

News

Fall/Winter 2012/13

Pathology

The University of British Columbia

www.pathology.ubc.ca



**HAPPY RETIREMENT
MAUREEN**

30 years of service



RESEARCH



EDUCATION



NEWSMAKERS



THE UNIVERSITY OF BRITISH COLUMBIA
a place of mind

 **pathology**
laboratory medicine



OCTOBER 2012
 Maureen Barfoot's
 30 years of service at the
 University of
 British Columbia.
 Happy Retirement Maureen



PATHOLOGY

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Head's *letter*

After nearly 30 years at UBC with nearly a third of those in the Department of Pathology and Laboratory Medicine, Maureen Barfoot's last day as Administrative Director was in October 2012. Maureen has made many important and significant contributions to the Department over the years. The Department and the people in it are indebted to her for the passion and commitment she has shown to their individual and collective excellence and well being, her planning and forward thinking, her ability to find workable solutions to complicated problems, and for the nature and quality of her leadership that created an excellent working environment.

On a personal level, I deeply appreciate and sincerely thank her for all these as well as for the support she gave me by teaching, explaining (usually more than once), listening, and sharing laughter, while I made the transition to a new role. I will never forget it. We sincerely wish that the path she chooses to follow in the next phase of her life leads to much happiness and joy!

Michael F. Allard, BSc, MD, FRCP(C)

Professor and Head

Department of Pathology and Laboratory Medicine
The University of British Columbia



We're talking about ...

PATHOLOGY DAY

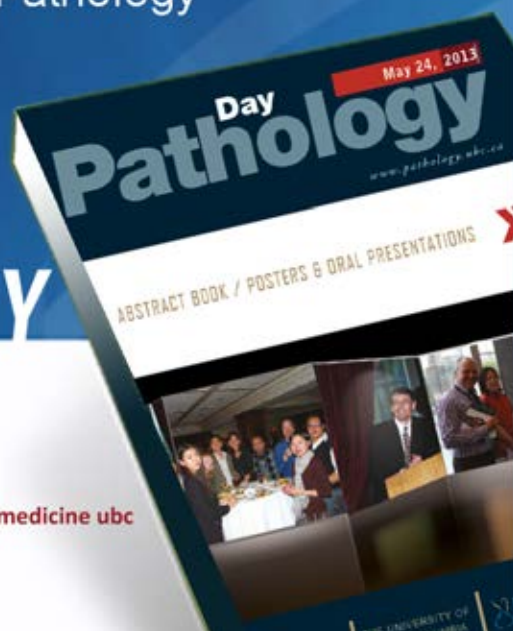
DON'T MISS OUT!

Student Poster & Oral Presentations
In the Fascinating Field of Pathology

May 24, 2013
PATHOLOGY DAY

VISIT TO
KNOW US

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AT THE PAETZOLD EDUCATION CENTRE, VGH

Pathology Day is an annual event held in late May featuring oral and poster presentations from graduate students, residents and other trainees. At an evening reception Cash prizes (\$500) are awarded for the top three graduate student oral presentations, top three resident oral presentations and the top three poster presentations.



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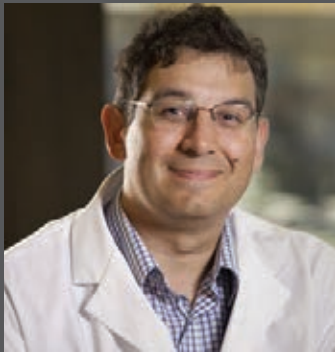
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AWARDS AND ACCOMPLISHMENTS



Bruce Verchere receives Diamond Jubilee Medal

The Department of Pathology and Laboratory Medicine congratulates **Dr. Bruce Verchere**, Professor, Department of Surgery, and Department of Pathology and Laboratory Medicine on receiving a Queen Elizabeth II Diamond Jubilee Medal for contributions to diabetes research. The medal was presented by the Canadian Diabetes Association (CDA) at a special ceremony hosted by UBC's Faculty of Pharmaceutical Sciences on February 28. Verchere is one of 30 Canadians nominated by CDA to receive Diamond Jubilee medals for helping to improve the lives of those living with diabetes. His research focuses on insulin-producing beta cells of the pancreas and seeks to understand why they are killed or are dysfunctional in both type 1 and type 2 diabetes and in transplanted islets.



UBC Killam Research Prize 2012

Congratulations to **Professor Samuel Aparicio** and **Professor Torsten Nielsen** for being awarded a 2012 UBC Killam Research Prize. Established in 1986, the UBC Killam Research Prizes are awarded annually to top campus researchers. Up to ten prizes in the amount of \$5,000 each are awarded to fulltime faculty members in recognition of outstanding research and scholarly contributions.

CANCER GENOME SEQUENCING: A NEW ENGINE OF DISCOVERY AND LEARNING

DR. SOHRAB SHAH - ASSISTANT PROFESSOR

I recently finished reading a wonderful book describing the history of our understanding of cancer entitled "The Emperor of all Maladies: a Biography of Cancer" by Siddhartha Mukherjee. The work ranges over many fascinating topics including ancient descriptions of cancers, evolving surgical practices throughout the 19th and 20th centuries, discovery of chemotherapies, politics of cancer research fundraising and how advances in molecular biology and targeted therapies offer new hope for treating patients more effectively. The book concludes with a teaser that alludes to new DNA sequencing technologies on the horizon that promise to make important contributions to cancer research. I started my program the year Mukherjee's book was written, and it is aimed at enacting the application of the genome sequencing technology to decipher the genetic underpinnings of cancer.

Cancer, in all of its diverse forms and manifestations is, ultimately, a disease of the genome. A hallmark of nearly all tumours, somatic mutations in the genomes of cancer cells result in transformation from non-neoplastic to malignant forms. The first such mutations discovered were in oncogenes such as HRAS, KRAS and BRAF and in tumour suppressor genes such as TP53 and RB1. While ultimately the 'phenotypes' of cancer cells



"My lab studies how innovative computational approaches can be brought to bear on the problems of Next Generation Sequencing analysis to answer biological questions about cancer genomes."

characterize their behavior, the malignant properties of cancer cells are written in their genomes. A natural question arises: "what mutations contribute to the pathogenesis of cancers?" Answers to this fundamental question will ultimately yield new diagnostics, prognostics and therapeutic targets – all critical for optimal clinical management and improved outcomes for patients. Whole genome characterization of cancers promises to provide an important first step towards these goals and can reveal a tumour's biology with great precision.

Consider that more than \$1 billion, invested over more than a decade, involving thousands of scientists was required to sequence the first or 'reference' human genome as part of the human genome project, completed in draft form in 2003. Since then, remarkable progress in DNA sequencing technology (so-called 'next-generation sequencing' (NGS)) has enabled cost-effective sequencing of an entire human genome in a few days for less than \$5000, providing unprecedented opportunities to study and characterize the complete mutation content of human tumours. Thus, cancers can now be seen through a new and more refined 'genomic lens'. Since 2008, this has resulted in dramatic advances in our understanding of how somatic mutations shape the malignant phenotype, disease etiology and progression, and how to inform therapeutic options for patients. During this time, my own work has

contributed to the discovery of new cancer genes (1-3), the world's first fully sequenced epithelial cancer genome and the description of a lobular breast cancer's evolution at nucleotide resolution (4) and a population study of the mutational landscape of triple negative breast cancer (5). This has been a small part of a wave of international activity stimulated by a massive investment in cancer genome sequencing, such that the complete sequences of over 500 specimens from more than 50 histological cancer types will be sequenced in the next few years.

The advances achieved by NGS experiments are only made possible with parallel advances in data analysis techniques. As such, the advent of NGS has shifted the bottleneck of cancer genome interpretation from sequence data generation to its requisite computational data analysis. My lab studies how innovative computational approaches can be brought to bear on the problems of NGS analysis to answer biological questions about cancer genomes. This is facilitated by the development and application of computational algorithms and software that run in massive data centers. In recent landmark studies (1-6) that our contributions to computational science have underpinned advances of biological understanding of disease in NGS experiments. Consider that each cancer genome sequencing experiment will produce over 100 billion datapoints representing redundant sequence coverage of

the nearly 3 billion nucleotides of the genome. We aim to identify mutations in these datasets that occur, on average, in about 1 in 10,000 bases, but they are often obscured by normal cells admixed with the tumour sample, and by the well known fact that tumours are composed of heterogeneous mixtures of cells that harbor different mutations. The problem is exacerbated by ubiquitous sequencing errors produced by the NGS machines. Consequently, rare, weak and error prone signals create an immense computational challenge that must be solved to optimize the power of cancer genome sequencing. To this end, we have made good progress using advanced statistical techniques known collectively as ‘machine learning’ whereby statistical models can be iteratively adapted based on properties of the data. This has proven to be a potent approach and results in highly sensitive and specific identification of mutations for a given sequencing experiment, enhancing the interpretability of a cancer genome for both clinical and research utility. We are using these techniques to define the mutational landscapes of many difficult-to-treat cancer types such as triple negative breast cancer, high grade serous ovarian cancer and diffuse large B-cell lymphomas.

Looking beyond mutational landscapes, an important opportunity has emerged at the confluence of NGS and cancer biology. Fundamentally, acquisition of the malignant phenotype, subsequent progression to achieve metastatic potential, and chemotherapeutic resistance are all driven by an evolutionary processes. Thus, a cancer can be thought of as a dynamic process fuelled by the accumulation of mutations over time that give rise to altered phenotypes. This idea has been well-articulated for several decades, but measurement devices were not precise enough to quantify the evolutionary process at its most fundamental level of nucleotide resolution.

“ Over the coming years, it is clear that the mutational content found in the genomes of cancers will illuminate critical insights that have eluded us for decades, and will begin to fill the immense knowledge gaps in our fundamental understanding of the biology of cancer. ”

We study how the evolutionary process unfolds through the precise mutational characterization of cancer genomes. This involves comparing the mutation content of tumour samples taken from distant anatomic metastases, or comparisons of primary tumours, to their matched relapse specimens after treatment.

The work I do in my lab plays a small role in a much larger juggernaut of international research activity aimed at the characterization and interpretation of cancer genomes. We are in a truly transformative era of cancer research driven by an accelerated pace of discovery. Mukherjee’s book reveals just how little we really know about cancer. Over the coming years, it is clear that the mutational content found in the genomes of cancers will illuminate critical insights that have eluded us for decades, and will begin to fill the immense knowledge gaps in our fundamental understanding of the biology of cancer.

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UBC OFFICE OF BIOBANK EDUCATION AND RESEARCH (OBER) ACTIVITIES

STEFANIE CHEAH - BIOLIBRARY COORDINATOR

The Office of Biobank Education and Research (OBER) was established in July of 2011. The mission of this office is to provide support for BC biobanks through education on biospecimen science and communication of best practices and standards for biobanking, in order to advance translational health research in BC.



