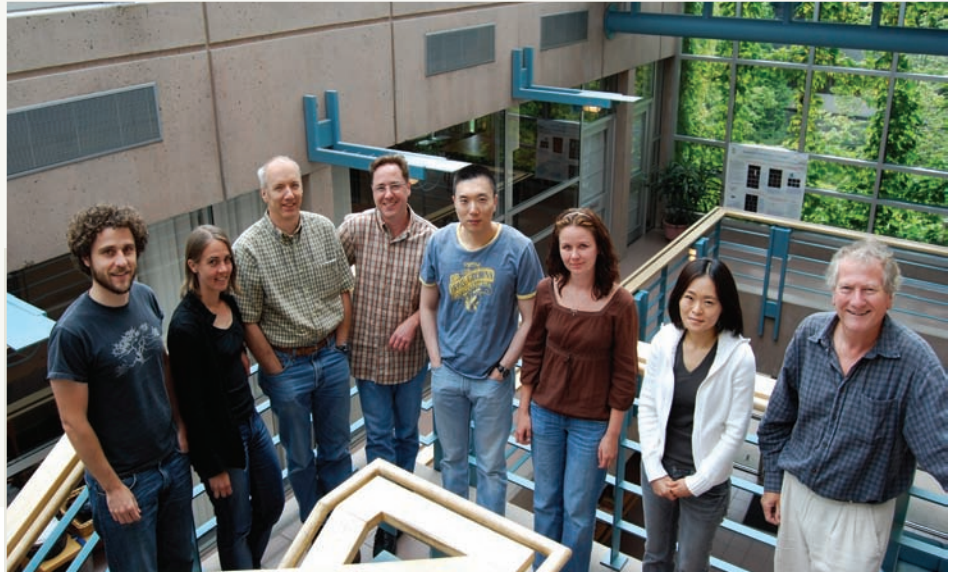
A common problem with blood stem cell transplants is the failure of stem cells to repopulate the thymus and generate T-cells. Without T-cells the patient is unable to fight infection and post-transplant prognosis is poor. Now Prof. Hermann Ziltener and his research team at UBC's Biomedical Research Centre have identified a molecule called S1P that can tell the thymus to "open the gates" and accept more stem cells.

"This discovery gives us a handle on determining whether the thymus will be receptive to migrating stem cells," says Ziltener, a professor in the Dept. of Pathology and Laboratory Medicine. "By treating patients with drugs that control S1P, scientists can now manipulate the thymic gates to either open or close."

The same team had previously identified a number of molecules that function as the thymic gates for migrating stem cells. The new study, published in the April issue of *The Journal of Experimental Medicine*, is the first to hone in on the "key" molecule that can open the thymic gate. Next steps in the research include finding the mechanism T-cells in blood use to control S1P formation. Researchers estimate that it would be at least five years before the discovery can be translated into a clinical test.

For more information about bone marrow transplants, visit www.bloodservices.ca.

THE ZILTENER LABORATORY



Klaus Gossens, Silvia Naus, Douglas Carlow, Michael Williams, Wooseok Seo, Krystle Veerman, Kyounga Seo and Hermann Ziltener

To protect our body from infection and injury there is a requirement for cells to circulate through the blood vessels and tissues. A major focus of our laboratory is on understanding the mechanisms that control the trafficking of the specialized white blood cells involved in immune surveillance and repair.

Cells in the body travel continuously through the blood vessels ready to seed new tissues, repair injury or defend against infectious agents in an immune response. If an infection occurs many different cell types are mobilized to fight the infectious agents. Some of these cells (dendritic cells) will ingest bacteria or virus at the site of infection and then travel to centres in the body (the lymph nodes) that are designed to activate other cells to fight the invading infectious agent. In order to function properly these activated cells also receive programming that help direct them to tissues where the infection was first encountered. The cells are induced to express homing receptors on their surface which then directs them to enter appropriate inflamed tissues that bind these receptors. Thus the programming and subsequent regulation of the homing receptors are a critical aspect of efficient immune surveillance. There are several ways that cells regulate these directional signals. The cells can stop expression of the homing receptor, express non-functional receptor or cleave them from their surface. We are interested in understanding the signals and mechanisms that are required to program and subsequently regulate homing receptor function.

The cell surface molecule PSGL-1 (P-selectin Glycoprotein Ligand-1) is known to play a central role as a homing receptor on white blood cells in the control of cell migration in our body. Our research program has made several key contributions to deciphering the role this molecule plays in the migration of cells of the immune system. These include the migration of stem cells that give rise to T lymphocytes and the migration of mature T lymphocytes before and after they become activated.

Programming directional migration in activated T cells

When T cells become activated in lymph nodes they receive instructions where to go. One way for cells to become programmed to home to a specific site in the body is to express PSGL-1 decorated with a specific sugar group, the so-called sialyl-Lewis x group (sialyl-Lex). Sialyl-Lex is composed of four different simple sugar molecules and is assembled by four enzymes (so-called glycosyltransferases). PSGL-1 carrying sialyl-Lex can bind to selectins expressed on blood vessels near sites of inflammation. PSGL-1 and selectin act like a molecular Velcro that serves to slow down the cells in the blood stream and allow them to exit the blood vessel and enter the inflamed tissue to carry out their defense and repair functions. If the Velcro-like binding is absent T cells home poorly to sites of inflammation. Our laboratory has helped clarify the nature of the relevant glycosyltransferases and the signals that control expression of these enzymes. Understanding these signals and enzymes will aid in the development of novel anti-inflammatory drugs.

Unlocking the thymus for stem cells

Bone marrow is the home of the stem cells that produce the cells of the blood. Most types of cells in the blood are made in the bone marrow with one important exception. Cells of the immune system called Thymus-derived lymphocytes (or T cells) mature in an organ in the chest called the "thymus". T cells protect us from viruses and bacteria. When they are lacking, as happens when T cells are destroyed by infection with HIV-1, people suffer from multiple infections. T cells are generated in the thymus from stem cells that have traveled through the blood from the bone marrow.

Our research group has discovered that for the stem cells to be able to home to the thymus PSGL-1 expressed on stem cells must interact with P-selectin, expressed on blood vessels in the thymus. Previously it was thought that PSGL-1 binding to P-selectin was only important in inflammation and that other adhesion molecules controlled trafficking of cells under non-inflammatory conditions. We found that when P-selectin was absent in the thymus stem cells homed poorly. Our group then identified a molecule called S1P (sphingosine-1-phosphate) that circulates in the blood and can signal the thymus to express P-selectin and to accept stem cells. Thus, measuring S1P in patient's blood will allow us to predict whether the thymus is open for stem cells or closed. Excitingly there are already several drugs that can control the levels of S1P in blood and it should now be possible to use them to open the thymus for bone marrow stem cells and thus more efficiently regenerate the T lymphocytes in patients having undergone bone-marrow transplantation as a result of leukemia. Stem cell transplant recipients must remain isolated in a sterile room until their new bone marrow stem cells have given rise to sufficient white blood cells to protect them from infections by bacteria or virus. Unlocking the thymus with S1P may significantly reduce this isolation time and decrease the risk of this procedure.

