

UBC PhD

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Newsletter – 2021 Winter

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

Dr. Anthony W. Chow - Founder of the UBC MD/PhD Program - Honoured by Vancouver Coastal Health

Dr. Anthony W. Chow MD, FACP, FRCPC, Founding Director of the University of British Columbia MD/PhD Program, has been recently inducted into the 2020 Vancouver Coastal Health Medical Staff Hall of Honour (which includes Vancouver General Hospital, UBC Hospital and G.F. Strong Rehab Hospital).

The Hall of Honour was created in 2018 by the Vancouver Medical, Dental and Allied Staff Association, in partnership with hospital administration and the VGH & UBC Hospital Foundation. This honour is to recognize those whose exceptional leadership, clinical and academic services have profoundly benefited the residents of British Columbia and who, in so doing, have brought great distinction to VGH and its institutions. This is the highest honour that the institution (and its medical staff association) can bestow upon a physician or surgeon. The actual induction ceremony has been postponed until June 2021 due to the current pandemic.



Dr. Anthony Chow

Dr. Chow is Professor Emeritus and former Head of the Division of Infectious Diseases, Department of Medicine, UBC and Vancouver General Hospital. He retired from clinical practice, teaching and administration in July 2006. Tony served a significant portion of his career as an infectious disease physician who has been nationally and internationally acknowledged as an exemplary researcher, clinician, teacher, mentor, and leader. He is recognized for his know-how in antimicrobial therapy as well as his expertise in the identification of conditions such as toxic shock syndrome, sepsis, septic shock, and anaerobic infections. In 2013, Dr. Chow received the prestigious Lifetime Achievement Award from the Association of Medical Microbiology and Infectious Diseases Canada.

Induction into the Vancouver Coastal Health Medical Staff Hall of Honour is awarded to very few physicians. The VGH Physician Hall of Honour is the first of its kind in Western Canada, and it stands on the main floor of the Jim Pattison Pavilion at VGH.

Congratulations, Dr. Chow!

UBC MD/PhD PROGRAM

UBC's MD/PhD Program Admissions & Advisory Committee 2020-2021

The MD/PhD Admissions/Advisory Committee consists of four ex-officio members and six appointed members. Ex-officio members hold standing spots on the committee because of their primary positions: the Assistant Dean of MD Admissions, the Associate Dean of Graduate & Postgraduate Education, the MD/PhD Program Director and the MD/PhD Program Associate Director. Appointed members are composed of clinician-scientists, basic scientists, graduate program advisors, student research supervisors and one student representative. To ensure that the MD/PhD Committee may benefit from maximum faculty and program involvement, diverse ideas and a healthy turn-over rate, the appointed members' terms are for three years, renewable once. The full Committee meets at least twice a year to review the admissions process and to finalize the ranking of MD/PhD applicants, as well as to discuss program policy. Members of the Committee undertake admissions interviews, and also frequently serve on MD/PhD students' Thesis Research Supervisory, PhD Comprehensive Examination and PhD Final Oral Examination Committees.



Shahin Shirzad, MD

Assistant Dean, Admissions, Undergraduate Medical Education, Faculty of Medicine, UBC



Michael Hunt, PhD

Associate Dean, Graduate & Postgraduate Education, Faculty of Medicine, UBC



Torsten Nielsen, MD/PhD

Director, MD/PhD Program, UBC

Professor, Department of Pathology & Laboratory Medicine, UBC



Liam Brunham, MD/PhD (Alumnus, UBC MD/PhD Program)

Associate Director, MD/PhD Program, UBC

Associate Professor, Department of Medicine, UBC

Principal Investigator, Centre for Heart Lung Innovation, UBC & St. Paul's Hospital Maureen Ashe, PhD



Associate Professor, Department of Family Practice, UBC Research Scientist, Centre for Hip Health and Mobility

Canada Research Chair in Community Mobility



Karen Cheung, PhD

Thalia Field, MD

Professor, Department of Electrical & Computer Engineering, UBC

Associate Director, School of Biomedical Engineering, UBC

Director, Graduate Biomedical Engineering Program, UBC



Associate Professor, Department of Medicine, UBC

Neurologist, Vancouver Stroke Program

Sauder Family and Heart and Stroke Foundation Professorship of Stroke Research



Lynn Raymond, MD, PhD

Professor, Department of Psychiatry, UBC

Director, Djavad Mowafaghian Centre for Brian Health, UBC

Louise A. Brown Chair in Neuroscience



Paul Yong, MD/PhD (Alumnus, UBC MD/PhD Program)