OBER HIGHLIGHTS

The OBER team has collaborated with the Canadian Tumour Repository Network (CTRNet, www.ctrnet.ca) and leading biobankers from across Canada to create the first comprehensive biobank education course aimed at biobank personnel. This program focuses on principles, activities and operations of biobanks and is a major component of the CTRNet Biobank Certification Program for Canadian tumour biobanks. The program has two phases: the first *Registration* phase became available in late 2011 and the second *Certification* phase will be available early 2013.

In addition, OBER has created a Certification Program for non-tumour and international biobanks, to be launched in summer 2013.

To support both programs, OBER has also launched a Biobank Resource Centre (www.biobanking.ca) where a variety of online tools and templates are available including:

- Biobank Informed Consent Form template
- Biobank Governance Organization Chart template
- Biospecimen Shipping Protocol
- Biospecimen Anonymization Protocol
- Biospecimen Collection Considerations
- Biobank Equipment List and Start Up Costs Biobank Costing Tool – to help biobanks determine the costs of

collecting, processing and distributing biospecimens

- Biospecimen Data Reporting Tool – to help biobanks report important biospecimen-related data for accurate replication/validation of studies

ADDITIONAL HIGHLIGHTS

- Provided assistance to Dr. Suzanne Vercauteren to create of the Childhood Cancer and Blood Research Biobank at BC Children's Hospital
- Provided consultation and IT support to Dr. David Schaeffer for the creation and management of the BC Pancreatic Tumour Bank at Vancouver General Hospital
- Published 3 papers on biobanking and the development of education, certification and biobank operations tools

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Awards and Programs for Research in Brazil

WANTED: COLLABORATOR IN SUNNY DESTINATION

"Brazil is actively seeking collaboration with other countries and has a variety of programs to facilitate international collaboration both in training and research programs. In addition, due to the size and diversity of Brazil tremendous research opportunities are present."

■ DR. ADAM C. SMITH - CLINICAL ASSISTANT PROFESSOR ■



■ MINI BIO

Dr. Adam C. Smith is a Clinical Assistant Professor in the Department of Pathology at UBC and formerly Clinical Cytogeneticist at the BC Cancer Agency. He is also a Professor and Researcher at the Instituto de Pesquisa Pelé Pequeno Príncipe in Curitiba, Brazil and the Director of Molecular Cytogenetics at Mantis Advanced Diagnostics.

He currently lives in Curitiba, Brazil – a city in the south of Brazil with a population of 1.7 million (municipality only) or 3.2 million including the metropolitan area.

Curitiba has the 4th largest GDP of all Brazilian cities behind Sao Paulo, Rio de Janeiro and Brasilia. Curitiba is a modern city with a relatively high standard of living and a moderate climate being further south and located at approximately 1000m of elevation above sea-level.



City of Curitiba

■ SCIENCE IN BRAZIL

Media attention concerning Brazil's strong and growing economy represents an unusual counterpoint to economic hardships currently being experienced in the United States, Europe and globally. This economic resistance may be a result of a strong domestic economy (fueled by Brazil's abundant natural resources), high import tariffs and a much lower utilization of consumer credit products (due to high interest rates). As a result of recent economic and political stability - and a general tendency to the political left – investment in research and development in Brazil has been growing steadily. Further, Brazil's scientific production has also shown significant increases of output over the past 20 years [4,301 articles published by Brazilian authors in 1992, to 26,482 articles published in 2008. Source: Thomson Reuters (Scientific) Inc. Web of Science, (Science Citation Index Expanded), compiled for UNESCO by Canadian Observatoire des Sciences et des Technologies, May 2010]. Brazil is actively seeking collaboration with other countries and has a variety of programs to facilitate international collaboration both in



Fernando de Noronha -
A UNESCO world heritage site

training and research programs. In addition, due to the size and diversity of Brazil, tremendous research opportunities are present. Below is a snapshot of major Brazilian funding institutions and programs.

■ FEDERAL RESEARCH FUNDING FOR PROJECTS AND TRAINING IN BRAZIL

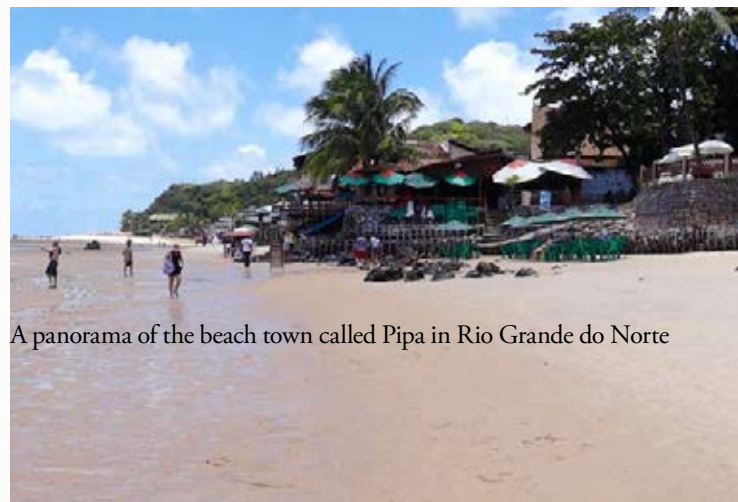
Promotion of research by the Brazilian government at the Federal level is accomplished by two primary organizations CNPq (www.cnpq.br) and CAPES (www.capes.gov.br). CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnologia/National Council for Scientific Research and Development) is the primary national research agency that funds training and research for the whole country. CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior/Coordination of Post-Secondary Training) is a foundation associated with the Ministry of Education and is responsible for investment and development of post-secondary programs – primarily postgraduate (Master's and PhD). A recent program launched by CAPES in cooperation with

Researchers with strong track records in their area who wish to develop collaborations and help research and development in their area in Brazil can apply for this program that includes a monthly stipend of roughly \$7,000 (CDN) .

CNPq is the “Ciencia Sem Fronteiras” program (Science Without Borders <http://www.cienciasemfronteiras.gov.br/>). This program plans to give 101,000 scholarships until 2015 for study both inside and outside Brazil. These include 24,600 scholarships for the “Doctoral Sandwich” program in which a Brazilian student starts a PhD at a Brazilian institution and can spend anywhere from 3 to 12 months (or sometimes longer) at an institution outside Brazil with a paid scholarship and round-trip airfare. In addition, over 1,000 scholarships for investigators are also available through this program including the Young Investigators and the Special Visiting Researcher programs. The Special Visiting Researcher program is similar to the Doctoral Sandwich, except in reverse. Researchers with strong track records in their area who wish to develop collaborations and help research and development in their area in Brazil can apply for this program that includes a monthly stipend of roughly \$7,000 (CDN) and the flexibility to stay from 1 to 3 months per year in Brazil (that can be broken into up into two visits with round-trip airfare covered).

■ STATE RESEARCH FUNDING FOR PROJECTS AND TRAINING IN BRAZIL

In certain Brazilian states, similar programs are run by state research foundations. In the state of São Paulo, where greater



A panorama of the beach town called Pipa in Rio Grande do Norte



Dr. Sam Aparicio



Dr. Torsten Nielsen



Dr. David Huntsman

Pathology and Laboratory Medicine researchers win "Impact Grants" from Canadian Cancer

Three Professors from the Department of Pathology and Laboratory Medicine: Sam Aparicio, David Huntsman and Torsten Nielsen have received Canadian Cancer Society Impact Grants, which are largest single grants ever offered by the organization.

- Dr. Aparicio will receive \$1.25 million over five years to answer questions about how breast cancer arises, grows and mutates.
- Dr. Huntsman's \$1.25 million Impact Grant will enable him to use advanced genomic approaches, including whole genome sequencing, to identify driver mutations - mutations that cause normal cells to become cancerous - in two of the most deadliest forms of ovarian cancer.
- Dr. Nielsen, who will also receive \$1.25 million, has made major progress in the understanding of a rare soft tissue cancer - synovial sarcoma - which mainly affects children and young adults and for which standard anticancer therapies offer little benefit.



Dr. Hélène Côté

UBC to lead national study of HIV's effects on women and their children "Impact Grants" from Canadian Cancer Society

The five-year, \$2.5 million grant will enable the team to study several issues – at the molecular, cellular and clinical levels – in more than 1,000 women and children in Vancouver, Montreal, Ottawa and Toronto. The project includes three principal investigators at UBC – Helene Cote, an Associate Professor in the Department of Pathology and Laboratory Medicine, Deborah Money, a Professor in the Department of Obstetrics & Gynaecology, and Neora Pick, a Clinical Associate Professor in the Division of Infectious Diseases.

than 70% of all public research investment in Brazil is located - largely due to the heavy investment of the state research foundation called FAPESP (Fundação de Amparo à Pesquisa do Estado de São Paulo/Research Support Foundation for the State of São Paulo www.fapesp.br) - who administers a similar Special Visiting Researcher Program as well funding basic and applied research in many areas of science, including health.

■ GOVERNMENT AND PUBLIC-PRIVATE PARTNERSHIPS

Partnership programs with external institutions are also common to help facilitate specific research objectives such as the recent Structural Genomics collaboration program between the University of Toronto, Oxford and Brazil.

Other recent partnerships have included the University of Ontario Institute of Technology, Microsoft, MIT, and the University of Florida. In addition, public-private partnerships and private research investment opportunities are also available such as those programs recently offered by ISTP (http://www.istpcanada.ca/international_programs/Brazil/) and MITACS (<http://www.mitacs.ca/globalink/what-globalink>).

■ SUMMARY

More detailed information about research programs and investment in Brazil can be found at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/sc_usr10_brazil_EN.pdf. The Brazilian government is actively seeking foreign collaborations for research and training opportunities offering substantial bi-directional benefit to individuals and institutions.

As a member of the Department of Pathology at UBC, and a researcher in Brazil, helping to develop partnerships with UBC and Canada is a unique opportunity to develop new collaborative programs and to help train the next generation of global scientists.

UBC's academic rigour, programs and affiliated institutions offer substantial training, educational and research opportunities for Brazilian scientists and students - and training and research opportunities for Canadian students and scientists are growing in Brazil.



Street scene in front of a pathology lab in Delhi

“The ophthalmic pathology lab at Hyderabad handles approximately 4000 specimens per year and 300 cytology specimens, including fine needle aspirations and vitreous fluids,,

TRIP TO INDIA: INDIA IS HARD WORK (IN MORE WAYS THAN ONE!)