Homing of naïve T cells into lymph nodes

Once T cells have matured they leave the thymus and travel through the blood and enter lymph nodes where the T cells encounter 'antigen presenting cells' (so called dendritic cells). The T cells probe dendritic cells for foreign antigens that

match their T cell receptor. If they find no dendritic cells presenting antigen they exit the lymph node, return to the blood to enter a different lymph node. Our laboratory made the discovery that PSGL-1 is also required for efficient homing of naïve (non-activated) T cells into lymph nodes. The surprising finding was that PSGL-1 did not express sialyl-Lex and did not function as a molecular Velcro as is the case for activated T cells or for thymus stem cells. We then uncovered a novel and hitherto unknown mode of PSGL-1 function involving the binding of chemokines (soluble factors that act as chemo-attractants for cells) and that this binding is required for efficient homing of cells into lymph nodes. If T cells cannot enter lymph nodes efficiently they cannot encounter antigen presenting dendritic cells and in these situations response to invading pathogens may be compromised. While one may seek to promote efficient homing of T cells there may be situations, such as organ transplant, where reduced homing to lymph nodes and an associated reduced immune response may be beneficial. PSGL-1 on naïve T cells may thus offer itself as a novel target to achieve immune suppression.

The multidisciplinary research environment of The Biomedical Research Centre (BRC), where our laboratory is located, significantly contributed to the success of our projects. Our team worked closely with BRC researchers McNagny, Rossi and Kast, experts in the very different fields of hemopoiesis, stem cell migration and mass spectrometry respectively to address specific problems arising in the projects highlighted here.

PATHOLOGY AND LABORATORY MEDICINE AT THE BC CENTRE FOR DISEASE CONTROL

By: Martin Petric



Muhammad Morshed, Linda Hoang, Jeff Stott, Judith Isaac-Renton, Martin Petric, Patrick Tang

The BCCDC is a leading centre for clinical and medical microbiology in British Columbia. In addition to fulfilling their diagnostic mandate, the 6 microbiologists are actively involved in teaching at UBC and carrying out externally funded research in microbiology. They actively collaborate with the Epidemiologists, the TB clinic and the STI clinic in investigating infections in the public health domain

and with faculty members at UBC and investigators both in Canada and internationally on research projects in microbiology. The following faculty members are based at the BCCDC.

Dr. Judith L. Isaac-Renton a Professor, is the Director of BCCDC Public Health Microbiology & Reference Laboratories, Provincial Health Services Authority (PHSA)

Labs. She is also Medical Head of the Environmental Microbiology and Parasitology Programs at BCCDC Labs. As a nationally recognized expert on drinking water, she was involved in the Walkerton Inquiry and North Battleford investigations. Besides her active clinical, academic and executive career, she is an avid researcher in the field of waterborne pathogens and has a special interest in

newly emerging pathogens and public health. In collaboration with researchers at the Division of Parasitic Diseases, US CDC-Atlanta, she is researching new approaches to assessing the risk of transmission of waterborne infections at a population level.

Dr. Muhammad Morshed, a Clinical Professor, is a Clinical Microbiologist and Head of Zoonotic Diseases and Emerging Pathogens section of Laboratory Services, BCCDC. He has an interest in spirochetal and rickettsial diseases specifically the molecular characterization of *Borrelia burgdorferi* and *Treponema pallidum* and detection of *Ehrlichia* spp in the tick population of BC. He also conducts research into *Helicobacter pylori*. Dr. Morshed is leader of the BCCDC Bioterrorism Response Group and West Nile virus and Laboratory Diagnosis surveillance. He is heavily involved as Block Chair in the HDI course.

Dr. Martin Petric, a Professor, is a Clinical Virologist at the BCCDC and is actively involved in clinical virology and in the development of the diagnostic virology laboratory at the BCCDC. In addition to his SARS-corona virus initiatives namely, the cultivation of the virus and implementation of diagnostic tests, he is now involved with pandemic influenza is overseeing the implementation of appropriate technologies for influenza diagnosis and investigation in British Columbia. He has also recently become involved in implementing tests for seroepidemiology of HPV in immunized subjects.

Dr. Linda Hoang, an Assistant Clinical Professor, is the Head for Bacteriology, Mycology and Enterics Program at the BCCDC who has been involved in BCCDC-led projects in Vietnam. In BC she is currently working on: *C. difficile* and

other healthcare-acquired infections, multidrug resistant organisms; emerging pathogens such as *Cryptococcus gattii*, and other outbreak related pathogens in BC; and food and waterborne infection surveillance. She is the site director for the Medical Microbiology Residency Training Program. She has developed the Microbiology portion of the Masters of Health Sciences Program.

Dr. Patrick Tang, an Assistant Clinical Professor, is the Head of the Mycobacteriology/Tuberculosis Laboratory and leads the Translational Research in Microbiology Program at the BCCDC. He is recognized for his expertise in molecular diagnostics, microarrays and bioinformatics which he is applying in the clinical microbiology laboratory. He has an interest in novel pathogens in infectious diseases as well as infectious etiologies in chronic diseases and cancer. Together with Dr. Jennifer Gardy and Dr. Robert Brunham, he is developing a bioinformatics program at the BCCDC.

Dr. Mel Krajden, a Professor, is the Director of Hepatitis Services at BCCDC and Associate Director of the BCCDC Public Health Microbiology and Reference Laboratories. He oversees the research on the impact of hepatitis C virus on our society which has been recognized for the innovative advances of delivery of care to hepatitis patients outside large urban setting. His research focus is on the use of molecular markers to monitor anti-viral efficacy in vivo and of molecular techniques to track microbial infections for epidemiological purposes. He has particular expertise in quantitative nucleic acid testing of hepatitis B and C viruses and inter-assay evaluation. Recently he has undertaken research in human papillomaviruses including their detection in specific populations, their seroepidemiology and seroconversion after vaccination.



The BCCDC is a leading centre for clinical and medical microbiology in British Columbia. In addition to fulfilling their diagnostic mandate, the 6 microbiologists are actively involved in teaching at UBC and carrying out externally funded research in microbiology.



Mel Krajden

PHC TEAM WINS INTERNATIONAL INFECTION PREVENTION AND CONTROL AWARD



W. Gilbert, C. Pienkowski, S. Gray, A. Sharma, L. Vierende, M. McNaughton, Dr. M. Hull, H. Green (back row)
J. Curtin, Dr. S. Champagne, Dr. M. Romney, Dr. J. Etherington (front row)

In the wake of the recent global H1N1 Influenza A (human swine flu) outbreak, Providence Health Care is especially pleased to announce that its Infection Prevention and Control Team (IPAC) has won the Oxoid Judges' Special Award for excellence in hospital infection prevention. It is the first time such an award has been bestowed upon an infection control team in North America.

"The Oxoid Infection Control Team of the Year Awards are open to infection prevention and control teams worldwide," says Fiona Macrae, Oxoid awards manager.

"We are delighted to make a Judges' Special Award to the infection control team at Providence Health Care for the work they have undertaken, not only reducing levels of hospital acquired infections, including VRE (Vancomycin Resistant Enterococci), which does not commonly feature in awards entries, but also reducing infections in intravenous drug users and homeless persons in the local community."

"It is a real honour to receive this award," said Dr. Marc Romney, PHC's Medical Director of Infection Prevention and Control. "The IPAC Team would like to share the Judges' Special Award with all PHC staff, physicians and leaders who have helped reduce our rates of hospital-acquired infections over the past five years."

