



UBC MD/PhD Program

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Newsletter – 2016 Winter

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

Student Research Forum & Open House

The 16th annual UBC MD/PhD Student Research Forum and Open House was held on Friday, 11 September 2015, 2:00-5:00 pm, at the UBC Michael Smith Laboratories. Opening remarks by **Dr. Lynn Raymond**, Director of the MD/PhD Program, set off the exciting event. Sincere thanks to our invited guest speaker, **Dr. Jason Barton**, Clinician-Scientist, UBC Neuro-Ophthalmology.

➤ Student presentations

Amanda Dancsok and **Adam Ramzy** talked about their experiences in their MD/PhD training.

Other students presented their research work.

Philip Edgcumbe, “Pico Latern: A pick-up projector for augmented reality in laparoscopic surgery”.

Andrea Jones, “Increased mortality in a community sample living in marginal housing”.

Jordan Squair, “A clinically relevant rodent contusion model to investigate cardiovascular dysfunction following spinal cord injury”.

David Twa, “Genomic rearrangements involving programmed death ligands are recurrent in primary mediastinal large B-cell lymphoma”, and “Activating *IL4R* mutations in primary mediastinal large B cell lymphoma”.

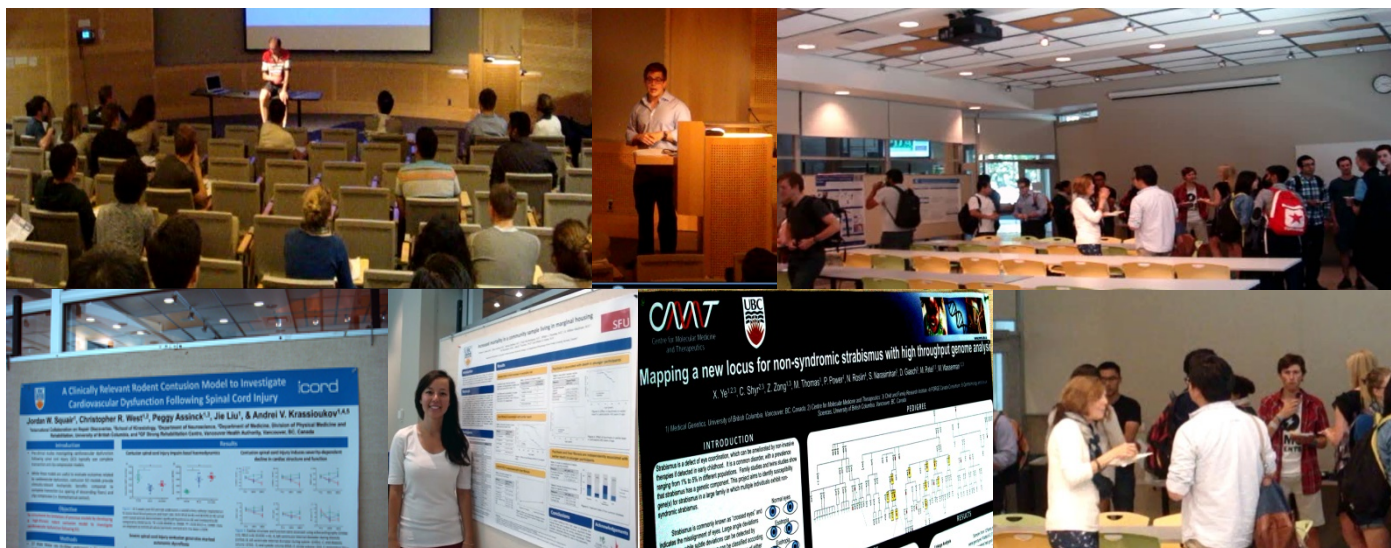
Cynthia Ye, “Mapping a new locus for non-syndromic strabismus with high throughput genome analysis”.



Amanda Dancsok, our student representative, at the welcoming session.

Student Research Forum & Open House (con't)

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 radiology, neurosurgery and neuropathology, ophthalmology, internal medicine, 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. We also offer reduced tuition and funding support to attend conferences.



