

# Welcome from the UBC Department of Medicine and Experimental Medicine Program!

On behalf of the UBC Department of Medicine Research Office and Experimental Medicine Graduate **Program,** we are delighted to welcome you to the UBC Department of Medicine's 2022 Research Expo!

We are pleased to celebrate the success of our faculty members and highlight the work of Department of Medicine researchers who are recognized as leaders in their respective fields. We also wish to highlight the central role played by trainees in moving our science forward and are excited for this opportunity to showcase the work of our remarkable young researchers as they blaze the trail ahead.

The COVID-19 pandemic has brought into sharp focus the critical role of science and translational research plays in society, how experimental medicine methods contribute to our understanding of health and disease and potential strategies to address these challenges. Our program spans research from translational basic science to population health and data science. We have an impressive roster of faculty speakers and student presenters, coming together to showcase our latest discoveries and celebrate our successes.

We are grateful for your leadership in creating a culture of scholarship, innovation, and research here at the Department of Medicine. We hope that you enjoy all this year's Research Expo has to offer and take this opportunity to connect with your peers, especially during our in-person poster session at the end of the oral presentations.

Warmest regards, Anita Palepu, Teresa S.M.Tsang, Tricia S.Tang

## RESEARCH EXPO 2022 | page 2



Anita Palepu, MD, MPH, FRCPC, MACP Professor and Eric W. Hamber Chair Head. Department of Medicine University of British Columbia



Teresa S.M. Tsang, MD, FRCPC, FACC, FASE Professor, Division of Cardiology Associate Head of Research. Department of Medicine University of British Columbia



Tricia S. Tang, PhD, RPsych Associate Professor, Division of Endocrinology and Metabolism Director, Experimental Medicine Graduate Program, Department of Medicine University of British Columbia

May 02/2022 12:30PM - 17:00PM

Via Zoom 12:30PM - 15:30PM Livestream Link Also livestreamed in Paetzold Auditorium (Jim Pattison Pavilion Room 1891)

Please send your questions:



www.sli.do#2022expo

In-person Poster Session 15:30PM - 17:00PM Jim Pattison Pavilion Rooms 1887/1888/1891

# 2022 Research Expo Agenda May 02, 2022

TIME	SESSION	SPEAKERS
12:30 - 12:40	Welcome and Opening Remarks	Dr. Anita Palepu
12:40 - 13:10	Keynote: Smooth Muscle Foam Cells: A Unique Target for Atherosclerosis Regression	Dr. Gordon Francis
13:10 - 13:25	Beyond Ejection Fraction: Exploring Non-traditional Echocardiographic Methods to Identify Patients at Risk for Heart Failure	Dr. Darwin Yeung
13:25 - 14:05	<b>Trainee Oral Presentations</b> Assessing Age at Menopause in Women Living With and Without HIV in Two Studies: Children and Women: AntiRetrovirals and Markers of Aging (CARMA) and the British Columbia CARMA-CHIWOS Collaboration (BCC3)	Shayda Swann & Shelley Tognazzini
	The Use of Normobaric Hyperoxia in Post-Cardiac Arrest Patients With Hypoxic Ischemic Brain Injury	Tison Schoenthal
	Dementia Research on Social Media: Current Practices and Challenges Ahead	Viorica Hrincu
	An Investigation of HIV Integrase Inhibitor Resistance Mutations in gp41 in Clinical Samples	Hanwei Sudderuddin
14:05 - 14:20	Precision Medicine to Tailor Prevention Strategies for Endometrial Cancer	Dr. Aline Talhouk
14:20 - 14:35	Drug Checking as a Harm Reduction Tool to Combat the Overdose Crisis	Dr. Lianping Ti
14:35 - 15:20	Panel Discussion	Dr. Gordon Francis Dr. Tricia Tang Dr. Sharon Marsh Dr. Aline Talhouk Dr. Lianping Ti
15:20 - 15:30	Awards and Closing	Dr. Tricia Tang
15:30 - 17:00	Trainee Poster Presentations & Reception Jim Pattison Pavilion Rooms 1887/1888/1891	

# Meet Our Speakers



### Keynote Speaker

**Dr. Gordon Francis** is a Clinician Scientist studying the role of cholesterol metabolism in the development, treatment, and prevention of atherosclerosis, the leading cause of death internationally in the forms of coronary heart disease and stroke. His laboratory made the observation that arterial smooth muscle cells make up the majority of foam cells in atherosclerosis, rather than macrophages as previously believed. The differences in cholesterol handling by smooth muscle cells and macrophages provide opportunities for new therapies to mobilize cholesterol from smooth muscle cell foam cells, not addressed by currently available treatments.



