

News Pathology

Fall/Winter 2011

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EDUCATION



RESEARCH



CLINICAL NEWS



a place of mind

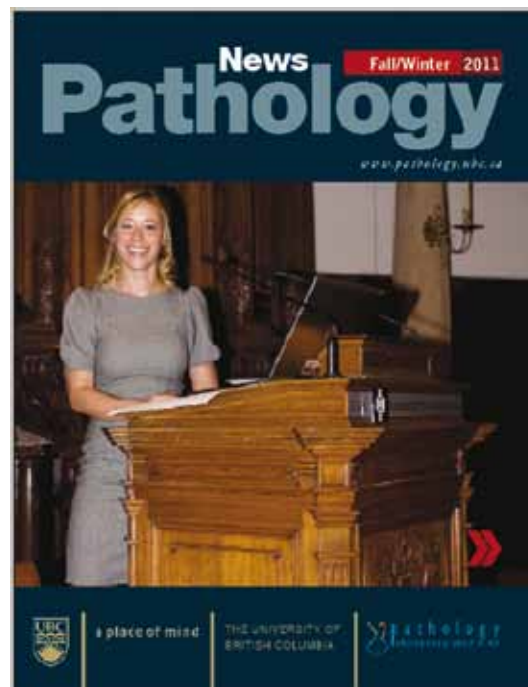
THE UNIVERSITY OF
BRITISH COLUMBIA

pathology
laboratory medicine



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Head's Comments

“Education has been a key focus of our Department for many years now.”

Over this time, members of our department, through their commitment and dedication, have excelled at this endeavor and have made significant contributions to the educational mission of the Department, the Faculty of Medicine, and the University. These contributions have spanned a broad spectrum, ranging from undergraduate to graduate to post-graduate and continuing medical education. In addition to striving to assure excellence in education, members of our department not only adapt to changing situations, requirements, or opportunities but also seek out new ways of delivering and disseminating our educational programs.

Consideration of selected educational programs reveals the foundational excellence and evolving landscape of these activities. A new initiative by medical undergraduate students resulted in the formation of a Pathology Student Interest Group. This group, which has been actively supported by our department and selected faculty members, provides a great opportunity to educate medical students about pathology and laboratory medicine and to encourage them to consider it as a career choice. A summative report of the BMLSc program in this issue of the newsletter gives a wonderful perspective of its growth and the significant impact the program has on its students. New activities (CanMeds lecture series), changes in leadership (Neuropathology), and the imminent opening of the Ken Berry Reading Room at the VGH campus are highlights of recent developments



Ken Berry Reading Room reception [Feb 9, 2011]
Mrs. Sally Berry, Dr. Edward S. Johnson & Dr. Michael Allard

in the post-graduate (residency) program. Our graduate program, one of the largest in the Faculty of Medicine, continues its legacy of success and will soon (finally) have a new geographic home.

The emerging Pathology Education Centre, an overview of which is presented in this issue of the newsletter, is a new development in our department that will have an impact on our programs and our people. Creating and establishing this centre, which is intended to serve as a geographic and virtual hub for educational activities and will be intimately linked to the David F. Hardwick Pathology Learning Centre, is critical to enhancing our educational programs by facilitating and enabling the incubation and development of new ideas and dissemination of our programs locally and around the province. Importantly, the centre will also function to support our faculty province-wide. As an endeavor in its early formative phase, input from students, faculty, and staff has and will continue to be solicited and encouraged to ensure it meets the needs and expectations of all and builds upon the proud history of accomplishments and incredible collection of talent in the area of education in our Department.

A handwritten signature in black ink, appearing to read "maw", written in a cursive style.

Michael F. Allard, BSc, MD, FRCP(C)
Professor and Head
Department of Pathology & Laboratory Medicine

The Pathology Education Centre



Concomitant with Mike's appointment as Head, our department was given space on the third floor of the Jim Pattison Pavilion at the VGH campus. After assuming his appointment, Mike invited departmental members involved in our educational programs to engage with him in a discussion aimed at determining how best to use this space. The discussion, with an involved audience of more than 30 departmental members, led to a vision that a Pathology Education Centre be created that will serve as a gathering place, physically and virtually, for the incubation and dissemination of educational ideas and activities within the UBC Department of Pathology and Laboratory Medicine.

A guiding principle that came forward was that it should be inclusive and meet the needs of:

- All of our educational programs and activities; and

- All of our departmental members; namely, faculty, staff and students at geographic sites throughout the city and province

To move the vision of the Pathology Education Centre forward, a steering committee was formed from those who expressed interest: Vicki Monsalve (Senior Instructor), Helen Dyck (Manager of the David F. Hardwick Pathology Learning Centre), Haydn Pritchard (Graduate Program Director), Farrah Rooney (Graduate Program Assistant), Patrick Doyle (Director of the Medical Microbiology Residency Program), Mike Nimmo (Director of the General Pathology Residency Program), and Niamh Kelly (past Director of the Basic Sciences in the Distributed Medical Undergraduate Program and current Director of the Department of Pathology CanMEDS series).

Mike and Maureen (Barfoot) joined the committee to keep us honest! At its first meeting (in the David

F. Hardwick Pathology Learning Centre, surrounded by the samples of the William Boyd Pathology Museum), the Steering Committee quickly realised that it needed to hear from the departmental members as to their vision for a Pathology Education Centre before making too many plans.

An e-mail consisting of two questions went to all of our departmental members asking:

- What is the singular most important thing that would help you to meet your educational (i.e. teaching and/or learning) goals?
- If you were designing a departmental education centre, which functions/activities would you include?