At St. Paul's Hospital (PHC's flagship hospital), 15 percent of patient admissions are attributable to injection drug use. This group has high prevalence rates of antibiotic-resistant organisms (AROs), including MRSA (Methicillin Resistant Staphylococcus aureus) and VRE. Providing IPAC services for those with substance abuse issues – as well as the remainder of the population – has presented unique challenges for the IPAC Team as well as the hospital's other staff and physicians.

"We've tackled these challenges by instituting a broad infection prevention and control program, based on best available evidence and using local data to support innovative practice," said Romney.

"These strategies include an extensive hand hygiene campaign with a mandatory hand hygiene module for physicians, sophisticated laboratory detection methods, refined surveillance systems, and enhanced infection control awareness and practices among health care professionals."

Although challenges and barriers remain, PHC's dedicated IPAC strategies are having positive impacts, as evidenced by decreases in hospital acquired infections and improvements in hand hygiene compliance.

"Canada has long been seen as a leader in infection control and prevention practices," said Suhail Khan, Oxoid Canadian Clinical Market Manager. "The award submission made by the Infection Prevention and Control Team at Providence Health Care is an excellent example of the level of expertise within Canada. The Infection Control Practitioners at Providence Health Care should be proud of their world class efforts. Members of PHC's IPAC Team attended an awards ceremony in Birmingham, UK, on June 2, 2009, where they were presented with their Judges' Special Award."



Torsten Nielsen



Maggie Cheang

NEW TEST DISTINGUISHES BREAST CANCER SUBTYPES

Results will help determine treatment program for a subclass of breast cancer patients who may be at risk for recurrence

By: Torsten Nielsen

A study published in the May 20, 2009 issue of the Journal of the National Cancer Institute, led by **Dr. Torsten Nielsen**, Associate Professor and clinician-scientist with the Genetic Pathology Evaluation Centre, and **Maggie Cheang**, a recent PhD graduate, helps pave the way for more personalized treatment options for women diagnosed with hormone receptor-positive breast cancer. Currently, treatment is prescribed based on patient age, tumour size, lymph node involvement, grade and hormone receptor status. Approximately two-thirds of patients have tumours that are estrogen or progesterone receptor positive, and they receive drugs such as tamoxifen or aromatase inhibitors which block the hormones that feed breast cancer growth. This therapy has reduced breast cancer mortality by more than 30 percent, but not all women benefit and there is an important need to distinguish patients at high risk for recurrence who need more chemotherapy from patients at low risk, for whom adjuvant hormonal therapy alone may be sufficient.

Gene expression profiling of breast cancer has shown that hormone receptor

positive breast cancers break down into two major types, Luminal A and Luminal B. The Luminal B tumors grow more quickly and are thought to require more aggressive treatment. However the gene expression tests are expensive and require complex equipment and data analysis. Dr. Nielsen and his team devised a panel of simple, inexpensive antibody tests that can distinguish between these two types of hormone receptive tumours.

“Previously, no simple test has existed that allowed us to differentiate the breast cancer molecular subtype on standard biopsy samples, and as a result, the differences between Luminal A and B breast cancers could not be used to guide treatment,” says Dr. Nielsen. “Our antibody test can be applied cheaply and inexpensively to standard pathology specimens, and so far it seems to provide much of the clinically-important information gained from more complicated molecular tests.”

The GPEC team is already applying the test to clinical trials samples to find out which treatments work best. “We gave advance notice of our test to colleagues

in Alberta and have found that a newer taxane chemotherapy works well for Luminal B patients, whereas Luminal A patients don’t get added benefit. We are applying our test to other clinical trials series with the hope that this will let us personalize decisions about which drugs are needed to give each patient her best chance of cure, while avoiding unnecessary risks for side effects.”



“Our antibody test can be applied cheaply and inexpensively to standard pathology specimens, and so far it seems to provide much of the clinically-important information gained from more complicated molecular tests.”

GRADUATION 2009

GRAD NOTES



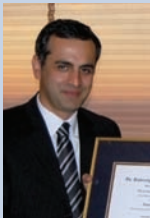
Cheng-han Lee (AP)

- Graduated UBC Bachelor of Science 1997, UBC MD-PhD program 2004
- Next: Molecular pathology/Soft tissue pathology fellowship at Brigham and Women's hospital
- Just had a boy – 6 months old now



Guangming Han (AP)

- Med school: University of Toronto 2000- 2004
- BSc University of Calgary in cellular and molecular biology
- MSc University of Toronto
- Next year: 1 year fellowship at Memorial Sloan-Kettering



Hamid Masoudi (GP)

- Graduation from medical school: 1992. Isfahan university, Iran
- Graduation from the first pathology residency: 2001, Isfahan University
- 2 years of postdoctoral research fellowship. GPEC, UBC



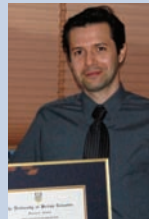
Shane Kirby (GP)

- MD Completed Spring, 2003 University of Calgary
- Internship (PGY 1), Royal Columbian Hospital, UBC (2003-2004)
- Upcoming Plans - working at Burnaby Hospital later this month
- Twin one month old boys



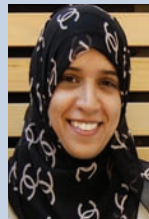
Raeda Al-Bannai (AP)

- Graduated from the Royal college of surgeons in Dublin, 1998
- Going to do fellowship in gyne pathology here in VGH for one year
- Husband doing fellowship in geriatric medicine & writing his Royal College exam in medicine June 2009



Victor Meneghetti (GP)

- Attended UBC Medical School, 2000-2004
- Interned for one year in Victoria at the Royal Jubilee and Victoria General Hospitals, 2005
- Residency from 2005-2009, General Pathology
- No job placement as of yet; preferring to take some time off first
- Special thank you to the general pathology program and staff for their help



Nafila Al-Riyami (MB)

- Medical school: Sultan Qaboos University, 1995-2002 Oman
- Internship: Royal and SQU hospitals Oman
- I'd like to thank God Almighty, my husband Adil, my 3 kids, my nanny and family for their support and patience.

I'd also like to thank the faculty of the department of medical biochemistry for their continued support and guidance.

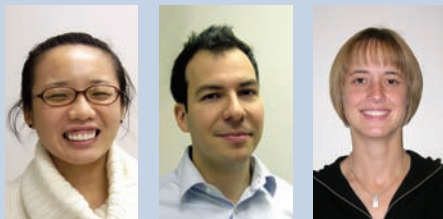
SMOOTH WIND GRADUATES!

FORMER CHIEF RESIDENTS



AP: Anna Adamiak, Jeff Terry | GP: Karen Ung

NEXT YEAR'S CHIEF RESIDENTS



AP: Fang-I Lu and David Schaeffer | GP Elaine Willman

RESIDENTS THAT RECEIVED ANY AWARDS/GRANTS (NOT AT PATHOLOGY DAY) DURING 2008-2009

Jeff Terry - "Best Trainee Presentation in Pulmonary Pathology at USCAP 2009" presented by the Pulmonary Pathology Society

ChengHan Lee - Clinical Investigator Program award

David Schaeffer - Coinvestigator for CIHR grant

Tony Ng - CIHR grant

By **Diana Ionescu**,
AP Residency
Program Director



At a sunset dinner held at the Royal Vancouver Yacht Club on June 2nd, 2009 we said good bye to another class of graduating residents. The venue and the atmosphere could not have been more beautiful and the sixty faculty, trainees and guests present all agreed that this was "the best party the department had in years".