DR. VALERIE A. WHITE - PROFESSOR

In November and early December 2012, following 2 weeks of travelling, I spent 4 weeks working in the ophthalmic pathology lab at the LV Prasad Eye Institute (LVPEI) in India. For most of that time I was in the oldest and largest centre in Hyderabad, but I also took a short trip to a satellite hospital

in Bhubaneswar, near the east coast of India on the Bay of Bengal, south of Kolkata. The institutes had each hired a new pathologist during the last year following the departure of their senior pathologist for a job as Dean of Medical Sciences in Hyderabad University, and felt that the junior pathologists

might benefit from working with an experienced pathologist. Hyderabad is a city of approximately 7 million people located in south central India. It was the centre of the Moghul empire in India from the 16th century and still has some beautiful old monuments to attest to this, particularly the preserved Qutb

Shahi tombs of the various wives of the ruling families of the time, and the Golkonda fort dating from the 1600s. Hyderabad is mostly a large, dusty, busy city that sprawls forever and has severe traffic problems. It is the centre of the tech industry with a suburb called Hitec City where Google and Apple have large headquarters. When LVPEI opened in 1987 it was on the fringes of the city near a small national park; both are now surrounded by the city that has expanded around them.



Pathologist, Dr. Ruchi Mittal, with Val in front of a neem tree she 'adopted' at LVPEI in Bhubaneswar

Although it is a private organization, the institute caters to all levels of society with eye problems and has a tiered payer system; the wealthy patients are offered perks, such as private rooms, for which they pay extra that subsidizes those that can't afford to pay. In this way, all can receive good eye care. The institute is the tertiary care centre at the top of a pyramid of 89 Vision Centres, each offering basic eye care for people in small villages. These centres are in turn serviced by fewer larger Secondary Eye Care Centres that can diagnose all eye diseases and provide high quality

surgical care for cataracts. All patients are referred to the main institute for complex surgical care and complicated problems. This is also where the training of all ophthalmic personnel takes place, from those working in the villages to subspecialty ophthalmologists.

The ophthalmic pathology lab at Hyderabad handles approximately 4000 specimens per year and 300 cytology specimens, including fine needle aspirations and vitreous fluids. The lab

Microsporidial keratitis, as opposed to the degenerative conditions that I mostly see in Vancouver. I may see 1 or 2 fungal infections per year whereas they can see from more than 5 - 10 per week. They receive about 180 retinoblastomas per year, many with extraocular extension and/or metastases, complications that I rarely see in Vancouver. Often the retinoblastomas are treated with chemoreduction therapy prior to enucleation. They also receive approximately 15 - 20



Val with Dr. Mulay (left) and technologists in lab at LVPEI

employs one fulltime pathologist and four fulltime technologists and is able to carry out a wide range of routine procedures and immunohistochemistry. The pathologist, Dr. Kaustubh Mulay, also reads bone marrow aspirations, done primarily for metastatic retinoblastoma and leukemia, and peripheral blood smears and CSF cytology as needed. Within a few days I had noted that the spectrum of pathology was quite different than what I was used to. The majority of corneal buttons are removed for fungal and/or other infectious causes, such as Acanthamoeba and

intraocular melanomas as most are enucleated, not treated primarily with radiation as they are here. This ratio of retinoblastomas to melanomas is opposite to what I see in Vancouver. And whereas basal cell carcinomas are the most common tumor of the eyelid skin in the Caucasian population, in India, the most common tumor is sebaceous carcinoma. Because of this, while there, I began a project examining the prevalence of microsatellite instability in sebaceous neoplasms as assessed by IHC and the association with Muir-Torre syndrome. Lymphomas are the

most common malignant neoplasm of the orbit in both Vancouver and India, but it seemed to me that they had a wider range of lymphomas involving the orbit, including more T-cell and other unusual types. Diagnosis of extramedullary myeloid tumor presenting in the orbit is also frequent. Some of the interesting cases I saw were:

1. Corneal button with fungal keratitis that had brown hyphae on H&E stain and was shown on culture to be a dematiaceous (pigmented) fungus *Fonsecaea pedrosoi*
2. Clinically a presumed extra-ocular extension of retinoblastoma treated with chemoreduction with destruction of the eye, and sinus extension that proved on biopsy to be a myxoid liposarcoma
3. Diffuse large B-cell lymphoma of the orbit with signet ring morphology
4. Clinically a presumed retinoblastoma that turned out to be intraocular TB
5. Scleral nodule due to leprosy
6. EMT in a 34 year old women
7. Conjunctival rhinosporidiosis

While there, I was billeted in the 'guesthouse' on the fourth floor of the institute and as the labs were on the fifth floor, I had a very short commute. Residents and fellows from away were billeted at a 'residence' also on the fourth floor and were under the strict thumb of the director, Dr. Rao. He dictated everything from hours of work

to the type of clothing that was worn. Trainees were not allowed off-site during the day, which began at 0700 with scheduled rounds and teaching sessions. The institute was meat and alcohol-free and, although food was served in the cafeteria three times a day, it was always the same food, and most resident, and fellows went out to eat when they could. I made breakfast in my room and discovered the local Starbucks mimic, 'Café Coffee Day' where I went for

lunch or afternoon coffee almost every day. For dinner I usually went to the local surrounding Indian restaurants, which were numerous and very good.

Overall the experience was quite positive and I felt that I learned as much from the pathologists there as they did from me!



Val, Sharon and Tina visit the Taj Mahal



Visitors to Café Coffee Day!



LV Prasad Eye Institute (LVPEI)

DR. HAYDN PRITCHARD – PROGRAM DIRECTOR

We would like to introduce you all to our newest intake of students into our Graduate Program. Nineteen students commenced either their MSc or PhD degrees during the 2012 calendar year. Most MSc students will transfer to the PhD program during their second year, and we anticipate that this group will become the cornerstone of the program over the next 4-5 years. The students are dispersed over the 4 geographic sites, yet they are strongly bound by our departmental ties and community.

Please join us in welcoming them to our department and feel free to contact them through their information that can be found on the Department of Pathology and Laboratory Medicine – Graduate Studies website: <http://www.pathology.ubc.ca/pathology/GraduateStudentPortfolio.html>.



SIGRID ALVAREZ

MSc [Sept 2012]

Supervisor: Bruce Verchere

My research interests are in immunology, autoimmunity, transplantation and diabetes. Currently, I am working on modulating the immune system to improve islet transplant outcomes in type 1 diabetic patients. I have a B.Sc. in Biochemistry from the University of Ottawa.

I moved to Vancouver from Ontario two years ago. I love Vancouver for the hiking and the views. I am trying to learn to ski, which is proving difficult here because the mountains here are huge compared to the hills in Ontario, and I now realize that I should have learned before coming here. I also love to bake, play volleyball and knit. Before getting into graduate school, I spent an entire year baking for friends. If I were not doing research, I would probably be a baker. I love to try new things, which is great because I learn new things in the lab every day, even if I don't intend to. I chose UBC because it is a great university that offers a diverse range of programs and great research facilities. It doesn't hurt that it's on the ocean and has great mountain views either.



AHMAD ARBAEEN

PhD [Sept 2012]

Supervisor: Dana Devine

I chose UBC because it is the place of mind and creativity.

The following describes my research: For trauma patients, platelet transfusion is crucial to maintain hemostasis and compensate for blood loss. Variation of the level of responsiveness of the transfused platelets can be reflected by the recipient's response. Posttransfusion testing of the platelets following administration is essential to assess the level of response in trauma patients. However, these assessments are run after transfusion, but a credible system has yet to be created to determine the quality of the platelets, pre-transfusion.

Patients undergoing prophylactic transfusion should receive stored platelets that have been assessed to ensure best patient outcome, therefore instruments that test the efficiency of clot formation may be used, such as thromboelastography (TEG) used in surgery suites to assess the hemostatic state of a patient susceptible to bleeding. The hypothesis is that applying TEG to evaluate the procoagulant activity of stored platelets can predict platelet quality. To test this hypothesis, two specific aims have been established.

Significance: This research will yield insight into platelet quality, coagulation and transfusion medicine. It will design a novel approach to prevent excess bleeding; for instance, it will update the policy of platelet transfusion policy at Canadian Blood Services

(CBS). Testing can distinguish hyper, moderate, and non-responsive platelet concentrates (PCs) and will lead to the discard of low responsive PCs when their TEG profiles do not show a good response.



MOMIR BOSILJCIC

MSc [May 2012]

Supervisor: Kevin Bennewith

I completed my Honours degree in Cell Biology and a Minor in Biochemistry through Simon Fraser University (SFU). I also took part in SFU's science coop program which allowed me to work in both the academic (BC Cancer Research Centre) and industrial settings (Amgen) as an undergraduate student. After a bit of travelling, I decided to come back to BC Cancer Research Centre and join Dr. Kevin Bennewith's lab as a laboratory technician. I remained as a technician in Dr. Bennewith's lab for almost two years before switching into the role of a graduate student. This jump allowed me to get more involved in the research I was already very excited to be involved with. I study the role of hypoxia on the promotion of metastasis in a breast cancer model. My ultimate career goal is to remain in the health field and improve the quality of life of patients suffering from disease. Outside of the lab, I have many interests including soccer, music, photography and swimming. I chose to join the Department of Pathology and Laboratory Medicine at the University of British Columbia due to its excellent reputation and a multidisciplinary approach to studying disease.

OUR STUDENTS (2012)

MSC PROGRAM

34 students

PHD PROGRAM

53 students

MD/PHD PROGRAM

4 students



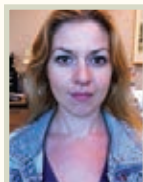
WAI HANG (TOM) CHENG

PhD [Sept 2012]

Supervisor: Cheryl Wellington

Hi, my name is Wai Hang Cheng. You can call me Tom. I am currently working in Dr Wellington's lab in CFRI, on a project related to traumatic brain injury, apolipoprotein E and Alzheimer's disease.

I was born and raised in Macau and I obtained my Bachelor and Master's degrees in Biochemistry from the Chinese University of Hong Kong. Regarding my research, I have a strong interest in deciphering neurodegenerative diseases, as well as looking for possible solutions. In my leisure time, I enjoy photography and literature, especially poetry. For sports, I like to jog, and I am currently learning Taekwondo. I chose UBC because it is a very renowned university, both for research and teaching. I wish we all have fruitful studies here!



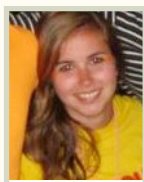
LINA CHERNOV

MSc [Sept 2012]

Supervisor: Marcel Bally

My name is Lina and I came to Vancouver five years ago from Israel. I graduated as a Biotechnology Engineer and worked in the area of diagnostic devices for a couple of years. Since I came to Canada I have been working at the Cancer Research Centre in the department of Experimental Therapeutics. This is where I understood the magnitude of cancer and realized the importance of cancer research. My research interest is childhood oncology, especially neuroblastoma. I believe that more effort should be directed to the development of more specific and less toxic drugs especially for treatment of children, in order to reduce long term side effects and to provide those kids with good quality of life. UBC is one of the leading universities of Canada, known for high quality of education and variety of the programs offered. All of those, in addition to collaboration of the

Department of Pathology and Laboratory Medicine and BC Cancer Research Center, encouraged me to start my graduate studies at UBC in the Department of Pathology.