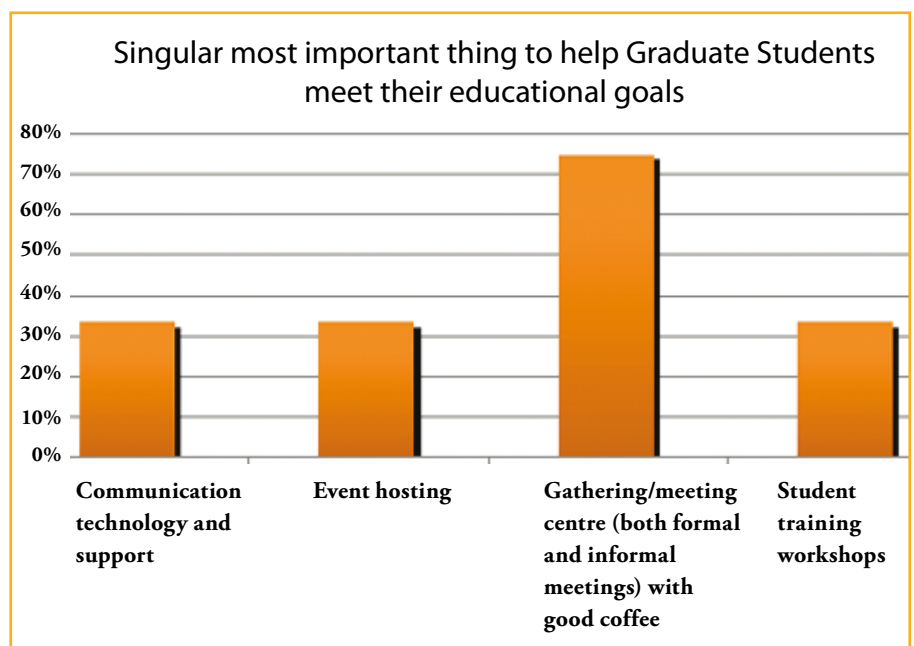
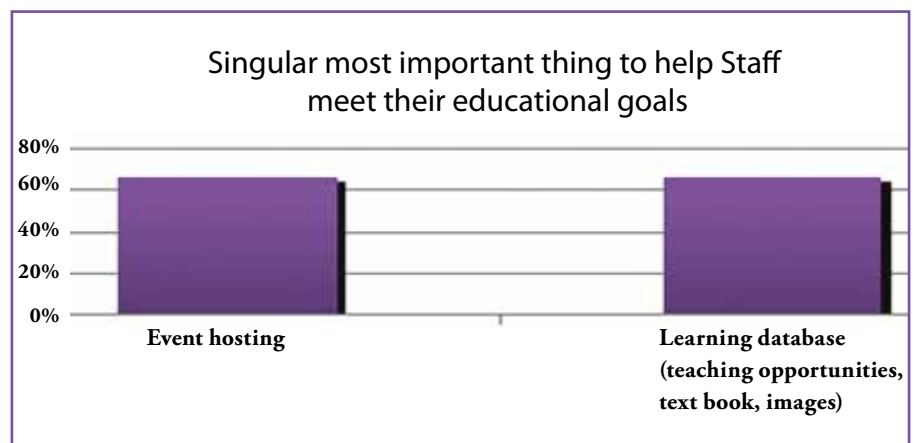
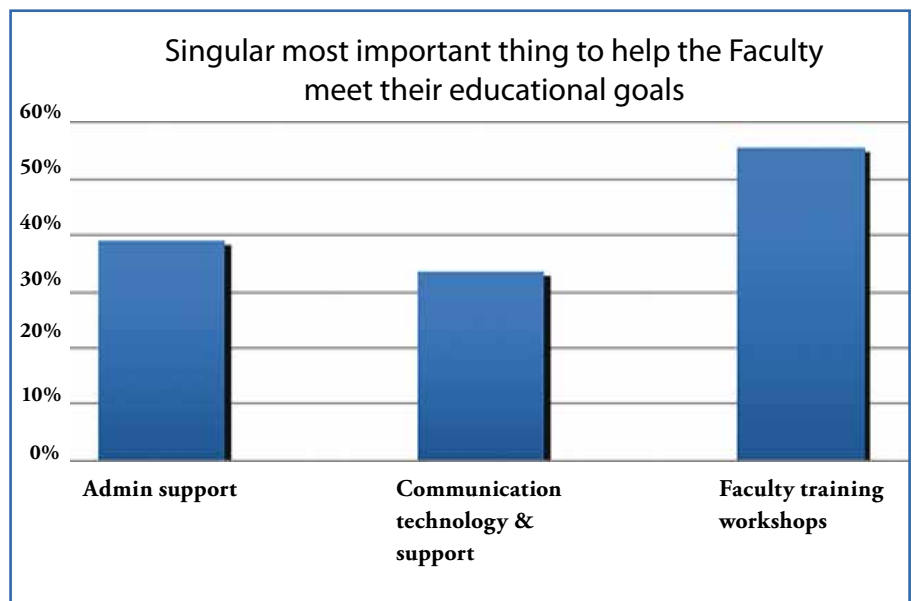
We had a healthy number of returns from faculty, staff and students and the results are presented in the accompanying three histograms. Looking at these responses from our department, the mission emerging

for the Pathology Education Centre is to provide faculty and student training workshops and seminars, administrative and IT support for our educational endeavours, and a meeting/gathering place to allow members of our various departmental educational programs to come together around common goals.

Activities that are being planned to enable this mission (so far) include:

- The establishment of databases designed to catalogue the educational activities available to members of our department in a manner that would facilitate faculty members engaging in teaching activities that suit their interest and style
- A repository and guidance centre, for the preparation of educational dossiers needed for promotion and tenure
- A gathering and meeting place bringing together different departmental groups eg. graduate students and residents
- Training/development workshops and sessions created specifically to meet the needs of our departmental members; and
- Social activities, such as the Pathology and Art night initiated by David Walker

An evolving concept of the Pathology Education Centre is that of an educational hub, bringing together people working on different endeavours for the purposes of cross-pollination of ideas and activities.



The new soon to be opened Ken Berry Reading Room opens into this area and, as such, will facilitate these interactions. There is also dry laboratory-educational space equipped with a smart board (and eventually with videoconference capabilities) planned, allowing sessions held here to be (electronically captured) and transmitted in real time around the province. By its proximity to the Centre for Health Education and Scholarship (CHES) which is located down the corridor, the Pathology Education Centre will enable interactions between department members interested in the emerging scholarship of teaching and learning (SoTL) field with like-minded individuals in the FoM.

And, the centre will be intimately linked with the David F. Hardwick Pathology Learning Centre to build upon this key educational resource and the interest among some of our department members to increase our presence within the university and in the public arena through outreach programs. The establishment of such a centre with physical, virtual, and outreach attributes, is both innovative and exciting and puts us at the forefront of the FoM in terms of our educational focus.

In a recent mail out to all of you we asked for your input into establishing the priorities for this space. We had an excellent response but are still happy to hear from any of you that

would like to share further thoughts with us. E-mail your ideas to Niamh, niamh@interchange.ubc.ca, under the subject heading Education Centre.

Call for Abstracts for Heart + Lung FEST 2011

(part of UBC's Celebrate Research Week)

March 8-12, 2011 Sheraton Vancouver Wall Centre

All trainees working on research related to cardiovascular and pulmonary health are welcome to participate.

Complete event details may be found here:
<http://fest.heartandlung.ca/>



The Graduate Studies office is moving!

In mid January 2011, the administrative office of our graduate studies program moved from UBC to VGH. This places the office of the Graduate Program Director and Program Assistant into a more centrally located facility. It is anticipated that this will create easier access to our services for both faculty and students.

Our offices are in the newly formed Pathology Education Center on the 3rd floor of the Jim Paterson Pavilion North at VGH. This facility houses a newly refurbished meeting room that may be used for student teaching, committee meetings, comprehensive examinations and PhD/MSc final exams. Please drop by and say hello!

Our new mailing address and phone numbers are:

UBC Pathology Education Centre
Vancouver General Hospital
Jim Pattison Pavilion North
Room 3200, 910 West 10th Ave
Vancouver, BC, Canada V5Z 1M9

Haydn Pritchard, PhD
Program Director
hpritchard@pathology.ubc.ca
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Farrah Rooney
Program Assistant
frooney@pathology.ubc.ca
Tel: 604-675-3945 Ext: 21075
Fax: 604-875-3941

Graduate Studies

Catching up with past Graduates

In this newsletter, we highlight the career path of one of our Graduating PhD students.

Name: Tyler Hickey
Supervisors: Dr. Richard Stokes & David Speert
Graduation Date: June 2009

Title of Doctoral Thesis: *Identification of Cpn60.2 as a Surface Ligand of Mycobacterium tuberculosis that Facilitates Bacterial Association with Macrophages via CD43.*



What have you been doing since you graduated from the PhD Program in Pathology at UBC? Since graduating from the PhD program in Pathology, I am now in second year of the UBC Medicine Undergraduate program.

Can you tell us a bit about the research you are doing now? This past summer, I completed a research project in the lab of Dr. Patrick Tang at the BCCDC. I used

molecular methods to examine the evolution of an outbreak of drug-resistance Tuberculosis that had spread between Vancouver and the BC Interior. Additionally, I completed gene sequencing within these clinical *M. tuberculosis* isolates to examine the specific mutations within these bacteria that conferred resistance to the drug isoniazid.

How does it relate to the research you did in Pathology at UBC? The BCCDC research project was an excellent complement to my PhD studies as both projects involved Tuberculosis research. However, while my PhD studies at the Child & Family Research Institute were strictly basic lab research (investigating composition and function of the bacterial cell wall), I was able to successfully transfer much of my knowledge of *M. tuberculosis* from the basic lab setting to the clinical lab setting for the BCCDC investigations on actual patient samples of this dangerous organism.

What was the most rewarding aspect of your PhD program? In addition to learning about the rigorous process and challenges associated with generating

publication quality research, I feel that I gained a much improved capacity for experimental design and critical analysis during my PhD studies.

