

Publications of the Week

SARS-CoV-2 RNA Quantification Using Droplet Digital RT-PCR

First Author: Natalie Kinloch (pictured, back, second from left)
Senior Authors: Chanson Brumme and Zabrina Brumme (front, second from right)
Journal of Molecular Diagnostics | SFU, BC Centre for Excellence in HIV/AIDS, St. Paul's Hospital, and UBC



Real-time droplet digital PCR (RT-ddPCR) offers an attractive platform for SARS-CoV-2 RNA quantification. The authors evaluated eight primer/probe sets originally developed for RT-PCR-based SARS-CoV-2 diagnostic tests for use in RT-ddPCR, and identified three as the most efficient, precise and sensitive for RT-ddPCR-based SARS-CoV-2 RNA quantification. [Abstract](#)

Epistasis and Intramolecular Networks in Protein Evolution

First Author: Charlotte Miton | Senior Author: Nobuhiko Tokuriki (pictured)
Current Opinion in Structural Biology | Michael Smith Laboratories



Proteins are molecular machines composed of complex, highly connected amino acid networks. Their functional optimization requires the reorganization of these intramolecular networks by evolution. In this review, the authors discuss the mechanisms by which epistasis, that is, the dependence of the effect of a mutation on the genetic background, rewires intramolecular interactions to alter protein function. [Abstract](#)

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Local News

Tiny Tumours and Oscillating Oxygen

UBC Centre for Blood Research



Cell culture that reflects the 3D nature of tumours can help researchers learn more about not only how tumours behave within the framework of hypoxia, but also how they react to treatment. In their paper published in *Scientific Reports*, Dr. Karen Cheung (pictured) and researchers in the Department of Electrical and Computer Engineering at UBC conveyed their findings from experiments conducted using 3D tumour spheroids. [Read More](#)

Biologizing Our Industry – How Microalgae Can Help Us Support Sustainability

UBC Microbiology & Immunology



Climate change represents potentially the biggest environmental threat to human kind since our existence. Still, our chemical industry relies mostly on the usage of fossil resources for the production of various products, such as plastics, chemicals, or fuels. In Dr. Moritz Koch's (pictured) work with microalgae, researchers describe an alternative process that sequesters CO₂ from the atmosphere and allows a carbon-neutral production of all these products. [Read More](#)

Using Precision Health to Uncover the Cause of a Rare Immune System Disorder and Treat It

BC Children's Hospital Research Institute



Dr. Stuart Turvey (pictured), Dr. Henry Lu, and their colleagues at BC Children's Hospital and UBC were surprised to find that two unrelated children from Alberta carried the same previously unknown genetic variant that leads to a dangerously weakened immune system. Experts call this profound combined immunodeficiency, or CID — a condition that can result from a wide variety of genetic and environmental causes. [Read More](#)

Targeting MondoA: A Potential New Treatment for Childhood Leukemia

BC Children's Hospital Research Institute



Scientists had previously noted that the presence of a large protein called MondoA was associated with worse outcomes in several pediatric cancers, but they didn't understand why. That changed after Dr. Poul Sorensen (pictured), a distinguished scientist with BC Cancer and an investigator at BC Children's Hospital, won an August-Wilhelm Scheer guest professorship award to work at the Technical University of Munich for a year. [Read More](#)

Dr. Shernaz Bamji Appointed President of the Canadian Association for Neuroscience

UBC Life Sciences Institute



The Life Sciences Institute congratulates Dr. Shernaz Bamji (pictured) on becoming President of the Canadian Association for Neuroscience (CAN). Currently Associate Director at the Djavad Mowafaghian Centre for Brain Health, Dr. Bamji has served as Vice President/President-Elect of CAN, a thousand-member organization dedicated to advancing brain research. She succeeds immediate Past-President Dr. Charles Bourque of McGill University. [Read More](#)

US Giant Takes Aim at Vancouver's Precision NanoSystems with Latest Acquisition Deal

Business In Vancouver



Expect US innovation giant Danaher Corporation's latest acquisition deal to function like an accelerator pedal for BC's biotech ambitions, according to Dr. James Taylor (pictured). "Together we'll be able to accomplish in two years what otherwise would take us five years, and in five years what would otherwise take us 20 years," says the Co-Founder and CEO of Vancouver-based Precision NanoSystems. [Read More](#)

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Upcoming Events in Vancouver

- June 14 6:00 PM **Picture a Scientist Virtual Screening** Online
- June 17 12:00 PM **CGSHE Speaker Series Presents: Dr. Rod Knight** Online
- June 22 12:00 PM **How Research and Innovation Drive the Food Industry** Online
- June 23 11:00 AM **Medical Innovations: Where Is Technology Leading Us?** Online
- June 24 4:00 PM **McCarthy Spotlight Speaking Series: How Digital Health Is Transforming Health Care** Online

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