EMMA CONWAY

MSc [Sept 2012]

Supervisor: Wan Lam

I am studying tumour associated macrophages in lung cancer. Before UBC, I did my undergraduate studies at the University of Victoria, receiving an honours degree in Microbiology. For my honours thesis I worked on epitope mapping of a therapeutic vaccine in a humanized mouse model. I also went on exchange to the University of Essex for a year. I enjoy soccer, rowing, squash, camping, climbing, and I am currently planning a sailing trip around the world with my Pops. I chose UBC for its excellent reputation and because I love this city.



SARAH FERNANDO

PhD [Sept 2012]

Supervisor: Neil Cashman

My research area is neurodegenerative disease, with Amyotrophic Lateral Sclerosis (ALS) being the main focus of my project. I completed my undergraduate studies at Aston University, UK, where I obtained my BSc in Cell and Molecular Biology. During the course of my studies I also did a research semester for my honours project at a molecular biology lab. The time spent in the lab was very rewarding for me, and I quickly recognized my interest in further pursuing academic research. After working as a research assistant at SFU for a year, I decided to pursue a career in research and to complete a PhD program. I chose UBC because of its excellent international reputation for research. I feel very fortunate to be a part of the Pathology and Lab Medicine program, and I'm excited for the learning opportunities ahead.



SAMANTHA HANSFORD

MSc [Jan 2012]

Supervisor: David Huntsman

My research concerns the genetics of hereditary upper gastrointestinal (UGI) cancers, using next generation sequencing techniques to discover genes that predispose families to unexplained hereditary patterns of disease. I graduated with a BSc from Memorial University of Newfoundland (MUN) with a Major in Biochemistry/Nutrition and Minor in Biology. I grew up in Newfoundland living a pretty active lifestyle, mainly playing organized sports. I've played competitive soccer my entire life, including 5 years of varsity for MUN during my undergrad.

Upon completing my undergrad at MUN, I was given the incredible opportunity to move to Vancouver and work under the guidance of Dr. David Huntsman and his Gastric Cancer team as a research assistant and lab technician. After improving my skills and knowledge in the area, working with some of the top researchers in the field and witnessing, first hand, the potential impact gene discovery can have on familial cancers, my passion for research grew. I decided to enter Graduate Studies at UBC and work on a collaborative UGI gene discovery project in Dr. Huntsman's lab that has the potential for significant impact on these familial cancers. The incredible people and constant support is really highlighting my experience as a graduate student here at UBC.

Since moving out west, I continue to play competitive team sports but have also picked up snowboarding and spend my time outside whenever I can: hiking and camping in the summer, snowshoeing treks in the winter, etc. I'm really enjoying the lifestyle that western Canada has to offer and I'm looking forward to future adventures!

**IVY HSU**

MSc [Sept 2012]

Supervisor: David Granville

I am currently working at the James Hogg Research Centre, under the supervision of Dr. David Granville. My research focuses on determining the extracellular role of a serine protease known as granzyme B, on wound healing and more specifically, in the pathogenesis of diabetic skin ulcers. I grew up in Vancouver but moved to Toronto for undergraduate studies. After completing my Bachelor of Science degree in Pharmacology and Toxicology at the University of Toronto, I decided it was time to move back to Vancouver as the cold winter was too hard to embrace. In my spare time, I like to go hiking and whenever I have the opportunity to, go travelling abroad.

**KHALEEL MEGHAIRBI**

PhD [Sept 2012]

Supervisor: Mike Noble

I carry out clinical research as a PhD student focused on Laboratory Quality Management (LQM). I have a BSc in Medical Laboratory Technology and MSc in Medical Microbiology. I have a strong feeling that quality is inherent in personality, since I like to see quality in every part of life. My passion for LQM motivated me to work on various projects, traced back to my undergraduate studies.

Then I had the privilege of working in a clinical laboratory as a Medical Laboratory Technologist where I developed a passion that drove me to educate and help both junior staff and new students on a regular basis. This experience was very helpful and dramatically improved my ability to be an active team member to cooperate and communicate effectively with staff members at different levels within the institution. I feel excited to work with one of the Canadian leaders in the field and in a state-of-the-art facility such as UBC that creates a nucleus of expertise, sophisticated equipment and opportunities for collaboration nationally and globally.

**JONATHAN LIM**

MSc [Jan 2012]

Supervisor: Poul Sorensen

I am studying oncogene-induced activation of transcriptional responses to oxidative stress to promote detoxification of reactive oxidant species and tumorigenesis. I completed a Joint Honours in Computing Science and Molecular Biology and Biochemistry at Simon Fraser University. My Honours work was carried out in the Dr. Jack Chen Lab where I studied daf-19, a *C. elegans* transcription factor that is orthologous to human ciliary genes implicated in a class of genetic disorders termed ciliopathies.

My two main interests are basketball and cycling. I have participated in various amateur and intramural basketball leagues in Vancouver including Urban Rec, in which my team recently won a division championship, and the Interchurch Basketball League (IBL). I am also an avid cyclist and will be taking part in this year's Ride to Conquer Cancer. I chose UBC because its graduate programs open doors to collaborating with a thriving community of world-renowned researchers, state-of-the-art facilities, and just an overall rich learning environment.

**DEBORAH CHEN**

MSc [Sept 2012]

Supervisor: Dana Devine

I was first exposed to and mesmerised by hematology and transfusion medicine during my undergraduate studies in the Bachelor of Medical Laboratory Science program at UBC. The Centre for Blood Research in Life Science Institute is the national hub for hematology research and this is where I ended up. My research project aims to identify protein biomarkers for quality of stored red blood cells, with aims to improve efficiency of blood banking and its delivery system. Beyond school, I am very passionate in translating scientific knowledge and in educating the public, especially in areas of health sciences. But all science aside, I am an avid yogi and runner who enjoys the outdoors, rain or shine!

**YAN MEI**

PhD [Sept 2012]

Supervisor: Jay Kizhakkedathu

I come from China. I graduated with a Bachelor in Polymer Materials and Engineering (Major), Wuhan University of Technology in June 2009. I was accepted as a Master's student majoring in biomaterials and tissue engineering at Southeast University. I will work on the development of surface modification methods for biomedical surfaces for enhancing biocompatibility. Specifically, I will try to develop multifunctional surfaces (anticoagulant, antimicrobial, anti-inflammatory) based on hydrophilic brushes and antimicrobial peptides. We anticipate that these new coatings will significantly improve the safety and performance of biomedical devices.

My favorite hobbies are badminton, cooking and traveling. There are two major reasons I chose UBC. Firstly, I like Vancouver very much and a lot of my friends are here. Another reason is that I would like to spend some years developing biomaterials and exploring mysteries and mechanisms of implant-body interactions, and then translating newly developed biomaterials into practical clinic use. Fortunately, Jay's lab in UBC can help me to achieve my career goal.

**YUDA SHIH**

MSc [Sept 2012]

Supervisor: Catherine Pallen

I am currently studying the signaling pathways involved in myelination and re-myelination in mouse models. I did my undergraduate studies at UBC in Cell Biology and Genetics. I chose to continue my post-graduate studies at UBC because of its prestigious reputation. I also didn't want to leave Vancouver because it's been a fantastic city that I've called home for most of my life. When I am outside the lab I enjoy playing soccer and rugby, and when I am able to, I like to fit in the occasional round of golf. Upon completing my graduate studies, I intend to venture off and embark on an adventure to experience the vast riches the world has to offer.

**TINA YANG****MSc [Jan 2012]****Supervisor: Poul Sorensen**

I was born in the frigid northern Chinese city of Harbin and immigrated to Canada at the age of 8. I landed in Ontario, where I spent the next 13 years of my life pretending to study while actually partaking in mindless activities condemned by my traditional parents. Four years of undergraduate studies at the University of Toronto have culminated in a biochemistry degree and a weary heart that has grown tired of the place I have called home for too long. It is then that the winds of fortune (as well as the recommendations from friends and the excellent research reputation of UBC) propelled me to Vancouver. Now freshly settled in the Sorensen lab at the BCCRC and more motivated than ever to pursue my childhood dream to become an academic scientist, I am studying oxidative stress signalling by the Hsc1 tumour suppressor in cancer. During my spare time I occupy myself with activities such as salsa dancing, photography, cooking, and playing ethnic instruments such as the bamboo flute and the 21-string Chinese zither.

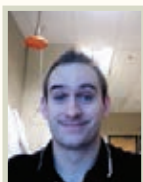
**ADA KIM****MSc [Sept 2012]****Supervisor: Kevin Bennewith**

I have been involved with cancer research since my first co-op position at the BC Cancer Research Centre in Vancouver in 2010. It was while working on my undergraduate honours thesis in the Bennewith Lab that I became interested in the role of hypoxia and metastasis in breast cancer. After receiving my BSc Honours in Biochemistry from the University of British Columbia, I continued my project, studying metastatic breast cancer and more specifically the role of one protein called, heme oxygenase-1 (HMOX1). I am interested in how HMOX1 affects metastasis in our pre-clinical models of metastatic breast cancer. Outside of research and school, I am passionate about the UBC Student Leadership Conference, an event that I've been a part of for many years. I also love to play with my dog, attend live music events, and travel with my friends. One of my favourite things to do is to

come up with playlists for various events; you'll often hear one playing in our lab.

**DAVID TWA****MSc [Sept 2012]****Supervisor: Christian Steidl**

I recently graduated with distinction from UBC's Microbiology and Immunology Bachelor's programme, having successfully defended my directed studies project on virus-linked autoimmunity. During my time as an undergraduate, I also had the occasion of serving as volunteer with the Keeling and Horwitz labs and as a work-study student with the School of Environmental Health lab. Under the direction of Dr. Christian Steidl at the BCCRC, I will be exploring the significance of immune privilege in the microenvironment of various B-cell malignancies by means of high-throughput sequencing, fluorescent microscopy techniques and both somatic and germline model systems. Academic work aside, I am the principal clarinetist for the UBC concert winds, a varsity lightweight rower and academic-all Canadian, and involve myself with several community volunteering pursuits. I also enjoy studying the piano works of Chopin, hanging out with my French bulldog Bella and avidly following satirists Rick Mercer and Stephen Fry. Because of the experience and variety of opportunities members of the Centre for Lymphoid Cancer have to offer, I am pleased to continue my studies in my home town.