Associate Professor, Department of Obstetrics & Gynaecology, UBC

Research Director, Centre for Pelvic Pain and Endometriosis



Wissam Nassrallah

Year 5, MD/PhD Student, UBC

Student Research Forum & Open House



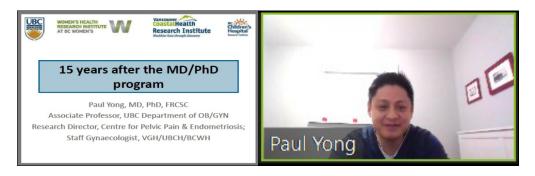
Dr. Torsten Nielsen

The 21st annual UBC MD/PhD Student Research Forum and Open House was held virtually via UBC Zoom on Tuesday, 15 September 2020, 1:00-5:00 pm. Opening remarks by **Dr. Torsten Nielsen**, Director of the MD/PhD Program, set off the annual event. This annual event is to showcase the research being done by our students, and to answer questions from prospective new students and from faculty interested in our program. We thank all the participants, including those from outside of Vancouver, who joined our first virtual open house. The ease by which those

from outside UBC could participate was noted and the event may stay as a virtual event in future years for this reason!

Indeed, the virtual event did turn out to be highly interactive. At the start of the event, the participants were welcomed to introduce themselves via the chat room, highlighting a gratifyingly broad range of backgrounds among applicants to our program – something we very much welcome. While Dr. Nielsen was doing his presentation, the live Q&A session in the chat room was proactively monitored by current MD/PhD students ensuring everyone got a chance to have their questions answered. For the last hour of the event, participants were randomly placed in the breakout rooms where they could comfortably chat with the program directors and current students. The platform really did create opportunities for our attendees to network more closely.

Sincere thanks to our invited guest speaker, our very own **Dr. Paul Yong**, UBC MD/PhD alumnus. Dr. Yong is now Associate Professor, Department of Obstetrics & Gynaecology, UBC. He is the Research Director of the Centre for Pelvic Pain and Endometriosis. Dr. Yong's research interests include bio-banking of endometriosis, gene sequencing in endometriosis, and investigating nerve formation in the pelvis as a cause of pain. He gave an inspiring talk on his clinician-investigator training path and answered questions from our students and prospective applicants. Thank you, Paul.



> Student presentations:

Daniel Kwon, **Katrina Besler** and **Rohit Singla** talked about their research projects and learning experiences in their MD/PhD training. They received great feedback from the audience.

Thanks also to **Wissam Nassrallah** and **Luke MacLean**, our student representatives, for organizing the event. It was a fun-filled learning experience for everyone.

MD/PhD Student Representative - Wissam Nassrallah

Wissam Nassrallah, Year 5 student, is our 2020-2021 student representative, supported by alternate student representative **Luke**MacLean, and Rohit Singla, our student representative at the Island 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, student socials, attending national MD/PhD meetings and presenting at student events to promote the MD/PhD Program. Prospective applicants are welcome to contact not only Wissam, but any of our students to ask questions. http://mdprogram.med.ubc.ca/mdphd/students/

Message from Wissam:

I am grateful to be serving as the 2020/2021 student representative for the MD/PhD Program at the University of British Columbia. Being the student representative this year has been more than interesting given the state of the COVID-19 pandemic. All social and academic events were moved to an online platform and planning these has definitely been a learning process which has been greatly facilitated through working with the alternative student representative, **Luke MacLean**. This has led however to our most attended Open House (ever!) reaching a much



Wissam Nassrallah

broader group of potential applicants. Through this process, I have had the privilege of working with our Director, **Dr. Torsten Nielsen**, and Associate Director, **Dr. Liam Brunham**; their wisdom and support have been invaluable, and I look forward to working with them throughout the remainder of the academic year. I would be remiss if I did not mention the invaluable help of our Program Coordinator, **Jane Lee**, who has always made sure to keep everything in order.

To give a brief introduction, I was born in Ottawa, Canada, and went through most of my education in French including a BSc in the biomedical program at the University of Ottawa. When I decided on completing an Honours Project, I distinctly remember the feeling of trying to decide on my field of interest, and at the time, I decided to work in Neuroscience for the simple reason that I found it "cool". Little did I know at the time that neuroscience research would eventually consume the greater part of my academic life. My project revolved around the effects of prolonged activity deprivation on hippocampal neurons in slice culture; I looked at the change of excitatory synaptic receptor subunit composition. My fascination with Neuroscience did not stop there as I further completed an MSc in Neuroscience (in English) at the University of Ottawa where I truly developed my penchant for research in synaptic plasticity, electrophysiology, and imaging techniques. Specifically, I studied the implication of the endoplasmic reticulum in the homeostatic synaptic response.