Three Anatomical Pathology (Raeda Al-Bannai, Guangming Han, Cheng-Han Lee), three General Pathology (Victor Meneghetti, Hamid Masoudi, Shane Kirby), one Medical Microbiology (Nafila Al-Riyami) residents and four fellows (Gyne: Abdulghan Elomami and Martin Kobel, Bone and Soft Tissue: Hassan Huwait, and Lymphoma Pathology: Ibrahim Alhaddabi) were celebrated that night. We wish them all good luck in their professional and personal lives, and know that they will make us proud with their successful careers. We hope they will always remember the UBC Department of Pathology as their Alma Mater.

The dinner also celebrated the teaching faculty and their daily efforts in molding our residents and fellows into outstanding practicing specialists. The Residency Program Office would like

to take this opportunity to thank all UBC teaching faculty for their help and support during this academic year.

This year a tradition that started long ago at UBC was reinstituted: the residents' teaching awards. Every year, one award is given to a GP Faculty and one to an AP Faculty for outstanding teaching. This year's winners are Dr. Tom Thomson for AP and Dr. Morris Pudek for GP. The residents also celebrated and thanked Dr. Blake Gilks who served as the AP Residency Program Director for the last few years (the hard act I now have to follow) and GP residency Program Director Dr. Mike Nimmo. The directors and graduating residents then received a good natured roasting led by AP chief resident Dr. Jefferson Terry.



"We intend to make the Graduation Dinner one of the outstanding and enjoyable social events in the department, and urge you all to watch out for your invitation in the spring of 2010!"

NEW RESIDENTS



Ayesha Vawda (HP PGY-1)

Originally from South Africa, I spent part of my childhood there as well as in Ontario. I was delighted to leave the blistering Ontario winters and study at the University of Victoria, where I completed a BSc in Biochemistry. As a recent UBC medical school graduate, I had the pleasure of attending the Island Medical Program. Among other things, I enjoy travelling, literature, hiking, and spoiling my cat, Fluffy. I really look forward to completing my residency training in hematopathology at UBC.



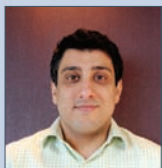
Jason Morin (AP PGY-1)

My name is Jason Morin. I graduated from the University of Calgary in May, and will be spending my PGY-1 year on the island in Victoria. Joining me is my wife, Jade, and our three cats. My current pathology interests revolve around how cancer cells overcome hypoxic environments through gene regulation and how this change in the tumour environment affects treatments for cancer. I am excited to begin the Anatomical Pathology program at UBC this year, and look forward to the things to come.



Natasha Penner (MM PGY-1)

I am a graduate of UBC, and very happy to be staying in beautiful Vancouver to complete my residency training. Before attending medical school I worked for three years as a Research Associate for a cancer drug development company. I therefore knew early on that Laboratory Medicine was the right career path for me! Currently, I'm living in Coquitlam with my husband and completing my rotating internship year at Royal Columbian Hospital. I'm very excited to be joining the Pathology and Medical Microbiology community, and I eagerly anticipate meeting many of my new colleagues in the near future.



Rohit Verma (AP PGY-1)
NO BIO



Hans Frykman (MB PGY-2)

I was born in Stockholm to Canadian and Swedish parents. In Dec. 1994 I completed my PhD at the Royal Institute of Technology (Stockholm) in Bio-organic Chemistry. The following 4 years was spent on a post-doc. at NCAUR laboratory in Illinois. At that time I found more and more interest in the medical applications of my knowledge. In 1999 I therefore started my medical training at the Karolinska Institute. At the end of my medical training I did a few rotations at University of Minnesota and a project at Mayo Clinic. My post graduate medical training of two years has been at Karolinska University Hospital. I am now entering in the second year of UBC medical biochemistry program where I hope to have use of my earlier experiences. I am married and have three children.

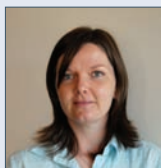


Salwa El-Malti (HP PGY-2)

I am a Libyan doctor, obtained my degree (MBBCh) in December, 1999 from Al Arab medical university, Benghazi, Libya. After completing a one-year internship, I joined the Department of Internal Medicine at Al Jamahiriya Hospital in my hometown where I rotated between different units, including Respiriology, Endocrinology, Infectious Diseases, Hematology, Intensive and coronary care units for three years. I enrolled in a MSc pathology program for three years. Obtained MSc degree in pathology, while competing for a government scholarship to continue my training in Canada. In June 2007, I was finally awarded the much coveted scholarship which I hope will enable me to achieve the dream I have been nurturing for so many years. I am married and I am a mother of two wonderful kids, a boy and a girl. My family is accompanying me and they are quite enjoying their stay in the beautiful British Columbia. I am looking forward to join the department and to meet in person with all my colleagues.



Alaa Samkari (NP PGY-6)
NO BIO



Karla Pederson (GP PGY-2 RE-ENTRY)

I completed medical school at the University of Saskatchewan and Family Medicine Residency at the University of Toronto. I worked as a family physician and coroner in Ontario, and moved to BC in 2008 to work for the British Columbia Coroner's Service. I will be joining the General Pathology Residency Program in October 2009. I have two boys, Toby (2yo) and Davin (4yo).



Jingyang Huang (HP PGY-1)

My name is Jingyang Huang. I did my undergraduate at the University of Saskatchewan majoring in Biochemistry. I also entered and did my medical school at the University of Saskatchewan, graduating in 2009. It was during my medical school years that I grew an interest in laboratory medicine and decided to make hematopathology as my career choice. My extracurricular interests include the violin, viola, music, watching documentaries, and biking.



Ananta Gurung (PGY-1 AP)

My name is Ananta, and I am honoured to be a PGY-1 in UBC's Anatomical/ General Pathology program. I was born in Hong Kong, went to high school in the U.K, completed my BMLSc degree at UBC, M.Sc in cancer biology/ wound healing at the University of Toronto and just recently my M.D at UBC. Along the way, my mentors (mother, father and Dr's. Elisabeth Maurer, Carol Park, Morris Pudek, Mike Nimmo, Malcolm Hayes and Benjamin Alman) have allowed me to become the gentleman, scholar, and resident physician I am today. I love my family, medicine, research, and of course football (soccer). As I write my bio, I am overlooking the beauty of Niagara Falls, but in just over a weeks time I will be starting my rotating internship year at St. Paul' Hospital. Thereafter, the remainder of my residency program will be spent in affiliated teaching hospitals in the Department of Pathology. I look forward to meeting my fellow residents, working with everyone in the department, and learning about the most fascinating, intriguing and challenging speciality in medicine! Cheers!



