

UBC MD/PhD Newsletter



Winter 2025

INTRODUCTION

Happy 2025 everyone!

Hope you all had a good start to the new year. To start off our 2025 at the MD/PhD program, we want to provide you with some brief summaries and highlights regarding things that have been going on and things that you can look forward to.

As promised in our last newsletter, here are our new students who joined the program last year.

WELCOME INCOMING STUDENTS



Linda Chen (2nd year)



Tony Guo



Ryan Ripsman



Linus Schweizer

STUDENT BIOGRAPHIES

**Linda Chen, Class of 2030****Education:** BSc (Integrated Sciences), UBC**Field of study:** Pediatric suicidology**Supervisor:** Dr. Quynh Doan**Hosting department and work location:** Experimental Medicine, BC Children's Hospital Research Institute (BCCHRI)

Linda grew up in Vancouver, BC, where she developed a strong commitment to supporting individuals facing mental health challenges, poverty, and discrimination. She completed her BSc in Integrated Sciences at the University of British Columbia, focusing on Behavioral Neuroscience and Statistics. During her undergraduate studies, Linda worked in the labs of Dr. Todd Woodward (UBC Brain Dynamics Lab), Dr. David Klonsky (UBC Personality, Emotion, and Behaviour Lab), and Dr. Albert Powers (Yale PRIME Psychosis Research Clinic). Now pursuing her PhD under the supervision of Dr. Quynh Doan, Linda's research focuses on developing a motivation-sensitive framework that can guide emergency care interventions for youth suicidality.

Outside of academia, Linda enjoys photography (especially birds), piano, basketball, ice skating, and baking, and she dreams of one day studying penguins in Antarctica.

**Tony Guo, Class of 2031****Education:** BSc (Cellular and Physiological Sciences), UBC; MSc (Experimental Medicine), UBC**Field of study:** Biological modelling of the airways**Supervisor:** Dr. Emmanuel Osei**Hosting department and work location:** UBC Okanagan

Tony moved to Vancouver, BC at a young age and is grateful to call it home. He completed his Honours BSc in Cellular and Physiological Sciences at UBC. During this time, he studied the airway epithelium's role in asthma and lung diseases associated with HIV/AIDS at the Centre for Heart Lung Innovation with Drs. Del Dorscheid and Janice Leung. He completed his co-op terms at the BC Children's Hospital Respiratory Clinic under Drs. Mark Chilvers and Connie Yang, coordinating observational and clinical studies on pediatric cystic fibrosis and asthma. For his MSc, he returned to the lab to investigate a novel mechanism of SARS-CoV-2 pathogenesis in the airway epithelium and collaborated with industry partners to develop and validate novel polymer solutions for cleaner water and air. During his PhD, under the supervision of Dr. Emmanuel Osei at UBC's Okanagan campus in Kelowna, he aims to develop complex, multi-cellular, vascularized, and dynamic in vitro models to study interactions between different cellular compartments in the lungs. By utilizing bioprinting, co-culture models, and flexible bioreactors, he hopes to generate more representative models to study respiratory diseases.

Outside of research, Tony works as a part-time paramedic with BC Emergency Health Services having served communities from Galiano Island to Chilliwack. In his free time, Tony is an avid baker, loves playing badminton, and exploring the beautiful outdoors BC has to offer.

STUDENT BIOGRAPHIES

**Ryan Ripsman, Class of 2031**

Education: BSc (Physics), University of Toronto; MSc (Laboratory Medicine and Pathobiology), University of Toronto

Field of study: Neuroscience

Supervisor: Dr. Mark Cembrowski,

Work location: Djavad Mowafaghian Centre For Brain Health (UBC Pt. Grey campus)

Ryan was born and raised in Toronto. During his undergraduate studies in physics, Ryan discovered a passion for biophysics and computational biology. After his third year of undergraduate studies, he joined the Shlien lab at SickKids hospital for a yearlong co-op, where he investigated how the transcriptional features of a patient's tumour influences their likelihood of responding to immune checkpoint inhibitors. After his undergraduate studies Ryan returned to the Shlien lab for his Master's studies where he worked on integrating liquid biopsy testing into the SickKids Cancer Sequencing precision oncology program, KiCS. For his PhD, he's planning to apply his bioinformatics skills to brain health.