At this point of my education, I wanted to take the knowledge and expertise I acquired during my training in fundamental mechanisms in neurons, and apply that in exploring cellular mechanisms in neurological disorders. This is when I decided to apply to the UBC MD/PhD Program to work with **Dr. Lynn Raymond**, a world renowned expert in Huntington's disease (HD), whose mentorship has been instrumental in shaping my career as a clinician scientist. I am now currently in my fifth year of the MD/PhD Program (I have completed two years of medical school and am now in my third year of full-time PhD research). My doctoral work focuses on exploring the cellular pathophysiology of HD. More specifically, HD is a devastating inherited disease that can be detected before symptoms arise, but which is incurable. In HD patients, neurons involved in motor functions degenerate leading to motor and cognitive problems.

MD/PhD Student Representative - Wissam Nassrallah (con't)

Neurons rely heavily on calcium for their function. Dysregulation of the function of the connections between neurons (synaptic function), and their ability to regulate calcium levels is a common trait of many neurodegenerative disorders such as Parkinson's, Alzheimer's, and HD. One level of calcium regulation is at the endoplasmic reticulum (ER), which is a part of the cell that also regulates protein production. This calcium regulation is abnormal in HD, leading to altered protein production and decreased synaptic function. Interestingly, activating Sigma-1 receptors (S1R) – proteins located on the ER and that play an important role in calcium regulation and therefore cellular mechanisms related to neurodegeneration – has been shown to normalize this calcium handling and restore synaptic function. The purpose of this project is to determine the relationship between S1R, protein production, calcium handling, and synaptic function in order to better understand the disease mechanism of HD and other neurodegenerative diseases, and to find new potential treatments. As there are currently no effective treatments for HD, the results from this study may revolutionize our approach to patients with this debilitating disease.

As for extracurricular activities, I have been involved as a section editor with the UBC Medical Journal (UBCMJ), was the MD/PhD student representative for the Faculty of Medicine Graduate Student Advisory Group, and am currently part of the Graduate Program Review Subcommittee. For leisure, I compose musical pieces, like to go for walks and hikes, and am a former competitor in powerlifting competitions (though I still weightlift for my mental health). Besides that, the support of my MD/PhD colleagues, and specifically my cohort in the MD/PhD Program and close friends **Mark Trinder**, **Daniel Kwon**, and **Alvin Qiu** cannot be understated. Whether it be talking about science, watching football together, going on hikes, or any other activity, our conversations and time together have been invaluable to me; this is a testament to the healthy and close-knit atmosphere that our amazing program fosters.

Here's to a brighter and Happy New Year! Looking forward to a hopeful 2021!

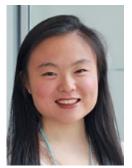
Welcoming of Incoming Students



On 14 September 2020, **Luke McLean**, our alternative student representative, organized a backto-school virtual game night social to welcome our three incoming Year 1 MD/PhD students, **Chloe Gao**, **Reid Vassallo** and **Joyce Zhang**. The students played virtual party games including trivia, Jackbox and skribbl.io. It was a great chance for students across different years to share advice and connect during the COVID-19 pandemic.

Another virtual social was held on 26 October 2020, after **Daniel Kwon**'s seminar presentation, "Next-generation molecular therapeutics in oncology and COVID19". We are glad that the distanced connection allowed our students the ability to connect from anywhere.

Meet Our Incoming Students - September 2020







Welcome to the Program!

Chloe Gao

Reid Vassallo

Joyce Zhang

In addition to two students transferring from Med 1 (Shayda Swann and Li Qing Wang, who were profiled in our last newsletter), the MD/PhD Program welcomed three new students to UBC MD/PhD in 2020:

Chloe Gao grew up in Aurora, Ontario, and completed her Bachelor of Health Sciences (Honours) degree at McMaster University with a specialization in Child Health in May 2020. Her personal commitment to mental health advocacy, coupled with her specific interest in the study of health and social systems, drove her to seek out specific professional opportunities throughout her undergraduate studies to gain a better understanding of how systems-level research can be used to improve mental health services. Through her experiences working in mental health systems research with the McMaster Health Forum, Waypoint Centre for Mental Health Care, and St. Michael's Hospital in Ontario, as well as the Sax Institute in Sydney, Australia as a Queen Elizabeth Scholar, Chloe developed a particular interest in eliciting the experiences of diverse communities and populations, and advocating for the integration of their perspectives into mental health service redesign. During her MD/PhD training, she aims to improve programs, policies, and services in a way that reflects the values of people seeking mental health and substance use care. Outside of school and work, Chloe is an endurance sports enthusiast with a particular love for ultra-marathons and competitive rowing. She is excited to continue these pursuits through the Vancouver Rowing Club and local ultra-marathon running groups in this beautiful city!