Erin Chapman (AP PGY-1)

I am very excited to be fulfilling my goal of joining the the Pathology residency program at U.B.C. since earning my BMLSc in 2004. After finishing my undergrad in Laboratory Medicine I attended the University of Western Ontario for my MD. While being away from home was a great experience I am happy to be returning to UBC and to my family in the Fraser Valley. I will be spending my internship year at Royal Columbian. I will be joined in Vancouver by my husband, Craig, who is in the final stages of his PhD in Cognitive Neuroscience at UWO and will be starting a Post-Doc at UBC. We are planning the adoption of a baby bulldog in the winter.



Patrick Wong (AP PGY-1)

Hi everyone, I'm Patrick and I'll be starting the AP/GP program on July 1st, 2009. A little about myself, I've been at UBC for all my educational life: BMLSc 2003, MSc (Experimental Pathology) 2005, and MD 2009. Also, I'll be getting married on August 8th, 2009! So this is a year of big transformation for me. I'm very excited to be in this amazing department. Pathology is definitely the best kept secret in medicine and I'm glad I found it! Looking forward to meet you all.



Amanda Wilmer (MM PGY-1)

I am a native to BC, and completed my bachelors and medical degrees at UBC. I am delighted to be continuing my training here in the Medical Microbiology residency training program. I am very passionate about microbiology and am looking forward to my future learning and research opportunities in the program! I have recently gotten married, and enjoy scuba diving, biking and snowboarding in my free time.

TRANSITION FROM POSTDOC TO JR. FACULTY: SURVIVING THE INITIAL YEARS

Dr. Kobel was a fellow in Gynecological Pathology in the Genetic Pathology Evaluation Centre for two years before taking a faculty position at the University of Calgary in June 2009.



What was the most difficult part of the transition? I would say the family side – to find a home and the billion small things related to moving.



Beginning my first faculty position at the University of Calgary means leaving the safe environment of several training programs over the past years and finally stepping into the real world of clinical service, teaching, and research. This sounds scary and the expectations raised are daunting – being a diagnostic expert with superb skills in all fields of histopathology, an excellent teacher and a researcher who will enhance the division as a whole. But even if not officially declared, one will be still seen as junior faculty member, allowed to ask questions and to look for mentorship. Having said this, being a junior faculty member is also fun; you are independent and can finally make the decisions for which I have been trained for so long. My job description stated 50% protected time for research, and I actually do

have this time off service. I am really surprised by the high standards and good organization of this department, for example I like the highly instructive Friday morning unknown cases rounds.

In summary the division of anatomical pathology of the University of Calgary seems to be very good place from a work perspective. What was the most difficult part of the transition? I would say the family side – to find a home and the billion small things related to moving. The work related bureaucracy is pretty straightforward and there are people helping you and pathology is done surprisingly similarly all over the world.

And one thing to keep in mind, young pathologists are expected to do and supervise autopsies (maybe more than you like).

PATHOLOGY DAY 2009

The 10th Annual Celebration of Pathology Day

Pathology Day is an annual event that features poster presentations from graduate students, residents, and other trainees. The day concludes with the annual departmental dinner.

Cocktails & Dinner at River Rock Casino Resort (8811 River Road Richmond, BC)

Poster and Oral presentations at UBC Life Sciences Centre

There were two concurrent oral sessions this year so twice as many abstracts selected for oral presentations by residents, graduate students and post-doctoral fellows. Several awards will be given to best oral and poster presenters.



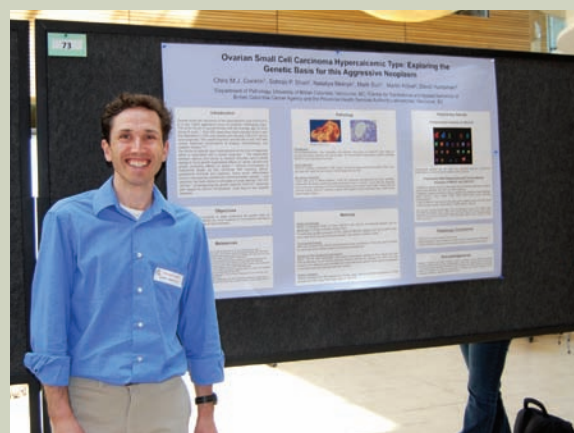
Pathology Residents and other participants at Pathology Day



James Hogg Keynote Speaker:
Jay Levy, Univ of California



Eszter Papp



Chris Conklin Poster

The resident oral presentation award winners are:

1st Place: Terry Jefferson

"NTRK2 Expression Predicts Improved Survival in Squamous Cell Carcinoma of Lung"

2nd place: David Schaeffer

"Insulin-Like Growth Factor-2 mRNA Binding Protein 3 (IGF2BP3) Expression May Be a Marker for a Unfavorable Prognosis in Pancreatic Ductal Adenocarcinoma"

3rd place: Tony Ng

"The Anoikis Stress Response Induces the AMPK Energy-sensing Pathway to Promote Survival in Transformed"

The graduate oral presentation award winners are:

1st place: Tie between Varun Saran and Agatha Jassem

Varun Saran: "Control of Glycolysis in Cardiac Hypertrophy: Interaction of Hexokinase and Voltage Dependant Anion Channel"

Agatha Jassem: "Outer Membrane Mediated Aminoglycoside Resistance in the Burkholderia Cepacia Complex"

2nd place: Henry Stringer

"Mitochondrial DNA (mtDNA) Depletion and Deletion in Statin-Induced Myopathy"

3rd place: Marissa Jitratkosol

"Mitochondrial DNA (mtDNA) Mutations in Infants Exposed to HAART in utero"

The poster presentation award winners are:

1st place: Paul Hiebert

"Granzyme B in skin aging and extracellular matrix degradation in apolipoprotein E deficient mice"

2nd place: Sara Giesz

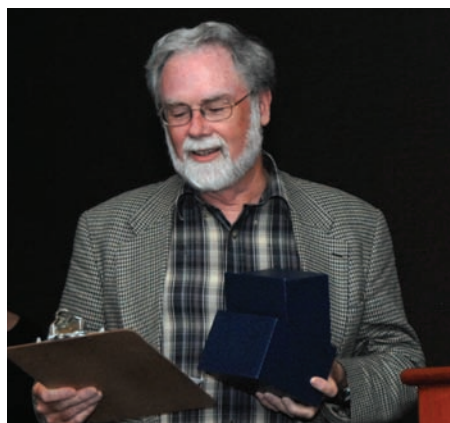
"Practical solutions in biobank facilitation: The BC Biobank initiative"

3rd place: Lisa S. Ang

"Extracellular activity of granzyme B contributes to abdominal aortic aneurysm and rupture"



Hélène Côté, Chair
Pathology Day 2009



David Walker



From the party Dr. Cote hosted for
Dr. Walker

Pathology Day 2009

Faculty Recognition Awards >>

Dr. Rusung Tan:

Most Valuable Player

Dr. Phil Clement:

David Hardwick Lifetime Achievement

Dr. Louis Wadsworth:

David Hardwick Lifetime Achievement

Dr. Blake Gilks:

Award for Excellence in Research and
Discovery

Dr. Diane Roscoe:

Award for Excellence in Education

Dr. Bonnie Massing:

Award for Excellence in Service

Ms. Penny Woo:

Staff Service Award

GRADUATE PROGRAMS

By: David Walker

This spring we graduated three MSc Students: Kimberley Louise Emsley-Leik, Penelope Jean Slack, Rita Tory and three PhD students: Ramesh Saeedi, Gang Wang, Jill Williamson. We have a significant number of students who are defending their theses right now so that fall graduation will be busy.