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

Our seminar series aims to illustrate the relationship that exists between clinical practice and medical research, allowing MD/PhD and other interested students 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.

Invited speakers:

Monday, 28 September 2015.

Dr. Janessa Laskin, Department of Medicine, UBC

Monday, 16 November 2015.

Dr. Michael Seidman, Cardiovascular Tissue Registry & Research Histology, Providence Health Care.



Dr. Janessa Laskin



Dr. Michael Seidman

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

Program Admissions & Advisory Committee (PAAC) 2015-2016

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 positions(s), including Associate Dean of Admissions, Assistant 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. To ensure that the MD/PhD Committee may benefit from maximum faculty involvement and has a healthy turn-over rate, the appointed members' term is for three years, renewable once. 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. 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, MD Associate Dean, Admissions, Faculty of Medicine, UBC
	Wendy Robinson, PhD Assistant Dean, Graduate & Postgraduate Education, Faculty of Medicine, UBC
	Lynn Raymond, MD, PhD Director, MD/PhD Program, UBC Professor, Department of Psychiatry, UBC
	Torsten Nielsen, MD/PhD Associate Director, MD/PhD Program, UBC Professor, Department of Pathology & Laboratory Medicine, UBC
	Liam Brunham, MD/PhD (Alumnus, UBC MD/PhD Program) Assistant Professor, Department of Medicine, UBC
	Dawn Cooper, PhD Instructor, Department of Cellular & Physiological Sciences, UBC Co-Director, FLEX and Foundations of Scholarship, MD Undergraduate Program Curriculum, UBC
	Jan Dutz, MD Professor, Professor, Department of Dermatology & Skin Science, UBC Scientist, Child and Family Research Institute
	Pamela Hoodless, PhD Professor, Department of Medical Genetics, UBC Senior Scientist, Terry Fox Laboratory, BC Cancer Agency
	Timothy O'Connor, PhD Professor, Department of Cellular & Physiological Sciences, UBC Director, Graduate Program in Neuroscience, UBC
	Amanda Dancsok Year 3, MD/PhD Student, UBC

MD/PhD Student Representative – Amanda Dancsok

Amanda Dancsok, Year 3 student, is our 2015-2016 student representative, along with alternate student representative, **Parker Jobin** 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 **Amanda**:

It is my pleasure to serve as the student representative this year for such an accomplished and inspiring group of budding clinician-scientists. I am in my third year of the program, so having just finished the first two years of medicine, I am excited to finally have the chance to dive in deep to the research side of things. I am doing my doctoral work under the supervision of **Dr. Torsten Nielsen**, our program's associate director, who is a clinician-scientist himself and an excellent model for myself and the other students. He, along with **Dr. Lynn Raymond**, the program director, and **Jane Lee**, the program coordinator, provide incredible support to all of us on our roads to success.

I grew up in Regina, Saskatchewan and completed my BSc, Honours in Biochemistry at the University of Regina in 2012. It was there that I first became interested in research, working in a microbiology lab with **Dr. John Stavriniades**. My honours research investigated pathogen-host interactions in *Pantoea* genus bacteria, through virulence assays in a whole “farm” of hosts (nematodes, flies, corn, onion)! I received an NSERC USRA grant to continue my research there, and I decided that I definitely want a career in research. Because of my interest in medicine and human health, I made the move to Vancouver, where I get to work in the wonderfully productive and collaborative hub that is the BC Cancer Agency research area.



Amanda Dancsok

The focus of my doctoral work is in the blazing field of immuno-oncology. This cancer therapy strategy is all about igniting (or re-igniting) the immune system to seek out and destroy cancer cells. I focus specifically on sarcomas, which are a category of connective tissue cancers made prominent by Terry Fox, such as cancers of the bone or soft tissue. While comparatively rare, sarcomas can be devastating for patients, as they face drastic (and sometimes disabling) surgeries and shortened life expectancies due to a lack of treatment options. Immuno-oncology research is exponential in many other cancer types, but it is relatively untouched for sarcomas. My research will investigate the extent and type of immune activation across the many subtypes of sarcomas, in order to better understand which sarcoma patients might benefit from immune therapy treatment. These patients will be prioritized in upcoming clinical trials of immune therapy agents, fast-tracking the bench-to-bedside pipeline for maximum patient benefit.

