UBC MD/PhD NEWSLETTER

Summer 2025

Introduction

Hello everyone! We hope you all are looking forward to some more sunshine and had a relaxing summer so far. In this edition of our newsletter, we will be covering all the latest student highlights and successes along with program updates from the first half of 2025.

Award Winners

Congratulations to all the recipients and their supervisors. We take pride in the ongoing achievements of our outstanding students!

Adam Sunavsky, Amardeep Sekhon and Nikolay Alabi were winners of prestigious Canadian Institutes of Health Research (CIHR) **Vanier** Canada Graduate Scholarships. The mandate of the Vanier awards program is to strengthen Canada's ability to attract and retain world-class doctoral students and establish Canada as a global centre of excellence in research and higher learning.

Adam Sunavsky

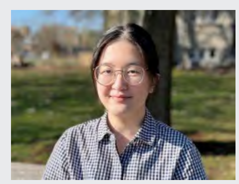
Adam's supervisor is **Dr. Fidel Vila-Rodriguez** and he is hosted by the Neuroscience Graduate Program. The title of his research project is *"Quantifying repetitive transcranial magnetic stimulation response in treatment resistant depression using computational neuroimaging methods"*

Amardeep Sekhon

Amar's supervisor is **Dr. Brian Kwon** and he is hosted by the Neuroscience Graduate Program. The title of Amar's research project is "*Closed-loop Sacral Neuromodulation for Improving Bladder Function in a Large Animal Model of Spinal Cord Injury (SCI)"*

Nikolay Alabi

Nikolay's supervisor is **Dr. Ali Bashashati** and he is hosted by the Bioinformatics Graduate Program. The title of his research project is "*Leveraging AI-driven Analysis for Treatment Response Prediction in Muscle-invasive Bladder Cancer"*



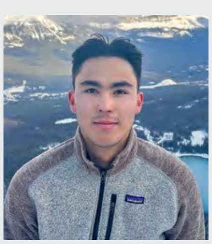
Monica Luo

Monica Luo won a CIHR Frederick Banting and Charles Best Canada Graduate Scholarship Doctoral Award (**CGS-D**). Her supervisor is **Dr. Arman Rahmim** and is hosted by the Interdisciplinary Oncology Program. Monica's research project's title is "*Towards Physician-in-the-loop Artificial Intelligence: Active Learning for Lymphoma Segmentation and Radiomics-Driven Outcome Prediction*"

Linda Chen

Newly admitted students who do not have Masters degrees are eligible to apply for CIHR Canada Graduate Scholarship Master's Awards (CGS-M). **Linda Chen** and **Linus Schweizer** are winners in the 2025 competition.

Linda is hosted by the Experimental Medicine Program; her supervisor is **Dr. Quynh Doan.** Linda's application title was **"Motivations for Suicide and Applications to Emergency Presentations for Youth Suicidality."**



Linus Schweizer

Linus is also hosted by the Experimental Medicine Program and his supervisor is **Dr. Bruce Vallance**. The title of Linus's application was "***Investigating the Protective Role of Mucus in Inflammatory Bowel Disease***"

Congratulations

Class of 2025

We had three graduates this spring: **Andy An**, **Dhiraj Mannar** and **Rohit Singla**.
The graduation ceremony for the Class of 2025 was held on Wednesday, May 21, 2025.

Andy An

Education: BSc (Pharmacology), UBC
Field of Study: Immunology, Infectious Disease
Supervisor: Dr. Robert Hancock
Hosting Department: Microbiology and Immunology

Message from Andy:
I am thankful for the wonderful support I have received from my friends, family, peers, and mentors to guide me through my 7-year MD/PhD adventure. Thank you to Torsten, Liam, Naureen, Lynn, Jane, and past and current MD/PhD students for making the UBC MD/PhD program an incredibly supportive extended family. Thank you to my supervisor Bob Hancock and the Hancock Lab for the invaluable mentorship and for challenging me to become a better scientist, as well as the (surprisingly productive) Beer Fridays we shared. Thank you to my amazing cohort - Lianne, Katrina, Ro, Luke - for being with me every step of the way - sharing this experience with you made the good parts great, and the bad parts ... at least funny in retrospect. I am so excited to see everyone continue to succeed in their careers!