Unfortunately we have been without Ms. Penny Woo who is out on leave until the end of August. Fortunately for us we have had Ms Ruth Sandilands here to replace her. She has been outstanding and as graduate advisor I will swear to that. I would be really lost without her. The program continues in good hands.

At this time we have admitted 7 new students to begin in September. Pathology 535/635 is now being coordinated by Dr. Hélène Côté who I might add is doing an outstanding job of it. Dr. Marcel Bally assisted over the year and we shall see if he can actually leave it, I hope he doesn't. His contributions to graduate student training have been invaluable to the students. He was acknowledged for the same this last Pathology Day.

Pathology Day, organized this year by Dr. Hélène Côté was an outstanding success for which she was acknowledged at the lovely dinner at the casino. To my knowledge no one lost their shirts gambling after dinner. Correct me if I am wrong. See more on this in the newsletter as well.

Soon thereafter we had the second annual Arts in Science gala night. That too was a success organized by the graduate students. Performances including readings, plays and music were outstanding. I particularly enjoyed Dr. Porter's Bach piece. Baroque is beautiful. See the note on this event in the news letter.

I am stepping down as graduate advisor as of the end of this month, June 09. It has been a busy but extremely rewarding seven years and I will miss some aspects of it greatly while others I am happy to let go of. I have only retired for one day a week so I will not be gone or deceased, to the best of my knowledge just yet. I would especially like to thank the students who came up with a most beautiful image of my favorite histology teaching slide on a two by almost three foot canvas! I would also like to thank you for your thoughts. Working with you all has been one of the most meaningful and rewarding activities in my career. Thank you for all that you do and for sharing. Finally, I want to thank the department and Dr. Côté and her husband Jamie for hosting the party. I have had a great time.



Penny Slack



Ash Marwaha (theatrical performance)



Agatha Jassem



Ash Marwaha



Genny Trigo



Marie Ang



THE ART OF SCIENCE

By: Tyler Hickey

Lights, Camera, Action! The Department of Pathology and Laboratory Medicine hosted its second student-organized Evening Arts Gala, 'The Art of Science' on June 11th. Building on the success of last year's inaugural event, Dr. David Walker and a core group of dedicated Graduate Students helped organize and run the evening that shared the artistic talents of individuals in the Department. This year's line-up of artists was both diverse in background as well as the media employed. The 160+ guests in attendance were able to enjoy a range of art forms including photography, drawings, paintings, fine woodworking and even a few stone sculptures by Dr. Walker himself. On the main stage were several musical performances including singing, piano and guitar, and new this year, a short play as well as a book reading by author Rosemary Fitzgerald. The generous support from our Department and Firefly Fine Wines & Ales allowed guests to enjoy a range of food and drinks over the evening and the modest admission prices allowed the organizing committee to donate over \$1000 to the local Arts Umbrella youth charitable organization. Many additional sponsors provided support through door prizes and a raffle during the evening. Special thanks are made to the hard working organizing committee who planned the event over several months: Agatha Jassem, Ashish Marwaha, Audra Vair, Penny Slack, Timon Buys, Lisa Ang, Angela Burleigh and Tyler Hickey.

BACHELOR OF MEDICAL LABORATORY SCIENCE (BMLSc) PROGRAM

By: Carol Park and Joanne Wouterse



CLASS OF 2009

This year marked the twenty-eighth year the Department has graduated students from the BMLSc Program. Twenty four students received their BMLSc degrees in May, bringing the total number of program graduates to 393.

At the reception held in the West Atrium of the UBC Life Sciences Centre on May 20, the following students were recognized for their outstanding academic achievements:

Helena Lee - Professor C.F.A. Culling
Bachelor of Medical Laboratory Science Prize

Gautamn Sarwal - Donald M. McLean Prize
in Medical Microbiology

Helena Lee - B.J. Twaites Prize in Laboratory
Administration

Mary Chan - The Eugenie Phyllis and Philip
Edward Reid Prize in Morphological Sciences

Marc Sze - William J. Godolphin Prize

Helena Lee - Prize for Best Presentations in
Path 405

GRADUATES' CHOICE FOR TEACHING EXCELLENCE AWARDS

The graduates recognized the following instructors, who each received a BMLSc Graduates' Choice for Teaching Excellence Award:

Dr. Michael Nimmo:

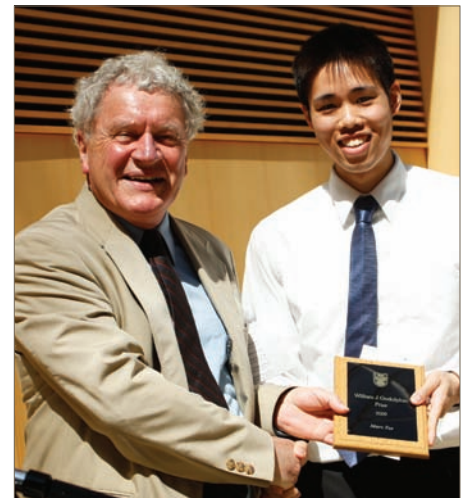
He often incorporated personal stories when teaching us different diseases, which made it much easier to learn. And, there is no other teacher that made us repeat concepts as much as Dr. Nimmo did. In every lecture, he would go around the class and have each student repeat a fact that had just been taught. I don't think any of us will ever forget that, 'Connective Tissue = Extracellular Matrix + Cells'."

Dr. Tom Mock:

"Dr. Mock took complex ideas and topics and explained them in a way that we would all be able to understand. We also know that we can count on Dr. Mock to incorporate many different random photos into his lecture slides, to keep our attention as we learned."

Dr. Morris Pudek:

"Dr. Pudek made sure to give us the background information necessary to understand what he was teaching us, but emphasized what was really important. And of course, we all appreciated it when Dr. Pudek would 'subtly' hint at what the exam questions would be."





THE REID MEMORIAL CUP

This award recognizes a Faculty or Staff member who has made an outstanding contribution to the experience of the BMLSc students. This year's recipient is **Jennifer Xenakis**.

"Jennifer dedicated much time and effort to us over these past two years. Last year, she worked tirelessly to print our photos for our microscopy project. When some of us became a little "obsessive compulsive" and requested re-print after re-print, she did that as well, without complaint. Jennifer has also been an excellent teacher to us. In the lab, she questioned us, getting us to think about why we were doing certain things and challenging us to figure things out on our own. In our toxicology tutorials she encouraged participation from everyone and again challenged us to "understand" concepts rather than memorize them. Her kindness and patience make it easy for students to approach her for help."



SPECIAL PRESENTATION

The Donald M. McLean Prize in Medical Microbiology was established by Dr. Donald McLean upon his retirement in 1991. The prize is awarded to a graduating student in the Bachelor of Medical Laboratory Science Program with the highest standing in PATH 327 (Medical Microbiology).

To commemorate this award we created a plaque bearing the recipients' names, which will hang in the Vassar Seminar Room.

We would like to thank Dr. McLean for his dedication to teaching in the Department and his longtime support of the BMLSc Program.



GRADUATES' FURTHER PURSUITS

Julie Cahill has been accepted into the Naturopathic Medicine Program at the Boucher Institute in Vancouver.