Outside of the lab, I have a number of diverse interests. I am a managing editor for the UBC Medical Journal, a student-run scientific journal from the Faculty of Medicine. This has given me a fascinating look at the review process of academic articles, and it will be very helpful in submitting my own manuscripts to high-level journals. I also work as a doula with the Inter-Professional Fir Square Doula Program at BC Women's Hospital, which pairs healthcare students with pregnant women struggling with addictions or socioeconomic issues. We provide emotional support, physical comfort, and advocacy for these women during pregnancy, labour, and post-partum. This rewarding experience has taught me a lot about the experience of healthcare for patients from marginalized populations. Further, I am a hobby ballerina, having previously danced for 20 years!! I can be caught at the annual Spring Gala, sharing my love for dance, singing, and music!

All the best for a happy and healthy 2016!

CSCI/CITAC Annual Conference and Young Investigators Forum



From left: Andrea Jones, Dr. Lynn Raymond, Eric Zhao, Amanda Dancsok, Adam Ramzy, Philip Edgcumbe, David Twa, Allen Zhang and Frank Lee.



UBC was very well represented at the Canadian Society for Clinical Investigation (CSCI) / Clinician Investigator Trainee Associate of Canada (CITAC) Young Investigators Forum, 23-25, November 2015, in Toronto, Ontario. Ten MD/PhD students were selected to present their outstanding research projects!

Presentations:

Amanda Dancsok, Year 3, “KDM2B: Setting the stage for aberrant silencing in synovial sarcoma”

Philip Edgcumbe, Year 5, “Pico Lantern: A miniature projector for surgical navigation in laparoscopic surgery”

Andrea Jones, Year 3, “Social network utilization and psychosis among marginally housed adults in Vancouver”

Frank Lee, Year 3, “Active site-modified clotting factor Xa: Dissecting a novel ‘clot-buster’”

Cynthia Min, Year 5, “The malleability of medical students’ self-assessments”

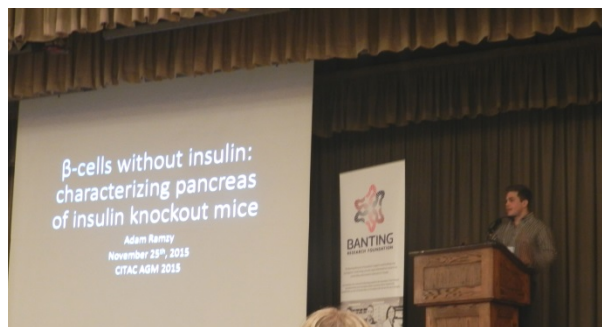
Adam Ramzy, Year 3, “ β -cells without insulin: characterizing pancreas from insulin knockout mice”

David Twa, Year 1, “Targeted high-throughput sequencing and characterization of programmed death ligand structural rearrangements in non-Hodgkin lymphomas”

Sandy Wright, Year 5, “Sport-related concussion induces transient impairment in dynamic cerebral autoregulation”

Allen Zhang, Year 3, “Evolution of tumour-infiltrating lymphocytes and cancer clones in high-grade serous ovarian cancer”

Eric Zhao, Year 3, “A BRCA-related genomic signature predicts clinical improvement with cisplatin”



Adam Ramzy was invited to do a podium presentation and he was one of the three runners-up.

UBC MD/PhD PROGRAM

PhD Oral Defense - Alexis Crabtree



Alexis Crabtree

Congratulations to Alexis Crabtree, for successfully defending her PhD dissertation entitled, **“It’s Powerful to Gather’: A Community-driven Study of Drug Users’ and Illicit Drinkers’ Priorities for Harm Reduction and Health Promotion in British Columbia, Canada”** on 15 September 2015.

