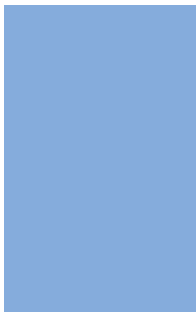
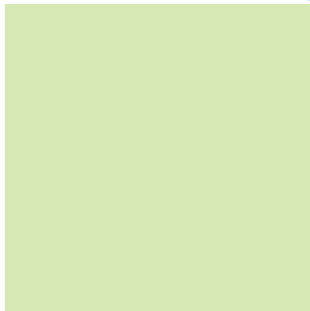




Department of Medicine
2008 Annual Report

TEACHING
RESEARCH
PATIENT CARE





MISSION STATEMENT

We, the members of the Department of Medicine of the University of British Columbia, will work with all of our partners to provide the highest possible standard of excellence in patient care, teaching and research. We will pursue this mission while emphasizing open communication and ethical behavior, and while recognizing that it is a privilege to provide responsible and innovative stewardship of human, financial and all other resources. We will always:

- respect the dignity, individuality and needs of our patients,
- strive to discover new knowledge that will advance state-of-the-art care,
- ensure effective and innovative teaching of our students,
- optimize our organization to promote both professional and personal fulfillment,
- value the efforts and achievements of teams and individuals who work to face the challenges of modern medicine.

These activities will ensure the respect of our peer organizations and recognition as a world-class Department of Medicine.

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DEPARTMENT HEAD'S MESSAGE

The UBC Department of Medicine provides research, teaching and clinical services related to the nature, cause and prevention of adult diseases. It is the largest department in the Faculty of Medicine and consists of 17 divisions: AIDS, Allergy and Immunology, Cardiology, Community Internal Medicine, Critical Care Medicine, Endocrinology, Gastroenterology, Geriatric Medicine, Hematology, Infectious Diseases, Internal Medicine, Medical Oncology, Nephrology, Neurology, Physical Medicine and Rehabilitation, Respiratory Medicine and Rheumatology. The annual report includes the different aspects of our Department and the things we have achieved over the past year.

I would like to take this opportunity to thank Dr. Paul Man, Associate Head of Medicine at UBC and Chair, Department of Medicine at Providence Health Care, and Dr. Michael Barnett, Associate Head of Medicine at UBC and Vancouver Hospital, for all of their contributions. Dr. Man and Dr. Barnett are absolutely integral to the function of the Department and all of its strategic initiatives.

Recruitment and retention are a large part of our business. In 2008, we appointed 4 Professors, 4 Assistant Professors, 2 Associate Professors, 1 Clinical Professor, 1 Clinical Associate Professor, 25 Clinical Assistant Professors, 14 Clinical Instructors, and one Adjunct Professor. We promoted 44 faculty members.

In 2008, our faculty received 5 Michael Smith Scholar/Scientist awards and 1 CRC Scientist award.

In 2008 the Department had several changes in divisional leadership. I am very pleased to announce the appointments of the following division heads:

- Dr. Charles Blanke, UBC Division of Medical Oncology – April 2008
- Dr. Kamran Shojania, UBC Division of Rheumatology – January 2008

I wish to express a sincere thank you to Dr. Susan O'Reilly, who stepped down from her role as Head of the Division of Medical Oncology, and Dr. John Esdaile, who stepped down from his role as Head, Division of Rheumatology, for all of their efforts on behalf of the Department.

The Department holds regular external reviews of all divisions as a means of facilitating continuing divisional renewal and accountability. In October 2008, a review was held of the Division of Cardiology and Sauder Family Heart and Stroke Foundation Chair in Cardiology. The reviewers were Dr. Mark FitzGerald, Professor and Head, UBC Division of Respiratory Medicine, Dr. Todd J. Anderson, Professor and Division Chief of Cardiology, Department of Cardiac Sciences, University of Calgary, and Dr. Jacques Genest, Professor and Director, Division of Cardiology, McGill University. The Division of Hematology was reviewed in November 2008 by Dr. Paul Keown, Professor and Head, UBC Division of Nephrology and Dr. David Anderson, Professor and Head, Division of Hematology, Dalhousie University. The divisions will work to integrate the recommendations of the reviewers into their strategic objectives.

Endowed chairs bring prestige not only to the department and institution, but also to the faculty member upon whom this honour is bestowed. An endowment also provides the financial support to attract the best and brightest of medicine's future generation. The UBC Department of Medicine has had phenomenal success in securing endowed chairs. The Department has recently been successful in securing two new chairs:

- *Dr. Christopher Carlsten* - AstraZeneca Chair in Occupational and Environmental Lung Diseases Research
- *Dr. Raul de la Fuente Fernandez* - James A. Moore Chair in Parkinson's Research

One of the Department's most important strategic initiatives is the creation of the Academic Enhancement Fund. These awards are provided in an effort to ensure greater protected research time for individuals undertaking meritorious research. The recipients of the Academic Enhancement Endowment Fund awards in 2008 were Dr. Sabrina Gill (Endocrinology), Dr. Raewyn Broady (Hematology) and Dr. Irene Ma (Internal Medicine). Recipients are termed Departmental Scholars.

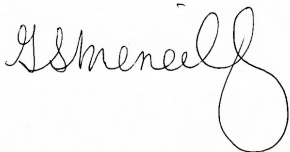
The foundation of all activities in a Department of Medicine is exemplary patient care. Maintaining the highest quality of care has been challenging due to resource constraints but our members continue to provide excellent care to the citizens of Vancouver and the province of British Columbia. In the last year we have implemented innovative regional programs for stroke care and delirium in the Vancouver Coastal Health Authority. We also began a collaboration with the Fraser Health Authority that will substantially enhance care for patients with chronic obstructive lung disease. Finally, last year a Medical Admissions Unit was implemented at VGH. This unit, the first of its kind in Canada, is based on similar units in the UK and is designed to provide optimal care for medical patients at the interface with emergency.

Once again the Department was extremely successful in attracting research support, receiving over \$26 million in peer reviewed grants and over \$10 million in non-peer reviewed grants. The number of high profile peer reviewed papers by members of the department continues to increase. The Department published over 1,100 peer reviewed papers in the last year in journals of the highest impact including *The New England Journal of Medicine*, *The Lancet*, and many others. These research contributions high

light the fact that many groups within the Department are among the best in the world in their area of expertise. The Department has also been successful in fundraising for research activities through the VG& UBC Hospital Foundation and the St. Paul's Hospital Foundation.

Our medical school has doubled in size and we have implemented a unique model of distributed education in both the undergraduate and postgraduate spheres. In the undergraduate realm, we successfully implemented a new clerkship program at the Royal Columbian Hospital which has been highly regarded by both faculty and students. We also began an innovative new program to teach clinical examination skills to 2nd year students in an outpatient setting. In the postgraduate realm, we have the second largest internal medicine training program in Canada and we continue to attract the highest quality trainees from around the country. Under the leadership of Dr. Roger Wong and other members of the postgraduate team, we have developed a new program to teach quality improvement to residents which is now being adopted widely across the rest of the country. We have made creative use of simulation technology to teach our residents procedural skills. Finally, we have developed a new outreach program to The Donald Fraser Hospital in Limpopo Province, South Africa, which is designed to enhance international health exposure for our residents. In the subspecialty area we continue to have some of the best training programs in the country and attract high quality trainees from around the world.

In closing I would like to take this opportunity to once again acknowledge the contributions of all faculty and staff and to thank them for their hard work, outstanding achievements and dedication to the success of the Department of Medicine.



Graydon S. Meneilly, MD, FRCPC, FACP
Eric W. Hamber Professor and Head
Department of Medicine
The University of British Columbia
Head, Department of Medicine
Vancouver Hospital

CHAIR'S HIGHLIGHTS

The Department extends its warmest congratulations to these outstanding individuals who received the following Departmental awards: the Fay R. Dirks Awards for Excellence in Teaching were awarded to Dr. Jennifer Yao (Physical Medicine & Rehabilitation) and Dr. Debbie Rosenbaum (Internal Medicine); the Martin M. Hoffman Awards for Excellence in Research were awarded to Dr. Stephen Lam (Respiratory Medicine) and Dr. Karin Humphries (Cardiology); the Donald M. Whitelaw Awards for Outstanding Grand Rounds were given to Dr. Leslie Zypchen (Hematology) and Dr. Alnoor Ramji (Gastroenterology); the Master Teacher Awards were given to Dr. Barrett Benny (Hematology) and Dr. Ron Werb (Nephrology).

In addition, members of the department were recognized by the Faculty of Medicine and other bodies for their excellence in teaching and research. Some of the special honours and awards received by our members in 2008 are: Dr. Chris Carlsten (Respiratory Medicine) received the Peter Wall Scholar Award; Dr. John Esdaile (Rheumatology) was appointed to the Institute Advisory Board of the CIHR-IMHA (Institute of Musculoskeletal Health & Arthritis) and was the recipient of a UBC Killam Research Award; Dr. Howard Feldman (Neurology) was awarded the Faculty of Medicine Distinguished Achievement Award for Outstanding Contributions by a Senior Faculty Member; Dr. Karin Humphries (Cardiology) received the Faculty of Medicine Distinguished Achievement Award for Excellence in Clinical or Applied Research; Dr. Saul Isserow (Cardiology) was the recipient of the Vancouver Acute Award for Clinical Excellence; Dr. Barry Kassen (Internal Medicine) was awarded the UBC Killam Teaching Prize; Dr. Neil Reiner (Infectious Diseases) received the Vancouver Acute Award for Scientific Achievement; Dr. Evan Wood (AIDS) was the recipient of the American College of Physicians Award for Best Clinical Research Project Award; and Dr. Leslie Zypchen (Hematology) received the Faculty of Medicine Clinical Faculty Award for Excellence in Teaching.



HEADS & DIRECTORS

UBC DEPARTMENT OF MEDICINE HEAD

Graydon S. Meneilly, MD, FRCPC, FACP
Eric W. Hamber Professor & Head
Department of Medicine, UBC & VGH

UBC DEPARTMENT OF MEDICINE ASSOCIATE HEADS

Dr. Michael Barnett, Associate Head of Medicine, Vancouver Acute
Dr. S. F. Paul Man, Associate Head of Medicine, Providence Health Care
Dr. Don Sin, Associate Head Research

UBC DEPARTMENT OF MEDICINE DIVISION HEADS

| | |
|---|--|
| Dr. Julio Montaner | AIDS |
| Dr. Robert Schellenberg | Allergy & Immunology |
| Dr. Christopher Buller | Cardiology |
| Dr. Barry Kassen (Acting) | Community Internal Medicine |
| Dr. Dean Chittock (Acting) | Critical Care Medicine |
| Dr. Ehud Ur | Endocrinology |
| Dr. Eric Yoshida | Gastroenterology |
| Dr. Barry Kassen (Acting) | General Internal Medicine |
| Dr. Janet McElhaney | Geriatric Medicine |
| Dr. Michael Barnett | Hematology/Bone Marrow Transplantation |
| Dr. Neil Reiner | Infectious Diseases |
| Dr. Susan O'Reilly (January 1 – March 31, 2008) | Medical Oncology |
| Dr. Charles Blanke (effective April 1, 2008) | Medical Oncology |
| Dr. Paul Keown | Nephrology |
| Dr. Howard Feldman | Neurology |
| Dr. Andrea Townson | Physical Medicine & Rehabilitation |
| Dr. J. Mark FitzGerald | Respiratory Medicine |
| Dr. Kamran Shojania | Rheumatology |

EDUCATIONAL PROGRAM DIRECTORS & ASSOCIATE DIRECTORS

Clinical Investigator Program
Continuing Medical Education Program
Graduate Studies Program in Experimental Medicine
HIV/AIDS Research Program
Postgraduate Education Program

Undergraduate Education Program

Dr. Anita Palepu
Dr. G. B. John Mancini
Dr. Vince Duronio
Dr. Julio Montaner
Dr. J. Mark Roberts

Associate Directors:

Dr. Roger Wong
Dr. Irene Ma
Dr. Barry Kassen
Dr. Grant Stiver

Associate Directors

Dr. Jim Dunne, 3rd year Clerkship Director & Clerkship Site Director, CTU, SPH
Dr. Jim Busser, 3rd year Clerkship Site Director, CTU, VGH
Dr. Abeer Jamal, 4th year Clerkship Director
Dr. Janet Kushner-Kow, Associate Director, Expansion & New Programs

ADMINISTRATION



Linda Rasmussen
Director of Administration



Nicholas Sidorenko
Finance Manager



Linda Kompauer
Human Resources Manager

Keeping such a large and diverse Department of Medicine running smoothly is a daily challenge, and that is why we take the time to identify our goals and strategies each year in all areas of our business.

The Department of Medicine consists of 17 divisions. We are currently partnering with 15 teaching hospitals throughout the province of British Columbia and we will continue to expand these sites to meet the needs of the medical school expansion.

Alternative Funding and Innovation Plan

One of the most important initiatives facing the Department of Medicine is the Alternative Funding and Innovation Plan. Presently the AFIP has been developed for the Division of General Internal Medicine and is in the final stages of collecting current financial information before it is completed for the Ministry of Health's review.

Budget Reduction

2008 has been a difficult year in the area of finance. We have had a 5% ongoing budget reduction which equates to a \$190,000 reduction in our GPOF budget.

Departmental Research Deficit Policy

A draft departmental research deficit policy was created and has been reviewed by the executive committee members. It outlines the steps the Department and Principle Investigators take to prevent grants from going into deficit, as well as the steps that will be taken to correct research grants that do go into deficit. It is now in the final stages of approval, once approved it will be put on the Department of Medicine website, www.medicine.ubc.ca

UBC Financial Certification

In the fall of 2008 the Finance portfolio applied for UBC financial certification. Once approved we will be able to pay our own bills without having to send requisitions, journal vouchers or travel requisitions to UBC central finance for processing. We will reduce the wait time for paying vendors by at least five to six weeks. To achieve certification, all employees in the Finance portfolio must take six courses and a final exam. A meeting with the UBC Director of Finance and Accounts Payable Manager will be set up to review the policies and procedures that the Department's Finance portfolio has in place. This process will take us into 2009.

STAR Database

We have partnered with the Faculty of Medicine in the development of a new database called STAR, which is scheduled to be implemented in late May, 2009. Our priority is ensuring that all of our data is transferred accurately to the new platform without disruption to our daily business. One of the highlights of STAR is the web-based CV module which will allow faculty members to access and update their CVs from anywhere. We look forward to the move and the additional functions the database has to offer.

Annual Report

This year we have updated the look of our annual report by purchasing Adobe InDesign software. Two employees have been trained on the new software and we have reformatted the entire document to give it a fresh and readable look. A big portion of the annual report is produced by entering CVs into the CV database. This year we entered 75 new CVs and updated 213 to aid in the creation of the annual report.

Divisional Administrative Integration

This year Divisional Administrative Meetings were organized by the Director of Administration to aid in the sharing of information and the connectivity of the Department as a whole. There was also a half day retreat where the administrators were provided with up to date recruiting and financial information. These meetings are now standing meetings in the Department of Medicine and are chaired by the Director of Administration.

Space Plan Review

A space plan review was undertaken and all space was reviewed at each site. Through this review it was determined that long-term planning can no longer take place due to the fact that mandatory retirement has been abolished and over 90% of our faculty are not retiring, therefore no space is becoming available for redistribution. The current status of academic space is that there is nothing available from the Dean's office and we must re-think the use of our current allocations as new recruits are hired or programs expand. The Gordon and Leslie Diamond Health Care Centre is at capacity and all requests for additional space at this site are put on a waitlist.

Human Resources

2008 was another busy year for Human Resources in the Department of Medicine. We have had a steadily increasing number of new hires from outside of Canada. A focus for us this year was streamlining the immigration processes and ensuring that our recruits are guided through the procedure in time for their arrival. We have also focused on taking a long-term view of our recruitment procedure by working with the divisions and the Dean's office to expedite each stage of the process. These changes have meant that new appointments are being moved forward more efficiently.

UBC Human Resources initiated a new classification process that is now driven by the departmental Human Resources Team. As of April 2008 the classification of all new CUPE 2950 (staff) job descriptions are benchmarked and classified by the Staff HR Clerk and Human Resources Manager. This means that we review each job description and compare it to a standardized set of benchmarks and classify each new position. This has eliminated sending job descriptions to Compensation at UBC for classification and has increased the workload and accountability of the HR team.

Health and Wellness Program

The Department of Medicine Health and Wellness Program received the "2008 Healthy Workplace Award" from UBC Health, Safety & Environment in recognition of leadership in health promotion. The Department is recognized as a pioneer in employee health and wellness, and is proud to be acknowledged for the work that has been done over the past 10 years to create an exceptional work environment.



The Department of Medicine Health & Wellness Committee

L-R: Sam Micner, Molly Miles, Donna Combs, Sabina Fitzsimmons, Andrea Toker, Jennifer Golinski and Linda Kompauer

Photo credit: Oriana Bella

RESEARCH



Dr. Don Sin
Associate Professor
and Associate Head, Research

Dr. Sin is a clinical respirologist within the department and holds a Canada Research Chair in chronic obstructive pulmonary disease (COPD). He is a senior scholar with the Michael Smith Foundation for Health Research and serves on The Global Initiative for Chronic Obstructive Lung Disease (GOLD) Guideline Committee for COPD as well as the Canadian COPD Guideline Committee.

His primary interest has been in promoting and fostering the development of clinician-scientists in the department through early exposure of medical residents to clinical research, enhancing the interaction of medical residents with clinician-scientist mentors and in assisting the transition of young academic faculty members from post-doctoral fellowship to their new faculty positions.

Dr. Sin organizes and hosts a monthly clinical seminar series at St. Paul's Hospital to enhance exposure of medical students and residents to clinical research being conducted by departmental members. He also serves on the Department of Medicine Research Taskforce and has previously chaired the Department of Medicine Ad Hoc Research Committee to develop strategic guidelines for the Department of Medicine at St. Paul's Hospital. Additionally, he works on an on-going basis with new departmental recruits to set out strategic research goals and to enhance their productivity. His long-term vision is to increase research funding and output in the department through strategic recruitment and by fortifying existing research infrastructure and adopting a department-wide alternative payment plan that will enable clinician-scientists to have sufficient protected time for research.

COMMITTEE FOR APPOINTMENTS, REAPPOINTMENTS, PROMOTIONS AND TENURE

Chair:

Dr. G. S. Meneilly, Professor

Vice-Chair:

Dr. S. F. Paul Man, Professor

Faculty Hires & Promotion Coordinators:

Amy Poon
Amy Stanley
Jeannie Brown

Committee Members:

Dr. Reva Adler, Clinical Associate Professor, Geriatric Medicine
Dr. Yossef Av-Gay, Associate Professor, Infectious Diseases
Dr. Tony Bai, Professor, Respiratory Medicine
Dr. Michael Barnett, Clinical Professor, Hematology
Dr. John Cairns, Professor, Cardiology
Dr. Marshall Dahl, Clinical Associate Professor, Endocrinology
Dr. John Esdaile, Professor, Rheumatology
Dr. Paul Hoskins, Clinical Professor, Medical Oncology
Dr. Simon Huang, Clinical Associate Professor, Rheumatology
Dr. Barry Kassen, Clinical Professor, General Internal Medicine
Dr. Nasreen Khalil, Clinical Professor, Respiratory Medicine
Dr. Robert Levy, Professor, Respiratory Medicine
Dr. Nevin Murray, Clinical Professor, Medical Oncology
Dr. Joel Oger, Professor, Neurology
Dr. Graham Reid, Clinical Professor, Rheumatology
Dr. Donald Ricci, Clinical Professor, Cardiology
Dr. Juan Ronco, Clinical Professor, Critical Care Medicine
Dr. Frank Ryan, Professor, Respiratory Medicine
Dr. Robert Schellenberg, Professor, Allergy & Immunology
Dr. Kamran Shojania, Clinical Associate Professor, Rheumatology
Dr. Urs Steinbrecher, Professor, Gastroenterology
Dr. Linda Vickers, Clinical Professor, Hematology
Dr. John Wade, Clinical Associate Professor, Rheumatology

This dedicated group of committed departmental members is charged with facilitating the career advancement of our members while upholding consistent and rigorous standards as set out by UBC. As usual, this Committee invested a great deal of thoughtful energy by attending 17 meetings this year to support the additions and promotions listed below. We are very proud of the following:

NEW APPOINTMENTS

Clinical Instructor

Caillier, Lisa - Physical Medicine and Rehabilitation
Bogod, Nicholas - Neurology
Boulton, Peter - Associate Member, Neurology
Graboski, Corrie - Physical Medicine and Rehabilitation (transfer from Family Practice)
Helper, Steven - Physical Medicine and Rehabilitation
Kaboli, Fariba - No Division
Kherani, Raheem - Rheumatology
Reynolds, Jennifer - Rheumatology
Shin, Tae Won - Community Internal Medicine
Thomas, Chandra - Community Internal Medicine
Tsui, Winston - No Division
Yip, Samuel - Neurology

Zandieh, Iman - Gastroenterology
Zelichowska, Agnieszka - Associate Member, Endocrinology

Clinical Assistant Professor

Affolter, Jonathan - Cardiology
Baker, Milton - Associate Member, Rheumatology
Baker, Sandra - No Division
Boyd, John - Critical Care Medicine
Comeau, Scott - Geriatric Medicine
Daly, Lyle - Associate Member, Neurology
Diggie, John - Associate Member, Neurology
Friesen, Arthur - Associate Member, Cardiology
Ghesquiere, Wayne - Associate Member, Infectious Diseases
Horgan, Kevin - Associate Member, Nephrology
Jaffer, Shahin, Community Internal Medicine
Lapin, Michael - Community Internal Medicine

Lin, Cassie - Associate Member, Gastroenterology
Maher, Deviani - Geriatric Medicine
Mahony, Christopher - Community Internal Medicine
McCauley, Graeme, Associate Member, Respiratory Medicine
(transfer from Family Practice)
Nasmith, James - Cardiology
Polasek, Petr, No Division (transfer from Family Practice)
Rolf, J. Douglass - Associate Member, Respiratory Medicine
Sterns, Laurence - Associate Member, Cardiology
Swiggum, Elizabeth - Associate Member, Cardiology
Tan, Peter - No Division
Vorobeychik, Galina - Associate Member, Neurology
Yamanaka, Michael - No Division
Yik, Kwok - Associate Member, Gastroenterology

Clinical Associate Professor

Winwood, Paul - Gastroenterology

Clinical Professor

Higginson, Lyall - Associate Member, Cardiology

Assistant Professor

Daley, Denise - Respiratory Medicine
Etminan, Mayhar - Respiratory Medicine
Moore, David - AIDS
Ramanathan, Krishnan - Cardiology

Associate Professor

De la Fuente-Fernandez, Raul - Neurology
Lee, Agnes - Hematology

Professor

Blanke, Charles - Medical Oncology
Bryan, Stirling - Respiratory Medicine
Tang, Anthony - Associate Member, Cardiology
Ur, Ehud - Endocrinology

Associate Member

Grant, Jennifer - Infectious Diseases
Griesdale, Donald - Critical Care Medicine
MacKenzie, Ian - Neurology

Adjunct Professor

Tenenbaum, Jerry - Associate Member, Rheumatology

PROMOTIONS

Clinical Assistant Professor

Broder, Sarah - General Internal Medicine
Cummins, Nora - Community Internal Medicine
Dyck, Chad - Community Internal Medicine
Fishman, Martin - Gastroenterology
Jamal, Abeed - Nephrology
Johnson, Michelle - Endocrinology
Jung, Beverly - Nephrology
Lavoie, Julve - Hematology
Lee, Christopher - Medical Oncology
Martin, Lee Ann - Medical Oncology
Mirzanejad, Yaz - Infectious Diseases

O'Connor, Russell - Physical Medicine and Rehabilitation
Pansegrau, Gary - Medical Oncology
Tung, Stanley - Cardiology
Winkler, Lawrence - Community Internal Medicine
Wong, Stephen - Community Internal Medicine
Zypchen, Leslie - Hematology

Clinical Associate Professor

Baillie, Hector - Community Internal Medicine
Chan, Sammy - Cardiology
Duncan, John - Nephrology
Fera, Tharwat - Respiratory Medicine
Helibron, Brett - Cardiology
Leitch, Heather - Hematology
Montessori, Valentina - Infectious Diseases
Sirrs, Sandra - Endocrinology
Spacey, Sian - Neurology
Townson, Andrea - Physical Medicine and Rehabilitation
Wong, Graham - Cardiology
Wood, Evan - Infectious Diseases

Clinical Professor

Elwood, R. Kevin - Respiratory Medicine
Gin, Ken - Cardiology
Ignaszewski, Andy - Cardiology
Landsberg, David - Nephrology
Nantel, Stephen - Hematology
Patterson, Caroline - Rheumatology
Robinson, Gordon - Neurology
Shepherd, John - Hematology

Associate Professor

Hmama, Zakaria - Infectious Diseases
Chi, Kim - Medical Oncology
Lacaille, Diane - Rheumatology
Choi, Hyon - Rheumatology

Professor

Av-Gay, Yossef - Infectious Diseases
Dodek, Peter - Critical Care Medicine
Palepu, Anita - General Internal Medicine

REAPPOINTMENTS

Assistant Professor

Cook, Victoria - Respiratory Medicine
Khan, Nadia - General Internal Medicine
Tebbutt, Scott - Respiratory Medicine

TEACHING EFFECTIVENESS

Chair: Dr. James Busser

Members: Jennifer Golinski
Katya Leonardia
Amy Stanley

Reports to: Committee for Appointments, Reappointments, Promotions and Tenure

Functions:

1. Provides faculty member with “guidelines” for producing necessary back-up documentation for teaching dossier.
2. Meets with faculty member to discuss necessary back-up documentation and the process entailed for the teaching and education component of promotion/tenure/reappointment.
3. Liaises with various program offices: Undergraduate, Postgraduate, Continuing Medical Education, Graduate Studies to obtain information regarding contributions to education, including teaching effectiveness, of candidate. Where necessary, requests additional peer review of teaching.
4. Reviews teaching dossier, back-up documentation, peer review and prepares draft report for Committee for Appointments, Reappointments, Promotions and Tenure.
5. Forwards draft report to faculty member to ensure that feedback appears accurate and representative, and that important information has not been omitted.
6. Finalizes report and forwards to Committee for Appointments, Reappointments, Promotions and Tenure.

In the year 2007, the Teaching Effectiveness Committee prepared 49 letters on behalf of GFT and clinical faculty. Subsequent promotions for these faculty have included:

- (3) Professor
- (3) Associate Professor
- (8) Clinical Professor
- (10) Clinical Assistant Professor
- (14) Clinical Associate Professor

Additionally, 8 letters were prepared for re-appointment.

In the year 2008, we met with another 8 faculty, and have prepared 8 letters to support their review and/or consideration of promotion.

AIDS

Division Members

Professor & Head
Dr. Julio Montaner

Associate Professor
Dr. Paul Harrigan

Assistant Professor
Dr. Thomas Kerr
Dr. David Moore

Clinical Associate Professor
Dr. Evan Wood



Dr. Julio Montaner
Professor and Head

DIVISION OVERVIEW

Since the creation of the Division of AIDS in April 2007, we have been able to enhance our ability to attract and retain academic staff with the wide range of expertise needed to address this truly interdisciplinary challenge. We have decreased the demands that the HIV/AIDS group has placed on the Division of Infectious Diseases, which naturally continue to be involved in HIV/AIDS, but with a much more specific sub-specialty focus. In 2008, we welcomed Dr. David Moore to our Division. Dr. Moore is also the Director of the Community Medicine Residency Program within the School of Population and Public Health at UBC.

Under the leadership of Drs. Thomas Kerr and Evan Wood, the epidemiology group has been very productive and continues to benefit from long-term analyses emerging from VIDUS, SEOSI, ACCESS, ARYS, and MAKa. A major focus has been the evaluation of the supervised injection site in the Downtown Eastside of Vancouver that is a key intervention in a comprehensive approach to reducing HIV and Hepatitis C transmission in this community.

Dr. Thomas Kerr received scholarship funding from the Michael Smith Foundation for Health Research Scholar. Grant funding was obtained from the Michael Smith Foundation for Health Research, Canadian Institutes of Health Research, National Institutes of Health in the United States and a number of pharmaceutical companies.

The research laboratory, headed by Richard Harrigan, PhD, and based at the B.C. Centre for Excellence in HIV/AIDS (BC-CfE) has established itself not only as a leading force in Canada, but also as a centre with considerable international influence. Much of the laboratory's research is focused on HIV drug efficacy and resistance, and the human and viral parameters that influence HIV disease progression, including the development of strategies to slow this process. The clinical implications and predictors of HIV drug resistance continue to be investigated, both at the BC-CfE and as part of international collaborations with researchers at the University of Alberta, McGill University, University of California Los Angeles, Microsoft, and with the Ontario Ministry of Health.

The research laboratory focuses on developing tools with clinical applications that may be employed in the near future. These include techniques for monitoring the side effects and degree of adherence to medications, as well as tracking variations in the HIV and human genomes which are associated with response to HIV therapy, and virus pathogenicity. In addition to providing HIV drug resistance testing as a clinical service to most of Canada and investigator-driven trials, the research lab has also received peer-reviewed funding for several studies from the Canadian Institutes of Health Research, Michael Smith Health Research Foundation, and the Ontario HIV Treatment Network. Dr. Harrigan currently holds both the Glen Hillson Professorship in Clinical Virology, and the CIHR/GSK Research Chair in HIV/AIDS at the University of British Columbia. Novel testing applications in the laboratory continue to provide testing support for Phase III clinical trials. Most recently, the laboratory has designed software which greatly cuts down on the time required to analyze DNA sequences, and is planning to make this software available on

the internet as a form of open source software to researchers worldwide. The lab continues to work on developing novel research tests to eventually integrate into clinical testing in hopes of advancing care for people living with HIV across Canada.

Under the direction of Dr. Julio Montaner, our Division continues to be actively involved in clinical research including randomized clinical trials. Areas of particular interest are optimizing the use of newer antiretroviral agents, diagnosis and management of drug-related toxicities, and management of hepatitis B and C co-infections.

A number of new antiretroviral agents that became available in the past year, including darunavir, etravirine and raltegravir, were investigated by the clinical research team. A randomized trial completed in 2008 studied the impact of immediate vs. delayed substitution of dual ritonavir-boosted protease inhibitors with darunavir/ritonavir. This strategy, if successful, would significantly reduce pill burden and drug-related side effects for patients taking complex multiple drug regimens. Results of this study will be presented at the 18th Annual Canadian Conference on HIV/AIDS Research in 2009. Regarding etravirine, a Canadian consensus document that provides guidelines to clinicians for the optimal use of this new agent in HIV-infected patients, will be published in the Canadian Journal of Medical Microbiology and Infectious Diseases early in 2009. A study describing a novel use of raltegravir as a substitute for enfuvirtide among multidrug-resistant patients was presented at the 15th Conference on Retroviruses and Opportunistic Infections [CROI] in February 2008 and published in AIDS later in the year. Another publication in AIDS during 2008 described a previously unrecognized association of raltegravir with depression in some patients.

Seek and Treat for Optimal Prevention of HIV/AIDS (STOP HIV/AIDS)

Under the leadership of Dr. Julio Montaner, in the mid-90's the BC-CfE team developed a new and highly effective HIV treatment currently known as Highly Active Antiretroviral Therapy (HAART). Widespread availability of HAART has dramatically decreased yearly rates of AIDS-related diseases and death in BC by over 90% since 1996 among those engaged in care.

The overall success of HAART, however, has been limited because of uneven access to therapy among various groups of HIV infected individuals. In BC, despite a universal health care system (which includes the provision of antiretrovirals free of charge), HAART coverage remains suboptimal among young men who have sex with men (MSM), Aboriginal individuals, the homeless, the poor, the mentally ill, and injection drug users (IDUs). As a result, marginalized and hard-to-reach individual, continue to bear a disproportionate burden of HIV/AIDS related morbidity and mortality in the province.

More recently, strong evidence has become available indicating that HAART can impact transmission of HIV. In brief, HAART rapidly and effectively renders HIV undetectable in blood and genital secretions and this is associated with decreased risk of

transmission. Our group has developed a mathematical model to predict the potential impact of expanding HAART coverage among those in medical need on the spread of HIV in BC. The model used data on the natural history of HIV infection, risk factors, HIV-1 RNA and CD4 cell counts, and the sources of transmission to derive the probable incidence of HIV in the coming years. Based on the available BC data, the model indicates that the status quo (i.e.: initiation of HAART at CD4 counts of 200 cells/mm³ or less, with coverage levels of 50% of those in medical need, and current compliance levels of 78.5%) will result in a continued 10% annual increase in new HIV cases. In contrast, the model predicts that an increase in HAART coverage to 75%, 90% and 100% of those in medical need would result in a decline in the annual incidence of new HIV cases by 37%, 54% and 62%, respectively, resulting in very significant savings over the long term.

Based on these results, we have proposed the implementation of a novel and aggressive strategy, which the provincial government plans to adopt, specifically designed to enhance and expand coverage among hard to reach HIV infected individuals in BC. This effort will specifically target the most vulnerable among those infected with HIV, including Aboriginal individuals, the homeless, the poor, the mentally ill, and injection drug users. This program will aim to decrease AIDS-related diseases and death among those already infected with HIV and to decrease the emergence of new HIV infections. This program will be used as a platform to fully characterize the benefits associated with the expansion of HAART to hard to reach populations and to show the world how to do it.

International Health

We are currently working in close collaboration with several countries to continue developing resources, training, services and research. These countries include Argentina, Mexico, Africa (Kenya, Uganda, Malawi) and China. There is active collaboration with Médecins Sans Frontières and the World Health Organization to develop antiretroviral guidelines for injection drug users in Eastern European countries and South East Asia, as well as their HIV Drug Resistance Network. We are also involved in a number of international cohort collaborations including the NA-ACCORD and ART Cohort Collaboration.

Awards & Distinctions

Harrigan, P Richard

CIHR/GSK Research Chair Award
2008-2011 (\$70,000), University of British Columbia

Kerr, Thomas

Research & Mission Award, Providence Health Care

Scholar Award

2006-2009 (\$45,000)

Michael Smith Foundation for Health Research

Montaner, Julio SG

President, IAS

2008-2010, International AIDS Society

“Placa al Mérito” from Asociacion de Profesores Hispano-Canadienses, Consulate of the Republic of Argentina

Moore, David

New Investigator Award for Population Research in HIV/AIDS
Canadian Institutes for Health Research

AIDS Research Program

The AIDS Research Program continues to refine the role of antiretroviral therapy for the treatment of HIV infection. The main areas of research continue to be epidemiology, basic science and clinical science. In the following report we summarize the program’s activities and areas of concern for the year 2008.

Epidemiological Research

The epidemiology group has been very productive and continues to benefit from long-term analyses emerging from VIDUS, SEOSI, ACCESS, ARYS, and MAKa cohorts under the leadership of Evan Wood, MD, PhD; Thomas Kerr, PhD; and Mark Tyndall, MD, ScD. A major focus has been the evaluation of the supervised injection site in the Downtown Eastside of Vancouver that is a key intervention in a comprehensive approach to reducing HIV and Hepatitis C transmission in this community.

The Drug Treatment Program, under the leadership of Robert Hogg, PhD, has emerged as a key contributor to our understanding of the dynamics of the HIV epidemic as well as the effect of treatment. Epidemiological studies conducted through the Drug Treatment Program fall under one of two projects, the Canadian Observational Cohort (CANOC) Collaboration, and the Longitudinal Investigations into Supportive and Ancillary Health Services (LISA) Project.

The CANOC Collaboration is an integrated research, mentoring, education and knowledge translation Canadian research team, comprised of 6 cohort databases across British Columbia, Ontario and Quebec. The team is designated to evaluate the impact of antiretroviral care on the health and well being of persons infected with HIV/AIDS in various regions of Canada. CANOC researchers assist in the training of new practitioners and researchers and disseminate research findings in ways that will improve current practice guidelines for treatment and care.

The LISA Project is a 3-year study funded by the Canadian Institute of Health Research (CIHR). The LISA team is comprised of core staff from the BC Centre for Excellence in HIV/AIDS (BC-CfE), and undergraduate and graduate students. The aim of LISA is to get a better understanding of how HIV-positive individuals are coping with HAART, and to provide them with the opportunity to voice the challenges and successes in their daily lives. To date, the LISA Project has resulted in the writing of

several manuscripts ready for submission, and the presentation of posters and oral presentations at national and international conferences.

Members of our team have received funding from the Canadian Institutes of Health Research for senior scholar research (Mark Tyndall), Michael Smith Foundation for Health Research Scholar (Thomas Kerr), and masters, doctoral and post-doctoral training. Grant funding was obtained from the Michael Smith Foundation for Health Research, Canadian Institutes of Health Research, National Institutes of Health in the United States and a number of pharmaceutical companies.

Basic Science

The research laboratory, headed by Richard Harrigan, PhD, and based at the B.C. Centre for Excellence in HIV/AIDS (BC-CfE) has established itself not only as a leading force in Canada, but also as a centre with considerable international influence. Much of the laboratory’s research is focused on HIV drug efficacy and resistance, and the human and viral parameters that influence HIV disease progression, including the development of strategies to slow this process. The clinical implications and predictors of HIV drug resistance continue to be investigated, both at the BC-CfE and as part of international collaborations with researchers at the University of Alberta, McGill University, University of California Los Angeles, Microsoft, and with the Ontario Ministry of Health.

The research laboratory focuses on developing tools with clinical applications that may be employed in the near future. These include techniques for monitoring the side effects and degree of adherence to medications, as well as tracking variations in the HIV and human genomes which are associated with response to HIV therapy, and virus pathogenicity. In addition to providing HIV drug resistance testing as a clinical service to most of Canada and investigator-driven trials, the research lab has also received peer-reviewed funding for several studies from the Canadian Institutes of Health Research, Michael Smith Health Research Foundation, and the Ontario HIV Treatment Network. Dr. Harrigan currently holds both the Glen Hillson Professorship in Clinical Virology, and the CIHR/GSK Research Chair in HIV/AIDS at the University of British Columbia. Novel testing applications in the laboratory continue to provide testing support for Phase III clinical trials. Most recently, the laboratory has designed software which greatly cuts down on the time required to analyze DNA sequences, and is planning to make this software available on the internet as a form of open source software to researchers worldwide. The lab continues to work on developing novel research tests to eventually integrate into clinical testing in hopes of advancing care for people living with HIV across Canada.

Clinical Science

Drs. Julio Montaner, Peter Phillips, Silvia Guillemi, Mark Hull and Marianne Harris are actively involved in clinical research including randomized clinical trials. Areas of particular interest are optimizing the use of newer antiretroviral agents, diagnosis

and management of drug-related toxicities, and management of hepatitis B and C co-infections.

A number of new antiretroviral agents that became available in the past year, including darunavir, etravirine and raltegravir, were investigated by the clinical research team. A randomized trial completed in 2008 studied the impact of immediate vs. delayed substitution of dual ritonavir-boosted protease inhibitors with darunavir/ritonavir. This strategy, if successful, would significantly reduce pill burden and drug-related side effects for patients taking complex multiple drug regimens. Results of this study will be presented at the 18th Annual Canadian Conference on HIV/AIDS Research in 2009. Regarding etravirine, Dr. Harris is first author on a Canadian consensus document that provides guidelines to clinicians for the optimal use of this new agent in HIV-infected patients, to be published in the Canadian Journal of Medical Microbiology and Infectious Diseases early in 2009. A study describing a novel use of raltegravir as a substitute for enfuvirtide among multidrug-resistant patients was presented at the 15th Conference on Retroviruses and Opportunistic Infections [CROI] in February 2008 and published in AIDS later in the year. Another publication in AIDS during 2008 described a previously unrecognized association of raltegravir with depression in some patients.

The clinical team works actively with the BC-CfE Laboratory to study the pharmacokinetics of antiretroviral drugs. One such study accepted for publication in the Journal of Clinical Pharmacology in 2008 examined the effect on lopinavir plasma levels of switching from high-dose Kaletra (lopinavir/ritonavir) capsules to the new formulation of Kaletra tablets. This was the first such study looking at this important issue which can affect multiple drug-experienced patients who need higher drug levels to overcome drug resistance. The Therapeutic Drug Monitoring program is accumulating a large database, which incorporates information on all HIV positive patients undergoing antiretroviral drug level testing in the province. Linkage of this information with the Drug Treatment Program database will enable us to explore the complex relationships between antiretroviral drug levels and drug efficacy and toxicity, with respect to demographic factors (e.g. gender, age, and ethnicity), comorbid conditions, concomitant medications and other factors. A major focus has been the use and study of pharmacokinetics to optimize and individualize care. Ongoing research is exploring factors which impact variability in the pharmacokinetics of these drugs such as gender, age and co-infection with hepatitis C.

Toxicities of antiretroviral therapy continue to be a major focus of research by the clinical group. Colleagues in the Healthy Heart Program are collaborating with our group to study metabolic disorders and cardiovascular disease risk among HIV-infected adults, and their association with antiretroviral drugs. Together these groups are spearheading a large Canada-wide randomized controlled trial examining the effect of rosuvastatin versus placebo on markers of cardiovascular risk including carotid intima media thickness among HIV+ patients receiving antiretrovirals, which commenced enrollment at St. Paul's Hospital in 2008. A large cross-sectional study examining the incidence of and risk factors for osteoporosis and osteopenia among 300 HIV-positive patients was completed, analyzed and

submitted for publication during 2008 by the clinical research group. Preliminary results were presented at the CROI conference in February of that year. In addition, a paper describing our clinical observations of high rates of adrenal suppression secondary to interactions between the commonly used antiretroviral agent ritonavir and inhaled corticosteroids was completed and submitted for publication.

The clinical group also participated in number of studies ongoing during 2008 examining the important issues of complications and management of hepatitis B and C co-infection in the HIV-infected population:

- An observational study describing rapid rebound in hepatitis B DNA in previously undetectable hepatitis B/HIV co-infected patients switching from tenofovir to entecavir therapy, presented at the 9th International Congress on Drug Therapy in HIV Infection, Glasgow, U.K., November 9-13, 2008.
- A CIHR-funded study examining the effect of mitochondrial toxicity in the liver caused by HIV and hepatitis C treatment (with Helene Cote at UBC).
- A national prospective HIV/hepatitis co-infection cohort (with Marina Klein at McGill University in Montreal).
- A randomized clinical trial of citalopram among patients initiating therapy for hepatitis C (with Marina Klein at McGill University in Montreal).
- HIV therapy, HCV infection, antibiotics and obesity, and mitochondrial toxicity (with H Cote at UBC).
- Tenofovir-based rescue therapy for advanced liver disease. Clin Infect Dis. 2008 Feb 1;46(3):e28-30.

There has been significant research developments in the area of HIV and primary care at the Immunodeficiency Clinic, under the supervision of Dr. R Barrios. This research examines monitoring of health care indicators and quality improvement measurement, as well as the impact of a comprehensive HIV primary care model on the utilization of hospital resources in the Emergency Room and AIDS inpatient ward.

Integrated Primary and Specialty Care

The John Ruedy Immunodeficiency Clinic (IDC), under the direction of Drs. Julio Montaner and Rolando Barrios, provides primary and specialty care to HIV-infected patients. The clinical team includes individuals with expertise in all areas of HIV care with specific emphasis on primary care, infectious diseases, lipid disorders, anal dysplasia, neurology, dermatology, psychiatry, addiction medicine, internal medicine, counseling and psychology, nephrology, and clinical trial operations. The clinic operates 5 days a week with after-hours on call coverage. A comprehensive team of family physicians, nurses, social workers, nutritionist, pharmacist, and a substance use counselor is available to all patients. A large database has been generated with information on primary care initiatives, allowing a compre-

hensive assessment of the patient's health status as well as immunizations, co-morbidities, medications, substance use, and other factors of interest.

The IDC serves the purpose of assisting the rapidly growing HIV population with very complex medical issues. The IDC philosophy is to provide a comprehensive and interdisciplinary approach to HIV positive patient care, which include the following services:

- Primary Care Clinic
- Side Effects Clinic
- AIDS Clinic
- Addiction Services
- Hepatitis C Clinic
- STD Clinic
- Specialists Clinic
- TDM Clinic
- Other Services (pharmacist, nutritionist, social workers, addictions counseling, community support groups, nurse)

Inpatient HIV/AIDS Care

The inpatient HIV Ward, under the direction of Dr. Peter Phillips, was opened in February 1997 and was expanded from 17 to 20 beds in March 2006. During that nine-year period, there have been approximately 400 admissions to the Ward annually. Approximately 70% of the patients admitted to the Ward are active or previous injection drug users. There are medical diagnoses accounting for hospitalizations including HIV-related opportunistic infections, malignancies, injection drug use-related infections (e.g. cellulitis, endocarditis, osteomyelitis), complications of chronic liver disease (e.g. hepatitis B and C) and adverse effects related to antiretroviral therapy. The Ward provides a multidisciplinary service and has linkages with various other care facilities and support groups in the community. Various policies and procedures have been developed which are specific for HIV/AIDS care. The Ward has attracted trainees from across the country at all levels of undergraduate and postgraduate training.

Outreach HIV/AIDS Care

The Downtown Community Health Clinic (DCHC), Vancouver Native Health (VNH), and the Street Health Outreach Clinic (SHOC) in South Surrey all receive HIV clinic support through consultancy services provided by Mark Tyndall. A number of innovative care and support programs including the Maximally Assisted Therapy (MAT) program at DCHC and the Chronic Care Model of HIV Care at VNH are ongoing programs of research.

Undergraduate, Graduate, Post-graduate Education

The following Teaching Rounds are available for all levels:

- Complex Care Patient Rounds at the IDC (previously known as the IDC Multidisciplinary Rounds).

- 10C Rounds-daily bedside teaching to rotating medical students & residents, and residents in the Infectious Diseases and Medical Microbiology training programs on the AIDS Ward (10C), as well as the outpatient clinics.
- AIDS Care Rounds-targeted to audiences including AIDS Care Group physicians, nurses (10C and community), IDC physicians, nurses, pharmacist, social workers etc.
- Infectious Diseases Intracity Rounds-Weekly city-wide teaching rounds available to medical students, medical residents, and residents in the Infectious Diseases and Medical Microbiology training programs.
- Academic Half Day Rounds-available weekly to fellows within the Infectious Diseases and Medical Microbiology training programs.
- WiP (Work in Progress) Research Rounds-Forefront.
- Web-based HIV teaching-offered via the BC-CfE website where selected rounds and events are posted.
- Noon Hour Subspecialty Rounds-available to core internal medicine residents at St. Paul's Hospital and at Vancouver Hospital & Health Sciences Centre.
- Department of Medicine Grand Rounds.
- ABC Educational Program-a basic HIV/AIDS educational program for health care professionals and the community that travels across the province.
- HIV/AIDS Updates-these one-day programs are conducted twice a year by the BC-CfE.
- UBC Co-op and TRID Studentships.
- IDC Journal Club: By-monthly event, target to the care givers at the IDC and attending trainees, 10C and IDC Morbidity and Mortality monthly rounds for health care providers in those units.

The Preceptorship Program at IDC, coordinated by Dr. Silvia Guillemi, is available at the Post-graduate level:

This is a program for family physicians offered within the IDC at St. Paul's Hospital. The main objective is to enhance their skills in HIV/AIDS. This program consists of an approximate 3-month rotation where physicians are exposed to an interdisciplinary approach to the management of HIV/AIDS, as well as participating in primary and specialized care of patients. The rotation involves 50% in primary care at IDC and 50% in academic and research activities. This program is available to physicians participating in the Skill Enhancement Program at UBC, as well as a full year postgraduate training in HIV/AIDS at a family practice residency level. The IDC is an important resource for family medicine, infectious diseases and other related residency programs from across Canada and internationally.

STUDENTS/RESIDENTS/POSTDOCTORAL RESEARCH FELLOWS

| STUDENT NAME | PROGRAM TYPE | DATES | SUPERVISOR(S) |
|------------------------|--|-------------------------------|--------------------------------|
| Sheila McCarthy | Graduate Student, Epidemiology | 2003-present | Patrick D, Wood E, Jolly |
| Karissa Johnston | PhD | 2005-2008 | Levy A, Hogg RS, Montaner J |
| Kate Shannon | PhD, Epidemiology | 2005-2008 | Tyndall MW, Kerr T |
| Peter Cheung | Postdoctoral Fellow, Research Virology Lab | 2005-present | Harrigan PR |
| Vikram Gill | MSc student, Research Virology Lab | 2005-present | Harrigan PR |
| Wii Small | PhD | 2005-present | Shoveller J, Wood E, Tyndall M |
| Brandon Marshall | MSc, Epidemiology PhD, Epidemiology | 2006-2008 2008-2011 | Kerr T, Shoveller J |
| MJ Milloy | MSc, Epidemiology PhD, School of Population & Public Health | 2006-2008 2008-2011 | Mathias R, Kerr T |
| Tessa Chaworth-Musters | MSc student, Research Virology Lab | 2006-2008 | Harrigan PR |
| Alan Wood | Graduate Student, Nursing | 2006-present | Kerr T, Wood E |
| Marissa Jitratkosol | MSc student, Research Virology Lab | 2007-2008 | Harrigan PR |
| Kora DeBeck | PhD-Drug Policy | 2007-present | Montaner J, Kerr T, Wood E |
| Paula Ochoa | Postdoctoral Fellow | 2007-present | Montaner J |
| Brian Cho | Medical Resident Research Elective | 2008 | Kerr T, Wood E |
| Christina Lim | Internal Medicine Resident Elective | 2008 | Kerr T, Wood E |
| David Knapp | Co-op Student, Research Virology Lab | 2008 | Harrigan PR |
| Justin Yeung | Medical Resident, UHRI Elective | 2008 | Kerr T, Wood E |
| Marla McKnight | Medical Resident Research Elective | 2008 | Kerr T, Wood E |
| Scott Hadland | Visiting Medical Student Elective | 2008 | Kerr T, Wood E |
| Steven Huang | Co-op Student, Research Virology Lab | 2008 | Harrigan PR |
| Ramesh Saeedi-Saghez | Postdoctoral Fellow-CIHR and CTN | 2008-2009 | Bondy G, Montaner J |
| Kate Shannon | Postdoctoral Fellow-CIHR Bisby Fellowship | 2008-2011 | Montaner J |
| Aranka Anema | PhD | 2008-present | Montaner J |
| Luke Swenson | MSc student, Research Virology Lab | 2008-present | Harrigan PR |
| Aida Sadr | IDC Preceptorship | Apr 2008 | Montaner J |
| Patricia Lim | MSI, 4th yr, UBC | Apr 2008 | Montaner J |
| Melanie Murray | Fellow, Infectious Diseases, UC | Apr-Jun 2008 Sept 2008 | Montaner J |
| Sanita Malhotra | Fellow, Infectious Diseases, UBC | Jan, Jun 2008 Oct-Nov 2008 | Montaner J |
| Miguel Genebat | International Fellow | Jan-Apr 2008 | Montaner J |
| Eliana Castillo | Fellow, Internal Medicine, UBC | Jan-Feb 2008 Apr-May 2008 | Montaner J |
| Cherinet Seid | Fellow, Ottawa | Jun 2008 | Montaner J |
| Lana Bullock | IDC Preceptorship | Jun 2008 | Montaner J |
| Heather MacDonald | IDC Preceptorship | March 2008 | Montaner J |
| A Fong | Fellow, Infectious Diseases, UBC | Nov 2008 | Montaner J |
| Ibrahim Momenkhan | Fellow, Infectious Diseases, UBC | Nov 2008 | Montaner J |
| V Brcic | IDC Preceptorship | Nov-Dec 2008 | Montaner J |
| Batool Ali | Fellow, Infectious Diseases, UC | Oct 2008 | Montaner J |
| Manisha Rajora | IDC Preceptorship | Sept, Dec 2008 | Montaner J |

ALLERGY & IMMUNOLOGY

Division Members

Professor

Dr. R. Robert Schellenberg

Clinical Professor

Dr. H. C. George Wong

Clinical Associate Professor

Dr. Donald Stark

Clinical Assistant Professor

Dr. Amin Kanani

Dr. Seung Kim



Dr. R. Robert Schellenberg

Professor and Head

DIVISION OVERVIEW

Our division is involved in providing clinical teaching in allergy and immunology at all levels. This includes major initiatives in patient education, CME programs for physicians, and elective rotations for residents and medical students. This year we have made submission to the Royal College of Physicians and Surgeons of Canada to establish a training program at UBC. This is a joint application with the Department of Pediatrics. The need for an additional training program in our discipline in Western Canada was highlighted by the external review of our division in December 2006. The benefits to the country in addition to British Columbia were mentioned. Increased exposure of trainees should aid in recruitment to our subspecialty which, in a recent national survey of physicians in Canada, had one of the highest levels of professional satisfaction. Dr. Donald Stark has resigned as chair of the Specialty Committee of Allergy and Clinical Immunology for the Royal College so that he can champion our application. The planned program would be a joint one with the Pediatric program in Allergy and Immunology at BC Children's Hospital. Members from adult and pediatric divisions are supportive and have been involved in discussions and modifications to the submitted application.