Reid Vassallo grew up in St. Catharines, Ontario and completed his BMSc in Medical Biophysics and MESc in Biomedical Engineering at Western University. During his undergraduate and graduate studies, his research included the development of novel solutions for image-guided interventions under the supervision of Dr. Terry Peters at the Robarts Research Institute, with applications in urology, cardiology, and neurosurgery. His PhD work will continue along this theme, striving to engineer solutions that make interventions easier for the clinician and better for the patient. Outside of research, Reid enjoys staying active through training for triathlons and watching comedies and is looking forward to exploring the natural beauty of BC.

Joyce Zhang moved from Beijing to Vancouver when she was 15 years old. She completed a BSc at UBC with a major in Pharmacology and a minor in Biochemistry. During her undergraduate thesis research work in Dr. Thibault Mayor's lab, she studied the assembly of stress granules in budding yeast and developed a keen interest in basic and translational research. After starting her Master's at the BC Cancer Research Centre under the supervision of Dr. David Huntsman, Joyce studied how two gain of function mutations cooperate to drive the tumorigenesis of a rare, chemo-resistant subtype of ovarian cancer. Specifically, she utilized innovative 3D organoid cultures derived from normal human Fallopian tubes to model the early stages of low grade serous ovarian cancer development, and subsequently interrogated the transcriptomic changes with single-cell RNA-sequencing. During her PhD, Joyce will extend the work from her Master's and explore how mRNA translation is altered to confer survival advantage for cells transitioning into malignancy with translatomic and proteomic approaches. Outside of research, Joyce is engaged in multiple science outreach activities, including programs at Let's Talk Science and the Science World. In her free time, Joyce enjoys barre classes, hiking, concerts and playing the violin.

MD/PhD Students - Making A Difference

The COVID-19 crisis has highlighted the critical importance of training clinician-scientists, and the UBC MD/PhD Program is proud to say we have done our part. The COVID lockdown led to many of our student trainees pivoting quickly to put their efforts to work, at several different levels, to help our society. They proved that their skills as clinician-scientists are widely useful, even if they were doing their PhD work in a different field. We are very proud to showcase some of the COVID-19-related publications.

Li W, Schäfer A, Kulkarni SS, Liu X, Martinez DR, Chen C, Sun Z, Leist SR, Drelich A, Zhang L, Ura ML, Berezuk A, Chittori S, Leopold K, **Mannar D**, Srivastava SS, Zhu X, Peterson EC, Tseng CT, Mellors JW, Falzarano D, Subramaniam S, Baric RS, Dimitrov DS. High potency of a bivalent human V_H domain in SARS-CoV-2 animal models. Cell. 2020 Oct 15;183(2):429-441.e16. doi: 10.1016/j.cell.2020.09.007. Epub 2020 Sep 4. PMID: 32941803.

Morjaria S, **Zhang A**, Kaltsas Md A, Parameswaran R, Patel D, Zhou W, Predmore J, Perez Johnston R, Jee J, Perales M, Daniyan A, Taur Y, Mailankody S. The effect of neutropenia and filgrastim (G-CSF) in cancer patients with COVID-19 infection. medRxiv. 2020 Aug 15:2020.08.13.20174565. doi: 10.1101/2020.08.13.20174565. Preprint. PMID: 32817981.

Navlakha S, Morjaria S, Perez-Johnston R, **Zhang A**, Taur Y. Projecting COVID-19 disease severity in cancer patients using purposefully-designed machine learning. doi: https://doi.org/10.1101/2020.08.23.20179838.

Nikiforuk AM, Kuchinski KS, **Twa DDW**, Lukac CD, Sbihi H, Basham CA, Steidl C, Prystajecky NA, Jassem AN, Krajden M, Patrick DM, Sekirov I. The contrasting role of nasopharyngeal angiotensin converting enzyme 2 (ACE2) expression in SARS-CoV-2 infection: A cross-sectional study of people tested for COVID-19 in British Columbia. doi: https://doi.org/10.1101/2020.11.23.20237206.