Outside of work, Ryan likes hiking, climbing, and swimming and is always searching for new vegetarian and vegan recipes.

**Linus Schweizer, Class of 2031**

Education: BSc (Laboratory Medicine and Pathobiology), University of Toronto

Field of study: Host-Microbe Interactions

Supervisor: Dr. Bruce Vallance

Hosting department and work location: Experimental Medicine, BC Children's Hospital Research Institute (BCCHRI)

Linus was born and raised in Winnipeg, Manitoba. Linus completed his HBSc at the University of Toronto specializing in Laboratory Medicine and Pathobiology (LMP). During his undergraduate studies, Linus synthesized and characterized adjuvants to overcome antimicrobial resistance when used in combination with antibiotics. His honours thesis focused on understanding potential mechanisms by which enteric pathogens may hijack host mitochondria to promote infection. Under the supervision of Dr. Bruce Vallance, Linus's PhD project will focus on understanding gut-microbiota interactions in the context of inflammatory bowel disease.

Outside of research, Linus enjoys skiing, playing the cello, sailing, or anything else outdoors!

PROGRAM UPDATES

Open house and Admissions 2025

We hosted our annual open house webinar event on Tuesday, September 10th 2024. It was attended by 60+ potential applicants who got to ask our program directors, and current MD/PhD students questions about the program. We also had the privilege of hearing from our invited speaker –

Dr. Martin Gleave

This open house and other outreach efforts have contributed to our program receiving more than 65 applications for the upcoming MD/PhD 2025 Admissions cycle. For more information about the admission cycle, please follow our Research Forum & Open House webpage:

<https://mdpprogram.med.ubc.ca/mdphd/mdphd-program-research-forum-and-open-house/>

In August 2025 we will advertise the date of and program for the September 2025 UBC MD/PhD open house event!



Dr. Martin Gleave is a Distinguished Professor and Chairman of the Department of Urologic Sciences at UBC, and a British Columbia Leadership Chair. He is Co-Founder and past Director of the Vancouver Prostate Centre, now a UBC and National Centre of Excellence. He is amongst the top cited and funded scientists in Canada, publishing > 600 papers with >60,000 citations, an H-Index of 122, and attracting >\$120M in research funding. Dr. Gleave is a surgeon-scientist whose research characterizes molecular mechanisms mediating treatment resistance in cancer, and designing co-targeting strategies to improve cancer control. He patented several anti-cancer drugs and founded OncoGenex Pharmaceuticals to develop OGX-011 and OGX-427, inhibitors of cytoprotective chaperones clusterin and Hsp27, progressing to Phase III and Phase II trials worldwide. OncoGenex was awarded Canadian Biotech Company of the Year in 2010. Dr. Gleave also recently co-founded Sitka and Sustained Therapeutics.

MD/PhD Committee Updates

We would like to give a very warm welcome to **Dr. Desmond Nunez** - the newest member of our MD/PhD committee. Dr. Nunez is a surgeon-scientist otolaryngologist based at VGH, with research programs in sensorineural hearing loss.