**Dr. Darwin Yeung** received his medical degree from the University of Toronto, followed by residency training in Internal Medicine and Cardiology at the University of British Columbia. He completed advanced fellowships in echocardiography at Vancouver General Hospital and at the Mayo Clinic, and is currently pursuing a Master of Public Health degree at the Harvard School of Public Health. His current research focuses on the application of strain imaging in the diagnosis and treatment of patients with cardiovascular disease.



**Dr. Aline Talhouk** is an Assistant Professor in the UBC Department of Obstetrics and Gynaecology. She is also the Director of Data Science and Informatics at OVCARE, BC's ovarian and gynecological cancer research program. Her research program is on developing and implementing predictive models to improve patient care in women's health and oncology.



**Dr. Lianping Ti** is an Assistant Professor in the Division of Social Medicine within the UBC Department of Medicine. She is also a Research Scientist and Health Administrative Data Lead for the BC Centre on Substance Use. An epidemiologist by training, her research largely focuses on understanding the intersections between substance use, infectious diseases, and the delivery and efficacy of healthcare systems.

# Meet Our Speakers



**Dr. Anita Palepu** is Head of the Department of Medicine and Professor in the Division of General Internal Medicine at UBC. She is the Physician Program Director for the St. Paul's Hospital Medicine Program and works as a General Internist. Dr. Palepu conducts her research at the Centre for Health Evaluation and Outcome Sciences and has a research program that falls under the broad umbrella of urban health research, with particular interest in vulnerable populations such as homeless persons and drug users.



**Dr. Tricia Tang** is an Associate Professor in the Department of Medicine, Division of Endocrinology at the UBC Faculty of Medicine. She is also a Behavioral Scientist and registered Clinical Psychologist with an expertise in diabetes translation research in high-risk and medically underserved populations.

**Dr. Sharon Marsh** holds a degree in Genetics from Nottingham University in England and a PhD in Medical Genetics from the University of Aberdeen in Scotland. Following her PhD, she crossed the ocean to work in various roles in an NIH funded cancer pharmacogenomics lab at Washington University in St Louis. Subsequently she worked in Montreal as an Associate Scientific Director in a Genome Canada funded centre before returning to academia at the University of Alberta's Faculty of Pharmacy and Pharmaceutical Sciences in Edmonton. Sharon joined UBC's Support Programs to Advance Research Capacity (SPARC) in 2017 as a Health Research Development Officer.

## Meet Our Trainee Speakers



Shayda Swann is a MD/PhD student in the Department of Experimental Medicine where she studies how hormones impact the health and well-being of women living with HIV. Shelly Tognazzini is a Peer Research Associate and community voice for women living with HIV. They are both passionate advocates for women's healthy aging

The Oak Tree Clinic | Supervised By: Dr. Melanie Murray & Dr. Hélène Côté



**Tison Schoenthal:** I graduated from UBC-Okanagan in 2016 and most recently from TRU with a diploma in Respiratory Therapy and have since been working at Vancouver General Hospital. I began my master's under Dr. Mypinder Sekhon in the ICU with the focus of ventilation management in post-cardiac arrest hypoxic ischemic brain injury.

VGH ICU Translational Research Lab I Supervised By: Dr. Mypinder Sekhon





**Viorica Hrincu** is a PhD student under the supervision of Dr. Julie Robillard at UBC. Her current project is on the ethics of social media use in dementia prevention research. Her research interests include: ethics and health, tech ethics, dementia, cognition, subjectivity, and personal identity. Nest Lab I Supervised By: Julie Robillard

Hanwei Sudderuddin is a first-year MSc student in the Experimental Medicine program at UBC and a Graduate Research Assistant with the Research Laboratories at the BC Centre for Excellence in HIV/AIDS. Together with his supervisor Dr. Chanson Brumme, Hanwei studies HIV genetics, evolution and drug resistance in different clinical contexts. Brumme Lab, BC-CfE | Supervised By: Dr. Chanson Brumme

# Trainee Poster Presenters Listed Alphabetically

#### Nicole Bailey

Kramer Lab, ICORD Supervised By: Dr. John (Kip) Kramer

Hannah Crepeault BC Centre on Substance Use Supervised By: Dr. M. Eugenia Socias/Dr. Lianping Ti

Narsis Daftarian Arthritis Research Canada Supervised By: Dr. J. Antonio Avina-Zubieta

**Bianca Fukakusa** Harris Lab Supervised By: Dr Kevin Harris

Tenanye Haglund Kelleher Lab, Life Science Institute Supervised By: Dr. Dermot Kelleher

Sarah Hanstock Lange Lab, The Stone Centre Supervised By: Dr. Dirk Lange

Katarzyna Kabacińska Neuroscience, Engagement and Smart Tech Lab Supervised By: Dr. Julie Robillard