What are your future goals? How do you feel your UBC program prepared you for these? Upon completion of my medical training, I am currently hoping to enter a Pathology residency program. Further down the road, it would be excellent if I could use my MD/PhD training to divide my time between clinical practice, lab research and teaching.

Is there any advice you can offer current students? Graduate research offers many things, from challenges to periodic frustration to immense feelings of success. For all its short term and long term rewards, it can be a long path, so patience is an important quality to have. Looking back, one learns so much more than just lab methods and crunching data. You'll make great friendships, you'll gain improved public presentation skills, and you'll gain a maturity and confidence that will take you far in whatever subsequent career path you choose.

Introducing our new Graduate Students for 2010-2011

Each of our qualified incoming students received a department entrance scholarship of \$ 3000 - great value for both students and supervisors!



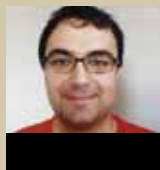
Dian Sulistyoningrum, MSc program
Supervisor, Dr. Angela Devlin



Gurmeet Sohi, MSc program
Supervisor, Dr. Helene Cote



Iren Tavakoli, MSc program
Supervisor, Dr. Marianne Sadar



Jacob Rozmus, PhD
Supervisor, Dr. Peter Shultz

	Jaques Courtade, MSc program Supervisor, Dr. Bruce Verchere		Melissa McConechy, MSc program Supervisor, Dr. David Huntsman
	Jay Gunawardana, PhD program Supervisor, Dr. Randy Gascoyne		Paul Hanson, MSc program Supervisor, Dr. DC Yang
	Jordan Cran, MSc program Supervisor, Dr. Andrew Minchinton		Robert Kridel, PhD program Supervisor, Dr. Randy Gascoyne
	Junyan Shi, PhD program Supervisor, Dr. Honglin Luo		Sarah Neil, MSc program Supervisor, Dr. Jacquie Quandt

Graduate Students First Authorships for 2009-2010

It is well accepted that first authorship of peer reviewed publications is a key success currency for our training program. here we highlight some of the papers published by our students and coworkers in the past year.

Graduate Student	Authors	Title	Journal
Chari, Raj	Chari R, Lonergan KM, Pikor LA,& Lam WL	A sequence-based approach to identify reference genes for gene expression analysis.	BMC Medical Genomics, 3(1):32, 1-11 (2010)
Chari, Raj	Chari R, Coe BP, Vucic EA, Lockwood WW, Lam WL	An integrative multi-dimensional genetic and epigenetic strategy to identify aberrant genes and pathways in cancer.	BMC Systems Biology, 4(1):67, 1-14 (2010)
Chari, Raj	Chari R, Thu KL, Wilson IM, Lockwood WW,.....& Lam WL	Integrating the multiple dimensions of genomic and epigenomic landscapes of cancer.	Cancer and Metastasis Reviews, 29(1):73-93 (2010)
Chin, Leslie	Chin LY, Bossé Y, Jiao Y, Solomon D.....& Seow CY	Human airway smooth muscle is structurally and mechanically similar to that of other species.	Eur Respir J.;36(1):170-7 (2010) Epub 2009 Nov 19
Gao, Guang	Gao G, Wong J, Zhang J....& Luo H	Proteasome activator REGgamma enhances coxsackieviral infection by facilitating p53 degradation.	J Virol. 2010 Nov;84(21):11056-66. Epub 2010 Aug 18.PMID: 20719955
Garmaroudi, Farshid	FS Garmaroudi, D Marchant, X. Si, A Khalili...& Bruce M. McManus	Pairwise network mechanisms in the host signaling response to coxsackievirus B3 infection.	Proc Natl Acad Sci U S A. Sep 28;107(39):17053-8. (2010) Epub 2010 Sep 10

Gershom, Edwin	FS Garmaroudi, D Marchant, X. Si, A Khalili... & Bruce M. McManus	Pairwise network mechanisms in the host signaling response to coxsackievirus B3 infection.	Proc Natl Acad Sci U S A. Sep 28;107(39):17053-8. (2010) Epub 2010 Sep 10
Gershom, Edwin	Gershom ES, Sutherland MR, Lollar P, Prydzial EL	Involvement of the contact phase and intrinsic pathway in herpes simplex virus-initiated plasma coagulation.	J Thromb Haemost. 8(5):1037-43. (2010)
Hendel, Alon	Hendel A, Hiebert PR, Boivin WA, Williams SJ, Granville DJ	Granzymes in age-related cardiovascular and pulmonary diseases.	Cell Death Differ. 2010 Apr;17(4):596-606
Heslop, Claire	Heslop CL, Miller GE, Hill JS	Neighbourhood socioeconomic status predicts non-cardiovascular mortality in cardiac patients with access to universal health care.	PLoS One. 4(1):e4120 (2009). Epub 2009 Jan 7
Heslop, Claire	Heslop CL, Frohlich JJ, Hill JS	Myeloperoxidase and c-reactive protein have combined utility for long-term prediction of cardiovascular mortality after coronary angiography.	J Am Coll Cardiol 55:1102-1109 (2010)
Johnson, Nathalie	Johnson NA, Savage KJ, Ludkovski O, Ben-Neriah S, Woods R, Steidl C, Dyer MJ, Siebert R, Kuruvilla J, Klasa R, Connors JM, Gascoyne RD, Horsman DE	Lymphomas with concurrent BCL2 and MYC translocations: the critical factors associated with survival.	Blood. Sep 10;114(11):2273-9. (2009) Epub 2009 Jul 13
Johnson, Nathalie	Johnson NA, Boyle M, Bashashati A, ... & Gascoyne RD	Reduced CD20 expression and CD5 positive DLBCL are associated with an inferior survival in CHOP+/- Rituximab treated patients.	Blood. Apr 16;113(16):3773-80 (2009). Epub 2008 Nov 24
Johnson, Nathalie	Johnson NA, Leach S, Woolcock B, ... & Gascoyne RD	CD20 mutations involving the rituximab epitope in diffuse large B cell lymphomas are rare and are not a significant cause of R-CHOP failure.	Haematologica. 2009 Mar;94(3):423-7 (2009). Epub 2009 Feb 11
Kalra, Jessica	Kalra J, Sutherland BW, Stratford AL, ... & Bally MB	Suppression of Her2/neu expression through ILK inhibition is regulated by a pathway involving TWIST and YB-1.	Oncogene. 2010 Dec 2;29(48):6343-56 (2010). Epub 2010 Sep 13
Kalra, Jessica	Kalra J, Warburton C, Fang K, ... Bally M	QLT0267, a small molecule inhibitor targeting integrin-linked kinase (ILK), and docetaxel can combine to produce synergistic interactions linked to enhanced cytotoxicity, reductions in P-AKT levels, altered F-actin architecture and improved treatment outcomes in an orthotopic breast cancer model.	Breast Cancer Res. 2009;11(3):R25. Epub 2009 May 1
Klimek, Agnieszka	Klimek AM, Soukhatcheva G, Thompson DM... & Verchere CB	Impaired proinsulin processing is a characteristic of transplanted islets.	Am J Transplant. 2009 Sep; 9(9):2119-25
Montoya, Vincent	Montoya V, Tang, P and Chiu CY	Metagenomics for the Identification of Novel Viruses.	In Metagenomics: Current innovations and future trends, D. Marco, ed. (Horizon Press) (2011)
Schutz, Peter	Schutz PW, Wong PK, O'Kusky J, Innis SM, Stockler S	Effects of D-3-hydroxybutyrate treatment on hypoglycemic coma in rat pups.	Experimental neurology 2010 Nov 4, in press
Tavassoli, Peyman	Tavassoli P, Wafa LA, Cheng H, ... & Rennie PS	TAF1 differentially enhances androgen receptor transcriptional activity via its N-terminal kinase and ubiquitin-activating and -conjugating domains.	Molecular Endocrinology. 2010 Apr;24(4):696-708. Epub 2010 Feb 24
Wiegand, Kimberly	Wang PS, Wang J, Xiao ZC, Pallen CJ	Protein-tyrosine phosphatase alpha acts as an upstream regulator of Fyn signaling to promote oligodendrocyte differentiation and myelination.	J Biol Chem. 2009 27;284(48):33692-702 2009. Epub 2009 Oct 6
Ye, Xin	Xin Ye and Decheng Yang	Recent advances in biological strategies for targeted drug delivery.	Cardiovasc Hematol Disord Drug Targets; 9(3):206-221 (2009)