Alexis made a good presentation of her research work and answered all questions well. Her PhD research supervisor is **Dr. Jane Buxton** and her thesis was under the auspices of the School of Population and Public Health. We are very proud to share Alexis’ research interests with everyone. Great work, Alexis!!

* * *

‘It’s Powerful to Gather’: A Community-driven Study of Drug Users’ and Illicit Drinkers’ Priorities for Harm Reduction and Health Promotion in British Columbia, Canada

ABSTRACT

It is essential that the autonomy and dignity of people who use illicit substances be respected by meaningfully involving them in research into their needs and priorities. This dissertation reports on two projects in which substance users were involved in planning and conducting qualitative research in British Columbia, Canada. In the first phase of the research, a province-wide series of 17 workshops, facilitated by drug users, was held to identify health and harm reduction priorities for this population. I found that drug users in British Columbia identified clear priorities to improve their well-being: improving interactions with health professionals, promoting access to a range of housing options, improving treatment by police, ensuring harm reduction best practices are followed everywhere, improving social assistance, supporting drug users' organizations, and engaging new and existing allies. These were based on the values of collectivity, activity, freedom from surveillance, and accountability. An unexpected finding of this research was identifying a need and opportunity for drug users to collaborate with illicit drinkers (defined as people who consume non-beverage alcohol (e.g. mouthwash) and people who consume beverage alcohol in highly criminalized ways (e.g. homeless drinkers)) based on their shared priorities, values, and polysubstance use. In response to this conclusion, the second phase of this research involved a series of 14 town hall meetings with illicit drinkers in Vancouver’s Downtown Eastside to research their perceptions of the harms they face from illicit drinking, the strategies they currently use to reduce these harms, and their ideas for additional harm reduction initiatives. These meetings were planned and facilitated with a steering committee of drug users and illicit drinkers. I found that the harms illicit drinkers experience and some of the strategies they suggest (particularly safe spaces and managed alcohol programs) can usefully be interpreted as examples of structural, everyday, and symbolic violence. This work has led to several positive outcomes for drug users and illicit drinkers, including deeper involvement of substance users in planning provincial harm reduction services and the formation of an activist group for illicit drinkers.

PhD Comprehensive Exam

		<p>Congratulations to Sandy Wright and Andrea Jones. They passed the comprehensive examination and had been admitted to candidacy.</p> <p>The MD/PhD Comprehensive Examination format consists of two parts:</p> <ul style="list-style-type: none">• a CIHR style research grant proposal in an area of research• an oral examination.
Sandy Wright	Andrea Jones	

Sandy's research supervisor is **Dr. Paul van Donkelaar**. The title of his research project is "Multidisciplinary approach to sport-related concussions". He is hosted by the Experimental Medicine Graduate Program.

Andrea's research supervisor is **Dr. William Honer**. The title of her research project is "Biological and psychosocial factors of psychosis among marginalized adults in Vancouver, Canada". She is hosted by the Graduate Program in Neuroscience.

MD/PhD Social

The MD/PhD group and their families had a wonderful time in the afternoon of 16 August 2015. Our Associate Director, **Dr. Torsten Nielsen**, kindly offered to host our annual summer social at his beautiful home in North Vancouver, where we swam and socialized in and around his backyard pool. We had a catering party with great food after we spent a wonderful time at Eagle Bluffs hike at Cypress Mountain. This annual event is to welcome incoming students and also serves as a great opportunity for our significant others to join us for fun. The hike picture turned out really well!



MD/PhD Student – Andrea Jones

Andrea Jones is a Year 3 student in the MD/PhD Program. She is completing her PhD training under the supervision of **Dr. William Honer** at the BC Mental Health and Addictions Research Institute. Andrea's research pursuits aim to improve the health and wellness of those marginalized by poverty, mental illness, and addictions. Andrea's doctoral work is part of the Hotel Study, a longitudinal observational study following individuals living in marginalized housing (such as single room occupancy hotels) in Vancouver. Andrea's most recent publication examined the high mortality rates seen among the cohort compared to the rest of Canada and identified psychosis and liver damage from chronic hepatitis C infection as risk factors for this premature mortality. This study was reported by The Globe and Mail in September 2015, and the paper was highlighted by BMJ Open as one of the most read articles that month in the journal.