I am off to do a Neurology residency in Toronto, which is a sharp turn from my thesis project, where I investigated how to utilize gene expression results to develop better prognostic and diagnostic tools for sepsis and COVID-19 - totally not brain-related. But the great thing about the program is that you gain useful and transferable skills that will let you succeed anywhere. Don't feel limited by your past experiences - be adventurous and explore, and you might stumble across something you didn't expect to be enjoyable and fulfilling. Good luck to all future grads of the UBC MD/PhD program!

Thesis: Identifying Mechanisms of Persistent Immune Dysfunction in Sepsis Survivors

Rohit Singla

Education: BASc (Computer Engineering), MASc (Biomedical Engineering), UBC
Field of Study: Ultrasound, Artificial Intelligence, Kidney Disease, Transplantation
Supervisor: Dr. Robert Rohling and Dr. Christopher Nguan
Hosting Department: Biomedical Engineering

Message from Rohit:
Reflecting on the conclusion of this seven-year MD/PhD journey, I'm filled with a deep sense of gratitude and emotion. It's hard to fully capture the personal and professional growth that occurs during this unique training. Over the years, I've learned what it means to strive for excellence both as a physician-in- training and as a researcher.

At the outset, I didn't fully appreciate just how critical the support of the MD/PhD program would be. I now recognize how fortunate I've been to train within such a dedicated and forward-thinking community. I extend my sincere thanks to Dr. Torsten Nielsen, Dr. Liam Brunham, Naureen Khan, and Jane Lee for their unwavering advocacy and mentorship, especially in times when championing physician-scientist training required courage and persistence.

I am deeply grateful to my PhD supervisors, Dr. Robert Rohling and Dr. Christopher Nguan, whose ambition and vision pushed me to think bigger and aim higher. They are a world-class team, and learning under their guidance was an exceptional privilege. Completing a PhD in Biomedical Engineering, an uncommon path among MD/PhD trainees in Canada, has been both challenging and deeply rewarding. Special thanks as well to the Island Medical Program for helping me navigate the unique hurdles of being the first distributed MD/PhD student based on Vancouver Island.

To my fellow MD/PhD colleagues - Andy An, Lianne Cho, Katrina Leung, Luke MacLean, and Reid Vassallo - thank you for the camaraderie, shared ambition, and mutual encouragement. I also want to recognize the broader MD/PhD community, both current students and alumni, for fostering a culture of excellence and support that makes this program truly special.

As I look ahead to the next phase of this journey, I do so with gratitude for the people who guided me, the community that sustained me, and the opportunities this remarkable program has made possible.

Thesis: Quantitative kidney ultrasound from macroscale to microscale

Dhiraj Mannar

Education: BSc (Biochemistry), UBC
Field of Study: Structure Guided Drug Design
Supervisor: Dr. Sriram Subramaniam
Hosting Department: Biochemistry & Molecular Biology

Message from Dijraj:
What an adventure!

I would like to thank my PhD supervisor Dr. Sriram Subramaniam, all the members of the Subramaniam lab, especially James Saville and Spencer Cholak. I would also like to thank all my stellar fellow MD PhD students for their support and guidance over the years. I am particularly grateful for the advice and friendship from Maryam Vaseghi-Shanjani, Katherine Baillie, and now alumni Daniel Kwon, Mark Trinder, and Alvin Qiu.

I am extremely grateful to the MD PhD program for taking a chance on me and giving me this amazing opportunity. The support and guidance from Dr. Torsten Nielsen and Dr. Liam Brunham has been invaluable. Finally, major thanks to my parents, siblings, my wife Jenna, and my son Dhiren. I am truly fortunate to have so many amazing people in my professional and personal life who have helped me on this journey.

Excited for what is to come!