Desmond A. Nunez, MBBS MD FRCS(ORL) FRCS
Professor

Honorary Reader in Otolaryngology – The University of Bristol, UK

Active Staff, Vancouver Hospital & Health Sciences Centre

City: Vancouver

Hospital Authority: Vancouver Coastal Health

MD/PHD Building Bridges Seminars

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. Here are the presenters we had over the last few months:

BUILDING BRIDGES SPEAKERS



Date: 23 September 2024, **Invited speaker:** Dr. Lara A. Boyd, PT, PhD, fCAHS
Professor & Distinguished University Scholar | Director, Brain Behaviour Laboratory,
Department of Physical Therapy, Faculty of Medicine, UBC

Dr. Lara Boyd is a Neuroscientist and Physical Therapist at the University of British Columbia, and a current member of our MD/PhD Admissions/Advisory committee. She is a professor and has held a Canada Research Chair, a Michael Smith Foundation for Health Career Scientist award and been a Peter Wall Early Career Scholar. Dr. Boyd directs the Brain Behaviour Lab at the University of British Columbia. Her TEDx talk “After this your brain will not be the same” has over 25 million views. Dr. Boyd is an expert in mapping how behaviours, environments and experiences affect brain health and learning using techniques such as magnetic resonance imaging and non-invasive brain stimulation. To date this work has largely examined the impact of exercise and learning on neurobiology.



Date: 28 October 2024, **Invited speaker:** Dr. Simon Pimstone MD, PhD, FRCPC
Clinical Associate Professor, Division of General Internal Medicine, Cardiology, Faculty of
Medicine, UBC

Dr. Pimstone is an internal medicine specialist with an interest in cardiovascular disease. He serves as a consultant physician at the UBC Medical and Cardiology Clinic at UBC Hospital in Vancouver. He is a founder and co-PI of the Study to Avoid cardiovascular Events in BC (SAVE BC), a provincial program for families with very premature atherosclerotic cardiovascular disease. He is also a founder, Director, and Chief Executive Officer at Xenon Pharmaceuticals Inc. (Nasdaq: XENE). Xenon is a clinical stage biopharmaceutical company committed to developing innovative therapeutics to improve the lives of patients with neurological disorders, including rare central nervous system conditions. Dr. Pimstone has previously served as Chair of the Providence Healthcare Research Institute, Director of the Providence Healthcare Board, Chair of Lifesciences BC, vice-chair of BIOTEC Canada, Director of the UBC Centre for Molecular Medicine and Therapeutics and of the PROOF Centre of Excellence.

BUILDING BRIDGES SPEAKERS



Date: 25 November 2024, **Invited speaker:** *Dr. Jason Andrade MD, FRCPC, FHRS Associate Professor, UBC | Director, Atrial Fibrillation Clinic, Vancouver General Hospital*
Dr. Jason Andrade is a cardiac electrophysiologist at Vancouver General Hospital who has a joint appointment at the Montreal Heart Institute. He is an Associate Professor of medicine at the University of British Columbia, and an Assistant Professor at the Université de Montréal. Dr. Andrade is the director of the Electrophysiology Laboratory and director of the Atrial Fibrillation Clinic at VGH. He is co-chair of the Canadian Cardiovascular Society Atrial Fibrillation Guidelines committee, chair of the Canadian Heart Rhythm Society Device Committee and medical chair for Heart Rhythm Disease for the Cardiovascular Disease Network in the province of British Columbia. Dr. Andrade has authored over 200 scientific publications, predominantly in the domain of atrial fibrillation. His publications can be found in journals such as the New England Journal of Medicine, Circulation, Journal of the American College of Cardiology, Journal of the American Medical Association, The Lancet, and Heart Rhythm. In addition, he is also the author of several textbooks, book chapters and medical apps.