Mary Chan has been accepted into the BCIT Medical Laboratory Technology Program.

Christine Chow is working as a lab technologist at the Genetic Pathology Evaluation Centre (GPEC).

Kathleen DeAsis, Naoki Kitano, Marc Sze and **Richard Yu** are all entering the Graduate Program in Experimental Medicine at UBC.

Johnny Nie is heading to the University of Toronto where he will be enrolled in the MD Program.

Janice Wai has been accepted into the Early Career Masters (ECM) Program at UBC's Sauder School of Business.

MEET THE PEOPLE OF PATHOLOGY

Maureen Barfoot, Director

Born in Dundee, Scotland, raised in Melbourne, Australia, came with family to Canada in '72 – Och, what's up mate, eh?

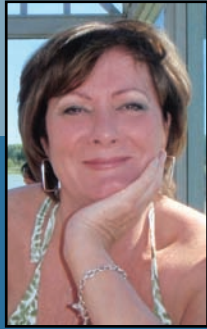
Considered a “UBC Lifer” with time spent in Departments of Biochemistry, Finance, Medicine, Pediatrics, Basic Sciences and Pathology.

Has one daughter, two sons, and four grandchildren (2 Canucks and 2 Yanks)

► ... Little known facts:

- • Once held the door open for an armed bank robber, but caught him later and collected a reward
- • Likes to snorkel and swim with the fishes
- • Has been known to read three books in a day
- • Wanted to be an anthropologist

Maureen
celebrated
her birthday
skydiving



"Sometimes when disaster strikes I laugh. This can be unnerving to people around me but it relaxes me."

.... JUST FOR FUN!

What are the first three things you do when you come home from work?

Flop my Luis Vuitton on the sofa, sip from a frosty martini made by my butler, and change into my dinner attire. Or just change into sweats, crack a beer and nuke a Lean Cuisine. Just depends on the mood.

What does the word success mean to you?

Not having to answer to anyone.

Tell me how many hats you have in your home?

Is this a trick question? Unless you're going to the Kentucky Derby no one wears hats.

Which color of umbrella do you like?

Yellow of course.

Tell us about one of your worst habits or qualities?

Sometimes I just say what's on my mind without filtering.

Which is your favorite language other than your native language?

Italian. An Italian could say, "Tonight we are serving roasted garden hose with manure sauce and piss wine and I'd order it."

If I take a look inside your refrigerator what would I find?

Diet Pepsi, cheese and oranges. Everything you need in case of an apocalypse.

If you are alone in a desert what are your thoughts?

Specifically what will be your first thought?

Ahhhh. Quiet.

What is your favorite book to date?

"A Fine Balance" by Rohinton Mistry

What would your first thought be when you learned that you won a lottery?

How much can I give my family.

Recent Faculty Awards

Congratulations to:

Dr. Michael Noble is this year's CLSI's (Clinical and Laboratory Standards Institute) award recipient.

This award is presented to an outstanding volunteer in recognition of advances in CLSI organizational directives and objectives, through unique and significant contributions.

Dr. Arun Garg is the recipient of the Wallace Wilson Leadership Award for 2009. This award is presented annually to graduates of the UBC Faculty of Medicine who have demonstrated high ethical standards and outstanding leadership to the profession.

Dr. Donald Rix and his daughter Laurie Macrae have donated \$2.5 million to the University of British Columbia to create a first-of-its-kind professorship in rural teacher education.

**Philanthropist
Dr. Rix does it again!**

PRESS RELEASES



Bruce McManus

UBC professors lead research initiative

The second phase has been launched for Biomarkers in Transplantation, a research initiative that will eventually allow doctors to identify which patients are rejecting a transplanted organ with a simple blood test, aimed at eliminating the need for expensive, painful post-surgery biopsies and reducing the burden of transplantation costs on the health care system.

The project leaders are UBC's Prof. Dr. Bruce McManus, Dept. of Pathology and Laboratory Medicine, Prof. Paul Keown, Director of Immunology and Head of Nephrology, and Prof. Robert McMaster, Head of the Dept. of Medical Genetics and Assoc. Dean of Research, Faculty of Medicine.

For more information, visit: http://www.genomebc.ca/whatnew_press/press_releases/2009_press/052609_biomarker.htm



David Huntsman

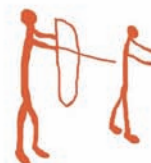
Canadian ovarian cancer breakthrough could crack other cancers

A group of Vancouver doctors and scientists is receiving international recognition after making a breakthrough cancer discovery that has potential to lead to a host of new cancer diagnostics and treatments.

"What we can do is completely decode cancers," said Dr. David Huntsman, a genetic pathologist at the BC Cancer Agency, Vancouver General Hospital and UBC.

Huntsman said the ability to decode the genetic sequences of specific cancers will be part of a road map to truly personalized medicine, in which doctors will be able to come up with an individualized "recipe" for every patient.

1st Bolzano Mummy Congress *Mummies and Life Sciences*



TYROLEAN ICEMAN 'OTZI' HOSTS INTERNATIONAL CONGRESS

By: Maria Victoria (Vicky) Monsalve

The new “EURAC-Institute for Mummies and the Iceman” in Bolzano, Italy was the venue for a “Mummies and Life Science” conference on March 2009. The Institute supports research in the anthropological, genetic, paleopathological and medical fields. Over 150 participants from 22 countries attended and delivered oral presentations and posters on biological anthropology, paleopathology, image studies and biomedical analyses of mummies from around the world. One memorable afternoon the participants met at the Archaeological Museum to view the unique “Mummies: the Dream of Eternal Life” exhibition of about 60 mummies. “Otzi”, discovered in the Tyrolean Alps in 1991 and the oldest frozen mummy ever found (dated 3300-3150 BC) was the focus of the gathering. Researchers from around the world presented papers on different aspects of the Iceman.

Researchers at the University of Zurich entertained the audience with the “Swiss Mummy Project”. Their multidisciplinary project examined more than two dozen human and animal mummies from ca. 900 BC to 100 AD. It included pathological analysis using minimally and non-invasive examinations of unique, older mummies such as King Tutankhamun and the Tyrolean Iceman.

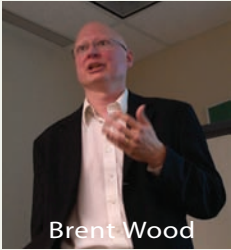
A presentation on mummification practices in the Central Highlands of Papua New Guinea was particularly intriguing. Mummies preserved through smoking were seated in chairs along a cliff overlooking the village. The American research team explained how they included the villagers as consultants and participants in their project to restore the smoke-preserved bodies.

Also fascinating was a presentation by researchers at the University of York on applying mass-spectrometry-based protein sequencing to a mummified Irish human bog body (362 -175 BC) and associated remains. Their results provided valuable information on exploitation of natural resources by ancient communities.