Thesis: Structure, function, and neutralization of SARS-CoV-2 spike glycoproteins

All our MD/PhD graduates for 2025

Andy An with our MD/PhD Program Director Dr. Torsten Nielsen and Andy's supervisor Dr. Robert Hancock

MD/PhD graduates and current students. Pictured from left to right: Rohit Singla, Katrina Leung, Lianne Cho, and Andy An

MD/PhD graduates and current students with Dr. Roger Wong, the UBC Faculty of Medicine Vice Dean of Education

PhD Defences

Here are some of our students who have successfully defended their PhD dissertations and are now finishing their last years of MD clinical training. We are very proud to share their dissertation abstracts with everyone. Full theses are deposited at UBC cIRcle

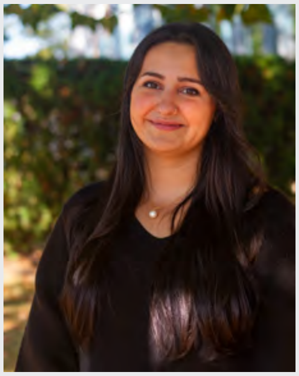
Lianne Cho

Supervisor: Dr. William Honer
Hosting Department: Neuroscience
Defence Date: March 28, 2024
Dissertation Title: Characterization of depression, suicidal ideation, and anxiety among adults who are homeless or precariously housed

Abstract:
Depression, suicidal ideation (SI), and anxiety are common in people who are homeless or precariously housed. However, predictors of these conditions over time in these individuals remain understudied, and this information is crucial for the design of effective support services. The objective of this thesis was to determine longitudinal predictors of depressive symptom severity, SI, and anxiety symptom severity among adults who are homeless or precariously housed in a community-based setting. Data were collected as part of the “Hotel Study”, an observational study of people living in an impoverished neighbourhood in Vancouver, Canada.

Participants (N=475) completed assessments of health and social factors monthly over a period of three years. SI and anxiety symptoms were assessed by the Maudsley Addiction Profile, which has demonstrated reliability in people who are homeless. The Beck Depression Inventory (BDI) assessed depressive symptoms, but its suitability for the present context was unknown because it was developed in a clinical setting. Thus, we first determined the psychometric properties of the BDI. Using the measurement approaches of Classical Test Theory and Rasch analysis, we found the BDI to be valid and reliable for assessing depressive symptom severity in the group. Next, we identified longitudinal predictors of depressive symptom severity, SI, and anxiety symptom severity using mixed effects regression models. We found that having a history of clinical depression, more trauma, more anxiety and psychotic symptoms, and frequent non-prescribed opioid use were associated with more depressive symptoms. Predictors of SI included having a history of psychotic disorder, more trauma, more anxiety symptoms, and concurrent clinical depression. Regarding anxiety, we found that having a history of anxiety disorder, history of alcohol dependence, more depressive and psychotic symptoms, daily tobacco use, frequent anxiolytic use, and recent negative social interactions were associated with increased symptoms.

The results suggest that managing psychotic symptoms, substance use, and the lasting effects of trauma may help alleviate depressive and anxiety symptoms in adults who are homeless or precariously housed. Given the variety of predictors identified, decreasing the burden of these conditions on those affected likely requires multidisciplinary interventions at the community, clinical and policy levels.



Maryam Vaseghi-Shanjani

Supervisor: Dr. Stuart Turvey
Hosting Department: Pediatrics
Defense Date: April 29, 2024
Dissertation Title: Characterizing the Molecular and Clinical Impact of Two Novel Human Inborn Errors of Immunity Caused by Defects in IKZF2 and ZBTB7B

Abstract
Inborn errors of immunity (IEIs) are a broad and heterogeneous group of genetic disorders that disrupt immune development and function, leading to a range of clinical outcomes including infections, autoimmunity, malignancy, and increasingly recognized forms of severe allergic inflammation. Traditionally identified through their association with recurrent infections, IEIs are now known to present with isolated or predominant features of immune dysregulation and allergic disease. This thesis responds to this expanding clinical spectrum by using genomic sequencing, detailed clinical phenotyping, and functional immunologic and molecular assays to uncover two novel monogenic disorders in humans caused by variants in key transcription factors – IKZF2 (Helios) and ZBTB7B (ThPOK) – and understand their molecular underpinnings.

