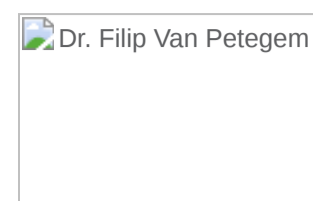


Publications of the Week

Pathological Conformations of Disease Mutant Ryanodine Receptors Revealed by Cryo-EM

First Author: Kellie Woll | Senior Author: Filip Van Petegem (pictured)
Nature Communications | UBC



Ryanodine Receptors are massive channels that release Ca^{2+} from the endoplasmic and sarcoplasmic reticulum. Hundreds of mutations are linked to malignant hyperthermia (MH), myopathies, and arrhythmias. The authors explore the first MH mutation identified in humans by providing cryo-EM snapshots of the pig homolog, R615C, showing that it affects an interface between three solenoid regions. **Abstract**

Inhibition of Cystathionine β -Synthase Promotes Apoptosis and Reduces Cell Proliferation in Chronic Myeloid Leukemia

First Author: Dan Wang | Senior Author: Weihong Song (pictured)
Signal Transduction and Targeted Therapy | Townsend Family Laboratories and UBC



Increased endogenous hydrogen sulfide (H_2S) level by cystathionine β -synthase (CBS) has been shown to closely relate tumorigenesis. However, the role of CBS and H_2S in chronic myeloid leukemia (CML) remains elusive. The authors suggest that inhibition of CBS induces cell apoptosis, as well as limits cell proliferation and migration, a potential target for the treatment of CML. **Abstract**

Diversity and Dynamism of IgA-Microbiota Interactions

First Author: Kelsey Hauss | Senior Author: Brett Finlay (pictured)
Nature Reviews Immunology | Michael Smith Laboratories and UBC



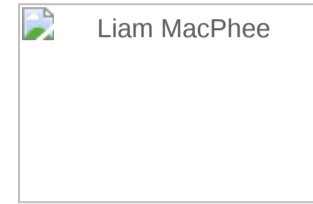
IgA mediates microbial homeostasis at the intestinal mucosa. Within the gut, IgA acts in a context-dependent manner to both prevent and promote bacterial colonization and to influence bacterial gene expression. IgA-microbiota interactions are highly diverse across individuals and populations, yet the factors driving this variation remain poorly understood. **Abstract**

[View All Publications](#)

Awards

Liam MacPhee Awarded 2020 Canada Graduate Scholarship

BC Cancer



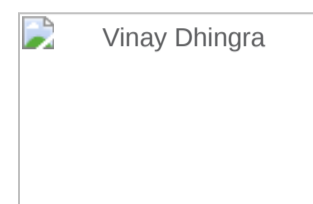
Congratulations to Liam MacPhee (pictured), who has been awarded a 2020 Canada Graduate Scholarship – Master's for his research investigating the anti-leukemic effects of the tumour-suppressor microRNA-204 in acute myeloid leukemia. The program supports up to 3,000 students annually in all disciplines and is administered jointly by Canada's three granting agencies. **Read More**

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Local News

New Evidence Calls into Question Vitamin C as a Treatment for Sepsis

Vancouver Coastal Health Research Institute



A new study by Dr. Vinay Dhingra (pictured), published in *The Canadian Journal of Anesthesia*, adds to a growing body of evidence that calls into question prior findings about vitamin C's effectiveness as a treatment for sepsis. Dhingra's historical cohort study of 140 septic patients, 52 of whom received vitamin C and corticosteroids and 88 who received corticosteroids alone, found no variation in mortality rates between the two groups. **Read More**

How a Canadian Firm Is Accelerating the Development of Therapeutics

Government of Canada



In Canada, strong collaboration between academic institutions and private companies, supported by investors and government programs, sparks innovations that advance global efforts to combat disease and improve human health. Vancouver-based AbCellera Biologics is one example of Canada's thriving biotech sector. **Read More**

Isolation and Sanitation during COVID-19 May Affect Human Microbiome, Scientists Say

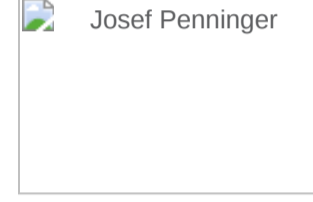
CTV News



As people around the world remain isolated in their homes, scientists warn there may be unintended consequences of these necessary pandemic protocols. According to Dr. Brett Finlay, a UBC microbiologist, when we hug someone, travel to another country, or get our hands dirty, we acquire new microbes. Although some microbes can make us sick, others are good for us, and a diverse and rich microbiome is essential to our health. **Read More**

Here Are Five Projects by Companies Tackling COVID-19 to Watch in Canada

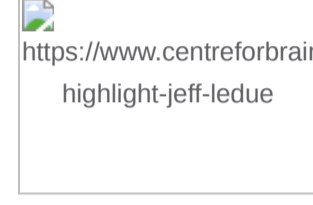
National Post



It's been a little more than a year since scientists and biotech companies around the world pivoted to understanding, treating and preventing COVID-19. One such company is Apeiron Biologics, co-founded by Dr. Josef Penninger (pictured), the Director of UBC's Life Sciences Institute. Data is expected soon from the phase two clinical trial for APN01, a treatment candidate for COVID-19 developed after the outbreak of SARS in 2002. **Read More**

DMCBH Staff Highlight: Jeff Ledue

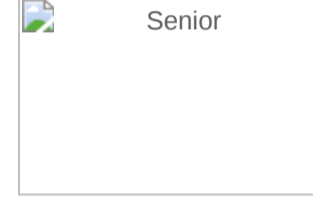
Djavad Mowafaghian Centre for Brain Health



