



UBC MD PhD

UBC MD/PhD Program

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Newsletter – Winter 2011

http://www.med.ubc.ca/education/md_ugrad/mdphd/news.htm

MD/PhD Student Research Forum & Open House - 13 September 2010

The 11th annual UBC MD/PhD Student Research Forum and Open House was held on Monday, 13 September 2010, 1:00-4:00 pm, at the Michael Smith Laboratories, UBC. Opening remarks by **Dr. Lynn Raymond**, Director of the MD/PhD Program, set off the exciting half-day event. **Dr. Torsten Nielsen**, Associate Director of the MD/PhD Program, marked the end of the event. Potential applicants had some excellent questions and discussions with the speakers and the current MD/PhD students.

Our special thanks go to our invited guest speakers:

- **Dr. Martin McKeown**, Department of Medicine (Neurology) and Pacific Parkinson's Research Centre, UBC
The title of his talk was "New perspectives on Parkinson's disease".
- **Dr. Paul Yong**, MD/PhD Alumnus, and PGY-5, Department of Obstetrics & Gynaecology, UBC
He presented "Reflections five years after the UBC MD/PhD Program".

Student presentation:

Kate Potter, Year 6, presented "Perspective of an MD/PhD student".

Poster presentations:

Matt Mayer, Year 4, "Immunomodulatory peptides attenuate local and systemic inflammation in a murine DSS-colitis model".

David McVea, Year 4, "Complex patterns of spontaneous cortical activity reflect functional neural circuits".

Clara Westwell-Roper, Year 3, "Human islet amyloid polypeptide promotes macrophage recruitment to islets and induces IL-1-dependent TNF-alpha release".

Thanks go to MD/PhD students **Clara Westwell-Roper** and **David McVea** for organizing the event.






From left: **Dr. Lynn Raymond**, **Dr. Torsten Nielsen**, **Dr. Martin McKeown**, **Dr. Paul Yong** and **Kate Potter**

Program Admissions & Advisory Committee (PAAC) 2010-2011

The MD/PhD Program Advisory & Admissions Committee consists of clinician-scientists, basic scientists, graduate program advisors, student research supervisors, and a senior student representative. Membership is appointed and reviewed annually by the Program Director. To ensure that the Committee benefits from maximum faculty involvement and has a healthy turn-over rate, members who complete a 3-year term are automatically rotated off the Committee, but can serve additional terms after a 3-year hiatus. The Committee meets at least once a year to review the admissions process, finalize the ranking of MD/PhD applicants, and assign the CIHR MD/PhD Studentships to individual MD/PhD students. Members of the Committee also serve on the student Thesis Research Supervisory Committees, the PhD Comprehensive Examination Committees, and the PhD Final Oral Examination Committees.

	Lynn Raymond, MD, PhD Director, MD/PhD Program, UBC Professor, Neurosciences, Department of Psychiatry, UBC
	Torsten Nielsen, MD/PhD Associate Director, MD/PhD Program, UBC Associate Professor, Anatomical Pathology, Department of Pathology & Laboratory Medicine, UBC
	Claudia Krebs, MD, PhD Senior Instructor, Department of Cellular and Physiological Sciences, UBC UBC MD Curriculum Committee Member
	Christian Naus, PhD Professor, Department of Cellular and Physiological Sciences, UBC Director, Life Sciences Institute, UBC
	Haydn Pritchard, PhD Professor, Department of Pathology & Laboratory Medicine, UBC Graduate Advisor, Pathology & Laboratory Medicine Graduate Program, UBC
	Fabio Rossi, MD, PhD Associate Professor, Department of Medical Genetics, UBC Canada Research Chair in Regenerative Medicine
	Alan So, MD Assistant Professor, Department of Urologic Sciences, UBC Research Scientist, Prostate Centre at Vancouver Coastal Health Research Institute
	Rusung Tan, MD, PhD Professor, Department of Pathology & Laboratory Medicine, UBC Director of Laboratory Medicine, Children's & Women's Health Centre of BC

	Stephen Yip, MD/PhD Neuropathologist, BC Cancer Agency Alumnus, MD/PhD Program, UBC
	Youwen Zhou, MD, PhD Associate Professor, Department of Dermatology and Skin Science, UBC Director, Chieng Genomics Centre and Laboratory of Predictive Medicine and Therapeutics, Vancouver Coastal Health Research Institute
	Clara Westwell-Roper MD/PhD Student (Year 3), UBC

From January to March 2011, members of the MD/PhD Program Advisory & Admissions Committee will be interviewing and adjudicating an impressive cadre of short-listed applicants for admission in 2012. Our students will be organizing a dinner for our selected applicants in February. Through the years, exceptional individuals from across the country have been recruited to the UBC MD/PhD Program.