The first disorder, driven by dominant-negative variants in IKZF2, defines a new human syndrome characterized by autoimmunity, immune dysregulation, craniofacial anomalies, hearing loss, and developmental delay. These findings reveal essential, previously unappreciated roles for Helios in immune tolerance, T cell regulation, and broader aspects of human development. The second discovery involves a multimorphic variant in ZBTB7B, identified in a child with early-onset, severe allergic inflammation, CD4+ T cell deficiency, and multi-organ fibrosis. This study demonstrates a critical role for ThPOK in regulating human T cell lineage commitment, maintaining immune balance, and preventing tissue remodeling and fibrosis.

Together, these discoveries provide new insight into how disruptions in transcriptional regulation can drive complex immune-mediated disease. By characterizing the first human disorders linked to IKZF2 and ZBTB7B, this work not only expands the diagnostic landscape of IEIs but also reveals fundamental biological pathways that govern immune homeostasis, development, and disease. These findings underscore how rare disease research can unlock transformative insights into human health and lead to novel strategies for diagnosis and therapy.

Shayda Swann

Supervisor: Drs. Melanie Murray and Helene Cote
Hosting Department: Experimental Medicine
Defence Date: May 31, 2024
Dissertation Title: Reproductive health, hormones, and age-related conditions among women living with HIV

Abstract
Background: Women living with HIV experience accelerated aging and a higher burden of age-related health conditions compared to HIV-negative women, however the reasons for this are poorly understood. States of hormone insufficiency, such as amenorrhea and early menopause, can drive disease progression in women. Thus, we investigated whether women living with HIV were more likely to experience amenorrhea, early menopause, and hormone dysregulation compared to HIV-negative women and whether these were associated with age-related health conditions.

Methods: This thesis largely drew upon data from the British Columbia CARMA-CHIWOS Collaboration study and the as well as the Children and Women: AntiRetroviral Therapy and Makers of Aging (CARMA), which both enrolled women living with HIV and HIV-negative women in British Columbia. Prevalences of amenorrhea, age at menopause, and hormone levels (estrone, estradiol, progesterone, testosterone, and cortisol) were compared between groups. Associations between amenorrhea and bone health, as well as estradiol levels and number of health outcomes, were assessed by multivariable regression modelling, controlling for clinical and socio-structural confounders.

Results: Women living with HIV were more likely to have ever experienced one year of amenorrhea compared to HIV-negative women. There was no difference in age at menopause between women living with HIV and HIV-negative women. Women living with HIV had similar hormone levels compared to HIV- negative women. Amenorrhea was associated with having lower baseline bone mineral density, but not rate of bone density loss. There was no association between estradiol levels and number of age-related health conditions, particularly after controlling for confounders like substance use.

Conclusions: These findings suggest that, in the modern era of efficacious HIV therapies, women living with HIV do not experience ongoing hormone dysregulation and that this does not drive development of age- related conditions. Factors outside of HIV infection, such as socio-structural conditions, may play a more important role in healthy aging for women living with HIV.

Reid Vassallo

Supervisor: Drs. Tim Salcudean and Peter Black
Hosting Department: School of Biomedical Engineering
Defence Date: May 22, 2025
Dissertation Title: Towards Improved Ultrasound-Based Methods for Prostate Cancer Detection

Abstract

Prostate cancer (PCa) is one of the most commonly diagnosed cancers worldwide but has major limitations in its diagnosis. Tissue biopsy is required for diagnosis, yet its acquisition relies on inaccurate or inaccessible imaging. The inaccuracy stems from standard ultrasound missing many cases of cancer, while inaccessibility is because of the high cost of magnetic resonance imaging, the gold standard for PCa. There is therefore a need for more cost-effective and accurate methods to diagnose prostate cancer and guide targeted biopsies. This is the basis for the work presented here.