<http://news.ubc.ca/2015/09/10/vancouver-downtown-eastside-residents-dying-at-more-than-eight-times-the-national-average-ubc-study/>

<http://blogs.bmj.com/bmjopen/2015/10/09/e-cigarette-use-abortion-legislation-and-mortality-in-marginally-housed-adults-most-read-articles-in-september/>

In addition to her training at UBC, Andrea has been involved with the Institute for Healthcare Improvement, an international organization that defines and disseminates best practice in health care delivery quality and safety. As co-founder and president of the UBC chapter for IHI for 3 years, Andrea worked closely with many passionate students and with local and provincial organizations to develop programming that supported collaboration between students and professionals to advance quality care in BC. She is currently the Canadian Regional Leader, supporting all Canadian student chapters in their advocacy and educational efforts and partnerships with local and national organizations. Last year, Andrea became more active in the Canadian MD/PhD community by joining the Clinician Investigator Trainee Association of Canada (CITAC) executive team as the Membership Committee Chair. In partnership with **Enoch Ng**, University of Toronto, Mentorship Committee Chair, they developed the iReps initiative to improve CITAC's national representation. Andrea will be continuing her involvement as Special Projects Chair to see through the dissemination of findings from a trainee survey to inform training program improvement.

Andrea has been awarded a few major awards including the Canadian Medical Hall of Fame for potential as future leader and innovator of health care in Canada (2015-2017), Zelodwicz Award for Clinical Science, UBC Department of Psychiatry for poster presentation at Research Day (2015), and the prestigious Vanier Canada Graduate Scholarship. She also presented her research work at national and international conferences such as the Institute for Healthcare Improvement National Forum (Orlando, Florida) and CIHR Canadian National Brain Bee (Vancouver, BC).

Since moving to British Columbia from Ontario, Andrea has also been a volunteer with the Mom2Mom Child Poverty Initiative as a mentor for a family living with challenges associated with poverty. Mom2Mom provides some grocery funding and enables Andrea and her partner mentor to provide some emotional and crisis prevention support as well as joy and celebration for the family. Over the years, Andrea has also volunteered at local clinics including the Downtown Community Health Center, Vancouver Native Health Youth Clinic, and Strathcona Mental Health team. In her spare time, Andrea enjoys exploring the outdoors. She can be found hiking, skiing, kayaking, or cycling. She also maintains a yoga practice and enjoys leading yoga classes to support wellness for medical students.

Recent Publications (selected):

- **Jones AA**, Vila-Rodriguez F, Leonova O, Langheimer V, Lang DJ, Barr AM, Procyshyn RM, Smith GN, Schultz K, Buchanan T, Krausz M, Montaner JSG, MacEwan GW, Rauscher A, Panenka WJ, Thornton AE, Honer WG. (2015) Mortality from treatable illnesses in marginally housed adults: A prospective cohort study. *BMJ open*, 5(8), e008876.
- Honer, WG, **Jones AA**, Thornton AE, Barr AM, Procyshyn RM, Vila-Rodriguez, F. (2015) Response trajectories to clozapine in a secondary analysis of pivotal trials support using treatment response to subtype schizophrenia. *Can J Psychiatry* 60(3 Suppl2):S19-25.

Andrea is featured at the UBC Graduate and Postdoctoral Studies website.
<https://www.grad.ubc.ca/campus-community/meet-our-students/jones-andrea>



Meet Our Incoming Students - September 2015

Welcome to the Program!

Rozlyn Boutin (supervisor: **Dr. Brett Finlay**)



I could not be more excited to be joining the MD/PhD program at UBC! I feel so grateful to have been given this opportunity to pursue my dual interests in medicine and research alongside some of the brightest students in the country and a leading expert in the field of immunology.