**JESSE OLSON****MSc [Jan 2012]****Supervisor: Angela Devlin**

My current research focuses on the influences of maternal diet on developmental programming of glucose homeostasis in offspring, which is super cool. I graduated from UBC-O with a degree in Molecular, Cellular and Developmental Biology and chose to attend UBC Vancouver for graduate school to learn two things. The first being epigenetics and the second being nutrition. In the future, I plan to investigate how the environment (nutrition) influences development of the immune system through epigenetic mechanisms.

As for personal and professional interests, I have a 32 handicap; hence I don't like golf, I cannot bowl, I am the worst tennis player and I think one of my legs is longer than the other. On the bright side of life, I enjoy teaching and have a passion for science.

**CHARLES SOONG****MSc [Sept 2012]****Supervisor: Sam Aparicio**

My research area is Genome Stability - Analysis of DNA Double-Strand-Break mechanisms using next-generation sequencing, and I have a Bachelor of Science in Biochemistry (UBC). I grew up in Taiwan and attended a Japanese elementary school. I came to Canada when I was 10, and have been in Vancouver ever since. During my senior years in UBC, I was fortunate enough to have my first 8-month co-op work term with Dr. Sam Aparicio, in the field of cancer genomics. In my second 12-month co-op term, I worked at an industrial company in Japan, screening for odorant receptors. Having exposure to both industry and academia, I realized that my true interest lay in academia. I decided to enter grad school to continue working with Dr. Aparicio. A hallmark of cancer and many other disorders is genome stability. My research aim is to develop new sequencing-based methods to study DNA repair. The Pathology Department in UBC has world-leading researchers in many areas, along with great facilities. Having exposure to different cultures from infancy, I feel at-home in the highly multi-cultural city of Vancouver.

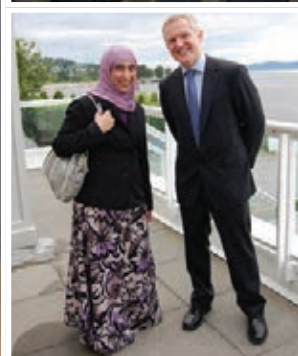
Nineteen students commenced either their MSc or PhD degrees during the 2012 calendar year.



RESIDENTS' GET-TOGETHER NIGHTS

The resident group gets along wonderfully and our calendars are sprinkled with social events each month.

Our department values the relationships we have with one another and encourages us to get together outside of work. The department also hosts an annual Holiday Party and Graduation Ceremony. These are formal events that are enjoyed by the whole department.



Accreditation Fast Approaching!

DR. MICHAEL NIMMO – PROGRAM DIRECTOR

■ PATHOLOGY RESIDENCY PROGRAMS

As many are aware, 2013 is the year during which the Royal College Of Physicians of Canada will survey each of the UBC post graduate residency training programs including UBC's pathology residency programs. UBC is one of the sites chosen to assess a different survey system. In February, the Royal College will visit and survey the "A" standards that apply to the University. Then in November the "B" standards applicable to the individual programs will be surveyed.

Small programs such as Pathology's may not require an on-site visit. If the Pre-Survey Questionnaire is considered to be sufficient and the Specialty Committee for that specialty has no concerns, and there are no concerns raised by the residents in the confidential survey they completed, then the Royal College will accredit the program without a visit. Several of the smaller programs will be chosen at random for on-site visits. Consequently Kim, Dzifa and all the Program Directors madly completed the Pre-Survey Questionnaire before the deadline of January 31st.

The on-site survey involves a survey team visiting the major teaching site, and interviews with the Department Head, the Program Director, the residents and available faculty. The survey typically takes a day and provides the survey team with an opportunity to review relevant documents and identify the strengths and weaknesses of the programs.

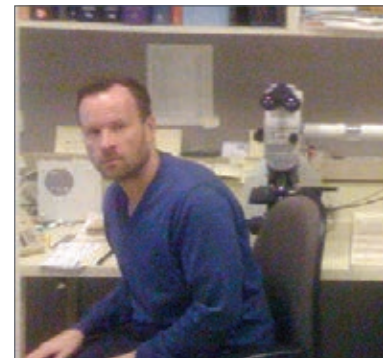


■ CARMS INTERVIEWS

The programs will be conducting interviews with those medical students who are interested in pursuing a career in pathology. There is typically a panel of interviewers that includes current residents and the students are given a tour of the relevant facilities. The first iteration of the match is limited to graduates from Canadian medical schools. If there are unmatched positions following the first match then those are transferred to the second iteration which is open to international medical graduates, students that were unmatched in the first iteration, and certain others. There have been many medical students completing electives in pathology and we are anticipating a strong interest.

The current residents are working hard and several will be attending the upcoming USCAP meeting in Baltimore and will all be taking the Royal College exams this year:

- Salwa El-Malti from Hematopathology,
- Hans Frykman from Medical Biochemistry,
- Zahra Al-Hajri and Fahad Alghamdi from Neuropathology,
- Chris Conklin and Tawny Hung from Anatomical Pathology and
- Ehsan Davani from General Pathology



PATHOLOGY'S EVOLVING DEPARTMENTAL PEER EVALUATION PROCESS

The perspectives, the methods, the processes keep changing but the question remains the same “what, exactly, is good teaching and how do we measure it?” A scary world of definition-wrangling ensues...



Dr. Maria Issa, BSc (Hons) UBC,
PhD (Univ of London)
Clinical Associate Professor, Dept
of Pathology and Laboratory
Medicine, UBC

A university, *universitas magistrorum et scholarium*, once primarily a teaching institution, has become the home of teaching and research, scholarly discourse and comment, and social relevance. It examines, grants degrees: approves that a student has arrived at an appropriate level of knowledge - thanks to the teaching received. The student has *learned*. This begs the question, “are universities *teaching* or *learning* institutions?” We can’t answer because one is the input, the other the output – we cannot measure one by the other: we can teach elegantly, lengthily, scholarly – but if the students do not learn, come away with something useful, then what have we accomplished? Television can do better...

Currently the peer evaluation process is focused more on the teaching input than the output. We make the assumption that the two are one – not just tenuously connected - we give great lectures, clear labs, fair exams: the students pass. With the availability of the Internet, on-line sources, *Coursera et al*, are we even relevant? Dr. Jason Ford, Pathology, gave an excellent rationale for the continued

existence of professors: professors can provide students with their own insights and approaches, synthesis and guidance, that the students cannot get from a textbook or a textbook-surrogate. Professors are the ones who must ask themselves “what should the student come away with?” Thus today, teaching must become personal.

The Department of Pathology and Laboratory Medicine, a large, province-wide, distributed department of nearly 450 faculty members, values good teaching highly. Consequently, the department has formed the *Peer-Assisted Teaching Development* committee to formalize and provide some basics: good examples, mentorship, formative feedback and support, as well as a strong impetus for teaching education through UBC’s CTLT. Participation in the process of Peer Support of Teaching is recognized and rewarded, as is good teaching, by means of public acknowledgement and a teaching prize presented during the annual Pathology Day. Of course, teaching comes in many flavours in an academic and clinical department:

classical courses and clinical courses at both the undergraduate and graduate levels are the obvious ones; but there is continuing medical education, public outreach, and one of the most personal ones – in a research laboratory or clinical

“Tracking these puzzle pieces of what teaching really entails, from preparation to delivery, from interaction to evaluation, deciding one’s own approach to teaching, one’s “teaching philosophy,” is a complex task.”

preceptor setting. Tracking these puzzle pieces of what *teaching* really entails, from preparation to delivery, from interaction to evaluation, deciding one’s own approach to teaching, one’s “teaching philosophy,” is a complex task. To be able to capture it all, in all its variations, needs a handy

database platform – and Pathology has created one. With guidance from Dr. Niamh Kelly and computer wizardry by Simon Dee, Pathology’s Teaching Dossier is on-line and connected. Through it, there is access to the UBC Calendar, places to include hours, comments, evaluations, ways to create a number of reports and other tools to facilitate the generation of an organized, annotated summary. Although Pathology is piloting this now, it will become available to other interested UBC groups.

Having an available summary of *what and how much* has been done, and how it was received, will facilitate the Summative Peer Review of Teaching (SPROT) that is now formulated as a specific UBC process. SPROT is evolving: currently it prescribes a holistic assessment of a professor’s involvement in teaching - the evaluation process is still quite subjective, with reference to “departmental norms.” Specific criteria of expectations against which to evaluate performance are still rudimentary and reflect familiar

classroom and group educational formats. What now becomes crucial in the era of on-line, disembodied, professorial superstars is how to address and evaluate the personal, one-on-one teaching. A power imbalance is inherent in such one-on-one teaching that takes place in some undergraduate and most graduate supervision situations such as research laboratories or the clinical bedside. Making those a rich, positive interaction, with well-defined expectations requires definition for both the faculty and students. We are all looking to the University for guidance on performance criteria for this type of interaction.

Ultimately we still have to ask ourselves “why should the students learn this?” and having a resoundingly good answer, the next questions still remain “what should they come away with?” and “have I provided them with adequate intellectual tools?” That is really what we need to evaluate.



IT SUPPORT

Service offered by UBC IT

Microsoft Home Use Program

You are now eligible to participate in Microsoft’s Software Assurance Home Use Program (HUP). This program enables you to get a licensed copy of most Microsoft® Office desktop PC applications to install and use on your home computer. Under the Home Use Program, you and our other employees who are users of qualifying applications at work (*e.g.* Office Enterprise) may acquire a licensed copy of the corresponding Home Use Program software (*e.g.* Office Enterprise) to install and use on a home computer. You may continue using HUP software while you are under our employment and as long as the corresponding software you use at work has active Software Assurance coverage.

For information on how to get Microsoft Office *via* the Home Use Program, please contact Debbie Bertanjoli *via* email: dbertanjoli@pathology.ubc.ca

PATHOLOGY FACULTY ACTIVITY DATABASE

For the past year the Pathology Faculty Activity Committee has been working on developing an online Faculty Activity Database. The committee is chaired by Dr. Niamh Kelly, Associate Professor, and includes: Dr. Mike Allard, Department Head, Simon Dee, Application Developer, Sandy Liu, Interim Director and Debbie Bertanjoli, Database Manager. The system was designed with user simplicity in mind which included extensive input from faculty members, administrators, human resource, and the database manager.

Faculty Activity Database (FAD) is a two-phase project:

- **phase one** of the project includes building a module to track faculty teaching activities (*teaching dossier*) and
- **phase two** of the project includes building a module to track faculty research and service activities, along with their accomplishments and professional activities (*curriculum vitae*)

PHASE

1

COMPLETED

SYSTEM TO TRACK FACULTY TEACHING ACTIVITIES

The primary purpose of the Faculty Activity Database is to maintain the accuracy and consistency of the information that is reported and additionally to reduce the number of requests that faculty members and the department members receive regarding the same data about their professional activities.