The UBC Neuropathology Residency Program

Past, Present and Future

By Dr. G. R. Wayne Moore, MD, CM, FRCPC, FRCPath, Clinical Professor of Pathology and Laboratory Medicine, Program Director (departing) of the Neuropathology Residency Training Program



The Neuropathology Residency Program at UBC is one of only five such programs in Canada. It began with Dr. Clarisse (Lore) Dolman as the director. She was the first qualified neuropathologist in British Columbia. She and three other pathologists were examined by Professor Lucien J. Rubinstein in 1968 to receive the first Fellowships in Neuropathology from the Royal College of Physicians and Surgeons of Canada. Her first resident was Dr. Ken Berry, who had practiced clinical neurology until 1972. After a fellowship at the Albert Einstein College of Medicine under

Dr. Robert Terry, Ken came on staff at the Vancouver General Hospital (VGH) as an attending neuropathologist. The second graduate of the program under Dr. Dolman was Dr. Katerina Dorovini-Zis, who after a research fellowship at the National Institutes of Health and a brief period on the faculty at the University of Michigan, returned to Vancouver to join Drs. Dolman and Berry. Other residents who spent extensive time training with Dr. Dolman in neuropathology included many who are currently members of the pathology department at UBC and elsewhere and well known

clinicians, including Drs. Janet Holden, Harry Vinters (now in Los Angeles), Stanley Hashimoto (Neurologist, former Clinical Director of the UBC Hospital Multiple Sclerosis Clinic) and Felix Durity (former chair of the Division of Neurosurgery).

When Dr. Dolman retired in 1987, Dr. Ken Berry assumed the position of Chief of Neuropathology at VGH and Director of the Neuropathology Program. Under his tutelage a number of neuropathology residents graduated from the program, including Dr. Aryn Rojiani, who is

now Chairman of the Department of Pathology at the Medical College of Georgia, Augusta. Other graduates included Drs. Tom Beach and Etela Neumann. Later Dr. Alex Easton went through the program and obtained an academic position at Dalhousie University.

With the opening of the BC Children's Hospital in the early 1980's, Pediatric Services moved from VGH to the new facility and a Pediatric Neuropathology Service was established under Dr. Margaret Norman, an international authority on Pediatric Neuropathology, who was also recruited to run the Newborn Screening Program. I joined UBC and the VGH Neuropathology Service in 1988. When Dr. Ken Berry stepped down

as Chief of Neuropathology and Residency Program Director in 1994, because of increasing administrative responsibilities in the clinical and teaching spheres, he wisely suggested it would be best that the duties be divided. Dr. Katerina Dorovini-Zis took over as Head of the Division of Neuropathology and I became the Residency Program Director, which position I filled until November 2010.

In the early years of the Neuropathology Residency Program, teaching was based almost exclusively on exposure to a wealth of autopsy and surgical specimens. In fact, at that time the autopsy service was so busy that it was necessary to run the service on weekends. Over time, as all residency programs, our program

has become increasingly structured with the addition of formal teaching sessions to the long-established broad clinical experience afforded by the neuropathology Services at VGH and BCCH. We have also introduced a formal examination process whereby we simulate the Royal College exam in neuropathology for our residents at least once a year. In addition, all residents have the opportunity to be involved with the diverse and independently funded research activities of the neuropathology faculty and this has resulted in publications in the peer-reviewed literature.

There have been a number of changes in the teaching staff over the years. After his neuropathology residency, Dr. Tom Beach came on

UBC NEUROPATHOLOGY RESIDENCY PROGRAM 2011

FACULTY



Dr. Katarina
Dorovini-Zis



Dr. Ian
Mackenzie



Dr. Glenda
Henderson



Dr. John
Maguire



Dr. Stephen
Yip

RESIDENTS



Dr. Alaa
Samkari



Dr. Fahad
AlGhamdi



Dr. Maxim
Signaevski



Dr. Veronica
Hirsch

staff at VGH. In 1997 Dr. Ken Berry retired and Tom took up a position in Arizona in neuropathology research in Alzheimer's Disease, where he is now head of the Civil Neuropathology Laboratory. Later that year we were joined by Dr. Ian Mackenzie from Toronto, followed shortly by Dr. John Maguire from Hamilton, both of whom continue to make very important contributions to our residency program up to the present day. After Dr. Margaret Norman's retirement, Dr. Glenda Hendson took over the BCCH service and continued to provide an excellent rotation in Pediatric Neuropathology. She was subsequently joined by Dr. Chris Dunham in 2007. With Dr. Katerina Dorovini-Zis at the helm, neuropathology attained divisional

status at VGH in 2002. She stepped down as division head in 2007 and Dr. Ian Mackenzie assumed that role.

A major crisis emerged in the past decade in the form of an attempt by the Royal College to eliminate neuropathology as a specialty. This fortunately was not successful and we have gone on to form a strong residency training program, with two to three neuropathology residents in the program at any given time. Our recent graduates include Stephen Yip, who after a research fellowship in neuro-oncology with Dr. David Louis and a Clinical Fellowship in molecular genetic pathology at Harvard has joined our faculty as a staff member of the BC Cancer Agency, Dr. Sadeq Al Dandan, and Dr. Ali Assiri (both of whom

recently took up some of the first Neuropathology positions in Saudi Arabia). Our current senior resident is Alaa Samkari, and in the following year, Fahad Al Ghamdi. Veronica Hirsch Reinshagen will be doing her year of Anatomical Pathology, and Maxim Signaevski his PGY1 year.

I am pleased to say, thanks to the high caliber of our residents, the continuing contributions of the neuropathology faculty and the dedicated assistance and support of Grace Adrias and Carolyn Mill in our residency program office, the UBC neuropathology program is in excellent health. My best wishes to Chris Dunham who assumes the role of the new neuropathology Residency Director. I am sure he will provide very capable leadership in the exciting and bright years ahead.

TIMELINE

PROGRAM DIRECTORS

1968-1986

Clarisse (Lore) Dolman



Dr. Dolman established Neuropathology Teaching at UBC

1986-1994

Ken Berry



Chief of Neuropathology at VGH and first Director of the Neuropathology Residency Program

1994-2010

Wayne Moore



Neuropathology Residency Program Director

2010-present

Chris Dunham



Neuropathology Residency Program Director

BMLSc

At-A-Glance

Program History and Overview

- Began in Fall 1980
- Joint initiative between BCSMLS and UBC
- Facilities include two teaching laboratories, seminar room, student computer room, microscopy facilities
 - Located in the Department of Pathology and Laboratory Medicine at UBC Hospital, Koerner Pavilion

What is Medical Laboratory Science?