Born and raised in Edmonton, I moved to Ottawa with my twin sister after high school to complete my BSc. Honours in Biology with a Concentration in Health Sciences undergraduate degree while playing varsity soccer. Through my interest in Darwinian medicine, I was introduced during my undergraduate degree to the “Hygiene Hypothesis” and how it relates specifically to the microbiome, the community of naturally occurring microbes that live symbiotically in and on the human body. As compared to developing countries, westernized countries have recently seen an alarming increase in the prevalence of allergic diseases such as food allergies and asthma. The “Hygiene Hypothesis” essentially suggests that this trend may be in part due to the excessive use of hygienic practices in affluent countries and the over-prescription of antibiotics to young children early in life when their microbiomes and immune systems are still developing. These practices may be inadvertently having adverse effects on the delicate relationship humans have evolved over thousands of years with the microbes forming the human microbiome, thereby interfering with the normal development of the immune system and resulting in abnormal immune responses to common allergens. Relating to this hypothesis, my undergraduate thesis work focused on the relationship between early life alterations in the human gut microbiome and the development of peanut allergies later in life.

Along similar lines, my PhD research will focus specifically on using humanized mouse models to determine which microbes are associated with either protection or susceptibility to asthma and on understanding the mechanisms through which these microbes influence the development of the immune system early in life. I will be conducting this research project under the supervision of **Dr. Brett Finlay** in the Michael Smith Laboratories. My hope is that this research will lead to developments that have the potential to help future generations of young children suffering from the physical and psychological effects of living with life-long allergies.

When not in the lab or studying, I enjoy playing team sports, running, hiking, and travelling. I am also hoping to continue to volunteer with Let’s Talk Science and to participate in several clubs, intramurals teams, and Global Health initiatives outside of class time over the next several years. Furthermore, after having lived in Edmonton and Ottawa, I am looking forward to getting to know the Vancouver area and especially to the snow-free Vancouver winters!

Meet Our Incoming Students - September 2015 (con't)

Jennifer Ji (supervisor: **Dr. David Huntsman**)



I am a first year student in the Vancouver-Fraser program. I was born in Beijing, China and immigrated to Vancouver during high school. I completed a B.Sc Honours degree in the UBC-BCIT joint Biotechnology Program, during which I had the opportunity to conduct translational oncology research at McGill, Harvard, and UBC.

My PhD is hosted by the Department of Pathology and Laboratory Medicine under the supervision of **Dr. David Huntsman** at the BC Cancer Agency. The Huntsman lab has contributed significantly to the development of prognostic and predictive biomarkers for gynecologic and gastric cancers using immunohistochemistry and high throughput sequencing platforms. I aim to translate proteomic, genomic and epigenomic landscape findings into disease management for patients affected by ovarian cancer. My project will focus on identifying the cell of origin for ovarian cancer. Screening efforts targeting ovarian cancer using imaging and serum biomarker have not shown effectiveness; however, the benefits of chemopreventative strategies have been clearly indicated. Specifically, combined oral contraceptive (COC) has been shown to be protective against all histotypes. The mechanism of COC's preventative effects is not well elucidated. By identifying the origin of ovarian cancer and its relationship with COC exposure, we hope to understand the natural history of the disease as well as its prevention and treatment.

Outside of the lab, I am an avid swimmer as well as a freelance illustrator and graphic designer. I recently illustrated for a children's activity book for the Reading Bear Society, and continue to be involved with the organization with the goal of increasing early literacy skills in underprivileged children. I also volunteer at the Vancouver Crisis Centre and am the artistic director for the UBC Medical Journal.

Michael Skinnider (supervisor: **Dr. Leonard Foster**)



I am happy to have joined the MD/PhD program at UBC and excited to begin full-time research this summer. I grew up in Victoria, but left for McMaster University after high school to complete a Bachelor's of Arts and Science. At McMaster I worked in the Magarvey lab for two and a half years, developing bioinformatic and cheminformatic methods for antibiotic discovery. It was a great experience as I was able to design several of my own research projects, and discovered a passion for research.