Jeff LeDue (pictured) wears many "hats" at UBC — he's a research associate, coordinator of the UBC Dynamic Brain Circuits in Health and Disease Research Excellence Cluster, and Managing Director of the Neuroimaging and NeuroComputation Centre, a shared research platform at the Djavad Mowafaghian Centre for Brain Health. **Read More**

Aging Muscle Spindles Contribute to Imbalance and Falls among Older Adults

Vancouver Coastal Health Research Institute



When the human body is sensing its movement, location, and positioning, also known as proprioception, many neural systems are hard at work. Researcher Dr. Robyn Mildren has a keen appreciation for these systems and how their changes due to aging can lead to mobility issues and falls, particularly for older adults. **Read More**

Pan-Biome Pharmaceuticals, Inc. Reports Positive Results in Preclinical Trial of Inflammatory Bowel Disease

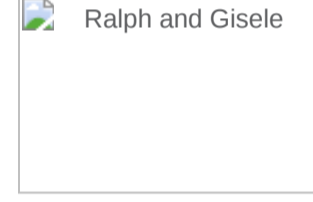
Pan-Biome Pharmaceuticals



Pan-Biome Pharmaceuticals, a preclinical biopharmaceutical company focused on chronic inflammatory and autoimmune diseases, has announced that one of its drugs produced strong effects in modulating gut microbiota in a mouse model study of inflammatory bowel disease. The compound induced a distinct shift in microbiota composition by increasing "good" bacteria while suppressing bacteria associated with the development of obesity and type 2 diabetes. **Read More**

Black Academic Success in Sciences: A Conversation

SFU Faculty of Health Sciences



On February 16, six members of the SFU Faculty of Health Sciences, including Dr. Ralph Pantophlet (pictured, left) and Gisele Umvilighitso (right), gathered to talk about their experiences in sciences and academia as Black students, faculty, and alumni. The discussion explored the challenges and successes in sciences and academia, and why mentorship and representation matters. **Read More**

SBME Introduces Their New Executive Advisory Committee

UBC School of Biomedical Engineering



The UBC School of Biomedical Engineering has a brand new Executive Advisory Committee! Their three-year term will begin March 1, 2021. The new committee includes Drs. Gina Ogilvie, Milos Popovic, Nancy Albritton, Alison Marsden, C. Ross Ethier, and Douglas Lauffenburger (pictured, clockwise from top left). **Read More**

Canada Home to Health Research Successes, but Needs Culture Shift: Expert

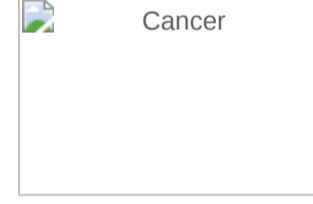
CTV News



Canada is home to significant scientific expertise and research tackling COVID-19, though one expert says long-standing hurdles make it difficult for the country to punch above its weight in the global fight against the virus. Among the standout contributions is a Vancouver biotech company that's producing a key component of several vaccines, but a UBC professor says Canada could do more to support its experts. **Read More**

Pediatric Case Study Demonstrates Value in Whole Genome Sequencing for Cancer Treatment Planning

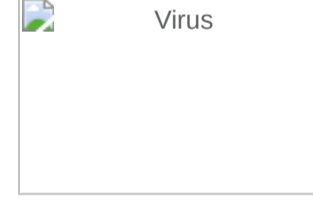
BC Cancer



Whole genome sequencing allows for the identification of novel genomic alterations that are not detected by standard clinical techniques. In a new study, researchers led by Dr. Christopher Dunham presented a case in which whole genome analysis unveiled a drug target for a pediatric patient with glioblastoma, a rare and often fatal form of brain cancer. **Read More**

Predicting the Evolution of SARS-CoV-2 Proteins: Insights into Ongoing COVID-19 Research at the CBR

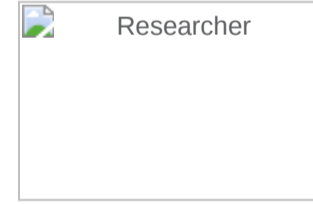
Centre for Blood Research (CBR)



The rapid emergence and propagation of the novel coronavirus SARS-CoV-2 has prompted collaborations among scientists from diverse fields of research, all looking to understand and hopefully predict the course that COVID-19 is taking. One of these teams is composed of Dr. Natalie Stynadka, Dr. Robert Brunham, and Dr. Vikram Mulligan. **Read More**

B.C. Researchers Working to Develop Breath Test for COVID-19

CBC News



Researchers in B.C. are working on developing a breath test for COVID-19 that, if successful, could provide results in less than one minute. The test could theoretically be rolled out in the community — at airports, schools, arenas, and other venues, said Dr. Renelle Myers, an interventional respirologist at Vancouver General Hospital and B.C. Cancer Research Centre who is leading the team at Vancouver Coastal Health developing the test. **Read More**

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Upcoming Events in Vancouver

- March 2 10:00 am **Women's Brain Health Initiative Trainee-Mentor Session** Online
- March 5 4:00 pm **Livewire: A Stimulating Night of Neurotechnology** Online
- March 6-7 10:00 am **Nature Club: Feather Facts** Online
- March 8 12:00 pm **Women's Health Seminar Series — Hormones, Brain and Social Cognition** Online
- March 10 1:00 pm **ONLINE Beaty@Home Live: Rivers and Biodiversity** Online

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Qu Biologics

Postdoctoral Fellow, Biologics
adMare BioInnovations

Research Associate
Canada's Michael Smith Genome Sciences Centre at BC Cancer

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