Together with representatives from the Provincial Blood Services and St. Paul's Hospital, a major initiative is being undertaken to develop a specialized clinic for Primary Immune Deficiency patients. Goals are to have a defined clinic where these patients can have specialized teaching and training for the initiation of home therapy with replacement immunoglobulin. Such a facility would enhance patient care while decreasing the requirement for hospital resources. Drs. Kanani, Stark and Schellenberg are actively pursuing this in collaboration with the outpatient nursing coordinator and the blood bank administrator at St. Paul's Hospital. More than 20 patients have already been successfully trained for self administration of subcutaneous immunoglobulin (sclg) at home and this program is expanding. There remains a critical need for Ministry of Health support for this program which would have major benefits for patients and hospital resources.

We are working to expand the number of clinical teachers, including members in Victoria. Dr. Seung Kim is a community member in Burnaby and has been very obliging in taking residents and students into his clinic and providing excellent teaching in this outpatient setting. We are actively recruiting additional community members as the BC Society of Allergy and Immunology contains a highly interactive membership which partakes in regular educational retreats, the programs being organized by Dr. Kim and Dr. Ross Chang.

Teaching

All members of the Division are actively involved in teaching students, residents, community physicians and lay persons.

The limited exposure to our subspecialty remains a problem but the number of students taking an elective rotation with us has increased substantially. However, we still have more from other universities than our own. This reflects the minimal amount of allergy and immunology in the curriculum despite how common these disorders are in any medical practise. Dr. Schellenberg provides an introductory lecture on the basic mechanisms of allergic inflammation in the Pathology 521 course. All members actively participate in case-based subspecialty teaching seminars for Med III / IV students and provide individual office-based teaching of students who have chosen an elective rotation in the subspecialty. In addition, each member teaches in the Clinical Skills block for Med I students and conducts Bedside teaching sessions with Med II students.

The month-long elective rotation for residents in Internal Medicine and its subspecialties has become increasingly popular in recent years. Members commit a half to a full day per week of their office practice for each resident and Dr. Schellenberg has one on one teaching sessions two half days each week with the resident, reviewing basic and clinical topics of relevance.

Major initiatives have been undertaken in community medical education to physicians, other health care professionals and to the lay public. CME programs organized by Dr. George Wong through the auspices of the UBC Community Programs are given in various communities in British Columbia and the Northwest Territories. These have received excellent evaluations and are highly appreciated by physicians in outlying areas. Each member contributes to these programs.

Dr. George Wong has developed specific expertise in evaluation of complementary and alternative medicine practices and has presented a number of interesting papers on these aspects at meetings in the USA and Canada, as well as to the BC Qualified Acupuncturists and Traditional Chinese Medicine Practitioners Association. He is a committee member of the Complimentary and Alternative Practices in Allergy Committee of the American Academy of Allergy, Asthma and Immunology (AAAAI) and involved in this organization's adverse reaction to drug and biological committee as well as is a member of the BCMA committee on allied health and alternative therapies.

Dr. Amin Kanani is a member of the Jeffrey Modell Foundation of Canada, an organization that promotes awareness of primary immune deficiency with health care providers and the lay public. He has organized a local Immunology Journal Club that brings together pediatric and adult immunologists to foster interaction and share knowledge and the development of needed laboratory testing. He and Dr. Schellenberg have been involved in an initiative that led to adding the "Ten Warning Signs for Primary Immune Deficiency" to the pamphlet "Do Bugs Need Drugs", a highly successful program in BC and Alberta developed by Dr. Mary Carson that reviews signs of infections and general considerations for health care providers (25,000 pamphlets distributed). This collaboration has been very fruitful and further aspects of joint teaching sessions are being discussed.

All members have been actively involved in providing teaching seminars in various communities in British Columbia. Examples include Grand Rounds presentations at Kelowna General, Surrey Memorial and Royal Jubilee Hospitals on topics of immune deficiency and management of difficult asthma.

Research and Clinical Practice Guidelines

The members at St. Paul's hospital have a major interest in management of Primary Immune Deficiency and have initiated a number of research projects as well as interactions with the lay organizations, Canadian Immune Deficiency Patient Organization and the Jeffrey Modell Foundation. Dr. Amin Kanani is the principal investigator on a grant-in-aid (co-investigators Dr. Stark and Dr. Schellenberg) evaluating the quality of life and health outcome parameters of patients with primary immunodeficiency using two different dosing regimens of IVIG to determine optimal dosing requirements. Preliminary results suggest very interesting findings that may form the basis of modifications to present clinical recommendations (Initial data from Vancouver presented by Dr. Kanani at the American Academy of Allergy, Asthma and Immunology annual meeting in Feb '07 and the updated data that included Toronto and Winnipeg was presented by Dr. Schellenberg at the 6th International Immunoglobulin Meeting in March '09).

Dr. Stark was the principle investigator (Drs. Kanani and Schellenberg are co-investigators) in a study evaluating the subcutaneous administration of an IVIG product which would allow home-based therapy. A further study using a once monthly subcutaneous product is presently underway by the same investigative team.

Dr. Kanani was a committee member evaluating subcutaneous vs. IV immunoglobulin therapy for Primary Immune Deficiency, evaluating the efficacy and cost effectiveness for the Canadian Agency for Drugs and Technologies in Health.

Dr. Schellenberg is a member of a Canadian Blood Services committee formulating evidence-based guidelines for the use of IVIG and sClG in patients with Primary Immune Deficiency.

Dr. Schellenberg was also involved in the formation of guidelines for the management of allergic rhinitis and continues involvement with a multidisciplinary group formulating guidelines on chronic rhinosinusitis.

Dr. Stark is involved with a national study sponsored by the AllerGen NCE evaluating "Anaphylaxis and Treatment Methods within the School System."

Dr. Schellenberg is involved in a national study sponsored by AllerGen devising an internet-based peer group interactive program for adolescents with asthma and anaphylaxis.

Dr. Wong is conducting studies assessing the use and potential harmful effects of herbal and Chinese medicines and regularly presents at local and international meetings.

Clinical Services

All members are actively involved in providing clinical consultative services in Allergy and Immunology to the community.

Dr. Mandl continues to provide allergy clinics to a number of aboriginal communities in Northern BC.

Dr. Stark provides outreach clinics in Prince George and Sechelt. He has been active with the hospitals in establishing protocols for the management of latex allergy in hospitals.

Dr. Wong has had a specific interest in complimentary medicine practices and the potential harmful effects of specific treatments.

A major initiative at St. Paul's Hospital to improve the care of patients with primary immunodeficiency is being led by Drs. Kanani, Stark and Schellenberg in conjunction with Debbie Laflamme (Supervisor of Outpatient Services) and Darryl Gouthro (Manager of the Blood Bank). This entails the establishment of an outpatient clinic and registry to provide service to these patients and initiate home subcutaneous or intravenous immunoglobulin therapy. The goal of this project is to have a provincial centre and resource for all patients with primary immune deficiency and link registries with others across Canada and globally.

National and International Initiatives

Members are very involved with the national programs for Allergy and Clinical Immunology.

Dr. Stark has just resigned as chair of the Subspecialty Committee for Clinical Immunology and Allergy of the Royal College of Physicians and Surgeons of Canada to focus on our application for a training program at UBC. He is a Past-President of the Canadian Society of Allergy and Clinical Immunology.

Dr. Schellenberg is the Chair of the Examination Committee for Clinical Immunology subspecialty of the Royal College of Physicians and Surgeons of Canada. He is also a Past-President of the Canadian Society of Allergy and Clinical Immunology.

Dr. Kanani is a member of the Steering Committee of the Jeffrey Modell Canadian Immunodeficiency Network and a member of the Royal College of Physicians and Surgeons Examination Committee for Clinical Immunology.

Dr. Schellenberg is a member of the Medical Advisory Committee of the Canadian Immune Deficiency Patient Organization.

Dr. Stark is a member of the Board of Directors for the Canadian Foundation for Allergy and Clinical Immunology, a charitable organization of which Dr. Stark was the founder.

All members are actively involved in local, national and international committees dealing with their areas of interest. Dr. Stark remains the Economics Chair from the section of Allergy and

Clinical Immunology for the Society of Specialist Physicians and Surgeons of BC.

Future Directions

The initiative to develop a Royal College accredited teaching program in our subspecialty and evaluate means of increasing exposure to medical students is being actively pursued. Due to our limited numbers and the expanding requests for elective rotations in our subspecialty, we plan to increase our membership by adding excellent clinical faculty from the community. A number already contribute significantly to our ongoing teaching programs that involve both pediatric and adult programs. The application proposal has been developed by Dr. Stark and Dr. John Dean with the support of all members of both the Department of Pediatrics and Department of Medicine.

A major initiative of the division is the development of a Comprehensive Care Program for patients with Primary Immune Deficiency in British Columbia. We are working collaboratively with groups across the country to establish a registry of these patients for improved care and opportunities for multi-centred research initiatives. Locally we are working to have a specific out-patient clinic where management can be better coordinated, especially as we move to home immunoglobulin replacement therapy. We are the first adult centre to initiate this and are developing a business plan to the Ministry of Health to make this a provincial resource that would provide superior, standardized care at lower cost.

Division Members

Professor & Head

Dr. Christopher E. Buller

Professor

Dr. John Boone (Emeritus)
Dr. John Cairns
Dr. Charles Kerr
Dr. G. B. John Mancini
Dr. John Mayo *
Dr. Henry Mizgala (Emeritus)
Dr. Simon Rabkin

Associate Professor

Dr. Hartmut Henning (Honorary)
Dr. Karin Humphries

Clinical Professor

Dr. Victoria Bernstein (Emeritus)
Dr. Ronald Carere
Dr. Arthur Dodek (Emeritus)
Dr. Anthony Fung
Dr. Kenneth Gin
Dr. Jaap Hamburger
Dr. Victor Huckell
Dr. Andrew Ignaszewski
Dr. Doris Kavanagh-Gray (Emeritus)
Dr. Marla Kiess
Dr. Ian Penn
Dr. Dwight Peretz (Emeritus)
Dr. Donald Ricci
Dr. Melville Shaw (Emeritus)
Dr. Max Walters (Emeritus)
Dr. John Webb
Dr. John Yeung-Lai-Wah

Clinical Associate Professor

Dr. Sammy Chan
Dr. Brett Heilbron
Dr. John Jue
Dr. Ian MacDonald (Emeritus)
Dr. Christopher Thompson
Dr. Graham Wong

Clinical Assistant Professor

Dr. Jonathan Affolter
Dr. Eve Aymong
Dr. Saul Isserow
Dr. Pui-Kee Lee
Dr. Robert Moss
Dr. Parvathy Nair
Dr. James Nasmith
Dr. Alan Rabinowitz
Dr. Krishnan Ramanathan
Dr. Jacqueline Saw
Dr. Lynn Straatman
Dr. Stanley Tung

Clinical Instructor

Dr. Bradley Munt
Dr. Sean Virani

Adjunct Professor

Dr. Scott Lear

Associate Member

Dr. Amin Aminbakhsh
Dr. Tom Ashton
Dr. Margaret Blackwell
Dr. Albert Chan
Dr. Eric Fretz
Dr. Arthur Friesen
Dr. Lyall Higginson
Dr. Peter Klinker
Dr. Gerald Simkus
Dr. Elizabeth Swiggum

CARDIOLOGY



Dr. Christopher E. Buller
Professor and Head

DIVISION OVERVIEW

The UBC Division of Cardiology consists of 37 active faculty members including 7 full-time and 30 clinical faculty distributed over two large tertiary programs at St. Paul's Hospital and Vancouver Acute, including UBC Hospital. This number includes one new recruit to the Division during 2008, Dr. Jonathan Affolter. Eleven additional members enjoy emeritus, honorary or adjunct status and a further ten members are appointed as Associate Members to the Division driven in part by the Medical School expansion. In 2008, Dr. Christopher Buller entered his fifth and final year as Head, UBC Division of Cardiology and Sauder Family Heart & Stroke Foundation Chair in Cardiology, as well continuing in his role as Head, Division of Cardiology, Vancouver Acute. Dr. Andy Ignaszewski (Clinical Associate Professor) enters his third year as Head, Division of Cardiology for St. Paul's Hospital.

The UBC Division of Cardiology provides a comprehensive range of tertiary and quaternary cardiology sub-specialty services and programs, including ambulatory and inpatient consultative cardiology, specialized clinics including heart function, cardiac intensive care, electrodiagnostics, cardiac ultrasound, interventional cardiology, electrophysiology, nuclear cardiology, adult congenital heart disease, cardiac transplantation and ventricular assist, atherosclerosis risk reduction and cardiac rehabilitation, and advanced cardiac imaging.

Teaching

Undergraduate: Dr. Parvathy Nair, Undergraduate Medical Education Director

Whether students choose to be general physicians or specialists, a foundation in the cardiovascular sciences and clinical examination is an essential part of their skill set. To ensure students are prepared for their future clinical practice, the Division has taken an active and integral role in the undergraduate curriculum. In the past year, the Division has contributed over 200 hours in bedside clinical skills teaching, seminars and problem-based tutoring. The Division has also recognized the students by accommodating over 30 elective students on the inpatients services, such as CCU, and in cardiologists' offices. Faculty continues to play an important part in the development of the curricular content as well as recruiting volunteer patients for clinical skills teaching. The UBC medical school now has over 250 students per year, and the Division is committed to its leadership role in undergraduate teaching using evidence-based teaching methods and assessment tools. The introduction of Harvey, the clinical skills simulator into the third year curriculum has been an important addition to bedside clinical teaching. The Division has also been instrumental in establishing an online curriculum for cardiology clinical skills, for first and third year medical students. With the incorporation of new technologies such as simulation and online curricula the Division has shown vision and leadership in the field of undergraduate education.

* Joint tenure appointment 50:50 with Department of Radiology

Postgraduate: Dr. Ken Gin, Director and Dr. Krishnan Ramanathan, Associate Director

The UBC Postgraduate Program in Cardiology now comprises of 16 residents and will further increase to 18 residents on July 1, 2009. Currently, there are 10 Ministry of Health funded residents and 6 externally funded residents.

Academic aspects of the program include an extensive weekly curriculum of structured bedside teaching, internal and guest faculty lectures, resident-led presentations, and journal club reviews of contemporary literature, comprising of 6–10 hours of structured teaching weekly. Exposure to cardiac radiology has been enhanced with the cross appointment of Dr. John Mayo from Radiology. Research mentoring has been enhanced by the appointment of three hospital-based research directors: Dr. John Jue (VGH), Dr. Sammy Chan (SPH) and Dr. Krishnan Ramanathan (SPH/VGH). The program has raised over \$20,000 to support resident research. At the 2008 Canadian Cardiovascular Congress, we witnessed 2 presentations by cardiology residents.

The core training program was reviewed by the Royal College in February 2007 and received full accreditation. The many strengths of the program were noted.

One candidate successfully took the Royal College examination in September 2008. Both of our core program graduates from 2008 (one Ministry funded, one externally funded) have secured positions for subspecialty training.

The subspecialty programs continue to include interventional cardiology, electrophysiology, echocardiography, heart function/transplant and advanced cardiac imaging.

Continuing Medical Education

Internal Rounds

Across sites, the Division of Cardiology presents a rich curriculum of regular lectures and rounds. Cardiology Grand Rounds is presented weekly at each hospital. In addition, a variety of city-wide and hospital-based rounds are held regularly as follows:

- Interventional Cardiology (weekly, both sites)
- Combined Cardiology/Cardiac Surgery (weekly, both sites)
- M&M (weekly at SPH, monthly at VGH)
- Echocardiography (monthly, VGH)
- Grand Cardiology Rounds (weekly, VGH and SPH)
- Resident Noon rounds (weekly, SPH)
- Research Rounds (bi-weekly, SPH)
- Journal Club (monthly, city-wide)
- Cardiac CT rounds (twice monthly, VGH)

Distinguished Speakers in Cardiovascular Medicine

2008 saw the fifth year of the Distinguished Speakers in Cardiovascular Medicine series held monthly during the academic year. Hosted jointly with the UBC Division of Cardiac Surgery, this program is directed by Drs. Buller and Andrew Ignaszewski and brings prominent cardiovascular academics to Vancouver for 1 or 2 days of focused activity and interaction including research seminars, resident teaching, and the Distinguished Speaker Lecture itself. A broad range of tertiary and community cardiovascular specialists and researchers attend these lectures. They afford an important opportunity for basic scientists, clinical and academic physicians, cardiac surgeons, as well as faculty and staff from pharmacy and other allied health disciplines to meet and interact.

A key goal of this guest lecture series is to maintain complete academic independence with respect to the choice of speakers and topics. Funding it, however, requires industry support. To resolve this paradox, the cardiac pharmaceutical and device industry was approached at large by the Divisional leadership to provide shared funding without any input regarding content. In 2008, 10 industry partners supported Distinguished Speakers through this arms length funding arrangement and we were fortunate in attracting 9 truly distinguished speakers during the period:

- Dr. Stuart Connolly, McMaster University
- Dr. Paul Armstrong, University of Alberta
- Dr. Christopher Granger, Duke University
- Dr. Norman Campbell, University of Calgary
- Dr. Judith Hochman, New York University
- Dr. Robert Harrington, Duke Clinical Research Institute
- Dr. Sanjiv Kaul, Oregon Health & Sciences University
- Dr. Valentin Fuster, Mount Sinai Medical Center
- Dr. Sonia Anand, McMaster University

Course & Convention Leadership / Selected Lectures and Presentations

Dr. Victoria Bernstein:

- Chicago for SHIFT Meetings - March 27, 2008.
- ACS – Ottawa and Roche meetings - May 30, 2008.
- ESC – Munich and Micardis Advisory Board - August 26, 2008.

Dr. Christopher Buller

- “Straight from the Heart: Your guide to the latest in cardiac research, care, and prevention” Vancouver Coastal Health Research Institute “Celebrating Research Week March 8-15, 2008”.
- 17th Interventional Cardiology Symposium, Montreal Heart Institute, Course Co-Director, June 19-21, 2008.
- Debate “Controversy: What is the best approach to risk assessment after ACS? Routine coronary angiography is preferred”. New Concepts in Acute Coronary Syndromes: Beyond 2000 (XIV) – CCC October 2008. Faculty & Planning Committee Member, Beyond 2000 Symposium (XIV) – CCC October 2008.

Dr. John Cairns

- Hot Topics in Cardiology “Antithrombotic Therapy of Atrial Fibrillation” Vancouver, April 2008.
- Iranian Association of Cardiology, “ASA and Clopidogrel resistance” and “Antithrombotic Therapy of Atrial Fibrillation”, Tehran, November 19 and 20, 2008.
- Distinguished Speaker in CV Medicine, “Aspirin Resistance and Clopidogrel Resistance – Sorting Out Diagnosis, Mechanisms and Management”, Vancouver, March 5, 2009.

Dr. Ronald Carere

- Live case demonstrations broadcast from St. Paul’s Hospital. “Trans Catheter Therapeutics (TCT) 2008 – Transcatheter Aortic Valve Implantation with Dr. John Webb. Oct 14, 2008.
- Contemporary Interventional Cardiology Practice - Interior Health Cardiology Day, Kelowna General Hospital, Kelowna, B.C. Sept. 26, 2008.
- Course Co-Director: 10 th Annual Excellence in Interventional Cardiology (December 2008) This 3-day course for Interventional Cardiologists is attended by Interventional Cardiologists from across Canada. The curriculum emphasizes novel topics relevant to interventional cardiology including advances in evidence-based practice and public policy challenges.

Dr. Marla Kiess

- “Cyanotic Congenital Case”, Canadian Society of Echocardiography, Vancouver, April 25, 2008.
- “What’s New in Adult Congenital Heart Disease”, North Shore Cardiologists, Vancouver, February 28, 2008.
- “Sinus venosus ASD”, E3 2008– Essential Echocardiography with Experts, American College of Cardiology Annual Scientific Sessions, Chicago, Ill, March 29, 2008.
- “Differences between the Canadian and American Systems regarding CAD management – Is higher cost necessarily better?”, International Atomic Energy Commission, Vienna, Austria, May 9, 2008.
- “Diagnosis of the etiology of heart failure: Role of Radionuclide imaging, Workshop on the Role of Imaging in Patients with Heart Failure, Annual Scientific Sessions of the Canadian Cardiovascular Society, Toronto, Ontario, October 28, 2008.
- “Advanced Imaging in the acute coronary syndrome patient: the role of Nuclear Cardiology”, Annual Scientific Sessions of the Canadian Cardiovascular Society, Toronto, Ontario, October 28, 2008.

Dr. Ian Macdonald

- Teaching, mentoring and examining medical students, UBC Faculty of Medicine (2nd, 3rd and 4th years), also mentoring senior medical students from foreign universities.
- Teaching and mentoring Cardiology Fellows, UBC Division of Cardiology Training Program.
- Leader of a mentor group, Student Mentoring Program, UBC Faculty of Medicine.

- January 2008 – Attendee, Mayo Clinic Course “Echo Hawaii” (Clinical echocardiography review course – 5 days).
- February 2008 – Presenter “ECG Interpretation” to PGY-1 Residents.
- September 2008 – Attendee – European society of Cardiology, Scientific Sessions, Munich, Germany.
- October 9, 2008 – Presenter: “Ambulatory ECG”, SPH combined cardiology rounds.
- October 26-29 – Attendee, Canadian Cardiovascular Society, Scientific Sessions, Toronto, Ontario.
- November, 2008, Presenter: “Advanced ECG Interpretation”, SPH CME course, Waterfront Hotel, Vancouver.

Dr. G.B. John Mancini

- “Pleiotropic Effects of Statins - Possible Role in COPD”, Society of Community Internists, Vancouver Island, Tofino, B.C., April 19, 2008.
- “PCI and the COURAGE to Change Practice”, Society of Community Internists, Vancouver Island, Tofino, B.C., April 20, 2008.
- Carotid IMT Studies: Controversy and Evidence. Canadian Perspectives on the ACC.08, Canadian Cardiovascular Society, Toronto, Ontario, Canada, April 25, 2008.
- COURAGE Trial: the Role of PCI & Modern Medical Therapy for Chronic Stable Angina, Progress in Primary Care, Sheboygan, WI, May 16, 2008.
- New Insights in Treating Patients with Coronary Artery Disease, The Saskatchewan Lipid Interest Group, Saskatoon, Saskatchewan, May 22, 2008.
- Optimizing the Management of Coronary Artery Disease, Cardiology Grand Rounds, University of Saskatchewan, Saskatoon, Saskatchewan, May 23, 2008.
- Surrogate endpoint trials in heart disease. Relevance in determining “best clinical practice”, Canadian Cardiovascular Congress, Toronto, ON, Oct 27, 2008.
- Debates: Current controversies in cardiovascular sciences. “There should be a moratorium on CT imaging until there are RCT’s”. Canadian Cardiovascular Congress, Toronto, ON, Oct 27, 2008.

Dr. Simon Rabkin

- President of 23rd Scientific Session of the International Society of hypertension.
- Stearic acid induced cardiac lipotoxicity is independent of the amount of cellular lipid and is mitigated by the fatty acids oleic and capric but not by the PPARagonist torglitazone – Canadian Society for Atherosclerosis and Thrombosis 2008.
- Nitric oxide alters gene expression of interleukin receptors in the heart – Canadian Society of Hypertension, October 25, 2008.
- P38 mitogen activated protein kinase is activated by norepinephrine and serves a cardioprotective role while epinephrine induces p38 MAPK dephosphorylation – International Society of Hypertension 2008.

- Comparative effect of atorvastatin on the inflammatory markers – CRP, MCP-1, serum amyloid alpha and interleukin-18 in patients with hypertension, diabetes mellitus or the metabolic syndrome - International Society of Hypertension 2008.

Dr. Sean Virani

- Invited presentation: Advances in Chronic Kidney Disease, Cancun Mexico (2008).
- Invited presentation: Cardiac Nursing Symposium, Vancouver BC (2008).

Dr. John Webb

- Montreal, McGill University, invited speaker, date pending.
- Frankfurt, Cardioskills, Jan 2008.
- Leipzig, Germany, LINC course, Chair, live case demonstration, Jan 2008.
- Los Angeles, Manchester distinguished lecture series, Feb 2008.
- Washington DC, CRT meeting, speaker, Feb 11 2008.
- Rome, Joint Interventional Meeting Feb 2008.
- Austria, CV Surgical Symposium Mar 2008.
- St. Petersburg, FL, Valve symposium Mar 2008.
- UBC Applied Sciences fluid dynamics studies Mar 2008.
- Chicago, American College of Cardiology, Mar 2008.
- Seattle, Tran Valve Symp, Co-chair, May 2008.
- Edmonton, Mazankowski lecture, May 2008.
- Ottawa, Medical Devices Dept, Jun 2008.
- Rome, Aortic valve summit, Mar 2008.
- San Diego, AATS, May 2008.
- Barcelona, EuroPCR, May 2008.
- Edmonton, Manzankowski lecture, June 2008.
- Seattle, Transcatheter Valve Therapy, Director, Jun 2008.
- Toronto, Amer Soc Echo, Jun 2008.
- Jeddah, Saudi Arabia, Jun 2008.
- Cedars Sinai, Los Angeles, Jun 2008.
- Mt Sinai, NY, Jul 2008.
- Hamilton, Ontario Jul 2008.
- Las Vegas, PICS meeting, Jul 2008.
- Seattle, University of Washington Hospital, Aug 2008.
- Columbia Univ Med Center Aug 2008.
- Washington Hosp, DC Aug 2008.
- Bellingham, St Joseph Hospital Oct 2008.
- Toronto, CCC, Oct 2008.
- Washington DC, TCT, Oct 2008.
- San Diego, UCSD Dec 2008.
- Washington DC, TCT, Associate director, Oct 2008.
- New Orleans, American Heart Association, Nov 2008.
- Kyoto, Japan JACCT, Nov 2008.
- San Francisco, Grand rounds, Dec 2008.
- New York, Mount Sinai, Dec 2008.
- Australia Nov 2008.
- New Zealand Dec 2008.

Audio Interviews:

- Webb J ACCEL Mar 2008
- Webb J JACC CVN Mar 2008

Research

Dr. Victoria Bernstein continues to be actively involved in research. Ongoing studies include: STICH; Magnesium study - Assessment of i/v magnesium for decrease in atrial arrhythmias after heart surgery; BEAUTIFUL study - Ivabradine vs.. placebo CAD with LV dysfunction; ONTARGET - Telmisartan/Ramipril or combination in high risk cardiac patients; AF-CHF- Rate control vs.. rhythm control in patients with LV dysfunction and paroxysmal AF; AUDITOR - Rimonabant in the regression of arteriosclerosis disease. DAL OUTCOMES – dalcetrapib to raise HDL; ASSESSION – reimbursement for smoking cessation; CRESCENDO – rimonabant to reduce cardiac events/mortality; PRADO – rimonabant to lower lipids and blood glucose; SHIFT – ivabradine to improve CHF. Dr. Bernstein has served on numerous adjudication committees, including SAVE; CARE; HOPE; PRAISE; COPERNICUS; HOPE TOO; ACCLAIM and IMAGINE. She is on the advisory board to Servier and Sanofi Aventis.

Dr. Christopher Buller is active in numerous clinical trials and in outcomes research. His primary research focus in recent years has been through his executive involvement in the NIH/NHLBI funded Occluded Artery Trial testing the late open artery hypothesis for patients with recent myocardial infarction. Numerous secondary analyses and publications are now in preparation. As a member of the OAT team, funding for long term follow up of patients enrolled in OAT and TO-SCA-2 has recently been awarded by NIH/NHLBI. Dr. Buller remains the Canadian PI for the NIH/NHLBI FREEDOM trial which at the end of 2008 had enrolled more than 300 patients across 14 Canadian centres.

Dr. John Cairns was a co-principal applicant with Dr. Salim Yusuf and 8 other CV investigators from across Canada for funding of the CANadian Network and Centre for Trials Internationally (CANNeCTIN). In April 2008 it was awarded \$10M over 5 years from CIHR and \$10M from CFI (matched by a further \$15M from government and philanthropy). CANNeCTIN is jointly led by Dr. Salim Yusuf, from Hamilton Health Sciences and McMaster University, and Dr. John Cairns, from the University of British Columbia. It will enhance Canada's capacity to implement clinical research with the ultimate aim of improving the prevention and treatment of heart disease and diabetes. CANNeCTIN brings together investigators from across Canada with a wide range of expertise and research achievement in cardiovascular disease and diabetes, to work collaboratively toward major discoveries which are likely beyond the capacity of an individual centre. It comprises a coordinating centre located at the Population Health Research Institute (PHRI) at Hamilton Health Sciences and McMaster University, a collaborative network of over 200 hospitals and clinics in every Canadian province, and an affiliated international network of over 1500 centres. Dr. Cairns chairs or is a member of a number of DSMBs of several large clinical cardiovascular trials, reviews regularly for several journals and also chairs the Division of Cardiology research award committee.

Dr. Ron Carere is an active participant in research activities related to the Transcatheter valve program in collaboration with Drs. Webb et al (Percutaneous and Transapical Heart Valves). He continues to pursue BC Cardiac Registry research activities with Dr. Humphries and with investigators Dr Fretz and Hilton at the Victoria Heart Institute.

Dr. Sammy Chan is active in clinical trials and mechanistic research. His area of interest is preventive cardiology, endothelial function and endothelial progenitor cells. He is the St. Paul's Hospital site investigator for the CRESCENDO study investigating the potential role of Rimanobant in reducing adverse cardiovascular outcomes.

Dr. Ken Gin continues to be actively involved in research, particularly in the areas of atrial fibrillation and coronary artery disease. Ongoing studies include ACTIVE (Atrial fibrillation Clopidogrel Trial with Irbesartan for Prevention of Vascular Events); the CRESCENDO study (randomized multinational multicentre, double blind placebo controlled, two arm parallel group trial of Rimonabant for reducing the risk of major cardiovascular events in abdominally obese patients with clustering risks; and a prospective, randomized, double blind, double dummy, parallel group multicentre event driven non-inferiority study comparing the efficacy and safety of once daily oral rivaroxaban). Dr. Gin also sits on the steering committee for the Magnesium To Prevent Post-op Atrial Fibrillation study which is Heart and Stroke funded. This is the largest trial ever performed to test the efficacy of intravenous magnesium to prevent post operative open heart surgery atrial fibrillation. Dr. Gin also provides echo imaging support for a number of trials including CLOSURE (PFO closure study) and 3 studies to assess the cardio-toxicity of various chemotherapeutic agents. Dr. Gin is also co-author of the Guidelines For Appropriate Wait Times For Echocardiography In Canada, published by the Canadian Cardiovascular Society.

Dr. Karin Humphries' areas of interest include sex/gender differences in CVD presentation, treatment and outcomes; health services research focused on secondary prevention; population-based rates of treatment, including PCI, CABG, and pharmacological therapy; and atrial fibrillation. Dr. Humphries has led B.C.'s team of contributors to the Canadian Cardiovascular Outcomes Research Team (CCORT) project and GENESIS - Gender and Sex Differences in Cardiovascular Disease - an Inter-disciplinary Capacity Enhancement Team funded by CIHR. A growing area of interest for Karin is investigator-driven randomized controlled trials. With her advanced theoretical and extensive practical knowledge, she supports and informs many such initiatives within the Division. As Principal Investigator, Dr. Humphries presently holds a New Investigator Award from the Canadian Institutes of Health (CIHR), a Career Investigator Award from the Michael Smith Foundation for Health Research, and is the Principal Investigator on three grants funded by the Heart and Stroke Foundation (1) and CIHR (2).

Dr. Karin Humphries is responsible for the re-development of the Cardiac Services BC Registry, a comprehensive clinical registry of all adult cardiac procedures in BC. She is also responsible for promoting and overseeing research using Registry data.

Dr. John Jue continues to add to his echo database which currently contains 113,000 studies. Current research work includes aortic stenosis and pulmonary hypertension; aortic stenosis regression and statins (Astronomer study); tissue strain in Fabry's and Hypertensive patients; pericardial fat in a Fijian population with metabolic syndrome; and Tissue Doppler following conversion of Atrial Fibrillation.

Dr. Marla Kiess is Member, CANNeCTIN Adult Congenital Heart Disease Working Group.

Dr. G. B. John Mancini has been active in clinical trials through his Cardiovascular Imaging Research Core Laboratory (CIRCL) which provides measurements of endothelial dysfunction (brachial artery ultrasound), carotid ultrasound, quantitative coronary intravascular ultrasound and quantitative coronary angiography (QCA). Cardiac Computed Tomographic Angiography has been added with a state-of-the-art, VITAL/Vitrea workstation dedicated solely to research and available to research technicians and fellows. The ACROSS-Cypher® trial assessing the efficacy of sirolimus eluting stents in chronic total occlusions was recently published. The North American COURAGE trial was presented as a late-breaking trial at the ACC in the spring and simultaneously published in the NEJM. Many post-hoc analyses are being presented and a majority utilize data generated in CIRCL. M-CHAT carotid ultrasound study, under the stewardship of Dr. Scott Lear, continues with long-term follow-up scans using funding awarded by CIHR. IVUS analyses for the Biomarker/Transplantation project under the direction of Dr. Bruce McManus are on-going. CIRCL is also supporting Dr. Karen Humphries' study of women with normal coronary angiograms. The latter will involve both IVUS and CTA analyses.

Dr. Parvathy Nair's research is in the area of medical education, specifically in the areas of assessment and the use of simulation technology in the medical curriculum. She is presently the principal investigator for a randomized trial looking at the application of simulation technology on the cardiology clinical skills of undergraduate students. She has published in the area of assessment of echocardiography skills in cardiology trainees and has written grants for further projects in this novel research arena. Dr. Nair is also the Medical Director of the Leslie Diamond Women's Heart Health Clinic, a newly established prevention program. The Clinic is the first in Western Canada and will be an important step in establishing research in cardiovascular prevention care for women.

Dr. Simon Rabkin's research focuses on two aspects: molecular mechanisms of cardiac disease and clinical risk factors for atherosclerotic disease. His clinical research is currently on biomarkers - inflammatory indicators of disease in high risk patients.

Dr. Donald Ricci remains local PI for FREEDOM (CABG vs. PCI with DES in diabetics) and TRITON (new anti-platelet drug) in 2008.

Dr. Jacqueline Saw is an interventional cardiologist with research interests in antiplatelet therapy, interventional cardiology and peripheral arterial disease. She is the principal investigator of 2 local trials that were published in 2008 on antiplatelet therapy and response. The ELAPSE study investigated long-term antiplatelet response to clopidogrel and aspirin with long-term administration, and was published in the JACC. This study was funded by the VGH Division of Cardiology Research Fund. The BRIEF-PCI Substudy on clopidogrel and aspirin response and effects on myonecrosis post-PCI was published in the JACC Cardiovascular Interventions. She was also awarded a new internal grant by the VGH Division of Cardiology Research to conduct further studies on antiplatelet therapy in 2008. She is also the local site PI of several clinical trials, e.g. PERISCOPE, SATURN, TIMI-50, and SAPPHIRE-WW Registry.

Dr. Sean Virani's research focus interests include cardiac transplantation, acute decompensated heart failure (ADHF) and the cardio-renal axis in heart failure. He is principal investigator for the ASCEND-HF Trial which is examining the role of Nesiritide in ADHF, the BALANCE Trial which addresses vasopressin antagonism in heart failure patients with hyponatremia and the TRIDENT Trial which looks at adenosine receptor antagonism in patients with volume overload and renal insufficiency. Additionally, he is the lead North American Investigator for CONFIRM – a trial designed to assess the efficacy of a novel pacing algorithm in patients with heart failure. He is a sub-investigator on a number of surgical heart failure trials through his collaboration with the transplant program at St. Paul's Hospital.

Dr. John Webb is director of interventional cardiology research at St. Paul's hospital. St. Paul's Hospital has become internationally known for transcatheter valve intervention. The year of 2008 saw published or in press 22 valve related journal articles, and invited presentations in 10 countries and two Audio interviews: (ACCEL)

Dr. Graham C. Wong remains active in the National Steering Committee for the CANRACE ACS Registry, which has been successful in having a number of abstracts accepted to ACC and CCC. He was involved in one published peer reviewed manuscript and the senior author in 2 published case reports in 2008. Finally he remains active in the development of a comprehensive regional database for the VCHA Regional STEMI Initiative.

VGH Division of Cardiology Research Awards

In 2006, the VGH Division of Cardiology in conjunction with the VGH and UBC Hospital Foundation established a semi-annual award competition targeting pilot projects led by VGH Division members. Applications are received January 1st, and July 1st and are reviewed by the Research Review Com-

mittee comprising Drs. John Cairns, John Mancini and Donald Ricci. During 2008 two awards were assigned, bringing the total number of awards to 9 since the competition began.

Administration

Dr. Christopher Buller:

- Head, UBC Division of Cardiology
- Head, Division of Cardiology, VGH
- Medical Director, Cardiology, Cardiac Science Program, VA
- Member, Provincial Advisory Committee on Cardiac Health
- Council Member, Canadian Cardiovascular Society

Dr. Andrew Ignaszewski:

- Head, Division of Cardiology, SPH
- Medical Director, Healthy Heart and Heart Function Programs, SPH
- Member, Provincial Advisory Committee on Cardiac Health

Dr. Ron Carere:

- Physician Director, Heart Centre, St Paul's Hospital
- Clinical Program Director, Cardiac Sciences Program, Vancouver Coastal Health
- Chair, Medical Advisory Committee, Providence Health Care
- Member, Provincial Advisory Committee on Cardiac Health
- Co – Chair, Vancouver Coastal Health Medical Advisory Committee
- Associate Director, Heart Lung Institute at St Paul's Hospital
- Physician Representative, St. Paul's Hospital Foundation Board
- Chair of Critical Care Coordinating Committee, Providence Health Care

Clinical Sub-Program Leadership

Acute Coronary Care

Krishnan Ramanathan* Graham Wong**

Adult Congenital Heart Disease

Marla Kiess*

Advanced Cardiac Imaging

John Mayo**

Arrhythmia Management

Charles Kerr* / Charles Kerr**

Cardiac Electrodiagnostics

Marla Kiess* John Jue**

Cardiac Ultrasound

Christopher Thompson* John Jue**

VGH & UBC Cardiovascular Clinic

Saul Isserow**

Healthy Heart Program (risk reduction and rehabilitation)

Andrew Ignaszewski* Saul Isserow**

Heart Function and Cardiac Transplantation

Andrew Ignaszewski* Sean Virani**

Interventional Cardiology & Cardiac Catheterization

John Webb* Anthony Fung**

* SPH Director **VGH Director

Clinical Sub-Program Reports:

Cardiac Care Unit, St. Paul's Hospital (Dr. Krishnan Ramanathan)

The Cardiac Care Unit (CCU) at St. Paul's Hospital continues to play an integral role in the activities of the Heart Centre at St. Paul's Hospital and a centre of learning for the University of British Columbia. To better reflect the increasing complexity and diversity of patients treated, the term "Cardiac Intensive Care Unit" (CICU) was adopted to replace the previous name. Over the past year there were over 1000 admissions to the CICU directly with a significant proportion coming from outside the Vancouver Coastal Health Authority.

In addition to providing excellence in care the CICU implemented several Safer Health Care Now initiatives, to reduce the mortality associated with Acute Myocardial Infarction, and decrease the incidence of Ventilator-Associate Pneumonia and Central-Line Associated Infections.

During the year the CICU at St. Paul's hospital became the first Cardiac Care Unit in Canada to offer patients Central Untrifiltration for treating Acute Decompensated Heart Failure.

This program was developed in conjunction with the Nephrology Department at St. Paul's Hospital.

The CICU is also part of the network developed by the STEMI regional committee to implement early diagnosis of STEMI through in-field ECGs, that can be transmitted to the Emergency Departments to enable early confirmation of the diagnosis and more importantly allow early activation of the reperfusion team.

Coronary Care Unit, Vancouver General Hospital (Dr. Graham Wong)

The 14-bed CCU at Vancouver General Hospital continues to provide tertiary level cardiac care to in-patients at VGH, the Vancouver Coastal Health Region and the remainder of the province. A total of 1295 patients were admitted to the CCU in the 2008 fiscal year, with an average length of stay of 2.7 days. The CCU retains the capacity for full hemodynamic and ventilatory support for critically ill cardiac patients, and sup-

ports the activities of comprehensive percutaneous coronary intervention and cardiac surgical programs. New initiatives involving the CCU in 2008 include the continued development of the advanced heart failure program in conjunction with Dr. Sean Virani. The CCU at VGH continues to be an integral part of the highly successful Regional STEMI Initiative along with SPH. The initiation of the pre-hospital ECG component of this initiative has been a resounding success, with a significant reduction in median door to balloon time (111 minutes to 73 minutes) and a 50% reduction in in-hospital mortality amongst STEMI patients undergoing primary angioplasty (10.8% to 4.5%). Finally the CCU at VGH continues to be one of the highest rated teaching rotations in the Post-graduate training program in Internal Medicine at UBC, and continues to offer training to residents and fellows in Internal Medicine, Emergency Medicine, Neurology and Anesthesia. It should be noted that many of the CCU attending physicians have won major teaching awards. The CCU has continued to increase research output, with participation in many multi-center clinical trials in acute coronary syndromes, secondary prevention in chronic ischemic heart disease and acute heart failure. Future challenges to the Unit will be the seamless integration of its clinical programs with the SPH CCU given the recent decision to merge the two hospital divisions into a single corporate entity.

Pacific Adult Congenital Heart Clinic (Dr. Marla Kiess)

The PACH Clinic continues to grow and is now caring for over 2500 patients who have made 1300 clinic visits for the 2008-9 fiscal year (25% increase over 2007). Clinics are now running two days a week. The number of admissions, open heart surgeries, interventional procedures, electrophysiology procedures, and diagnostic tests has expanded dramatically. There are usually 4-5 patients in hospital at any one time. We are actively recruiting another PACH physician and a part-time EP-PACH physician. Weekly case conferences are attended by the PACH cardiologists, congenital cardiac surgeon, advanced imaging radiologists, adult congenital interventionalists, advanced practices nurses, cardiology fellows and medical students.

A Congenital Heart Pulmonary Hypertension Clinic has been developed in collaboration with the Pulmonary Hypertension Clinic at VGH. Clinics are held once per month and are attended by a PACH cardiologist and either Dr. Robert Levy or Dr. John Swiston.

The St. Paul's-B.C. Women's Cardiac Obstetrics Team has been very active with participation from cardiology, fetal maternal medicine, internal medicine, anesthesiology, obstetrics, and obstetrical and cardiac nursing. The number of pregnant patients seen has more than doubled to over 100. In addition, many patients have been seen for pre-pregnancy counseling. The Cardiac Pregnancy Clinic is held once or twice a month and is attended by Obstetrical and Maternal Fetal Medicine residents and fellows. There are monthly case conferences attended by the entire team.

Research has been active in collaboration with the Canadian Adult Congenital Heart Network in the areas of Eisenmenger's Syndrome and arrhythmias in patients with systemic right ventricles. There has been active collaboration with the percutaneous pulmonary valve research program of Dr. J. Webb. Abstracts in nursing and psychology aspects of ACHD have been presented at national and international meetings. Teaching is provided to medical students, residents and cardiology fellows.

Whitehorse Outreach Clinic - In 2008, four outreach clinics lasting from 3-5 days each were held at Whitehorse Hospital. Two of these were Pacemaker clinics attended by the pacemaker nurse and Dr. John Boone. Two were general cardiology clinics attended by Dr. Kiess. Attendance of SPH echocardiography technologists (with a portable echo machine) and ECG/stress technologists have allowed echocardiography, ECG and stress testing services to be provided. The IT issues have been overcome and echocardiography images are now sent down daily to SPH for interpretation. The echo techs have been able to access the SPH echo reporting program remotely.

Advanced Cardiac Imaging, Vancouver General Hospital (Dr. John Mayo)

The section of Advanced Cardiac Imaging has installed, performed acceptance testing and commenced operation of the Toshiba 320 Aquilion One Advanced Cardiac CT scanner in December of 2008. In the first quarter of 2009 scanner volumes were ramped up to approximately 5 scans per day. There has been excellent cooperation between cardiology and radiology in the joint supervision of the scanner under the direction of Dr. Fung. Both services have participated in the interpretation of cardiac CT examinations. When required, transfer of patients to the Siemens dual tube scanner in Emergency has been achieved. Initial feedback from the referring clinicians has been favourable. Cardiac CT rounds have recommenced, being held on the first and third Wednesdays of each month. An outpatient protocol for oral metoprolol and transfer of function to the CT technologists for sublingual administration of nitroglycerin spray is under review. We will continue to refine operational protocols in the next 12 months.

Healthy Heart Program (risk reduction and rehabilitation), St. Paul's Hospital (Dr. Andrew Ignaszewski)

During 2008, the Healthy Heart Program enjoyed a very productive year with regard to clinical, academic and research activities, which are summarized below.

Clinical – Further consolidation of the newly created Prevention Clinic was headed by Dr. Gordon Francis. In addition, the Cardiac Rehabilitation Program started preparing its new vision for community expansion with the Vancouver Coastal Program, which hopefully will be completed in the years 2009 and 2010. The Metabolic Syndrome Clinic, under the direction of Dr. Sammy Chan, has seen its 600th patient and now has first outcome data from the first 18-month-completers.

Academic - At present, together with the Founding partners, the program is involved in recruitment of Canada's first Distinguished Chair in CVD Prevention Research, hopefully to be completed in 2010.

Healthy Heart Program (risk reduction and rehabilitation), Vancouver General Hospital (Dr. Saul Isserow)

In 2008 the Vancouver General Hospital Healthy Heart program formed an alliance with the community by creating an outreach program into local community centres. The Cardiac Rehabilitation program was also extremely fortunate in attracting a significant private donation of \$2.5million in 2008 which will further expand the program at VGH.

Heart Failure Program, Vancouver General Hospital (Dr. Sean Virani)

Dr. Virani was recruited to VGH in the spring of 2007 with the specific intent to develop a multidisciplinary heart failure program. A former cardiology trainee from UBC, Dr. Virani completed his heart failure and transplant fellowship at Stanford University before moving back to Vancouver in 2007. He recently completed a Master's degree in Public Health at Columbia University with a specific focus on healthcare management and public policy. Since his arrival, he has worked to develop the human resources and physical plant infrastructure, in addition to processes and care pathways paramount to the successful launch of a Heart Failure Clinic.

With the support of the Division, private donors and both the VGH and UBC Hospital Foundation, the heart failure clinic will officially open in the fall of 2008. The multidisciplinary clinic will focus on evidence based comprehensive heart failure care consistent with guidelines from major governing bodies in Cardiology. The clinic will be staffed by nurse educators, case managers, nurse practitioners, internists, geriatricians and cardiologists in a collaborative fashion recognizing that heart failure patients are complex with significant co-morbid disease.

Heart Function and Cardiac Transplantation, St. Paul's Hospital (Dr. Andrew Ignaszewski)

Heart Function and Heart Transplant programs in 2008 continued to enjoy record popularity. There are now 5 cardiologists who are involved in patient care and take part of the consolidated inpatient and outpatient activities. The Heart Function Clinic, Pre-Heart Transplant Clinic, and the Maintenance Clinic have committed to matching the wait targets for seeing new patients, with the help of the first outpatient Nurse Practitioner.

The interviews for the medical director of Heart Transplantation are scheduled later in 2009. Hopefully, this key recruitment will enable further growth of the program into the future. In addition, the first Canadian Advanced Heart Failure Program was set up with the financial help from the BC Cardiac Services. The program will consist of the Advanced Heart Failure Unit in part of the CCU, where all treatment modalities

ties for advanced heart failure patients will be administered, and the outpatient Ventricular Assist Device support clinic run jointly with the Division of Cardiovascular Surgery. As a part of the Advanced Heart Failure Program, further support for the Ventricular Assist Device Program was incorporated and the program has enjoyed record popularity. To date, over 50 VADs have been implanted in the program.

Division Future Directions

Dr. Buller completed his term as The Sauder Family Heart and Stroke Foundation Chair in Cardiology on December 31st, 2008 and has chosen not to seek reappointment for a second term. The recruitment of a new Chair in Cardiology is not anticipated to begin immediately as it is generally felt that enhancements in inter-hospital cooperation and the creation of a single cardiovascular program are conditions which are necessary for successful recruitment of a qualified external candidate. The coming year will see a major emphasis placed on creation of a unified program that will allow for strategic planning and development of a more unified University-wide Division.

The Division at both hospitals continues to recruit new, highly trained and sought after candidates in a variety of sub-specialized fields including molecular cardiology, advanced cardiac imaging, cardiac prevention and rehabilitation, interventional cardiology, echocardiography, adult congenital heart disease and electrophysiology. Between seven and eight new candidates are expected to be in place during calendar 2009, including at least three at both sites. This successful recruitment drive holds much promise for the Division's renewal and future success.

Special Honors and Awards 2008

Dr. Victoria Bernstein

- Honorary Member – Canadian Medical Association.
- Honorary Member – UBC Alumni Association.

Dr. Christopher Buller

- Member, Canadian Cardiovascular Outcomes Research Team / Canadian Cardiovascular Society Acute Myocardial Infarction Quality Indicator Panel.
- Member, PHSa Registry Replacement Committee.

Dr. Jaap Hamburger

- CIT Award 2008 - Education: for recognition of the outstanding contribution and continuing dedication to the development of interventional cardiology in China.

Dr. Saul Isserow

- VA Award for Clinical Excellence.

Dr. Charles Kerr

- Canadian Cardiovascular Society, Member of Council and Executive, 2004 – present.
- Canadian Cardiovascular Society Academy, Executive Member, 2004 - present.

- Canadian Cardiovascular Society, Vice-president/President Elect., 2006 – 2008.
- Chair, Provincial Advisory Panel on Cardiac Health (PAPCH), 2004 to present.

Dr. Marla Kiess

- Past-President, Canadian Society of Nuclear Cardiology.
- Invited participant, Technical Meeting, "Current role of Nuclear Cardiology in the Management of Cardiac Diseases", International Atomic Energy Commission, Vienna, Austria.
- Sub-Editor, Adult Congenital Heart Disease Guidelines Working Group, Canadian Cardiovascular Society.
- Invited Guest, American College of Cardiology Board of Trustees meeting and Strategic Planning Retreat, Vancouver, B.C., July 31-August 2, 2008.
- Chair, "Risks and Benefits of catheter intervention in congenital heart disease", European Society of Cardiology, August 31, 2008.

Dr. G.B. John Mancini

- Member, B.C. Guidelines and Protocols Advisory Committee.
- Secondary Panel Member for Canadian Guidelines for the Use of Cardiac Computed Tomography (published 2009).
- Chairman, UBC Department of Medicine 11th Annual Medicine in the 21st Century: Advances in Internal Medicine Vancouver, BC. June 5-7, 2008.
- Co-chairman, Late breaking and featured clinical trials session Canadian Cardiovascular Congress, Toronto, ON Oct 29, 2008.

Dr. Donald Ricci

- Invited speaker to Cardiovascular Symposium in Northern Ireland.
- Consultant to Medtronic valve program.
- Issuance of Canadian and U.S. Patents on stent design.

Dr. Simon Rabkin

- Member, Canadian Diabetes Association 2008 Guidelines.
- Chair, Canadian Hypertension Guidelines Hypertension in patients with cardiovascular disease.

Dr. Sean Virani

- Division of Cardiology Teaching Award 2008: Best Academic Half Day Presentation by a staff cardiologist

Dr. John Webb

- McLeod Family Professorship in Valvular Heart Disease Intervention.
- Health Canada, Scientific Advisory Committee on cardiovascular medical devices. Core member.
- American College of Cardiology, Catheterization and Interventions Committee, member.
- Society of Cardiac Angiography and Intervention, Executive Committee: Structural Heart Disease (SHD) Council.