Swann S, Campbell AR, Nicholson VJ, Murray CM. et al. <u>Meaningful community collaboration in research</u>. MDs to be COVID-19. BC Medical Journal, Vol. 62, No. 9, November 2020, 340-341.

MD/PhD Award Winners

Congratulations!

We take pride in the ongoing achievements of our students. This is a list (partial) of students who won awards in the 2020 winter term. Congratulations!

Andy An - Richard A. Robertson Memorial Service Award in Medicine

- William, Sadie and Edwin Rowan Scholarship in Medicine
- UBC Four Year Doctoral Fellowship

Katie Baillie - John J Mason Memorial Scholarship

- William, Sadie and Edwin Rowan Scholarship in Medicine

Lianne Cho - Medical Student Initiative Fund

Chloe Gao - Dr. Anthony Chow MD/PhD Studentship

- Friedman MD/PhD Studentship

Michael Skinnider - Harry and Florence Dennison Fellowship in Medical Research

Shayda Swann - Harry and Martha Virginia Small Scholarship in Medicine

Mark Trinder - Dorothy Helmer Scholarship in Medicine

Reid Vassallo - NSERC Doctoral Award

Allen Zhang - Dennis Harris Memorial Prize in Psychiatry

- Antonio and Iolanda Giuseppina Minicucci Award in Medicine

Joyce Zhang - UBC Four Year Doctoral Fellowship

MD/PhD Students - In the News

Rozlyn Boutin was one of the co-first authors on the collaborative study, "Breastmilk feeding practices are associated with the co-occurrence of bacteria in mothers' milk and the infant gut: the CHILD cohort study" published in Cell Host & Microbe; her work was reported in the Faculty of Medicine News. Outside of research, Rozlyn runs marathons as an elite athlete. During the COVID-19 pandemic, Rozlyn took part in the 2020 Virtual Boston Marathon, and she was one of the top finishers. She has been top finishers in marathons and traveled to other countries in the competitions. Rozlyn worked with **Dr. Brett Finlay**, and she is currently completing the MD Year 3 curriculum.

Lianne Cho and Shayda Swann appeared in the SciConnect YouTube channel (founded by high school students). Lianne is a Year 3 MD/PhD student; she talked about her research opportunities in high school and undergrad. Lianne also gave high school students some useful tips for university applications and how to focus and manage our time spent on work, while at home during the pandemic. Shayda is a Year 2 MD/PhD student. She talked about what to consider when applying for post-secondary schools; things like class size or the community in each environment can play a role in one's final choice. Shayda also talked about her current research and how she balances her research with medical school.

Jennifer Ji found a potential new treatment for a rare and aggressive form of ovarian cancer. Her study, "Arginine depletion therapy with ADI-PEG20 limits tumor growth in argininosuccinate synthase-deficient ovarian cancer, including small-cell carcinoma of the ovary, hypercalcemic type" was published in <u>Clinical Cancer Research</u>. Her study was reported in the Faculty of Medicine News, the <u>Hindustan Times</u>, and the <u>Economic Times</u>. Jennifer's research supervisor is **Dr. David Huntsman**.

Dij Mannar was interviewed by the <u>Faculty of Medicine Medical Journal</u> in January 2021. He talked about his current project which involves the structural and biochemical characterization of the SARS-CoV-2 spike glycoprotein. SARS-CoV-2 is the causative agent of COVID-19 and relies on a trimeric spike glycoprotein to recognize and enter host cells. Dij works with the Subramaniam lab in utilizing cryo-electron microscopy to visualize molecules, viruses and cells with the central goal of accelerating the development of effective therapeutic agents to treat cancer, disorders of the brain and infectious diseases.

Adam Ramzy has helped develop a novel gene therapy tool that can act as a "trojan horse" to selectively deliver Cre to beta-cells in the pancreas. In July 2020, he was interviewed by Science in the City. His work "AAV8 Ins1-Cre can produce efficient β-cell recombination but requires consideration of off-target effects" was published in Scientific Reports. In October 2020, Adam appeared in a podast to discuss his publication, "Revisiting proinsulin processing: evidence that human β-cells process proinsulin with Prohormone Convertase (PC) 1/3 but Not PC2". On top of all his great publications, Adam also won a BC Diabetes Research Network Virtual Trainee Travel Award. Adam worked with **Dr. Timothy Kieffer**, and he is now completing the MD Year 4 curriculum.