- Study of the scientific principles underlying disciplines practised in diagnostic and medical research laboratories such as: Pathology, Histology, Medical Microbiology, Clinical Chemistry, Hematology, Toxicology, Immunopathology...
- Combines the use of sophisticated instruments and techniques with the application of theoretical knowledge to perform complex procedures on tissue specimens, blood samples and other body fluids
- Emphasizes data analysis and an understanding of the underlying principles
- Tests and procedures that are performed in the clinical laboratory provide critical information enabling physicians to diagnose, treat and monitor a patient's condition

Objective of the BMLSc Program

- Provide a high quality undergraduate university program in the discipline of Medical Laboratory Science
- Expand and enhance career and educational opportunities available to registered medical technologists (RT) and students of the life sciences

- Provide motivated and dedicated individuals with career opportunities not available to them with their present qualifications and permits them to fulfil their personal goals

Program Structure

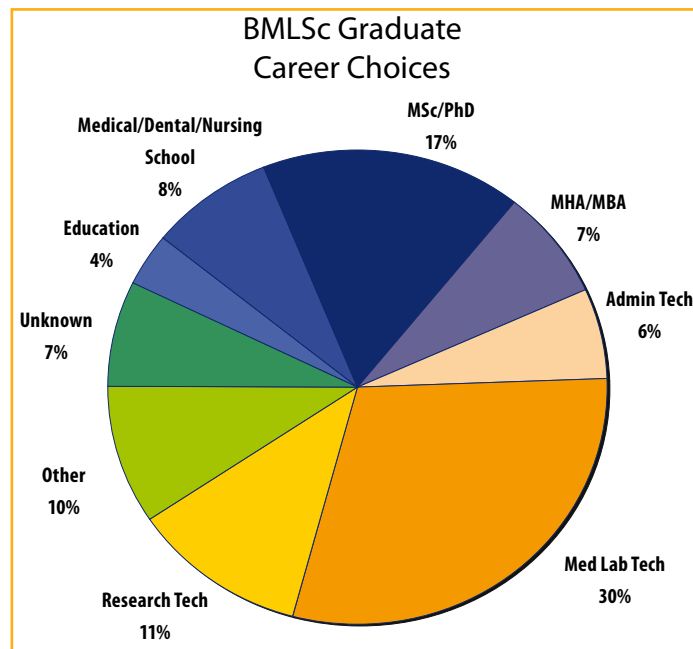
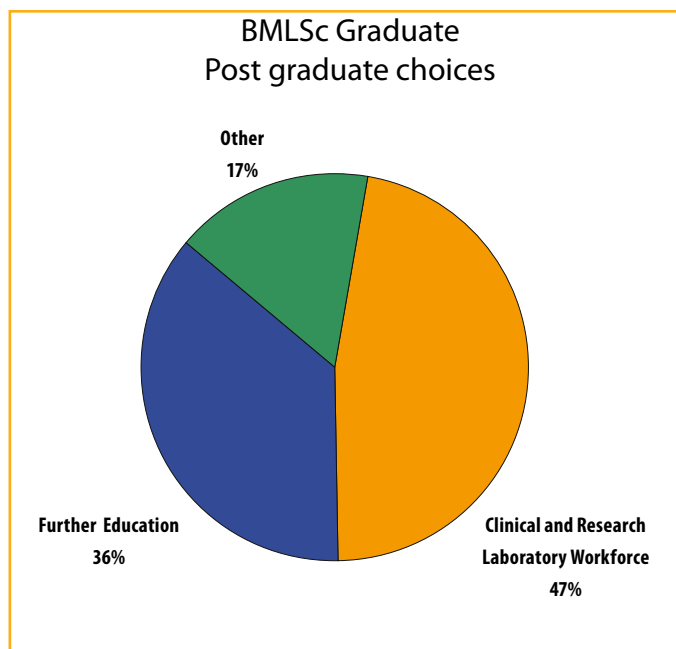
- Two year undergraduate degree
- Students enter year three after completing two years of science prerequisites or the Registered Technologist (general) diploma of CSMLS and 12 credits of second year chemistry
- Class size: 24 students each year

Program Instructors

- Courses taught by approximately 70 faculty members, both researchers and clinicians, of the Department of Pathology and Laboratory Medicine and other departments at the University of British Columbia

BMLSc Curriculum

- Covers broad range of subjects that make up medical laboratory science
- Students gain not only theoretical knowledge but also practical, hands-on experience in a wide variety of laboratory techniques
- Year 3: Emphasis on acquiring practical laboratory skills
 - Theory behind laboratory techniques
 - Applications in clinical and research settings
- Year 4: Emphasis on acquiring other skills, including useful "life skills"
 - Critical appraisal and problem solving
 - Presentation/teaching skills
 - Career preparation



Students' perspectives.....

Helena Lee (BSc 2005, BMLSc 2009)

For most students, an undergraduate degree is a stepping-stone to higher education, which means that they need to choose carefully the program they wish to enter. For me, the BMLSc program was the perfect choice to prepare for medical school and I consider it to be one of the best choices I have made thus far. I would describe the program as a general medical science degree; the courses introduce students to various aspects of human disease, from the microbes that cause disease to the histological and pathological characteristics of disease. As someone who planned to study medicine, I thoroughly enjoyed learning the theoretical part of the program. Furthermore, I found that my first semester of the UBC MD program was more relaxed because I had

such a strong foundation of knowledge from the BMLSc program.

I have also greatly benefitted from the practical skills obtained from the BMLSc program. For example, after completing the first year of the program, I obtained a position as a summer research student, working on a nation-wide project. Not only did the BMLSc program provide me with the laboratory skills needed to perform various experiments as a part of my summer project, but I also do not believe I would have had this opportunity without having been in the program. In addition, skills on effective CV preparation, job searching and interviewing that were taught and practiced as a part

"The quality of instruction is beyond anything I would have expected and the confidence it gave me is invaluable."

of the BMLSc program were all helpful in obtaining the research position that I held in the year between graduation and entering the MD program.

I have nothing but praise for the BMLSc program and am honoured to be an alumna of the program. The quality of instruction is beyond anything I would have expected and the confidence it gave me is invaluable. I found that the instructors and staff are very supportive of all of their students, and I am grateful for the relationships that I have made through the program. I feel that I can accurately attribute my academic successes thus far to the BMLSc program.

Attila Almos (RT, BMLSc 2003, MHA 2005)

I found my way to the BMLSc program in my final year of the BCIT medical lab diploma program. The BMLSc distance format offered at the time enabled me to begin my career in the clinical laboratory while expanding on my initial technical training. The courses quickly advanced my knowledge, directly translating to my activities in the workplace. I was able to take on senior positions in the hospital laboratory after only a few years of work.

I specialized in clinical chemistry and after leading the chemistry department in the MSA (Abbotsford) Hospital for a few years moved to a regional position at Fraserhealth. Four years later I took the position of manager for the Chemistry department in the Abbotsford Regional Hospital, where I am still working today.

After completing the BMLSc in 2003 I continued my academic path and had a desire to broaden my training from a medical laboratory focus to an overall health system perspective. I completed a Master's in Health Administration (UBC) in 2005. Overall the BMLSc is truly a hidden gem in the UBC undergrad programs! It provided me with a very 'personal' program where I felt part of a team working to ensure the best learning for the students. I feel I can directly attribute my last decade of work and experience to the BMLSc program.

Ananta Gurung (BMLSc 2003, MSc 2005, MD 2009)

I am currently a second year Resident in the Department of Pathology at UBC. The BMLSc Program is excellent preparation and academic background for medicine, my current career, and also provides real hands-on learning for those interested in pursuing a career in research. I learned many valuable lab techniques such as PCR, column chromatography, Western Blotting, and many more.

The whole program is great - really organized and well structured. The small class size allows one to develop close friendships with fellow students and long-lasting professional friendships with professors and administrative staff. The best thing about the program is the quality of its instructors. Instructors I found particularly dedicated and inspirational were Dr. Park, Dr. Nimmo and Dr. Pudek.

After graduation, I received a University of Toronto entrance fellowship and pursued my MSc degree in the Department of Laboratory Medicine and Pathobiology. My research on radiation therapy and wound healing was carried out at Toronto's Hospital for Sick Children under the supervision of Dr. Benjamin Alman. I enjoyed being part of an interdisciplinary health research team working on musculoskeletal neoplasia. During my time as a graduate student, I received funding offers from the OGS (Ontario Graduate Scholarships) and NSERC (Natural Sciences and Engineering Research Council of Canada). As well, I have co-authored two papers, presented my work at numerous conferences, and have won a number of awards for poster presentations.

