



UBC MD PhD

UBC MD/PhD Program

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Newsletter – 2013 Winter Term

<http://mdprogram.med.ubc.ca/mdphd/news/>

Open House

The 13th annual UBC MD/PhD Student Research Forum and Open House was held on Friday, 7 September 2012, 2:00-4:00 pm, at the Michael Smith Laboratories, UBC. Opening remarks by **Dr. Lynn Raymond**, Director of the MD/PhD Program, set off the exciting event. Special thanks go to our invited guest speaker, **Dr. Kevin Gregory-Evans**, Department of Ophthalmology and Visual Sciences, UBC. Prospective applicants had some excellent questions and discussions with the speakers and the current MD/PhD students. Thanks to **Long Nguyen**, our student representative, and **Farzad Jamshidi**, our alternate student representative for organizing the event.



Dr. Kevin Gregory-Evans (left)
and **Long Nguyen** (right)

➤ Student presentations

Philip Edgcumbe, “Ultra-fast two-photon microscope based on acousto-optic deflector for imaging of synaptic and neuronal morphology in brain of *in vivo* Xenopus Tadpole for study of early brain development” .

Farzad Jamshidi, “A novel mechanism of INI1 inactivation in epithelioid sarcoma”.

Long Nguyen, “Development of a lentiviral-based cellular barcoding strategy to examine the spectrum of *in vivo* growth and differentiation potential of normal human mammary stem cells”.

UBC's MD/PhD Program is one of the nation's best and most competitive programs for training future clinician-scientists. Our alumni go on to top-tier residency programs across North America in specialties such as neurosurgery and neuropathology, ophthalmology, internal medicine, radiology, and emergency medicine, and later establish careers bridging clinical medicine with scientific research. Our program boasts an exceptional student publication record, guaranteed funding for all our students starting in the spring of the first year of the program, and outstanding success in external funding applications.

Program Admissions & Advisory Committee (PAAC) 2012-2013

The MD/PhD Admissions/Advisory Committee consists of four Ex-officio members and six appointed members. Ex-officio members are appointed as for their primary position(s), including Associate Dean of Admissions, Associate Dean of Graduate & Postgraduate Education, MD/PhD Program Director and MD/PhD Associate Program Director. Appointed members are composed of clinician-scientists, basic scientists, graduate program advisors, student research supervisors and a senior student representative. The Committee meets at least twice a year to review the admissions process and to finalize the ranking of MD/PhD applicants and to assign the CIHR MD/PhD Studentships to individual MD/PhD students. Some 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.

	Bruce Fleming Associate Dean, Admissions, Faculty of Medicine, UBC
	Peter Leung Associate Dean, Graduate & Postgraduate Education, Faculty of Medicine, UBC
	Lynn Raymond Director, MD/PhD Program, UBC
	Torsten Nielsen Associate Director, MD/PhD Program, UBC
	Robert Holt Associate Professor, Department of Psychiatry, UBC Head of Sequencing, Michael Smith Genome Sciences Centre, BC Cancer Agency
	Claudia Krebs Senior Instructor, Department of Cellular & Physiological Sciences, UBC UBC MD Curriculum Committee Member
	Haydn Pritchard Professor, Department of Pathology & Laboratory Medicine, UBC Graduate Advisor, Pathology & Laboratory Medicine Graduate Program, UBC
	Patrick Tang Medical Microbiologist, Laboratory Services, BC Centre for Disease Control Clinical Assistant Professor, Pathology & Laboratory Medicine, UBC
	Stuart Turvey Co-Director, Immunity in Health & Disease Research Cluster and Senior Clinician Scientist, CFRI Associate Professor, Infectious & Immunological Diseases, Department of Pediatrics, UBC
	Long Nguyen Year 4, MD/PhD Student, UBC

Our sincere thanks go to **Drs. Stephen Yip and Youwen Zhou** for their contribution to the committee in the past three years.

MD/PhD Student Representatives

Long Nguyen is our 2012-2013 student representative, along with alternate student representative, **Farzad Jamshidi** and **Sandy Wright**, our student representative at the Southern Medical Program. The major responsibility of the student representative is to sit on the MD/PhD Admissions/Advisory Committee. Other duties include helping to organize the MD/PhD monthly student meetings/seminars and presenting at student events to promote the MD/PhD Program. Prospective applicants are welcome to contact any of our students to ask questions. <http://mdprogram.med.ubc.ca/mdphd/students/>

Message from **Long Nguyen**:



Long Nguyen

The MD/PhD Program at UBC is one of the continent's finest, and I am honoured to be the student representative for this year. The program's strength derives from the meaningful mentorship we find in our program directors (Drs. Lynn Raymond and Torsten Nielsen), the efficiency and support provided by our program coordinator (Jane Lee), and the intellectual and aspirational bonds we as trainees form with each other. In my role this year, I hope to further build cohesiveness within our group distributed throughout the multiple academic sites, and years of the program. I also hope to increase awareness of our unique training path so that its importance within the greater community can be truly recognized.