At UBC, I will complete my PhD studies under the supervision of **Dr. Leonard Foster** and within the Genome Sciences and Technology program, with a focus on the protein-protein interactome. Diseases rarely result from mutations to a single gene, and most gene products cannot be assigned a discrete biological function. Instead, biological functions are mediated by complex networks of interactions between proteins, DNA, RNA, and small molecules. The interactome is the complete set of biologically relevant molecular interactions. The field of network medicine aims to apply network theory to interactomic datasets in order to understand disease pathogenesis. Dr. Foster's group has recently developed a high-throughput method of monitoring the protein-protein interactome with high temporal resolution, and my research will focus on the development of bioinformatic methods to interrogate the resulting data.

Meet Our Incoming Students - September 2015 (con't)

Jordan Squair (co-supervisors: **Drs. Andrei Krassioukov** and **Chris West**)



I am co-supervised by **Dr. Andrei Krassioukov** (an expert in blood pressure lability after spinal cord injury and a practicing physiatrist) and **Dr. Chris West** (an expert in cardiac decline after spinal cord injury). After completing a Bachelor of Kinesiology from UBC I continued on to complete my MSc under the supervision of **Dr. Mark Carpenter**. For my MSc thesis, I moved to Stockholm, Sweden to investigate preserved motor pathways in individuals with complete high-thoracic or cervical spinal cord injury in conjunction with the Karolinska Institute and the Swedish School of Sports and Health Sciences. I then shifted fields and began focusing on autonomic dysfunction after spinal cord injury and am currently completing my PhD training at the International Collaboration on Repair Discoveries (ICORD) under the Experimental Medicine Graduate Program. My research is broadly focused on understanding the cardiovascular consequences of spinal cord injury. Recently, our research group has identified that individuals with spinal cord injury are 300-400% more likely to suffer from cardiovascular disease (i.e. stroke, myocardial infarction, cardiac disease) than the general population. Thus, my doctoral work will specifically focus on developing novel strategies to restore and/or maintain descending control of crucial autonomic structures below the level of injury. Further, I use a translational approach, with basic science studies to elicit novel anatomical observations as well as mechanisms, and human studies to understand the clinical reality. Some of my specific interests include developing new methods to manipulate microglia expression in order to modulate the inflammatory environment of the central nervous system after spinal cord injury. Using these strategies, I aim to reduce blood pressure lability, restore cardiac function (as measured by in vivo echocardiography and pressure-volume loop analyses), and thereby reduce the dramatic cardiovascular disease risk burden in spinal cord injured individuals. Outside the lab I act as the Editor-in-chief of the UBC Medical Journal and as a Family Support Volunteer at Canuck Place Children's Hospital.

David Twa (supervisor: **Dr. Christian Steidl**)



I am hosted by the Department of Pathology and Laboratory Medicine. Previously, I completed my BSc with distinction in Microbiology and Immunology at UBC and defended my thesis on Cocksackieviruses. As an affiliate of the BC Cancer Agency's Centre for Lymphoid Cancer, I am completing my research under the direction of **Dr. Christian Steidl**. I am supported by a Killam Fellowship, a CIHR Vanier Scholarship, UBC Graduate & Postdoctoral Studies affiliated awards and the Canadian Hematology Society.

My lab-group (<http://steidlmlab.med.ubc.ca/>) is interested in modeling mutations identified in B-cell malignancies using high-throughput sequencing methods (genome, capture-based exome, transcriptome). Specifically, I am interested in identifying novel structural rearrangements involving programmed death ligands 1 (CD274) and 2 (PDCD1LG2). Physiologically, when these ligands engage their cognate receptor PDCD1, they maintain peripheral tolerance. In the context of lymphomas however, the axis is hijacked to induce clonal anergy in tumor infiltrating immune cells. As part of my project, I also assess the functionality of checkpoint inhibitors, such as Nivolumab and Ipilimumab in the context of in vitro co-culture and xenotransplantation models. Additionally, I model novel single nucleotide variations in GNA13, a member of the G-protein coupled receptor signalling cascade. My collaborative efforts contribute to understanding how JAK/STAT signalling receptors, such as IL4R (CD124), are deregulated in B-cell malignancies.