Challayne Kenney (BMLSc 2006, MEd 2009)

The BMLSc Program gave me a skill set that is a solid foundation for graduate studies and the working world. It helped teach me how to be a critical thinker, as well as giving me a broad knowledge base of the pathophysiology

of disease, research methods and theory of laboratory techniques. In addition, the intimate class size provided invaluable one-on-one time with professors. I really appreciated being able to get to know them, as well as for them to get to know me. The support and insight I have gained from the Program's faculty members is immeasurable.

After graduation I continued to work for the Genetic Pathology Evaluation Centre (GPEC) as a technologist, eventually working my way up to lab manager. I volunteered with the Canadian Liver Foundation coordinating their 2007 Vancouver Living with Liver Disease workshop. I also volunteered with the Arthritis Society assisting in the population of databases for the launch of their new website.

In 2009 I completed my Master's of Education at SFU in the Health Education and Physical Activity program. I am presently the Program Coordinator at the University of Victoria Centre on Aging (Ladner).



"The support and insight I have gained from the Program's faculty members is immeasurable."

Program Office for Laboratory Quality Management's Quality Weekend Workshop

June 17-19, 2011

Paetzold Health Education Centre, Vancouver British Columbia

The Quality Weekend Workshop brings together the group of medical laboratory quality experts discussing a variety of key topics including Costs of Poor Quality, Working with Quality Partners, Opportunities in Quality oriented Education, and Quality Culture. The meeting provides presentations, discussion, workshop, and the opportunities for participant posters and podium presentations. A special event in a beautiful location.

For details, please visit: www.POLQMWeekendWorkshop.ca

or contact : Maggie Ma, POLQM Coordinator,

604 875-4111 Ext 67488, ubcpolqm@gmail.com

The Cancer Genetics Laboratory at the BC Cancer Agency



The Cancer Genetics Laboratory Technologists

The Cancer Genetics Laboratory (CGL) at the BC Cancer Agency provides molecular cancer genetic testing and specialized cancer cytogenetic testing for the entire population of British Columbia. In addition, the CGL offers standard cancer cytogenetics to three health authorities: PHSA, Northern Health and Interior Health. A dedicated team of 4 scientists, 14 technologists and a clerk work full tilt to generate information that is used for diagnosing and subclassifying various hematologic malignancies and solid tumors, as well as for identifying patients with hereditary cancer syndromes and screening their families. Very importantly, an increasing number of tests are being used to stratify patients within oncologic subcategories to specific therapies. In addition, tests are used to follow patients on therapy

to determine the level of minimal residual disease. Diagnostics at the CGL is integrated with morphology through constant interactions with the anatomic and hematological pathologists at the BCCA.

In partnership with the Genome Sciences Centre (GSC), a High-throughput Clinical Sequencing Facility (HTS) has recently been implemented. The HTS currently performs sequencing of the BRCA1 and BRCA2 genes to identify mutations in patients that meet criteria for being at high-risk for having a hereditary breast and ovarian cancer syndrome. Through independent Genome BC funding there is a drive to migrate the capillary sequencing technology used in the HTS onto a next-generation sequencing platform. Successful implementation of new generation

sequencing technologies will place molecular genetic testing in BC at the forefront of such developments globally.

The combined expertise of scientists and pathologists at the CGL encompasses in-depth knowledge in standard techniques as well as in next generation sequencing, bioinformatics and microarray technology. The expertise of this highly-knowledgeable and dedicated team of individuals combined with the successful implementation of genomics technologies in partnership with the GSC has the CGL well poised to become a leader in the use of genomic technologies to deliver the most current testing to cancer patients in BC.

Dr. C  t  's Laboratory Research Program



Izabelle Gadawski, H  l  ne C  t  , Beheroze Sattha, Jayoung Lee, Adam Ziada, Pinky Hapsari, Mehul Sharma, Tuhina Imam, Gurmeet Sohi

The major focus of the C  t   laboratory research program is on the short-term (adverse events) and long-term (accelerated aging) toxicity of HIV and antiretroviral therapy. The majority of our work is done studying women (including pregnant women) and their children throughout Canada who participate in our cohort called CARMA. The CARMA cohort is funded through a CIHR team grant on HIV therapy and aging (lead PI: Cote). It includes women, men and children who are either infected with HIV, exposed to HIV during their mother's pregnancy, or uninfected controls. We are mostly interested in investigating the relationship between exposure to HIV/antiretroviral drugs and biomarkers of the aging process.

Combination antiretroviral therapy

has revolutionized treatment of HIV infection and today, HIV-infected people live with a chronic disease that requires life-long medication. With treatment in pregnancy, the transmission of HIV from mother to infant has also been reduced to less than 1%. Despite these successes, concerns remain with respect to the long-term effect of exposing humans to drugs that can affect multiple biological processes, including those implicated in aging. For example, nucleoside analogues that form the backbone of HIV regimens can affect mitochondrial replication and repair by polymerase gamma, which can lead to mitochondrial dysfunction. Similarly, many nucleoside analogues can inhibit telomerase, the enzyme complex that elongates nuclear DNA telomeres and for which a novel yet unclear mitochondrial role has recently emerged. Mitochondrial

dysfunction/oxidative stress and telomere shortening are two hallmarks of aging tissues. Indeed evidence is accumulating that HIV-infected people experience age-associated diseases (neurocognitive, bone health disease, cardiovascular disease, cancer) and polypharmacy earlier in life compared to uninfected people. Although it is difficult to tease out the effects of HIV infection itself from those of the drugs used to control it, we are studying available drugs for their effects on mitochondria and telomeres, using both cell culture models and clinical samples.



Meet the People of Pathology

Brian R Berry MD , FRCPC

Well, I was a little stressed out when asked by Dr. Allard to provide a biography and other interesting details for the Fall/Winter 2010-11, Pathology Newsletter, especially having to follow Dr. McManus from the Spring/Summer edition.

While I share some roots in Saskatchewan with Dr. McManus (everyone should!), they happen to all be on my lovely wife Celine's side of the family. I hail from Rosemere, Quebec, a beautiful old suburb north of Montreal. While I left there to go to St. Francis Xavier University, my roots, my parents and a couple of brothers are still there with their growing families. It is still home in many ways, and our family escapes to a little cabin in the Laurentians several times a year. The rest of my five siblings are scattered far afield from the UK to Halifax to Palo Alto, California but we remain very close nonetheless. After a fantastic biology undergraduate experience

in Nova Scotia, graduating in 1980, I completed medical school at the University of Ottawa (1984).

My interest in cardiology and cardiac pathology began as an undergraduate (my thesis was "The Effect of Nicotine on Isoproterenol-induced Myocardial Necrosis") and continued through medical school and this brought me to the Royal Jubilee Hospital for my internship. It was during that year of adventure and hard work that I decided that one day I had to return to this beautiful city. I was able to follow a circuitous route for the next several years including general practice in Campbell River (great fishing and even greater people), a cardiology registrar position in Auckland, NZ (great sailing and many lasting friendships) and Internal medicine and hematology at the University of Calgary. While Calgary provided unbelievable skiing and hiking, it was meeting and marrying my wife, Celine that

was the highlight. It was also there that I finally decided to redirect my career from cardiology to Pathology and ultimately, Hematopathology. I still recall my conversation with David Owen, something about a position opening up after a first year pathology resident cracked up under the pressure! So I finally arrived at the UBC Pathology program where, in my first rotation, I sat in the resident's room between Mike Allard and Ken Berean and behind Chris Bellamy, all a couple of years ahead of me and much older (probably wiser), if I recall.

I completed my Anatomic Pathology in 1991, the year my first son, Robert, was born and Hematopathology in 1992, a week after my daughter, Erin, was born. I was fortunate to find funding for extra training in Lymph Node Pathology with Randy Gascoyne at the BCCA. I returned to Victoria in 1992 as Director of Hematopathology and have enjoyed

... Just for fun

1. Favorite childhood television program?
Hogan's Heroes

2. Have any hidden talents?
None really; what you see is what you get

3. Name one thing not many people know about you?
Despite usually coming up short, I am able to endure great pain and suffering as I try to reach the finish line in a bike race, sailing regatta, etc.