Phase one of the FAD project was to develop a ***System to Track Faculty Activity and Productivity in Teaching*** which has been completed. The teaching dossier is an increasingly popular way for faculty to document their teaching effectiveness, both for self-improvement and for tenure and promotion. The teaching dossier will allow the Human Resources team to generate annual reports and queries for faculty members that are up for promotion. It will also allow them to do finer queries, such as faculty member activities at a certain period of time and export them into Excel for detail analysis or as appendix in reports. Although entering information in the teaching dossier initially may be more time consuming than previous collection methods, the new system promises to provide many advantages to faculty and the department including the following:

- The Teaching Dossier (TD) provides a single place for you to keep current information about all of your activities and productivity relevant to teaching
- The system will enable you to record your annual activities throughout the year, reducing the need for chairs to make solicitations for reports
- The web-based environment provides secure, easy to use web forms for entering information: you or your representative can enter and modify data
- The Teaching Dossier (TD) produces customized reports and you will be able to select sections to include or exclude from the printout (word or .pdf). The format of the TD report was developed using existing reports as guides

UBC Teaching Dossier

by UBC Faculty of Medicine - Pathology and Lab Medicine

Objective UBC Courses Supervisions Non-UBC Improvements Comments Documents More...

Approach to Teaching

[Edit Record](#)

Statement Of Teaching Philosophy

Teaching Strategies And Practice

- Support and training (including on-line tutorials, help screens) for all users will be provided
- Support for data input of past years' information, if needed will be provided as well.

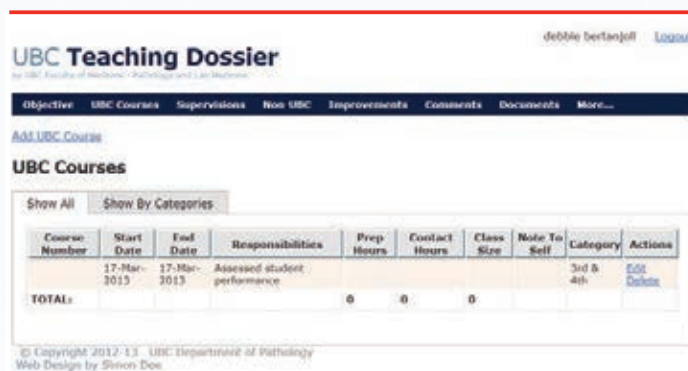
The new teaching dossier includes a wide range of information divided into sections.

The '*Objective*' section highlights the faculty's approach to teaching and is divided into three sections: statement of teaching philosophy, teaching strategies and practice, and teaching perspective and highlighted teaching contribution.

The '*Service*' section details various types of services, including teaching UBC courses, supervision, non-UBC teaching, and the '*Improvements*' section includes educational conferences, teaching awards *etc.* In addition, the new system has a 'self note' field (non printing field) for almost all sections and an option of uploading documents and displaying teaching ratings.

The main navigational element is a listing of hypertext menu options located on the top of the browser window. These menu options will expand to reveal the submenu options. By clicking on the submenu category you will be taken to the associated interface. If the menu option does not have submenus, you will go directly to the user interface for that selected menu option. Tooltips are added to the data entry forms to make it even more user friendly.

The system is cross-compatible with most browsers including Internet Explorer, Mozilla Firefox, Apple Safari and Mobile Browsers, iPhone, iPad, Android, Blackberry, etc. You can update your information at any time, from any computer with Internet connection and reports are dynamically generated instantly and automatically reflecting these additions and modifications. Faculty members are encouraged to begin the process of setting up their TD and if they have any questions to contact Debbie Bertanjoli at dbertanjoli@pathology.ubc.ca.



PHASE

2

IN PROGRESS

FACULTY RESEARCH & PROFESSIONAL ACTIVITIES

Plans are underway for Phase two, which will address the faculty research and service activities, along with their accomplishments and professional activities. The communications of today's scholars encompass not only book and journal publications, but also less formal textual communications, many of them made possible by recent advances in information technology. It is not uncommon today for an academic CV to list news articles, blog postings, tweets, video presentations, artworks, datasets, and other artifacts so our new system will have a broader definition of academic contribution. In the long run, we expect that the Faculty Activity Database will:

- Provide a single point of data entry for Faculty Activity Reports and website updates
- Allow for convenient reporting on all aspects of faculty activities
- And possibly ease of integration with the University's other enterprise systems

FEEDBACK

We thank all our Beta testers for their most insightful feedback. We also encourage all users to report bugs, provide feedback, feature suggestions and annotations for the data, to help us constantly improve our system.

To access this system please go to <http://td.pathology.ubc.ca> and self register.

JEREMY PARKER - LABORATORY MANAGER

LATEST NEWS FROM OUR LAB:

1 Good-bye to:

- Post-docs Alexandre Patenaude and Michele Fournier

2 Hello to:

- Post-doc Sergio Martinez-Hoyer, Research Student Nikola Lazic, Co-op student Angela Liu

3 Congratulations to:

- Post-doc Linda Chang, recipient of a US Department of Defense fellowship award!



RECENT PUBLICATIONS:

- Chang AC, Patenaude A, Lu K, Fuller M, Ly M, Kyle A, Golbidi S, Wang Y, Walley K, Minchinton A, Laher I, Karsan A. Notch-Dependent Regulation of the Ischemic Vasodilatory Response--Brief Report. *Arterioscler Thromb Vasc Biol.* 2013 Jan 3. PubMed PMID: 23288167.
- Garside VC, Chang AC, Karsan A, Hoodless PA. Co-ordinating Notch, BMP, and TGF-beta signaling during heart valve development. *Cell Mol Life Sci.* 2012 Nov 16. PubMed PMID: 23161060.
- Venner CP, Wegrzyn Woltosz J, Nevill TJ, Deeg HJ, Caceres G, Platzbecker U, Scott BL, Sokol L, Sung S, List AF, Karsan A. Correlation of clinical response and response duration with miR-145 induction by lenalidomide in CD34+ cells from patients with del(5q) myelodysplastic syndrome. *Haematologica.* 2012 Aug 28. PubMed PMID: 22929976.

It's nice to be back...

CMPT AND THE PROGRAM OFFICE MOVES TO COMPLETE A FULL CIRCLE

In 1982, the Clinical Microbiology Proficiency Testing (CMPT) program was born on UBC campus on the 2nd floor of the old Wesbrook Building, but moved quickly to space within the Microbiology Laboratory at UBC Hospital. Since then we moved around the city to the Friedman Building, Shaughnessy Hospital, and Heather Pavilion. Last month we returned to our near original home back into the space that was once the UBC Hospital Microbiology Laboratory (Koerner Pavilion G408). All the interim locations provided good functional space, but suffered badly from chronic lack of environmental maintenance.

That is not the case with our "new" home. Here we can do our work without the risks and hazards of contaminated ventilation, draughty windows, wild temperature swings, unstable

electrical supply and occasional murine and avian and vagrant visitors; a much better environment for developing and creating and delivering quality assessment challenges that go across the country. While the trek by the Program Office for Laboratory Quality Management (POLQM) was not as broad, our beginnings in 2002 were in and around the Koerner Pavilion PaLM office, but also moved out to the Heather Pavilion. So for POLQM it is also like being back-to-home (Koerner Pavilion G401).

The Program Office for Laboratory Quality Management
Room G401, UBC Hospital - Koerner Pavillion
2211 Wesbrook Mall
Vancouver, B.C. V6T 2B5



Last year, thanks to our performers, artists and volunteers, we raised \$1,500 for Arts Umbrella and put on a wonderful show of music, stories and dance.



PATHOLOGY
ARTS GALA
FRIDAY JUNE
14, 2013



PATHOLOGY ARTS GALA

arts**UMBRELLA**[™]

come
together

The 2013 Pathology Arts Gala is a night to celebrate performers and artists in the Department of Pathology and Laboratory Medicine. On this night, hard-working scientists and staff in our department have the opportunity to showcase their artistic talents in the presence and support of their peers. This gala also serves to raise money for Arts Umbrella, a not-for-profit arts education centre for young people ages 2-19 with an aim to make arts education available to youth regardless of their socio-economic standing.

This year the Gala will be held on Friday, June 14, 2013 at MSAC (the UBC Medical Students & Alumni Centre) on Heather and 12th Ave.

From Kevin Tsai (PhD Program)

LIFE AS A RESEARCH ASSOCIATE

DR. MARK ELLIOT - RESEARCH ASSOCIATE



"A typical day may involve bandsawing and coring a lung in the morning, then taking samples for histology processing"



Me with Adult Lamprey 1982

I am the 6th of 7 children and was born in a small town in northeastern Ontario close to the Quebec border. After graduation from Grade 13 (Ontario still had Grade 13 at the time) I moved to Toronto where I had been accepted into undergraduate studies at the University of Toronto's Scarborough Campus where I majored in Biological Sciences. I took two courses which had a big effect on my future; Comparative Vertebrate Anatomy and Vertebrate Histology. It may sound a little macabre but I enjoyed getting my hands in and dissecting the various animals we were presented with during the course. Histology was a natural extension of anatomy class as we got to visualize the microscopic make-up of what we had been dissecting. In my 4th year of undergraduate studies I did an independent studies course under Dr. John Youson, whose area of interest was studying the processes that occur during the metamorphosis of the sea lamprey. This turned into a PhD in Zoology. Working on my thesis got me out in the field collecting animals, which was a lot of work, but great fun as well and it also introduced me to electron microscopy and immunohistochemistry.

In 1988 I joined Dr. Nelly Auersperg's lab at UBC as a Post-doctoral Fellow to learn the art of cell culture. In 1991 I was hired by Dr. Jim Hogg as a Research Associate to work on adenoviral infections in the lung. After a couple of years I was asked by Dr. Hogg to take over the processing of the human lungs they were obtaining from surgery at St. Paul's Hospital, where they had started to build up a large bank of resected lung specimens for a variety

of experiments/investigations. All of these were collected from patients who had consented to have their tissue banked for research purposes. I have been running the Lung Tissue Bank at the James Hogg Research Centre ever since. To allow us to get the most out of the tissue from the lungs that we get, we take the samples required for diagnosis and then the rest is processed in a variety of different ways. The lungs are filled with either air or with diluted OCT and frozen over liquid nitrogen. Then the lungs are band-sawed into slices about 1 inch thick and cores are taken and kept frozen. The remaining portions are fixed in formalin and samples are taken for paraffin-embedding. We collect as much information on the patient as we can, including medical history, medications, occupation, exposures, smoking history *etc.*

I am never quite sure what I will be doing from day to day as it depends on what people need. A typical day may involve bandsawing and coring a lung in the morning then taking samples for histology processing. Then I may have to find frozen samples or paraffin-embedded blocks which people have requested for their studies. I may also do an immunohistochemistry staining run at the same time. Through a variety of collaborations we are able to obtain samples from around the world - as well as shipping samples - to every continent, except Antarctica! I am a member of the International Society for Biological and Environmental Repositories (ISBER) as well as the National Society of Histotechnology (NSH) for which I am the Bylaws Committee Chairperson.