Date: 09 December 2024, **Invited speaker:** *Dr. Angela Kaida, PhD Scientific Director | CIHR Institute of Gender and Health Professor | Faculty of Health Sciences, Simon Fraser University (SFU)*
Dr. Angela Kaida is a global health epidemiologist interested in the linkages between HIV and sexual and reproductive health. She received her PhD in 2010 from the School of Population and Public Health at the University of British Columbia. She then completed a brief post-doctoral fellowship jointly at the Women's Health Research Institute at BC Women's Hospital and the Department of Obstetrics and Gynaecology at UBC. In addition to her academic training, Dr. Kaida has substantial experience as a public health practitioner, having worked with the International Development Research Centre, the Alberta Ministry of Health and Wellness, and the Public Health Division of the Capital Health Authority. Dr. Kaida joined the Faculty of Health Sciences as an Assistant Professor in September 2010. She held a Canada Research Chair Tier 2 in Global Perspectives in HIV and Sexual and Reproductive Health from 2012 to 2022. Dr. Kaida's research interests pertain to understanding the impact of expanding access to HIV treatment and prevention services on sexual and reproductive intentions, behaviours, and outcomes of HIV-affected individuals and couples in high HIV prevalence global settings and in Canada. In collaboration with recognized local, national, and global partners, she leads innovative mixed-method studies centered on a rights-based, evidence-informed, and community-driven approach to sexual and reproductive health in the context of HIV. Her inter-disciplinary research program integrates longitudinal data analysis methods, arts-based research methodologies, and qualitative research approaches within multi-site, prospective, research studies with women, men, and youth living with or affected by HIV in South Africa, Uganda, and Canada.

STUDENT LIASON



Saif Dababneh, Year 4 student, is our 2024-2025 student liaison, supported by alternate student representative **Erica Qureshi**.

The major responsibility of the student liaison is to sit on the MD/PhD Admissions/ Advisory Committee. Other duties include helping to organize the MD/PhD monthly student meetings/seminars, student socials, attending national MD/PhD meetings and presenting at student events to promote the MD/PhD Program.

Message from Saif

Hi everyone, my name is Saif and I'm currently in the 4th year of the UBC MD/PhD program. My undergraduate degree was an Honour's BSc in Translational & Molecular Medicine at the University of Ottawa. During my time there, I had the privilege of working in Dr. Kyoung-Han Kim's lab at the University of Ottawa Heart Institute throughout my degree, which is where I fell in love with cardiac research! There, I worked on a variety of wet and dry lab projects aiming to understand the molecular regulators driving cardiac development and the heart's electrical system. While medicine was always on my radar, my curiosity and desire to better understand how the heart works the way it does, and what happens when things go wrong, led me to pursue dual training at UBC to become a clinician scientist. While interviewing, I felt that the training environment, the people, and the potential research projects at UBC were unparalleled. This led me to join the Tibbits Lab at BC Children's Hospital and collaborate with numerous scientists and clinicians tackling the same questions from complementary angles.

For my PhD, I am focused on understanding the genetic and molecular basis of inherited cardiac disorders and exploring how we can utilize this information to improve patient care. These disorders include common conditions, like atrial fibrillation, and ultrarare monogenic disorders, like calcium release deficiency syndrome (CRDS). In doing so, I utilize several cutting-edge technologies including human induced pluripotent stem cells, CRISPR-Cas9 genome editing, multi-omics (i.e. genomics, epigenomics, proteomics), and polygenic risk scores. I am also collaborating with fellow MD/PhD student Torin Halvorson on cardio-immunology projects that could improve the outcomes of heart transplantation via engineered T regulatory cells (i.e., CAR-Tregs). Outside of research, I enjoy playing soccer, walking by the seawall while listening to podcasts, and cooking. I also enjoy mentoring younger students interested in pursuing the clinician-scientist career path, and have developed a passion for teaching ultrasound to junior medical students via the UBC Ultrasound Club.

I'm very excited to serve as student liaison and welcome this year's incoming students into the MD/PhD program.

Prospective applicants are welcome to contact not only Saif, saifdab@student.ubc.ca, but any of our students to ask questions at: <http://mdprogram.med.ubc.ca/mdphd/students/>

STUDENT ACHIEVEMENTS



Our Year 7 student, **Rohit Singla**, published the research article below in *npj Digital Medicine*. Rohit's work on developing a Canadian artificial intelligence medical curriculum has the potential to revolutionize medical education in Canada in beyond, in the era of rapidly evolving applications for artificial intelligence in medicine and science.