4. How many Emails per day?
~40 (1260 unread and counting!)

5. How has your life been different than you'd imagined?
I have never really planned very far ahead but never imagined that a boy from suburban Montreal would be regularly skiing and sailing on the same day here in Victoria.

6. What traditions have been passed down in your family?
Full contact ball hockey games on Christmas day (the girls are as rough as the guys).

7. What is the strangest food you ever ate?
Live slugs from a bamboo tree in the jungle of northern Thailand (I cringe to this very day).

8. What do you want to be doing in 10 years?
Duking it out with Berean on the slopes of Monte Zoncolan.

9. What is the best job in the world?
I may suffer from a lack of imagination but I think I have it now. Running a sailboat charter business in the south pacific would be worth a try.

an incredibly fulfilling pathology career since. This has included the full range of Laboratory Hematology, Transfusion Medicine, Tissue Banking and Hematolymphoid Pathology (as a consultant to BCCA with Randy).

I am extremely fortunate to work with two wonderful Hematopathology colleagues here in Victoria. Both Drs. Wei Xu and Jonaki Manna trained at the University of Alberta so they bring great depth to our tertiary level lab, which provides a comprehensive consultative and diagnostic service to a very broad range of enthusiastic generalist and subspecialist physicians across Vancouver Island. While my professional interest has always been primary service oriented, we all contribute medical student and resident teaching (UBC and Island Medical Program) as well as participate in local and provincial collaborative research and publication. We are able to enjoy the best of all worlds professionally in this setting and I would highly recommend this style of pathology practice to current trainees. Of course, it is also a great pleasure to work in an Island-wide (Vancouver Island Health Authority) department with incredibly strong anatomic pathologists and fellow clinical pathologists. I have been fortunate to have participated in many provincial and national committees and expert groups in Laboratory Hematology, Transfusion Medicine and Tissue

Banking. Dr. David Pi and my many provincial colleagues on the BC Transfusion Medicine Advisory Group have been particularly inspiring over the last decade.

However my growing family is still most important to me. My oldest 2 kids are now in university and my youngest will join them next year (time is flying!). They are each choosing completely different paths and seem to be much better at most things than I can ever hope to be. We have enjoyed just about every sport together that Vancouver Island has to offer and they have each become elite sailors, leaving Mom and Dad in their wake.

My Evolution as a Teacher

David Walker BA, MA, PhD

01. In the Beginning

In 1968 after completing a BA in Zoology I went into the Peace Corps in June. In this program I was to teach High School Biology in a small town along the Esequibo river in Guyana and start a ceramics cottage industry. The program began in Trinidad at the University of the West Indies. I am not sure I took instruction too seriously. I mostly remember the Indian family I lived with and then dancing to steel band music with my wife soon to be. Sadly, due to intervention by Uncle Sam, I left Peace Corps at the end of August '68, got married to Diane and started in a 'recruit teachers to the Ghetto' program in Los Angeles. I was thrown in to teaching classes in five of seven periods a day seeing approximately 130 students a day. About 95% of my students in the infamous Watts of L.A. were black, the rest Hispanic or oriental. This challenged my white middle class upbringing. I now became a Honky Mother *+@&@# and an authority figure to be challenged. This was a character building experience. I carried a briefcase to break up fighting students. One



of my students I was told was wanted and if he ever showed up in class I should call for help immediately, happily Willie Thomas never did. By bringing myself to draw a line on discipline I happily avoided being beaten up, unlike my less fortunate colleagues. After being told who was boss by a rather substantial female student in my 6th period class she became my enforcer, breaking up fights and hauling kids to the Vice Principals office for me. Somehow I decided to invite some of my most 'unruly' students on a family picnic with my wife and family to the beach. They amazingly transformed into polite young adults! Lesson: the struggle in the classes was role playing and not personal. My life became very good after this. I could send them to be swatted or expel them as long as I had a smile on my face and we parted friends. Second period was a 'conference' period which meant covering classes with no teacher as subs refused to come down into the ghetto in L.A. I quickly abandoned trying to do a lesson and began drawing a giant shark on the board, they fell silent and I would begin telling horror stories of shark attack, they lived with random violence all the time and could relate. They learned a little biology along the way and I survived for 50 minutes. I finished off my time at Foshay Jr. High team teaching a reading readiness class to incoming 7th graders with a fantastic senior teacher who loved them all and took no flack from them. I don't really feel that good about the teaching I did and in fact I was the student learning incredible lessons about compassion and humanity and about who I was/

am. I am forever indebted to them. During subsequent anti Vietnam war riots in Santa Barbara one of my former students phoned me and offered to let us stay with her and her mother.

Graduate school was a time for being a student and a bit of a hippie-type; perhaps not much teaching.

02. What I did with my PhD in Marine Botany



When my daughter Sara was four in preschool 35 years ago, I offered an intertidal tour in Stanly Park for a silent auction for the Preschool group. It went so well that it blossomed into intertidal tours for the whole preschool at the invitation of the Preschool teacher, Roslyn. From that time forward I have given intertidal tours to preschool kids, kindergarten kids and for my classes through their grade school years. Last Spring was the first time in years that I have not done so. Sara's former preschool teacher Roslyn retired from running the preschool for the Jewish Community Centre on 41st and the other teacher, Sandy who taught kindergarten at Talmud Torah School also retired. In thanks for all of the times I had led intertidal tours for the Jewish Preschool and for Talmud Torah, a tree was planted in my name in Israel. Maybe someday I shall see how much shade it provides.

For each tour I began by collecting a tub of specimens



just before the kids arrived for 'show and tell'. I then met them on the sea wall for an introduction to the etiquette of intertidal touring. This introduction consisted of the kids sitting on the grass while I explained that we were uninvited guests and that one must always return a rock to its original position after lifting to see who was living below it. My most memorable one of these introductions was when a seagull or crow dumped right on my hatless head, a blunt lesson in humility. Another incident that really touched me resulted from my explaining to the kids that we did damage when walking in the intertidal and that in fact the crunching sound under your feet would be due to the crushing of animals like barnacles or other



shell fish. After we all got down to the intertidal off of the sea wall, one little fellow stayed behind with a parent

or supervisor. I learned that the child refused to come down off of the sea wall for fear of killing any animals. Another lesson for me in humility and gentleness.

Most of these tours were given at the statue of the little scuba diver lady in Stanley Park over the last 36 years. Amongst these students were some of the best students. They soaked up material like sponges, they were not squeamish about anything and their enthusiasm for learning was magical.

03. Sculpture Mentoring

Over a number of years beginning in 19__ I was suggested to an organizer of special education for gifted children to mentor 6th or 7th grade students in sculpture. These session went for about ten weeks in the spring time and in summary amounted to mostly playing with clay with some very fine young folks and then going to a show and tell in early June with them and their parents and



what they had accomplished. One group of four young ladies included the daughter of the sculptor who did the Pendulum in the HSBC bank at Georgia and Hornby. My first impulse was to ask whether we hadn't gotten things all backwards. We had fun though. Possibly the brightest kid I played with clay with had been ridiculed in classes by fellow students for actually being brighter than the teachers who also gave him grief. We had amazing discussions of sub particles of the atom and what the flash point of hot wax was. Another amazing case was a young fellow with a genetic condition that necessitated a

tracheotomy. His imagination and ability to focus on our playing with clay were amazing and I quickly forgot about his tracheotomy. As an outsider he was an outstanding observer. Life was not easy for him.