MEET THE PEOPLE OF PATHOLOGY

■ DR. DAN HOLMES - CLINICAL ASSOCIATE PROFESSOR

■ CHILDHOOD

Dan Holmes grew up about one hour outside of Toronto in the small town of Port Hope, Ontario which is situated about half-way between Toronto and Kingston. He attended Trinity College School, also in Port Hope, where the dining hall is named after its legendary physician alumnus, Dr. William Osler. Dan was taught biology by Richard Honey, the father of UBC Professor of Neurosurgery Christopher Honey but his academic passion in secondary school was most certainly chemistry, particularly when it came to the art of making explosives. He was active in highschool athletics as a member of the cross-country and track and field teams. Coached by Kirk DeFazio, Dan specialized in steeplechase and was the 1990 Ontario highschool champion and to his mild chagrin, his 22 year old steeplechase records were recently eclipsed by another Port Hopian, Jeremy Coughler – such is life.

■ TRINITY COLLEGE

Around the age of 18, Dan realized that though it might be cute for teenagers to make firecrackers, for adults it may result in incarceration. So, his energies turned toward undergraduate studies in Chemistry at the University of Toronto where he resided at Trinity College, on Hoskin Avenue. Dan was also a member of the University of Toronto Blues Track and Field team and trained under Peter Pimm but had to leave track due to injuries during his third year. By this time, his focus had turned to Chemical Physics, particularly Quantum Mechanics and his last two years of studies were focused in this area. But life has a way of directing one to where one is supposed to go. Dan underwent an arthroscopy in 1993



for his knee injury and through the process of having a medical problem and a difficult recovery, he decided he wanted to be a physician himself. Lacking the pre-requisites to enter medicine, he had to go back and take undergraduate Biology and Biochemistry in order to apply.

■ UNIVERSITY OF BRITISH COLUMBIA

In the summer of 1995, he met his future wife Kathy, while working at Muskoka Woods Sports Resort in Rosseau, Ontario. Because Kathy lived in Vancouver, Dan ultimately applied to UBC medicine, and was accepted just 4 days before classes started in 1997 (into the “new” now “old” curriculum) ...a positive outcome of the waitlist. His most notable contribution to UBC campus life was his tutoring business “Dan The Tutor” which ran continuously from 1996 to 2008 – but all good things must come to an end – like steeplechase records, for example.

■ RESIDENCY TRAINING

Dan graduated from UBC in 2001 and eventually found his way to the General Pathology residency training program and inspired by Drs Morris Pudek, Andre Mattman and Gillian Lockitch, moved into Medical Biochemistry in 2003. Notable mentors in this discipline are also Dr. Jiri Frohlich and Dr. Frances Rosenberg.

■ ST. PAUL'S HOSPITAL

In 2006, he finished his residency and started at St. Paul's Hospital on staff in the second week of July of that year because in the first week of July, there were some very important fish that needed catching in Algonquin Park. Dan and Kathy have three children, Max (6), Meghan (8) and Ethan (11) and when they have a chance, they like to canoe together at Bowron Lakes in Wells, BC where their friend Lothar runs Becker's Lodge. Speaking of which, Dan and Jason Clement from the UBC Department of Radiology did their best not to die travelling around the Bowron Lakes in the winter of 2007. They managed to fall through the ice only 3 times and stole fish from an otter because Dan did not pack enough food. (that is actually true!)

■ RESEARCH FOCUS

In the area of research, Dan focuses most of his efforts on diagnostic aspects of endocrinology and developing LC-MS/MS based tests for this discipline. Actually, Grace Van Der Gugten does all the work – Dan just writes the papers. Dan and Kathy attend Bethany Baptist Church in Richmond and host a Bible study at their home on Thursday evenings.

From the photo one can see the skywalk connecting the WAB to the Centennial building

KELOWNA GENERAL HOSPITAL

30

DR. MURRAY L. SAVARD - CENTRAL AREA LABORATORY DEPARTMENT HEAD, KGH



Murray L. Savard BSc, MD, FRCPC
Central Area Laboratory Dept Head
Kelowna General Hospital

The KGH has mushroomed to its current status in only the last decade and there are currently 10 professional laboratory physicians, including two Medical Microbiologists, five General Pathologists and three Anatomic Pathologists. Currently our facility is recruiting four more staff, including a Clinical Chemist and a Hematopathologist.

This year was historic for the Kelowna General Hospital (KGH) which originally opened its doors 2 Aug, 1908. The site is now a campus with the newest of three towers, the Centennial Patient Care Tower, completed and becoming operational during the last six months. A new laboratory was opened across Pandosy Street in the Walter Anderson Building (84,470 sq ft), named after a respected physician from Kelowna. This three story building has an outpatient collection site, two modern autopsy suites on the main floor, anatomic and cytopathology on the second floor and the remaining departments of the laboratory on the third floor. The building is connected to the main



site for the central and east part of the health region and includes a helicopter landing pad on the new tower. Three regional hospitals, at Penticton, Vernon and Trail are connected by Aperio telepathology and videoconferencing for continuing medical education and daily multiheaded conferencing with Kelowna, each other and other sites.

The KGH has mushroomed to its current status in only the last decade and there are currently 10 professional laboratory physicians, including two Medical Microbiologists, five General Pathologists and three Anatomic Pathologists. Currently our facility is recruiting four more staff, including a Clinical Chemist and a Hematopathologist.

The Anatomic Pathology Department does processing for both Vernon and Kelowna and the immunohistochemistry for the central and east part of the region. The Microbiology Department is in the process of consolidating all the central microbiology into the Kelowna site and going to a 24/7 operation with MALDITOF and molecular testing.

The hospital is nestled on the shoreline of Kelowna just South of the bridge and Harvey Avenue, the main artery through town. Being able to cycle to work year round through vineyards and orchards, and within 45 minutes of Big White, one of the worlds premier ski resorts, in addition to a guaranteed three continuous months of sunshine every summer, are huge perks for our staff. Despite recent challenges of restructuring our senior technical staff, the move and new programs, our 130 plus technical staff have stepped up and adapted remarkably and I think everyone is pleased with our new location.

hospital by a skywalk across Pandosy and there is a pneumatic tube system connecting the laboratory to all sites in the hospital. The old laboratory housed in the Pandosy building was torn down after 70 years and this site will be the new home of the cardiac center which is beginning construction.

The new UBC Okanagan Medical School opened its doors this past year and our second group of 34 new students are now on campus. On 1 Dec 2012 open heart cardiac surgery began and joins an active thoracic, neurosurgical and other surgical programs in two different sites. The Kelowna General Hospital is the hub tertiary referral



Human Resources

You Asked - We Answered

❖ At UBC, how can a faculty members' children become eligible for the tuition fee waiver?

Eligibility:

The position, type of appointment and appointment length - determine a child's eligibility for the waiver benefit.

You are eligible if:

- You are an active member of the Faculty Association bargaining unit with an appointment of at least one year in length at 50% time
- You are approved for the Income Replacement Plan (IRP) and are currently receiving IRP benefits
- You are a retired eligible member of the Faculty Association (as above)

**Faculty Association members include all levels of the professoriate (Assistant Professor, Associate Professor, Professor), and Instructors & Senior Instructors.*

**Your dependent children are eligible for the Tuition Fee Benefit if they are unmarried and under age 25, and substantially dependent on you for financial support at the start of the session to which the Tuition Fee Benefit applies (either Winter or Summer Session).*

**For more information, please click on the following link: <http://www.hr.ubc.ca/benefits/professional-development/faculty/#eligibility> or contact Rita Amisano, Interim HR Manager, at 604-822-7256.*

UNUSUAL CONNECTIONS BETWEEN ART AND MEDICINE

DR. MARIA ISSA

Probably the oldest known “art objects” are the Venus figurines (fig 1) http://en.wikipedia.org/wiki/Venus_of_Hohle_Fels dated to between 30 000 – 40 000 BC. But are these art or medicine? Certainly both - as the craftsman required skill and observation to create an image of something of fundamental importance – knowledge of nature, and most probably, the artist created it in the hope of controlling that nature.



[fig 1]

Then we move to relatively recent times and the familiar medical images of Leonardo da Vinci

(fig 4). <http://www.leonardo-da-vinci-biography.com/images/leonardo-da-vinci-anatomy.6.jpg> - and the almost impossibly beautiful anatomical drawings by Michelangelo Buonarroti.

Our time-machine moves forward a log to 3000 BC to find images of Egyptian medicine and the Edwin Smith Papyrus at the New York Academy of Medicine (fig 2) the earliest known treatise on surgery in the Western World. <http://neurophilosophy.wordpress.com/2006/07/10/pharaonic-neurosurgery-the-edwin-smith-surgical-papyrus/>

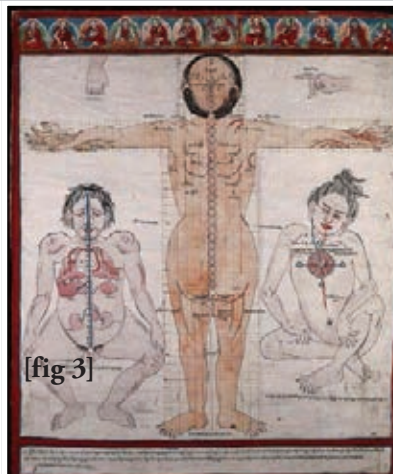


[fig 2]

[fig 5]. There is the suggestion that Michelangelo knew more neuroanatomy than was probably safe for him because during the renaissance, such knowledge was attainable only by illicit dissection.

Again images and medicine are connected. Similarly, there are artistic images of Tibetan medicine, 2000 years ago, describing the “wiring behind the senses” with diagrams (fig 3).

<http://www.amchikunga.com>.



[fig 3]

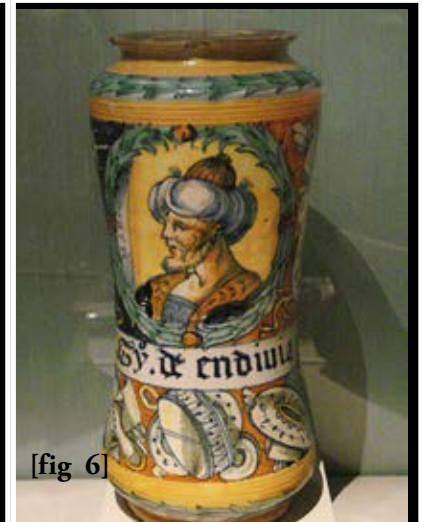
Consequently, it was coded into art [fig 5a] <http://www.pachs.net/blogs/comments/renaissance-art-or-neuroanatomy-part-1/> Medical knowledge was recorded in beautiful images – and thus art and medicine are inextricably linked.