Our sincere thanks go to **Drs. Del Dorscheid, Vince Duronio and Sally Osborne** for their contribution to the Committee in the past three years. We welcome three new members to the Committee: **Drs. Claudia Krebs, Haydn Pritchard and Stephen Yip**. Thank you for your support of the MD/PhD Program!

Dr. Torsten Nielsen - Winner of the 2010 Joe Doupe Young Investigator Award

Our Associate Program Director, **Dr. Torsten Nielsen**, won the **2010 Joe Doupe Young Investigator Award**. The award consists of a free one-year membership to the Canadian Society for Clinical Investigation (CSCI), a plaque and a \$1,000 cheque which was presented to Dr. Nielsen at the time of his lecture, during the CSCI Young Investigators' Forum (20-22 September 2010). The lecture was entitled, "Translating gene expression into clinical care".

This annual award is given to a new young investigator within eight years of his first academic appointment who, in the estimation of his departmental chair, is deemed to have accomplished a significant and innovative piece of work since this initial academic appointment.

Dr. Nielsen also wrote an article for the CSCI Journal Clinical and Investigative Medicine (CIM), "Discovery research to clinical trial: A ten year journey", Vol. 33, No. 6, 2010.

Congratulations!

Dr. Stephan Pasternak (left), CSCI Award Committee Chair, presenting the 2010 Joe Doupe Young Investigator Award to **Dr. Torsten Nielsen**.



UBC MD/PhD PROGRAM

Student Representative



Clara Westwell-Roper

Clara Westwell-Roper, Year 3 MD/PhD student, is the 2010-2011 student representative, along with alternate student representative, **Michael Copley**, Year 3 MD/PhD student. Michael will succeed Clara as the student representative next year.

The major responsibility of the student representative is to sit on the MD/PhD Advisory and Admissions Committee. Other duties include helping organize the MD/PhD monthly student meetings/seminars and presenting at student events to promote the MD/PhD Program. Clara presented at the UBC SCI Team's seventh annual "Get Into Research" event on 24 November 2010. Her talk was very well-received and generated a lot of interest among the audience.



Message from Clara:

I am pleased to be this year's student representative for the UBC MD/PhD Program. I am currently in my third year and have very much appreciated the opportunity to move back and forth between the initially disparate but increasingly integrated worlds of medical and graduate school.

I grew up in North Vancouver and completed my BSc in Honours Microbiology and Immunology at UBC in 2008. During my early research training I was fortunate to work with outstanding mentors at QLT Inc., the Jack Bell Research Centre, Genome BC, Child & Family Research Institute, and UBC. My interest in innate immune signalling in chronic disease led me to the lab of **Dr. Bruce Verchere**, where I am currently studying the role of islet amyloid polypeptide (IAPP) in pancreatic islet inflammation.

Pancreatic islets from patients with type 2 diabetes exhibit progressive beta cell death, likely due in part to increased expression of pro-inflammatory cytokines, macrophage infiltration, and islet amyloid deposition. Islet amyloid deposits form by aggregation of IAPP, a 37-amino-acid peptide co-secreted with insulin by beta cells. Aggregates of IAPP share a common cross β -sheet structure with those of other amyloidogenic peptides known to induce a potent pro-inflammatory response. We have recently observed that IAPP aggregation induces pro-inflammatory cytokine and chemokine release by islets and contributes to macrophage recruitment to islet grafts. We are currently evaluating the mechanisms of immune cell activation by IAPP and the effects of interleukin-1 blockade on IAPP-induced islet inflammation. This work will contribute to our understanding of how protein aggregates interact with the immune system and may aid in the development of strategies to preserve beta cell function in both type 2 diabetic patients and islet transplant recipients.

Outside of the lab I like to spend my time experimenting in the kitchen, playing with paints, walking on the Gulf Islands, and listening to baroque music. I also help organize several project-based science programs for high school students and am thrilled to be co-chairing the UBC Geriatrics Interest Group in its first full year.

All the best for a happy and healthy 2011!

Alumni News - Dr. Ryan Hung

Dr. Ryan Hung graduated from the UBC MD/PhD program in 2005, supervised by **Dr. Anthony W. Chow**. His research was in understanding the role of apoptosis among cells of the hematopoietic lineage in the pathogenesis of toxic shock syndrome. Ryan has been working on his Radiology residency at the University of Alberta in Edmonton since graduation. He took a one year break in 2008-2009 to do a postdoctoral fellowship in molecular imaging and cancer immunology in the lab of **Dr. Afsaneh Lavasanifar**. His work combined his PhD experience in immunology with his training in Radiology to develop novel targeted nanoparticle constructs for T cell tracking by magnetic resonance imaging. Ryan plans to continue his studies with a clinical fellowship in Nuclear Medicine after completing his Radiology board exams this May.