I came to UBC by way of McGill University in Montreal, where I completed a B.Sc. in Honours Biochemistry in 2009. While there I had the opportunity to engage in many fruitful scientific pursuits, from structural biology of proteins using nuclear magnetic resonance and x-ray diffraction crystallography, to studying liver metastasis in mouse models. For my PhD I was ready for a challenge that demanded skills I had acquired from my previous training, but also required me to gain deeper knowledge and training in an area of seemingly unlimited potential. I wanted to investigate the properties of stem cells.

My current research at the Terry Fox Laboratory in the Eaves lab is to develop a technique called "cellular barcoding" whereby random sequences of non-coding DNA are integrated into cells so that we can retrospectively infer their regenerative properties in multiple tissue systems. I find this work both technologically and biologically engaging. It took a good year for me to get the technology up and running, with the help of Canada's Michael Smith Genome Sciences Centre here in Vancouver. Now, my colleagues in the lab and I have applied this technology to study the activity of mouse and human mammary stem cells, human breast cancer stem cells, human hematopoietic stem cells, and human embryonic stem cells. Our findings are of great interest to the field, and we hope they will provide meaningful direction for both basic scientific research and clinical application.

My time in this program has been very rewarding thus far. The top graduate fellowship offered by the Canadian Institutes for Health Research is the Vanier award, and I am one of seven students in our program to receive this prestigious award. I have had the opportunity to present at many national and international conferences, including a recent trip to Hydra, a small island in Greece, where I interacted and formed collaborations with leading European experts in stem cell biology, not to mention the bonds I formed with fellow trainees while cliff jumping into the Mediterranean sea. My trip ended in Paris, France where I gave a talk at one of their stem cell institutes.

The one bit of advice I would have for incoming students is the program is what you want to make of it. I am someone who loves to be continually engaged in the stimulating academic environment, and for certain, Vancouver is a fantastic place to live. It was here that I played ice hockey for the first time, and became addicted. And, also where running along the seawall during sunset has become the highlight of my days during the beautiful summer months.

Best of luck to all of our aspiring and incoming students!

Long

MD/PhD Student Representatives (con't)



Sandy Wright

Sandy Wright is our student representative at the Southern Medical Program (SMP). Sandy is the first student from the SMP to be enrolled in the UBC MD/PhD Program. Sandy's research focusses on determining if deficits in neurocognitive and sensorimotor function induced by sport-related head impacts are related to alterations in cerebrovascular function for youth contact sport athletes. Under the supervision of **Dr. Paul van Donkelaar**, Acting Director for the School of Health and Exercise Sciences, Sandy works closely with **Dr. Phil Ainslie**, Assistant Professor at UBC Okanagan and **Dr. Brad Monteleone**, a practicing Sport Medicine MD/PhD in Kelowna.

Students interested in the SMP are welcome to contact Sandy to know more about our program.

UBC MD/PhD PROGRAM

Why choose MD/PhD @ UBC?

Facts about our program ...

- The combined UBC MD/PhD Program is a 7-year program.
- MD/PhD students find his/her perfect supervisor from the highly regarded faculty members within the Faculty of Medicine.
- MD/PhD students have their curriculum customized to synergize with their research program.
- MD/PhD students choose to work in one of the four medical programs (Island, Northern, Southern, and Vancouver Fraser).
- Graduate work begins by the end of first year and continues, interwoven with medical school curriculum, through fifth year.
- UBC is one of the top 3 Medical Schools in Canada.
<http://oncampus.macleans.ca/education/2012/11/01/2013-medical-doctoral/>
- UBC Life Sciences ranked number 1 in Canada.
www.timeshighereducation.co.uk/world-university-rankings/2012-13/subject-ranking/subject/life-sciences
- UBC is highly ranked among all Universities in the world. <http://www.ubc.ca/about/global.html>
- At least 7 distinct research campuses with cutting edge research tools.
- Plenty of financial support: reduced tuition, scholarships, travel awards and research stipends.
- The program hosts regular seminars for trainees and advocates for scheduling to balance research and clinical demands.
- Connect with the highly motivated medical and graduate students ready for academic discussion, sports outings or a night of fun.
- With the expansion of the UBC Undergraduate Medical Program, the UBC MD/PhD Program is expecting growth in student numbers in the coming academic years.

MD/PhD Admission 2013

This year, the MD/PhD Program received a record number of applications. From January to March 2013, members of the MD/PhD Program Admissions & Advisory Committee will be interviewing and adjudicating an impressive cadre of short-listed applicants for admission in 2013.