COMMUNITY INTERNAL MEDICINE

Division Members

Clinical Professor & Acting Head

Dr. Barry Kassen

Clinical Associate Professor

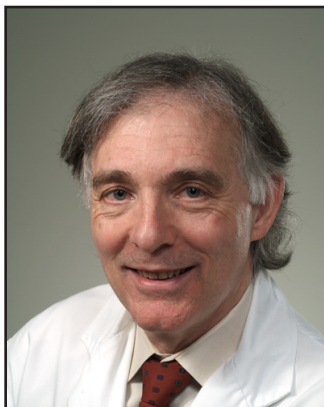
Dr. Hector Baillie
Dr. Stephen Sullivan

Clinical Assistant Professor

Dr. Yasemin Arikan
Dr. Khalid Bashir
Dr. Sarah Broder
Dr. Nora Cummins
Dr. Chadwyn Dyck
Dr. Shavinder Gill
Dr. Zafar Iqbal
Dr. Shahin Jaffer
Dr. Mehdi Keshmiri
Dr. David McDonald
Dr. Scott McKee
Dr. Donald MacRitchie
Dr. Christopher Main
Dr. Sebouh Matossian
Dr. Tun Maung
Dr. Simon Min
Dr. Allister Richmond
Dr. Peter Sherk
Dr. Steven Sutcliffe
Dr. Susan Taylor
Dr. Arul Varadarasa
Dr. Sara Wadge
Dr. Dave Williams
Dr. Lawrence Winkler
Dr. Ewa Wojtowska
Dr. Steven Wong
Dr. Tung Chuo Yang

Clinical Instructor

Dr. Edward Auersperg
Dr. Sherri Caswell
Dr. Francis (Frank) Ervin
Dr. Ezz Fam
Dr. Anna Kang
Dr. Michael Kenyon
Dr. David Kincaide
Dr. Kevin Lai
Dr. Kevin McLeod
Dr. Tariq M. Qureshi
Dr. Doug Skinnider
Dr. Jennifer Sunderwood
Dr. Shannon Walker



Dr. Barry Kassen
Clinical Professor and
Acting Head

DIVISION OVERVIEW

The Community General Internal Medicine Division is made up of internists who do not practice primarily at VGH, St. Paul's Hospital or BC Women's Hospital. Therefore, the group consists of community general internists in urban settings (Richmond, Vancouver, etc), suburban settings (Maple Ridge, Langley, etc) and other areas in the province (Nanaimo, Penticton, Kamloops and Kelowna). Furthermore, internists at the distributed sites of Victoria and Prince George fall into this group.

To date, the efforts have been to recruit and credential (obtain faculty appointment) members to the CGIM division.

Members have diverse clinical interests and activities. The common academic interest of CGIM is medical education. The membership has members who act in leadership roles in medical journal publications, medical societies (provincially and nationally), are involved with non-medical activities (fiction writing) and CME, which is a large component of educational activities for this group. CME is done at sponsored (industry events), grand rounds and other venues. Dr. Steve Wong of Richmond is very active in CME, involving computers and technical advances to support physicians' medical practices.

The UBC Division of Community General Internal Medicine has been active in recruiting new members and is comprised of 44 members.

New Training Sites

Penticton has taken on the role of a training site for Internal Medicine's Core Residents (in place of Nanaimo). Nanaimo, Victoria and Lions Gate Hospital have become training sites for Fellows in General Internal Medicine. In addition to these sites, internists from Salmon Arm, Vernon, Kelowna, Surrey and Quesnel have been added to the division. Dr. Jennifer Sunderwood is an active member in Campbell River.

Teaching

Teaching is a fundamental activity to this group. All members teach at both the undergraduate and postgraduate levels in Internal Medicine. Members also teach Internal Medicine to other disciplines including family practice residents and residents from different Royal College specialties.

Some members have been involved for many years while others have recently joined the faculty. Some members are active in teaching every month while others only interact with medical students and resident trainees on an occasional basis.

The group's cohesiveness is defined by its relationship to the undergraduate program and the postgraduate program in Internal Medicine and its fundamental commitment to the provision of consultative Internal Medicine care to their hospitals and communities.

The teaching/academic activities have increased and have been reviewed as stellar. Dr. Kevin McLeod (with Drs. Tak Bouchier, Nasim Mahmoudi and others) have created an active GIM training site at Lions Gate Hospital. As well, Dr. McLeod has residents and fellows accompanying him to Whitehorse.

Dr. Steve Wong has residents and fellows with his practice in Richmond and his teaching and mentoring continues to be reviewed as outstanding.

The Nanaimo group and Dr. Mike Kenyon are routinely viewed as an excellent experience by students.

Recently, Penticton has been added and again is reviewed by undergraduate as well as postgraduate trainees as a strong place to train.

Research

Research to date has not been a focus of this group but will be an area for future faculty development. There are some industry sponsored clinical trials in which some members participate.

Scholarly

Dr. Hector Baillie, a general internist from Nanaimo, is editor of the periodical Canadian Journal of General Internal Medicine. Along with being an active advocate for General Internal Medicine, he is in full-time clinical practice in Nanaimo.

Dr. Paul Winwood is the new Education Coordinator (undergrad and postgrad) for Prince George. Dr. Kevin McLeod, Dr. Chad Dyck and Dr. Steve Wong have taken on similar roles in their respective locations.

Dr. Jim Spence continues in the role of CTU Director in Victoria. He has modified his practice and dedicates much of his time to teaching and administration for undergraduate medical student and residents in medicine and family practice. He has been awarded a special teaching award by the UBC medicine residents. Dr. Spence continues to lead the GIM undergraduate and postgraduate IM experience in Victoria and has joined the Postgraduate Residency Program.

The members of the CGIM division are involved in the medical administration for the various hospitals and health care regions. There are some members who are active nationally in the Royal College, with oral and written examinations in Internal Medicine, as well as promoting the development and the values of General Internal Medicine in Canada. Drs. Kenyon and Ballie are examiners for the Royal College in Internal Medicine. The medical school expansion is integral to the promotion of

this division. The capacity to develop new training sites and new training directions is a primary focus of the CGIM Division's teaching program.

Clinical Services

The members of this group provide Internal Medicine care to their respective communities. These activities include consultation to hospitals and outpatient groups, intensive care medicine, acute coronary care unit, pacemaker clinics, dialysis, perioperative and emergency services. In short, this group provides the entire spectrum of Internal Medicine services (in most communities). The CGIM group's activities are absolutely essential to the function of all acute care facilities

Some of the Nanaimo internists, including Dr. Mike Kenyon continue to volunteer and spend time in Kandahar, Afghanistan working in the field hospital and providing Internal Medicine services and critical care services to the military and civilians in this region. Dr. Kenyon also services Northern BC communities in ICU/GIM and incorporates this with a teaching service for fellows in GIM.

Administration

The CGIM represents different health regions – Vancouver Island Health, Fraser Health, Vancouver Coastal, Interior Health and Northern Health Authority.

Activity

In 2007, a meeting was held in Vancouver to discuss some of the issues confronting the division of CGIM. The meeting was attended by Drs. Chad Dyck, Don MacRitchie, Jim Spence, Kevin McLeod, Scott McKee, John Staples, Nasim Mahmoudi, Hector Baillie, Dave Forrest, Paul Mitenko, Shahin Jaffer, Steve Wong, Matt Bernard, Ric Arseneau and Barry Kassen. These people are educational leaders in CGIM and represent various communities in our province. The meeting had a CME component presented by Dr. Dan Pratt and Dr. Ric Arseneau entitled "Why Can't Everyone Be Like Me."

The remainder of the meeting discussed the current shortage of general internists in the province and the potential consequences of this shortage. The group felt that there needed to be increased opportunities to train GIM and there needed to be a "new model", with emphasis of community-based training sites and for a significant portion of the internal medicine core and fellowship groups.

A special educational meeting was held in Vancouver in the fall of 2008. The goal was to better integrate the community into the GIM training program. This meeting involved CGIM teachers from Prince George, Nanaimo, Penticton and Vancouver and was attended as well by Dr. Anita Palepu, the director of the GIM Training Program. The result was to be a stronger role for the community component of the GIM Program for the 2 year fellowship in GIM.

Future Directions

There are many challenges and therefore many opportunities. The initial challenge is to organize a physically disparate division in order to have an administrative structure that provides a sense of group cohesiveness. This is an ongoing activity that will be facilitated by site leaders who share the same goals.

The future goal is still to promote educational strategies and innovative learning opportunities at the different sites. It would be the aim of the CGIM Division to identify and evaluate the different strategies, and to potentially publish in this area.

It remains important to establish community Internal Medicine training sites that have trainees on a full-time basis.

The financial and administrative support for CGIM members is still lagging behind other divisions. Some members at different sites are now receiving financial support. The goal will be to try and obtain support for all our site leadership.

UBC GIM Fellowship Graduates

In the last three years we have had 4 fellows enter the community practice – Drs. Kevin McLeod, Nasim Mahmoudi, Tak Bourchier and Y.D. You.

Community Leadership Roles

Drs. Kevin McLeod and **Danny Myers** (Salmon Arm) are the directors of the Community GIM Section of the BCMA and are leading advocacy for community internists.

Dr. Hector Baillie (Nanaimo) continues in his roles as editor of the Canadian Journal of Internal Medicine and Executive Member of CSIM.

Dr. Scott McKee is a Member of the Rocky Mountain/ACP Conference.

Dr. Paul Winwood has recently arrived from England and has been appointed academic teacher in Prince George.

Dr. Kevin McLeod of North Vancouver is the Director of Community Internal Medicine at Lions Gate Hospital and Whitehorse Yukon.

CRITICAL CARE MEDICINE

Division Members

Clinical Assistant Professor & Head

Dr. Dean Chittock

Professor

Dr. James Russell

Dr. Keith Walley

Associate Professor

Dr. Peter Dodek

Dr. Delbert Dorscheid

Assistant Professor

Dr. Morad Hameed

Clinical Professor

Dr. Juan Ronco

Clinical Associate Professor

Dr. John Tsang

Clinical Assistant Professor

Dr. John Boyd

Dr. Vinay Dhingra

Dr. John Fenwick

Dr. David Forrest

Dr. Gregory Grant

Dr. William Henderson

Dr. Sean Keenan

Clinical Instructor

Dr. Katherine Craig

Dr. Craig Fava

Dr. Cheryl Holmes

Dr. George Isac

Dr. Ruth MacRedmond

Dr. Carole-Anne Yelle



Dr. Dean Chittock
Clinical Assistant Professor
and Head

DIVISION OVERVIEW

The UBC Division of Critical Care Medicine is multi-disciplinary in structure with 29 faculty members. Our members are qualified critical care specialists with Medicine, Surgery, Anaesthesia and Emergency Medicine backgrounds. They participate in patient care at St. Paul's Hospital, Royal Columbian Hospital, Richmond General Hospital, Kelowna General Hospital, Nanaimo Regional Hospital and Vancouver General Hospital.

The Division completed some planned expansion in 2008/2009 with the recruitment of faculty who have an interest in epidemiologic research, translational biology, education, and health services research. The two-year Critical Care Medicine subspecialty-training program is fully accredited and has also expanded to accept three trainees per year with plans to add a fourth position in 2009. The Research Program in Critical Care Medicine is comprehensive, spanning from molecular and cellular biology through large animal models to clinical research in critically ill adults. The basic science research program is based in the Cardiopulmonary Laboratories at St. Paul's Hospital. The clinical research program is focused in the intensive care units of St. Paul's Hospital, Royal Columbian Hospital and Vancouver General Hospital.

Teaching

The University of British Columbia Adult Critical Care Medicine Training Program, under the direction of Dr. Katherine Craig, continued at the British Columbia Children's, St. Paul's and Vancouver General Hospitals. In 2007/2008, there were 6 trainees in the Adult Critical Care Medicine Fellowship Training Program.

The ICU rotations for speciality residents from Medicine, Anaesthesia and Surgery continued to be highly rated at both St. Paul's and Vancouver General Hospitals. We have continued to develop simulator education under the direction of Dr. Vinay Dhingra. We continue to use the advanced patient simulator for team training and apply it for local and distance training of health care providers in basic and advanced principals of critical care medicine.

We also have a working relationship with CESEI, (Centre of Excellence for Surgical Education and Innovation) to further develop, expand and achieve excellence in medical education and research related to educational technology as it relates to critical care. As part of this initiative, participation in the SCCM Critical Care Support Course continues to expand and includes core residents from all UBC Departments as well as hospitalists, rapid response team members, nurses and respiratory therapists.

The Sixth Annual Canadian Critical Care Conference was held this year in Whistler. The program was a great success with increased local, national and international attendance.

Research

The Research Program in Critical Care Medicine is comprehensive, spanning from molecular and cellular biology through large animal models to clinical research in critically ill adults. The basic science research program is based in the Cardiopulmonary Laboratories at St. Paul's Hospital. The focus of the clinical research program is in the intensive care units at St. Paul's, Royal Columbian and Vancouver General Hospitals.

Dr. John H. Boyd - Clinical Assistant Professor

Dr. Boyd continues his work looking at toll-like receptor signaling in the heart. He has received the Providence Health Care Research Institute Physician Scholar Award; \$140000 and the IMPACT Training Award; CIHR/iCAPTURE; \$130000CDN.

He currently has 4 refereed publications (in press) between January 2008 - November 2008 and 1 book submission on vasopressors in acute severe heart failure.

Dr. Dean R. Chittock – Clinical Assistant Professor

The academic year was a landmark one for Dr. Chittock. As PI for the SUGAR trial, Dr. Chittock was rewarded with the wrap-up of the NICE-SUGAR trial which culminated in a lead publication in the NEJM. The extraordinary work would not have been possible without the outstanding contributions of all his UBC co-investigators: Dr. V. Dhingra, Dr. W. Henderson, Dr. J. Ronco, and Dr. P. Dodek. Dr. Chittock submitted 4 manuscripts to various journals this year.

Dr. Peter M. Dodek – Professor

Co-investigator for "The Impact of Critical Care Nurse Work Schedules on Patient Safety in the Intensive Care Unit (ICU)". Grant agency: VGH and UBC Hospital Foundation. Dr. Dodek is also a Co-investigator of the E-PROTECT: Prospective Economic Analysis in the Prophylaxis for Thromboembolism in Critical Care Trial. Grant agency: Heart and Stroke Foundation of Canada. The past year has been productive with the submission of 13 journals and 13 abstracts to his credit.

Dr. Delbert R. Dorscheid – Associate Professor

Dr. Dorscheid was awarded a Senior Scholar Award from the Michael Smith Foundation for Health Research: "IL-13 and the Glycomics of Airway Epithelial Repair". He also received a BC Lung Association Operating Grant. "Acute Lung Injury: Erythropoietin and the Immune Barrier." Dr. Dorscheid continued to be productive resulting in multiple publications and abstract presentations at local, national and international venues.

Dr. Donald E. G. Griesdale – Clinical Instructor

Staff Anaesthesiologist at VGH since July 2007 and Staff Intensivist at VGH since September 2008.

His areas of special interest and accomplishments are:

- Observational study design.
- Regression modelling including logistic and propensity score analysis.
- Systematic review and meta-analysis methodology.

Dr. Griesdale supervised a research project to one AN resident as well as one Critical Care Fellow and one AN Fellow. He has submitted 1 journal (2 more are in press) and 3 abstracts.

Dr. William R. Henderson – Clinical Assistant Professor

Areas of special interest include:

- Glucose Control in Critically Ill.
- Traumatic Head Injury.
- Acute Respiratory Distress Syndrome.
- Critical Illness Poly Neuropathy.

Steering Committee member for the NICE-SUGAR Trial - a multi-centred, international trial of insulin and glucose management in critically ill patients. The study is now complete with 6,100 patients enrolled, constituting the largest trial in the critical care literature (see below).

Dr. Sean P. Keenan – Clinical Assistant Professor

Maintains a strong interest and expertise in the area of non-invasive ventilation, collaborating with others on the publication of systematic reviews, a working group statement and original research (see publications). In addition to speaking nationally and internationally on the use of non-invasive ventilation in various acute settings, he will also be involved in a series of systematic reviews conducted by the NIV guidelines group to inform these guidelines.

Member of the Canadian Critical Care Society Committee for Clinical Practice Guideline Development. As part of the former, Dr. Keenan co-leads a group on the development of national guidelines for the use of non-invasive ventilation in the acute care setting. This guideline is nearing completion with preliminary results presented at a national meeting. The final results will be presented at an international meeting in May, 2009. (The manuscript is currently being written).

In addition, he is a member of a group who recently updated the Canadian guidelines for prevention of ventilator-associated pneumonia and developed new companion guidelines for the diagnosis and treatment of ventilator-associated pneumonia. These guidelines have been presented at an international meeting and published as manuscripts in a peer-review journal.

Dr. Keenan is the Site PI for a number of multi-centre randomized controlled trials at the Royal Columbian Hospital: since he established RCH as a site for ICU research in 2000, they have been involved in 9 completed multi-centre trials or registries. They are currently actively involved in 5 multi-centre trials, with 3 more slated to open over the next 4 months. They are also in the process of expanding our Critical Care Research Program currently at Fraser Health, to a second site at Surrey Memorial Hospital.

Member of the ICU Patient Safety Team lead by Drs. Dodek and Ayas. The goal of this group is to establish a database to measure current levels of quality and patient safety indicators for ICU patients with the future objective of implementing interventions to improve ICU patient safety.

Dr. Keenan has submitted 5 refereed publications; 3 publications arising as participant of a larger group of collaborators, and 2 non referred publications; 1 abstract and 4 chapters.

Dr. Ruth MacRedmond – Clinical Instructor since 2008

Research Associate at the iCapture Centre where her preliminary work is to investigate the role of Erythropoietin in ARDS, has demonstrated for the first time EPO/EPOR expression and responsiveness in lung tissue, and cytoprotective effect of rhEPO in models of Fas-mediated and neutrophil-mediated acute lung injury, along with identification of several potential mechanisms.

She is the recipient of The Michael Smith Foundation for Health Research Fellowship, recipient of a CIHR Fellowship, and a recipient of the St. Paul's Hospital Physician Scholar Award. Her productivity with publications remains high. Dr. MacRedmond participated in a poster discussion at the Society of Critical Care Medicine in February 2008 on Erythropoietin is cytoprotective in a model of neutrophil-mediated epithelial cell apoptosis.

Dr. Juan J. Ronco – Clinical Professor

Dr. Ronco is a Co-investigator for two studies: Oscillation for ARDS treated early (OSCILLATE Pilot Study) which has been completed and has successfully obtained CIHR funding for the randomized control trial. He successfully completed the NICE SUGAR Investigators Study on Intensive vs. Conventional Glucose Control in Critically Ill Patients. *New England Journal Medicine*.

He also submitted 4 refereed publications and 6 abstracts (one of them is in press).

Dr. James A. Russell – Professor

Dr. Russell was the winner of a Canadian Institutes of Health Research Doctoral Research Award from the Institute of Genetics 2005 – 2008, (\$21,000/yr for 3 years = \$63,000).

Dr. Russell remains very active with the submission of 7 journals and 1 book chapter.

Dr. David D. Sweet – Clinical Instructor

Dr. Sweet is a new attending physician for the divisions of Critical Care and the Department of Emergency. Despite being newly appointed, Dr. Sweet was a Co-supervisor for Dorian Kiers (a Research Masters Student from The Netherlands, September 2008 – February 2009), who was studying the association of early resuscitation in sepsis and renal dysfunction.

Dr. Sweet had 1 peer reviewed publication in 2008.

Dr. John Y.C. Tsang – Clinical Associate Professor

Areas of interest and accomplishments include:

- Pathophysiology of pulmonary edema and pulmonary embolism.
- Gas exchange and regional blood flow after pulmonary edema and pulmonary embolism.
- Interaction of inflammatory mediators in the lung after injury.
- Role of leukocytes in the lung after pulmonary embolism.

- Effects of inotropes during resuscitation of acute pulmonary embolism, Ventilatory heterogeneity after lung injury.
- Patient-controlled analgesia in critical care setting.
- The roles of endothelins in pulmonary embolism and pulmonary hypertension.
- Spatial distribution of ventilation perfusion mismatch following acute pulmonary thromboembolism.
- Distribution of regional ventilation after acute pulmonary thromboembolism.

Dr. Keith R. Walley – Professor

Areas of special interest and accomplishments are:

- Pathophysiology of cardiovascular dysfunction in critical illness.
- Oxygen transport in peripheral tissues.
- Genetic determinants of outcome from critical illness.

Research has continued in the area of Genomics of Critical Care (Russell, Walley). The two major current themes of this research are: (1) the genetics of the systemic inflammatory response syndrome (SIRS) and sepsis and (2) randomized controlled trials in the critically ill. Genomics of critical care and sepsis involves studies in the critically ill of SNP's and haplotypes of key inflammatory and innate immunity genes. The focus is on refining the clinical phenotypes of organ dysfunction in the critically ill. In addition, the research program is looking at gene association studies of candidate genes in: (1) critically ill ICU patients who have SIRS, sepsis, and septic shock and (2) cardiovascular surgery patients. Specifically this group is looking at the influence of polymorphisms on coagulation and inflammatory mediator genes on phenotype post cardiopulmonary bypass surgery. (Walley, Russell).

Dr. Russell has obtained a CIHR gene environment grant to study haplotypes of susceptibility genes in cardiac, pulmonary and vascular disease (\$2,756,473 over 5 years). In addition, Dr. Russell has obtained peer-review grant funded studies of the association of genotype with phenotype in SIRS in the critically ill, SIRS after cardiopulmonary bypass (Co-PI of a grant from CIHR), in ARDS (grants from BC Lung Association and Providence Health Care) and in acute lung injury (funded by NIH SCCOR/University of Washington contract).

Clinical Services

The ICUs at St. Paul's and Vancouver General Hospitals continued to experience an increase in occupancy and workload with over 1800 admissions at the two sites. Division members from St. Paul's, Vancouver General and Richmond General Hospitals participated as members of the Regional Critical Care Council and continue to develop and implement strategies to improve the delivery of critical care services within the region. This has now expanded to include the Fraser Health Region and the Lower Mainland integration. It is the goal of the regional critical care council to improve access, patient flow and sustainability through appropriate design and efficiencies and to implement best practices to improve health outcomes. Building on this theme along with a three-month pilot that took place in the Fall

of 2004 at VGH, findings indicated that there were significant gains to be made in patient outcomes and care management with an intensivist-led ICU Outreach program which is now in place at Vancouver Acute.

Insufficient bed capacity remains the largest challenge in provision of adequate, safe and timely care to the critically ill of the province. Process improvements have allowed us to increase this capacity by about 20% but further significant improvements are unlikely, resulting in problems with patient access to critical care services that are predicted to increase to unsafe levels over the next few years.

Future Directions

The Division continues to explore ways to obtain increased recruitment of both clinical and basic science researchers to expand our research capacity and collaborations. We also hope to recruit an academic intensivist with an interest in medical education to help expand our role in medical education at the undergraduate and postgraduate level. Under the direction of Dr. Vinay Dhingra, the Division will continue to expand the implementation of a new critical care education format inclusive of simulation training. Our research capacity and productivity continues to expand. Collaboration between sites has increased over the past year and is expected to continue. The CCM fellowship program continues to expand and we expect that with greater clinical workload, expansion of the program will occur at VGH and SPH.

Special Honours and Awards

Dr. Dean Chittock

- Appointed Senior Medical Director at Vancouver Acute.

Dr. Vinay Dhingra

- Appointed Medical Director of the Intensive Care Unit at Vancouver General Hospital. He is also the recipient of the Master Teacher Award, UBC, Dept of Anaesthesiology, Pharmacology and Therapeutics, 2008.

Dr. Peter Dodek

- Continues his work on the executive of the Canadian Critical Care Trials Group.
- Professor of Medicine appointment was acquired in July 1, 2008.
- Invited speaker at the UBC Sauder School of Business to discuss about Variation in Transport Times and Outcomes for Critically Ill Patients who are transferred to Referral Centres.
- Lead Facilitator for the "ICU Management and Outcomes I" poster session at the International Conference of the American Thoracic Society in Toronto.
- Invited speaker at the Critical Care Forum Canada in Toronto, where he presented on Organizational Culture and Family Satisfaction in Critical Care.
- Member of the Search for Chair in Patient Safety, UBC Department of Anaesthesiology, Pharmacology and Therapeutics, 2006-2008 and the Search for Head, UBC Division of

Critical Care Medicine, 2007-2009.

- Member as the Outcome Adjudicator for the PROTECT study and Co-chair for the Canadian Critical Care Trials Group, Grants and Manuscripts Review Committee.
- Other service to the community include Volunteer Scientist and Innovator for the "Opening of the Door Program" at Science World.

Dr. Delbert Dorscheid

- Member, CIHR Committee Personnel Awards for Health Professionals; Member, UBC MD/PhD Undergraduate Selection Committee; Member, Executive Committee, iCAPTURE Centre, and Representative for Critical Care Medicine, Heart and Lung Institute Executive Committee.
- Reviewer for 6 peer-reviewed journals and 2 granting agencies.
- Editorial Board Member for Critical Care Forum.
- Provincial Medical Director for bcbedline.

Dr. Gordon Finlayson

- Staff Physician for the Anaesthesia Department and Staff Intensivist for Critical Care Medicine Vancouver General Hospital.
- Invited speaker to the UBC General Surgery Academic Half Day 2008 on Contemporary Hemodynamic Monitoring.
- Invited speaker to the UBC Critical Care Medicine Core Lecture Series 2008 on Difficult Airway Management in the ICU.
- Clinical Instructor at the ICCU Echocardiography Imaging Course, June 2008.
- Invited Supervisor at the Anaesthesiology Academic Day Fall 2008 (Thoracic Anaesthesia).
- Member of the Residency Selection Committee for the UBC Department of Anaesthesiology, 2008.

Dr. Greg Grant

- Deserves recognition for his work at SPH in early goal-directed care protocols for sepsis and septic shock through a care team.
- Dr. Greg Grant continues to serve as the Division Head and Physician Program Director at St. Paul's Hospital and Mt. St. Joseph's Hospital. He led the St. Paul's Hospital ICU team in setting up the "Donation After Cardiac Death (DCD)" program. This is the first DCD Program in Western Canada. He continues to work collaboratively with various provincial hospitals and organizations to increase organ donation. In 2008, he received the "Executive Director's Commendation" from the British Columbia Ambulance Service and for the "Outstanding CanMEDS Communicator Role" from the University of British Columbia.

Dr. Don Griesdale

- Completed his MPH in Quantitative Methods at the Harvard School of Public Health in May 2008. He presented a lecture on cardiopulmonary interaction at Harvard University Department of Anaesthesia in Boston MA. A lecture on septic shock to the UBC General Surgery Residents and presented a lecture on control of confounding in observational research: the propensity score at the Anaesthesia Grand Rounds at Vancouver General Hospital.

- Member of the Critical Care Medicine Journal as peer reviewer.

Dr. Bill Henderson

- Founded the BC Society of Critical Care Medicine. The BCSCCM represents the province's critical care physicians to the Society of Specialist Physicians and Surgeon, the BCMA and the Ministry of Health. He developed and implemented a hypothermia protocol for treatment of cardiac arrest patients for the Fraser Health Authority, a "sepsis team" for the early resuscitation and care of patients with sepsis, and a specialized neurotrauma monitoring capabilities for the Royal Columbian Hospital Neurotrauma program, including the education and quality assurance initiatives needed for the use of ICP and cerebral oxygen monitoring.
- Acted as the VGH Undergraduate and Resident Coordinator – Division of Critical Care Medicine, 2007-2009.

Dr. George Isac

- Invited speaker at the ECMO – VGH Experience, UBC Dept of Anaesthesia Grand Rounds. Vancouver, BC, December 3, 2008.
- Member of the Society of Cardiovascular Anaesthesiologists, June 2008 – present.

Dr. Sean Keenan

- Invited speaker to the NIV for Acute Respiratory Failure. 42nd Respiratory Care Journal Conference, Cancun, Mexico, March 8, 2008.
- Invited speaker to the Non-Invasive Ventilation Following Extubation at the Canadian Critical Care Forum/Canadian Critical Care Society Resident's Day. Toronto, ON, November 10, 2008.
- Invited speaker to the Update on the Latest NIV Guidelines at the Critical Care Canada Forum in Toronto, ON, November 13, 2008.
- Member of the Fraser Health Research Administration and Development Advisory Committee, 2008-present.

Dr. Juan Ronco

- Promoted to Clinical Professor.
- Continues as the Vice Chair, Examination Board in Critical Care Medicine, Royal College of Physicians and Surgeons Canada.
- Examiner and Member of the Board of Examiners in Internal Medicine, Royal College of Physicians and Surgeons of Canada.
- Member, BC Society of Critical Care Medicine, Executive Board.

Dr. James Russell

- Invited speaker to present on "Vasopressin in Sepsis: Therapy or Replacement" at the 37th Critical Care Congress, Society of Critical Care Medicine in Honolulu, HI, USA.
- Invited speaker to present on "Gene Polymorphisms in Sepsis" at the 37th Critical Care Congress, Society of Critical Care Medicine in Honolulu, HI, USA.
- Invited speaker to present on "A Pressing Case for Vasopressin" at the American Thoracic Society Annual Meeting in Toronto, Ontario.

- Member of the Editorial Board for the Journal of Innate Immunity, 2008 – present.
- Reviewer of manuscripts for American Journal of Respiratory and Critical Care Medicine; Chest; Journal of American Medical Association; New England Journal of Medicine; Journal of Critical Care; Intensive Care Medicine and Critical Care Medicine.
- Reviewer of grants for the Canadian Institutes of Health Research (CIHR); Canadian Heart Foundation; Physicians Services Incorporated (Ontario) and The Michael Smith Health Research Foundation.

Dr. Demetrios Sirounis

- Promoted to Clinical Associate Professor in 2008. He assumed the role of Physician Operations Leader in the ICU, Division of Critical Care at Providence Health Care (St. Paul's Hospital and Mt. St. Joseph's Hospital). He leads the quality improvement initiatives and is the VAP/ CLI Prevention Program Head.

Dr. David Sweet

- Appointed the VGH ICU Medical Student/Resident Director of Education; the physician leading team to evaluate oral care in ICU; the physician leading team to evaluate end of life issues in the ICU including, evaluation of goals of care, improved communication, process of comfort care.
- Presented on "Utilization of Non-Invasive Positive Pressure Ventilation" to the Respiratory Therapist Class of 2005-2008.
- Member of the Executive, British Columbia Society of Critical Care Medicine.

Dr. John Tsang

- Attended the 2008 American Thoracic Society Annual Meetings and gave abstract presentations.
- Member of the Clinical Research Ethics Board (CREB).
- Invited Instructor at the 2008 Fundamental Critical Care Support (FCCS) Course and videotaping of the lecture for the FCCS course.

Dr. Keith Walley

- Presented on "Vasopressin and Septic Shock Trial – Meet the Professor" at the American Thoracic Society State of the Art 2008 in Chicago, IL.
- Guest speaker at the American Thoracic Society State of the Art 2008 in Chicago, IL on "Cardiac dysfunction in critical illness".
- Guest speaker at the Canadian Critical Care Review 2008 in Toronto, ON. Lecture on "Hemodynamics – Shock Resuscitation".
- Vice Chair, Heart & Stroke Foundation of BC & Yukon, Research Advisory Committee.
- Invited Reviewer of the CIHR Cardiovascular System B Committee.
- Awarded Distinguished Scholar for the Michael Smith Foundation.

ENDOCRINOLOGY

Division Members

Professor & Head

Dr. Ehud Ur

Professor

Dr. Keith Dawson (Emeritus)
Dr. Gordon Francis
Dr. Jerilynn Prior

Adjunct Professor

Dr. Diane Finegood

Clinical Professor

Dr. Graeme Wilkins (Emeritus)

Clinical Associate Professor

Dr. Marshall Dahl
Dr. David Kendler
Dr. Breay Paty
Dr. Sandra Sirrs
Dr. Hugh Tildesley

Clinical Assistant Professor

Dr. Richard Bebb
Dr. Thomas Elliott
Dr. Michelle Fung
Dr. Sabrina Gill
Dr. Michelle Johnson
Dr. Stuart Kreisman
Dr. David Miller
Dr. Barbara Priestman
Dr. David Thompson
Dr. Clarissa Wallace

Clinical Instructor

Dr. Jason Kong
Dr. Robert Mase
Dr. David Shu
Dr. Agnieszka Zelichowska

Associate Member

Dr. Agnieszka Barts
Dr. Greg Bondy
Dr. J-P Chanoine
Dr. Daniel Holmes
Dr. Jennifer Klinke
Dr. Julie Lee
Dr. Daniel Metzger
Dr. Dina Panagiotopoulos
Dr. Ralph Rothstein
Dr. Laura Stewart



Dr. Ehud Ur
Professor and Head

DIVISION OVERVIEW

The division is making great progress in organizational renewal and reinvigoration of its academic mandate. The islet cell transplant work, clinical trials in diabetes, lipids, osteoporosis, and women's health remain the focus. We are developing pituitary and thyroid clinics at VGH and SPH respectively and recruitment of a director for the latter is well underway.

Teaching

Undergraduate

The Division of Endocrinology is an active participant in the Endocrinology & Metabolism Block of the 2nd year undergraduate curriculum (FMED). Division members and fellows act as preceptors in the problem-based learning sessions and provide lectures to the undergraduate class. The division members at both St. Paul's and Vancouver General Hospitals are also actively involved in 3rd and 4th year undergraduate electives, providing clinical instruction in outpatient clinics and inpatient hospital management, as well as presenting formal teaching sessions to the senior students throughout the year. Some division members serve as attending physicians on CTU and are involved in teaching internal medicine to clinical clerks.

Postgraduate

The Division of Endocrinology offers a Royal College accredited, 2 year subspecialty training program. The program offers one or two internally funded training positions per year and may offer another position to a well-qualified externally funded applicant each year for a total of four subspecialty residents. In addition, the Division provides one month rotations for core internal medicine residents and visiting electives at Vancouver General and St. Paul's Hospitals, as well as at Royal Columbian Hospital in New Westminster. Careful planning is required to provide a thorough grounding in the principles of endocrinology within the constraints of a one month rotation. With the expected expansion of the medical school, the demand of endocrinology teaching is likely to grow. The Division is currently planning ways to meet this increased demand.

Community

Our division provides an increasing number of educational activities to community physicians. The Division organizes annual Professional Development courses such as the Diabetes Directors Symposium and BC Endocrine Days as well as participating in other annual CPD programs such as the Annual Review of Internal Medicine and the Live Well with Diabetes Symposium. Division members continue to provide a large number of invited lectures to community physicians across the province. Dr. Prior has a very active web-site that allows people all over the world to learn about her research in the area of women's health.

Committees

- **Dr. Ur** is the chair of the Canadian Diabetes Association, a member of the Endocrine Society and American Diabetes Association and is on the board of Directors for Obesity Canada, is a member of the Clinical Expert Review Panel for Diabetes of the Canadian Agency for Drugs and Technology in Health (CADTH) and also serves as a member of the Special Advisory Committee on Metabolic therapies to Health Canada.
- **Dr. Dahl** serves on the Medical Services Commission of British Columbia and is a member of the Clinical Expert Review Panel for Diabetes of the Canadian Agency for Drugs and Technology in Health (CADTH).
- **Dr. Tildesley** is the Chair of the organizing committees for B.C. Endocrine Days, Kelowna Endocrine Days and the Diabetes Directors Seminar.
- Several division members are involved in the preparation of the 2008 Canadian Diabetes Association's Clinical Practice Guidelines: Dr. Thompson (Chair Diabetes in Pregnancy section, steering committee), Dr. Dawson (aboriginal issues, steering committee), Dr. Tildesley (insulin therapy in type 1) and Dr. Bebb (erectile dysfunction), Dr. Ur (Chair Diagnosis and Prevention, steering committee).
- **Dr. Sirrs** is on the national committee for Fabry's disease.
- **Dr. Prior** is the President for 2007-2009 of the International Society for Menstrual Cycle Research.
- **Dr. Gill** is a member of the Publications committee in the Endocrine Society and on the Task forces for Endocrine Mentoring, Endocrine Fellows and Endocrine Clubs with the Endocrine Society as well as on the Communications committee in Women in Endocrinology.
- Several division members serve as expert reviewers for medical journals and national grants competitions.
- **Dr. Kendler** is President of the International Society for Clinical Densitometry.
- **Dr. Paty** is a chapter author for the CDA Clinical Practice Guidelines, an Associate Editor for the Canadian Journal of Diabetes, a Grant reviewer for the Canadian Diabetes Association and a manuscript reviewer for the journal "Diabetes."
- **Dr. Elliott** is the Chair, Endocrinology & Metabolism Society of BC.
- **Dr. Francis** is on the CIHR Metabolism Grants Panel - Regular internal member and Heart and Stroke Foundation of BC and Yukon Research Advisory Committee.

Research

Research within the Division of Endocrinology and Metabolism continues to thrive and grow. In 2008 an annual Divisional Research Fest was added and was considered a major success, with presentations by divisional members and fellows as well as invited speakers from basic science (Bruce Verchere), Surgery (Garth Warnock), and Pediatrics (Jean-Pierre Chanoine). Presentations by our residents and fellows at the Resident Research Day continue to be highly received with several awards, including for best overall presentation. Gordon Francis has been appointed Director of Research for the endocrinology and metabolism fellowship to help coordinate and guide the fellows in their research projects. Most division members are involved in a number of areas of clinical or basic research, with the major ones listed below:

- **Dr. Ur:** diabetes: (clinical trials, health care delivery models), lipids, obesity, neuroendocrinology (clinical trials), basic laboratory studies on adipokines.
- **Dr. Francis:** basic and clinical research on dyslipidemias, HDL formation, lysosomal cholesterol storage disorders, atherosclerosis, smooth muscle cell biology, and LDL apheresis; Chair of the 2010 International Atherosclerosis Society Workshop on HDL.
- **Dr. Dawson:** diabetes care in First Nations communities, clinical trials.
- **Dr. Elliott:** clinical trials, President of the BC Endocrine Research Foundation.
- **Dr. Fung:** islet cell transplantation, inpatient diabetes care delivery.
- **Dr. Kong:** diabetes in pregnancy, clinical trials.
- **Dr. Sirrs:** adult metabolic disease, lipid disorders.
- **Dr. Dahl:** evidence-based review of diabetes health care delivery and transgender health.
- **Dr. Thompson:** islet cell transplantation, diabetes in pregnancy.
- **Dr. Bebb:** male reproductive health.
- **Dr. Prior:** women's health, osteoporosis, menstrual cycles, ovulation, perimenopause, progesterone therapy, hot flashes treatment and epidemiology, osteoporosis epidemiology.
- **Dr. Tildesley:** diabetes care, clinical trials, lipid lowering in type 2 diabetes.
- **Dr. Kreisman:** thyroid disease, cystic fibrosis and diabetes.

- **Dr. Gill:** women's health.
- **Dr. Kendler:** osteoporosis.
- **Dr. Johnson:** pituitary disease.
- **Dr. Paty:** diabetes, islet transplantation and the endocrine consequences of bone marrow transplantation.

Clinical Services

The Division of Endocrinology provides consulting services to Vancouver General, St. Paul's and BC Women's hospitals. We also are involved in a number of specialized, multidisciplinary outpatient clinics:

Diabetes: Vancouver General, St Paul's, BC Women's

Lipid: St Paul's

Osteoporosis: BC Women's

Adult Metabolic: Vancouver General

Thyroid: St. Paul's

Future Directions

The division aspires to further develop its teaching and research base as well as to work on business models that will support the new initiatives and activities more effectively.

GASTROENTEROLOGY

Division Members

Professor & Head

Dr. Eric Yoshida

Professor

Dr. Hugh Freeman
Dr. Urs Steinbrecher

Associate Professor

Dr. Frank H. Anderson (Emeritus)
Dr. Walter McDonald (Emeritus)
Dr. Baljinder Salh

Assistant Professor

Dr. Isabella Tai

Clinical Professor

Dr. Hugh Chaun (Emeritus)
Dr. Lawrence Halparin
Dr. Stan Stordy (Emeritus)

Clinical Associate Professor

Dr. Michael Byrne
Dr. Robert Enns
Dr. James Gray
Dr. W.C. Peter Kwan
Dr. Alan Weiss
Dr. Paul Winwood

Clinical Assistant Professor

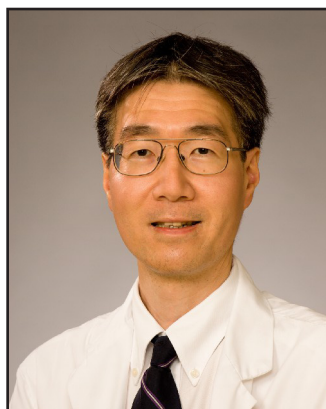
Dr. Jack Amar
Dr. Kenneth Atkinson
Dr. Nazira Chatur
Dr. Siegfried Erb
Dr. Martin Fishman
Dr. Eric Lam
Dr. David Pearson
Dr. Robert Penner
Dr. Alnoor Ramji
Dr. R. Andrew Singh
Dr. Jennifer Telford
Dr. J. Scott Whittaker

Clinical Instructor

Dr. Brian Bressler
Dr. Henry Chung
Dr. Jin Kee Ho
Dr. Cassie Lin
Dr. Iman Zandieh

Associate Member

Dr. Alan Buckley
Dr. Sharlene Gill
Dr. Stephen Holland
Dr. Kathy Kozial
Dr. Brock Pullen
Dr. Kwok Yik



Dr. Eric Yoshida
Professor and Head

DIVISION OVERVIEW

The UBC Division of Gastroenterology consists of the faculty of the two main teaching hospitals, Vancouver Acute (Vancouver General Hospital and UBC Hospital), and St. Paul's Hospital (Providence Healthcare). The Division also has faculty members at the distributed sites including Richmond General Hospital, Royal Columbian Hospital and Lion's Gate Hospital in the Lower Mainland, the Victoria and Vancouver Island Hospitals in Kelowna and Prince George. The faculty consists of both GFT and Clinical Faculty members. There are also associate members who were appointed by the Associate Dean of distributed sites as well as associate members who share areas of academic interest in common with the Division of Gastroenterology. The Division has four emeritus faculty members and one visiting faculty member.

Clinical Services

Full clinical in-patient and out-patient services are provided at the teaching hospitals as well as the distributed hospital sites. In particular, the main teaching hospitals, Vancouver General Hospital and St. Paul's Hospital are provincial quaternary hospitals and are the main destinations for patient transfers from community hospitals throughout BC and the Yukon Territories via BC Bedline and the "Life, Limb or Transplant" policy. Specialized therapeutic endoscopy consisting of ERCP, both diagnostic and therapeutic, is offered as a clinical service at the Vancouver General Hospital, St. Paul's Hospital and Royal Columbian Hospital sites in the lower mainland and at the Victoria Hospital Corporation institutions. The specialized modalities of endoscopic ultrasound and capsule endoscopy are available at St. Paul's Hospital but are not available at the Vancouver General Hospital. Endoscopic ultrasound is available at the BC Cancer Agency Vancouver Clinic and is performed by VGH faculty with cross-appointments (Dr. Alan Weiss and Dr. Michael Byrne). As well, the Division is involved in clinical activity with the British Columbia Transplant Society and the British Columbia Cancer Agency (PHSA). The BC Hepatitis Program, which is a partnership of the BC Centre for Disease Control and the UBC Division of Gastroenterology, is actively involved in clinical services related to viral hepatitis and liver disease. It is located within the Division of Gastroenterology's block in the Diamond Health Care Centre of the Vancouver Hospital. The St. Paul's Hospital group, Pacific Gastroenterology Associates, also offers specialized out-patient care in luminal gastroenterology and viral hepatitis. Dr. Frank Anderson has a large private office group (the Liver and Intestinal Research Centre) that offers out-patient services including out-patient endoscopy. In terms of long-term nutritional support and care, the province's Home Enteral and Parenteral Program is based at St. Paul's Hospital under the leadership of Dr. J. Scott Whittaker who is the Medical Director of the Program.

Teaching

Undergraduate

The Division of Gastroenterology is an active participant in the GI Block of the 2nd year undergraduate curriculum (FMED 424). Division members provide lectures to the undergraduate class as well as participate as preceptors in the problem-based learning sessions as well as the hepatology seminars. Drs. Bill Salh and Eric Yoshida are the Block Co-Chairs and Drs. Peter Kwan, Bill Salh and Eric Yoshida are Week Chairs for FMED 424.

The division members at both St. Paul's Hospital and Vancouver General Hospital sites have been actively involved in the 2nd year bedside examining skills course as well as 3rd and 4th year undergraduate selectives. Ambulatory clinical instruction out-patient, office setting, clinics are offered to the undergraduate class yearly during their gastroenterology selectives. Dr. Nazira Chatur is currently the Undergraduate Program Director for Gastroenterology for these clinical years.

Postgraduate

The Division of Gastroenterology has a strong Gastroenterology fellowship training program. The core program consists of two senior GI Fellows, Drs. Hin Hin Ko and Darin Krygier and three junior GI fellows, Drs. Al Moutaz Hashim, Janakie Singham and Holly Weisinger. Drs. Ko and Krygier are also the appointed Chief Gastroenterology Fellows. The training program has many applicants both internally and externally each year and competition for GI fellowship positions has become increasingly fierce. Dr. Nazira Chatur is the Program Director and Dr. Peter Kwan is the Associate Program Director as well as a Fellowship Training Committee that includes representation from both teaching hospitals, the community group and a trainee representative. The training committee members, aside from Drs. Chatur and Kwan, include Drs. Darin Krygier (Fellow), Alnoor Ramji, Eric Lam, Bill Salh, Marty Fishman and Eric Yoshida. The GI fellowship training program has full accreditation from the Royal College. Next year's trainees are Drs. Michele Buresi, Albert Chang and Al Nahdi Sheraisher Nawal.

The Division of Gastroenterology offers specialized training programs beyond the core Royal College Gastroenterology Fellowship Program. For many years we have had the liver transplantation and hepatology training program based at the Vancouver General Hospital in association with the BC Transplant Society. The 2008 Hepatology/Liver Transplantation Fellows were Dr. Pongphob Intaraprasong (Bangkok Thailand), and Dr. Wichian Apiratpracha (Bangkok, Thailand). The 2009 Fellow is Dr. Maz Hacque (Queensland Australia). The Division of Gastroenterology also has a formal therapeutic endoscopy training program. Drs. Rob Enns and Mike Byrne are the co-directors. All the therapeutic endoscopists of St. Paul's Hospital and Vancouver General Hospital are involved in this including Drs. Eric Lam, Jennifer Telford, Urs Steinbrecher and Alan Weiss. A non-therapeutic endoscopist division member will serve in an advisory role. Dr. Eric Yoshida was appointed by Drs. Enns and Byrne in 2007. The therapeutic endoscopy

training program involves diagnostic and therapeutic ERCP and endoscopic ultrasound. The current Therapeutic Endoscopy Fellow is Dr. Alan Coss of Ireland.

Experimental Medicine

Dr. Bill Salh co-ordinates the gastroenterology aspects of the experimental medicine program at UBC. The program involves graduate students registered in experimental medicine as well as summer students and post-doctoral fellows.

Continuing Medical Education

The UBC Division of Gastroenterology has organized several CME conferences and both the Vancouver General Hospital and St. Paul's Hospital Divisions organize a weekly Gastroenterology/General Surgery/Radiology/Pathology multidisciplinary rounds that is accredited for the Royal College of Physicians and Surgeon Maintenance of Competence Program. The UBC Division of Gastroenterology also organized the 13th Annual Digestive Diseases Week Review for subspecialists including gastroenterologists and general surgeons from throughout BC. This event was very well attended and received favourable comments from attendees.

Many of our division members have participated in national and international CME events including the telerounds of the Canadian Association of Gastroenterology, Canadian Digestive Diseases Week (the annual meetings of both the Canadian Association of Gastroenterology and the Canadian Association for the Study of Liver) and conferences organized by out of province universities. Dr. Ramji is the Organizer of the annual Course for Family Physicians in Internal Medicine at St. Paul's Hospital. Dr. Robert Enns was the keynote speaker at the Canadian Digestive Diseases Week Live Endoscopy presentation and was the keynote speaker for three topics (colon cancer screening, esophageal endoscopic mucosal resection new imaging modalities in GI) at the Saskatoon Annual GI Forum. Dr. Eric Yoshida was an invited speaker at the Discover the World of Hepatology Conference which is sponsored by the Canadian Liver Foundation. He also was an invited speaker at the Primary Care Hepatology Conference in Winnipeg organized by the University of Manitoba. Dr. Yoshida is also a member of the Implementation Committee of CDDW 2009. Numerous CME lectures were provided by Division members for local organizations including the BC Centre for Disease Control, Gut Club, Advances in Medicine in the 21st Century Day as well as local hospital rounds and lectures for the Canadian Society of Gastroenterology Nurses and Associates (CSGNA). The national CSGNA conference was held in Vancouver in the fall and Drs. Enns, Yoshida and James Gray were invited speakers.

Administration

Clinical Academic Special Programs

The UBC Division of Gastroenterology members are involved in several specific and specialized clinical academic pro-

grams. Dr. Alan Weiss is a member of the BC Cancer Agency Hepatoma Program. Both Dr. Weiss and Dr. Siegfried Erb are involved in multi-disciplinary hepatoma rounds that include the UBC Division of Gastroenterology, the UBC Division of General Surgery, and the Vancouver General Hospital Department of Interventional and Abdominal Radiology. This multi-disciplinary group is involved in clinical decision making for hepatocellular carcinoma cases referred from communities throughout the province. It is also involved in clinical research in the area of liver cancer.

Drs. Erb, Steinbrecher and Yoshida (Medical Director) are members of the Liver Transplant Program of the BC Transplant Society. This provincial program provides clinical care to post-liver transplant recipients, assessment of end-stage liver disease patients referred to the Transplant Society, as well as administrative leadership both at a provincial and national level and both clinical/basic science research in the field.

The BC Hepatitis Program, which is a partnership of the BC Centre for Disease Control and UBC Division of Gastroenterology, is situated within the Division of Gastroenterology's block in the Diamond Health Care Centre of the Vancouver Hospital. Its members include Drs. Erb, Steinbrecher, Kwan, Weiss, and Yoshida (Head of the BC Hepatitis Program). The BC Hepatitis Program staff includes Ms. Jo-Ann Ford (Associate Director), Ms. Kerri Earnshaw (hepatitis nurse) and Messrs. Kirby Lau, Jeff Lin and Dr. Marisa Guan (clinical research assistants). The program is involved in clinical care and patient teaching in the area of viral hepatitis and liver disease. The BC Hepatitis Program is actively involved in clinical research with industry sponsored clinical trials and non-industry sponsored clinical studies. There are close collaborative research partnerships with BCCDC and the UBC Virology Laboratory. The BC Hepatitis Program is actively involved in continuing education at all levels and has organized CME events. It is also involved actively in nursing education and is part of the UBC Faculty of Pharmaceutical Sciences PharmD program with preceptorship of clinical rotations as well as the provision of formal class lectures. At the national level, Ms. Jo-Ann Ford is the current President of the Canadian Association of Hepatology Nurses and Dr. Eric Yoshida is the President of the Canadian Association for the Study of Liver (CASL). The BC Hepatitis Program has been involved with the Canadian Liver Foundation and Ms. Ford and Dr. Eric Yoshida serve on the National Board of Directors. Dr. Yoshida is the Vice-Chair of the Canadian Liver Foundation Medical Advisory Committee. The BC Hepatitis Program was also involved in World Hepatitis Day 2008 and Dr. Yoshida was the Chair of the Medical Subcommittee for this event.