In his spare time, Ryan is an avid competitive ballroom dancer, as well as an aspiring chef. Last April, Ryan was dancing at the Silver and Gold levels. Ryan and his partner won the Silver Standard competition at the 2010 Canadian Closed Championships, and placed 2nd in Silver Latin and Gold Standard.



Dr. Ryan Hung

Recent publications (selected):

Ghotbi Z, Haddadi A, Hamdy S, **Hung RW**, Samuel J, Lavasanifar A. Active targeting of dendritic cells with mannan-decorated PLGA nanoparticles. J Drug Target. Jun 30, 2010. PMID: 20590403

Molavi O, Mahmud A, Hamdy S, **Hung RW**, Lai R, Samuel J, Lavasanifar A. Development of a poly(D,L-lactic-co-glycolic acid) nanoparticle formulation of STAT3 inhibitor JSI-124: implication for cancer immunotherapy. Mol Pharm. 7(2):364-74, 2010. PMID: 20030320

Incoming Student - Julia Pon







Julia Pon

Julia Pon is our incoming student in 2010-2011. Julia is currently taking all required course work for Year I of the medical curriculum, which will be completed in early June. Since she is finding this mainly a review of courses she had as an undergraduate, she is spending significant time reading and developing ideas for her PhD project. Julia is a recipient of the CIHR Scriver Family MD/PhD Studentship Award, for six years beginning September 2010. Her research project title is "Role of histone modifications in non-Hodgkins lymphomas".

Message from Julia:

I am excited to be starting the MD/PhD Program here at UBC. I grew up in Calgary and did my undergraduate in Molecular Genetics at the University of Alberta. My undergraduate research focused on functional characterization of genetic variants causing Wilson Disease, a hepatic copper transport disorder. My MD/PhD research is with **Dr. Marco Marra** at the Michael Smith Genome Sciences Centre (CGS). I will be investigating the role of a gene involved in DNA packaging in the transformation of lymphoma to a more aggressive form. By understanding the genome wide changes in gene expression that occur during the progression of cancer, I hope my research will suggest new methods of determining cancer prognosis and treatment. Outside of school I am enjoying getting involved in community volunteering, painting, and baking. I look forward to getting to know all of my amazing classmates!

Student Awards

	Michael Copley , Year 3 MD/PhD student, won a Poster Prize at the CSCI Young Investigators Forum (CITAC/CSCI Conference, Ottawa, September 2010). He presented “FETAL stage hematopoietic stem and progenitor cells differ from their adult counterparts by elevated high-mobility group A2 (<i>Hmga2</i>) expression and correspondingly low expression of its regulatory counterpart <i>let-7b</i> ”. Michael also won a Travel Award at the American Society of Hematology meeting (ASH Annual Conference, Orlando, December 2010), where he presented “Evidence that high-mobility group A2 (<i>Hmga2</i>) expression contributes to the ontogeny-dependent properties of fetal hematopoietic stem cells.”
	Brennan Eadie , Year 6 MD/PhD student, won the Top Presentation Prize at the Pacific Northwest Chapter Meeting of the Society for Neuroscience (Victoria, BC, October 2010). He presented “NMDA receptor hypofunction in the dentate gyrus and impaired context discrimination in adult <i>Fmr1</i> knockout mice.”
	Gareth Mercer , Year 2 MD/PhD student, won two awards from the UBC Faculty of Medicine - Dr. and Mrs. S Schaffer Memorial Scholarship - Hamber Scholarship in Medicine
	Long Nguyen , Year 2 MD/PhD student, received a Scholar-in-Training Award to present at the American Association for Cancer Research (AACR) Stem Cells, Development, and Cancer special conference in Vancouver, BC in March 2011. His project of presentation is “Lentiviral tracking of normal and malignant human mammary epithelial cell growth in an in vivo xenotransplant model”.

Congratulations!

Long Nguyen

Long Nguyen is one of two MD undergraduate student representatives who sit on the Implementation Task Force for Curriculum Renewal (MD Undergraduate Program) this year. The task force is responsible for providing a strategic direction in the curriculum renewal process, managing timelines, pilots, approval processes, as well as developing new curricular models, structures, and technologies. It oversees the ideas and initiatives from four clusters of working groups (12 working groups in total): Social Responsibility & Accountability, Exit Outcomes & Competencies, Curriculum Design, and Curriculum Governance.

Long’s role so far has been to provide a voice from a student perspective. Currently, a matter of interest to the student body is how to set up outlets for communication such that students can be heard to improve curricular components. Students can inform themselves of the decisions and activities initiated by the task force during the curriculum renewal process. To engage students, task force members have presented their role in the curriculum renewal process at the Medical Undergraduate Society (MUS) Student Council meetings. All the student representatives on the Implementation Task Force and the Working Groups, including Long, have regular meetings to discuss how to engage and involve students.