This thesis builds upon previously established prostate imaging. The capability of high-resolution micro- ultrasound (microUS) is expanded by implementing volumetric imaging and tissue stiffness mapping. To begin working towards these aims, the first microUS-based implementation of two forms of relative elastography are achieved. This includes manual strain imaging and transfer function imaging. Based on phantom validation, it is found that transfer function imaging is the more repeatable method. A computer- controlled volumetric imaging system was then adapted for use with this microUS system, and was validated using a wire-crossing phantom and a commercial prostate phantom. This volumetric imaging system was then integrated into a shear wave elastography (SWE) implementation to achieve three-dimensional SWE imaging, which allows for reliable quantitative estimation of tissue stiffness. This, too, was validated using a commercial quality assurance phantom. Moving beyond microUS, work was also performed to create a novel targeted ultrasound contrast agent for PCa using gas vesicles (GVs). This includes a novel method to functionalize GVs with antibody fragments to target prostate-specific membrane antigen (PSMA), a common cell surface PCa biomarker. This included validating the attachment method using a fluorescent protein and characterizing the size and surface charge of the resulting nanoparticles. These targeted GVs were then validated \textit{in vitro} using a knockout validation and assessed *in vivo* to investigate their ability to specifically image PSMA-positive PCa cells in a murine xenograft model.

Joyce Zhang

Supervisor: Drs. David Huntsman and Yemin Wang
Hosting Department: Pathology and Laboratory Medicine
Defence Date: May 15, 2025
Dissertation Title: Dissecting the cell of origin and progression events of DICER1 syndrome-associated sarcoma

Abstract

DICER1 syndrome is a rare genetic disorder driven by germline DICER1 inactivating pathogenic variants that predispose pediatric and young adult patients to cancers at various sites. The second, missense mutation in RNase IIIb domain on the alternate allele leads to partial inactivation, compromising its capability in the processing of its targets, e.g., microRNAs. Malignant tumours at various sites are mostly sarcomas that are histologically and molecularly similar, suggesting a shared cellular origin and oncogenic mechanisms. Recently, the Huntsman laboratory has developed a lineage-traceable genetically engineered mouse model that allows for controlled activation of Dicer1 biallelic mutations in Hic1+ mesenchymal stromal cells, resulting in the development of renal tumours resembling the human DICER1 sarcoma histologically and molecularly.

To uncover the cellular origin and developmental hierarchy, I utilized this model and relevant control lines to dissect the tumour development trajectory. Single-cell transcriptomics analysis of 5 primary tumours revealed a Hic1+Pdgfra+Mfap4+ fibroblastic progenitor population that was identified as universal fibroblasts at normal kidneys. These cells have the capacity to undergo rhabdomyoblastic differentiation or transition into proliferative sarcomatous cells. To facilitate mechanistic characterization, we derived 5 cell lines from primary murine tumours, and 4 of which harboured de novo Trp53 and Kras mutations. Trp53-mutant cells were more resistant to chemotherapies such as vincristine and doxorubicin currently used to treat pleuropulmonary blastoma, the most common DICER1 sarcoma. To identify tumour progression events and associated targetable, perturbed pathways, I performed a curated CRISPR/Cas9 knockout screen for 484 tumour suppressor genes in the cell line harbouring no obvious secondary mutations. Tumour suppressors such as Trp53, Pten, Cdkn2b (p15), Nf1, and Sav1 were identified as candidates. The relevance to disease progression was supported by higher frequency of their protein losses in more advanced DICER1 sarcomas. Loss of Sav1, an effector of the Hippo pathway, is partially correlated with YAP nuclear translocation that promotes proliferation. Activation of MAPK/ERK and inactivation of the Hippo pathway were observed in more advanced DICER1 sarcomas, suggesting synergistic treatment would be beneficial. Overall, our work uncovers a fibroblastic origin for DICER1 sarcoma and identifies critical progression events, providing rationale for a more targeted therapeutic approach.

Program Updates

MD/PhD Program participation and representation at CITAC 2025

The CSCI-CITAC Annual Joint Meeting (AJM) is Canada's premier conference for clinician-scientists and clinician- scientist trainees. The AJM is jointly organized by the Clinician Investigator Trainee Association of Canada (CITAC) and the Canadian Society for Clinical Investigation (CSCI). The UBC MD/PhD program provides support for our students to travel to, attend and participate in this meeting. This year, the conference was held in Toronto, Ontario from April 9th and 10th, 2025.