- Pathologists are a visual lot who live for images. Indeed medicine, and even before that, culture as we know it, evolved from images.
- Today, we create useful images for work: science, marketing, entertainment, *etc* and we also create images for their own sake and we call them “art.” This separation has not always been the case.

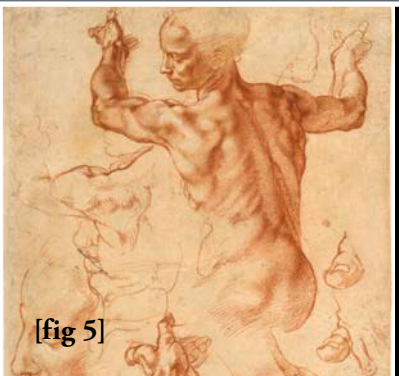


[fig 4]

Sometimes, the medical utility – the “work” – was decorated to provide beauty as well as functionality. This was the case for the “albarello” ceramics of the 16th, 17th and 18th centuries [figs 6, 7].



[fig 6]



[fig 5]

Apothecary jars - sometimes with Latin inscriptions of their contents - that were beautifully decorated. The contemporaries of the apothecaries were the “barber surgeons,” http://en.wikipedia.org/wiki/Barber_surgeon medical practitioners who, among other things, balanced the patients’ humours <http://www.sciencemuseum.org.uk/broughttolifetechniques/humours.aspx> by blood-letting into beautifully decorated barber bowls.



[fig 7]



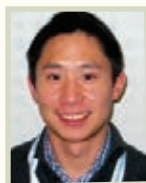
[fig 5a]

[fig 8]. Examples of such useful but beautifully decorated ceramics can be found in the Koerner Ceramics Collection at the UBC Museum of Anthropology, <http://moa.ubc.ca> one of the hidden jewels of UBC: worth a (long) visit and it is open late Tuesday evenings and is free to UBC students, faculty and staff.



[fig 8]

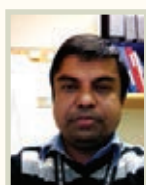
WELCOME NEW FACULTY MEMBERS



LEUNG, VICTOR

Clinical Assistant Professor,
Pathology, Associate Member
Department of Medicine,
Division of Infectious
Diseases

Dr. Leung currently works as the Infection Prevention and Control physician for Providence Health Care. He is also a member of the Medical Microbiology laboratory and maintains a clinical practice in the division of Infectious Diseases at St. Paul's Hospital. Dr. Leung completed medical school and Internal Medicine training at UBC. His fellowship training in Infectious Diseases and Medical Microbiology was completed at McGill University. His interests are in the development of antimicrobial stewardship programs and the prevention of hospital associated infections. He is actively involved in teaching medical students, residents and fellows. In his free time, he enjoys painting, cooking and swimming.



HASAN, MOHAMMAD RUBAYET
Clinical Instructor, Children's
Hospital

Dr. Hasan's involvement with biomolecular research dates back to 1995 as a MSc research student at an International Health Research Organization in Bangladesh. He obtained his PhD in Bioscience and Bioinformatics in 2006 from Kyushu Institute of Technology, Japan. Upon completion of his doctoral research on microtubule interaction with the iron storage protein ferritin, he continued his research on ferritin at Children's Hospital Oakland Research Institute (CHORI), California, as a Postdoctoral Fellow. He briefly worked at Texas A&M Health Sciences Center before he immigrated to Vancouver, Canada in 2009. Around the same time, Dr. Hasan started his postdoctoral studies on colon cancer biomarkers at the Genome Sciences Centre, employed by the Faculty of Medicine, UBC. Currently he is a Laboratory Scientist at Children's and Women's Health Centre of BC, Department of Pathology. He developed new molecular assays to detect infectious bugs regardless of how tiny they are and how difficult to catch them!!!! Apart from work, he likes watching movies and spending time with his daughter.

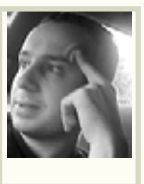


DENG, BO

Postdoctoral Research Fellow,
Brook's Lab, Centre for Blood
Research

Dr. Deng started his research on functional modification of polymer films *via* radiation induced grafting in the laboratory of Radiation Chemistry and Radiation Technology at the at Shanghai Institute of Applied Physics, Chinese Academy of Sciences from 2000 to 2003. As a PhD candidate, Dr. Deng starts his research in 2003 and focused on the preparation of antifouling filtration membranes from radiation induced grafted polymer powder and received his PhD in inorganic chemistry in 2008 at the same institute. From 2009 he worked as an Associate Professor and focused on the development of laundering - durable superhydrophobic and antibacterial polymer fabrics *via* radiation induced polymerization grafting. From March, 2011 to March, 2012, Dr. Deng was a Guest Scientist at the Laboratory of Biomolecular Research (LBR) and Laboratory for Micro and Nanotechnology at the Paul Scherrer Institute in Switzerland. His project was: "High contrast cell-adhesive polymer films coated with micro& nano patterned proteins using micro-fluid method".

Dr. Deng joined Dr. Brooks' group in August 2012 as a Postdoctoral Research Fellow. His current research focuses on the study of protein nonfouling PVC platelet storage bags *via* surface initiated ATRP with zwitterionic monomers.



CROXEN, MATTHEW

Research Associate, BCCDC
Public Health & Microbiology
Reference Laboratory

Dr. Croxen received his PhD from Dalhousie University, supervised by Dr. Paul Hoffman, followed by a postdoctoral fellowship with Dr. Brett Finlay at the University of British Columbia. He will be working with Drs. Judith Isaac-Renton, Patrick Tang and Natalie Prystajek, along with the rest of the watershed metagenomics team, looking for biomarkers in various watersheds. Outside of work, Matthew enjoys playing soccer, photography and spending time with his wife and 18 month-old daughter.



CHOW-WHITE, PETER

Affiliate Associate Professor,
Koerner Pavilion

Dr. Chow-White's research investigates the intersection of information technologies, such as the Internet, and genomic technologies. His genome and health related projects aim to understand the emerging risks and benefits for different stakeholders, such as clinicians, researchers, and policy makers, as they innovate and develop new clinical genomic technologies for personalized medicine. Dr. Chow-White received his PhD from the Annenberg School for Communication at the University of Southern California and holds a position as an Associate Professor in the School of Communication at Simon Fraser University. He is also a member of the Centre for Clinical Diagnostic Genomics at the Genome Sciences Centre. The research in his Genomics and Networks Analysis (GeNA) Lab also focuses on the role of big data in the evolution of social media. He spends his 'spare' time coaching his two young boys in basketball and baseball. Dr. Chow-White looks forward to working with his new colleagues at UBC.



RAKIC, BOJANA

Clinical Instructor,
Biochemical Genetics Fellow,
Children's Hospital

Dr. Rakić finished her BSc in organic chemistry from the University of Belgrade. She received an international fellowship for postgraduate studies at the University of Ottawa. She obtained her PhD in biological chemistry where she studied the effects of small molecules' on hepatitis C virus replication. She was awarded an NSERC Postdoctoral Fellowship in the laboratory of Dr. Stephen Withers at UBC where she investigated the function, mechanism, and kinetics of sialyltransferase enzymes. Currently, Dr. Rakić is a Biochemical Genetics Fellow and is interested in developing new methods for identifying inborn errors of metabolism of children and adults. She enjoys spending time with her kids, listening to music, cross country skiing and dinghy sailing.

**ALLAN, LENKA**

Fellow in Immunology,
Vancouver General Hospital

Dr. Allan obtained her BSc in Medical Laboratory Science at the University of Alberta and her PhD in Immunology at Boston University School of Medicine. Her thesis research focused on the mechanisms by which ubiquitous environmental pollutants suppress B lymphocyte function. She began her post-doctoral training at UBC (BRC) in Dr. John Schrader's lab. Her project focused on characterizing human monoclonal auto-antibodies to the cytokine GM-CSG with the aim of understanding the mechanisms that govern humoral immune responses as well as generating antibodies that may be used therapeutically. Dr. Allan later joined Dr. Peter van den Elzen's laboratory at CFRI. She worked on identifying lipids that can be presented by B cells to NKT cells in order to boost immune responses. Potentially such lipids can be utilized as vaccine adjuvants. She is now a fellow in the immunology laboratory at VGH where she is working towards becoming an ASHI-credentialed director. She is involved in developing new clinical assays such as HLA typing by next generation sequencing.

**PARKINSON, LEIGH**

Postdoctoral Fellow,
St. Paul's Hospital

Dr. Parkinson is a new Postdoctoral Fellow in the Granville Lab at the UBC James Hogg Research Centre (JHRC) at St Paul's Hospital. He completed his PhD at the University of Western Australia (UWA) in his home town of Perth, where he studied the effect of nano-scale topography on skin cell behaviour and wound healing following a burn injury. At the JHRC he is involved in the translational research effort related to understanding the physiological and/or pathophysiological roles of granzymes in injury, inflammation and repair. He is a very active person who loves to be outside, at the beach, hiking or snowboarding.

**YANG, HUI-MIN**

Clinical Assistant Professor,
St. Paul's Hospital

Dr. Yang, originally from Taipei, completed her medical school training at Vanderbilt University, and pathology residency and gastrointestinal/liver pathology fellowship at UCLA. Since 2010, she has been an integral part of the Anatomic Pathology team at St. Paul's Hospital. At St. Paul's, she finds satisfaction in the close collaboration with her gastroenterology colleagues in providing first-rate patient care, as well as in teaching interactions with residents. Outside of work, she enjoys reading, skiing, travel and independent films.

**LAURBERG, TINNE**

PhD Fellow, Genetic
Pathology Evaluation Centre

Dr. Tinne is a Doctor of Medicine graduated in 2007 from University of Aarhus, Denmark. After finishing her internship she did residency training at the Dept. of Pathology, University Hospital of Aarhus. She is currently working on her PhD. The aim of her project is to look deeper into the nature of breast carcinoma in young women, and see if it is possible to find biological markers which are prognostic according to loco-regional recurrence. She works in Torsten Nielsen's laboratory getting an experience in translational research. She looks forward to continuing collaboration projects in the future.

UBC IT's Enterprise Dropbox Service

will offer storage, file synchronization and client software.

Users will be able to create a folder on their computer, which will securely synchronize with a central server. Files placed in this folder can also be accessed through a web browser and mobile devices, including smartphones and tablet computers.

Furthermore, files or folders can be shared with people both inside and outside of the university network.

**UBC IT's
Enterprise
Dropbox Service**



UNIVERSITY OF BRITISH COLUMBIA
Faculty of Medicine
Department of Pathology

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Suggestions from readers are both encouraged and welcome
at any time.

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<http://www.pathology.ubc.ca>