Tamila Kalimullina Autonomic Research Laboratory, ICORD Supervised By: Dr. Andrei Krassioukov

Iryna Kayda Microbiology and Virology Laboratory, BC Children's and Women's Hospital Supervised By: Dr. David Goldfarb

Jane Kim Addictions and Concurrent Disorders Research Group Supervised By: Dr. Michael Krausz A scoping review: Indigenous experience of physical pain in Canada

Demographic and socio-structural factors associated with a history of non-fatal overdose among individuals with prescriptiontype opioid use disorder: Findings from a pragmatic randomized control trial

RetINal Toxicity And HydroxyChloroquine Therapy (INTACT): protocol for a prospective population-based cohort study

A Feasibility Study: Physical Activity Counselling for Children with Congenital Heart Disease (CHD)

Genomic variance favouring clonal dominance in Barrett's Esophagus' stem cell populations

The role of the gastrointestinal microbiome in oxalate transport and metabolism in kidney stone formation

Using socially assistive robots to support children and parents in the hospital waiting room

A Non-invasive Neuroprosthesis for Cardiovascular Recovery after Spinal Cord Injury

Sensitivity of gargle samples compared to swabs for SARS-CoV-2 detection with nucleic acid amplification testing: a systematic review and potential meta-analysis

Impacts of early and late homelessness on adulthood consequences

# Trainee Poster Presenters Continued

#### Huitao Liu

Luo Lab, Center for Heart Lung Innovation Supervised By: Dr. Honglin Luo

#### Ana Luque

Alan So Lab Supervised By: Dr. Alan So/ Dr. Claudia Chavez-Munoz

#### Matthew Manson

mHealth ConVISation Labs Supervised By: Dr. Richard Lester

#### Brynn McMillan

Vaccine Evaluation Center, BC Children's Hospital Research Institute/BC Centre for Disease Control Supervised By: Dr. Manish Sadarangani/Dr. Agatha Jassem

### Dalia Ibrahim Othman Lange Lab, The Stone Centre Supervised By: Dr. Dirk Lange

Naomi Potter Quon Lab, Centre for Heart Lung Innovation Supervised By: Dr. Bradley Quon

Miguel Prieto Quon Lab, Centre for Heart and Lung Innovation Supervised By: Dr. Bradley Quon

Dominic Skitsko Moritz Lab Supervised By: Dr. Orson Moritz

Ruixuan Yang Dr. Caigan Du's Lab Supervised By: Dr. David Harriman miRNA modification of Coxsackievirus for lung cancer therapy

Modular bioreactor for engineering a kidney

Two-way SMS messaging to understand post-discharge care challenges and reduce readmission rates to an Acute Mental Health Ward in Vancouver, BC: A Protocol

Prospective Evaluation of Immunity After COVID-19 Vaccines: The PREVENT-COVID Study

### The Role of the Urinary Microbiome in Determining Response to Intravesical BCG in Patients with High Risk Non-Muscle Invasive Bladder Cancer.

Calprotectin predicts cystic fibrosis pulmonary exacerbations in equivocal cases

Systematic review of prevalence and incidence of nontuberculous mycobacteria in cystic fibrosis population

Characterization of retinal function and morphology in GNAT1-knockout X. laevis.

The Urinary Microbiome as an Indicator of Changing Health States in Kidney Transplant Patients

A special thank you to our presenters, organizers and judges

#### 2022 Research Expo Adjudicators

- Dr. Shazhan Amed
- Dr. Hélène Côté
- Dr. Kathleen Deering Dr. Julie Robillard
- Dr. Quynh Doan •
- Dr. Xuesen Dong
- Dr. Doris Doudet
- Dr. Nadia Fairbairn · Dr. Sam Wiseman
- Dr. Danya Fast
- Dr. Matthias Görges
- Dr. Dirk Lange
- Dr. Kenneth Madden
- Dr. Orson Moritz

- Dr. Tashmeeta Ahad · Dr. Claudia Chavez-Munoz
  - · Dr. Seonaid Nolan
  - Dr. Will Panenka
  - Dr. Christian Schuetz
    - Dr. Babak Shadgan
    - Dr. Eugenia Socias
  - Dr. Alexander Wyatt

### 2022 Research Expo Organizing Committee

- Delaram Behnami
- Diane Kim
- · Dr. Anita Palepu
- Dr. Tricia Tang
- Dr. Teresa Tsang
- Sharon Xu

#### 2022 Research Expo Student Committee

- Vanessa Diamond
- Jialin Han
- Nina Huana
- Tamila Kalimullina
- Jane Kim
- Jenny Lee
- Kasra Moolooghy
- Ari Rotenberg
- Hanwei Sudderuddin