Research

The faculty of the Division of Gastroenterology are very involved in both clinical and basic science research. Drs. Salh, Steinbrecher and Tai are actively involved in basic science research programs supported by national and provincial granting agencies including CIHR, HSFC, CCFC, and the Canadian Society for Intestinal Research (CSIR). Clinical research is very strong within the Division of Gastroenterology and appears

to be expanding. The specific areas of clinical research within the Division have encompassed: liver disease, viral hepatitis, hepatocellular cancer, liver transplantation as well as solid organ transplantation and donation, inflammatory bowel disease and therapeutic endoscopy. Dr. Rob Enns has a clinical trials unit located at the Pacific Gastroenterology Associates office block. Dr. Enns is also actively involved in non-industry clinical research and has developed outstanding clinical research expertise in capsule endoscopy and therapeutic endoscopy. He has published many publications this year in these areas. Dr. Eric Lam is also actively engaged in clinical research in the field of endoscopic ultrasound. Dr. Brian Bressler, is establishing a clinical research program in inflammatory bowel disease. At the Vancouver General Hospital and Health Sciences Centre, Dr. Hugh Freeman continues to be a prolific author of many clinical research papers in inflammatory bowel disease and celiac disease. The BC Hepatitis Program and the Liver Transplant Program of the BC Transplant Society have been very active in clinical research both in industry sponsored clinical trials and non-industry sponsored clinical studies. The BC Hepatitis Program and Dr. Anderson's private LAIR Centre are co-investigators in a CIHR sponsored hepatitis C study with the University of Toronto. The Division of Gastroenterology at Vancouver General Hospital is also in the process of creating a separate Luminal Gastroenterology Clinical Trials Unit under the leadership of Drs. Michael Byrne, James Gray and Bill Salh. It is expected that clinical research will continue to expand at both the main teaching hospitals and is a major strength of the Division

Special Honours, Awards and Distinctions

Notable Service to the University and the Community

Many Division members serve on UBC, BCMA and other provincial committees and many Division members have served as reviewers of numerous Canadian and international peer-review journals and grant funding agencies. Both Drs. Rob Enns and Eric Yoshida are Associate Editors of the Canadian Journal of Gastroenterology (official journal of the Canadian Association of Gastroenterology and the Canadian Association for the Study of Liver). Dr. David Pearson is also on the Editorial Board of the Canadian Journal of Gastroenterology. Drs. Michael Byrne, Hugh Freeman and Eric Yoshida are on the Editorial Board of the World Journal of Gastroenterology and Dr. Freeman is the Associate Editor-in-Chief of the "Observations" section of the World Journal. Drs. Byrne and Yoshida are on the Editorial Board of the Internet Journal of Gastroenterology and Dr. Michael Byrne is an Editorial Consultant for the Physicians Information and Education Resource (PIER) published by the American College of Physicians. Dr. Urs Steinbrecher is a member of the editorial board of the Journal of Lipid Research. Dr. Eric Yoshida is an appointed member of the Editorial Board of Liver International, the official journal of the International Association for the Study of Liver (IASL) and the English language Medline indexed, Annals of Hepatology, the official journal of both the Mexican Association for the Study of Liver and the Latin American Association for the Study of Liver. Dr. Hugh Chaun is the Vice President of the Bockus Internal Society of Gastro-

enterology and continues to serve as the Society's Secretary General. Dr. Chaun is also the Chair of the Governing Board of the Canadian Digestive Health Foundation. Dr. Michael Byrne and Dr. Eric Lam are members of the National Endoscopy Committee of the Canadian Association of Gastroenterology which has Dr. Rob Enns as the Committee Head. Dr. Enns is also Head of the Capsule Endoscopy Special Interest Group of the American Society of Gastrointestinal Endoscopy. Dr. Enns is also a member of the Conflict of Interest Committee Subgroup of the International GI Bleeding Consensus Conference that was held in Vienna. Dr. Enns was also a voting panel member of the Vienna Consensus Conference and a subgroup member of the Quality of Upper Endoscopy subgroup of the Vienna Conference. Dr. Alnoor Ramji is a member of the Blood Borne Infectious Diseases Committee of the BC College of Physicians and Surgeons. Dr. Eric Yoshida is the President of the Canadian Association for the Study of Liver since March of 2008. He is also the Chair of the BC Pharmacare Adjudication Committee in Viral Hepatitis. Dr. James Gray is the Chair of the Medical Advisory Committee of the Canadian Society for Intestinal Research (CSIR) as well as the President of the BC Society of Gastroenterology. Dr. Bill Salh is a member of the Medical Advisory Committee of CSIR. Drs. Nazira Chatur, Martin Fishman, Peter Kwan and Eric Lam are examiners for the Western Canadian Trainee Examinations in Gastroenterology (annual preparatory examination for the Royal College of Physicians and Surgeons specialist examination in gastroenterology). Dr. Scott Whitaker is an Examiner of the Royal College of Physicians and Surgeons for the Gastroenterology Subspecialty Certification Examinations. At Royal Columbian Hospital, which is fast evolving into a teaching hospital, Dr. Ken Atkinson is Chief of the Medicine and Deputy Chair of the RCH Medical Advisory Committee.

In terms of service to the community, Dr. Hin Hin Ko, one of our senior Gastroenterology Fellows, is on the Executive Board of the Chinese Canadian Medical Society of BC and was on the organizing committee of the very well attended annual Health Fair of the Chinese Canadian Community. Drs. Enns, Peter Kwan and Yoshida have also worked with the print media, radio and television with regards to health-care issues that affect the residents of BC.

Special Honours and Awards

Dr. Alnoor Ramji was the recipient of the Department of Medicine's Donald M. Whitelaw Award for Best Grand Rounds.

Dr. Robert Enns was the recipient of two awards from prestigious journals; he received the Reviewer Recognition Award from Gastrointestinal Endoscopy, the official journal of the American Society of Gastrointestinal Endoscopy in May of 2008 and was recognized by Alimentary Pharmacology and Therapeutics as being amongst the top 10% of reviewers in 2008. In the annual competition for best research paper, the Dr. ABR Thomson and Dr. CN Williams Award; a UBC paper with Dr. Henry Chung as the primary author and Dr. Eric Yoshida as the senior co-author, was the second runner-up amongst all the papers published by the journal. Dr. Eric Yoshida was also the

senior author of a poster presentation at the 2008 American Association for the Study of Liver (AASLD) Annual Meeting that was designated a Presidential Poster of Distinction. The GI Fellows bestowed the Hoffman LaRoche Award for best lecture at the weekly Gastroenterology Academic Quarterday to Dr. Sharlene Gill. Dr. Bill Salh received this award the previous year (an omission from last year's report).

Special Tributes

In remembrance of the outstanding teaching contributions of the late Dr. Donald M. Carr, who was our beloved colleague and clinician, the Division of Gastroenterology at Vancouver General Hospital created the Donald M. Carr Teaching Award to be given to the "Best VGH Faculty Teacher" as selected by the GI fellows, medical residents and medical students rotating through gastroenterology. The 2007-08 recipient was Dr. Eric Yoshida.

In honour of his outstanding contributions to Gastroenterology at UBC and throughout the Province of British Columbia, the UBC Gastroenterology Fellows created the Dr. Hugh Chaun Mentorship Award. Dr. Brian Bressler was named the recipient for 2008.

Trainee Awards

The annual AstraZeneca Canada Gastroenterology Medical Residents Award were given to Dr. Keith Tang (VGH Hospital Site) and Dr. Trevor Jamieson (SPH site). Dr. Joanna Law was the Chief Gastroenterology Fellow for 2007-2008 and received a plaque from the Division for her outstanding service.

Future Directions

From a clinical perspective, there are many challenges facing the Division, including dwindling out-patient resources in the face of demand that is increasing yearly, and an increasing demand for in-patient admission/consultation via the Emergency Department, the hospital wards and inter-hospital transfers via BC Bedline. This is a particular source of concern for the VGH Division as the appropriateness, as well as the process, of the requests for consultations has been questioned by almost all Division members at many Divisional meetings. In terms of endoscopic equipment, the VGH Division is attempting to persuade its hospital to acquire endoscopic procedures and technologies (eg. Endoscopic ultrasound, luminal stenting etc) that are considered standard of care elsewhere but are not provided for at that institution. To this end, the VGH Division is attempting to raise the monies required for endoscopic ultrasound through the fund raising efforts of the Vancouver General Hospital Foundation. The issue of the appropriate and equitable distribution of provincial funds for out-patient screening colonoscopy for the two main teaching hospitals is a concern and is currently being discussed. Dr. Rob Enns is the appointed representative of the teaching hospitals on this Ministry of Health committee.

Academically, there has been great progress towards enhanced collegiality and co-operation between the two main teaching hospitals, the Vancouver General Hospital and St. Paul's Hospital as well as the distributed sites in the community. It is anticipated that collaboration between these two institutions and the community sites will increase in the near future. The development of an Academic Financial Plan (AFP) by the University of British Columbia and the Government of BC would greatly enhance the Division of Gastroenterology's academic productivity and ability to compete with other Canadian centres. Without an AFP, the future viability of the UBC Division of Gastroenterology may be compromised significantly. This is also true of all Divisions within the Department of Medicine and should be a concern for this University, especially given the expansion of the undergraduate medical school and the medical residency training program. Lastly, the Division hopes to enhance future collaborations with other Departments within the Faculty of Medicine (including the Department of Surgery, the Department of Radiology, Department of Laboratory Medicine and Division of Pediatric Gastroenterology), with other Divisions within the Department of Medicine, and with other health-care institutions within BC and the rest of Canada.

GENERAL INTERNAL MEDICINE

Division Members

Clinical Professor & Head
Dr. Barry Kassen

Professor
Dr. Laird Birmingham
Dr. Bruce Paige (Emeritus)
Dr. Anita Palepu
Dr. Michael Schulzer (Emeritus)
Dr. James Wright

Associate Professor
Dr. Robert Rangno (Emeritus)
Dr. Donald Studney (Emeritus)

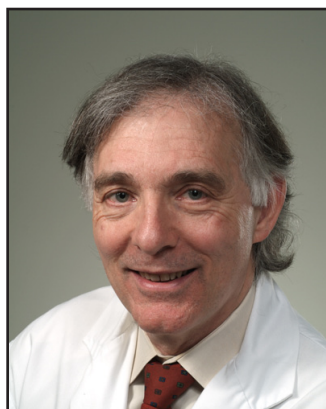
Assistant Professor
Dr. Nadia Khan

Clinical Professor
Dr. Penny Ballem
Dr. Iain Mackie
Dr. Jake Onrot

Clinical Associate Professor
Dr. Rose Hatala
Dr. James Kennedy
Dr. Laura Magee
Dr. James Mark Roberts

Clinical Assistant Professor
Dr. Richard Arseneau
Dr. James Busser
Dr. James Dunne
Dr. Phillipa Hawley
Dr. Irene Ma
Dr. May Ong-Lam
Dr. Thomas Perry
Dr. Robert Wakefield
Dr. John Ward

Clinical Instructor
Dr. Eliana Castillo
Dr. Alex Chong Hen Chan
Dr. Kenneth Cunningham
Dr. Iain McCormick
Dr. R. Jane McKay
Dr. Susan Purkiss
Dr. Debbie Rosenbaum



Dr. Barry Kassen
Clinical Professor and Head

DIVISION OVERVIEW

The UBC Division of General Internal Medicine has 32 faculty, which participate in activities at BC Women's and Children's Hospital, BC Cancer Agency, Vancouver Acute and St. Paul's Hospital. The specific site activities are varied. All members do not participate in all activities, nor do they necessarily participate at all sites. Our members are involved with Palliative Care (Dr. P. Hawley heads the program at the Vancouver Cancer Agency), Obstetrical Medicine (Drs. Laura Magee, Eliana Castillo and Sue Purkiss at BC Women's and Children's Hospital), as well as multiple programs and disciplines which include HIV care (Drs. Iain Mackie, Eliana Castillo and Jake Onrot), Eating Disorders (Drs. Ric Arseneau, Debbie Rosenbaum and Jane McKay), Addiction Medicine (Dr. Alex Chan), Heart Failure Clinic (Dr. Mark Roberts) and UBC Sports Medicine (Dr. Mark Roberts) at St. Paul's Hospital and Vancouver Acute. The division is also involved with Geriatrics (Dr. Wakefield) and Clinical Pharmacology (Dr. Wright and Dr. Perry) in Therapeutics Initiatives Program

Basic to all of the division is the provision of General Internal Medicine consultation (and ongoing care) provided by the membership. This may take place in an inpatient setting (clinical teaching unit), consultation service to inpatients, perioperative service or an ambulatory setting.

Amongst our membership, the GIM physicians provide expertise, core teaching and research in Addiction Medicine, Pain Management, Eating Disorders, Hypertension, HIV Management, Drug and Poison Control and Hemochromatosis. A division member is also involved in Scleroderma research and patient management. The Therapeutics Initiative Program has a strong representation from GIM.

Some of our members are involved in providing community-based care work in rural and urban settings, at times being responsible for Intensive Care Units as a prime clinical function (Drs. Ken Cunningham, Jane McKay, Rose Hatala).

Our members are program leaders in medical education, research and administration and are recognized locally and nationally in these areas.

Our membership has an emphasis on medical informatics and has strong well-recognized leadership in these areas. Dr. Ric Arseneau (development of web eval, etc), Dr. J. Busser (development of CTU Tracker) and Dr. Ken Cunningham (online medical grand rounds) are the active members, currently.

Medical Education

The core element for the UBC Division of GIM is teaching. Dr. Mark Roberts is director of the Department of Medicine UBC Postgraduate Program and is supported by 3 co-directors, two of which are in the division. Dr. Irene Ma has the portfolio of evaluation and Dr. Kassen has portfolio of community rotations and distributed site (Victoria and Prince George) development.

Dr. Roberts heads the CTU at Vancouver General Hospital (VGH) and Dr. Kassen at St. Paul's Hospital (SPH). With the expansion of the undergraduate students at the distributed sites, all undergraduate students in Vancouver are taught at VGH or SPH. All of the postgraduate training in CTU's and GIM clinics are conducted at these sites as well.

Trainees are also mentored in eating disorders, pain management, HIV and addiction medicine. We have a strong program in palliative care and maternal-fetal medicine (using a mentorship model). The CTU faculty is instrumental in the International Medical Graduate Program in both training and evaluation.

Drs. Jim Busser and Jim Dunne are current directors of the Undergraduate Clerkship Program at VGH and SPH respectively.

New initiatives have been adopted through the research and subsequent implementation of tools such as mini-CEX (research and subsequent implementation in evaluation of trainees in the CTU setting) and pioneering the use of simulations in medicine (Drs. Irene Ma, Rose Hatala and Barry Kassen). The latter program will teach central line insertion (and has used this opportunity to study and publish in this area), as well as promote learning and evaluation using simulation models. Dr. Ma has expanded the use of simulation learning extensively to the UBC Postgraduate Internal Medicine trainees as well as the faculty.

Our group is involved in CME in the university and in the community.

Research

Research is conducted at all sites including VGH, SPH and BC Women's Hospital. There is a core group of funded researchers with dedicated time for some activities.

Dr. Anita Palepu is the senior researcher whose interest is in urban health and is a Michael Smith Foundation for Health Research Senior Scholar. She is widely published and has been an invited speaker to national and international meetings. She holds CIHR operating grant funding for the Health and Housing in Transition Study. She serves on the CIHR New Investigator Award Committee for Health Services Research.

Dr. Nadia Khan is very active in social determinants of cardiovascular disease. She has received many prestigious supporting grants including CIHR and Michael Smith Awards, and has received the CIHR New Investigator Award, the Genesis Scholar Award and the SPH Physician Scholar Award. She has a CIHR operating grant exploring gender and ethnic differences in patients with hypertension.

Dr. Khan as well is a member of the Canadian Hypertensive Society Education and Research Group. She also serves as a scientific committee member of the Heart and Stroke Foundation Trainee Award Program.

Dr. Laura Magee continues her research in maternal-fetal medicine, concentrating on hypertension in pregnancy using randomized clinical trial methodology. She is supported by major grants from CIHR and holds a Michael Smith Foundation for Health Research Scholar Award and has been highly productive and widely recognized as a leader in her field.

Medical education research is a focus for **Drs. Rose Hatala, Iain Mackie, Mark Roberts and Barry Kassen**. Previously this group was awarded a Stemmler Grant (from the National Board of Medical Examiners from the USA) and completed this national study. There have been presentations and publications from this work. This group has also published their experience with the development of a quality improvement process for postgraduate first year trainees, and have been awarded a Royal College Grant to continue this work. Follow-up studies are being done with the research group of the Royal College Internal Medicine Examination group and involve cooperative studies with international colleagues.

Dr. Irene Ma has developed a strong interest in medical education and the use of simulations. She is actively involved in teaching and research in this area.

Dr. Alex Chan was involved in a national study in heroin use (NAOMI Study) which has now finished.

Administration

Members of the division play key roles in administration locally, provincially and nationally.

Drs. Nadia Khan, Iain Mackie, Jake Onrot and Barry Kassen are on the Executive of the Rocky Mountain Review Course (a University of Calgary Internal Medicine initiative).

Dr. Anita Palepu was promoted to Professor in July 2008. She is the Departmental Director of the Clinical Investigator Program, and the Director of the GIM Fellowship Program. She is the co-editor of Open Medicine http://www.open_medicine.ca, an independent, peer-reviewed open access general medical journal. She was the President of the International Society of Urban Health and was the Organizing Chair of the 7th International Conference on Urban Health that was held October 29-31 in Vancouver.

Drs. Tom Perry and James Wright are members and active leaders in the UBC Therapeutics Initiatives–Education group and Dr. Perry also directs the undergraduate program at the UBC site.

Dr. Mark Roberts is CTU Director at VGH, Postgraduate UBC Director, a member of the GIM Fellowship Training Committee and a member of the Oral Examination Board of the Royal College in Internal Medicine.

Dr. Rose Hatala is research director for the Internal Medicine Examination Committee for the RCPC, an active member of the Oral Board in Internal Medicine and a member of the Faculty Development Group in the Faculty of Medicine. Dr. Hatala as well mentors researchers in medical education (in various departments) and medical educators.

Dr. Jim Busser is clerkship director (VGH) and Dr. Jim Dunne is clerkship director (SPH). Dr. Dunne is director of the Scleroderma Clinic at SPH.

Dr. Jim Busser has been elected to the BCMA (division #3 rep).

Dr. Jim Kennedy is Director of the Hospitalist Program at Providence Health (St. Paul's Hospital and Mt. St. Joseph Hospital).

Dr. Jane McKay is director of Ambulatory Care at SPH and the Provincial Eating disorders Program. Drs. D. Rosenbaum and Kassen direct the VGH Ambulatory Care Program.

Dr. Irene Ma will be leaving the division and will be relocating at the University of Calgary. She will maintain a UBC affiliation with the division and department to further collaboration with her research. The GIM division recognizes the strong work and many contributions that Dr. Ma has made over her 5 years on faculty.

Dr. Barry Kassen is UBC division head, SPH division head, Vancouver Acute division head, Associate head Department of Medicine SPH, Acting Division Head Community Internal Medicine, CTU Director SPH, Associate Program Director (Core Internal Medicine), Representative to Rocky Mountain and Canadian Society of Internal Medicine, past Governor of British Columbia for the American College of Physicians, member of the UBC Internal Review Committee, Chair of the Provincial Albumin working Group, past chair of the Internal Medicine Examination Committee (RCPSC), member of the Working Group in General Internal Medicine (RCPSC), member of the Evaluation Committee (RCPSC) and member of the Health and Policy Committee (RCPSC).

Future Directions

The division has been working very actively on an alternate funding system and sees this as a key component to fulfilling its mandate. Innovation in health care delivery and medical edu-

cation are the directions this would support and negotiations are underway.

The continued emphasis on our medical education goals, as well as support of the distributed sites (Victoria and Prince George), will continue to be a divisional aim.

A regional approach to Internal Medicine with equal emphasis at both major general teaching hospital (VGH and SPH) and a recruitment strategy that would see the acquisition of clinical and research faculty at VGH and BC Women's Hospital is a top priority.

The division has had 2 retreats previously with a significant focus on recruitment and new clinical activities. The aim of the division is to recruit the "new" fellows upon their completion of training and to recruit widely to enhance the aims of the division.

The clinical area of emphasis is the development of a perioperative service and a consultative service for VGH and St. Paul's Hospital. Presently the division is working with Anesthesia and Surgery at both sites. The Division is developing the services in conjunction with Anesthesia with the goal of optimizing the health care delivery for preoperative patients through the leadership of Drs. Iain Mackie and Jane McKay. There are now two active perioperative services, at VGH and St. Paul's Hospital respectively. There is a modified model for consultative service at both sites.

Support and modification of the Eating Disorders Medical Model has been advanced by Dr. Jane McKay. In association with Drs. Ric Arseneau and Dr. Debbie Rosenbaum, they are changing the model of medicine involvement in the patients with anorexia nervosa.

The training of general internists for the community and the university is a high priority for the division.

There is a current emphasis on reorganizing the ambulatory medicine program at St. Paul's Hospital and VGH to promote academic as well as a clinical relevant service to the hospitals and communities. This has been done successfully and implementation of a perioperative service with the Preadmission Clinics of VGH and SPH are underway.

The research component of our members needs to be promoted and celebrated by the Division of Internal Medicine, the Department of Medicine, faculty and the appropriate research affiliates.

Finally, the division of Internal Medicine needs to take a leadership role in producing and advocating for more general internists for the university and community of British Columbia. The division of Internal Medicine is committed to this goal and sees this as one of its primary aims.

New Recruits

This year we welcomed **Dr. Eliana Castillo** (VGH/SPH/BC Women's Hospital) to the division. Dr. Castillo has expertise in maternal-metal medicine and HIV. She will be a strong addition to the division.

Dr. Cary Cuncic will be recruited to VGH/SPH sites with an interest in Addiction Medicine, Medical Education and GIM.

New Education Initiatives

Undergraduate Education has been advanced by the division of GIM. Under the leadership of Drs. Ric Arseneau, Jim Busser and Jim Dunne, an ambulatory component for the CTU experience is being incorporated into the curriculum.

Fellowship Program

Dr. Anita Palepu is the Director for the Fellowship Program in General Internal Medicine. She has been very successful in recruitment and as well as introducing a strong structure to the program with administrative assistance from Betty Cristofoli. We currently have 6 fellows in the program. They are Matt Bernard, Stephane Voyer, Chandana Weerasinghe, Aman Nijjar, Cary Cuncic and John Staples. In his second year, Matt Bernard will be doing a Masters in Health Administration, Chandana Weerasinghe and Stephane Voyer will both pursue Clinical Educator Fellowships. Aman Nijjar will continue with her fellowship and Clinical Investigator Program. John Staples will complete his final year at the Harvard School of Public Health to obtain a MPH. Cary Cuncic will complete her program in September and has been recruited by the division.

Dr. Palepu has introduced a cross-site journal club, which is of very high quality.

The fellowship program also has supported a strong community base to its training and has involved community leaders in GIM in its planning including Michael Kenyon (Nanaimo, Chad Dyck (Penticton). The fellowship program promotes general internal medicine practice in the community and university setting.

Dr. Palepu has expanded our complement of fellows and for the fellowship 2009 year we have four new fellows (rather than 2) and hopes to increase the capacity to train at least five fellows per year to meet the broader need for competent general internal medicine physicians both in the community and in the university setting.

GERIATRIC MEDICINE

Division Members

Professor & Head
Dr. Janet McElhaney

Professor
Dr. B. Lynn Beattie (Emeritus)
Dr. Graydon Meneilly

Assistant Professor
Dr. Phil Lee
Dr. Kenneth Madden

Clinical Associate Professor
Dr. Reva Adler
Dr. Larry Dian
Dr. Roger Wong

Clinical Assistant Professor
Dr. Maria Chung
Dr. Scott Comeau
Dr. Anna Forbes
Dr. Amanda Hill
Dr. Janet Kushner-Kow
Dr. Peter O'Connor
Dr. Shunmoogam (Willie) Pillay
Dr. Christopher Rauscher

Clinical Instructor
Dr. Kim King
Dr. Janice Menezes
Dr. Caroline Petrossian
Dr. Hetesh Ranchod
Dr. Dorothy Williams

Associate Member
Dr. Leslie Sheldon



Dr. Janet McElhaney
Professor and Head

DIVISION OVERVIEW

The Division of Geriatric Medicine currently has 13 faculty members within Vancouver Acute (VA) and Providence Health Care (PHC) and 2 faculty members in distributed sites. Emeritus Professor, Dr. Lynn Beattie, remains very active in Division activities. Eleven clinical instructors and associate members also contribute to teaching in geriatrics in the lower mainland and on Vancouver Island.

The Division provides a wide range of clinical services across these sites, including active geriatric consultation services, in-patient acute care for elders (ACE), geriatric activation and assessment beds, geriatric day hospitals and multiple outpatient clinics. Most recently, the division has received approval for implementation of a team to deliver goal-responsive acute care for elders (GRACE). Clinical services provided as an outreach to the community are gradually being integrated into the Community Health Centers of VCH.

The Division's strategic plan is moving forward and will continue to support and implement processes of care that improve outcomes of seniors accessing the acute care system with a specific focus on managing risk for functional decline through the transitions from care in the emergency department and acute care settings, back to the community. The Vancouver Initiative To Add Life to Years (VITALiTY) partnership continues to collaborate with other health disciplines within VCH and was funded as the VITALiTY Team from the Michael Smith Foundation for Health Research to formalize these research partnerships in Workshop held on January 12, 2009 as a first step in establishing an international network of collaborators. The Division's major areas of research emphasis are in health services research and active research programs in diabetes, dementia, osteoporosis, falls prevention, cardiovascular disease, inflammation, immunosenescence and vaccination provide a foundation for the scholarship and service that will promote health, wellness and independence for seniors in the community of Vancouver Coastal Health and British Columbia.

Teaching

Undergraduate

Dr. Kushner-Kow continues on the Undergraduate Education Committee overseeing the third year Internal Medicine Clerkship and its distribution to Victoria, Northern BC and the Fraser Valley. She is also Faculty Development Liaison for the third year committee, a Week chair for the Brain and Behaviour Block in year two, and organizer for the geriatrics component of the clinical skills course in year two. All of the Division members teach in various components of problem-based learning and clinical skills, as well as on the clinical teaching services in geriatrics and internal medicine. Students continue to seek electives in geriatric medicine and the Division members see this as our primary opportunity to attract these students into this field of medicine.

Postgraduate

Dr. Kushner-Kow continues as Vice-chair for the Royal College Geriatric Medicine Examination Committee and has been involved in the transition to Standardized Clinical Examinations (StaCERs), a context-specific real-life evaluation method to ensure Geriatric Medicine trainees demonstrate clinical competencies.

Dr. Kushner-Kow also continues as the Program Director in Geriatric Medicine. The postgraduate program included three residents (with a delayed start of a fourth subspecialty resident) after a highly successful in the 2008 subspecialty match, attracting three new trainees. A Geriatric Medicine Fellows Retreat in Whistler, BC was added to the Geriatric Medicine Fellows Day at the 2009 Canadian Geriatrics Society meeting in Toronto in April 2009.

Dr. Roger Wong continues as the Associate program director, postgraduate medical education, Department of Medicine UBC. He continues to champion the development of innovative curriculum and teaching methodologies for the department of Medicine.

All Division members continue to be actively involved in the teaching of internal medicine residents and fellows in the principles of the care of the frail elderly, including the clinical teaching units and noon rounds for medical residents. Residents have rated teaching in geriatric medicine among the highest of the divisions in the Department of Medicine.

Continuing Medical Education

Dr. Kushner-Kow continues to work with the UBC Care for Elders group, an interprofessional group dedicated to developing educational modules for interprofessional teams, as well as encouraging recruitment to the health professions dealing with working with Seniors. This program evolved to the Inter-Professional Education in the Care of Elders (IPECE) project based in Providence Health Care and provides semi-annual workshops for students from all health care disciplines to develop skills in the care of older patients.

Dr. Kushner-Kow is an associate with the UBC Office of Faculty Development and continues to run the ACT (Advanced Clinical Teaching) course for mid-career faculty to improve their skills in medical education. She is also the CME director for the Canadian Geriatrics Society.

Several members of the division continue to be active in CME including national and provincial initiatives in the areas of dementia, osteoporosis, cardiovascular fitness, immunosenescence and vaccine preventable diseases.

Research

Division members continue to develop their research programs:

Dr. Graydon Meneilly continues his research program in diabetes in older adults and this has led to a collaboration with Dr. McElhaney to study 'inflammaging' in older adults with diabetes and the metabolic syndrome, and its effect on immune function; this work was funded by a new CIHR operating grant in 2008.

Dr. Kenneth Madden was awarded the competing renewal of his CIHR Operating Grant to conduct a randomized, controlled trial of aerobic, strength to measure its effect on arterial stiffness and the cardiovascular control measures that prevent syncope during upright tilt. Dr. Madden also received a CIHR Grant to support the VITALiTY Workshop. This forum brought together healthcare professionals and researchers from Canada and the US to transition from VITALiTY team planning grant to planning for VITALiTY team development grant.

Dr. Janet McElhaney has established an international collaboration with CIHR funding, to validate the laboratory assays for the different immunologic correlates of protection against influenza that have been developed in her research program. She is a Co-PI on a CIHR Pandemic Team grant with collaborators across Canada to develop new immunologic correlates of protection for influenza pandemic planning and vaccine development. An NIH U01 grant has developed a model system for pre-clinical testing of new vaccine/adjuvant combinations that has attracted interest from industry and new collaborations. These projects including the work on her NIH R01 at the University of Connecticut, have also attracted the interest of World Health Organization for pandemic planning in developing countries that are experiencing rapid aging of their populations.

Dr. Reva Adler is working with the Presidents Office and Senate of the Republic of Rwanda on a four-phase research initiative funded by the J. William Fulbright Scholarship Board of the US State Department targeting primary prevention of ethnic violence in the Great Lakes region of Central Africa. Dr. Adler is a member of the invitation-only Global Futures Forum, a joint initiative of the and the U.S. State Department and the Privy Council of Canada. Dr. Adler continued her BCD-E research initiative in West Darfur to identify and support the conflict-related mental health sequelae and treatment needs of average citizens in the Darfur region of Sudan. Locally, her ongoing research "Newer Older Immigrants to Vancouver", identifies the health services needs older Chinese and South Asian immigrants to the lower mainland to British Columbia.

Dr. Roger Wong continues to conduct research in acute care service delivery for older adults, and in medical education with the development of new curriculum to enhance competency in quality improvement, health advocacy, and communication among internal medicine residents.

Dr. Lynn Beattie is involved in multiple research projects related to dementia and is Chair of the Research Policy Committee for the Alzheimer Society of Canada and the BC Network for Aging Research, a member of the CIHR Gender, Sex and Health Committee, and Acting Director, Centre for Health Aging at Providence.

Dr. Amanda Hill is involved in interventions and health care delivery research in the areas of management of congestive heart failure and delirium, and has developed a pre-printed order set for the management of delirium. This PPO will be rolled out across VCH under the Transforming Seniors Care initiative.

Dr. Wendy Cook has continued to develop her research skills in the area of falls prevention and fall-related injuries and in 2009, will undertake a part-time PhD program to continue to develop her research skills in the area of falls risk assessment and management in older adults.

Dr. Ima Alimoradi has completed her Masters in Healthcare and Epidemiology (MHSc) at UBC and has been involved in program evaluation and various aspects of osteoporosis research through the Falls Clinic.

Dr. Phil Lee received funding for his work on medication use in the residential care setting from the Cullen Family through the Tapestry Foundation of PHC. He was also awarded an annual honorarium from the Ralph Fisher Family and Alzheimer Society of BC Endowed Professorship to conduct studies through the UBC Alzheimer Clinic Research Unit and the Center for Brain Health.

Clinical Services

At both PHC and VA, clinical activities continue to increase. At VGH, ACE units continue to operate at maximum capacity of 69 beds. The GRACE team was launched in November 2008 at St. Paul's Hospital and is developing interprofessional collaborative practice to achieve patient-centred goals of care, with training opportunities for all health care disciplines. The Division is actively involved in patient assessment and management at the VGH STAT Centre in the newly renovated Centennial Pavilion.

A collaboration between VGH and PHC has extended geriatric outreach network to most of the Community Health Centers within Vancouver Community Health and is working to strengthen the collaboration between primary, community and acute care. Dr. Chris Rauscher continues his work on the Frail Elderly Collaborative project and as a "clinical quality improvement advisor" working throughout BC with the Ministry of Health and Vancouver Coastal Health, including the Transforming Seniors Care Initiative.

Drs. Dian, Kushner-Kow, and Madden are part of the Geriatrics Outreach Teams to Northern BC. They provide specialized Geriatric Medicine consultation services to Northern, rural and remote communities including Queen Charlotte City, Masset, Prince Rupert, Terrace, Kitimat, Smithers, Burns Lake, Van-

derhoof, Fraser Lake, McBride, Dawson Creek, Fort St John and Fort Nelson. This unique model of care involves Geriatric Medicine specialists pairing with Geriatric Psychiatrists, visiting communities on a regular basis and working in tandem with community service providers in those towns. Dr. Alimoradi provides a similar service to Kelowna and Interior Health.

Drs. Wendy Cook and Ima Alimoradi continue to develop the SPH falls clinic and supported an interdisciplinary team members in a project to evaluate the services under the falls prevention program run through the Clinic.

Dr. Phil Lee continues to provide consultation in memory disorder clinics at St. Paul's Hospital and the Alzheimer's and Related Disorders Clinic at UBC Hospital.

Administration

Dr. Janet McElhaney is the Division Head of Geriatric Medicine for UBC, PHC, and VGH; the PHC Physician Program Director for Elder Care Acute Services and the Regional Medical Lead for the Seniors Continuum for Vancouver Coastal Health.

Dr. Graydon Meneilly is Head, Department of Medicine at both UBC and VGH and Medical Director, Medical Services, Vancouver Acute.

Dr. Janice Menezes is the Physician Operations Leader at St. Paul's Hospital.

Dr. Reva Adler is Medical Director of the VGH STAT Centre.

Dr. Roger Wong is Associate Medical Director, Medical Services at Vancouver Acute.

Dr. Ken Madden has assumed the positions at Vancouver Acute, of Deputy Division Head, Geriatric Medicine, and Medical Manager, ACE units.

Dr. Maria Chung is Medical Director, UBC Hospital.

Special Honours and Awards

Dr. Amanda Hill initiated an International Health Program for the Internal Medicine Residency Program at UBC. She received a grant of \$325,000 over 5 years from the Cedar Foundation to fund this program.

Dr. Kenneth Madden is the principal investigator of two CIHR grants to study "The Use of a Home-based Walking Program to Treat Orthostatic Hypotension in Older Adults with Type 2 Diabetes" and "Preventing catastrophic disability in an aging population". He is a co-investigator for a BC Network on Aging Research study called "Changes in temperature regulation and chemosensitivity in the elderly." He is part of the VITALiTY Research Team Forum funded by the Michael Smith Foundation.

Dr. Roger Wong received the 2008 UBC Department of Medicine Award for "Outstanding CanMEDS Health Advocate Role".

HEMATOLOGY

Division Members

Clinical Professor & Head
Dr. Michael Barnett

Professor
Dr. Keith Humphries
Dr. Peter Lansdorp
Dr. John Schrader

Associate Professor
Dr. Agnes Lee
Dr. Clayton Smith

Clinical Professor
Dr. Penny Ballem
Dr. Donna Hogge
Dr. Stephen Nantel
Dr. Thomas Nevill
Dr. John Shepherd
Dr. Linda Vickars

Clinical Associate Professor
Dr. Barrett Benny
Dr. Donna Forrest
Dr. Heather Leitch
Dr. Heather Sutherland
Dr. Cynthia Toze

Clinical Assistant Professor
Dr. Raewyn Broady
Dr. Juley Lavoie
Dr. Chantal Leger
Dr. Charles Li
Dr. Kevin Song
Dr. Gayatri Sreenivasan
Dr. Peter Tsang
Dr. Leslie Zypchen

Clinical Instructor
Dr. Yasser Abou Mourad
Dr. Lynda Foltz
Dr. Sujaatha Narayanan
Dr. Tanya Petraszko
Dr. Maryse Power
Dr. Khaled Ramadan

Associate Member
Dr. Robert Coupland
Dr. Connie Eaves
Dr. Douglas Horsman



Dr. Michael Barnett
Clinical Professor and Head

DIVISION OVERVIEW

In 2008, the UBC Division of Hematology included 31 staff and 3 associate staff members based at the Vancouver General Hospital (VGH), the Vancouver Cancer Centre (VCC) and the Terry Fox Laboratory (TFL) of the British Columbia Cancer Agency (BCCA), St. Paul's Hospital (SPH), and the University of British Columbia (UBC).

It is with great sadness that the death of Dr. Juley Lavoie on September 26, 2008 is mentioned. Dr. Lavoie joined the Division in 2001. She was an excellent clinician teacher. Her accomplishments in the Division included the highly effective mentoring of summer students and fellows, the development of the Leukemia/Bone Marrow Transplant (BMT) Daycare and authorship of a number of important papers.

Laboratory research programs at TFL, UBC and Vancouver Coastal Health Research Institute (VCHRI) achieved peer-reviewed operating support of \$1.5 million and clinical research at VGH and SPH brought in \$1.0 million. There was a total of 41 peer-reviewed publications. Patient care and training remained at the forefront of clinical activities. Trainees in the Division as a whole included 8 Hematology residents, 8 Leukemia/BMT fellows and 7 laboratory post-doctoral fellows.

In November 2008, the Division was reviewed by Dr. David Anderson (Head, Division of Hematology, Dalhousie University) and Dr. Paul Keown (Head, Division of Nephrology, University of British Columbia).

Teaching

Undergraduate

Dr. Gayatri Sreenivasan served as Week Chair of the Blood & Lymphatics problem based learning (PBL) block (two weeks) for undergraduates. A number of members of the Division participated in the PBL teaching course.

Postgraduate

A total of 52 residents in the Internal Medicine Program took hematology-based electives during the past year. These were one or two month blocks spent on the Hematology Consultation Service at VGH or SPH.

Subspecialty Training

Dr. Peter Tsang served as Director of the Hematology Training Program. Eight Hematology residents were based at VGH. Rotations included the General Hematology Consultation Service, Leukemia/BMT Service, Blood Transfusion Service, Cell Separator Unit, Out-patient Clinics and Hematopathology. Rotations were also taken at SPH, VCC, BC Women's and Children's Hospital. These positions were taken by Drs. Luke Chen, Hatoon Ezzat and Jesse Shustik (July, 2006); Zayed Al-Zahrani (July, 2007); Alina Gerrie, Judith Rodrigo, Natalia Rydz and Chris Venner (July, 2008).

Dr. Kevin Song served as Director of the Leukemia/BMT Training Program. The Program had five positions available for clinical training in the management of patients with hematological malignancies and those undergoing hematopoietic stem cell transplantation. These positions were taken by Drs. Satish Anumula, William Han, Jonathan Hebb, Kai Luecke, Manoranjan Mahapatra, Lakshmi Pillai, Matthew Wright and Adisak Tantiworawit.

Dr. Carolyn Owen completed a 2 year fellowship at the Centre for Medical Oncology, St. Bartholomew's Hospital, London in September, 2008. Dr. Paul Yenson completed a 15 month fellowship in Apheresis (Puget Sound Blood Center, Seattle) and Hemophilia/Hemoglobinopathies (Hospital for Sick Children, Toronto and Hemoglobinopathy Reference Laboratory, Hamilton) in December, 2008. Dr. Luke Chen started a 2 year fellowship in Clinical Education at UBC in October, 2008 and will continue to be affiliated with the Division.

Postdoctoral Training

Division Members conducting bench research at the TFL and UBC trained 7 postdoctoral fellows, all of whom were PhDs.

Doctoral Training

The TFL accommodated 4 graduate students as well as 13 research and co-op students.

Continuing Medical Education

Division Members attended numerous national and international meetings both as speakers and attendees.

Research

Clinical research involved hematological malignancies, hematopoietic stem cell transplantation, apheresis, blood product support, thrombosis, iron overload and HIV/AIDS. As well as in-house studies, significant contributions were made to national and international trials. A thrombosis research program, including collaboration with investigators at the Centre for Blood Research (CBR) at UBC, is being developed by Dr. Agnes Lee.

From early 2005, a major initiative has been the development of the Hematology Clinical Trials Unit (HCTU) (made possible by substantial initial and ongoing support from donors). The goals of the HCTU are: to produce and evaluate new treatments for blood diseases that are more effective and less toxic; to provide British Columbians with access to new treatments much earlier than would otherwise be possible; to improve quality of life for patients with blood diseases. The HCTU was awarded a grant from the Ministry of Health Services, BC in late 2008. In parallel with the HCTU, a Hematology Cell Bank (HCB) was developed in 2005 (Dr. Clayton Smith and Coordinator Anna Koochin). The HCB collects and stores specimens of blood and marrow from patients and donors for research. In 2006, the HCTU became the study center for a trial of the Canadian Blood & Marrow Transplant Group (Dr. Cynthia Toze, Dr. Clayton Smith and Coordinator Holly Kerr). The trial (funded by the National Institutes of Health, USA) recruited transplant groups in Australia, New Zealand, Saudi Arabia and the USA in 2008. Important research related to the value of iron chelation therapy in patients with myelodysplasia (Drs. Leitch and Vickars) gained international recognition.

Laboratory research based at the TFL (Drs. Hogge, Humphries, Lansdorp and Smith) involved the regulation of normal and malignant hematopoietic cell growth and differentiation with special emphasis on the myeloid leukemias, Hox genes, telomeres and transplantation. The molecular characterization of regulatory pathways was the focus at UBC (Dr. Schrader). Collaborative research in graft versus host disease and graft tolerance was conducted at the Immunity and Infection Research Centre, VCHRI (Dr. Broady).

Clinical Services

The Leukemia/BMT Program and Apheresis Program (Cell Separator Unit) are located at VGH. The Hemophilia, Hemoglobinopathy and Hemosiderosis Programs are located at SPH.

The Leukemia/BMT group at VGH/VCC had 14 members: Drs. Clayton Smith (Director), Donna Hogge, Michael Barnett, John Shepherd, Stephen Nantel, Thomas Nevill, Heather Sutherland, Cynthia Toze, Donna Forrest, Juley Lavoie, Kevin Song, Yasser Abou Mourad, Maryse Power and Sujaatha Narayanan. The group provided comprehensive inpatient (T15 Ward) and outpatient (Krall Centre, Centennial Pavilion) care to patients with hematological malignancies and those undergoing hematopoietic stem cell transplantation. In 2008, new myelodysplasia and graft versus host disease clinics (weekly) opened as well as outreach clinics (monthly) in Abbotsford, Prince George and Victoria (the Kelowna clinic having opened in 2006).

The General Hematology group at VGH had 7 members: Drs. Peter Tsang (Head), Barrett Benny, Gayatri Sreenivasan, Charles Li, Raewyn Broady, Leslie Zypchen and Agnes Lee. The group was responsible for the Hematology Consultation Service at VGH. The number of consultations has increased steadily over the past 5 years. In addition, the patient population includes those with complex medical and surgical problems. Each member also had outpatient clinics. In total, there

were 16-18 weekly half day clinics. Three of the group, Drs. Tsang, Li and Zypchen provided a consultation service and call coverage for the B.C. Women's Hospital (BCWH). They held a weekly outpatient Hematology clinic at BCWH which included teaching of trainees from Medicine, Hematology and Obstetrics. Three of the group, Drs. Sreenivasan, Benny and Broady had a cross appointment with the CSU (under a Clinical Services Contract). A significant challenge for the General Hematology group at VGH relates to remuneration and resources. Payment for clinical work is on a fee for service basis. From a number of perspectives, an alternate funding plan would be more appropriate.

The Division of Hematology at SPH had 5 clinicians: Drs. Linda Vickars, Heather Leitch, Chantal Leger, Khaled Ramadan and Lynda Foltz. The group was responsible for the care of patients with a complete spectrum of hematological disease both benign and malignant, including acute leukemia and aggressive lymphoma (some HIV-associated) and those conditions requiring treatment with apheresis. The workload was demanding. Primary and consultative care for inpatients at SPH was provided on a rotational (weekly) basis. Daycare activity was carried out on the Medical Short Stay Unit at SPH. Outpatient clinics were conducted in a facility across from SPH on Burrard Street. Each member had 3-4 clinics per week. In addition, Dr. Vickars held a Hemophilia clinic twice per month. Drs. Leitch and Leger held a monthly HIV/AIDS Hematology clinic. The group received remuneration from a Clinical Services Contract. By far the major problem for the group at SPH is, with the exception of the Hemophilia, Hemoglobinopathy and Hemosiderosis Programs, lack of infrastructure support. Funding for such positions as a clinical associate, research nurse and data coordinator would result in significant benefit.

Administration

In August, 2008 Dr. Barrett Benny stepped down as Director of the Apheresis Program at VGH. Dr. Benny provided resolute stewardship of the Program from 2001 to 2008. Dr. Gayatri Sreenivasan became Dr. Benny's successor. Dr. Agnes Lee joined the Division in September, 2008 as the first Director of Thrombosis. Dr. Clayton Smith (Director of the Leukemia/BMT Program at VGH and VCC), Dr. Stephen Nantel (Medical Director of the Clinical Practice Unit (CPU) for Hematology/BMT at VGH), Dr. Peter Tsang (Head of General Hematology at VGH and Director of the Hematology Training Program), Dr. Linda Vickars (Medical Director of the Adult Hemophilia, Hemosiderosis and Hemoglobinopathy Programs at SPH) and Dr. Michael Barnett (Head of Hematology at UBC, VGH and SPH) continued in leadership positions.

At VGH, the activities of the Division were overseen by a Hematology Executive made up of Drs. Barnett, Smith and Nantel. Dr. Nantel was chairman of the Hematology/BMT CPU committee whose membership was as follows: Dr. Barnett, Dr. Smith, Dr. Tsang, Dr. Sreenivasan, Ms. K. Hermkens (Administrative Manager, Hematology), Ms. K. Berryman (Patient Services Manager, Hematology/BMT), Ms. C. Heritage

(Operations Director, Medicine) and Mr. J. Nickel (Finance Manager). The committee met monthly to review issues arising and to propose new initiatives.

At SPH, interactions with the administrative group were on an ad hoc basis. Dr. Paul Man (Head of Medicine) and Dr. Jeremy Etherington (Vice President, Medical Affairs) provided funds for the SPH Division's Research group and Electronic Medical Record initiative, respectively. In addition, Dr. Yvonne Lefebvre (Vice President, Research and Academic Affairs) was supportive of the group. Finally, Dr. Ken Harman (Leader, Medical Affairs) and Mr. Warren Hart (Director, Medical Affairs) worked tirelessly on the group's behalf to negotiate with the MOH and bring to fruition the new contract for hematologists at SPH.

Future Directions

The recruitment of Dr. Agnes Lee (September, 2008) as the first Director of Thrombosis represented a fundamental advance for the Division. The arrivals of Dr. Paul Yenson (to the VGH group in January, 2009) and Dr. Shannon Jackson (to the SPH group in July, 2009) are eagerly awaited and will bolster the Apheresis and Hemophilia & Hemoglobinopathy Programs. This recent infusion of new blood will be completed with the recruitment of Dr. Edward Conway as a clinician scientist in the Division and the new Director of the Centre for Blood Research (CBR) at UBC (July, 2009). Dr. Conway, whose interests are in endothelial biology, angiogenesis and thrombosis is entirely suited to play a pivotal role in the development of collaboration between the Division and the CBR.

Thus a strong platform has been created upon which to pursue future directions. It is intended that the major initiatives over the next 5 years will be to:

- Sustain the Hematology Clinical Trials Unit
- Enhance translational research in hematological malignancy and stem cell transplantation
- Establish a comprehensive Thrombosis Program
- Promote collaborations with the Centre for Blood Research
- Create fellowships in areas other than Leukemia/BMT
- Develop comprehensive Provincial Hemophilia & Hemoglobinopathy Programs
- Determine the provincial need for Hematology services

Special Honours and Awards

Dr. Barrett Benny
UBC, Department of Medicine
Master Teacher Award

Dr. Linda Vickars
UBC, Faculty of Medicine
Career Award for Excellence in
Clinical Teaching

Dr. Raewyn Broady
UBC, Department of Medicine
Academic Enhancement Fund Award

Dr. Leslie Zypchen
UBC, Department of Medicine
Donald M. Whitelaw Award for
Outstanding Grand Rounds at VGH

INFECTIOUS DISEASES

Division Members

Professor & Head

Dr. Neil Reiner

Professor

Dr. Yossef Av-Gay
Dr. William Bowie
Dr. Robert Brunham
Dr. Anthony Chow (Emeritus)
Dr. H. Grant Stiver

Associate Professor

Dr. Theodore Steiner
Dr. Mark Tyndall

Assistant Professor

Dr. Artem Cherkasov
Dr. Zakaria Hmama
Dr. Devki Nandan

Clinical Professor

Dr. David Burdge
Dr. Robert Chan (Emeritus)
Dr. Peter Phillips
Dr. Michael Rekart

Clinical Associate Professor

Dr. Valentina Montessori

Clinical Assistant Professor

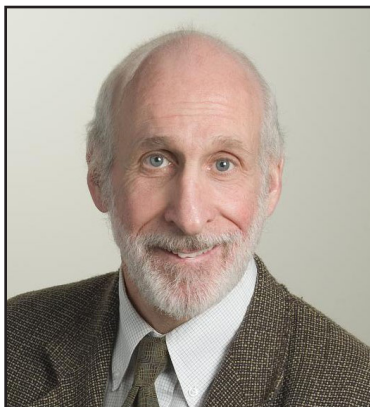
Dr. Yazdan Mirzanejad
Dr. Neora Pick
Dr. Natasha Press
Dr. Robert Reynolds

Associate Member

Dr. Wayne Ghesquiere
Dr. Jennifer Grant
Dr. Fawziah Marra
Dr. Janet McElhaney
Dr. Robert McElhaney
Dr. Deborah Money
Dr. David Patrick

Adjunct Professor

Dr. Michael Grigg



Dr. Neil Reiner
Professor and Head

Dr. Neil E. Reiner
Professor and Head

Dr. H. Grant Stiver
Professor and Assistant Head

Dr. Mark Tyndall
Associate Professor and Head
St. Paul's Division of Infectious Diseases

DIVISION OVERVIEW

Infectious Diseases clinicians, clinician scientists, and full time research faculty, numbering 18 plus 8 Associate Members, have maintained a productive pace with patient care, education and research activities at three teaching hospitals located at Vancouver General (VGH), St. Paul's (SPH) and BC Children's & Women's Hospitals, and at the BC Centre for Disease Control. Dr Wayne Ghesquiere (Victoria, Nova Travel Clinic) and Dr Jennifer Grant (Medical Microbiology, VGH) were welcomed to the Division this year as Associate Members. Many Division members, including 2 emeritus faculty members, made important contributions through collaborations with University of British Columbia, and national and international research initiatives, and by participation in expert clinical advisory committees. The primary need and focus continues for recruitment of a clinician scientist for VGH and clinical faculty for SPH, along with planning for replacement space for the Division at Vancouver General Hospital.

Teaching

Infectious Diseases faculty are highly rated by undergraduate and postgraduate students, medical students, residents and fellows alike for the breadth of expertise and quality of the teaching experience they receive. Increasing numbers of medical residents and students choose elective rotations in Infectious Diseases. This applies, as well, to the number of visiting trainees from other Canadian medical schools. To more effectively manage the growing number of trainees and effective management of programs, Kirstie Lang was recruited to become the Division's Medical Education Coordinator.

Undergraduate

The Division's significant commitment to medical undergraduate teaching includes the highly regarded Host Defense Infection Block in the Problem Based Learning course. Dr. Mark Tyndall is the Week Chair for HIV/AIDS. Dr. Grant Stiver continues to be Program Director of Undergraduate Medical Education for the Department of Medicine, and Dr Bill Bowie is the Undergraduate Education Supervisor for the Division of Infectious Diseases. Basic science training in the Im-

munity and Infection research labs at VGH continues to attract outstanding students.

Postgraduate

Under the exceptional Directorship of the ID Residency Training Program by Dr Natasha Press, inpatient and outpatient training was provided to 51 residents from Medicine and Surgery programs at St. Paul's and Vancouver General Hospitals. The opportunity to train with UBC ID Faculty for careers as infectious diseases specialists through the two year Subspecialty Training Program continues to attract exceptionally qualified and talented applicants. This year the 6 subspecialty residents and clinical fellows included Batool Ali, Nezar Bahabri, Greg Deans, Ibrahim MomenKhan, Melanie Murray and Laurenna Peters. Sangita Malhotra completed her training mid year and has joined staff at Royal Columbian Hospital. Research Faculty supervised 9 Post Doctoral Fellows in either laboratory research at VGH, or in clinical research at St. Paul's Hospital.

Graduate Students

Infectious Diseases faculty supervised at least 15 graduate students during the year. The students are primarily affiliated with the Experimental Medicine Program, Health Care and Epidemiology, Laboratory Medicine and Microbiology and Immunology, and Medical Genetics.

Research

Research programs being conducted at all four principal sites of the Division are diverse and broad-based as detailed below. The Division's research programs are highly productive and innovative, resulting in grant funding totaling \$ 6.2 M during 2008. Research funding comes from multiple sources including CIHR, Genome Canada and the NIH amongst others.

Host defense and pathogenesis

The Division maintains an active basic research program in molecular microbial pathogenesis and host defense at VGH. Pathogens under study included *M. tuberculosis*, *Leishmania*, *E. coli*, *Staphylococci*, *Streptococci* and *Chlamydia*. In addition to addressing mechanisms of pathogenesis, ongoing research is concerned with both innate and acquired immune responses to infection including vaccine development. The Division's research program has an important bioinformatics focus with additional state-of-the art expertise in molecular modeling and computer-aided drug design.

HIV/AIDS Research

The AIDS Research Program conducted through the BC Centre for Excellence in HIV/AIDS, involves faculty members at the St. Paul's site. It is nationally and internationally recognized for work in all facets of HIV, including behavioral studies, epidemiology, clinical trials and basic sciences. The epidemiology group has been actively developing and maintaining long-term analyses of drug treatment programs in Vancouver, including

harm reduction strategies to prevent HIV transmission. Recent clinical research has been launched into HIV co-infections with Hepatitis C and Human Papilloma Virus.