To be eligible for admission, the student must have completed a BSc Degree with First Class Standing (or equivalent), and have fulfilled all the requirements of acceptance into the four year medical curriculum of the Faculty of Medicine and the PhD program of the Faculty of Graduate Studies.

Students in the first or second year of graduate studies and those who are in first year medicine with high standing are also eligible to apply for the MD/PhD Program.

Besides academic excellence, other strengths including maturity, research experience and potential, scholarship, personal qualities, research field of interest, and proposed research supervisor and laboratory are also assessed. Applications to the MD/PhD Program from students with a strong research background will be evaluated using the same criteria, regardless of whether the applicant is a BC resident or from out of province.

Our students will be organizing a dinner for our short-listed applicants in February.

Through the years, exceptional individuals from across the country have been recruited to the UBC MD/PhD Program.

MD/PhD Graduate - Heather Heine

Congratulations to **Heather Heine**. Heather completed her MD/PhD Program and graduated in November 2012. Her PhD research supervisor is **Dr. Bruce McManus**, Department of Pathology & Laboratory Medicine, at the James Hogg, iCAPTURE Centre, St. Paul's Hospital. Heather's PhD research is entitled, "Characterization and use of a controlled *in vivo* model for angiogenesis". After graduation, Heather has chosen to pursue a career in biotechnology in California. Best wishes to Heather!

PhD Comprehensive Exam

Congratulations to **Farzad Jamshidi**, Year 4 MD/PhD student. Farzad passed his comprehensive examination on 26 September 2012, and had been admitted to candidacy. His research supervisor is **Dr. Torsten Nielsen**, Department of Pathology & Laboratory Medicine. The title of his research project is "Identification and analysis of key mutations in forme fruste tumors to develop new insights into cancer biology".



Farzad Jamshidi

Faculty of Medicine - 3rd Annual Student Social

Thanks go to **Farzad Jamshidi**, who participated at the Faculty of Medicine Student Social event as an MD/PhD representative and presented a poster as well. The event was held on 12 October 2012 at the UBC Life Sciences Centre.

The purpose of this annual event is to bring together students from the entire Faculty of Medicine to socialize and meet colleagues across Medicine, which is especially important and challenging given the geographic distribution of our Faculty. The event has been very well attended by students in different health disciplines.



Meet Our Incoming Student - Hwan Lee

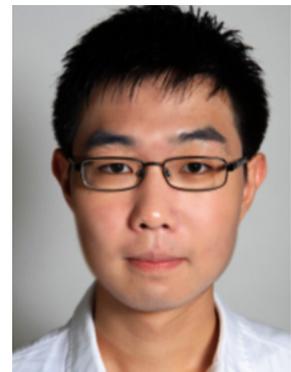
Hwan Lee is currently enrolled in Year 1 of the combined MD/PhD Program. He enrolled in the UBC Medical Undergraduate Program as a Year 1 student in September 2012 and applied to the MD/PhD Program in November 2012; he was accepted retroactively in September 2012. This is one of two routes to enter our program, the other being concurrent MD and MD/PhD application. Hwan has an excellent academic record, having completed 3 years of his BSc (Honours in Physiology) at UBC. He received numerous awards in his undergraduate studies, and has excellent research experience. He is already a co-author on two published journal articles, one in Neurobiology of Disease and one in the Journal of Neuroscience.

* * *

Message from Hwan Lee:

I am very excited to join the UBC MD/PhD Program. It is great to be entering the community of clinician-scientists and I look forward to learning much from various people for the next several years.

I was born in Seoul, Korea and I spent my adolescent years in Coquitlam, BC. After graduating from high school, I went on to study physiology at UBC. During my undergraduate years, I developed my interest in research through a variety of research projects. I investigated the role of host serum response factor cleavage in coxsackievirus B3-induced cardiomyopathy, the extent of NMDA-induced excitotoxicity in cortical and striatal neurons of rats/mice, and modulation of acid-sensitive ion channel activation by neurosteroids. The first two projects were done at UBC, and the last project took place at Universitätsklinikum Aachen, in Germany.



Hwan Lee

I have also been active in both the UBC community and the lower mainland area. In particular, I was involved in many academic endeavours such as student governments/clubs, community English as Second Language (ESL) teaching, academic workshop development, academic crisis counseling, and professional development event organization. In my free time, I enjoy reading, meditation, music, and movies. I have started working out recently as well.

I will be conducting my doctoral research in medical physics through the Interdisciplinary Oncology Program. My co-supervisors will be **Dr. Cheryl Duzenli**, a medical physicist at the BC Cancer Agency, and **Dr. François Bénard**, a nuclear medicine clinician-scientist at the BC Cancer Research Centre. My research will be in the area of radiation therapy and nuclear imaging in oncology.