Thank you, Long.

PhD Comprehensive Exams

The intent of the PhD comprehensive examination is to ensure that the student has adequately prepared for the proposed thesis research and can gain maximum benefit from this experience. The MD/PhD comprehensive examination format consists of two parts:

- a CIHR style research grant proposal in an area of the student's research
- an oral examination.



David McVea Matt Mayer

Two MD/PhD Year 4 students, **Matt Mayer** and **David McVea**, successfully passed their comprehensive examinations on 28 June 2010 and 20 September 2010 respectively, and have been admitted to candidacy.

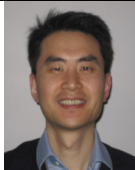


Matt is completing his PhD research with **Dr. Robert Hancock**, Department of Microbiology & Immunology. His project aims to investigate the use of anti-infective compounds that fight disease by modulating key components of the host's immune system.

David is completing his PhD research with **Dr. Tim Murphy**, Neuroscience Graduate Program, Department of Psychiatry. David's project aims to help understand how neural circuits in the brain change during recovery from injury.

MD/PhD "Building Bridges Seminar Series" - ALL ARE WELCOME

This well established seminar series is aimed at illustrating the relationship that exists between clinical practice and medical research. The seminars are put together for budding clinician-scientists of the MD/PhD and Clinician Investigator Programs, which allow the trainees to hear about different career tracks and various ways to combine clinical and research work. In addition to speaking about their active research, the invited speakers also talk about their experiences, discuss their training background, share their advice with the prospective clinician-scientists, and talk about their opinions on career development options for clinician-scientists. All faculty, clinical investigator trainees and students in the Faculty of Medicine are invited. Our usual venue is at the Medical Student Alumni Centre, 6:00-7:00 pm. Food is provided!

Our sincere thanks go to our guest speakers:

	Dr. Don Sin presented on 18 October 2010. Dr. Sin is Professor, Department of Medicine, UBC, Canada Research Chair in Chronic Obstructive Pulmonary disease (COPD), Senior Scholar, Michael Smith Foundation for Health Research, and Head of Respiratory Medicine at St. Paul's Hospital in Vancouver. His title of talk was "Why you should choose UBC internal medicine program for your residency?"
	Dr. Intan Schrader , Alumnus, Clinician Investigator Program, UBC, presented on 20 December 2010. She presented, "A family's tie between bones and blindness; insight through next-generation sequencing."
	Dr. Jason Barton talked on 17 January 2011. Dr. Barton is Professor and Canada Research Chair, Department of Medicine (Neurology) and Department of Ophthalmology & Visual Sciences, UBC, Director, Clinical Neuro-ophthalmology, UBC, and Director, Human Vision and Eye Movement Laboratory, UBC.

For information on upcoming seminars, please visit our webpage at http://www.med.ubc.ca/education/md_ugrad/mdphd/seminars.htm

Clinician Investigator Trainee Association of Canada (CITAC-ACCFC)

<http://www.citac-accfc.org/portal/>

The mission of the CITAC-ACCFC is to organize and promote activities that support clinician investigator trainees in Canada. We are pleased that students in the UBC MD/PhD Program are performing leading executive roles and participating in the Executive Committee 2010-2011:

Chair, Finance Committee - **Suze Berkhout**

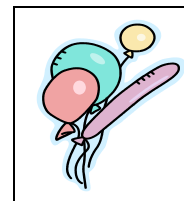
Chair, Policy Committee – **Long Nguyen**

Treasurer - **Will Guest**

Election Officer - **Fiona Young**

MD/PhD Summer Social

The MD/PhD group enjoyed a very pleasant evening at **Dr. Torsten Nielsen's** residence (North Vancouver) on Sunday, 25 July 2010. Our Program Directors, Advisory Committee members, MD/PhD students and their significant others had an enjoyable time. The food was great and everyone was thrilled. After dinner, we exercised ourselves in the swimming pool and took some great pictures. The party was a great success! Thanks, Dr. Nielsen!!



Comments and Suggestions!

We welcome comments and suggestions to the UBC MD/PhD Program and to our newsletters. Please send comments to the MD/PhD Program office, 2N6 - 2818 Detwiller Pavilion, 2255 Wesbrook Mall, UBC, Vancouver, BC, Canada V6T 2A1. Phone: 1-604-822-7198 Fax: 1-604-822-7917 Email: ubcmdphd@interchange.ubc.ca Website: <http://www.med.ubc.ca/mdphd>

Edited by Jane Lee, Program Coordinator, MD/PhD Program, UBC