Epidemiological Research

The wide ranging research of ID Faculty at the UBC CDC includes STD prevention, control and service delivery; control of emerging infectious diseases; assessment of the human papillomavirus infection (HPV); reduction of antimicrobial misuse as linked to the emergence of resistant organisms; detection and description of unique outbreaks such as *Cryptococcus gattii* disease; and early interruption of transmission of diseases from infected food products. Drs. Michael Rekart and Bill Bowie continue their work with CIDA funded projects concerning STD, HIV, TB prevention and care in Vietnam, and ecosystem health in Ecuador.

Clinical Research

There are a number of both industry sponsored and investigator-initiated studies that division members are involved with that recruit volunteers for new anti-infective agents. Dr. Tyndall is the site PI for STEP that is an international study for a preventative HIV vaccine.

Clinical Services

The Division maintains two highly active inpatient consultation services at SPH and at VGH. The trend of increasing complexity and number of consultations, (7% growth per year at VGH) and the ongoing effect of antibiotic resistance make the ID clinical programs highly dynamic and challenging to administer. In addition to general ID cases, there is increasing demand to treat infections in reconstructive orthopedics including spine, neurosurgery, bone marrow and solid organ transplant, and tuberculosis. The SPH group has a special interest and competency with the treatment of infections related to injection drug use and infections in marginalized populations. The AIDS inpatient ward based at SPH continues to be extremely busy with 20 inpatient beds designated for HIV positive patients.

Administration

Members of the Division involved in expert committees included:

Yossef Av-Gay

- Member of the scientific review panel of the European Commission; 7th Framework Infectious Diseases
- Member of the Canadian Institute of Health Research (CIHR) "China-Canada Joint Health Research Initiative" Committee

William Bowie

- Member of the Provincial Infection Control Network (PIC-Net)
- Member of Health Canada Veterinary Drugs Directorate Expert Advisory Committee on Antimicrobial Resistance Risk Assessment
- Member of the Tick-borne disease committee of the Health Canada National Non Enteric Zoonotic Diseases Committee
- Member of Health Canada and CIHR steering committee on Ethical Review of Public Health Activities

Tony Chow

- Canadian Institute of Academic Medicine Expert Advisory Board on Anti-Infective Therapies, Therapeutic Products Directorate, Health Canada
- CIHR University-Industry Peer Review Committee
- Co-Chair, Infectious Disease Society of America Clinical Practice Guideline Committee on Sinusitis
- Co-Chair, Association of Medical Microbiology & Infectious Disease of Canada/Canadian Surgical Society Clinical Practice Guideline Committee for Complicated Intraabdominal Infections

Neil Reiner

- Member, Canadian Institutes of Health Research peer review panel for Proof of Principle (POP) Program
- Elected to Council, Society for Leukocyte Biology
- Chair Meetings Committee, Society for Leukocyte Biology

Ted Steiner

- CIHR Experimental Medicine peer review panel

Grant Stiver

- Co-Chair Clinical Care Working Group for the Public Health Agency of Canada (PHAC) Pandemic Influenza Committee
- Member of the PHAC Expert Task Group on Oseltamivir Resistance regarding the impact of oseltamivir resistance on pandemic influenza management
- Member of the Canadian Council of Academies Committee on Influenza Transmission and Personal Protective Respiratory Equipment (Commissioned by PHAC)

Mark Tyndall

- Ad-hoc CIHR Committee on HIV Testing
- Member of the Reference Group to the UN on HIV and Injection Drug Use
- Temporary Consultant - WHO Working Group on Tuberculosis and Injection Drug Use
- CIHR peer review panel for Gender, Sex and Health

Division Members

Professor & Head

Dr. Charles Blanke

Honorary Professor

Dr. Nicholas Bruchovsky

Professor

Dr. Charles Blanke

Dr. David Klaassen (Emeritus)

Assistant Professor

Dr. Kim Chi

Dr. Stephen Chia

Dr. Sharlene Gill

Dr. Kerry Savage

Clinical Professor

Dr. Joseph Connors

Dr. James Goldie (Emeritus)

Dr. Paul Hoskins

Dr. Grant MacLean

Dr. Robert Nevin Murray

Dr. Susan O'Reilly

Dr. Ian H. Plenderleith (Emeritus)

Dr. Amil Shah

Dr. Hulbert Silver (Emeritus)

Dr. Kenneth Swenerton

Clinical Associate Professor

Dr. Richard Klasa

Dr. Tamara Shenkier

Clinical Associate Professor

Dr. Christopher Coppin

Dr. Christian Kollmannsberger

Dr. Kevin Murphy

Dr. Marianne Taylor

Clinical Assistant Professor

Dr. Sharon Allan

Dr. Abdulwahab Al-Tourah

Dr. Helen Anderson

Dr. Vanessa Bernstein

Dr. Cicely Bryce

Dr. Susan Ellard

Dr. Karamjit Gill

Dr. Cheryl Ho

Dr. Hagen Kennecke

Dr. Kong Khoo

Dr. Margaret Knowling

Dr. Aruna Kommareddy

Dr. Janessa Laskin

Dr. Lyly Le

Dr. Christopher Lee

Dr. Ursula Lee

Dr. Caroline Lohrich

Dr. Nicol Macpherson

Dr. Lee Ann Martin

Dr. Barbara Melosky

Dr. Brian Norris

Dr. Gary Pansegrau

Dr. Ravinder Sawhney

Dr. Laurie Sehn

Dr. David Stuart

Dr. Anna Tinker

Dr. John Yun

Clinical Instructor

Dr. Elaine Bouttell

Dr. Catherine Fitzgerald

Dr. Jason Hart

Dr. Mary MacNeil

Dr. Heidi Martins

Dr. Sanjay Rao

Dr. Sheila Souliere

Dr. Judith Sutherland

Dr. Adrian Yee

MEDICAL ONCOLOGY



Dr. Susan O'Reilly
Clinical Professor and Head
(January 1 - March 31)



Dr. Charles Blanke
Professor and Head
(April 1 - December 31)

DIVISION OVERVIEW

The Division of Medical Oncology, UBC Department of Medicine, comprises medical oncology and scientific staff at the Vancouver Center, Fraser Valley Center, Abbotsford Cancer Center, Vancouver Island Center, and the Center for the Southern Interior, as well as community oncologists throughout the province of British Columbia. In addition to the clinical division, there is a laboratory section (Advanced Therapeutics), comprising senior scientists and clinical investigators who have appointments at the Vancouver Cancer Center, Department of Medical Oncology, and which is located in the British Columbia Cancer Research Center, Vancouver. Medical oncology clinical services are organized as a Provincial Systemic Therapy Program reaching across the Province. Undergraduate teaching occurs in the Vancouver, Victoria and Fraser Valley Cancer centers. Postgraduate teaching occurs primarily at the Vancouver Cancer Center, with additional elective opportunities available at all five cancer centers. UBC clinical faculty at all centers participate in undergraduate and/or resident teaching.

The new \$100,000,000 B.C. Cancer Research Center building opened in early 2005. This state-of-the-art research facility houses a wide range of laboratory research programs including molecular oncology, the Terry Fox Laboratory focusing on hematologic cellular biology and leukemias and core programs in genomic analysis, gene expression profiling, novel imaging and tumor modeling and population based epidemiology and biostatistics. The BC Cancer Agency Genome Sciences Centre continues to forge collaborative projects with several tumor groups within Medical Oncology, including breast cancer, gastrointestinal cancers, and lymphoproliferative neoplasms.

The next five years pose exciting challenges and opportunities. Medical oncologists and hematologists specializing in neoplastic diseases are being actively recruited, to address the rising incidence of cancer related to the aging population, and increasingly complex treatment programs incorporating new targeted small molecules and immunotherapeutic agents. Expanded

opportunities for clinical and translational research are increasingly available, based on the rapid emergence of new knowledge in cancer biology.

Major changes have been underway for Medical Oncology. After 13 years of highly successful leadership, Dr Susan O'Reilly stepped aside as Division Chair, to assume additional responsibilities within her portfolio as Vice President Cancer Care for the BCCA. Dr O'Reilly looks back on a period of extraordinary growth and productivity for the Division of Medical Oncology at BCCA. She led the Division through the opening or expansion of three new Cancer centres, and she has had a pivotal leadership role in the planning of the new facility soon to be opened in Prince George. She has successfully recruited a number of new Medical Oncology faculty. The Division of Medical Oncology thus has new leadership. Dr. Charles Blanke started as Divisional Head in April 2008, and he has already brought significant change to the BCCA. The academic Division has applied for membership within the Southwest Oncology Group (Dr. Blanke heads the GI Cancers section), and he has expanded the University presence within the American Society of Clinical Oncology. Dr Blanke has recruited several new faculty members, with a wide variety of neoplastic experience.

Teaching

The Medical Oncology Undergraduate Training Committee, chaired by Dr. Amil Shah, is active in teaching an introduction to neoplasia via the Principles of Human Biology course in the undergraduate MD program. It also coordinates clinical skills teaching, including the history-physical examination sessions in Internal Medicine. Members of the staff conduct the Academic Half-Day sessions in Medical Oncology during the Internal Medicine clerkship in third year and participate in scheduled bedside teaching. An elective in Medical Oncology is available to UBC and visiting medical students.

The Postgraduate Training Committee, chaired by Dr. Tamara Shenker, offers popular two-month electives in Medical Oncology to internal medicine residents from UBC and other universities. Approximately 10-16 residents per year from these and other specialty disciplines spend elective periods at the Vancouver Cancer Center. Opportunities are available for electives at all of our regional cancer centers and some financial support for travel and accommodation is available for residents choosing one of these options. The Postgraduate Training Committee also plans and supervises the two-year subspecialty-training program in Medical Oncology. This program is based at the Vancouver Cancer Center with elective opportunities at all other centers and in community oncology practice. The three-month elective period may also be applied to laboratory or clinical research. One or two month electives at centers elsewhere in Canada or in other countries may also be considered. This program, now one of the largest programs in Canada, has expanded to enroll four first year and four second year residents and is fully accredited by the Royal College of Physicians and Surgeons of Canada and has consistently received excellent reviews. Additional training positions for overseas residents result in eight or nine trainees participating in this two-year

program at any one time. Currently, residents participate in academic oncology training with excellent exposure to clinical practice, ambulatory care and clinical trials. Residents are expected to conduct clinical research and have a number of publications and presentations to their credit. At least half of our residents from each year recently have competed successfully for post-residency academic subspecialty fellowships that have launched them on promising academic careers. Opportunities to pursue laboratory research projects are available.

Additional teaching includes regular medical student and resident clinical instruction in outpatient clinics of the Cancer Centre, scheduled BCCA lectures to same, participation in 1st and 2nd year problem-based learning modules, and active participation in community outreach/education programs.

All medical staff are active in Professional Development and Knowledge Transfer courses organized by the British Columbia Cancer Agency, other provincial, national and international bodies. Several of our faculty members have emerged as international leaders in their field and are actively sought out to provide leadership within the major international societies, including the American Society of Clinical Oncology, the American Society of Hematology and the American Association for Cancer Research in addition to their contributions to the National Cancer Institute of Canada and its Clinical Trials Group.

Research

Members of the Division are involved in a wide variety of phase I, II, III and IV clinical trials. These include the development of new anti-cancer drugs, the evaluation of new schedules and combinations of drugs in the phase II and III settings, and additional design of and participation in multi-institutional phase III studies and post marketing phase IV trials, evaluating effective new treatments on specific categories of malignancy. Many faculty are involved in population based outcomes projects and clinical trials, most of which are industry sponsored, NCIC-led, or investigator initiated.

Our phase I investigational new drug program has grown rapidly as a reflection of the energy and enthusiasm of the scientists and physicians in the Advanced Therapeutics section of Medical Oncology and in response to the increasing availability of new agents for testing in North America. Our Advanced Therapeutics section is able to evaluate new biological response modifiers, gene therapy and pharmaceutical agents through all stages from in-vitro testing in the laboratory to evaluation in human volunteers.

At the pre-clinical level, studies are being carried out in evaluating anti-angiogenesis agents, gene modifiers, enzyme inhibitors, experimental drug modulators, pre-clinical drug toxicities and molecularly targeted agents such as the new tyrosine kinase inhibitors, immunotherapeutic agents targeted against breast cancer, colorectal cancer, lung cancer and lymphomas.

Clinical Services & Administration

The five B.C. Cancer Centres now provide medical oncology consultations for 10,000 new patients annually, with more than 67,000 ambulatory care visits to these institutions. The Provincial Systemic Therapy Program, headed by Dr. Charles Blanke and aided by Dr. Susan O'Reilly, manages the \$1,030,000 oncology drug budget, which supports the care of more approximately 30,000 patients annually, both within BCCA centers and in community hospitals. Opportunities for health services research projects are available and linkages with the Provincial Tumour Registry and Vital Statistics are readily available. We are uniquely positioned to further develop province-wide population-based research in health outcomes for cancer patients and regularly take advantage of this special opportunity.

Additional Service

Members of the Division serve on numerous UBC committees, including the Academic Promotions Committee for the Department of Medicine, interviewing with Ca RMS, and participating in 3rd year oral exams.

Future Directions

The major academic goal of the Division is to continue to build an outstanding translational research unit that combines the excellent basic science research at the British Columbia Research Center, the input from the Genome Science Centre, the resources of our academic medical oncologists and the participation of our diverse patient population.

British Columbia has consistently shown the best cancer survival statistics in Canada for a number of solid tumours, and we continue to carry out outstanding quality province-wide treatment programs, as well as meaningful clinical and translational research. We strive for continuous improvement in all these areas and in those of health outcomes and economic analyses.

NEPHROLOGY

Division Members

Professor & Head

Dr. Paul Keown

Professor

Dr. Eugene C. Cameron (Emeritus)

Dr. John Price (Emeritus)

Dr. Gary Quamme

Dr. Roger Sutton (Emeritus)

Dr. Norman Wong

Associate Professor

Dr. John Gill

Clinical Professor

Dr. Clifford Chan-Yan

Dr. David Landsberg

Dr. Adeera Levin

Dr. Angus Rae (Emeritus)

Dr. Ron Werb

Clinical Associate Professor

Dr. John Duncan

Dr. Jean Shapiro

Dr. Paul Taylor

Dr. Kit Yeung

Clinical Assistant Professor

Dr. Monica Beaulieu

Dr. Anthony Chiu

Dr. Michael Copland

Dr. Linda De Luca

Dr. Abeer Jamal

Dr. Jacek Jastrzebski

Dr. Olwyn Johnston

Dr. Beverly Jung

Dr. Mercedeh Kiaii

Dr. Peter Neufeld

Dr. Suneet Singh

Dr. Nadia Zalunardo

Associate Member

Dr. Victor Chan

Dr. Aaron Cass

Dr. Gerald Da Roza

Dr. Marlyce Friesen

Dr. Gaylene Hargrove

Dr. Kevin Horgan

Dr. Christopher Jones

Dr. Mohamud Karim

Dr. George Lam

Dr. Sui Lam

Dr. Alex Magil

Dr. Daniel Schwartz

Dr. Robert Starko



Dr. Paul Keown
Professor and Head

DIVISION OVERVIEW

The Division of Nephrology includes 25 current members and 4 emeritus members based at three principal sites: St. Paul's Hospital, Vancouver General Hospital, and UBC Hospital, who provide provincial leadership in research, education, and clinical care within the field of renal medicine.

We congratulate Dr. John Duncan (Clinical Associate Professor), Dr. David Landsberg (Clinical Professor), Dr. Abeer Jamal (Clinical Assistant Professor) and Dr. Bev Jung (Clinical Assistant Professor), who were all approved by the Department of Medicine for promotion, commencing July 1, 2008.

In 2008, we welcomed three new members of the Division:

- Dr. Monica Beaulieu (Clinical Assistant Professor) - general nephrology/dialysis at St. Paul's Hospital, on April 1.
- Dr. Jagbir Gill, Nephrologist - renal transplantation, St. Paul's Hospital, on September 1 (academic appointment pending).
- Dr. Olwyn Johnston (Clinical Assistant Professor) - renal transplantation, Vancouver General, also on September 1.

The Division also welcomed 1 new associate member, Dr. Kevin Horgan, in 2008, for a total of 11, representing the Fraser and Vancouver Island Health authorities, as a result of the expanded presence of the distributed Medical Program of the Faculty of Medicine across BC.

The Division has a strong clinical base and provides integrated and decentralized nephrology care throughout Vancouver Coastal Health, including Richmond, North Vancouver and coastal areas, with a strong working collaboration with Fraser Health. The Division has an important role in the UBC undergraduate medical curriculum, has a mature nephrology postgraduate training program, and participates actively in the Experimental Medicine and Clinical Investigator programs of the Department of Medicine. Research activities encompass both laboratory and clinical sciences, and combine genetic and molecular research, pharmacology and therapeutics, epidemiology and clinical trials, and population health and outcomes/economic investigations in renal disease and transplantation. Members of the Division assume leadership roles in the advancement of nephrology at provincial, national and international levels through their positions in the BC Provincial Renal Agency, BC Transplant, the Vancouver Coastal Health Regional Renal Program, the Kidney Foundation of Canada, the Canadian and International Societies of Nephrology, the Canadian Society of Transplantation, The Transplantation Society (international) and US National Kidney Foundation.

Teaching

The UBC Division of Nephrology is a key component of the tertiary education program for medicine and related health sciences for the University of British Columbia. Through its active undergraduate, graduate, post-graduate and continuing medical education programs the Division is responsible for the training of medical students, interns, residents, subspecialty residents in nephrology, rotating trainees in general medicine, anaesthesia and other relevant disciplines, graduate and doctoral students, and clinical and research fellows. These programs attract trainees from across Canada, and from Australia, Europe, Asia and the Middle East. The primary sites for undergraduate and graduate training are at VGH, SPH/Providence Healthcare and the BC Children's Hospital, with outreach to expansion school locations throughout British Columbia by way of videoconferencing. The Richmond General Hospital and Lion's Gate Hospital, as well as hospitals within the Fraser Health Authority, will increasingly provide a platform for community nephrology training as the Division extends to these locations.

Funding for the educational programs of the Division is provided by UBC, through the BCPRA, and from partnership contributions through the Division of Nephrology. Education in pharmacy and allied health disciplines occurs in the same sites under the auspices of UBC and related professional bodies. In 2008, Divisional program directors included Dr. Suneet Singh (Undergraduate Programs), Dr. Peter Neufeld (Postgraduate Programs), Dr. Adeera Levin (Continuing Medical Education), and Dr. David Landsberg (Fellowship Programs).

Undergraduate

The Division of Nephrology has contributed significantly to implementing the medical school's expanded and distributed curriculum in 2008 and is actively involved in all areas of education throughout the undergraduate program. Dr. Suneet Singh is the Director of Undergraduate Education for the Division of Nephrology, supported by Drs. Copland, Neufeld, Levin, Chan-Yan, Jamal and other members of the Division. Nephrology subspecialty residents are actively involved in clinical case sessions. Dr. Singh and Dr. Abeed Jamal coordinate medical student rotations through Nephrology at the VGH and SPH sites respectively, and Dr. Singh and Dr. Neufeld each organize one week of the 3 weeks of nephrology teaching in the Foundations of Medicine (FMED) course for undergraduate medical students. Dr. Jamal and the administration staff at both sites serve as the student contact for electives and selectives. These rotations receive excellent evaluations and many students return as residents.

Postgraduate

On July 1, 2008, Dr. Peter Neufeld assumed the role of Director of the Postgraduate Education Program, which is widely recognized for the excellence of its clinical training. This highly-structured program encompasses the broad range of basic and clinical renal sciences with formal educational sessions and weekly resident and fellow's rounds. The Program had

5 second-year and 4 first-year trainees enrolled in the core nephrology training as of July 1, and has an outstanding record of successful Royal College examination results. Elective opportunities are provided for subspecialty residents to pursue training in particular aspects of renal medicine, including histopathology, glomerular diseases, community nephrology, dialysis or transplantation, and other components according to their needs and interests. Residents and fellows are encouraged to be active in clinical research throughout their core years, with submissions to and presentations at meetings of the Canadian and American Societies of Nephrology, the American Society of Transplantation, the Canadian Transplant Society, and The Transplantation Society (international).

Fellowship Education

The Division has an active fellowship education program under the direction of Dr. David Landsberg (general/dialysis) and Dr. John Gill (transplantation), which offers advanced and specialist training in clinical or laboratory sciences in many areas of renal medicine including chronic kidney disease, dialysis, transplantation, immunology and genetics/genomics. This training may be combined with formal graduate course work leading to Masters or Doctoral degrees in Experimental Medicine, Health Care and Epidemiology or related disciplines through the Faculty of Graduate Studies. In 2008, the Division hosted 1 postdoctoral research fellow and 2 Canadian clinical fellows, as well as 4 international clinical fellows – 1 from each of Italy, Thailand, Northern Ireland and Ireland.

Continuing Medical Education

Members of the Division participate actively in Continuing Medical Education activities at the local, provincial, national and international levels, and in so doing bring an important measure of prestige to the Department and University. UBC Division of Nephrology rounds are held over 20 times per year, alternating between Vancouver General and St. Paul's Hospital sites, with distinguished speakers invited from throughout North America and Europe. Distinguished Visiting Professors also visit the Division on a frequent basis to present individual seminars or conferences and interact with the members, trainees and staff during their visit. Drs. Levin, Keown, Shapiro and Gill maintained active speaking schedules in national and international meetings, presenting both reviews of key topics and original research in Nephrology and Transplantation, and other members of the Division are gradually acquiring national and international recognition in additional aspects of nephrology.

Research

The Division has a strong and internationally-recognized translational research program in both renal disease and transplantation. Members of the Division currently held over \$6 million in research support in 2008, including grants from Genome Canada, Networks of Centres of Excellence, the CIHR, the MS-FHR and other peer-review agencies, as well as unrestricted industry supported grants, and conventional industry supported

trials. Members of the Division generated more than 30 scientific articles in 2008.

The UBC Division of Nephrology research program is working to: (a) optimize the ongoing academic activities of current members by fostering effective collaboration, (b) ensure effective mentoring for new recruits to maximize their opportunities for academic success and (c) provide formal graduate and post-graduate scientific training for residents and fellows in Medicine, Nephrology and other disciplines, and for students from the Experimental Medicine and Clinical Investigator programs.

The Renal Sciences Program integrates members from the VGH and SPH / Providence Health sites to ensure full participation and collaboration, and to ensure appropriate academic space and resources for the proposed research at both principal hospital sites. The program is funded from multiple sources including peer review agencies, private research contributions, corporate partnerships and the creation of a strong industrial-academic interface. The Division's clinical research activities also include collaborations with research staff at the BC Provincial Renal agency and the iCapture Centre at St. Paul's Hospital.

Our Divisional research unit at St. Paul's Hospital site continued to benefit through 2008 from a well-staffed Research Unit, and strong funding from both industry and peer-reviewed agency support. The unit's staff has significant presence in St. Paul's Comox Building, and includes a Research Manager, Ms. Katy Vela; a number of highly-qualified Research Coordinators including Sheila O'Donoghue, Lina Sioson, Mila Tang, Naama Rozen, Nancy Ferguson, Kathleen Carlson (all in CKD/Dialysis research), Ann Chala and Patrick Altejos (transplantation research); and Ms. Caren Rose, Biostatistician. Sandra Matzek continued to offer administrative support to the SPH research team in 2008.

The Division continued development of a Nephrology Clinical Research Unit (CRU) at the VGH site in 2008, to complement the strong research infrastructure already in place at St. Paul's Hospital. Daniel Rogers was promoted to Research Manager in 2008, and we welcomed Ms. Reena Tut, Clinical Research Coordinator, and Ms. Leigh White, Research Nurse, to the research team at this site. Ms. Kam-Sein Yee continued to offer clinical coordination for the SHARP (Study of the Heart and Renal Protection) Study at this site as well. The unit's biostatistical team, including Senior Statistician Dr. Robert Balshaw and Biostatistician Dr. Guiyun Li continued to offer support to a growing number of industry- and investigator-initiated studies. The CRU continued to contract the services of Ms. Shawna Flynn, project Medical Writer, throughout 2008. Our new and existing staff continued to utilize expansion office space at the Gordon and Leslie Diamond Health Care Centre, acquired with research grant funding in October 2007.

Divisional members are actively involved in two major streams of research:

Laboratory Sciences

- Dr. Quamme's research is focused on differential expression analyses that identify novel genes involved with magnesium transport and metabolism in human kidney. Using expression systems his group has experimentally characterized these transcripts offering novel clinical approaches to diagnoses of diseases. Dr. Quamme continues this line of investigation through identification of key molecular targets, regulation of gene expression, and cell signaling events.
- Dr. Wong's research activity continues to explore the role of vasocative peptide in regulating the expression of vasopressin V2 receptor expression in the inner medullary collecting duct of the kidney, and of other vasoactive peptides including endothelin and AQP4 on the kidney, heart and brain.
- Dr. Keown's research has targeted the mechanisms, modulation and consequences of the immune response in organ transplantation and autoimmune disease, combining studies in molecular genetics, cell biology, pharmacokinetics and dynamics. Dr. Keown continues to co-lead a Genome Canada-funded (\$9.1 million) search for predictive biomarkers of acute and chronic allograft rejection in heart, kidney and liver transplant recipients. This program is now being extended to explore biomarkers and disease mechanisms in glomerular injury and autoimmune diseases.
- Dr. Gill, a Michael Smith Scholar and Vice President of the Canadian Organ Replacement Register, has pioneered the investigation of alloimmunity following transplantation with the monitoring of anti-donor HLA antibodies using novel solid-phase fluorescent methods for antibody detection. Continuing research will build upon these above studies using newly established DNA/RNA banking facilities, signal analysis and high-throughput genomics and proteomic methods for molecular targeting, to investigate disease risk and therapeutic response genes, immuno pharmacodynamics /pharmacogenomics and measures of operational tolerance.

Clinical Sciences

Chronic Kidney Disease (CKD):

- Dr. Levin's research encompasses the broad range of epidemiology, outcomes, and health policy in chronic kidney disease. Particular interests include the impact of anemia on renal co-morbidity, analysis of cardiovascular disease risk in patients with impaired renal function, strategies for and benefits of co-ordinated care for chronic kidney disease, the role of vitamin D in bone health and clinical outcome, measures of renal function, and societal measures of renal disease burden. Dr. Levin leads an active clinical training program for researchers in clinical epidemiology, translational physiology and health outcomes, which has 1 clinical scholar and 3 clinical research fellows participating. Of note, two of the research fellows

have been referred here from international sources (UK and Italy). Dr. Levin holds a MSHRF planning award for additional research into complex disorders, and supervised two international fellows (from Italy and the UK) in 2008. CANPREDDICT is a newly funded large study (\$5 million) which aims to improve our understanding of CKD progression and CVD progression in a Canadian cohort of 2500 patients. This observational cohort study will collect blood samples, clinical and demographic data on these patients over a 2 year period, and seeks to characterize the population with specific attention to biomarker profiles of vascular health, inflammation, ischemic heart disease and heart failure. This grant is investigator-initiated and supported by an unrestricted industry grant.

- Dr. Chiu is principal investigator on a number of proteinuria studies.
- Dr. Beaulieu, who joined the Division in 2008 at the St. Paul's site, has a keen interest in health outcomes and system redesign issues, especially as related to CKD care. She is currently involved in formal evaluation of an integrated care clinic, and is the provincial lead for evaluating pharmacy services in the province, as well as provincial vascular access initiatives.
- Dr. Yeung was a co-investigator with the continent-wide EVOLVE study, looking at acute kidney injury following cardiac bypass surgery.

Dialysis:

- Drs. Taylor and Singh are involved in national and international studies in peritoneal dialysis - namely, the assessment of mineral metabolism abnormalities of in PD patients and evaluation of outcomes of bedside PD catheter insertion. Plans for integrating additional physiological and health outcomes studies are being developed.
- Dr. Copland, as director of the provincial Home Hemodialysis program, has developed a program of enquiry focusing on health outcomes in HHD. as well as exploration of the utility of specific biomarkers in HHD patients. In collaboration with colleagues across the country, he has developed CANSLEEP, a multi-centre national consortium, looks at intensive hemodialysis modalities. In 2008, he was also involved in a large NIH study looking at nocturnal dialysis populations.
- Drs. Kiaii and Jastrezkbi have developed a series of studies relating to vascular access outcomes in HD patients.
- Dr. Zalunardo is conducting an investigator-initiated study looking at supplementation of vitamin B12 in hemodialysis patients, to ascertain whether it will improve indicators of vitamin B12 deficiency

Renal Transplantation:

- Dr. John Gill has established an important platform of clinical research in the epidemiology of renal transplantation, which has examined the impact of increased donor age and recipient waiting times on outcomes of renal transplantation, the potential survival advantage of pre-emptive transplantation, the progression of kidney disease in native and grafted organs, and the incidence and consequences of cardiovascular disease during the waiting period. Dr. Gill is the recipient of a major CIHR award to further this research base.
- Supported by a grant from the CIHR, Dr. Keown continued research in 2008 employing computer models to explore therapeutic interventions, health outcomes and service delivery in transplantation. Along with two other co-investigators, Dr. Keown was the successful recipient this year of a \$15 million Network of Centres of Excellence grant entitled PROOF. This collaboration, led by the Providence Heart + Lung Institute, VCH Research Institute, and University of British Columbia and other partners across BC, Alberta, and North America, will focus on the development of blood and urine biomarkers to aid in the prevention and effective early detection of major diseases that cause heart, lung and kidney failure. In 2008, this same team also received a \$3.5 million grant continuation from Genome Canada for their Biomarkers in Transplantation project, utilizing a team of researchers and resources at the iCapture Centre at St. Paul's Hospital to develop a more precise, accurate and sensitive method of detecting early and/or discrete tissue rejection in heart, lung and kidney transplant patients.
- Dr. Shapiro is engaged in outcomes related research in clinical transplantation, including studies of post-transplant diabetes, predictors and management of malignancy post-transplant, and pharmacokinetic, pharmacodynamic, and pharmacogenetic studies of immunosuppressive agents in transplant recipients. In collaboration with the Department of Neuropsychology at Simon Fraser University, she supervised two graduate students in research related to neurocognition in chronic renal failure and transplantation.
- Dr. Jagbir Gill, who joined the Division on September 1, 2008, has conducted research to examine interactive predictor variables in the aging living donor transplant population, with the objective of developing readily applicable estimators of recipient outcome based on multivariate logistic regression models.
- Dr. Olwyn Johnston, who also joined the Division on September 1, 2008, is doing research in post-transplant diabetes mellitus, a problem of increasing magnitude and severity in renal transplantation, and a major therapeutic challenge. The ability to accurately identify risk predictors and mechanisms at the genomic and molecular level will have great importance in this disorder, and offers the promise for effective intervention.

- The Division has a strong commitment to clinical and therapeutic trials, with many continuing single and multi-centre Phase II - Phase IV studies. Further integration of the clinical research program will enable the introduction of advanced study methods and trial designs, and will permit all members of the division to become actively involved in the evaluation of new and innovative treatments.

Clinical Services

The renal services provided by the Division of Nephrology operate within a broad provincial context with established clinical guidelines, provincial contracts, information systems, central administration and co-ordination for education and other projects. This affords the Division an opportunity to be both a key contributor to and a beneficiary of provincial policies, projects and experience. British Columbia is widely recognized to be at the forefront of renal care delivery, with active programs for the early detection of renal disease in the population, multi-disciplinary coordination of care, delivery of dialysis therapy in the community or at home, and novel approaches to renal transplant donation. The BC Provincial Renal Agency (BCPRA) coordinates the development and integration of renal services, funding, establishment of standards and guidelines, and works in collaboration with each of the health authorities to ensure equal access to care for all patients living with kidney disease. The BC Transplant Society coordinates the funding and oversight of renal and other solid organ transplant services and the retrieval of cadaveric organs and tissues.

Within this framework, renal care delivery is based on established principles of integrated chronic disease management through a combination of institutional, community and home-based programs. Three tertiary care teaching hospitals, the Vancouver General Hospital (VGH), St. Paul's Hospital (SPH Providence Healthcare) and BC Children's Hospital (BCCH), collaborate to provide ambulatory chronic renal disease care, in-patient management, plasma exchange (SPH), hospital dialysis and renal transplantation, and home hemo- and peritoneal dialysis for adult and pediatric patients with renal disease throughout the Vancouver Coastal Health and sections of the Fraser Valley region. The home hemodialysis program, headed by Dr. Michael Copland, is now one of the largest of its kind in North America. Dr. Singh is heavily involved in improving patient education about dialysis, and working with multidisciplinary teams to promote home dialysis in our region. With her assistance, the peritoneal dialysis (PD) program worked to establish the first long term care facility to do PD as a pilot project with measured outcomes. Community hemodialysis is conducted as an integrated program in six units, supported by three hospital-based units, and renal consultation is provided at Lion's Gate Hospital and Richmond General Hospital. Almost 3,000 patients with chronic renal disease currently receive care within VCH, of whom over 1,000 have progressive CKD, almost 800 are on dialysis, and a further 800 have a functioning renal transplant. Recent figures estimate that many more subjects within this region may have chronic renal dysfunction without knowledge of the fact so that further innovation, coordination and integration of services will be essential to meet the impending challenge

over the next decade and to improve maintain the standards of care already established by the Division.

In 2008, the Division recruited one new transplant nephrologist (Dr. Jag Gill - SPH and Dr. Olwyn Johnston - VGH) at each of the two main Vancouver hospital sites on September 1. We also welcomed Dr. Monica Beaulieu to the general nephrology team at St. Paul's Hospital on April 1.

Service To Community

Members of the Division of Nephrology play a key role in many University, academic community and volunteer organizations in Canada and around the world.

Dr. Levin serves as Director of the BC Provincial Renal Agency, and Chair of the Curriculum Committee of the KRESCENT program, a collaboration between the Kidney Foundation, the Canadian Society of Nephrology and CIHR, established to enhance clinical research science training and career development. She serves as subject editor for Nephrology, Dialysis, Transplantation (NDT), and is on the editorial board of NDT, American journal of Kidney Disease (AJKD) and Clinical Journal of the American Society of Nephrology (CJASN). She reviews for major journals in internal medicine and nephrology, as well for national and international granting agencies (Kidney Foundation, CIHR, NIH, Kidney Research UK, Hong Kong Kidney Research, Physician Services, and Alberta Health and Wellness),

Dr. Gill is Vice-Chair of the American Society of Transplantation Guidelines Committee, Chair of the CST Communications Committee, and sits on the Steering Group for CCDT IM/IT Development and the Steering Committee for the CCDT Organ Allocation Forum. He is also involved in peer-review activities with the NIH, Kidney Foundation of Canada, Physician's Services Incorporated, and National Kidney Foundation. He is also the Chair of the Canadian Organ Replacement Registry (CORR).

Dr. Keown is a member of Council of the Transplantation Society and Chair of the National Organizing Committee for the XXIII International Congress to be held in Vancouver in August 2010. He is involved in numerous university, granting body and scientific journal committees.

Dr. Copland brings significant contributions to the Kidney Foundation of Canada as: Immediate Past Chair of the National Medical Advisory Committee, and current Chair of the National Public Policy Council. He remains active as a member of the National Public Policy and National Patient Services Committees.

Dr. Landsberg, Physician Program Director and Head of the Division of Nephrology for Providence Health Care/St. Paul's Hospital, serves as Member of both the St. Paul's Hospital Medical Advisory Committee and BC Transplant Society Medical Advisory Committee,.

Dr. Shapiro is Medical Director of the Solid Organ Transplantation Program at Vancouver General Hospital and a member of the BC Transplant Medical Advisory Committee.

Dr. Jastrzebski continues to serve as Member of the Canadian Society of Nephrology's Ad Hoc Committee for the Prevention of Infection in the Hemodialysis Unit. He also serves within the Vancouver Coastal Health region on the City-wide Hemodialysis Committee, the Vancouver Coastal Community Dialysis Committee, the Project Charter for Disaster Committee, the Pilot Project for TB Control (Provincial Guidelines for TB Control in the CKD Population), and as an ad hoc member of the Provincial Vascular Access Committee.

Dr. Chan-Yan is Chair of the St. Paul's Hospital Department of Medicine Finance Committee, and sits on the University Clinical Faculty Appointment and Promotion Committee.

Dr. Singh is a speaker at the BC Provincial Renal Agency's Peritoneal Dialysis education day, and on the Organizing Committee for their annual B.C. Nephrology Days. She is also a reviewer for the journals Peritoneal Dialysis International (PDI) and Nephrology Dialysis Transplantation (NDT).

Administration

The main Divisional office continued in 2008 to be located in the state-of-the-art Gordon and Leslie Diamond Health Care Centre, utilizing over 6,000 ft² to meet the needs of its expanding academic and research programs, complementing the administrative research space allocated in the Comox Building at St. Paul's Hospital to provide further opportunities for renal research.

Dr. Paul Keown, Professor of Medicine, continued in 2008 as Head of the Division of Nephrology, Director of the VGH Immunology Laboratory, and Director of the VCH Regional Renal Program. The Division has continued to build an effective administrative and financial infrastructure to support growth and development. Mr. Shawn Jorgensen was promoted to Senior Administrator of the Division in 2008.

All aspects of our Divisional education programs, including undergraduate, postgraduate and fellowship activities, continued to have strong support in 2008 from Ms. Pam Sewell at the St. Paul's Hospital site. Mrs. Tammie Davis, located at the main Divisional office at VGH, continued in her role as Program Administrator in 2008, overseeing responsibilities for education program administration, and providing assistance in financial administration and patient relations.

Plans are already underway for 2009 to add administrative and research personnel to fulfill the clinical service, teaching and research goals and objectives of our growing Division.

Future Directions

The Division will continue to build on its strengths to ensure the highest quality of academic and clinical activity for the University, the health system, and the community. The Division received hospital and Foundation leadership approval in September 2008 to develop a \$10 million fundraising campaign to develop a Centre of Innovation in Renal Sciences, with the support of both the VGH & UBC Hospital Foundation and St. Paul's Hospital Foundation. This Centre will integrate existing activities in the fields of laboratory and clinical sciences and expand into novel areas of cutting-edge research. The Division also gave impetus in 2008 (in concert with the Dean of Medicine's office, the Heads of the UBC Departments of Medicine, Medical Genetics, Pathology, Surgery and Urologic Sciences, and the VCH Research Institute, as well as many of the 17 Division Heads of the Department of Medicine) to the creation of an Institute for Translational and Regenerative Medicine, bringing together several Centres and programs to create synchronicities and economies of scale and foster the development of research activities. Plans are being developed for an early-2008 developmental meeting on that front. On April 18, a standing-room-only meeting was held at the VGH site with nearly 20 leaders representing various hospital and university entities, and interest in development of this Institute received unanimous support. Development on the project will continue in 2009.

In 2008, the Division initiated discussions with the Dean's Office and other interested stakeholders at UBC and hospital sites in the development of a general Phase 1/Phase 2 Clinical Trials Unit. This much-anticipated Unit, using models from similar centres in Edmonton and other Canadian cities, will partner with industry to develop novel research studies of benefit to the health and wellbeing of the more than 2.5 million residents of the Lower Mainland and beyond. Interest has already been expressed by several industry partners in the development of this project, and work is now underway to develop a proposal and blueprint for this new Unit.

The Division will continue to take a major role in the teaching of Renal Sciences within the University, continue its leadership position in nephrology postgraduate education, and introduce innovative initiatives in the delivery of integrated regional care for patients with renal disease.

Professor & Head

Dr. Howard Feldman

Professor

Dr. Jason Barton
 Dr. Donald Calne (Emeritus)
 Dr. Neil Cashman
 Dr. Doris Doudet
 Dr. Andrew Eisen (Emeritus)
 Dr. Judy Illes
 Dr. Seung Kim (Emeritus)
 Dr. Joel Öger
 Dr. Brian Pate (Emeritus)
 Dr. Steven Pelech
 Dr. Peter Rieckmann
 Dr. Jon Stoessl
 Dr. Vincent Sweeney (Emeritus)
 Dr. Joseph Tsui
 Dr. Yu Tian Wang

Associate Professor

Dr. Armin Curt
 Dr. Raul De la Fuente-Fernandez
 Dr. Lorne Kastrukoff
 Dr. Martin McKeown

Assistant Professor

Dr. Claudia Jacova
 Dr. Anthony Traboulsee
 Dr. Helen Tremlett

Clinical Professor

Dr. Andre Anzarut (Emeritus)
 Dr. Paul Bratty (Emeritus)
 Dr. Stanley Hashimoto (Emeritus)
 Dr. Gordin Robinson
 Dr. Philip Teal

Clinical Associate Professor

Dr. Jeff Beckman
 Dr. John Hooge
 Dr. Manouchehr Javidan
 Dr. Michael Jones
 Dr. Robert Keyes
 Dr. Charles Krieger
 Dr. Sian Spacey
 Dr. Milton Wong (Emeritus)

Clinical Assistant Professor

Dr. Christopher Bozek
 Dr. Hannah Briemberg
 Dr. Stephen Clarke
 Dr. Anthony Costantino
 Dr. Virginia Devonshire
 Dr. Dean Foti
 Dr. Gillian Gibson
 Dr. Sherri Hayden
 Dr. Ging-Yuek Robin Hsiung
 Dr. Dean Johnston
 Dr. David Katz
 Dr. Jeffrey Martzke
 Dr. Michelle Mezei
 Dr. Colleen Murphy
 Dr. Alister Prout
 Dr. Brian Thiessen
 Dr. Andrew Woolfenden

Clinical Instructor

Dr. Nicholas Bogod
 Dr. Kristine Chapman
 Dr. Bradley Hallam
 Dr. Penelope Smyth
 Dr. Charles Tai
 Dr. Tiffany Townsend
 Dr. Michael Varelas
 Dr. Samuel Yip

Associate Member

Dr. Duncan Anderson
 Dr. Peter Boulton
 Dr. Todd Collier
 Dr. Lyle Daly
 Dr. John Diggie
 Dr. Susan Forwell
 Dr. Douglas Graeb
 Dr. Kennely Ho
 Dr. Trevor Hurwitz
 Dr. Blair Leavitt
 Dr. David Li
 Dr. Ian Mackenzie
 Dr. George Medvedev
 Dr. Wayne Moore
 Dr. Jeffrey Oyler
 Dr. Lynn Raymond
 Dr. Adele Sadvnick
 Dr. Robert Stowe
 Dr. Galina Vorobeychik
 Dr. Rosemary Wilkinson

Adjunct Professor

Dr. Daniel Bub
 Dr. Joachim Ostermann
 Dr. Vesna Sossi
 Dr. Thomas Ruth

NEUROLOGY



Dr. Howard Feldman
 Professor and Head

DIVISION OVERVIEW

The Division of Neurology has major teaching, research and clinical activities at Vancouver General Hospital, UBC Hospital, and St. Paul's Hospital. There are 53 Neurology faculty members whose primary appointment is in the Division, with another 20 appointed as associate members, 4 as adjunct professors and 9 as emeritae. The Division continues to expand its breadth of membership to include a broader range of neuroscience disciplines. There is a strong emerging core of basic bench neuroscientists, clinical neuropsychologists and cognitive neuroscientists.

The Division is nationally and internationally recognized for its clinical and research programs in multiple sclerosis, neurodegenerative disorders including the dementias, motor neuron disease and Parkinson's disease, and stroke. It has been consistently extremely successful in obtaining peer reviewed grant funding from agencies in Canada and internationally with a total of \$9,940,000 for the year 2008. Divisional members make important contributions to both basic neuroscience and clinical neurological literature. This past year, divisional members published more than 211 papers in peer-reviewed journals. Clinically, the Division provides province-wide tertiary and quaternary care for a variety of neurological disorders. The Division has clinical outreach to many communities around the province. Faculty members are actively involved in teaching and supervising all levels of students and trainees from undergraduate to post doctoral fellows. The Residency training program in Neurology is the largest in the country.

Among the highlights for the Division in the past year was the successful negotiation of an alternate payment plan for a Stroke service. This service, which will commence March 1, 2009, will provide comprehensive urgent assessment and ongoing management as well as assessment of patients with transient ischemic attacks. The Stroke service was also joined by Dr. Samuel Yip in 2008. 2008 marked the official inauguration of the National Core for Neuroethics at UBC, led by Dr. Judy Illes. Dr. Raul de la Fuente-Fernandez was recruited back to UBC as the James A. Moore Chair in Parkinson's Research.

During 2008, work continued on the development of the Centre for Brain Health, in which Neurology is heavily engaged. At the end of 2008, Dr. Howard Feldman took a leave from UBC in order to take on the role of Vice President and Therapeutic Area Head, Global Clinical Research, Neuroscience at Bristol-Myers Squibb. Dr. Jon Stoessl has agreed to serve as Acting Head.

Teaching Programs

Undergraduate

The Division is involved in providing instruction to UBC medical students (250) during the Brain and Behavior section of Phase Two. Division members lecture within the didactic calendar on topics such as headache, dementia, multiple sclerosis, Parkinson's disease and neuromuscular disorders.

The Neurosciences Clinical Skills course gives students 18 hours of small-group instruction (6 - 8 students) in learning to perform a neurological examination. This consists of 32 student groups scheduled between January and May using on average 24 neurologists from the Division (includes VGH, UBCH and SPH staff).

Support materials have been developed and these are disseminated to distant sites as printed and video material. These sessions have been enhanced by the recruitment of volunteer patients who are used to demonstrate common deficits found on neurological examination.

During third year, all Vancouver-based students participate in a small-group (2 - 4 students) bedside session. They evaluate a patient with neurological disease following which a Division member provides direct instruction.

Students enrolled in the Vancouver program are provided with a two hour seminar reviewing the neurological examination and other topics in neurology. This is scheduled at VGH during the first week of their medical CTU rotation and is simulcast to distant sites (SPH, Royal Columbian and Royal Jubilee Hospitals).

A 4-week elective/selective is offered in third or fourth year (guidelines attached) to any UBC medical student. On average, 15 - 20 students participate at either SPH or VGH sites in a primarily inpatient rotation. At VGH, students may be scheduled to Neurology as part of their medical CTU training. In addition, the Division accepts students from Canadian and accredited foreign medical schools for elective study.

Faculty associated with the Division provide clinical teaching in the Vancouver Island and Prince George programs.

Postgraduate

The Post Graduate Residency Training in Neurology is fully accredited with the Royal College of Physicians and Surgeons. It currently has 24 residents at various levels of training from PGY1 to PGY5. In the first two years of the program, the residents rotate through various subspecialties in Internal Medicine, ICU, Emergency, as well as doing their first Neurology rotations. The PGY3-5 years are core Neurology training years. Residents do their inpatient training at Vancouver General Hospital and St. Paul's Hospital. Many outpatient subspecialty clinics are done at UBC Hospital. During their training, the residents in Neurology are actively involved in various research projects. In 2008, there were 8 resident poster presentations at various international meetings and 6 abstracts published in

peer-reviewed journals. Dr. Omar Ayoub, the chief resident in Neurology was awarded a Resident Scholarship Award for the American Academy of Neurology Annual Meeting in 2008. Dr. Natalie Briscoe was awarded the Best Neurology Resident's Research presentation at BC Neuroscience Day in 2008.

A Divisional web site has been developed with postgraduate component including schedules, scientific papers and future projects. The web site was developed by Dr. Naveen Deshpande (R3) with input from our divisional staff.

There are 5 CaRMS positions for academic year 2008-2009.

Graduate, Doctoral, Postdoctoral Students and Fellows:

The Division has an active program supporting students at all levels of neuroscience and neurology training. In 2008 there were 30 trainees mentored by Divisional faculty:

Alzheimer's Disease and Related Disorders: Fellows: Dr. Naga Kandiah (Singapore), Dr. Ummamon Puanthong (Thailand), Dr. Itthipol Tawankanjanachot (Thailand).

Parkinson's Disease and Movement Disorders (Pacific Parkinson's Research Center): Clinical fellows: Dr. Nandhagopal Ramachandiran (India), Dr. O.K. Sujith (India), Dr. Bijju Gopalakrishnan (India), Dr. Renju Kuriakose (India), Dr. Silke Cresswell (Germany).

Multiple Sclerosis and MRI: Post-doctoral fellow: Dr. Raed Al Roughani (Kuwait), Dr. Jameelah Saeedi (Saudi).

Neuromuscular Diseases: Dr. Areej Bushnaq (Saudi).

Neuro-ophthalmology: Clinical fellows: Dr. Martin Sutton-Brown (Calgary), Amadeo Rodriguez (Argentina), Dr. Pedro Lagleyze (Argentina), Dr. Travis Pollock (South Africa), Dr. Anand Moodley (South Africa), Amir Mani (Singapore); Clinical research fellow: Dr. Mathias Abegg (University of Bern, Switzerland) Post-doctoral research fellows: Dr. Ann Marie Grbavec (Computational modeling, Simon Fraser University), Dr. Giuseppe Iaria (Neuropsychology, University of Rome, Italy), Dr. Linda Lanyon (Computational neuroscience, University of Plymouth, UK), Ipek Oruc (Neuropsychology, New York University, NY), Dr. Michael Scheel (Psychiatry, University of Berlin, Germany), Dr. Wieske van Zoest (Cognitive psychology, Vrije Universiteit Amsterdam, Netherlands) Graduate students: Kirsten Dalrymple, MSc program psychology, UBC. Chris Fox, PhD program neuroscience, UBC.

Neuroethics: Post-doctoral fellows: Kate Tairyan, MD, MPH, Senior Research Fellow; Daniel Buchman, BA, MSW, Research Fellow.

Stroke: Dr. Naser Alotaibi (Saudi), Dr. Jamelah Alghalbi (Saudi).

Vancouver General Hospital Neurology Service (Clinical Teaching Unit)

The in-patient service at VGH consists of a 14 beds unit located on T5 and 6 of the Pattison Pavilion. This unit is the only dedicated hospital neurology clinical teaching unit (CTU) in the province and has within its mandate the provision of tertiary care for complex neurological disorders. The inpatient program features a specialized seizure monitoring unit and Acute Stroke Unit. Life, Limb and Threatened Organ policies approved by the Vancouver Acute Medical Advisory Committee are in place for accepting acute stroke patients, as well as other neurological disorders requiring a higher level of care.

A large percentage of all stroke patients presented to the emergency room at VGH are now admitted to the Neurology service for acute management of the first 5-7 days of their post stroke care. From there the stroke pathway includes transfer to the Subacute Stroke Unit (now located on T6-A) or other appropriate rehabilitation facilities or home.

A joint initiative between the UBC Division and VA has been successful in instituting an alternate payment plan allowing specialized stroke neurologists to be actively involved in stroke care throughout the continuum. This service will be initiated in early 2009 and promises to be a major advance for this patient population.

The VGH and UBCH neurologists provide important consultation services within Vancouver Acute. Neurological diagnostic services at VGH include electroencephalography (EEG), intra-operative monitoring (IOM) and electromyography (EMG).

Ambulatory services provided include subspecialty clinics for movement disorders, multiple sclerosis, headache, ALS, Alzheimer's disease and other dementias, stroke, neuromuscular disease, and neuro-oncology.

These clinics integrate with a strong research environment for each of these programs, which in turn form the core of the academic mission of the Division. The clinics also provide important post-graduate educational activities for trainees within the Division.

St. Paul's Hospital: Division of Neurology

The Division of Neurology at St. Paul's Hospital now comprises a faculty of 7 active clinicians and clinician scientists as well as two clinical Emeritus members. The Division of Neurology at St. Paul's Hospital has continued its longstanding traditions of excellence in clinical teaching and patient care. In addition, active participation in clinical neurological research programs continues as well. The inpatient activities of the Division are based at St. Paul's Hospital. However, active and busy consultative services are maintained at St. Paul's Hospital, Mount St. Joseph's Hospital and B.C. Women's Hospital.

Active and busy ambulatory Neurology clinics devoted to general Neurology are located in the Neurology/Neurophysiologi-

cal Department at St. Paul's Hospital. A specialized Neurology clinic related to the neurological complications of HIV/AIDS is located in the Infectious Disease Clinic at St. Paul's Hospital. Additionally, an active and busy ambulatory Neurology Clinic devoted to general Neurology is located in the outpatient department at Mount St. Joseph's Hospital. A wide range of clinical services related to general neurology, HIV/AIDS, cerebrovascular disease/stroke, neuromuscular diseases, epilepsy, multiple sclerosis and the neurological complications of pregnancy are provided through these many outpatient clinics.

Large numbers of First Nations patients and patients of many different racial and ethnic origins are seen on the St. Paul's Hospital Neurology Consultation Service; on the St. Paul's Hospital inpatient service; and in all of the neurology and neurophysiology clinics provided by the Division of Neurology at St. Paul's Hospital in Vancouver as well as in hospitals and communities throughout British Columbia and the Yukon Territories.

The neurophysiology laboratories are located at St. Paul's Hospital and the activity levels have continued to increase over the past several years. EEG, EMG and Evoked Potentials Studies services are provided within these laboratories for all inpatients and outpatients associated with the entire Providence Health Care System and the associated referral base. Some intraoperative neurophysiological capabilities exist as part of the neurophysiology laboratory services. These laboratories provide a significant resource to the entire Providence Health Care community and associated referral base.