Allen Zhang was the recipient of the 2020 Anita Unruh Prize. He has been recognized for his primary research paper, "Interfaces of Malignant and Immunologic Clonal Dynamics in Ovarian Cancer," published in Cell in June 2018. The prize rewards excellence in ovarian cancer research by a trainee and aims to encourage promising young scientists to establish careers in the ovarian cancer field. Allen worked with **Dr. Wyeth Wasserman** and successfully defended his PhD thesis in 2019; he is currently completing the MD Year 4 curriculum.

BRAVO!!

Kudos

Many of the MD/PhD students served on committees, advisory groups and student activity clubs. Here are some of our student leaders.

Andy An - President, UBC Pottery Club

- Student representative, Chinese Canadian Medical Society

Katie Baillie - Portfolio Advisory Group, UBC Medical Undergraduate Society

Katrina Besler - Director, Medical Education Committee, UBC Medical Undergraduate Society

Lianne Cho - Panelist, "Science Connecting Youth" Virtual Conference

Luke MacLean - Appointed member, Graduate Student Advisory Group, Graduate & Postdoctoral Education, Faculty of Medicine

Alvin Qiu - Communications Officer, UBC Thunderbirds Sport Club Triathlon

- Vice President Academic Jr, Medical Education Committee, UBC Medical Undergraduate Society

Shayda Swann - Student Representative, MED Years 1 and 2 FLEX

Maryam Vaseghi-Shanjani - Vice-President, UBC Clinician-Scientist Career Group

CSCI/CITAC Annual Conference and Young Investigators Forum

The first virtual Canadian Society for Clinical Investigation (CSCI) / Clinician Investigator Trainee Associate of Canada (CITAC) Young Investigators Forum was held on 12-13 November 2020. The following MD/PhD students presented their outstanding research. Good job!

Dij Mannar (supervisor: Dr. Sriram Subramaniam)

- Structural characterization of antigenic epitopes on the SARS-CoV-2 spike

Alvin Qiu (co-supervisors: Drs. Martin Hirst and Torsten Nielsen)

- Subgrouping primary synovial sarcoma based on epigenomic landscape

Mark Trinder (supervisor: Dr. Liam Brumham)

- Genetic and pharmacological inhibition of cholesteryl ester transfer protein improves survival from sepsis

Dij Mannar won Best Poster Award. Congratulations!!

UBC Medical Journal

The <u>UBC Medical Journal</u> is published by the University of British Columbia. It is a student-driven academic journal with a goal to engage students in dialogue in medicine. The MD/PhD students are actively taking up different roles and served on the executive committees.

In the 2020-2021academic year:

Katie Baillie - Commentaries, Senior

Katrina Besler, Lianne Cho – Copyeditor, Senior

Dhiraj Mannar - News and Letters, Senior

Alvin Qiu, Daniel Kwon – Managing Editor, Senior

Maryam Vaseghi-Shanjani – Publications Manager, Senior

Reid Vassallo, Joyce Zhang - Commentaries, Junior

Thanks for your hard work.

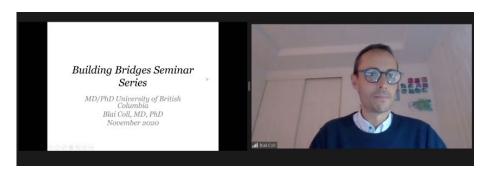
MD/PhD "Building Bridges Seminar Series" - ALL ARE WELCOME

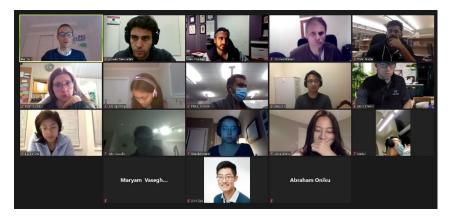
Our seminar series aims to illuminate the relationship that exists between clinical practice and medical research, allowing MD/PhD and other interested students to hear about different career tracks and various ways they may be able to combine clinical and research work. In addition to speaking about 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 of any stripe, students in the Faculty of Medicine and prospective applicants to our program are invited. The seminar is on held on-line at https://ubc.zoom.us/.

November 23, 2020 -- Invited speaker: **Dr. Blai Coll Crespo**Cardiovascular and Metabolic Platform Lead, The Center for Observational Research and Medical Affairs Amgen, Inc., Thousand Oaks, California, USA

Thanks, Dr. Crespo, for sharing your clinical and research experiences with us.

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





Thanks to **Alvin Qiu**, for capturing the awesome photos for 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, 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

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