Welcome aboard!

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

This well-established seminar series aims to illustrate the relationship that exists between clinical practice and medical research. The seminars are organized 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 discuss their experiences and training backgrounds, share their advice with prospective clinician-scientists, and give 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, video-conferenced to Victoria, Prince George and Kelowna. Refreshments are provided!

Our sincere thanks go to our guest speakers, **Dr. Jeffrey Brubacher**, Department of Emergency Medicine, UBC, who spoke on 5 November 2012. Dr. Brubacher's talk on impaired driving and the effects of street drugs was well received by the audience.

For information on upcoming seminars, please visit our webpage at <http://mdprogram.med.ubc.ca/mdphd/seminars/>

MD/PhD Mentors

Michael Copley, Year 5 MD/PhD student, volunteered his time as a mentor at UBC SciCon, a new undergraduate program that allows first and second year students to get their first taste of research. It is a program offered by UBC Undergraduate Research Opportunities (URO). Michael works with his mentees and focusses on leading them through the development of a theoretical research project.

Philip Edgcumbe, Year 2 MD/PhD student, serves as the Alumni Representative on the Board of Directors of the Science Fair Foundation of BC (2012-2013). This program aims to provide BC students in grades 7-12 with the resources they need to investigate scientific questions of interest to them. As well, **Clara Westwell-Roper**, Year 5 MD/PhD student, is the Coordinator for the Science Fair Alumni Mentorship Program.

Clara Westwell-Roper, Year 5 MD/PhD student, is the Chair of the Clinician Investigator Trainee Association of Canada (CITAC) Annual Meeting Planning Committee (2012-2013). Each year, CITAC hosts an Annual General Meeting to which all CITAC members are welcome to attend. The meeting features training sessions relevant to clinician investigator career options, networking and mentorship events, scientific symposia and more.

CSCI/CITAC Annual Conference and Young Investigators Forum

UBC was very well represented at the Canadian Society for Clinical Investigation (CSCI) Young Investigators Forum, 19-21 September 2012, in Ottawa. Four MD/PhD students were selected to present their outstanding research projects!

Philip Edgcumbe, Year 2, "Ultra-fast two-photon microscope based on acousto-optic deflector for imaging of synaptic and neuronal morphology in brain of in vivo *Xenopus* Tadpole for study of schizophrenia".

Farzad Jamshidi, Year 4, "Pathobiology of epithelioid sarcoma: mechanism of SMARCB1 inactivation".

Cynthia Min, Year 2, "Recognizing uncertainty in your knowledge: The impact of response options presentation on self-monitoring accuracy".

Clara Westwell-Roper, Year 5, "Macrophages mediate islet dysfunction in response to human islet amyloid polypeptide".

Clara Westwell-Roper
won the oral
presentation award.
Congratulations!

Good job, everyone.

MD/PhD Award Winners (2012 Winter Session)

UBC Faculty of Medicine Graduate Award

Michael Copley
Hwan Lee
Long Nguyen
Sandy Wright

UBC College for Interdisciplinary Studies Graduate Award

Julia Pon
Daniel Woodsworth

UBC Four Year Fellowship (4YF)

Michael Copley
Philip Edgcumbe
Julia Pon
Gareth Mercer
Cynthia Min
Long Nguyen
Clara Westwell-Roper
Sandy Wright

Canadian Millennium Scholarship Foundation Excellence Award

Victor Li

Long Nguyen was awarded a Stem Cell Network travel bursary to attend the meeting, Hydra VIII: The European Summer School on Stem Cells & Regenerative Medicine, in Greece in September 2012.

Gareth Mercer was awarded the Canada Graduate Scholarship Michael Smith Foreign Study Supplements for conducting his research in South Africa.

Congratulations!

Kudos

Two MD/PhD students are sitting on the Faculty of Medicine Research Council – **Julian Pon** is representing Basic Science and **Clara Westwell-Roper** is our MD/PhD representative.

Philip Edgcumbe is seeking his third term on UBC Senate. He is also the Senator, Division of External Affairs, UBC Medical Undergraduate Society. Philip was interviewed by the Globe and Mail in October and he shared his exchange experience with the public. <http://www.theglobeandmail.com/news/national/education/canadian-university-report/study-abroad-get-a-job-anywhere/article4620605/>

Long Nguyen is the Fundraising Executive, BC Cancer Agency Graduate Student and Post-Doctoral Fellow Society.

Farzad Jamshidi and **Long Nguyen** are MD/PhD representatives for the UBC Medicine Undergraduate Research Forum and UBC Medical Journal Release Organizing Committee – 19 February 2013, 8:00 am to noon, UBC Life Sciences Centre. Come join us!

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
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