The Division of Neurology at St. Paul's Hospital carries out active undergraduate and postgraduate clinical training. Clinical training includes a Royal College accredited specialty training program in neurology that is provided at the undergraduate level primarily to students in the Faculty of Medicine at the University of British Columbia, but also to medical students from other universities throughout Canada from across Canada and abroad. Clinical training in Neurology is also provided at the postgraduate level to residents training in Royal College accredited specialty training programs in neurology; internal medicine; physical medicine and rehabilitation; pediatric neurology; psychiatry; and neuropsychiatry. The main research areas are related to clinical problems in neurology and include stroke prevention, acute stroke management, multiple sclerosis therapies and small fiber neuropathy therapies.

Teaching

The Faculty within the Division of Neurology at St. Paul's Hospital maintains widespread and substantial contributions to education within the Faculty of Medicine and in the community.

Undergraduate

The Undergraduate Training Program in the Division of Neurology at St. Paul's Hospital is under the direction of Dr. Alister Prout. The Division maintains a significant contribution to the undergraduate medical education program through rotations of medical students on the inpatient, outpatient and consultative services at St. Paul's Hospital. In addition, regular teaching at

clerkship half days and on Professors Rounds remains part of the Faculty commitment to undergraduate medical education. Additionally, the Faculty regularly participates in formal bedside clinical neurological examination during several years of the undergraduate medical education program. Medical students are primarily from the University of British Columbia, but medical students from other universities in Canada rotate through the Neurology Service at St. Paul's Hospital. The Faculty within the Division of Neurology at St. Paul's Hospital is always rated very highly as to their teaching skills by the undergraduate medical students. Finally, the Faculty regularly provides didactic and practical teaching sessions to all undergraduate medical students as part of their daily activities on the neurology service at St. Paul's Hospital.

Postgraduate

The Postgraduate Training Program in the Division of Neurology at St. Paul's Hospital is under the direction of Dr. Alister Prout. The Division maintains a leading role and a high profile in the teaching of resident trainees at multiple levels. Residents from neurology; internal medicine; physical medicine and rehabilitation; pediatric neurology; psychiatry and neuropsychiatry all rotate through the various services within the Division of Neurology at St. Paul's Hospital. The majority of the residents come from the University of British Columbia. However, residents from other universities in Canada also rotate through the Division of Neurology at St. Paul's Hospital. The Faculty within the Division of Neurology at St. Paul's Hospital is always rated very highly as to their clinical expertise and teaching skills by postgraduate trainees. The St. Paul's Hospital Neurology rotation is highly sought after by residents in all training programs. Regular seminars as well as practical bedside teaching sessions are provided by each member of Faculty as part of their daily activities at St. Paul's Hospital.

Other Trainees

The Division of Neurology at St. Paul's Hospital is also responsible for the training of neurophysiology technology students from BCIT and BC Children's Hospital. These students regularly rotate through the Clinical Neurophysiology Laboratories at St. Paul's Hospital. The St. Paul's Hospital Clinical Neurophysiology rotation is highly sought after by neurophysiology students.

Continuing Medical Education

Faculty members within the Division of Neurology are regularly involved in continuing medical education activities both within the Department of Medicine and Division of Neurology as well as outside the Department of Medicine. Many Division members participate as Faculty members in seminars, conferences and other programs centered at St. Paul's Hospital, centered at other teaching hospitals within the University of British Columbia and in other community hospitals. The Faculty members from the St. Paul's Hospital Division of Neurology are regularly asked to speak on topics arising from all subspecialty areas within the discipline of clinical Neurology.

Outreach Programs

The Faculty of the Division of Neurology at St. Paul's Hospital continues to maintain active and regular on-site general neurology and subspecialty neurology clinics through a series of outreach programs. The many outreach programs provided by the Faculty of the Division of Neurology at St. Paul's Hospital have been in operation for many years. These outreach programs include close liaisons with other Vancouver teaching hospitals within the Faculty of Medicine and University of British Columbia as well as other community hospitals throughout the Province of British Columbia and the Yukon Territories. Other teaching hospitals within the University of British Columbia to which various Faculty members from the Division of Neurology regularly attend include the following: Vancouver General Hospital; Mt. St. Joseph's Hospital; UBC Hospital; B.C. Women's Hospital; and B.C. Children's Hospital. At the Vancouver teaching hospitals, various St. Paul's Hospital Division of Neurology Faculty members participate regularly in subspecialty programs related to the following conditions: multiple sclerosis; peripheral neuropathy; myasthenia gravis; pediatric & adolescent neuromuscular diseases; and neurological complications of pregnancy. The aforementioned programs are all provincially based programs providing subspecialty tertiary neurology services to the province of British Columbia.

The many community-based neurology outreach programs provided by the Faculty members of the Division of Neurology of St. Paul's Hospital include general neurology clinics, neurophysiology clinics and some subspecialty neurology clinics, particularly related to multiple sclerosis. The outreach programs result in the physical presence of many St. Paul's Hospital Division of Neurology Faculty members in other teaching and community hospitals throughout British Columbia and the Yukon Territories. Faculty members from the Division of Neurology at St. Paul's Hospital regularly provide on-site general neurology and neurophysiology clinics in the following communities and their surrounding areas: Sechelt, Gibsons, Squamish, Terrace, Kitimat, Prince Rupert and Whitehorse. In addition, tertiary subspecialty multiple sclerosis neurology clinics are also provided in the following communities: Prince George, Fort St. John and Kitimat. As a result of the longstanding on-site community neurology clinics, all Faculty members within the Division of Neurology at St. Paul's hospital receive regular requests for telephone consultations from family physicians and other specialists in the indicated hospitals and communities. These activities serve the local hospital and community needs and provide additional teaching and clinical experiences for the students, residents and fellows rotating through the Neurology Service at St. Paul's Hospital.

Dr. Andre Anzarut pioneered the concept of neurology outreach to peripheral communities many years ago. Dr. Anzarut continues to actively participate in regularly scheduled general neurology clinics in Sechelt and Gibsons. Dr. Anzarut has recently stopped going to Whitehorse, Yukon Territories.

Dr. Kristine Chapman participates on a weekly basis in the Myasthenia Gravis Clinic and Peripheral Neuropathy Clinic at Vancouver General Hospital. These clinics are provincially

based programs providing subspecialty tertiary neurology services to the Province of British Columbia and Yukon Territories. In addition, Dr. Chapman has recently started participating in a regular general neurology clinic and neurophysiology clinic in Whitehorse, Yukon Territories.

Dr. Stephen Clarke participates on a regular basis in general neurology clinics and neurophysiology clinics in Terrace, British Columbia.

Dr. John Hooge participates on a weekly basis in the Multiple Sclerosis Clinic at UBC Hospital and in other multiple sclerosis clinics in Kitimat, Fort St. John and Prince George. The multiple sclerosis clinics are provincially based programs providing subspecialty tertiary neurology services to the province of British Columbia and Yukon Territories. Dr. Hooge also participates regularly in general neurology clinics in Kitimat, British Columbia.

Dr. Dean Johnston participates on a weekly basis in general neurology clinics and neurophysiology clinics in Squamish, British Columbia.

Dr. Robert Keyes participates on a weekly basis in the Pediatric & Adolescent EMG & Neuromuscular Clinic at BC Children's Hospital. This is a tertiary referral clinic for the Province of British Columbia and Yukon Territories. This clinic results in a liaison between pediatric and adult patients with neuromuscular diseases as well as other neurological conditions including headache and epilepsy. Dr. Keyes also participates regularly at BC Women's Hospital in the assessment and treatment of patients with Neurological Diseases in Pregnancy. This association results in a liaison and close working relationship between the St. Paul's Hospital Division of Neurology and the Departments of Obstetrics and Gynecology at BC Women's Hospital and St. Paul's Hospital. This association provides tertiary neurology services to this subset of patients from the Province of British Columbia and the Yukon Territories.

Dr. Alister Prout regularly participates in general neurology clinics and neurophysiology clinics in Prince Rupert, British Columbia.

Dr. Charles Tai participates on a weekly basis in the Rapid Access Neurology Clinic at Mount St. Joseph's Hospital. In addition, Dr. Tai has recently started participating in a regular general neurology clinic and neurophysiology clinic in Whitehorse, Yukon Territories.

Clinical Research

The clinical research in the Division of Neurology at St. Paul's Hospital emphasizes clinical trials and outcomes research. The Division is actively involved in industry sponsored and peer-reviewed research in a number of areas related to central nervous system disease and peripheral nervous system disease. Areas of particular interest are stroke outcomes trials, stroke neuroprotective agent trials, multiple sclerosis drug treatment trials, treatment of diabetic small fiber neu-

ropathies, treatment of HIV/AIDS related peripheral neuropathies and the neurological complications of pregnancy.

Future Directions

The Division of Neurology at St. Paul's Hospital will continue to build on its current strengths to ensure the highest quality of clinical, teaching and academic activity for the Division of Neurology, Department of Medicine, Faculty of Medicine and the University of British Columbia. This has become more important and more challenging to all Faculty members over the last several years coincident with the expansion of the University of British Columbia Medical School. The members of the Division of Neurology will work closely with the other hospitals within Providence Health Care and within the University of British Columbia Community to meet the needs of the patients, students and university. The St. Paul's Hospital Division of Neurology continues to actively support a return of full neurosurgical services to St. Paul's Hospital and Providence Health Care.

Specialty Programs in the Division of Neurology

Alzheimer Disease and Related Disorders Program

Faculty

The three faculty members of the UBC Alzheimer research program have been very active in this year. Dr. Howard Feldman has continued to build and expand on his long standing work on clinical characterization and biomarkers development for Alzheimer Disease and Frontotemporal dementia. Dr. Robin Hsiung has launched and developed a laboratory to examine blood biomarkers and genetic risk factors of Alzheimer and related dementias. Dr. Claudia Jacova has constructed a scale of clinically meaningful changes in Alzheimer Disease, as well as pursued topics on the interface of cognitive sciences and neuroimaging.

Clinical Activities

With our team of clinicians (Drs. Howard Feldman, Dean Foti, and Robin Hsiung: Neurologists, Drs. Lynn Beattie and Philip Lee: Geriatricians, and Dr. Margo Genge: Geriatric Psychiatrist), we continue to evaluate over 1000 patients per year with a range of neurodegenerative and other geriatric cognitive disorders. The Clinic for Alzheimer Disease and Related Disorders is the main tertiary care referral center in B.C. for dementia assessment and management. New referrals are evaluated by a range of multidisciplinary assessments including Genetic Counselling, Social Work, Neuropsychology, Geriatrics, Geriatric Psychiatry and Neurology each of which make seminal contributions to the multifaceted clinical care needed for dementia patients and their families. The Clinic is also recognized as one of the most accomplished specialty clinics and clinical dementia research centers in Canada. Its referred population has included an ever increasing younger cohort of subjects under age 55 in addition to an expanding

over age 80 group. A large database has been developed to support the administrative and research core activities of the Clinic which includes almost 3 decades worth of data.

Research Activities

Dr. Howard Feldman (PI) and Dr. Ian MacKenzie (co-PI) with co-investigators (Drs. Robin Hsiung, Claudia Jacova, Brad Hallam, Blair Leavitt, Jon Stoessl, and Dessa Sadovnick) have successfully renewed a CIHR grant to continue to examine the clinical, genetic, and pathological biomarkers of Frontotemporal Lobar Degeneration with Ubiquitinated Inclusions. Since our discovery of mutations in progranulin as a common cause of familial Frontotemporal dementia (FTD) and the identification of TDP-43 as the major protein component of the ubiquitinated inclusions, FTD continues to be a key area of research progress within the unit. The current focus is to discover the gene responsible for FTD-ALS syndrome in collaboration with researchers at the Mayo Clinic. Dr. Claudia Jacova is researching the role of neuroimaging (MRI, PET) as early markers of FTD, and Dr. Robin Hsiung has established a lab with Dr. Ian Mackenzie to examine novel blood biomarkers in FTD and other dementias. Funding from the Pacific Alzheimer Research Foundations to examine overlap syndromes through Dr. Jon Stoessl (PI) also helps to support this research program.

In Alzheimer research, we have been involved in a number of industry sponsored studies examining novel approaches to slow down the rate of progression in Alzheimer Disease. Dr. Robin Hsiung has received funding through the BC Network of Aging Research and the Michael Smith Foundation for Health Research to test the role of computer games in cognitive training for patients with Mild Cognitive Impairment. With funding from the BC Ministry of Health Alzheimer Drug Therapy Initiative (ADTI), our team is collaborating with researchers at University of Victoria in a series of studies to examine the long term outcome of cholinesterase treatment in patients with Alzheimer Disease. Dr. Claudia Jacova has received funds to investigate in a multi-site project treatment response within the ADTI on a newly developed instrument: The Clinical Meaningfulness in Alzheimer Disease Treatment (CLIMAT) scale. We continue to participate in the NIH sponsored Alzheimer Disease Neuroimaging Initiative (ADNI) and support large scale Canadian programmatic grants such as the RAPID and the CLSA. Ongoing research areas include the development of volumetric analytic techniques for MRI in mild cognitive impairment, and the long-term characterization of clinical outcomes in the observational ACCORD cohort study.

New initiatives launched by Drs. Jacova and Hsiung include the development of a computer-based cognitive screening battery for office and online use in BC (funded by Michael Smith Foundation for Health Research CIHR Pillars 3 & 4 Development Program seed funds), and the piloting of functional MRI studies of music processing in dementia (funded by BC Network for Aging Research seed funds), and a collaborative study with the physiotherapy group to examine

the role of exercise in cognitive performance in patients with vascular cognitive impairment.

Teaching Activities

The Clinic continues to be extremely active in providing teaching to trainees of multiple disciplines at the student, graduate student, resident and fellow levels. We hosted the Canadian-Dutch Colloquium in 2008 with excellent reviews. Clinic members participated extensively in CME activities, and on expert national/ international working groups and advisory committees. Dr. Foti has been a co-chair of the "Dementia Specialists Train the Trainer Program, BC Specialists Practice Assessment".

Fellows

Dr. Nagaendran Kandiah has completed his fellowship and is now an associate consultant at the National Neurosciences Institute in Singapore. Dr. Itthipol Tawankanjanachot, Neurologist, and Dr. Umamon Puangthong, Geriatric Psychiatrist, have joined us from Thailand this year to advance their clinical and research skills related to dementia and cognitive disorders.

Public Awareness

The Clinic is very active in public education and its clinicians have also been called on to have a high profile in local, national and international public policy in dementia care. In the past year, our members have appeared in Good Times Magazine, Global News, Omni News, CBC Radio, Public Forum (in Kelowna, BC), The Vancouver Courier, Health Report, ABC Radio National (Sydney, Australia), and the Canadian Health Magazine.

Multiple Sclerosis Program

Faculty

The UBC MS clinic has currently 7 neurologists (Drs. V. Devonshire, S. Hashimoto, J. Hooge, L. Kastrukoff, J. Oger, P. Rieckmann, A. Traboulsee), 2 clinical research fellows (Drs. J. Saeedi, R. Alroughani), and 3 neuro-ophthalmologists (Drs. D. Anderson, J. Lindley and K. Wade). Dr. P. Smyth recently moved to Edmonton to take on a position as Clinical Director at the Univ. of Edmonton. Dr. Rieckmann provides overall leadership to the MS program and currently also serves as the clinical Director of the MS Clinic. The MS clinical trial group is co-directed by Drs. A. Traboulsee and P. Rieckmann. Dr. H. Tremlett works as an epidemiologist in the group.

Clinical Activities

The MS clinic at UBC hospital, with 3892 patient visits and 620 new patients in 2008, is one of the largest in Canada and provides a multi-disciplinary service (including psychiatric and genetic counseling) to all patients across the province via the British Columbia Multiple Sclerosis Clinic Network (BCMSCN). This network is one of the largest collabora-

tive efforts in the world providing excellent multi-disciplinary services to MS patients. Currently, the clinical database at UBC includes up to 25 years of natural history data on the disease courses of over 8000 patients. This network provides an excellent resource for research, training, and education, and attracts national and international visitors every year for clinical preceptorship or fellowship.

The clinic maintains important interdepartmental collaborations to optimize care to affected patients and their family members as appropriate. In particular the close collaborations include Dr. A. D. Sadovnick and her team (genetic & reproductive counseling), Dr. A. Jiwa/ J. Tham (psychiatric care), Dr. S. Elliot (sexual medicine care) and Dr. Fenster (neuro-urology). The clinic coordinates (RN J. Geddes) new escalating immune therapy options for aggressive MS. The clinic also provides specialized care for patients with neuro-myelitis optica (NMO), an aggressive form of optic nerve and spinal cord demyelination with special focus on the evolution of new phenotypes in the Asian immigrant population. The MS clinic also has important collaborations with the Cell Separator Unit at VGH site with Dr. Traboulsee and Dr. Oger serving on the Neuroplex Committee. Currently, guidelines and pathways for rapid access to escalating therapies are established.

As part of the commitment to the BCMSN, the UBC clinic provides outreach to 3 clinics in Victoria (1000 patients registered), Kelowna (700 patients), and Prince George (300 patients), as well as providing outreach care directly to patients in Comox. Collaborative projects have been established with the Burnaby Clinic and another outreach clinic is planned in Kamloops. The next step to improve the care for our patients is to provide interdisciplinary service as a provincial program.

In collaboration with Pharmicare and with educational funding from the pharmaceutical industry, we were able to continue the "MS Special Therapy" program, which provides education to patients in their choice for Disease Modifying Therapies (DMT) and management of their potential side effects. There are over 2000 treated patients in this program.

Research Activities

Based on the excellent clinical database of the clinic, Dr H. Tremlett and her coworkers were able to further examine the natural history of secondary progressive MS, long-term adverse drug reactions, effects of sunlight exposure and infections on relapse rate as well as the timing of birth and disease progression.

In Dr. J. Oger's laboratory, E. Gibbs has graduated with a PhD in experimental medicine. Using a new method of plasmon resonance, it was demonstrated that the immune response against recombinant interferon-beta injected by MS patients (neutralizing antibodies) switches from an IgG1-based response to an IgG4-based response and affinity increases. A Luciferase based assay to measure NABs against interferon-beta is now available as a standard test in the lab and together with the acetylcholine receptor antibody assay

(for diagnosis of myasthenia gravis) has been approved by the laboratory medicine section of BCMA. Dr. Oger's lab received over 1800 samples for tests in 2008.

After extensive renovations, finally, new wet laboratory space was created on the second floor of Koerner Pavilion and Dr. Rieckmann's experimental research on functional aspects of the blood brain barrier and disease modifying genes in MS got on its way. Dr. J. Basivreddy started as a research coordinator together with one technician, one post-doc and 2 graduate students in the lab. This laboratory provides a centralized facility for DNA extraction from clinical sample and is currently used by the MS and the dementia programs (Dr. R. Hsiung). In addition, a new interdisciplinary program on physical activity in MS patients (Dr. V. Strehlau), including functional and structural aspects of repair was initiated.

Dr. Sadovnick's research on genetic susceptibility to MS has now entered its 5th phase and is continuously the most productive and successful part of the MS program. Her research team also significantly contributes to the success of the prospective study on epidemiology, pathobiology, and clinical outcome of Canadian children with clinically isolated demyelinating syndromes (CIS). Dr. Sadovnick has initiated a Multiple Sclerosis North American Pregnancy Program (MS-NAPP) in collaboration with the MS Society of Canada, National (US) MS Society and the Consortium of MS Clinics, which now includes cooperation partners in Argentina and Chile.

The MRI Research Group has further improved the clinical applicability of myelin water imaging (MWI), the only in vivo method to specifically quantify myelin content in the central nervous system. This important work has received ongoing grant support from the MS society and international acclaim. A new serial study of MS subjects, monitoring the development and repair of new lesions over a 6-month period was recently completed. Based on these findings, this technique will be adapted for multicentre clinical trial use starting in 2009. A key component of this research has been the collaboration with Drs. Wayne Moore and Corre Laule who continue to work on pathologic validation of MRI techniques.

In addition to renewal of existing grants, MS/MRI Research Group received a new 2 year grant from the MS Society of Canada (PI: Tony Traboulsee) to investigate the effect of medications on brain hydration. Changes in brain size or atrophy (shrinkage) occur with most diseases of the central nervous system and they are often used to monitor for therapeutic benefit of new investigational drugs. Drs. Li and Traboulsee, in association with the Consortium of MS Centers, recently hosted an international panel of MS and MRI experts to revise a standardized MRI protocol and clinical guidelines for the use of MRI in MS care. This is an important translation of an evolving body of research and opinions into a clinically practical set of guidelines that will benefit patients and clinicians worldwide.

The MS Clinical Trials Group participated in 2 studies for clinical isolated syndromes (phase II and phase III), 9 studies for relapsing remitting MS (2 phase II, 5 phase III, 2 extension studies), 3 studies for PPMS (phase III). This latter group is particularly important as there are no treatment options for progressive MS. Both Drs. Rieckmann and Traboulsee serve on many steering committees and safety monitoring boards of international studies. We have a dedicated clinical trial staff including 4 nurse coordinators, 2 research technologists, and 1 research coordinator.

Researchers of the MS program participate in several national and international collaborative research networks and hold grants from CIHR, NSERC, European Union, MS Society of Canada, National MS Society of USA and MSFHR worth over CDN\$ 6M. They have published in 2008 over 50 peer-reviewed articles.

Teaching Activities

Members of the MS Program actively recruit students for the neuroscience and experimental medicine graduate programs (there are currently 12 students in the program). They have lectured locally, in the region, nationally and on different international conferences on the important aspects of optimized MS treatment and care both for clinicians and also for MS patients. The MS Program offers research-training opportunities for students and residents, which has resulted in highly recognized publication. We recently organized a formal rotation of residents to all clinical neuroscience programs at UBC hospital. The UBC MS program offers clinical and research fellowships for neurologists who are interested in building a career as clinician scientists. In 2008, we hosted over 30 clinicians and researchers for short term or extended fellow- and preceptorships. Together with the University of Saskatoon, we successfully applied for Western Pacific Regional Research and Training Center, which will start in 2009 and will provide an optimal interdisciplinary environment to attract students, researchers and clinician scientist to MS research. The center is funded by the EndMS campaign of the Canadian MS society.

Neuroethics Program

Since its inception at the University of British Columbia in August 2007, the National Core for Neuroethics has committed itself to tackling the ethical, legal, policy and social implications of frontier neuroscience through high impact research, education and outreach to ensure the close alignment of innovation and human values. As such, the Core strives to ensure that neuroscience is applied for maximum knowledge, health and well being through the early integration of ethics and research, a collective understanding of neuroethics, and by informing policy as the science unfolds. Led by Dr. Judy Illes, the Core is known on both the national and international stage as a forerunner in the field of neuroethics, with particular focus on ethics in neurodegenerative disease and regenerative medicine, international and cross cultural challenges in brain research, neuroimaging and ethics, the neuroethics of enhancement, and personalized

medicine. Considerable attention has been given to the Core by both the scholarly and non-academic media, with the Core recently featured in the New York Times, the Vancouver Sun, on the Global Newshour, and in the journal Science, amongst many others. Highlights of the year were the Annual Dana Brain Awareness Week Lectureship in Neuroethics in March, our inauguration on 11 September 2008 at which the Core was officially welcomed to the university by President Stephen Toope, and a telecast of revisions to the Helsinki Declaration jointly hosted with the MS program in December. With the rapid pace of technological advance in the field of neuroscience, the National Core for Neuroethics is poised for continued expansion and success.

Faculty

The Core is led by Judy Illes, PhD, Canada Research Chair in Neuroethics and Professor of Neurology. Peter Reiner, PhD, Professor of Psychiatry, is a Senior Faculty Member with the Core. The Core is staffed by Kate Tairyan, MD, MPH, Senior Research Fellow; Daniel Buchman, BA, MSW, Research Fellow; Neil Chahal, BSc, Administrator, Finance and Research; and Sofia Lombera, BSc, Manager for Research and Global Partnerships. Current graduate students are Kevin Comerford, MFA, MIS, in collaboration with the School of Library, Archival and Information Studies, and Mohsen Sاداتسافي, MD, MHSc, in collaboration with the Department of Health Economics. Newly hired Research Coordinators are Carole Federico, BA for our neuroimaging and neurodegeneration/regenerative medicine work, Ranga Venkatachary, PhD, as part of the leading our dementia education effort, and Joanne Reimer, as the lead on our project exploring functional recovery in patients with spinal cord injury. We also welcome Dr. Umamon PuangThong as our new Visiting Scholar, whose year with us will focus on the challenges of human subjects research that involves multicultural populations. The Core is funded with grants from the Stem Cell Network, the North Growth Foundation, Canadian Institutes for Health Research, the Michael Smith Foundation for Health Research, the Dana Foundation, the Vancouver Coastal Health Research Institute, the Foundation for Ethics and Biotechnology, the Institute for Mental Health and Addictions, the Canada Foundation for Innovation, the British Columbia Knowledge Development Fund, the Greenwall Foundation, and the National Institutes of Health. Please see the website <http://www.neuroethics.ubc.ca> for more information.

Research Activities

Research in the Core is focused on high impact, high visibility areas in the neurological sciences, including basic and translational neuroimaging, commercialization of neurotechnology, clinical findings detected incidentally in research, healthy aging and regenerative medicine, knowledge translation, and patient and physician engagement on an international scale. A major new direction in addiction and mental health was identified for Neuroethics at UBC during the past year; we will pursue new initiatives and large scale funding for this area during 2009.

Neuromuscular Diseases Program

Clinical Activities

The program consists of specialized weekly clinics for the diagnosis and treatment of Myasthenia Gravis, Myopathies, Peripheral Nerve disease, and Amyotrophic Lateral Sclerosis. The program is closely associated with the Adult Metabolic diseases clinic and the ALS Centre at GF Strong. The Vancouver Hospital neurophysiology labs are integrated into the neuromuscular diseases program. Patients with peripheral nerve disease and peripheral nerve trauma are referred for neurophysiologic testing from around the province. Drs Gibson and Mezei participate in monthly Neuroplex meetings and there is a close liaison of the neuromuscular diseases program with the VH Plasma exchange unit. A donor to the NMDU has enabled the program to fund a part-time clinical nurse educator focused on patient education.

Teaching and Educational Activities

The NMDU is active in resident teaching of clinical neuromuscular disease and neurophysiology. Neurology and Rehabilitation medicine residents are involved in the training program. The program holds weekly rounds for the presentation of neurophysiologic topics and clinical cases and once monthly neuropathology rounds where muscle and peripheral nerve biopsies are reviewed. A comprehensive 2 year neuromuscular fellowship has also been established.

In June 2008, the VH Neuromuscular diseases unit hosted the Canadian Neurologic Sciences Neurophysiologic licensing examinations. Drs Gibson and Chapman hosted the first Western Canada GBS and CIDP Foundation meeting in Vancouver in April 2008. Dr. Chapman is involved in the organization of the first Vancouver Multidisciplinary Neuromuscular Disease group meeting to be held in April 2009.

Research Activities

Research activities include the participation in a multinational NIH funded trial assessing the efficacy of thymectomy in the management of Myasthenia Gravis. Other ongoing clinical trials include the evaluation of Etanercept in Dermatomyositis and Talampanel in ALS. Several clinical trials assessing the efficacy of new drugs in the treatment of neuropathic pain in peripheral neuropathy were completed. Dr Mezei has ongoing clinical research projects in mitochondrial diseases. Dr Charles Krieger has continued laboratory studies in the mutant SOD mouse model of ALS.

Amyotrophic Lateral Sclerosis Program

Clinical Activities

The ALS Centre at GF Strong is a trans-disciplinary entity providing care, teaching and basic research in the Vancouver area to provide clinical services to affected patients and their families. The ALS Centre is staffed by three neurologist physician-scientists (Drs. Briemberg, Cashman and Krieger),

a physiatrist (Dr. Travlos), and a specialized nurse coordinator (Marife Fabros), as well as the highly trained ALS Team at GF Strong, providing social work, physio- and occupational therapy, speech language assessment and therapy, and dietary guidance. The ALS Society of BC (ALSBC) and the ALS Centre have consolidated an innovative partnership to provide a successful outreach clinic program for areas of the province difficult to reach for disabled patients. Outreach clinics in 2008 included Victoria, Kelowna and Prince George.

Research Activities

Three major scientific programs are being conducted at the ALS Centre. Dr. Briemberg leads clinical trials for the ALS Centre, in collaboration with other team members and with the encouragement and financial assistance of ALSBC. Two clinical treatment trials are underway, and an additional trial is being considered through the newly founded Canadian ALS Clinical Trials and Research Network (CALN). In future, it is possible that the scope of clinical trials may expand with assistance from ALSBC to include new medical devices and technologies for improving the quality of life with ALS. Dr. Krieger's CIHR-supported basic scientific program at Simon Fraser University is focused on the engraftment of stem cells in the affected CNS of mouse models of ALS, with collaboration from Fabio Rossi at the UBC Biomedical Research Centre. Dr. Cashman is a Canada Research Chair in Neurodegeneration and Protein Misfolding Diseases at the UBC Brain Research Centre. With support from CIHR, CFI, BCKDF, and Amorfis Life Sciences, Dr. Cashman is conducting basic research on immunotherapies and vaccines to protein misfolding diseases, especially ALS.

Neuro-Oncology Program

Faculty

The Neuro-Oncology program is a multidisciplinary program involving members of the Divisions of Neurology, Radiation Oncology, Neurosurgery and Medical Oncology. Its goal is to provide comprehensive care for patients with CNS malignancies and establish both clinical and translational research programs in Neuro-Oncology.

Clinical Activities

In the realm of patient care, the program has continued to supply patients with advanced surgical and radiotherapeutic management of brain tumors including a well-established linear accelerator-based stereotactic radiation program. Molecular diagnostic technology has advanced our understanding of oligodendrogliomas and improved our management and chemotherapeutic strategies for these tumors.

Research Activities

Over the 2008 year, the Neuro-oncology Program has continued with two multicentre randomized clinical trials in gliomas. The first is a trial in low grade gliomas comparing upfront radiotherapy to upfront chemotherapy in treatment of this

disease. The second trial is enrolling elderly patients with glioblastoma multiforme, comparing treatment with radiotherapy alone to combination of radiotherapy and chemotherapy.

The Neuro-oncology site group, working with the BC Cancer Foundation, was successful in raising over \$1 million dollars to support its BrainCare BC initiative at a recent Gala event. This is a multiphase plan to enhance research, delivery of care and rehabilitation to brain tumor patients in BC.

Neuro-Ophthalmology Program

Faculty

There are 5 staff neuro-ophthalmologists including Duncan P. Anderson, Maryam Aroichane, Jason J.S. Barton, Janette I. Lindley, Chris J. Lyons. There are 7 adjunct clinical staff: Ray Bell, Victoria; David Neima, New Westminster; David Nelson, Langley; Briar Sexton, Vancouver; Martin SuttonBrown, Victoria; N. Kevin Wade, Vancouver and David Wakelin, Duncan.

Clinical Activities

The UBC Neuro-ophthalmology Division provides clinical teaching and research services at Providence Health Care (St. Paul's Hospital site), VHHSC (Eye Care Centre) and UBC Hospital. Consulting services are also provided at GF Strong Rehab and BC Children's Hospital. St. Paul's site has 4-5 neuro-ophthalmology clinics per week staffed by D Anderson (3 clinics) and J Lindley (1-2 clinics). VGH Eye Care Centre has 6 clinics per week staffed by D Anderson (4 clinics) and J Barton (2 clinics). UBC has 2 clinics per week in the Multiple Sclerosis Clinic staffed by D Anderson, J Lindley, and K Wade. Neuro-ophthalmology patients are also seen in private offices of B Sexton and K Wade. BC Children's hospital has 2 pediatric neuro-ophthalmology clinics per week staffed by M Aroichane and C Lyons. Botulinum toxin injection clinics are provided by Janette Lindley and Kevin Wade. There are satellite MS/neuro-ophthalmology clinics, one every 2 months in Burnaby staffed by D Anderson, and one in Comox. The monthly clinic at the Royal Jubilee Hospital in Victoria staffed by R Bell (director), J Barton, and D Wakelin, was transferred to the service of M SuttonBrown in July.

Research Activities

There were 25 research presentations, 7 invited research lectures, 22 clinical/teaching lectures and 49 articles or chapters published or in press at the time of this report. The research of the Human Vision and Eye Movement Lab was highlighted in the Faculty of 1000 Biology twice. We received press coverage from newspapers (Toronto Globe and Mail, Vancouver Sun, Vancouver Province, the Times (UK), Denver Post, EpochTimes), radio and TV (CBC Radio, ABC News Radio, CTV Dr Rhonda Low show, USA Today), and magazines (MacLean's, Canadian Geographic, The Scientist), among others.

Teaching Activities

The educational outreach of the program included a variety of key activities. Dr. Michael Ronthal from Harvard Medical School, Dr. Nancy Kanwisher from MIT and Dr. Gordon Plant from Queen Square, UK were the 3 invited speakers for 2008. The educational website operated by the division continues to be well used, receiving 733,104 hits and 68,628 visits in the last 12 months.

Pacific Parkinson's Research Centre

Clinical Activities

The Movement Disorders Clinic provided more than 3,400 outpatient visits in 2008. The majority of these were for patients with Parkinson's disease or focal dystonia. The program continues to be heavily supported by nurse coordinators, who provide education and counseling to patients, families and other health care professionals. A Centre of Excellence award from the National Parkinson Foundation (Miami, Inc.) with additional support from the Parkinson Society British Columbia supported part-time physiotherapist and social worker.

Research Activities

In 2008, Centre investigators continued to receive support through a CIHR Team grant in Parkinson's Disease (\$4.45M over 5 years, beginning 2006) and a Research Unit award from the Michael Smith Foundation for Health Research (\$800K over 4 years, starting 2006). Additionally, working together with other UBC investigators in the dementia program (Drs. Feldman and Mackenzie) and collaborators at the Mayo Clinic Jacksonville, PPRC investigators hold a Centre grant from the Pacific Alzheimer Research Foundation on Overlap Syndromes resulting in Dementia, valued at more than \$7M over 5 years (PI Stoessl). Dr. Sossi obtained a new CIHR grant on Impulse Control Disorders in Parkinson's Disease (\$291,000 over 3 years) and Centre investigators continue to work on a number of other CIHR funded projects, including the Natural History & Progression of Parkinson's Disease, Occupational Risk Factors in PD, Depression in PD and the regulation of placebo-induced dopamine release in PD. Dr. Ruth and his collaborators continue to work on labeling of large molecules for positron emission tomography. Dr. McKeown holds a multidisciplinary MSFHR Team award on Monitoring and Control of Abnormal Brain Dynamics. Centre investigators had 27 PubMed listings during 2008, including papers in Annals of Neurology, BMC Neurology, Journal of Nuclear Medicine, Lancet Neurology, Neuroimage, Neurology and Neuroscience.

In 2008, Dr. Raul de la Fuente-Fernández rejoined the Centre as the James A. Moore Chair in Parkinson's Research, following an international search. Dr. de la Fuente-Fernández had worked at PPRC in the past as a visiting scientist and was extremely productive, including first authorship on the seminal paper in Science (2001) in which he demonstrated that the placebo effect in Parkinson's disease is mediated by

release of endogenous dopamine. In addition to heading up new research activities, he is seeing patients in the Movement Disorders Clinic.

Teaching Activities

The Movement Disorders Clinic continues to provide ambulatory teaching to medical students and to residents in neurology, geriatrics, psychiatry and family medicine. During 2008, 3 clinical fellows completed their training in the Centre and we were joined by another 3 fellows. Faculty members of the Pacific Parkinson's Research Centre participate in the Brain & Behaviour course and provide training to multiple trainees at the MSc. and PhD levels in the Graduate Neuroscience program. 2 students obtained PhDs and another 3 obtained their MSc in 2008. Dr. McKeown continues to run the Motor Systems module of the Systems Neuroscience (Neuroscience 501) core course in the Graduate Neuroscience program. Faculty members within the Centre serve as mentors in the CIHR-funded Neuroscience Training Initiative and serve on numerous supervisory, comprehensive and examination committees.

Epilepsy Program

Faculty

Dr. Mano Javidan and Dr. Tiffany Townsend have been the Co-Directors of the Epilepsy Program. Dr. Mano Javidan is also the Director of the Neurophysiology Lab at Vancouver General Hospital. Dr Javidan is the president of the Canadian Society of Clinical Neurophysiology (CSCN) and the member of the Executive Board, Canadian Neurological Society Federation. He has served as examiner for the EEG Board examination of CSCN since 1999.

Clinical Activities

Epilepsy Clinic: This has been a very active year. Patients with wide range of epileptic disorders, diagnosis of spells, first seizure, complex and refractory epilepsy, candidates for epilepsy surgery or complex medical treatment were assessed. Dr. Townsend and Dr. Javidan worked in the clinic 4-5 days a week.

Seizure Investigation Unit (SIU): This unit is located on T5B at VGH. It is the only adult epilepsy surgery program in British Columbia. In 2008, a total of 58 patients were monitored in the 2 bed SIU with 13 epilepsy surgeries performed and 3 with invasive monitoring. The technology within the SIU continues to advance with improved usage and accuracy of the seizure detection software. Extensive education is provided to the neurology nursing staff and patients/families by Janice Hendrickson, a skilled nurse practitioner. This year also witnessed the transition to a fully integrated hospital clinic for epilepsy patients.

Dr. David Katz, neuropsychologist, moved to California on a leave. In his absence, Dr. Runa Steenhuis is working part time for the program.

Research Activities

Dr. Javidan has been actively developing a program of clinical research spanning the rates of non-convulsive status epilepticus, the localization and prediction of seizures by computerized analyses, the characteristics of patients with temporal lobe epilepsy and surgery without interictal epileptic activity on EEG and the weighted value of interictal and ictal EEG activity in the surgical outcome of patients with temporal lobe epilepsy.

Currently, Dr. Javidan is involved in a project to assess the outcome of patients with non-convulsive status epilepticus.

Teaching Activities

The Epilepsy Program plays a key role in the education of Neurology residents and fellows. Neurology residents spend at least 3 months of their residency on the EEG/ Epilepsy rotation where they interpret outpatient and inpatient EEGs, admit and are directly involved with the care of the patients in SIU and those seen in the Epilepsy Clinic, all under direct supervision. Drs. Javidan and Townsend are both active in CME and also have served as experts on provincial and national committees.

Basic Neuroscience Research Program

The Division's basic neuroscience research is primarily conducted within the Brain Research Center at the UBC Campus. Areas of research include a focus on neuroimmunology, neurovirology and neurochemistry.

The long-standing research interest in Dr. Yu Tian Wang's laboratory has been on understanding fundamental mechanisms controlling synaptic transmission among neurons in the brain, and the dysfunction of these mechanisms in the pathogenesis of brain disorders such as epilepsy, stroke and learning deficits. Dr. Wang and collaborators have developed an NR2B-derived peptide as an anti-excitotoxicity based stroke therapy and has recently completed phase 1 of the trial. The results showed that the predicted efficacy dose of the peptide was well-tolerated by human subjects. The second phase 2A started in the fall of 2008 and is expected to be completed within two years.

Beyond the research on stroke, the Wang lab also continued their investigations on the pathogenesis of epilepsy. Following the initial electrophysiological characterization of GABAAR alpha1 mutation (A322D) identified in patients with juvenile myoclonic epilepsy (Nat Genetics, 31:184-9, 2002), they further found that in addition to the compromised receptor stability, the mutation results in a significant reduction in the number of functional receptors due to the facilitation of GABAAR endocytosis, suggesting a rapid alteration of cell surface GABAAR expression in mediating the mutation-associated epileptic phenotype (J. Biol. Chem. 283: 22043-22050, 2008). Their investigation of learning and memory also led to several new discoveries, including the elucidation of underlying mechanisms and how alteration of these mechanisms

contributes to some of the memory deficits caused by brain diseases or stress. (PNAS, 104:11471, 2007; Neuropsychopharmacology. 33: 2416–2426, 2008). These results are particularly relevant to memory deficits in humans following acute psychological stress and fear memory retention associated with post-traumatic syndromes.

The labs of Drs. Steven Pelech, Joel Oger, Lorne Kastrukoff, Neil Cashman, Peter Rieckmann, contribute to divisional reach in basic neuroscience research.

Appointments and Promotions

Dr. Raul de la Fuente-Fernandez was appointed as Associate Professor and the James A. Moore Chair in Parkinson's Research with effect from July 1, 2008.

Dr. Gordon Robinson was promoted to the rank of Clinical Professor from Clinical Associate Professor with effect from July 1, 2008.

Dr. Sian Spacey was appointed to the rank of Clinical Associate Professor with effect from July 1, 2008.

Dr. Robin Hsiung was appointed to the rank of Clinical Assistant Professor with effect from April 1, 2008.

Dr. Nicholas Bogod was appointed as Clinical Instructor with effect from July 1, 2008.

Dr. Samuel Yip was appointed as Clinical Instructor with effect from August 1, 2008.

Dr. Peter Boulton was appointed as Associate Member in the Dept of Medicine, Division of Neurology with effect from November 1, 2008.

Dr. Lyle Daly was appointed as Associate Member in the Dept of Medicine, Division of Neurology with effect from Jan 1, 2008.

Dr. John Diggle was appointed as Associate Member in the Dept of Medicine, Division of Neurology with effect from May 5, 2008.

Dr. Ian Mackenzie was appointed as Associate Member in the Dept of Medicine, Division of Neurology with effect from July 1, 2008.

Special Honours and Awards

Dr. Neil Cashman was awarded the Vancouver Acute Award for Bringing Clinical Renown 2008 and was elected to the Canadian Academy of Health Sciences 2008.

Dr. Raul de la Fuente-Fernandez received the National Parkinson's Research Award (Spain) 2008 from the Spanish Society of Neurology.

Dr. Howard Feldman was honoured with a Fellowship of the Canadian Academy of Health Sciences and the Distinguished Achievement Award for Outstanding Contribution by a Senior Faculty Member from the Faculty of Medicine, UBC.

Dr. Peter Rieckmann was elected as Honorary member of the All Russian Neurological Society, Moscow in November 2008. He was also elected as member of the Medical Advisory Board National Multiple Sclerosis Society of Canada and Executive Board member on BC Chapter of the MS Society of Canada.

Dr. Jon Stoessl was elected a Fellow of the American Academy of Neurology in 2008.

Dr. Helen Tremlett was the Winner of the 2008 European Charcot Foundation's Young Investigators Award for Multiple Sclerosis Research. She won the first prize for the poster presented at the European Charcot Foundation Symposium 2008 in Sicily, Italy. She was awarded the World Congress on Treatment and Research in Multiple Sclerosis travel bursary for young investigators from the LACTRIMS-ACTRIMS-ECTRIMS Scientific Committee to attend the annual conference in Montreal, Canada 2008. She was also awarded the Global Collaboration Fund to Facilitate Development of External Collaborations from Vancouver Coastal Health Research Institute to fund a two-month placement at the Sylvia-Lawry Centre for MS Research, Munich, Germany.

Dr. Michael Ronthal, Professor of Neurology in Harvard Medical School, was awarded the Whitaker Professorship to present at our Neurosciences Grand Rounds on April 9, 2008.

Publications by Fellows/Students/Residents

IARIA, Giuseppe

Iaria G, Fox, CJ, Chen J-K, Petrides M, Barton JJS. Detection of unexpected events during spatial navigation in humans: Bottom-up attentional system and neural mechanisms. *Eur J Neurosci* 2008; 7:1017-25.

Iaria G, Lanyon LJ, Fox CJ, Giaschi D, Barton JJS. Navigational skills correlate with hippocampal fractional anisotropy in humans. *Hippocampus* 2008; 18: 335-339.

Iaria G, Fox CJ, Waite C, Aharon I, Barton JJS. The contribution of the fusiform gyrus and superior temporal sulcus in processing facial attractiveness: Neuropsychological and neuroimaging evidence. *Neuroscience* 2008; 155:409-22.

Iaria, G., Bogod, N., Fox, C.J., & Barton J.J. (2008). Developmental topographical disorientation: Case one. *Neuropsychologia* (Aug. 27), epub ahead of print.

KANDIAH, N.

Feldman HH and Kandiah N. The Early Identification of AD: What have we learned from MCI? *CNS Spectrums* 2008; 13 (3 Suppl. 3): 4-7.

PHYSICAL MEDICINE & REHABILITATION

Division Members

Clinical Associate Professor & Head
Dr. Andrea Townson

Professor
Dr. Duncan Murray (Emeritus)

Clinical Professor
Dr. Cecil Robinson (Emeritus)

Clinical Associate Professor
Dr. Hubert Anton
Dr. Andrei Krassioukov
Dr. Alexander Pinkerton (Emeritus)
Dr. Wolfgang Schamberger
Dr. Andrew Travlos
Dr. Theo van Rijn
Dr. Elliott Weiss

Clinical Assistant Professor
Dr. Rida Baruni
Dr. Pankaj Dhawan
Dr. James Filby
Dr. Jaime Guzman
Dr. Gabriel Hirsch
Dr. Barbara Hughes
Dr. David Koo
Dr. Lynne MacKean
Dr. Peter Mortifee
Dr. Russell O'Connor
Dr. Heather Underwood
Dr. Michael Vondette
Dr. Jennifer Yao

Clinical Instructor
Dr. Mark Adrian
Dr. Lisa Caillier
Dr. Mark Crossman
Dr. Andrew Dawson
Dr. Heather Finlayson
Dr. Steven Helper
Dr. Herman Lau
Dr. Nittin Reebye
Dr. Rajiv Reebye
Dr. Rhonda Willms

Associate Member
Dr. Janice Eng
Dr. William Miller

Adjunct Professor
Dr. Lyle Gross

Honorary Member
Dr. Claire Weeks



Dr. Andrea Townson
Clinical Associate Professor
and Head

DIVISION OVERVIEW

The UBC Division of Physical Medicine & Rehabilitation currently has 30 active faculty members who are involved with patient care, teaching and research. Our members consult and provide rehabilitation services to persons ranging from the very young to the very old. We manage inpatient and outpatient programs for persons who have suffered spinal cord injury, acquired brain injury, neuromuscular abnormalities and cardio/pulmonary dysfunction. Inpatient services are provided at several sites, including Vancouver Acute/GF Strong Rehab Centre, St. Paul's Hospital, Holy Family Hospital, Eagle Ridge Hospital, Sunny Hill Health Centre, as well as consultation services to the Vancouver teaching hospitals, BC Children's Hospital, Royal Columbian Hospital and Burnaby General Hospital. Our staff is actively involved in teaching residents and medical undergraduate students, as well as undergraduate and graduate students in related disciplines. Research activity deals with disease specific issues related to our patient population, as well as disability issues for the population at large.

Teaching

Undergraduate

Dr. David Koo is the Undergraduate Coordinator for the Division.

We continue to provide a strong presence with MSK skills preceptorship during the 2nd year MSK skills series, in conjunction with the Divisions of Orthopedic Surgery and Rheumatology at VGH site. Six Division members participated in the teaching for the 2008/2009 year.

GF Strong has continued to participate in 2nd year bedside clinical skills teaching, with the capacity of taking 2 students per block, for the 4 potential blocks.

UBC elective/selective requests have come from 22 medical students with 6 from out-of-province students and 16 from UBC students for the 2008/2009 year.

The Vancouver PMR elective rotations have been streamlined into three primary block rotations to minimize scheduling conflicts with concurrent students (Acquired Brain Injury/Adolescent Young Adult, Spinal Cord Injury, and Neuromuscular blocks). Student elective capacity at Vancouver site remains at 3 students per rotation. Year 4 PMR electives are now also being offered at Victoria site, with 1 student capacity per rotation.

Undergraduate involvement of PMR in the 3rd year Internal Medicine half-day lecture continues to reflect the new 1 hour format of these lectures and works within the new teleconferencing structure of the satellite sites. The objectives for this lecture include the WHO-sanctioned definitions of impairment, activity and participation, as per the International Classification of Function.

Postgraduate

Dr. Heather Finlayson is the Residency Program Director. There were ten active residents in the program at the end of 2008. The Division also provides regular teaching to residents in Neurology, Geriatrics, and Rheumatology, as well as for resident electives from other UBC and external programs.

Resident teaching is done at the bedside and in ambulatory clinics. Formalized seminars are undertaken during weekly Academic Half Days as well as selected times throughout the week. The resident academic half-day schedule follows a systems/disability-based approach. A new summer workshops series was introduced combining gross anatomy musculoskeletal sessions and anatomical simulators with teaching of chemodenervation, joint, and soft tissue injection techniques.

All residents participate in a yearly Quality Improvement project and all residents are involved in research. Residents from PGY2 onwards have a weekly formal half-day of research experience throughout their academic years. Resident research topics include: Correlation of piriformis syndrome provocation tests with CT-guided injection; Impact of autonomic dysfunction in the classification system for disabled athletes; Prevalence of fatigue in patients with traumatic brain injury; Use of acupuncture for pain in spinal cord injury; Type and frequency of injuries in Paralympic sledge hockey, Use of the Wii-Fit in amputee rehabilitation, and Impact of the Segway mobility device on pain and spasticity in individuals with spinal cord injuries. Two residents are enrolled in the UBC School of Population and Public Health Master of Health Science program.

Continuing Professional Development

Dr. Russell O'Connor is our Continuing Professional Development Coordinator. The Division provides needs-based weekly CPD meetings attended by Division and non-Division members who have an interest in topics presented. The CPD Committee meets at least bi-annually to review upcoming CPD activities and to formulate ways to enrich ongoing education of our membership. The CPD committee continues to encourage members to develop innovative teaching methods, as well as utilizing panel discussions and experts from other sub-specialties for broader educational experience.

Dr. Jaime Guzman supports the residents in the selection and analysis of articles for the scheduled monthly Division Journal Club.

Research

Dr. Andrei Krassioukov is the Division Research Director and Chair of the Division Research Advisory Committee. Dr. Hugh Anton is the GF Strong Research Coordinator. Division members actively participate in regular research education sessions focused on the relevance of research to the professional development needs of the Division. Current areas of research development include use of therapeutic injections for the management of spasticity and pain; novel approaches to functional electrical stimulation in stroke; evidence based practice and interventions for spinal cord injury; and fatigue in neurological and neuromuscular disorders. The Division Research Advisory Committee continues to meet and develop a strategic planning process for research.

Dr. Hugh Anton is the co-leader of the interdisciplinary Fatigue and Function in Neurologic and Neuromuscular Disorders research team. Other Division members on the team include Dr. Andrea Townson and Dr. Barbara Hughes.

Dr. Andrei Krassioukov continues his internationally renowned research in autonomic dysfunction with several active research projects and graduate students under his supervision

Dr. Andrea Townson continues as a co-investigator on SCIRE: Spinal Cord Injury Rehab Evidence available at www.icord.org/scire.

Drs. Russell O'Connor, Heather Finlayson, Andrew Travlos, Rajiv Reebye, Andrei Krassioukov and Jennifer Yao are actively involved in research on therapeutic injections with Botulinum Toxin, Phenol and Lidocaine.

Other active research areas include the Impact of Critical Illness Polyneuromyopathy in Rehabilitation (Drs. Heather Finlayson, Andrew Travlos, Russell O'Connor) and Upper Limb Outcomes in Stroke Subjects (Dr. Heather Finlayson).

Clinical Services

Members of our Division continue to provide consultation services to Vancouver Acute, St. Paul's Hospital, as well as other hospitals in the Fraser Health Authority. Dr. Elliot Weiss is the leader for rehabilitation of Providence Health Care. Dr. Jacqueline Purtzki provides consultation services for the BC Children's Hospital, Vancouver Acute, and Sunnyhill Health Centre. Drs. James Filby and Lynne MacKean are providing UBC Undergraduate teaching assistance in Victoria.

Administration

Dr. Andrea Townson is the UBC Division Head as well as Division Head for Vancouver Acute and the Medical Site Lead for G.F. Strong Rehab Centre. Drs. Andrew Travlos, Rhonda Willms and Jennifer Yao are the medical managers assisting in program related issues at G.F. Strong Rehabilitation Centre.

Dr. Elliott Weiss is the Division Head for Providence Health.

Dr. Jennifer Yao is the Co-chair of Stroke Rehabilitation and community reintegration workgroup for the Provincial Stroke Strategy, the Vice chair for the Education Committee for the CAPMR and a Member at Large for the CAPMR executive.

Dr. Heather Underwood is the national leader for the amputee special interest group for the CAPMR. Dr. Andrea Townson is the national leader for the spinal cord injury special interest group for the CAPMR.

Dr. Hugh Anton continues to serve as an examiner for the Specialty of PM&R at the Royal College.

After many years of service, Dr. Gabriel Hirsch stepped down as Chair of the Section of PM&R for the BC Medical Association. Dr. Elliott Weiss in the new Chair.