04. Science 101 at UBC

Finally, due to a case of mistaken Identity back in 2004, I am not the David C. Walker in Chemistry, I was recruited to teach a class to downtown East Side residents in 2005 and have done so since until last summer. This involves having the classes come here to SPH for a little exploration as to what a cell is and then seeing them on the Transmission Electron Microscope. These folks ask the most challenging questions about cell biology and life I think I have encountered. The most unique experience I have had with them and yet perhaps most informative was when Ellen with whom I teach asked if any of the students knew what a cell was. On student immediately piped up and said that yes she had spent a lot of time in many different cells!

Through these many hours, trials and contacts with so many students the last laugh is on me the teacher who realizes that I HAVE BEEN THE STUDENT through all of this.



UBC Sweeps Young Investigator Awards at CTOS

The Connective Tissue Oncology Society (www.ctos.org) holds the world's largest annual meeting devoted to research into sarcomas, cancers of the bone and soft tissues.

Each year they give out two Young Investigator awards for the best research submissions from pathology trainees, fellows and junior faculty. This year's winners, are both affiliated with UBC Pathology & Laboratory Medicine, and received their awards November 11, 2010 at the meeting held in Paris, France.

Dr. Cheng Han Lee, a 2009 graduate of our residency program, was cited for his work entitled "YWHAE oncogenic rearrangement is a transforming mechanism in clinically aggressive endometrial stromal sarcomas." This work was completed during Cheng's recent one-year fellowship in the laboratory of Jonathan Fletcher in the Department of Pathology and Harvard Medical School, with Dr. Blake Gilks among his co-authors. Cheng Han discovered and characterized a new gene translocation driving the biology of some uterine sarcomas. Our department is fortunate to have recruited Cheng as a new clinical assistant professor, who took up his position in summer 2010. Cheng is now based at VGH as an anatomical pathologist, maintaining his interests in



gynecological cancers and sarcomas in close collaboration with Drs. Gilks and Nielsen.

The other winner is Le Su, a PhD student co-supervised by Dr. Torsten Nielsen. He was cited for his work on "Deciphering the SS18-SSX transcriptional complex in synovial sarcoma," a breakthrough in the field that is part of an ongoing collaboration between our department and researchers at the Biomedical Research Centre. This work is providing biological support behind a new clinical trial of histone deacetylases in translocation-associated sarcomas of young adults, NCIC-CTG IND.200. This Phase II trial opened Canada-wide this autumn, and was initiated by Dr. Nielsen based on basic, translational and preclinical research undertaken in his laboratory since 2003.

Considering also the award won at the previous year's CTOS meeting in Miami by Dr. Poul Sorensen's fellow Jenny Potratz for their project "*Synthetic lethality siRNA screening to identify novel therapeutic targets in Ewing sarcoma*," it is clear that the UBC Department of Pathology is one of the world's hotbeds of research into these fascinating forms of cancer, in terms of biology, diagnosis and treatment.

Welcome New Faculty Members



Dr. Mads Daugaard
Postdoctoral Research
Fellow

Dr. Mads Daugaard received his Master degree from University of Copenhagen in molecular biology and continued his PhD work at The Department of Apoptosis, Copenhagen, Denmark, supervised by Professor, Dr. Marja Jäättelä, and as part of the Centre for Genotoxic stress headed by Professor, Dr. Jiri Lucas. With his PhD work, Mads has contributed to the understanding on how the cellular stress response drives cancer cell growth and survival. Mads received a grant from the Danish Cancer Society Research Council to join Professor Poul HB Sorensen, Department of Molecular Oncology, BCCRC, UBC. Mads's current work at BCCRC focuses on elucidating how the genotoxic stress response modulates cancer cell survival pathways.



Dr. Daphne De Launay
Postdoctoral Research
Fellow

Dr. Daphne De Launay is a new Postdoctoral Fellow being mentored by Dr. Jacqueline Qunadt at the department of Pathology and Laboratory Medicine at UBC. Born and raised in The Netherlands, Dr. De Launay received her PhD from the University of Amsterdam in March 2010, where she investigated the Ras Family GTPase Signaling contributions to inflammation and joint destruction in Rheumatoid Arthritis.

She is currently investigating the role of nitroxide radical TEMPOL as neuroprotectant and its role to promote repair within the CNS during chronic and progressive autoimmune disease like Multiple Sclerosis (MS). TEMPOL may limit disease by limiting CNS entry of immune cells or altering Blood-Brain-Barrier permeability; and/or scavenging free radicals to protect neural populations during interactions with immune cells and their products or during neurodegenerative processes occurring independent of inflammation. This will provide insights into the involved pathways and define the mechanisms that support the therapeutic potential of TEMPOL in MS. In addition to her research and academic activities, she enjoys making time for friends and family, reading, sports, and traveling around the world.



Dr. Cheng-Han Lee
Clinical Assistant
Professor

Dr. Cheng-Han Lee received his MD-PhD degree from the University of British Columbia (UBC, Pharmacology) in 2004 and completed his Anatomic Pathology residency training at UBC in 2009. During the residency training, he pursued a post-doctoral research fellowship on the genetics of sarcoma in Dr. Matt van de Rijn's laboratory at Stanford University. After completion of the residency program, Dr. Lee continued to explore his research interest in sarcoma biology through a post-doctoral fellowship at Jonathan Fletcher's laboratory in Brigham and Women's Hospital. His work helped to demonstrate the importance of tumor-stroma interaction in the progression of leiomyosarcoma (malignant smooth muscle tumor) and to elucidate the genetic basis of high grade uterine sarcoma. Diagnostically, Dr. Lee also received specialized training in musculoskeletal pathology. He hopes to further the understanding of sarcoma genetics and oncobiology through more translational work with the strong team of interdisciplinary researchers in Vancouver.



Dr. Michelle Wong
Clinical Instructor

Dr. Michelle Wong completed her BSc in Biopsychology at UBC and attended UBC medical school. She was subsequently accepted into the Hematopathology Residency program at UBC. Currently she is working in the Fraser Valley primarily at Surrey Memorial Hospital and Royal Columbian Hospital enjoying a varied practice. She has an interest in teaching medical students and residents. She also enjoys spending quality time with her family.



Dr. Martin Wale

Dr. Martin Wale, BMed Sci, BMBS, Dp Bact, FRCPath, MBA

Executive Medical Director, Quality, Research and Patient Safety, Vancouver Island Health Authority

Martin joined VIHA from the UK in May 2009 to take an Island-wide portfolio including quality, patient safety, infection prevention, and research. Martin qualified in medicine from Nottingham, UK, and trained in medical microbiology in the Public Health Laboratory Service. After appointment as Consultant he worked in university hospitals in Southampton and Nottingham. In 2007 he was awarded a Fellowship to the NHS Institute for Innovation and Improvement, working on novel approaches to managing Clostridium difficile associated disease (CDAD), and was appointed Special Associate Professor at Nottingham University Medical School. Martin achieved Distinction in his Executive MBA in 2008. Prior to coming to Canada he was Chief Medical Officer at a large multi-site Acute Trust in the NHS. His research interests include antimicrobial resistance and sustainable system improvement.



Dr. Martin Jädersten
Postdoctoral Research
Fellow

Dr. Martin Jädersten completed his MD at the Karolinska Institutet in Stockholm 2000 and his board certifications in internal medicine and hematology in 2009. In parallel he conducted clinical and basic research under supervision of Prof. Eva Hellström-Lindberg, and defended his PhD-thesis on myelodysplastic syndromes (MDS) in 2008. In 2009 he decided to go for a post doc and contacted Dr. Aly Karsan at the Genome Sciences Centre, BC Cancer Agency, who has excellent on-going research in MDS, and was offered a two-year post doc position. Dr. Jädersten moved to Vancouver in August 2010 together with his wife, two kids and two cats. His initial projects will address the genetic basis of MDS by evaluating serial samples from early stage disease until subsequent leukemic transformation with next-generation sequencing. He is very excited about this opportunity, and hopes that his two years here will be rewarding both professionally and personally.



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