Outside of the lab, I am an advocate for evidence-based medicine as Managing Editor for the UBC Medical Journal and am involved in the BC Sportsbikes motorcycling community. Previously, I was a member of the UBC Varsity Rowing Team, coached at the Vancouver Rowing Club and served as principal clarinetist for the UBC concert winds. I continue to be involved in my pursuits as a member of the Burnaby Lake Rowing Club and serve on the Department of Pathology & Laboratory Medicine Awards Committee.

<https://www.grad.ubc.ca/campus-community/meet-our-students/twa-david>

Kudos

- Awards winners in the 2015 Winter Term (selected):
 - **Julia Pon** – Elizabeth K. Craig Memorial Scholarship
 - **Clara Westwell-Roper** – Douglas and Jean Bailey Scholarship and Dr. A.E. Trites Memorial Scholarship
 - **Allen Zhang** – Faculty of Graduate & Postdoctoral Studies Elwyn Gregg Memorial Fellowship.
- **Eric Zhao** was selected to participate in the CIHR Health Research Training Working Group in 2015. The goal of the working group is to ensure their efforts to enhance training are meaningful and informed by the broader community, including the important perspectives of graduate students.
- **Adam Ramzy** won the title of Best Overall Lifter at the Commonwealth Powerlifting Federation Championships (2015).
- **Adam Ramzy** and **Allen Zhang** were nominated as the representative and alternate representative for MD/PhD students on the Faculty of Medicine Graduate Student Committee (2015-2016).

Canadian Clinician-Scientist Training

In June 2015, the Canadian Institutes of Health Research (CIHR) announced the termination of the MD/PhD Grant Program across Canada, the 2015/2016 competition will be the program's last. In scrapping the program before putting new alternatives in place, the CIHR's decision was made without consultation with the MD/PhD Programs across Canada. The fallout of this decision will undoubtedly affect the Canadian healthcare system and has broader implications on international translational research collaborations. The Program Directors attended the recent CSCI/CITAC meeting and discussed strategies to secure future funding.

Four MD/PhD Year 1 students submitted an editorial piece to the Journal of Clinical Investigation on the CIHR MD/PhD funding decision. *J Clin Invest* 2015;125(12):4317-4319. doi:10.1172/JCI85194. <http://www.jci.org/articles/view/85194>

“The Canadian clinician-scientist training program must be reinstated”

Authors: David Twa, Jordan Squair, Michael Skinnider, Jennifer Ji

Abstract: Clinical investigators within the Canadian and international communities were shocked when the Canadian Institutes of Health Research (CIHR) announced that their funding for the MD/PhD program would be terminated after the 2015–2016 academic year. The program has trained Canadian clinician-scientists for more than two decades. The cancellation of the program is at odds with the CIHR's mandate, which stresses the translation of new knowledge into improved health for Canadians, as well as with a series of internal reports that have recommended expanding the program. Although substantial evidence supports the analogous Medical Scientist Training Program in the United States, no parallel analysis of the MD/PhD program has been performed in Canada. Here, we highlight the long-term consequences of the program's cancellation in the context of increased emphasis on translational research. We argue that alternative funding sources cannot ensure continuous support for students in clinician-scientist training programs and that platform funding of the MD/PhD program is necessary to ensure leadership in translational research.

Although the CIHR funding has been cut to MD/PhD Programs across Canada, the UBC MD/PhD Program remains able to support new admissions for the 2015/2016 application cycle.

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, 2894 Detwiller Pavilion, 2255 Wesbrook Mall, UBC, Vancouver, BC, Canada V6T 2A1. Phone: 1-604-822-7198 Fax: 1-604-822-7917

Email: md.phd@ubc.ca Website: <http://www.med.ubc.ca/mdphd>

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