The Division continues to provide leadership for the 2010 Paralympics:

Dr. Russell O'Connor is the Medical Manager for the 2010 Paralympics, Vancouver Olympic Committee.

Dr. Heather Underwood is venue medical officer for Nordic Skiing, Dr. Andrea Townson for Alpine Skiing and Dr. Rajiv Reebye for Wheelchair Curling.

Future Directions

The opening of the ICORD building this year has fostered further interdisciplinary collaboration, research and clinical activities focused on spinal cord injury research. Similarly, plans for the new Centre for Brain Health at UBC are providing opportunities for further clinical and research collaborations with neurology and psychiatry.

Clinical initiatives are underway for joint clinics with neurology in multiple sclerosis and with paediatrics in spina bifida.

Teaching and medical education have always been key strengths for the Division. With Division members pursuing formal training in education (Drs. Jennifer Yao and Heather Finlayson), the Division is poised to take a national leadership role in medical education and psychiatry. The Division has begun to co-develop a Canada-wide post-graduate education/teaching initiative to promote academic excellence in our specialty.

The distributed medical school sites provide an opportunity for our Division to build further on our clinical and academic ties throughout the province. Undergraduate rotations are now available in Victoria and the Division is working on recruiting a new member to provide clinical and academic ties to Northern British Columbia.

The Division continues to develop long-term initiatives regarding medical education and research in overseas countries.

Special Honours and Awards

Dr. Jennifer Yao was the 2008 recipient of the Fay R. Dirks Award for Excellence in Teaching from the UBC Department of Medicine.

Dr. Barbara Hughes was the recipient of the 2008 Duncan Murray Award for Excellence in Teaching.

Drs. Steven Helper and **Anibal Bohorquez** were awarded the 2008 Best Annual Physical Medicine and Rehabilitation City Wide Rounds Presentation for their presentation on 'Lumbar Radiculopathy'.

Dr. Andrea Townson was a visiting Professor at the University of Saskatchewan in April 2008.

RESPIRATORY MEDICINE

Division Members

Professor & Head
Dr. Mark FitzGerald

Honorary Professor
Dr. Morley Lertzman
Dr. Wan Tan-Hogg

Professor
Dr. Tony Bai
Dr. Vincent Duronio
Dr. John Fleetham
Dr. Stephen Lam
Dr. Robert Levy
Dr. S. F. Paul Man
Dr. David Ostrow
Dr. Peter Pare
Dr. Jeremy Road
Dr. Francis (Frank) Ryan
Dr. Stephanus Van Eeden
Dr. Raja Abboud (Emeritus)
Dr. Moira Yeung (Emeritus)

Associate Professor
Dr. Najib Ayas
Dr. Andrew Sandford
Dr. Donald Sin
Dr. Helen Ward
Dr. Pearce Wilcox

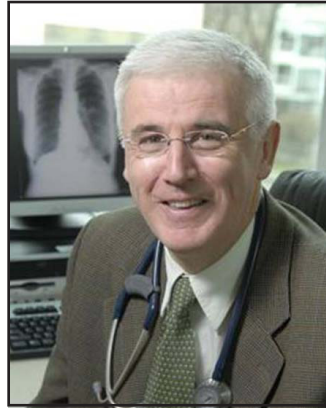
Assistant Professor
Dr. Stirling Bryan
Dr. Christopher Carlsen
Dr. Victoria Cook
Dr. Denise Daley
Dr. Mahyar Etminan
Dr. John Swiston
Dr. Scott Tebbutt

Clinical Professor
Dr. Edward Allen (Emeritus)
Dr. Paul Champion (Emeritus)
Dr. Richard Elwood
Dr. Nasreen Khalil
Dr. Lindsay Lawson
Dr. Edina (Barbara) Nakielna (Emeritus)
Dr. Juan Ronco

Clinical Associate Professor
Dr. Tharwat Fera

Clinical Assistant Professor
Dr. John Boyd
Dr. Richard Cohen
Dr. Annette McWilliams
Dr. Chris Miller
Dr. Mark Turner
Dr. Jennifer Wilson

Associate Member
Dr. Michael Brauer
Dr. Delbert Dorscheid
Dr. Ann Gordon
Dr. Mehdi Keshmiri
Dr. Susan Kwan
Dr. Alan Lowe
Dr. John MacCarthy
Dr. Nestor Muller
Dr. Darlene Reid
Dr. Clive Roberts
Dr. J. Douglass Rolf
Dr. Dennis Rupka
Dr. Bruce Sanders
Dr. John Tsang
Dr. Sheila Webster
Dr. Shannon Walker



Dr. Mark FitzGerald
Professor and Head

DIVISION OVERVIEW

The UBC Respiratory Division is primarily located at the major teaching hospitals affiliated with the UBC Faculty of Medicine. The major activities are focused at Vancouver General Hospital, St. Paul's Hospital and UBC Hospital. In addition, reflecting the distributed medical school there are a now a significant number of community respirologists affiliated formally as either full or associate members of the Division. Dr. FitzGerald is the Head of the UBC Respiratory Division, as well as the VGH Respiratory Division. Dr. Jeremy Road is the Associate Director of the UBC and VGH Respiratory Divisions which is a new position created in 2007 to allow Dr. FitzGerald to focus on major strategic directions. Dr. Tony Bai is the Head of Respiratory Medicine at SPH. In addition, in 2007 the UBC Respiratory Division developed a multi-site lung health framework focusing on education, clinical care and research. The Centre for Lung Health will provide a broader framework for a Lung Health Initiative originally conceived in 2006.

In 2008 Dr. Denise Daley was recruited as a CRC Chair with special interest in asthma related genetics. Dr. Daley is primarily located at the iCAPTURE Centre.

Teaching

Undergraduate

Dr. Jeremy Road (VGH) and Dr. Tony Bai (SPH) coordinate undergraduate elective programs for medical students. In this regard, the increased size of the medical school has presented new opportunities and challenges. Dr. Richard Cohen has assumed responsibility for the PBL pulmonary block and brings specialty expertise in education to this role as well as his specialty training in Respiratory Medicine.

Postgraduate

Dr. Jen Wilson is the Program Director for the Respiratory Medicine postgraduate training program. The program received full accreditation in the Royal College Review of Specialty Post graduate programs in 2007. The Program has expanded significantly with currently 7 clinical fellows in the program. The increased number of fellow's has created new opportunities for a greater range of specialty elective rotations both with the traditional teaching hospital locations but also in many community hospitals. Dr. Pare continues to lead the IMPACT training program which is a CIHR funded training program designed to develop a critical mass of scientists researching in the respiratory domain. Many Divisional members have cross affiliations with other CIHR funded trainee programs. These include TRID (Translational research in Infectious Diseases) FitzGerald and CIHR funded trainee program in transplantation (FitzGerald) under the leadership of Dr. Stephen Chung, General Surgery.

Many Divisional members are primary or co-supervisors of Masters, Ph D and post Doc students in a wide range of trainee programs across many different disciplines.

Experimental Medicine

Dr. Vince Duronio is the director of the Experimental Medicine Program, as well as a Divisional member. In total there are 17 fellows, 16 PhD students, 9 Masters students affiliated with the Respiratory Division.

Continuing Medical Education

Divisional members contribute extensively on a provincial, national and international level to professional development. The scope of these contributions are too abundant to list in this brief report but reflect the major productivity of the Division in terms of research activity as outlined below. It also reflects the major contributions members have continued to make in terms of national and international guideline development in many therapeutic areas. The major Divisional activity is the UBC Respiratory Medicine Update which again was a very successful meeting co sponsored with the BC Lung Association and held in Vancouver in March 2008. In addition to the UBC Update, the UBC Lung Health and Research and Policy Day was held for the first time in 2008. This meeting provided a platform for showcasing the broad research programs across the Centre for Lung Health and its many affiliates. It also included a policy session focusing on chronic disease management and COPD In particular. Finally the 6th Annual Air Quality and Lung Health meeting was held in conjunction with these meetings. Dr Lawson has served on the RCPC fellowship exam committee for many years and is about to be replaced by Dr P Wilcox who is also the UBC Respiratory Division CME directors.

Research

The UBC Division has an international reputation for excellence in research, which spans the CIHR Pillars, from state of the art basic research through to health outcomes. A conservative estimate of dollars generated for lung related research within the Division for 2008 comes to \$16 million. Major peer reviewed publications totaled over 200 papers for 2008 either published or in press. The iCAPTURE Centre for Cardiovascular and Pulmonary Research at SPH continues to provide strong leadership in basic and translational research with a particular focus on airways disease and cystic fibrosis but also an emerging emphasis on interstitial lung disease. Divisional members based in iCAPTURE include Scott Tebbutt and Andy Sandford, focused on genetic mechanisms of lung disease. The recent recruitment of Dr. Denise Daley has further consolidated expertise in the genetics of airways disease and in particular asthma. Drs. Don Sin, Wan Tan and Stephan Van Eeden, focused on COPD and air pollution; and Paul Man and Peter Pare both share multiple pulmonary research interests. Basic research also occurs at The Lung Centre at VGH with strong leadership from Drs. Vince Duronio and Nasreen Khalil but its major emphasis continues to be clinical and epidemiologic research

focusing on sleep disordered breathing, interstitial lung disease (both clinical and basic), airways diseases, occupational lung diseases and tuberculosis. There is a major collaborative link between VGH based investigators and the BC Cancer Agency focusing on better understanding of the pathogenesis, prevention and management of lung cancer. Drs. Stephen Lam and Annette McWilliams provide leadership for this program. Health outcomes research has been facilitated by MSFHR funding of a Sleep Research Unit with a number of economic evaluations completed in the sleep disordered breathing domain. In addition Dr. FitzGerald has continued with the development of a Respiratory Evaluation Sciences Program (RESP) with the planned recruitment of a Faculty level respiratory health economist.

Clinical Services

The UBC Division provides tertiary and quaternary services in a distributed model with regional and provincial services in pulmonary transplant (Medical Director, Dr. Levy), Pulmonary hypertension (Director, Dr. John Swiston), chronic home ventilation program (Director, Dr. Jeremy Road), occupational lung diseases (Director, Dr. Chris Carlsten) and Tuberculosis Ward (Director, Dr. Mark FitzGerald) based at VGH.

Other specialty clinics at VGH include COPD (Dr. Road et al), Asthma (Dr. FitzGerald), Interstitial Lung Disease (Dr. Khalil), lung cancer (Drs. McWilliams and Lam) and pleural diseases (Dr. Ryan et al). The Provincial cystic fibrosis program is based at SPH where there is also specialty expertise in pulmonary complications of HIV with links to the BC Centre for Excellence in HIV. SPH has specialty clinics for difficult asthma, pulmonary complications of scleroderma, interstitial lung diseases and COPD. UBC Hospital is the site, for the regional program in sleep-disordered breathing. Dr. Fleetham is the medical director of this program. Both sites provide comprehensive state of the art management across the continuum of care from ambulatory to acute, managing a broad range of respiratory diseases.

In addition there is a respiratory consultation service provided to UBC Hospital, Mount St. Joseph's Hospital, GF Strong and Pearson Hospitals. Both sites continue to develop ambulatory care related resources with an improved location for the Respiratory Ambulatory Unit at VGH, expanded pulmonary rehabilitation capacity at both major hospitals as well as innovative extension of care into the community best exemplified by an excellent program based at SPH with links to community rehabilitation. There are continued efforts to create better models of chronic disease management with COPD and asthma clinics continuing to evolve based on multi disciplinary models of care. Both sites have reconstituted their Morbidity and Mortality Rounds and have been proactive in including fellows and trainees in this process. The latter involvement has facilitated quality assurance projects. Vancouver Acute recently completed accreditation and the Respiratory Sciences got very high levels of commendation for its many programs.

Administration

Ms. Bernice Robillard provides administrative support for the post graduate training program. The UBC Divisional Secretary position was filled by Ms. Margie Bell who has provided excellent administrative support for the Division. Margie has expanded the previous job description with the development of a more program-management position and strategic direction with a plan to hire additional part-time secretarial support.

Future Directions

The Division faces a number of major challenges but also great opportunities. A major focus will be to develop a strategic recruitment plan especially focusing on the imminent needs for a clinician scientist, with an interest in cystic fibrosis, to be recruited to SPH, as well as the need for additional clinical respiratory physicians at that site. The Division also needs to look more generally at manpower needs especially the impact of the abolition of mandatory retirement at UBC on anticipated practice patterns in the future. Physical space and infrastructure, most notably for research space at SPH, will be a major focus on Divisional related activities. Although The Lung Centre at VGH provides excellent clinical and research space, with recent recruitments and a major increase in general clinical research additional, space will be required on this site also.

The development of a virtual Centre for Lung Health has provided an opportunity for broader strategic planning looking at new opportunities for education, research and clinical care. The ability to leverage off this Province wide initiative, with site specific opportunities most notably the Providence Heart and Lung Institute at SPH, presents a unique opportunity to maximize funding sources especially of a philanthropic nature from hospital based Foundations as well as seeking priority within UBC's broader fund raising campaigns.

Special Honors and Awards

Dr. Bob Levy was the President of the Canadian Thoracic Society in 2008. Dr. Levy was also the Program Chair for the very successful Canadian Respiratory Conference and also took a leadership role in the development of a National Lung health framework which will be formally announced in the Spring of 2009.

Dr. Stephen Lam: Faculty of Medicine Distinguished Achievement Award and Martin Hoffmann Award in Research Excellence.

Dr. Peter Pare: Ludwig Visiting Professor University of Sydney 2008.

Dr. Stephan van Eden: MSFHR Senior Scholar

Dr. Don Sin: SPH Distinguished Achievement Award in the Excellence in Clinical and Applied Research.

RHEUMATOLOGY

Division Members

Clinical Associate Professor & Head
Dr. Kam Shojania

Professor
Dr. Andrew Chalmers
Dr. John Esdaile
Dr. Denys Ford (Emeritus)

Associate Professor
Dr. Hyon Choi
Dr. Diane Lacaille

Assistant Professor
Dr. Jolanda Cibere

Clinical Professor
Dr. Kenneth Blocka
Dr. Barry Koehler (Emeritus)
Dr. Caroline Patterson
Dr. Graham Reid
Dr. Harold Robinson (Emeritus)
Dr. Ian Tsang (Emeritus)

Clinical Associate Professor
Dr. Simon Huang
Dr. Alice Klinkhoff
Dr. Robert Offer
Dr. Rhonda Shuckett
Dr. John Wade

Clinical Assistant Professor
Dr. Maziar Badii
Dr. Stephanie Ensworth
Dr. Cathy Flanagan
Dr. John Kelsall
Dr. John Watterson

Clinical Instructor
Dr. Antonio Aviña Zubieta
Dr. David Collins
Dr. Stanley Fenton
Dr. Jean Gillies
Dr. Raheem Kherani
Dr. Jason Kur
Dr. Jennifer Reynolds
Dr. Lucie Wilk

Associate Member
Dr. Milton Baker
Dr. James Dunne
Dr. Jacek Kopec

Adjunct Professor
Dr. Jerry Tenenbaum

Adjunct Member
Dr. Judy Le Page



Dr. Kam Shojania
Clinical Associate Professor,
Head and Postgraduate Program
Director

DIVISION OVERVIEW

The UBC Division of Rheumatology currently consists of 26 active faculty members, as well as three associate members, two adjunct members, and four emeritus members. Rheumatology consultation services are offered at Vancouver General Hospital, St. Paul's Hospital, and G.F. Strong Rehabilitation Centre. Ambulatory care services are available at the Mary Pack Arthritis Centre, the Gordon and Leslie Diamond Centre, St. Paul's Hospital, and in private practices throughout Metro Vancouver, Penticton and Victoria. The Arthritis Society (BC & Yukon Division) provides excellent patient education and resources available through the Learning Centre based at the Mary Pack Arthritis Centre.

Many divisional faculty are members of the Arthritis Research Centre of Canada, a multidisciplinary clinical research and clinical trials facility affiliated with both the University of British Columbia and the Vancouver Coastal Health Research Institute. The Arthritis Research Centre focuses on "Practical Research for Everyday Living" for people with arthritis.

Dr. Diane Lacaille was promoted to Associate Professor with tenure in 2008, based on her major contribution to research, her national and international stature, her grants and her teaching.

Dr. Caroline Patterson was promoted to Clinical Professor in 2008, which is a testament to her dedication to teaching and her many years of work for the Division, as well the Department of Medicine and UBC.

Dr. Cathy Flanagan is a welcome new addition to the UBC Division of Rheumatology as a Clinical Assistant Professor, and is based at the Royal Columbian Hospital in New Westminster. Her work with the Drug Benefits Advisory Committee has been much appreciated. She will be working with trainees in her clinic one day per week, where they will benefit from her clinical expertise.

Dr. Milton Baker is welcome as an Associate Member based with Vancouver Island Health Authority. Dr. Baker has been a hard-working advocate for Rheumatology at the level of the British Columbia Medical Association and teaches at the Island Medical Program.

Dr. Jerry Tenenbaum is welcome as an Adjunct Member, based with Vancouver Island Health Authority. Dr. Tenenbaum brings years of teaching experience and administrative experience from the University of Toronto where he was Associate Dean.

Teaching

Undergraduate

Dr. Rhonda Shuckett has taken over as director of the highly successful undergraduate rheumatology program from Dr. Simon Huang. This includes the Musculoskeletal block (which we share with orthopedics), Bedside Clinical Teaching, and Rheumatology Week. The latter has proved so useful that Dr. Shuckett gives her Rheumatology Week lectures in Prince George each year.

Dr. Shuckett also does a superlative job of leading the Rheumatology Problem-Based Learning for the second-year medical and dental class. A number of our faculty provide clinic and teaching time for medical student rotations. In 2008, approximately 27 fourth-year medical students from UBC and other universities spent two to four-week electives with St. Paul's Hospital and Vancouver General Hospital Rheumatology.

Postgraduate

Dr. John Esdaile stepped down as Program Director for the Postgraduate Training Program at the end of 2007, and Dr. Kam Shojania is the new Program Director as of January 2008. The faculty provides one to two month elective rotations in Rheumatology Internal Medicine and other specialties from UBC and other universities. In 2008, approximately 60 residents from Internal Medicine, Family Practice, Neurology and Physical Medicine and Rehabilitation spent elective rotations in one of our two teaching sites, St. Paul's or Vancouver General, as well as private practices in Metro Vancouver.

The two-year Postgraduate Training Program in Rheumatology continues to be the second-largest clinical rheumatology training centre in Canada. The program typically receives funding from the Ministry of Health for one trainee every year. Also, one or two internationally-funded trainees are considered. Active in-patient, ambulatory care and research training is done at Vancouver Hospital & Health Sciences Centre, St. Paul's Hospital, G.F. Strong Rehabilitation Centre, the Arthritis Research Centre, and in private practices throughout the Lower Mainland and elsewhere in the province.

The postgraduate program is currently comprised of two first-year trainees, three second-year trainees, and two postdoctoral fellows. The trainees participate in mandatory rotations at Vancouver Acute, St. Paul's Hospital, G.F. Strong, BC Children's Hospital, Physical Rehabilitation, and in numerous drug/disease monitoring clinics and community rheumatology practices throughout their training.

For the eighth consecutive year, the Division offered the "Basic Skills Course for Rheumatology Fellows" in the first week of July, 2008. This course is organized by Dr. Kam Shojania and involves the majority of the divisional faculty. It continues to be the only course of its kind in Canada, and provides new rheumatology fellows with a comprehensive background in the basic skills required in the academic and clinical practice of rheumatology. It also provides a useful and timely review for

senior fellows. In addition to our trainees, seven rheumatology trainees from other programs across Canada attended the course.

Our trainees have benefited from several guest speakers at their weekly Academic Half-Day. Both the Division and the Postgraduate Training Program have enjoyed Noon Rounds presentations from each of our local Division members, as well as a number of visiting professors, including Dr. Fred Wolfe (University of Kansas), Dr. Rick Adachi (McMaster University), Dr. Alan Rosenberg (Pediatrics, University of Saskatchewan), Dr. Daniel Furst (University of California, Los Angeles), Dr. Jaime Guzman (UBC), Dr. Xenophone Baraliakos (Ruhr University, Germany), Dr. Art Kavanagh (University of California, San Diego), Dr. Sharon Leclercq (University of Calgary), Dr. Kristin Houghton (UBC Division of Paediatric Rheumatology), Dr. Ye-ting He (Guangdong University, China), and Dr. Jan Storek (University of Calgary).

Research

Members of the Division continue to be active in the Arthritis Research Centre, located in Vancouver. The Arthritis Research Centre includes faculty from the Division of Rheumatology, the Department of Orthopedics, the Department of Health Care & Epidemiology, the Department of Pharmaceutical Sciences and the School of Rehabilitation Sciences, as well as from the Centre for Health Evaluation and Outcome Studies at St. Paul's Hospital, and the Centre for Clinical Epidemiology and Evaluation at Vancouver Acute. They also are members of the Centre for Hip Health at the Vancouver General Hospital.

Current research is funded by the Canadian Arthritis Network (of the Networks of Centres of Excellence), The Arthritis Society of Canada, The Kirkwood Foundation (U.S.) and the Canadian Institutes of Health Research. Faculty members hold scholarships from the Arthritis Society of Canada and the Canadian Institutes of Health Research. Drs. Diane Lacaille and Jolanda Cibere both received new CIHR grants in 2008.

Drs. Kenneth Blocka, Andrew Chalmers, Jan Dutz, Alice Klinkhoff, Jennifer Reynolds and Kam Shojania are leading clinical trials at the Arthritis Research Centre. The group's research focuses primarily on the study of new biologic agents.

For the last few years, Dr. Ian Tsang has been working closely with the Guangzhou Traditional Chinese Medicine University in Guangzhou, China, to develop innovative ways to establish clinical evidence for Traditional Chinese Medicine. He has participated in several conferences related to evidence-based medicine in China as a speaker and panel member. He has also published on the subject.

Clinical Services

The Mary Pack Arthritis Centre is operated by Vancouver Coastal Health and directed by Dr. Alice Klinkhoff, and the Centre runs extensive drug and disease monitoring clinics. These include the Immunosuppressive Clinic (Dr. John Kelsall and

Dr. Ken Blocka), the Cyclosporine Clinic (Dr. Andrew Chalmers and Dr. David Collins), the Out-Patient Day Program (Dr. Alice Klinkhoff), the Gold Clinic (Dr. Alice Klinkhoff), and the Young Adults with Rheumatic Diseases Clinic (Drs. David Cabral, Angela How, and Lori Tucker). There are also two Combined Clinics in Orthopedics (Drs. Alistair Younger and Dr. Erin Brown), one Combined Clinic in Oral Pathology (Dr. Bruce Blasberg), and a Combined Clinic in Dermatology (Dr. Jan Dutz).

The Mary Pack program coordinates the travel of divisional faculty to 22 remote locations in British Columbia, in a Rheumatology Outreach Program. This program's goal is to provide consultation and treatment services to communities with populations of 5,000 which do not have a rheumatologist accessible within two hours driving time, as well as to numerous isolated First Nations communities. The Mary Pack program also provides a variety of educational workshops for patients, as well as physiotherapy, occupational therapy, and access to social workers and vocational counselors.

Ambulatory care clinics offered at St. Paul's Hospital include a rapid access program with Dr. John Kelsall, and the Limited Scleroderma Clinic with Dr. James Dunne. Dr. Dunne also works with Dr. Wilcox, of the Division of Respiratory Medicine, in a Combined Lung Scleroderma Clinic, which helps in our goal to interact with other Divisions in order to promote excellence in the treatment and study of systemic rheumatic diseases. The new Lupus Clinic, directed by Dr. Jennifer Reynolds opened its doors in March 2008, and is also staffed by Dr. Ken Blocka and Dr. Lucie Wilk. The Lupus Clinic continues to grow, seeing new patients referred by General Practitioners as well as complicated consults from fellow rheumatologists.

The rapid-access clinic for early rheumatoid arthritis patients is staffed by Drs. David Collins, Alice Klinkhoff, Lucie Wilk, Diane Lacaille and Andrew Chalmers. This clinic is part of a Canadian network of early rheumatoid arthritis clinics and will share data for research purposes.

The G.F. Strong Rehabilitation Centre's Arthritis Unit, directed by Dr. John Watterson, offers post-operative and rehabilitative services to rheumatology patients along with specialized physiotherapy, occupational therapy and vocational counseling. In-patient services are offered at Vancouver Acute and St. Paul's Hospital.

Dr. Robert Offer in Penticton has extensive involvement in teaching including rheumatology fellows, residents and medical students. He is involved in many continuing-education events for physicians. Penticton is the major rheumatology resource for the interior with a well-staffed Mary Pack Treatment Centre at Penticton Regional Hospital and a drug monitoring clinic covering more than 500 active rheumatoid arthritis patients. Dr. Offer does outreach traveling consultation clinics and now telemedicine to Creston, as well as research and clinical trials.

Administration

Dr. John Esdaile completed his second term as Head and Postgraduate Program Director at the end of 2007, and Dr.

Kam Shojanian started in January 2008 as the new Head and Postgraduate Program Director for UBC Rheumatology. Dr. Ken Blocka continued as the Head of the St. Paul's Hospital Division, and oversaw the training program there, until July 2008. Dr. John Wade continued as Acting Head of the Vancouver Hospital Division until December 31, 2008. As part of a general trend in the Department of Medicine to centralize administration, Dr. Kam Shojanian became Head of the St Paul's Division on July 1, 2008, and Head of the Vancouver General Hospital Division on January 1, 2009. Dr. John Watterson continues to oversee the hospital training program at G.F. Strong Hospital. Dr. Alice Klinkhoff is Director of the Mary Pack Arthritis Centre. Dr. John Esdaile continues as the Scientific Director of the Arthritis Research Centre. Miss Tracey Ernst joined the team as Division and Postgraduate Program Administrator in September 2007, as well as Administrator for VGH Rheumatology. Ms. Linda Birmingham dedicated herself to the St. Paul's Division for 15 years, and in July 2008 gracefully stepped back to work exclusively with Dr. Blocka, and gave Miss Ernst an excellent foundation to inherit and build on.

Dr. John Esdaile is on the Executive Committee of the Western Alliance of Rheumatology, along with faculty members from the Universities of Alberta, Calgary, Saskatchewan, and Manitoba, and in May 2008 they held the sixth annual Western Alliance of Rheumatology Meeting, which is a collegial gathering of rheumatologist from the Western provinces and focuses on practical clinical and research topics.

The third annual BC Rheumatology Invitational Education Series (BRIESE) was once again organized by Drs. John Wade, John Watterson, Maziar Badii and Jason Kur in October 2008. This two day academic program brings rheumatologists together from across the province for a focused program with local and international faculty. This year's invited speakers included Dr. Rick Adachi (McMaster University), Dr. Michael Schiff (University of Colorado) and Dr. Atul Deodhar (Oregon Health and Science University).

Dr. Barry Koehler is Chair of the Canadian Rheumatology Association (CRA) Human Resources Committee. Dr. Kam Shojanian and Dr. Stephanie Ensworth serve on the CRA Scientific Committee. Dr. Shojanian also sits on the CRA Education Committee and the Royal College Specialty Committee. Dr. Diane Lacaille serves on the Canadian Arthritis Network (CAN) Research Management Committee. Dr. John Esdaile and Dr. Alice Klinkhoff are Board members of The Arthritis Society of B.C. and Yukon.

Future Directions

In 2009, the Division will continue to pursue excellence in teaching, research, and clinical care. We face challenges in Human Resources and an increased demand for outpatient clinics, which we hope to resolve by increasing Rheumatology clinics in the two main teaching hospitals, which will benefit both the community and our education program. We continue to enhance the collegiality and cooperation between the two teaching hospitals, and anticipate further incorporating the com

munity rheumatologists. We will also benefit from continuing close cooperation with The Arthritis Society and the Mary Pack Arthritis Program, as well as other UBC Divisions.

Distinctions and Awards

Dr. John Esdaile was awarded the 2008 UBC Killam Research Award.

Dr. Rhonda Shuckett was awarded the UBC Class of 2011 Outstanding Educator Award.

MEDICINE

Members at Large

Faculty Members

| | |
|----------------------|------------------------------|
| Dr. Sandra Baker | Clinical Assistant Professor |
| Dr. Daryce Cuff | Clinical Assistant Professor |
| Dr. Gaylene Hargrove | Clinical Assistant Professor |
| Dr. Fariba Kaboli | Clinical Instructor |
| Dr. Yvonne Lefebvre | Clinical Professor |
| Dr. Petr Polasek | Clinical Assistant Professor |
| Dr. Lisa Ronald | Visiting Scholar |
| Dr. Dennis Rupka | Clinical Assistant Professor |
| Dr. Viera Saly | Clinical Assistant Professor |
| Dr. Patricia Sparks | Clinical Associate Professor |
| Dr. Timothy Takaro | Visiting Associate Professor |
| Dr. Peter Tan | Clinical Assistant Professor |
| Dr. Angela Towle | Assistant Professor |

CLINICAL INVESTIGATOR PROGRAM



Dr. Anita Palepu
Professor and Director

The Clinical Investigator Program (CIP) program is an integral component of the Department of Medicine. Its main goals are to integrate promising medical students, residents and fellows into an academic environment that sustains and nurtures academic interests. Dr. Palepu in her role as director of this program, has been advocating for young investigator participation and interest in research activities. The CIP program is a resource, which permits divisions within the DOM to leverage funding opportunities in order to support the academic endeavors of those divisions.

The Faculty Clinical Investigator Program is a 2-year program, which has the potential to fund at least 5 individuals each year. Current CIP young investigators enrolled in the DOM CIP program from 2008 include: Dr Catherine Weber, Nephrology (2nd year), Dr Carolyn Taylor, Cardiology (2nd year).

Accomplishments of those individuals are listed in the appendix below.

Given the importance of the CIP program to the growth and sustainability of research programs, the co-directors have been more formally integrated into key activities of the DOM. This has included presentations to the DOM business meetings at both PHC and VGH sites, and ongoing interaction with Division Heads at the UBC DOM Division Heads meeting held monthly and at the quarterly Subspecialty Program Directors meetings. They have also presented to the core internal medicine residents early in their academic year to increase awareness of opportunities to pursue a research career through the CIP.

The CIP directors also provide advice and support to CIP trainees as they negotiate their first faculty position and provide referee letters for external funding.

One new initiative that is supported by the DOM and the core Internal Medicine training program is the opportunity for up to two core Internal Medicine residents to pursue research training during their residency. This initiative is also supported by the Faculty of Medicine CIP and both co-directors participate in the Faculty CIP committee.

CIP goals for 2008-9:

Ad hoc meetings with residents and fellows interested in a research career.

- Prioritizing residents for selection into the core Internal Medicine program who aspire to have research careers and can be accommodated through the Core Internal Medicine and Faculty CIP program
- Formal contact with the core Internal Medicine residents regarding career planning and research via their Academic Half Day has occurred regularly and in particular at the beginning of the academic year
- Ad hoc meetings with residents and fellows interested in a research career

Collaborating with Dr. Don Sin to increase the profile of research to trainees. A noon round has been started to expose trainees to the departmental research activities at SPH.

APPENDIX

Dr. Catherine Weber (2nd year)

Division: Nephrology

Supervisor: Dr. Adeera Levin

Publications

Weber CL, Rose CL, Magil AB. Focal segmental glomerulosclerosis in mild IgA nephropathy: a clinical-pathologic study. *Nephrol Dial Transplant.* 2009;24(2):483-8.

Weber CL, Frohlich J, Chan-Yan C. Reply-Stability of lipids on peritoneal dialysis in a patient with familial LCAT deficiency. *Nephrol Dial Transplant.* 2007;(7):2084-8.

Weber CL, Bartley D, Al-Thaqafi A, Embil JM. Blastomyces dermatitidis osteomyelitis of the tibia. *Am J Orthop.* 2007 Jan; 36(1): 29-32.

Research in Progress

INTERACTEDD: INTEgrated Studies in Vascular Reactivity and Anaemia in Chronic Kidney Disease and Dialysis Patients.

This is an observational study examining the relationship between vascular stiffness, hemoglobin concentration and erythropoietin dose in hemodialysis, peritoneal dialysis and chronic kidney disease patients. We will be using the SyphygmoCor device to measure Augmentation Index and Pulse Wave Velocity (measures of vascular stiffness), and be performing special blood tests (Circulating Microparticles which are markers of endothelial activation/damage) over a six-month period of time. We plan to compare groups at different concentrations of hemo-

globin (100-110g/L, 111-120g/L and 121-130g/L). We hypothesize that those patients with the highest degrees of vascular stiffness will benefit from a 'lower' hemoglobin concentration.

INTERACTEDD is a multi-national study (Germany, Australia and Canada). In December 2007, the study received ethics approval at St. Paul's Hospital. Recruitment is starting in January 2008, and we are hoping to enroll 90 patients at the St. Paul's Hospital site.

Degree Programs Enrolled

Masters in Clinical Epidemiology
University of British Columbia
Completion May 2009

Funding

Submitted applications to KRESCENT (Kidney Research Scientist Education and National Training Program) and Kidney Foundation of Canada for funding 2008 onward, awards to be announced May 2008.

Dr. Carolyn Taylor (2nd year)

Division: Cardiology
Supervisors: Dr. Sammy Chan (St Paul's Hospital, Vancouver, BC, Canada) and Dr. Udo Hoffmann (Massachusetts General Hospital, Boston, MA, USA)

Completed abstracts/publications:

Taylor CM, Lombardero MS, Krishnaswami A et al. Global burden of risk factors in diabetics with stable coronary artery disease – an analysis from the BARI 2D trial. Canadian Journal of Cardiology 2008; 24: 334-335.

Brunner NW, Taylor CM, Wong GC et al. Isolated coronary artery disease versus stroke and peripheral arterial disease in south asians: are there differences in risk factor profiles? Canadian Journal of Cardiology 2008; 24: 271.

Publications Submitted (2009) – acceptance pending:

Taylor CM, Humphries KH, Pu A, Ghali W, Gao M, Knudtson M, Carere RG. A clinical prediction tool to identify patients unlikely to require coronary revascularization at invasive angiography.

Bhatia R, Donnelly P, Taylor CM, Nasir K, Sarwar A and Hoffmann U. Outcomes and referral patterns for further cardiac testing after coronary computed tomography in patients with suspected coronary artery disease.

Brunner NW, Taylor CM, Cairns JA, Seidman JG, Penn IM, Ramanathan K. Kava consumption and coronary artery disease in South Asians: Is there an association?

Research in Progress:

Prevalence, distribution and phenotype of coronary artery plaque on cardiac computed tomography angiography amongst patients with a family history of premature coronary artery disease

*Massachusetts General Hospital (Dr. Udo Hoffmann)

ECG predictors of findings on cardiac CT angiography: a ROMI-CAT substudy

*Massachusetts General Hospital (Dr. Udo Hoffmann)

Incidence of contrast nephropathy following cardiac computed tomography angiography in stable chest pain patients

*Massachusetts General Hospital (Dr. Udo Hoffmann)

Extending the Benefits of Cardiac Rehabilitation to Rural British Columbia

*St. Paul's Hospital Healthy Heart Program (Dr. Sammy Chan)

Journal Reviewer:

American Journal of Cardiology

2008-2009

Journal of Cardiovascular Computed Tomography

2008-2009

Degrees Obtained:

Masters of Public Health (2008)

Harvard University

Certification Obtained:

Diplomate, Cardiovascular CT (2008)

Certification Board of Cardiovascular Computed Tomography

CONTINUING MEDICAL EDUCATION PROGRAM



Dr. G.B. John Mancini
Professor and Director



Kathy Standeven
Program Organizer

New Initiatives/Developments

In our fiscal year 2008, the department successfully planned and delivered two Continuing Medical Education events; began the planning for four events to be held throughout 2009 as well as published the manuscripts presented at the 2007 Vascular Biology meeting in the June supplement issue of the Canadian Journal of Cardiology.

The 10th Annual Respiratory Update Conference was held March 28-29, 2008 at the Sheraton Wall Centre Hotel in Vancouver. The two day event was well-attended and received by a mix of 125 physicians, therapists and other allied health professionals.

Our "11th Annual Medicine in the 21st Century" Conference was held June 5-7, 2008 at the Sheraton Vancouver Wall Centre Hotel. A distinguished roster, comprised of twenty six UBC Faculty members, delivered a series of didactic presentations and small case based workshop sessions to over 100 physicians and allied health professionals from across Canada and the United States. Once again this event was well-attended and the quality, as in past years, was rated highly.

Next year we will be hosting, in addition to the above two annual events, the bi-annual Vascular Biology Working Group meeting in August and a new event for our department, the Rheumatology Update in October 2009.

The department continues to offer the CME conferences with the goal of providing top-tier professional development opportunities while also generating funding for the Department of Medicine Academic Enhancement Fund. This fund helps support junior faculty who need protected time and other resources to develop their academic credentials in teaching and research.

We would like to thank our many Faculty Members who have contributed their time by participating in our CME events. Without their continued support we would be unable to continue to offer high quality, well-attended CME events.

GRADUATE STUDIES PROGRAM IN EXPERIMENTAL MEDICINE



Dr. Vincent Duronio
Professor and Director

Program Overview

Experimental Medicine is the UBC graduate studies program within the Department of Medicine, which was developed to train individuals seeking a career in biomedical research. Students are enrolled in both MSc and PhD degree programs. Subspecialties within the Experimental Medicine Program include Cancer Biology, Cardiology, Gastroenterology, Haematology/Oncology, Immunology, Infectious Diseases, Molecular Biology, Nephrology, Neurology, Pediatrics, Physiotherapy and Respiratory Medicine. A substantial number of students in the program are under the supervision of faculty members outside of the department. In 2008, 29 new students were admitted to the program. At the end of 2008, there were 141 students registered in the program, 41 for MSc degrees and 100 for PhD degrees.

During 2008, a total of twenty-eight students graduated; thirteen at the May 2008 Convocation and fifteen at the November 2008 Convocation. Student names and thesis titles are listed below (research supervisor in parenthesis):

PhD Graduates

- **Sarah Allan**, Defining the Biological Role of FOXP3 in Human CD4+ T Cells, (Dr. Megan Levings).
- **Daisy Frangolias**, Candidate genes other than the CFTR gene as possible modifiers of pulmonary disease severity in cystic fibrosis, (Dr. Peter Paré).
- **Ebrima Gibbs**, Evolution of the Anti-Interferon Beta (IFN β) Antibody Response in Multiple Sclerosis Patients - IgG Subclass Distribution, Affinity Maturation and Clinical Correlates, (Dr. Joel Oger).
- **Alison Karst**, Novel Therapeutic Targeting of Apoptosis and Survival Pathways in Melanoma, (Dr. Gang Li).
- **Maisie Lo**, Role of transporters in pancreatic drug resistance, (Dr. Victor Ling).
- **Barbara Murdoch**, Identification, regulation and lineage tracing of embryonic olfactory progenitors, (Dr. Jane Roskams).
- **Kyle Niessen**, Coordinated Regulation of the Snail Family of Transcription Factors by the Notch and TGF- β pathways during heart development, (Dr. Aly Karsan).
- **April Randhawa**, The role of CD43 in the growth and pathogenesis of mycobacterium tuberculosis within the mammalian host, (Dr. Richard Stokes).
- **Alexander Scott**, Tendon overuse pathology - clinical and laboratory studies, (Dr. Karim Khan and Dr. Vincent Duronio).
- **Wooseok Seo**, Functional Analysis of murine C43 shedding, (Dr. Hermann Ziltener).
- **Poh Tan**, Role of Podocalyxin in Hematopoiesis and Cell Migration, (Dr. Kelly McNagny).
- **Amy Tien**, Immune cell alterations in mouse models of prostate cancer, (Dr. Cheryl Helgason).

MSc Graduates

- **Yasmin Ahamed**, Sex-Specific Changes in Bone Structure and Strength during Growth: pQCT Analysis of the Mid-Tibia, (Dr. Heather McKay).
- **Paxton Bach**, The effects of topical calcipotriol treatment on immune responses to vaccination, (Dr. Jan Dutz).
- **Armin Barekatin**, Disease mechanisms in the C3H/HeJ mouse model of alopecia areata, (Dr. Kevin McElwee and Dr. Jerry Shapiro).
- **Becky Chan**, Expression of Beta Subunit of Epithelial Sodium Channel and Cystic Fibrosis Transmembrane Regulator in Small Airways Obstruction in Chronic Obstructive Pulmonary Disease, (Dr. Shizu Hayashi).
- **Jung-Un Choi**, The Longitudinal Effect of Electroconvulsive Therapy in the Rodent Model of Parkinson's Disease, (Dr. Doris Doudet).
- **Kai Gao**, The Role of Nuclear Factor kappaB Subunit p50 in Melanoma Pathogenesis, (Dr. Gang Li).
- **Tobi Higo**, Role of BCL2 Proteins in Neutrophil Activation and Delayed Apoptosis in Crystal-Induced Arthritis, (Dr. Vincent Duronio and Dr. Helen Burt).

- **Kelvin Ip**, Mechanical Integrity of Myosin Thick Filaments of Airway Smooth Muscle in vitro: Effect of Phosphorylation of the Regulatory Light Chain, (Dr. Peter Paré and Dr. Chun Seow).
- **Edgar Lam**, Development of a novel liquid chromatography based tool to study post-translational modifications, (Dr. Juergen Kast).
- **Guinevere Lee**, Serine/threonine phosphorylation in Mycobacterium tuberculosis: Identification of Protein Kinase B (PknB) substrates, (Dr. Yossef Av-Gay).
- **Cathy Lee**, Y-box binding protein-1 (YB-1) is Essential for the Growth and Survival of HER-2 Over-Expressing Breast Cancer Cells, (Dr. Sandra Dunn).
- **Yu Huan Theresa Liao**, Evaluation of insulin secretion by in vitro generated human islet-like clusters, (Dr. Garth Warnock).
- **Andrew Low**, Using genotype and phenotype methods to determine the HIV co-receptor phenotype in the clinical setting, (Dr. Richard Harrigan).
- **Matthew Sniatynski**, Data Analysis in Proteomics, (Dr. Juergen Kast).
- **Rena Tabata**, Neuropathology induced by sterol glucosides in mice, (Dr. Christopher Shaw).
- **Rossitta Yung**, Polymorphisms of CF Modifier Genes: Their Relationship to Pseudomonas Aeruginosa Infection and Severity of Disease in CF Patients, (Dr. Andrew Sandford).

In 2008, 114 Experimental Medicine students surveyed reported a total of \$2,519,667 in funding, an average of \$22,102 (up from \$20,907 in 2007) per student. Research Supervisors provided \$1,035,984 in Graduate Research Assistantships. Other funding sources included CIHR (\$554,250, up from \$551,333 in 2007), the Michael Smith Foundation (\$394,083, up from \$270,000 in 2007), and NSERC (\$130,500, up from \$105,000 in 2007).

There are 140 faculty members currently registered as Research Supervisors in the program. Faculty members from other departments also participate as course lecturers, thesis committee members, in research seminars and as examiners for internal examinations and theses defenses.

In the academic year 2007-2008, the Experimental Medicine Program offered eight graduate courses. These included: MEDI 501 (Molecular & Cellular Biology), MEDI 502 (Methodology), MEDI 530 (Gastroenterology), MEDI 535 (Journal Club), MEDI 548 (Directed Studies in Experimental Medicine), MEDI 560 (Pulmonary Pathophysiology), MEDI 570 (Cardiology), and MEDI 590 (Molecular Medicine).

The overall administration of the program is under the guidance of the Experimental Medicine Committee. This committee meets at least once per year to discuss policy and procedures. Current members of the committee are: Dr. Yossef Av-Gay (Infectious Diseases), Dr. Michael Cox (Dept. of Urological Sciences), Dr. Vincent Duronio (Respiratory Medicine and Director), Dr. R. Keith Humphries (Haematology/Oncology), Dr. Kevin McElwee (Dept. of Dermatology), Dr. Alice Mui (Dept. of Surgery), Dr. Steve Pelech (Molecular Medicine), Dr. Bill Salh (Gastroenterology), Dr. Andrew Sandford (Respiratory Medicine, iCapture Centre), Dr. Yu Tian Wang (Neurology, Brain Research Centre), and Dr. Graydon Meneilly (ex-officio). The Experimental Medicine Program's daily administration is through the director and one secretary.

The Experimental Medicine Program continues to sponsor Student Research Day events, two of which were held in 2008.

The first Student Research Day of 2008 was held on June 13 at the Ballroom of the Graduate Student Centre at UBC. 14 students gave oral presentations and 33 students participated in poster presentations.

Brian Reikie won Best Overall Presentation. Arezoo Astanehe and Jennifer Locke won Best Oral Presentations. Abdi Ghafari and Karen To won Best Poster Presentations. The total amount of prize money awarded was \$700.

The second Student Research Day of 2008 was held on November 27 at the Holiday Inn Vancouver Centre. 14 students gave oral presentations and 26 students participated in poster presentations.

Michael Butt won the award for Top Overall Presentation. Andrew Lee and Andrew Ming-Lum won Best Oral Presentations, Alastair Davies, Nicholas Bilbey, and Grace Boutilier won Best Poster Presentations. The total amount of prize money awarded was \$800.

Financial support for the Student Research Day events was provided by the Vancouver Coastal Health Research Institute, GlaxoSmithKline Inc., and the Canadian Society of Biochemistry, Molecular and Cellular Biology.

The Experimental Medicine Program continued to offer travel grants to students who had already used the travel grant provided by the Faculty of Graduate Studies.

The Experimental Medicine Office is located at the: UBC Department of Medicine, 10th Floor, Room 10226, Gordon and Leslie Diamond Health Care Centre, 2775 Laurel Street, Vancouver General Hospital. The office telephone number is 604-875-4111-ext.63140, the fax number is 604-875-4886 and e-mail address is exptimed@interchange.ubc.ca.

POSTGRADUATE EDUCATION PROGRAM



Dr. (James) Mark Roberts
Clinical Associate
Professor and Director



Hazel Wilcox
Program Administrator

New Initiatives/Developments

In January 2008 our first formal advocacy project was implemented with Dr. Roger Wong leading the way with a talk on hypertension and blood pressure to the Asian Community from the Vancouver Eastside. Seven of the Medical Residents, along with Hazel Wilcox, Postgraduate Program Manager, participated in this program by assessing blood pressures and providing information. Residents reflected on this experience by posting pictures on the departmental advocacy website. The exponential learning subsequently formed the basis of the new Advocacy in Action curriculum.

The Medical Cantonese Project, a resident driven advocacy project lead by Resident Penny Tam, was implemented in 2008. The project entailed a group of residents establishing a curriculum and assessment methods for teaching peers in the learning of basic medical Cantonese. This will enable the residents stronger communication with patients and families who speak little or no English. The uptake by residents has been tremendous and pilot data from this will be presented at Resident Research Day 2009.

In 2008 the training program purchased simulators models for thoracentesis, paracentesis, lumbar puncture and will be initiating educational programs with these models in the 2009/2010 academic year. We have a well-established curriculum for central line placement and intubation simulation. We are also initiating faculty development on portable ultrasound technology in Internal Medicine. This will be implemented in August 2009.

The 24th Annual resident Research Day was held on May 21st with 27 podium presentations by residents and 25 poster presentations. The moderator for this year was Dr. Ken Madden. Podium adjudicators were Dr. Vince Duronio, Director, UBC Experimental Medicine Program, Dr. Bill Ghali, Professor of Medicine in the Department of Medicine, University of Calgary, and Dr. Jim Spence, specialist in Internal Medicine and Director of the Clinical Teaching Unit at Royal Jubilee Hospital. Poster adjudicators were Dr. Bob Schellenberg - Professor of Medicine UBC Department of Medicine, Division of Allergy & Immunology and Dr. Donald Sin, Associate Professor of Medicine in the UBC Division of Respiratory Medicine.

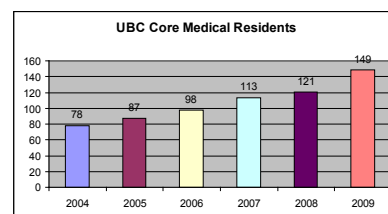
Our 3rd Resident Quality Improvement Day was held on November 26, 2008. The guest speaker was Dr. J. Dean Sandham - Dean, Faculty of Medicine, University of Manitoba Chair, Manitoba Health Research Council. Dr. Sandham along with Drs. Dean Chittock and Barbara Terise adjudicated the afternoon sessions.

Royal Columbian Hospital rotations sites are being further developed by Dr. Gerald Da Roza and in May 2008 Dr. David Shu took on the role as Associate Site Director at RCH. For the 2008/2009 academic year, and thanks to the cooperation of Dr. Julie Lee, Endocrinology at RCH is being added as a further rotation and are looking towards development of additional sub-specialty rotations for the 2009/2010 academic year. In 2008 we sent the first residents to a newly developed CCU rotation at Royal Jubilee Hospital as well as an Ambulatory Cardiology at Royal Jubilee. We anticipate Victoria CCU will be a site where we will have the ability to schedule many of the off-service residents, as well. We also piloted an ICU rotation at Surrey Memorial Hospital in anticipation of assigning residents for the 2009/2010 academic year.

Prince George Regional Hospital saw Dr. Don MacRitchie step down as Site Director. Dr. MacRitchie was replaced with Dr. Paul Winwood.

Our training program continues to grow at a rapid pace. July 2008 saw a record-breaking 121 core residents which is anticipated to grow to 142+ for the 2009/2010 academic year. The chart below provides an overview of this growth.

Our Annual Winter Retreat was held, once again, in Whistler with a focus on "Advocacy in Action". Planning has already begun for the 2009 Retreat which will be relocating to Harrison Hot Springs in March 2009.



In June 2008, under the guidance of Dr. Amanda Hill, an International Health Program was established in South Africa. A partnership was formed with the Donald Fraser Hospital in the Limpopo Province of South Africa. We were successful in obtaining 5 years of funding through Bob & Lynda Bentall of the Cedar Foundation. Through this funding we are able to send two residents and one attending to South Africa every three months. We anticipate this as a step to forging further International Projects.

We anticipate continued challenges in the upcoming year particularly with respect to capacity and development of additional training sites.

UNDERGRADUATE EDUCATION PROGRAM



Dr. H. Grant Stiver
Professor and Director



Jennifer Golinski
Program Manager

The Department of Medicine Undergraduate Education Program Office is located in the Gordon and Leslie Diamond Health Care Centre. The Department currently consists of 17 divisions overseen by Division Heads, as well as, site-specific Division Heads: AIDS, Allergy and Immunology, Cardiology, Community General Internal Medicine, Critical Care, Endocrinology, Gastroenterology, Geriatric Medicine, General Internal Medicine, Haematology, Infectious Diseases, Medical Oncology, Nephrology, Neurology, Physical Medicine & Rehabilitation, Respiratory Medicine and Rheumatology. All Divisions are engaged in undergraduate teaching.

The Department of Medicine Undergraduate Medical Education Program is a distributed program with satellite offices in Chilliwack (Chilliwack Integrated Clerkship), Prince George (Northern Medical Program (NMP)), and Victoria (Island Medical Program (IMP)). The IMP and NMP each have 24 medical students in the Undergraduate Education Program.

The Department of Medicine Vancouver Fraser Medical Program (VFMP) encompasses second, third and fourth year medical students.

From January through May, second year UBC medical students participate in a four-week bedside teaching course. These sessions are part of the Clinical Skills Course and continue to be one of the most highly rated sessions in the undergraduate curriculum. Students are assigned a patient and perform a complete and focused history and physical examination, reviewed at the bedside by a clinician instructor who also critiques the student's write-up of the case. In January 2008, there were approximately 177 medical students in the second year class. Students were deployed between nine different sites throughout the Lower Mainland, including Burnaby General Hospital, GF Strong, the Fraser Valley Cancer Centre, and Royal Columbian Hospital.

From September through August, the third year clinical clerkship rotation consists of an eight-week rotation, including Thursday afternoon academic half-days, Chief Medical Resident teaching sessions and a Neurology Bedside Teaching session. The third year clinical clerkship differs considerably from the second year in that the objectives are not only to further the medical knowledge and skill of the student in clinical diagnosis, but also to have the student learn to manage patients' problems and pro-

vide daily overall care to the ill patient. As of September 2008, there are approximately 177 medical students in the third year class. The written examination at the end of each clinical clerkship rotation continues to be the National Board of Medical Examiners (NBME) shelf examination in Medicine. The performance of UBC first-time examinees of the NBME exam in Medicine (all clerkship rotations) during the 2007-08 academic year resulted in a mean subject exam test score of 75.2. The mean for North American medical schools which have an eight-week clerkship was 75.4. The performance of students beginning the clerkship at the end of Third Year generally increased compared with the performance of students beginning in September, reflecting the increased clinical experience acquired throughout the year.