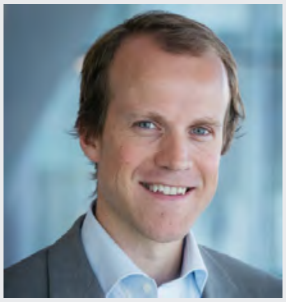
The following students (pictured below from left to right) represented the UBC MD/PhD program at this event: Ryan Ripsman, Adam Sunavsky, Andrew Dissanayake, Erica Qureshi, Catie Futhey, Elizabeth Gregory, Saif Dababneh, and Nikolay Alabi.

Admissions

Our program received more than 65 applications in 2024 for the 2025 Admissions cycle. We were excited to interview the top 16 candidates and will have 4 highly qualified new students joining our program this Fall. We look forward to introducing the newest MD/PhD trainees in our next newsletter.

MD/PhD Admissions / Advisory Committee Members

We would like to give a very big thank you to our committee members **Drs. Haakon Nygaard** and **Tillie Hackett**, both of whom have recently completed their 3-year term on our program's admissions & advisory committee. Thank you so much for all your hard work and support!



Dr. Haakon Nygaard, MD, PhD

Associate Professor,
Division of Neurology, Department of Medicine, Faculty of Medicine, UBC

Director, UBC Hospital Clinic for Alzheimer and Related Disorders

Dr. Tillie-Louise Hackett

Professor, Vice Chair, Research – Anesthesiology, Pharmacology & Therapeutics

Pathobiology & Therapeutics Investigator, Centre for Heart Lung Innovation, St. Paul’s Hospital

We would also like to welcome **Drs. William Honer** and **Rachel Eddy** to the MD/PhD admissions & advisory committee. We look forward to working with you.

Dr. William G. Honer

Professor & Jack Bell Chair in Schizophrenia Research, UBC
Department of Psychiatry, Division of Neuroscience and Translational Psychiatry

Investigator, BC Children’s Research Institute and BC Mental Health & Substance Use Services

Dr. Rachel Eddy

Assistant Professor

Radiology, UBC; Pediatrics, UBC & BCCH

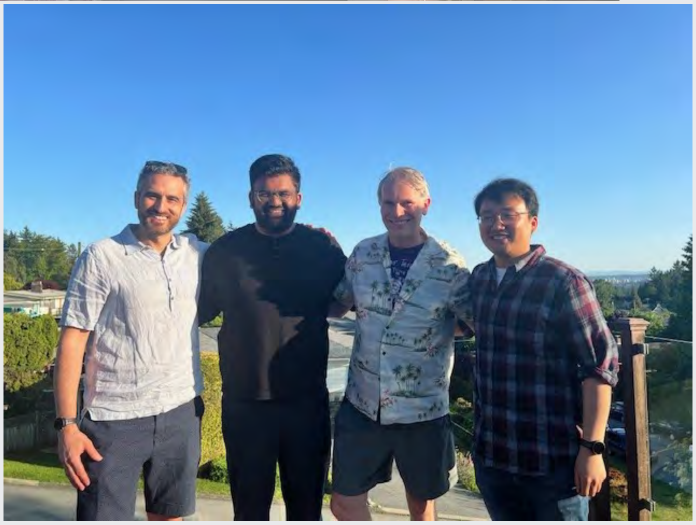
Summer Social

Our program held a very fun and successful summer social at our program director, Dr.Torsten Nielsen's beautiful house this June 2025. Here are some fond memories from the event:






Thank you to SERVED catering
for all of the wonderful food at this event!



Torsten's homemade cookies (pictured bottom left) were a program favourite - we hope they make appearances at future social events!