Please check out Rohit's full article here: <https://www.nature.com/articles/s41746-024-01307-1>

Elizabeth Gregory, our Year 4 student, got the Rising Star Award in Mental Health Research, in Memory of Vivian Distler from Brain Canada for \$12,000.

https://braincanada.ca/funded_grants/brain-heart-dynamics-in-treatment-resistant-depression-and-the-effects-of-repetitive-transcranial-magnetic-stimulation/



Congratulations to BC Children's Hospital Research Institute trainees **Saif Dababneh** and **Torin Halvorson**, who were recently named recipients of **the 2024 UBC Science Co-op Employer Recognition Award** in the Supervisor category! Their dedication, mentorship, and exceptional leadership have made a lasting impact on UBC Science Co-op students, inspiring the next generation of innovators and professionals.

STUDENT ACHIEVEMENTS



Saif Dababneh, our current Student Liaison, was awarded the 2024 Canadian Heart Rhythm Society's "Highest Rated Electrophysiology Abstract by a Trainee Award" and the Canadian Cardiovascular Society Trainee Research Award Finalist in the Clinical Science category.

The CHRS Highest Rated Electrophysiology Abstract by a Trainee Award is presented on a yearly basis. Abstracts that are accepted for presentation at the Canadian Cardiovascular Congress (CCC) that are submitted to the CHRS EP Trainee Award are considered, and the trainee with the highest rated electrophysiology abstract is selected as the winner.

Check out Saif's Award winning abstract here:

[https://onlinecjc.ca/article/S0828-282X\(24\)00711-6/fulltext](https://onlinecjc.ca/article/S0828-282X(24)00711-6/fulltext)



Erica Qureshi, our alternate student representative, recently published a scoping review in Pediatric Emergency Care that explores strategies to reduce the impact of non-urgent visits on the pediatric emergency department.

Her review highlights the need for standardized definitions and outcome measures in their field and it outlines three potential strategies that may help reduce the impact of non-urgent visits on the pediatric emergency department. Erica is excited to explore the potential feasibility and impact of Emergency Department to Community (ED2C) programs as one strategy to reduce the impact of non-urgent visits on the pediatric emergency department within her PhD.

Please see her publication here:

<https://pubmed.ncbi.nlm.nih.gov/39642271/#:-:text=Three%20types%20of%20strategies%20employed.reorganizing%20PED%20operations%20in%20anticipation>

PROGRAM UPDATES

CONGRATULATIONS!



To our **Associate Program Director,**
Dr. Liam Brunham

Dr. Brunham successfully renewed his Canada Research Chair in Precision Cardiovascular Disease Prevention (Tier 2).

Read article here:

<https://www.med.ubc.ca/news/three-ubc-medicine-researchers-among-new-and-renewed-canada-research-chairs/>



To our **Program Director,**
Dr. Torsten Nielsen

Dr. Nielsen was elected into the Royal Society of Canada. He is one of fifteen UBC faculty members announced by the Royal Society of Canada (RSC) as new Fellows and Members of the College of New Scholars, Artists and Scientists in September 2024. Fellows and College Members are officially inducted into the RSC at the annual Celebration of Excellence and Engagement in November.

See full story here:

<https://research.ubc.ca/rsc-2024-fellow-torsten-nielsen>

STUDENT ACTIVITIES



Erica Qureshi, organized and ran a successful summer beach social for all our current and incoming students at Spanish Banks. Our program funds and organizes an annual event where all program staff and students can network together and share their brilliant work as well as create new partnerships for future research output and combined work.

Our current MD/PhD students at the November 2024 student social. All our students can enjoy these socials (funded by our program) and network with their peers after each of our Building Bridges Seminars.



**STAY TUNED FOR OUR
NEXT NEWSLETTER
IN SUMMER 2025**



**THE UNIVERSITY
OF BRITISH COLUMBIA**

Comments and Suggestions

We welcome questions, comments and suggestions about our newsletters and our program. Please send comments to the MD/PhD Program office at: md.phd@ubc.ca