In the fourth year of the MD Undergraduate Program, UBC medical students undertake a series of elective rotations. UBC fourth year medical students have elective time during the months of September, October and November, and January, March and April. Our Program continues to offer a wide range of sub-specialty rotations, including elective opportunities within the Island Medical Program and the Northern Medical Program. In September 2008, there were approximately 226 medical students in the fourth year class. Elective opportunities are also offered to visiting medical students and in 2008 our Program processed and confirmed approximately 72 visiting student elective applications for the Vancouver Acute and St. Paul's Hospital sites.

New Initiatives and Achievements in 2008

- An ambulatory component was introduced into the second year bedside teaching sessions at VGH site. Lynn Mockler, the new Clinical Skills Academic Patient Coordinator, was hired to undertake this initiative. Lynn has been very proactive in building this component. Many of the Division Clinics located in the Gordon and Leslie Diamond Health Care Centre continue to be involved in developing this component with Lynn.
- The number of medical students assigned to Royal Columbian Hospital third year Medicine CTU in January 2009 will increase from four students to six students.
- Chief Medical Resident Teaching sessions were formally scheduled within the Academic Half-Day module. These sessions were made available via videoconference to distributed sites, including Royal Columbian Hospital, Chilliwack, the Island Medical Program and the Northern Medical Program. Students rated these teaching sessions most highly.
- A proposal to introduce an ambulatory clinic component within the third year clinical clerkship rotation was developed and submitted to the MD Undergraduate Dean's Office, and now has been approved. The ambulatory component will consist of a two-week sub-rotation during the eight-week CTU rotation, and will focus on the evaluation and management of patients in an outpatient setting, and communication with referring physicians. The outpatient rotation also includes didactic teaching, and a comprehensive evaluation framework.
- In September 2008, we implemented a new format for the oral examination for 3rd year medical students completing their Internal Medicine rotation. The oral examination is now a two-part examination, with Part 1 focusing on physical exam skills and Part II, case scenarios.



THE UBC DEPARTMENT OF MEDICINE INTERNATIONAL HEALTH PROJECT

A Partnership Between the Internal Medicine Residency Training Program & the Donald Fraser Hospital, Limpopo Province, South Africa

Background

The Internal Medicine Residency Training Program of the Department of Medicine at the University of British Columbia recognized a need to establish a program for international health for our residents (1,2). This was in response to the expressed wishes of the residents and is also aligning the Department of Medicine with the goals and vision of the University. As a Department we felt that such a project would provide an enhanced opportunity to fulfill our Social Accountability goals and the Can Meds training requirements - particularly the advocacy requirement.

For decades public health systems in the developing world have been struggling in the face of the HIV epidemic with poor health infrastructure and lack of human resources. Attempts to correct these have been hampered by high rates of emigration of health providers. The Department of Medicine at UBC has benefited considerably from the immigration of South African health providers to Canada and we wished to investigate a long-term strategy that would assist in filling the gap in care that has been left following this exodus.

With these factors in mind we established the International Health Program in the Department of Medicine (3).

The Africa Health Project, a not-for-profit organization, facilitated our connections in South Africa and in October of 2007 a meeting was held with Dr. Kwindu, Dr. Nkademeng, the Deputy Minister of Health in Limpopo Province, and Dr. Amanda Hill from UBC. A commitment was made between the parties to establish a long term and sustainable partnership between the University of British Columbia, Department of Medicine and the Donald Fraser Hospital and the Department of Health in Limpopo Province South Africa.

Limpopo Province has a population of 5.8 million with an unmeasured refugee population from Mozambique and Zimbabwe. It is one of the poorest areas in South Africa and suffers a chronic shortage of health care providers. The Donald Fraser Hospital is a district hospital located in a rural area. It serves a population of approximately 250,000 and 500+ outpatients are seen each month. In the heart of the AIDS epidemic, the hospital runs a very active anti-retroviral clinic as well as a number of outreach clinics in very remote communities.

The goals of the program were established in collaboration with our South African partners:

- Have two residents accompanied by a consultant from the Department of Medicine visit Limpopo Province for 1 month every 4 months over a minimum period of 5 years.
- Provide short-term and immediate clinical care to patients as well as some immediate relief to the overworked clinicians at the hospital.
- Work with our local colleagues in establishing programs that are sustainable:
- Protocols and care pathways. We will research local disease patterns and use our collective expertise we have in Vancouver to develop care plans and protocols (eg diabetic pathway for a newly established diabetic clinic, diarrhea protocols).
- QI projects (eg review of the medical administration record).
- Provide teaching and skill development.
- Provide a transformative educational experience for our residents and our staff that will challenge them to be socially and community responsive educators, scholars, collaborators, communicators and advocates.
- Start a collaboration on research that will immediately benefit this community (eg research the prevalence of schistosomiasis and its contribution to anemia) as well as develop local research capacity.
- Develop a sound monitoring and evaluation framework to guide our work.
- Utilize this project to provide a template for future partnerships between Canadian university medical programs and under-resourced areas.



Vision: *A long term and sustainable partnership between the University of British Columbia and the Donald Fraser Hospital and the Department of Health in Limpopo Province, South Africa:*

- *to enhance the medical care and treatment that is already being provided in Limpopo Province;*
- *to assist and be partners in achieving the vision that our South African partners have articulated;*
- *to provide an opportunity for our staff and our residents to participate in the medical needs of a resource poor setting within an ethical framework; and*
- *to provide the Canadian residents with the belief that as global citizens they have the ability to contribute to change.*

Project to date

The project has been running since June 2008. We have had 4 residents go to the Donald Fraser Hospital and we have planned 6 more residents this year with 4 faculty. We have achieved our goals of busy clinical work assisting our colleagues in South Africa. The residents and the staff have learned a lot clinically and have been challenged to consider their ethical and professional responsibilities. We have made friends and developed community relationships. We still feel we have gained more than we have contributed, however the physicians there are grateful for the engagement with academics and the literature does suggest that this is a major factor in retention of rural physicians. We are aware that the project is still new and that to achieve an enduring impact on the medical care in the area, it is going to take years of consultation, collaboration and commitment. We have helped initiate a diabetic clinic and establish the use of HbA1C in rural patients. We have a planning group that will help establish priorities from the UBC side of the partnership and consistency between visiting teams. We run a pre-departure workshop for the UBC teams with the assistance of Dr. Dharamsi from UBC to explore the ethics of overseas work. This has been a very interesting and challenging endeavour and provided a lot of learning for all of us. We are continuing to recruit interested faculty to participate. Funding for this project has been generously donated by The Cedar Foundation.

Looking forward, we hope to establish a consistent group of staff who will visit annually. We hope to collaborate in research or QI projects with our South African partners. There is a plan to establish a medical school in that area and we will be cooperating where we can in that challenging undertaking.

Amanda Hill, MB, BCh, FRCPC
 Munyadziwa Kwindi MB, BCh
 Mark Roberts, MD, FRCPC
 Graydon S. Meneilly, MD, FRCPC, FACP
 Shafik Dharamsi, BEd, MSc PhD
 Hazel Wilcox – Program Administrator
 The Cedar Foundation
 Africa Health Placements

1. Gupta et al, The international health program – The Fifteen year experience of Yale University's Internal Medicine Residency program *Am.J. Trop .Med Hygiene* 61 (6), 1999 – pp 1019-1023.
2. Panosian et al The new “medical missionaries” – grooming the next generation of global health workers *NEJM* 354:17, April 27, 2006.
3. Suchdev et al. A model for sustainable short-term educational trips – *Ambulatory Pediatrics*, vol 7 number 4 2007-2008.

CANADA RESEARCH CHAIRS & ENDOWED CHAIRS

CANADA RESEARCH CHAIRS



Canada Research Chair in Cellular Therapies

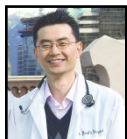
Dr. Clay Smith

Dr. Clay Smith was recruited to Canada from the US in 2003 as a Canadian Research Chair in Cellular Therapies. In this role, he has sought to improve the outcomes for persons with blood cancers through basic, translational and clinical research primarily involving the manipulation and transplantation of blood stem cells. His major efforts have included:

1. Leading the Leukemia and Bone Marrow Transplant Program of British Columbia; the largest integrated blood cancer program in Canada.
2. Directing the BC Hematology Clinical Trials Unit which conducts over 20 clinical trials per year for persons with blood cancers.
3. Overseeing a research laboratory at the Terry Fox Laboratory where his group seeks to further the understanding of self-renewal pathways critical to stem cell expansion and leukemagenesis.
4. Participating as a leader and promoter of translational and clinical research at the BC Cancer Agency where he is Chair of the Tumor Group Council, a member of the BC Cancer Agency Executive Council and a member of the Research Advisory Group.

In addition, in the last year, he has further sought to foster translational and clinical research in blood cancers and cell therapies as a member of the Executive Board of the Terry Fox Research Institute and an active participant and study director for the Canadian Stem Cell Network.

In 2008-2009, he has authored 18 publications in print or press and has 8 publications submitted or in preparation. His research is supported by the NIH, the Stem Cell Network, the Lifeline Society and in the last year he has helped raise >\$5M in philanthropic and government support for blood cancer research as well.



Canada Research Chair in Chronic Obstructive Pulmonary Disease

Dr. Don Sin

Dr. Sin was awarded a Canada Research Chair in COPD in 2004. COPD is a highly prevalent lung condition that may affect up to 3 million Canadians and responsible for 10,000 deaths each year in Canada. Unlike other common causes of morbidity

and mortality, there are no drug therapies to prolong survival of COPD patients. The current therapies are only mildly effective in reducing symptoms and enhancing the quality of life of patients.

A major barrier to new drug discovery in COPD has been the lack of (blood) biomarkers that can be used as an intermediate endpoint in small trials to assess therapeutic efficacy of novel compounds. Dr. Sin and his collaborators are actively working on identifying novel blood protein biomarkers to address this problem. Over the past year, they have discovered a number of very promising blood protein biomarkers. The majority of these proteins are lung-specific (i.e. produced in the lungs and secreted into the systemic circulation). Using animal models as well as large clinical cohorts, Dr. Sin and his colleagues will test the usefulness of these candidate proteins as biomarkers in COPD.



Canada Research Chair in Immunology

Dr. John Schrader

Dr. Schrader's development of methods for generating human monoclonal antibodies in 2008 yielded both new knowledge and new potential therapeutics agents. A collaborative study with Dr. Emil Pai of the University of Toronto, a Canada Research Chair in Structural Biology, has provided new insights into how the immune system protects us from common pathogens. The crystal structure of a high-affinity, hypermutated human antibody that neutralizes human cytomegalovirus (HCMV) revealed that germline immunoglobulin "variable" genes encoded key contacts with the virus. This was a validation of the hypothesis that humans evolved an "innate immunological memory" that facilitates the generation of protective antibodies that bind to vulnerable sites on common pathogens. Most humans undergo infection by the human cytomegalovirus virus but healthy immune systems have no trouble at preventing disease. However, if a mother is infected with HCMV during pregnancy, the developing fetus is at high risk. About 1 in 1000 babies are born with congenital HCMV infection which is the commonest form of congenital birth defects and disabilities, causing deafness and mental retardation, as well as many other health problems. Despite years of effort there is no effective vaccine. Moreover, at present there is no effective therapy for pregnant women who are infected with HCMV. This work provides clues about the characteristics of human monoclonal antibodies that could be used to protect fetuses in women who suffer infection with HCMV during pregnancy. It also suggests a new strategy for making an effective vaccine that exploits the innate ability of humans to make these antibodies.

The study group are now following up clues that the same pair of V-genes also protects us from a common bacterium that causes serious infections, *Streptococcus pneumoniae*. This has shown that these germline V-genes encode part of binding sites of antibodies that target a vulnerable site on the pneumococcus.

The study group has also made a panel of human monoclonal antibodies against a pro-inflammatory cytokine implicated in rheumatoid arthritis and multiple sclerosis. We are studying how these antibodies bind and inhibit inflammatory cells.

In other projects, Dr. Schrader is working on a novel approach to treating many common human cancers and is studying the function of a novel protein that seems to have a novel mechanism of controlling immune responses.



Canada Research Chair in Neurodegeneration and Protein Misfolding Diseases

Dr. Neil Cashman

Dr. Cashman was appointed Canada Research Chair in Neurodegeneration and Protein Misfolding Diseases at the University of British Columbia.

Classical and newly emergent prion diseases have created serious medical, veterinary, and economic challenges worldwide. These diseases, including Creutzfeldt-Jakob disease (CJD) of humans, bovine spongiform encephalopathy (BSE) of cattle, and chronic wasting disease (CWD) of cervids, are due to “protein only” infectivity, driven by template-directed misfolding of the normal cellular prion protein (PrP^C) by physical contact with the abnormal, disease-specific prion protein (PrP^{Sc}). Template-directed protein misfolding may also participate in other neurodegenerative syndromes, including Alzheimer’s disease, amyotrophic lateral sclerosis (ALS), and Parkinson’s disease.

Dr. Cashman’s laboratories at the Brain Research Centre and the Life Sciences Centre are now home to 17 high quality personnel and trainees working primarily in the biochemistry and immunology of protein misfolding in prion diseases and motor neuron diseases. Central programs in the lab include the development of immunotherapies for ALS, an incurable neuromuscular disease for which there is no current effective treatment, and vaccines for prion diseases and other protein misfolding diseases.

Among other lab accomplishments in 2008 were a publication on the use of G-CSF stem cell mobilizing factor in ALS, 3 patent filings, two CIHR Proof of Principle grants, and 2 sponsored research agreements with industry.

Also since 2005, Dr. Cashman has led PrioNet Canada as Scientific Director of this 7-year 35MM Network of Centres of Excellence; in 2008, the PrioNet team successfully passed an intensive Interim Review of the strategic program.

Dr. Cashman continues to serve as Director of the ALS Centre at GF Strong Hospital, and provides teaching and mentoring for neurology trainees in UBC Medical School and Vancouver General Hospital.

In 2008 he was appointed a Fellow of the Canadian Academy of Health Sciences, and recognized by the Department of Medicine for bringing clinical renown to UBC.



Canada Research Chair in Neuroethics

Dr. Judy Illes

Dr. Judy Illes was appointed Canada Research Chair in Neuroethics and Professor of Neurology in the Department of Medicine in August 2007. With the generous support of the Chairs program, CIHR/INMHA and other research sponsors, she established the National Core for Neuroethics at the University of British Columbia at that time. With the goal of addressing challenges at the juncture of neuroscience, ethics, culture and human values, the Core carries out high impact, high visibility, research, education and outreach that has been widely recognized in the local community, across Canada, and on the international stage.

Current initiatives in neuroethics at UBC are focused on investigations of the ethical, legal and societal impact of innovations in neurotechnology such brain imaging, brain stimulation, pharmacology and stem cells, on neurodegenerative disease and dementia, mood, attention and anxiety disorders, addictions, and spinal cord injury. The more than dozen faculty, post-doctoral fellows staff and students of the Core work hand-in-hand with practicing neuroscientists, clinical researchers, policy makers and related stakeholders in British Columbia to promote and ensure a close consideration of stakeholder expectations, needs and perspectives in the research process. To achieve this goal, the Core has a series of ongoing studies to describe the landscape of ethics training in neuroscience curricula, to characterize barriers and motivators to aligning ethics upstream in the research process, and to work toward the development of ethics tools and resources that can be readily embraced by practicing neuroscientists in both the research and clinical arenas. The Core already has also launched a robust program of clinical neuroethics training for residents in neurology, psychiatry, radiology and neurosurgery that gives them the opportunity to conduct research projects that have both a neuro and ethics component, and to engage in scholarly journal clubs and seminars about difficult cases they experience in their daily lives.

Dr. Illes’ research and the activities of the Core are made possible by generous support from the Institute of Neurosciences, Mental Health and Addiction (INMHA) of the Canadian Institutes of Health Research (CIHR), the Canada Foundation for Innovation (CFI), the British Columbia Knowledge Development Foundation (BCKDF), the National Institutes of Health (NIH), the Vancouver Coastal Health Research Institute (VCHRI), the Michael Smith Foundation for Health Research (MSFHR), the Stem Cell Network (SCN), the Foundation for Ethics and Technology, the North Growth Foundation, and the Dana Foundation.



Canada Research Chair for Neuropsychology of Vision and Eye Movements

Dr. Jason Barton

In the Human Vision and Eye Movement Laboratory, the focus is on improving our understanding of how cerebral cortex performs complex levels of visual processing and implements control of saccadic eye movements. To do this, healthy subjects and patients with damage to certain brain systems are studied using both assessments of behaviour and also functional neuroimaging.

In vision, an international working group has been formed to study patients with prosopagnosia, the inability to recognize faces, a rare condition acquired after bilateral brain damage. These patients are flown to Vancouver for a week of imaging and experimental tests, aimed to determine how the various cognitive functions that contribute to different aspects of face perception are affected, and how this correlates with the structural damage seen in their functional imaging. The group also has an arm of research focused on topographic orientation, the ability to form and use mental maps of the world in navigation, and recently described the first patient with a congenital topographagnosia. Other areas of perceptual work include studies on simultanagnosia, an attentional deficit that limits the processing capacity of vision, and alexia, the inability to read after cerebral damage.

The saccadic control group in the laboratory has focused on using saccades to understand the influence of context on human behaviour. The group has studied the cognitive operations involved during task-switching and the influence of recent history and future expectations in imparting systematic biases to saccadic responses, which we have modeled as spatial interactions in the superior colliculus. They have used functional imaging to show how the brain transforms sensory input into reversed motor maps for antisaccades, and demonstrated contextual modulations from task-switching in the frontal eye field. This work is aimed at providing a broader concept of how behaviour operates in the real world, where each act has a past and a future, expectations and goals.

The group's work has been forwarded in the last year with the participation of six post-doctoral fellows, one faculty on sabbatical, two graduate students, and one undergraduate and two medical students. They have been supported by research grants from CIHR, NSERC, and NIMH, as well as fellowship support from MSFHR, CIHR, the Alzheimer's Society of Canada, and the Swiss National Science Foundation.



Canada Research Chair in Genetics of Respiratory Disease

Dr. Andrew Sandford

Dr. Andrew Sandford was appointed a Canada Research Chair in Genetics in July 1, 2001. His research is focused on the role that genetics play in diseases of the airway, including asthma, chronic obstructive pulmonary disease and cystic fibrosis. There is compelling evidence to show that almost all of the major inflammatory diseases have a hereditary component. Dr. Sandford is studying patients and their families to learn the associations between genes and lung diseases.

Dr. Sandford is conducting research into the genetic basis of asthma and related allergic conditions such as rhinitis and atopic dermatitis. The genetic variants that are discovered to be associated with these diseases are investigated to determine the mechanism by which they cause increased susceptibility to these disorders. He also investigates the relationship between cigarette smoking and chronic obstructive pulmonary disease, and the role that genes play in increasing the susceptibility of some smokers to this inflammatory disease. Most recently, he is investigating the genetic factors that are involved in determining the severity of pulmonary disease in patients who have cystic fibrosis. In 2008, Dr. Sandford's research was supported by the Canadian Cystic Fibrosis Foundation, the BC Lung Association and AllerGen NCE, and resulted in six peer-reviewed publications.



Canada Research Chair in Parkinson's Disease

Dr. A. Jon Stoessl

Dr. Stoessl was originally appointed a Tier 1 Canada Research Chair in 2000 and successfully renewed his Chair in 2007.

Dr. Stoessl directs the Pacific Parkinson's Research Centre and National Parkinson Foundation Center of Excellence at UBC, as well as a CIHR Team in Parkinson's, a Michael Smith Foundation for Health Research Unit in Parkinson's Disease and Monoaminergic Function in the Central Nervous System and a Pacific Alzheimer Research Foundation Centre grant.

The team's research program uses functional imaging to study the progression of Parkinson's disease, the basis for complications of advanced disease and its treatment, as well as the use of Parkinson's as a model to better understand the role of dopamine in the healthy brain. During 2008, Dr. Stoessl and his colleagues continued this work.

In collaboration with colleagues at the Mayo Clinic Jacksonville, they reported on the use of PET to detect subclinical progression of disease in patients with genetic Parkinson's (Neurology). They demonstrated a link between downregulation of the dopamine transporter and emergence of treatment related complications in Parkinson's (Neurology).

In collaboration with Dr. Wayne Martin at the University of Alberta, they reported on the relationship between dopaminergic dysfunction and clinical manifestations in early, untreated Parkinson's disease (Annals of Neurology). They used imaging to study the response to a novel gene therapy for Parkinson's (Lancet Neurology).

In collaboration with investigators in Psychiatry, they have studied the basis for depression and impulse control disorders in Parkinson's disease. Highly publicized work on mechanisms of the placebo effect in Parkinson's continued and was the topic for one graduate student who successfully completed her PhD in 2008 and has since gone on to medical school.

ENDOWED CHAIRS



Allan M. McGavin Chair in Geriatric Medicine

Dr. Janet McElhaney

Dr. McElhaney was recruited to UBC as the Allan M. McGavin Chair in Geriatric Medicine in 2005. The role of the Chair is to promote research within the Division of Geriatric Medicine while continuing to build the Chair's own research program focused on the aging immune system and vaccination in older adults.

In 2008, Dr. McElhaney was awarded the VITALiTY (Vancouver Initiative To Add Life To Years) Team planning grant from the Michael Smith Foundation for Health Research. This Team is centered within the Division of Geriatric Medicine and extends to the multiple health care disciplines involved in clinical and translational research on issues that impact on the health in older adults. The purpose is to identify risk factors for catastrophic disability in older adults, including the contribution of "inflammaging", and design therapeutic interventions to reduce the risk for sudden onset disability in this population.

The six leading causes are stroke, congestive heart failure, pneumonia and influenza, ischemic heart disease, cancer, and hip fracture. Research themes for this Team intersect with the academic interests of the faculty within the Division including cardiovascular fitness (Dr. Ken Madden), cognitive status (Dr. Phil Lee), falls and immobility (Dr. Wendy Cook and Dr. Ima Alimoradi), inflammation/immune function (Dr. McElhaney and Dr. Graydon Meneilly), ethnocultural issues (Dr. Reva Adler),

and educational strategies for knowledge translation (Dr. Roger Wong and Dr. Janet Kow).

Targeted interventions are now being developed and implemented to address the needs of hospitalized older adults and the establishment of national and international networks of researchers and clinicians as COACHnet (Care of Older adults with Acutely Compromised Health).

Other grants awarded to the Chair and other Members of the Division during 2008 have facilitated international collaborations and will also contribute to the research and expertise that supports the development of this Team.



AstraZeneca Chair in Occupational and Environmental Lung Disease

Dr. Chris Carlsten

Dr. Chris Carlsten's clinical and research interests, supported by the AstraZeneca Chair in Occupational and Environmental Lung Disease, center on occupational airways disease including the effects of diesel exhaust and other particulate matter on asthma induction and exacerbation. To pursue these interests, he has established the Chan-Yeung Centre for Occupational and Environmental Lung Disease (www.cher.ubc.ca/CCOERD), home of the Air Pollution Exposure Laboratory (APEL). This laboratory will investigate the respiratory and immunological health effects of combustion-derived particulate matter, using diesel exhaust as the primary model. The fundamental questions that the lab will address relate to the synergism of inhaled combustion-derived particles and co-exposures such as classical allergens and novel chemicals (such as phthalates) in mediating such health effects. The research of the lab will use an interdisciplinary, team-focused approach to ask these questions on multiple levels (genetic, cellular, gross functional, etc). The laboratory has been designed to accommodate both human and animal exposures, and it is also compatible with several in vitro techniques.



The Eric W. Hamber Chair in Medicine

Dr. Graydon Meneilly

The Eric W. Hamber Chair in Medicine is one of the most significant endowments of its kind in Canadian health education history. Established in 1966 by Mrs. Eric W. Hamber as a memorial to her husband, the Hon. Eric W. Hamber, former lieutenant-governor of BC and UBC chancellor, the Chair is the first perpetually

endowed and fully supported professorship or chair at UBC. It is a fitting memorial to the late Mr. Hamber, who gave the strongest support as Chancellor of the University to founding of the UBC Faculty of Medicine.

The purpose of the Chair is to support the Department Head. Fully supported endowments of this kind are very important in attracting outstanding medical teachers and researchers by providing financial resources beyond those ordinarily available to the medical school. Outstanding faculty members become magnets for others. This is particularly important as the competition for top teachers and researchers is growing stronger across Canada and around the world.

Dr. Meneilly was appointed Head, Department of Medicine and Eric W. Hamber Professor on July 1, 2002, and was reappointed for a second term on July 1, 2007. He was recruited for his strength in leadership in an ever changing environment and his ability to be innovative, provide strategic direction and encourage and build collaborative relationships. He is the fourth Eric Hamber Professor.

Dr. Meneilly has held peer-review funding from national and provincial research agencies and has an international reputation for studies of diabetes and carbohydrate metabolism in the elderly. He has over 100 peer-reviewed publications. He has spoken and written widely in his areas of expertise, and has supervised many residents and graduate students. He has been active in hospital service leadership in a variety of settings and is currently Medical Director, Medical Services, Vancouver Acute. He brings broad perspectives of personal achievement in clinical investigation, an intense commitment to resident and student education, and innovative concepts of health service delivery across communities throughout the province.



James A. Moore Chair in Parkinson's Research

Dr. Raul de la Fuente-Fernandez

Dr. Raul de la Fuente-Fernandez is the recipient of the James A. Moore Chair in Parkinson's Research. Dr. de la Fuente-Fernandez is well-known in the scientific community for the discovery of the biochemical basis of the placebo effect in Parkinson's disease. His scientific contributions in relation to the etiology and pathogenesis of Parkinson's disease are also well recognized. Parkinson's disease is the second most common neurodegenerative disorder, with an estimated lifetime risk of 1 in 45. The cause of the disease remains a mystery. Over the next five years, Dr. de la Fuente-Fernandez will focus on investigating whether Parkinson's disease is primarily genetic or environmental. This is a fundamental question with profound implications for the future development of more effective therapies. His research will also focus on better understanding the placebo effect. Dr. de la Fuente-Fernandez thinks that the potentiation of factors

positively associated with placebo responses may contribute to enhance the clinical benefit provided by active treatments. In addition to his research activities, the Chairholder will mentor and train postgraduate students interested in Parkinson's research, and will contribute to raise awareness about the importance of research in the field of neurodegeneration.



The Sauder Family Heart & Stroke Foundation Chair in Cardiology

Dr. Christopher E. Buller

2008 sees the end of Dr. Buller's 5 year term as the Sauder Family Heart & Stroke Foundation Chair in Cardiology. In total, the close of 2008 saw 18 peer-reviewed publications, 5 major textbook chapters, 24 abstracts completed, and primary or major contributions to four peer-reviewed grants for clinical research.

Toward the end of 2008, two additional textbook chapters were completed by invitation; these included a comprehensive chapter describing the principles of percutaneous revascularization in the prestigious cardiovascular textbook Evidence Based Cardiology (Salim Yusuf, Editor) as well as a chapter entitled Pathophysiology of Cardiogenic Shock Complicating Myocardial Infarction in the first dedicated textbook on cardiogenic shock to be published (Judith Hochman, Editor, American Heart Association Publications). Dr. Buller is grateful for the support provided from the Chair over the course of the term that helped protect the considerable time required for thinking, generating new knowledge and writing.

Perhaps more important than his personal productivity was the growth of faculty within the UBC Division of Cardiology over his 5 year tenure, largely obtained through strategic external recruitment of new, talented and highly specialized faculty members.

Dr. Buller lists and commends these individuals as tomorrow's academic cardiologists at UBC. They are:

1. Dr. Graham Wong, Director of Coronary Care and Coronary Care Unit Research at Vancouver General Hospital, following his clinical training at McGill and research training at Harvard University.
2. Dr. Krishnan Ramanathan, Director of Coronary Care and Coronary Care Unit Research at St. Paul's Hospital, following clinical training in Auckland and Vancouver, and research training at New York University Medical Center.
3. Dr. Jacqueline Saw, Co-Director Cardiac Catheterization at Vancouver General Hospital, following her clinical and research training at Cleveland Clinic.
4. Dr. Parvathy Nair, Director of Undergraduate Education, following her clinical training in Toronto and graduate studies in Medical Education at University of Chicago.

5. Dr. Sean Virani, Director of Heart Failure and Heart Failure Research, Vancouver General Hospital, following his clinical training in Vancouver and Stanford, and his research training at Stanford and Columbia Universities.

Recruitment initiatives from 2008 will continue to bear fruit through 2009. At least three outstanding individuals will join the Division in the second half of 2009:

1. Dr. Carolyn Taylor, in the fields of advanced cardiac imaging and cardiac prevention following her clinical training in Vancouver and Boston, and her fellowships at Harvard University and Mount Sinai Hospital, New York.
2. Dr. David Wood, in the fields of interventional cardiology and medical education, following his clinical training in Vancouver and New York, and graduate studies in Medical Education from the University of Dundee.
3. Dr. Teresa Tsang, Professor of Medicine Mayo Clinic. Dr. Tsang will be joining the VGH/UBC Divisions to lead research in early detection and intervention of vascular disease.

Dr. Buller and others in the Division hope these recruitments will continue to change the focus and academic productivity of cardiology in Vancouver. They already represent more than 20% growth and turnover of our UBC faculty at a time when many academic Divisions of Cardiology are struggling to retain their members as clinical work moves to the suburbs and smaller communities. In his opinion, the next 3 to 5 years must see the development of an alternative payment plan for cardiologists working at the major teaching hospitals if we are to develop this new pool of talent to its considerable potential.



UBC and St. Paul's Hospital Foundation Chair in AIDS Research

Dr. Julio S. G. Montaner

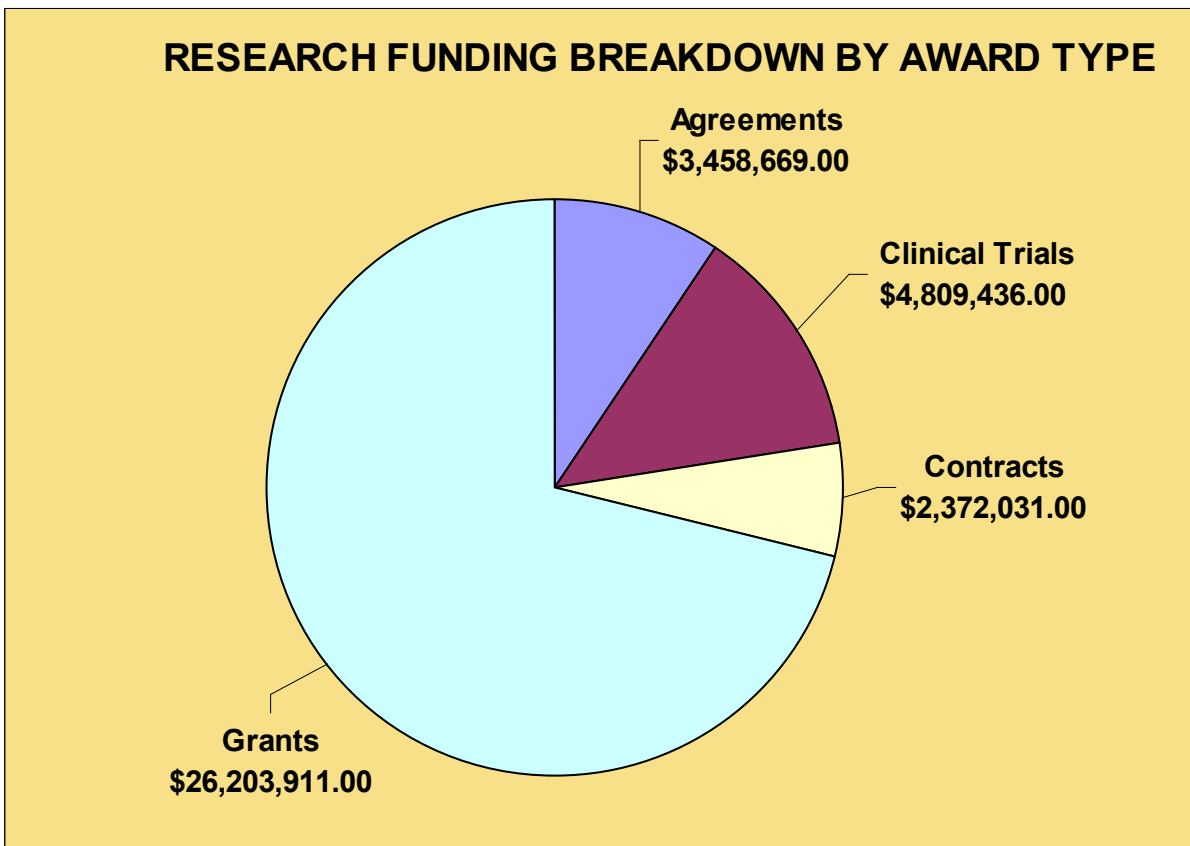
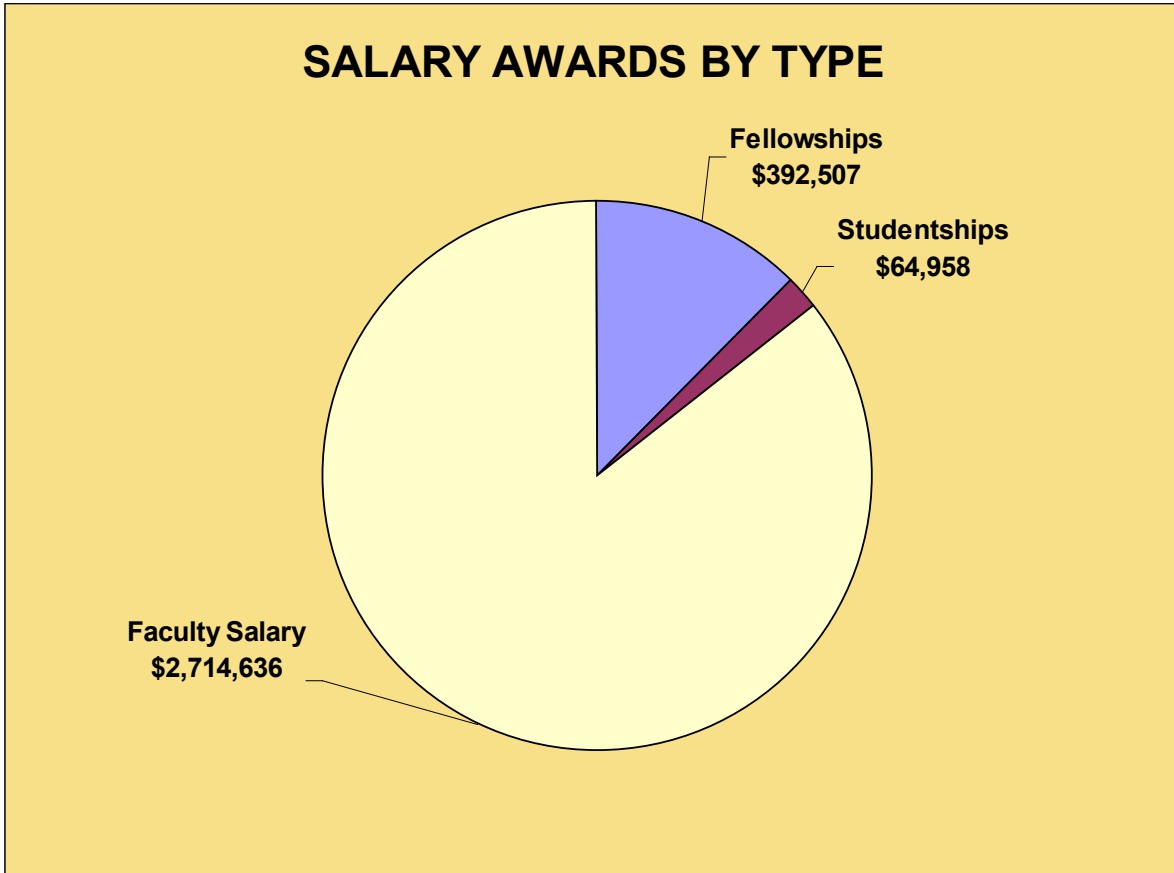
Since 1997, the endowed UBC and St. Paul's Hospital Foundation Chair in AIDS Research has allowed Dr. Montaner to carry out research which has successfully translated to improved treatment, care and service delivery to HIV infected individuals throughout BC and internationally.

Over the last few years, Dr. Montaner has increasingly focused his research efforts on the "Expansion of HAART coverage to control progression to AIDS and the spread of HIV". HAART stops viral replication and drives down viral load in plasma to undetectable levels. Consequently, HAART restores immune function, preventing progression to AIDS and prolonging life expectancy, among HIV-infected individuals. HAART also drives viral load to undetectable levels in semen, vaginal fluid and rectal mucosa. Consequently, HAART decreases HIV transmission to a very substantial degree. An association was previously shown between HAART uptake and decrease in new HIV cases between

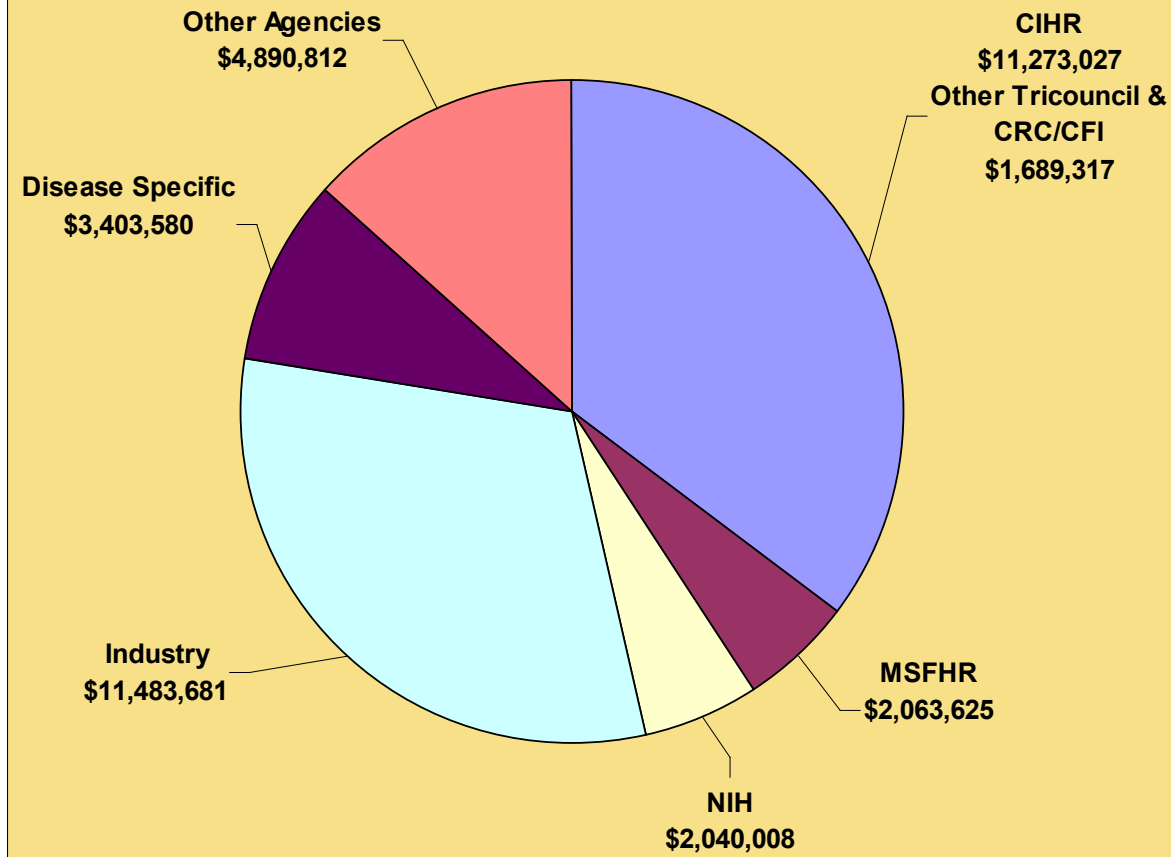
1996 and 1999 in BC. More recently, a temporal association was demonstrated between the decrease in community viral load, decrease incidence of HIV and increased HAART uptake in injection drug users, in Vancouver. Using a novel mathematical model, it was estimated that expanding HAART coverage in BC from the current 5,000 to 7,500 eligible persons in BC would lead to better health outcomes among those infected and prevent 150 annual new HIV infections. A recent economic analysis based on this model concluded that HAART expansion is not just cost-effective but actually cost-averting, due to the multiplier effect provided by reduction of new HIV infections over time. Earlier this year, the Provincial Government endorsed the group's proposal to field test expanded use of HAART to "STOP HIV and AIDS in BC", which will represent an estimated investment of \$100 million dollars over 5 years.

In September 2008, Dr. Montaner was honoured to receive the inaugural Avant-Garde Award from the U.S. National Institute of Drug Abuse (NIDA) at the National Institutes of Health (NIH) to support the proposed HAART expansion (US\$2.5 million over 5 years). More recently, investigators based at the World Health Organization (WHO) independently validated the group's Treatment as Prevention. Further support for this initiative has been garnered through public statements from former US President Bill Clinton, former Canadian UN Ambassador Stephen Lewis, and the Economist magazine. Dr. Montaner's current role as the Director of the BC Centre for Excellence in HIV/AIDS, Co-director of the CIHR-Canadian HIV Trials Network and President of the International AIDS Society has greatly facilitated the translation of our research at the Provincial, National and International level, respectively.

RESEARCH FUNDING



RESEARCH AWARD FUNDING BREAKDOWN



For a detailed listing of research funding received by the Department in 2008, please visit our website.

PUBLICATIONS

In 2008, the members of the Department published over 1,100 peer-reviewed papers. For a detailed listing of publications by division, please visit the Department of Medicine website at www.medicine.ubc.ca. Annual Reports can be found under the "general" tab.

AFFILIATED INSTITUTES

CENTRES

BC CENTRE FOR DISEASE CONTROL

Dr. Robert Brunham, Director

BIOMEDICAL RESEARCH CENTRE

Dr. John W. Schrader, Director

BRAIN RESEARCH CENTRE

Dr. Max Cynader, Director

CENTRE FOR BLOOD RESEARCH

Dr. Grant Mauk, Acting Director

CENTRE FOR HEALTH EDUCATION SCHOLARSHIP

Dr. Joanna Bates, Acting Director

CENTRE FOR HIP HEALTH

Dr. Heather McKay, Director

CENTRE FOR MOLECULAR MEDICINE & THERAPEUTICS

Dr. Michael R. Hayden, Director

JAMES HOGG ICAPTURE CENTRE

Dr. Bruce McManus, Director

PACIFIC PARKINSON'S RESEARCH CENTRE

Dr. A. Jon Stoessl, Director

PROSTATE CENTRE AT VGH

Dr. Martin Gleave, Interim Director

INSTITUTES

VANCOUVER COASTAL HEALTH RESEARCH INSTITUTE (VCHRI)

Dr. Robert McMaster, Interm Executive Director & VP

PROVIDENCE HEALTH CARE RESEARCH INSTITUTE (PHCRI)

Dr. Yvonne Lefebvre

CHILD AND FAMILY RESEARCH INSTITUTE

Dr. Stuart MacLeod, Executive Director/Assistant Dean Research

LIFE SCIENCES INSTITUTE

Dr. Christian Naus, Director

SCHOOLS

SCHOOL OF AUDIOLOGY & SPEECH SCIENCES

Dr. Valter Ciocca, Director

SCHOOL OF POPULATION & PUBLIC HEALTH

Dr. Martin Schechter, Director

HEALTH AUTHORITIES

FRASER HEALTH AUTHORITY (FH)

Nigel Murray, President & CEO

INTERIOR HEALTH AUTHORITY (IH)

Murray Ramsden, President & CEO

NORTHERN HEALTH AUTHORITY (NH)

Cathy Ulrich, President & CEO

PROVINCIAL HEALTH SERVICES AUTHORITY (PHSA)

Lynda Cranston, President & CEO

VANCOUVER COASTAL HEALTH AUTHORITY (VCHA)

Ida Goodreau, President & CEO

VANCOUVER ISLAND HEALTH AUTHORITY (VIHA)

Waldner Howard, President & CEO

HOSPITALS

BC CANCER AGENCY (BCCA) - (PHSA)

Dr. Simon Sutcliffe, President

FRASER VALLEY CANCER CENTRE

Dr. Simon Sutcliffe, President

BC CHILDREN'S HOSPITAL (INCLUDES SUNNY HILL) (BCCH) - (PHSA)

Larry Gold, President

BC WOMEN'S HOSPITAL & HEALTH CENTRE (BCW) - (PHSA)

Dr. Liz Whynot, President

BURNABY GENERAL HOSPITAL

Arden Krystal, Executive Director

CHILLIWACK GENERAL HOSPITAL

Rowena Rizzotti, Executive Director

FRASER VALLEY HEALTH

Dr. Nigel Murray, President and CEO

GF STRONG REHABILITATION CENTRE

Anne Sutherland Boal, COO

LIONS GATE HOSPITAL

Mary Ackenhusen, COO

MOUNT ST. JOSEPH'S HOSPITAL

Dianne Doyle, President & CEO

ROYAL COLUMBIAN HOSPITAL

Dr. Brad Halkier, President

ST. PAUL'S HOSPITAL / PROVIDENCE HEALTH CARE (SPH-PHC) - (VCH)

Dianne Doyle, President & CEO

SURREY MEMORIAL HOSPITAL

Loretta Solomon, Executive Director

VANCOUVER GENERAL HOSPITAL (VGH)

Anne Sutherland Boal, COO

UNIVERSITY OF BRITISH COLUMBIA HOSPITAL

Anne Sutherland Boal, COO

OTHER AFFILIATES

COLLEGE OF HEALTH DISCIPLINES (CHD)

Louise Nasmith, Principal

HONOURS & AWARDS

Ashton, Thomas

Medicine
BCMA Silver Medal of Service Award

Benny, Barrett

Hematology
Department of Medicine Master Teacher Award

Bernstein, Victoria

Cardiology
UBC Medical Alumni Association Honorary Alumna Award

Canadian Medical Association Honorary Alumna Award

Beaulieu, Monica

Nephrology
UBC, Sauder School of Business WJ Lyle Memorial Scholarship

Canadian College of Health Service Executives Robert Wood Johnson Award

Bressler, Brian

Gastroenterology
Dr. Hugh Chaun Mentorship Award

Broady, Raewyn

Hematology
UBC Department of Medicine Academic Enhancement Fund
Departmental Scholar

Carlsten, Chris

Respiratory Medicine
Peter Wall Scholar Award

Cashman, Neil

Neurology
2008 Vancouver Acute Award for Bringing Clinical Renown to Vancouver Hospital

Chi, Kim

Medical Oncology
GU Tumor Group Award for Clinical Research Excellence

Daley, Denise

Respiratory Medicine
CIHR Maud Menton New Principal Investigator Prize

de la Fuente-Fernandez, Raul

Neurology
Spanish Society of Neurology National Parkinson's Research Award (Spain)

Enns, Robert

Gastroenterology
American Society of Gastrointestinal Endoscopy International Reviewer Recognition Award (from peer-reviewer journal "Gastrointestinal Endoscopy")

Esdaile, John

Rheumatology

Appointed to the Institute Advisory Board of the CIHR-IMHA (Institute of Musculoskeletal Health & Arthritis)

UBC Killam Research Award

Feldman, Howard

Neurology
2008 Faculty of Medicine Distinguished Achievement Award
Outstanding Contributions by a Senior Faculty Member

Finlayson, Heather

Physical Medicine & Rehabilitation
Vancouver Coastal Health Excellence Award for Interprofessional Practice (as part of the GF Strong Interprofessional Dysphagia Committee)

Friesen, Marlyce

Nephrology
YMCA President's Award of Excellence "For Outstanding Leadership in Cardiac Rehabilitation in Canada & the YMCA's Healthy Heart Program"

Gill, Sabrina

Endocrinology
UBC Department of Medicine Academic Enhancement Fund
Departmental Scholar

Gill, Sharlene

Medical Oncology
Hoffman LaRoche Award for Outstanding Faculty Lecture

Hamburger, Jaap

Cardiology
China International Therapeutics Award - Education: recognition of the outstanding contribution and continuing dedication to the development of interventional cardiology in China

Harrigan, Paul

AIDS
CIHR/GSK Research Chair Award in HIV/AIDS

Humphries, Karin

Cardiology
2008 Department of Medicine Martin Hoffman Award for Research Excellence

2008 Faculty of Medicine Distinguished Achievement Award for Excellence in Clinical or Applied Research

Ignaszewski, Andrew

Cardiology
BCMA Individual Award for Excellence in Health Promotion

HONOURS & AWARDS

Illes, Judy

Neurology
Global Health and Ethics Conference, Sacramento, CA
Keynote Speaker: Global Health Neuroethics

6th Forum of European Neuroscience, Geneva Switzerland
Plenary Speaker: Emerging Neuroethics for Emerging Neuroscience

IVancouver Coastal Health Clinical Ethics Conference Vancouver, BC
Keynote Speaker: A Vision for Quality End of Life Care

Society for Neuroscience Award in Recognition of Service to the Society for Neuroscience as Co-Chair of Women in Neuroscience

International Brain Research Organization Chair, Women in World Neuroscience

Isserow, Saul

Cardiology
2008 Vancouver Acute Award for Clinical Excellence

Kassen, Barry

General Internal Medicine
UBC Killam Teaching Prize

Kerr, Thomas

AIDS
Providence Health Care Research & Mission Award

Krassioukov, Andrei

PMR
American Spinal Injury Association Alan T. Brown Foundation Research Award

Lam, Stephen

Respiratory Medicine
2008 FoM Distinguished Achievement Award for Overall Excellence

2008 Department of Medicine Martin Hoffman Award for Research Excellence

Lansdorp, Peter

Hematology
UBC Killam Research Prize in Senior Science

Ling, Victor

Medical Oncology
Order of Canada

Ma, Irene

Internal Medicine
UBC Department of Medicine Academic Enhancement Fund
Departmental Scholar

Montaner, Julio

AIDS
LifeSciences BC Leadership Award

Consulate of Argentina Paca al Mertio-Asociacion de Profesores Hispano-Canadienses

President, International AIDS Society

NIDA, NIH Avant Garde Award

Moore, David

AIDS
CIHR New Investigator Award

Nasmith, James

Cardiology
SPH Dept of Family Practice Postgraduate Teaching Award

Page, Gordon

General Internal Medicine
Medical Council of Canada Levasseur Award for extraordinary contributions & vision

Rae, Angus

Nephrology
Yukon Hospital Corporation Board of Trustees – Honorary Medical Staff Privileges Whitehorse General Hospital – acknowledgement for many years of service to the Yukon Communities (1973 – 2007)

Ramji, Alnoor

Gastroenterology
2008 SPH Department of Medicine Donald M. Whitelaw Award for Outstanding Grand Rounds Presentation

Reiner, Neil

Infectious Diseases
2008 Vancouver Acute Award for Scientific Achievement

Rosenbaum, Debbie

General Internal Medicine
2008 Department of Medicine Fay R. Dirks Award for Excellence in Teaching

Schuckel, Rhonda

Rheumatology
MD Class of 2011's Outstanding Educator Award

Tremlett, Helen

Neurology
European Charcot Foundation's Young Investigators Award for Multiple Sclerosis Research

HONOURS & AWARDS

Vickars, Linda

Hematology
SPH Long Service Award (20 years)

Faculty of Medicine Career Award for Excellence in Teaching

Walley, Keith

Critical Care Medicine
CIHR Training Grant: 2007-2008 for the CIHR IMPACT Strategic Training Program

Webb, John

Cardiology
SPH Department of Medicine McLeod Family Professorship in Valvular Heart Disease Intervention

Verb, Ron

Nephrology
2008 Department of Medicine Master Teacher Award

Wong, Roger

Geriatric Medicine
UBC Department of Medicine Award for "Outstanding CanMEDS Health Advocate Role"

Wood, Evan

AIDS
American College of Physicians Award for Best Clinical Research Project Award

Yao, Jennifer

Physical Medicine & Rehabilitation
2008 Department of Medicine Fay R. Dirks Award for Excellence in Teaching

Yeung, Moira

Respiratory Medicine
American Thoracic Society Distinguished Achievement Award

Yoshida, Eric

Gastroenterology
PAR-BC Residents' Advocate Award

Dr. Donald M. Carr Memorial Teaching Award
(selected by GI Fellows and medical residents rotating through gastroenterology)

Zypchen, Leslie

Hematology
2008 VGH Department of Medicine Donald M. Whitelaw Award for Outstanding Grand Rounds Presentation

Faculty of Medicine Clinical Faculty Award for Excellence in Teaching

Department of Medicine Health & Wellness Program
UBC Healthy Workplace Award
for Leadership in Health Promotion



The University of British Columbia

Graydon S. Meneilly

Eric W. Hamber Professor and Head
Department of Medicine

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