Advanced techniques using mid infrared spectrometry and gas chromatography-mass spectrometry were introduced as “cutting edge” tools for analysis of biochemical preservation of ancient remains. The author orally presented UBC Pathology’s findings on BC’s iceman Kwäday Dän Ts’inchi (found in a glacier in Tatshenshini-Alsek Park in 1999 and dated 1670 AD to 1850 AD) using both technologies. Her collaborative work with Saskatchewan’s Canadian Light Source Inc. and Drs David Chen and Wayne Vogl at UBC evidenced degradation of tissue muscle into fatty acids with presence of adipocere. MD student Jacksy Zhao enriched his knowledge of basic sciences through a Summer Research project under the author’s supervision. The results of the analysis of the ancient tissues using gas chromatography are “in press” in the Journal of Forensic Sciences.

DEPARTMENT'S DISTINGUISHED LECTURER SERIES

By: Bakul I. Dalal



The Department of Pathology and Laboratory Medicine offers a Distinguished Lecturer Series program to invite internationally acclaimed experts in various fields of pathology.

On 2009 June 18, Professor Brent Wood of Department of Pathology,

University of Washington School of Medicine was invited by Drs. Bakul Dalal, Andrew Weng and Aly Karsan under this program to visit our Department. Dr. Wood is a recognized authority on flow cytometry in hematopathological conditions, and as such, is a reference pathologist for international

Children's Oncology Group, for flow cytometry of acute lymphoblastic leukemias.

Our Head of the Department Dr. Blake Gilks introduced Dr. Wood for the Distinguished Lecturer presentation on "Flow Cytometry of Classical Hodgkin's Lymphoma" on Thursday 2009 June 18 at the Paetzhold Education Center at the Vancouver General hospital to a full house.

In addition, he talked on "Flow Cytometric Assessment of Minimal Residual Disease in Acute Lymphoblastic Leukemia" for a Special Hematology Lecture organized by the Division of Clinical Hematology that afternoon (Photo-3) at the Diamond Center Conference Room to a capacity audience.



Morning Lab Session Audience



LEARNING CENTRE VOLUNTEER OPPORTUNITIES AT THE DAVID HARDWICK PATHOLOGY

We have begun a very successful implementation of our Volunteer Program at the David Hardwick Pathology Learning Centre this spring. We have had 13 people volunteering 1-3 hours a week on various projects at the centre. We are in the process of cataloguing three new collections as well as maintaining and digitizing the main William Boyd Collection. Our volunteers have put in over 66 hours at the centre changing fluid on specimens, tagging specimens and photographing them. Another group has been busy taking the

CMPT AND THE UBC PROGRAM OFFICE FOR LABORATORY QUALITY MANAGEMENT WELCOMED 4 VISITORS FROM CHINA CDC



Li, Jiandong, Yan, Meiying, Blake Gilks, Michael Noble, Zhou, Yongyun, and Wang, Lei

CMPT and the UBC Program Office for Laboratory Quality Management welcomed 4 visitors from China CDC who have come to Vancouver for training in Proficiency Training. This is our second group of trainees from China, and our sixth over the last several years. Other programs that came for training were from South Africa, Zimbabwe, Thailand, and Belgium. Trainees come for an intense two-week technical

training program, working with CMPT senior staff Esther Kwok and Caleb Lee. In addition we have covered many of Laboratory Quality Management topics, primarily through a series of video conferences between China CDC in Beijing and the video conference centre in the Diamond Centre.

In China, while the hospital laboratories have programs for proficiency testing

available to them, our current visitors are charged with setting up a new program for federal laboratories, starting with programs for enteric bacteriology and Hantavirus. This program was established as a joint collaboration between CMPT and the POLQM and China CDC and the Centers for Disease Control and Prevention, Atlanta. We are looking forward to a long term connection with China CDC.

photographs and preparing them for display on the virtual slide website using the Photoshop® skills they picked up in Path305. This group has worked on their own time and at locations that are convenient for them. We are always looking for new volunteers as all the projects are large and ongoing and we appreciate any amount of time you can give. If you are interested in volunteering please contact Helen Dyck at 604 875 5117 or email: hdyck@pathology.ubc.ca.



What's New with the BC BioLibrary?

The BC BioLibrary is a project that is affiliated with, led by, and close to the hearts and minds of many members of the UBC Department of Pathology



BC BioLIBRARY NETWORK

The BC BioLibrary continues to expand its network to additional hospital sites across BC. A third Biospecimen Collection Unit (BCU) has now been approved and will be implemented this summer at St. Paul's Hospital. This third BCU broadens the existing network of BCUs at Vancouver General and Children's and Women's Health Centre of BC. The VGH BCU is transitioning from its pilot phase and is able to consider serving new biobank users, while the C&W BCU is in a pilot phase restricted to specific demonstration biobank projects. The BC BioLibrary continues to enhance collection of tissue and blood biospecimens for translational research.

DELIBERATIVE DEMOCRACY WORKSHOP

The BC BioLibrary, in collaboration with the W. Maurice Young Centre for Applied Ethics at UBC, recently concluded a second public consultation event concerning biobanking. The specific objective of this project was to

support the development of a governance structure (guidelines, protocols and policies) for the BC BioLibrary that is ethically sustainable and politically legitimate.

Building on the first successful deliberative event (BC Biobank Deliberation 2006/07), a diverse group of 24 BC citizens were brought together in Vancouver by an interdisciplinary research team comprised of BC BioLibrary and GE3LS ARCH personnel. The purpose of this event was to deliberate on several key issues regarding biobanking. The research team was specifically interested in gathering participant recommendations in the following five areas:

1. Collection of Biospecimens
2. Initial Contact/ Introducing the Biobank
3. Linking Samples to Personal Information
4. Consent
5. Governance of Biospecimens and Associated Data

These topics were discussed at length over two weekends in March. Significant

dialogue resulted, upon which the team is currently performing analysis. Resolving the concerns discussed will directly benefit BC's life sciences researchers, through better access to quality annotated tissue, and British Columbians and Canadians, through improved health outcomes.

BIOBANKING EDUCATION & TRAINING

Biobanking and the use of high quality biospecimens continues to be a critical aspect of translational research, however, formal training for those who collect or who process biospecimens for research is rarely available. The BC BioLibrary is currently developing an education and training program addressing multiple aspects of biobanking. The initial phase of online training modules will be available from the BC BioLibrary website in the fall.

eNEWSLETTER

To stay engaged in the activities of the BC BioLibrary please visit www.bcbiolibrary.ca and sign up for our eNewsletter, *BioAccess*.

Announcement

The First Canada-China Symposium on Airway Smooth Muscle and Asthma will be held in Chongqing, China during Oct. 19-22. The symposium is being organized by Dr. Chun Seow of the Department of Pathology and Laboratory Medicine, UBC. Dr. Seow is also the major fund raiser for the symposium. Generous support (from BC and Nova Scotia Lung Associations, Allergen Inc., International Science and Technology Partnership Canada Inc., and the Chinese Science and Technology Bureau) covers all expenses for participants. The main goal of this First Symposium is to facilitate collaboration amongst investigators in both countries, specifically in the form of exchange students and faculties. Principal investigators from 8 major asthma research laboratories across Canada will be present at the symposium.

Asthma or airway smooth muscle researchers from the Department of Pathology and Laboratory Medicine interested in attending the symposium may contact Dr. Seow for more information. Space limited.

congratulations!



REBECCA & JAMES WALTERS:
had a little girl Alexis Anne Donkin on 22nd March.
They are all doing well, minus the sleep!





UNIVERSITY OF BRITISH COLUMBIA
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<http://www.pathology.ubc.ca>