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 some of the presenters we had over the last few months:

Date: 10 F ebruary 2025, **Invited speaker: Dr. Stuart Turvey,** MBBS, DPhil, FRCPC
Canada Research Chair in Pediatric Precision Health
Aubrey J. Tingle Professor of PediatricImmunology, Professor | UBC

Dr. Stuart Turvey is a Pediatric Clinical Immunologist, a Professor of Pediatrics at The University of British Columbia, and holder of the Tier 1 Canada Research Chair in Pediatric Precision Health. As a practicing pediatric immunologist based at BC Children's Hospital, Dr. Turvey's research program responds to major challenges in contemporary pediatric medicine. Specifically, his research focuses on childhood immune deficiency diseases and disorders of immune dysfunction including asthma, allergies, and autoimmunity. Dr. Turvey is internationally recognized for his research in developing precision health-based strategies to address childhood asthma and pediatric immune system disorders, and he is a highly effective mentor for the next generation of child health clinician-scientists.

Date: 05 May 2025, **Invited speaker: Dr. Pieter Cullis** FRSC, FRS, OC
Professor, Department of Biochemistry and Molecular Biology, UBC

Dr. Pieter Cullis OC, former Director of the Life Sciences Institute, is a Professor in the Department of Biochemistry and Molecular Biology at UBC. He is recognized for making fundamental advances in the generation, loading and targeting of lipid nanoparticle systems for intravenous delivery of small molecule and nucleic acid drugs. Dr. Cullis has co-founded and served on the board of more than 10 companies to commercialize his research in nanomedicines. He also founded and led pan-Canada research centres including the Centre for Drug Research and Development (CDRD; 2004-2010), and NanoMedicines Innovation Network (NMIN; 2019-2021) to advance academic research, commercialization and training of the next generation scientists. Dr. Cullis has received many awards throughout his career; notably in 2021-2022 for his contribution to Covid-19 vaccines, he was awarded the Prince Mahidol Award, VinFuture Prize Grand Prize, Canada Gairdner International Award and Governor General's Innovation Award. Dr. Cullis is an Officer of the Royal Society of Canada. He has published over 380 papers and holds 80 patents.

At the May 2025, Building Bridges Seminar at the Diamond Health Care Centre

Current MD/PhD Students at a dinner social following a Building Bridges Seminar. The UBC MD/PhD program provides support for our students to get together to share their ideas and experiences, typically over dinner at a venue of their own choosing, after seminar events!

Notable Achievements

On the left is our current student liaison for 2025–2026, Erica Qureshi, and on the right is our previous student liaison for 2024–2025, Saif Dababneh. This photo was taken at the CSCI-CITAC Annual Joint Meeting in Toronto, Ontario. Erica received a poster award for her presentation, while Saif won the award for the best oral presentation at CITAC 2025.

Our incoming alternate student liaison, Catie Futhey (left), received a best lightning talk award at UBC Psychiatry Day 2025.

Have a look at our current students, Christopher Lee and Elizabeth Gregory being featured in the article on the right, along with on of our alumni, Andrea Jones. https://pathwaysmagazine.med.ubc.ca/interviews/bridging- the-gap-between-brain-research-and-patient-care

Training the next generation of clinician-scientists

The Faculty of Medicine's MD/PhD program is providing learners with the translational skills they need to develop innovative treatments and more effective care for patients.

From left to right: Christopher Lee, Dr. Andrea Jones and Elizabeth Gregory

Our MD/PhD alumnus, **Dr. Long Nguyen**, completed his MD/PhD in 2016 in Experimental Medicine with Prof. Connie Eaves on the topic of normal and malignant mammary stem cell biology. He trained in Internal Medicine and specialized in Medical Oncology at the University of Toronto. He then pursued a clinical/research postdoctoral fellowship in functional breast cancer genomics with Dr. Carlos Caldas at the University of Cambridge in the United Kingdom for which he received both a Translational Research Fellowship from the European Society for Medical Oncology, and a Young Investigator Award from the American Society of Clinical Oncology. Long now has a faculty position as a clinician-scientist medical oncologist at the University of Toronto.

Recently he also won the Marathon of Hope Cancer Centres Network (MOHCCN) Clinician-Scientist Award. You can read here about Dr. Nguyen's involvement with MOHCCN:

Predicting-drug-response-of-molecular-clones-in-triple-negative-breast-cancer

Thanks for reading!

Our next newsletter will be sent in the Fall.

THE UNIVERSITY OF BRITISH COLUMBIA