

Publications of the Week

Effect of Small Molecule eRF3 Degradors on Premature Termination Codon Readthrough

First Author: Alireza Baradaran-Heravi | Senior Author: Michel Roberge (pictured)
Nucleic Acids Research | UBC



Premature termination codon (PTC) readthrough is considered a potential treatment for genetic diseases caused by nonsense mutations. Identifying compounds that enhance PTC readthrough by aminoglycosides or reduce their toxicity is a continuing challenge. The authors showed that PTC readthrough by aminoglycoside G418 is considerably enhanced by eukaryotic release factor 3 (eRF3) small interfering RNAs. [Abstract](#)

The Role of Phosphorylation in Atrial Fibrillation: A Focus on Mass Spectrometry Approaches

First Author: Sina Safabakhsh (pictured) | Senior Author: Zachary Laksman
Cardiovascular Research | UBC, AbCellera, BC Children's Hospital Research Institute, and SFU



Atrial fibrillation (AF) is the most common arrhythmia worldwide. It is associated with significant increases in morbidity in the form of stroke and heart failure, and a doubling in all-cause mortality. The pathophysiology of AF is incompletely understood, and this has contributed to a lack of effective treatments and disease-modifying therapies. This review discusses recent evidence surrounding the role of protein phosphorylation in the pathogenesis of AF. [Abstract](#)

From Infection Niche to Therapeutic Target: The Intracellular Lifestyle of *Mycobacterium tuberculosis*

First Author: Leah Rankine-Wilson | Senior Author: Yossel Av-Gay (pictured)
Microbiology | UBC



Mycobacterium tuberculosis (Mtb) is an obligate human pathogen killing millions of people annually. Treatment for tuberculosis is lengthy and complicated, involving multiple drugs and often resulting in serious side effects and non-compliance. Mtb has developed numerous complex mechanisms enabling it to not only survive but replicate inside professional phagocytes. [Abstract](#)

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Local News

New Data about SARS-CoV-2 Virus Functions Could Aid in Treatment Designs

Phys.org



For the first time, a team of researchers has captured X-ray images of a critical enzyme of the COVID-19 virus performing its function. "What we've captured at high resolution is one of the important steps in that process that has never been visualized before in any viral protease of this class," said Dr. Natalie Strynadka (pictured, left), the UBC biochemistry Professor who led the research team with colleague Dr. Mark Paetzel (right) from SFU. [Read More](#)

Cloud Computing Support Accelerates COVID-19 Vaccine Improvements

UBC News



For the last 11 months, UBC Biochemistry and Molecular Biology Professor Dr. Leonard Foster (pictured) and his team have been studying how SARS-CoV-2 attacks the human body, in hopes of developing a more targeted vaccine with fewer side effects. Before the pandemic, he was known for his work applying mass spectrometry to understand how pathogens affect honey bees. Now he's applying the same technology to better understand the novel coronavirus. [Read More](#)

SFU Neuroscientist Discusses Opportunities for Early-Career Researchers

Nature Careers



Dr. Brienne Kent (pictured), a neuroscientist at SFU, says more junior researchers are in positions of influence because so many are active in movements around open science, open access and reproducibility. "Early-career researchers are really driving these initiatives to change scientific culture," said Dr. Kent, who is the first, and currently the only, junior scientist to sit on the Canadian Institutes of Health Research's 16-member governing council. [Read More](#)

Podcast Diabetes: From Beta Cells to Bicycles with Dr. Mary Jung

BC Diabetes Research Network



Podcast host Krista Lamb is joined by BC Diabetes Research Network researcher Dr. Mary Jung (pictured). Dr. Jung is an Associate Professor at the School of Health and Exercise at UBC Okanagan. Her major research area is self-regulation of health behaviours, with a specialization in exercise, physical activity, and dietary behaviours, and the creation of community-based interventions for individuals at risk or living with type 2 diabetes. [Read More](#)

New Tools in the Fight against Crop Disease

Genome BC



Stripe rust, caused by the fungus *Puccinia striiformis*, is one of the most devastating pathogens of wheat and barley in Canada. Dr. Gurcharn Singh Brar (pictured), an Assistant Professor in Plant Science at UBC, and Dr. Guus Bakkeren with Agriculture and Agri-Food Canada are studying single cells to identify the prevalence of an adaptive somatic hybridization mechanism in which there is a genetic exchange without sex, and cells simply fuse. [Read More](#)

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Interesting Articles

Rebuilding the Canadian Biomanufacturing Sector

Signals



To rectify Canada's R&D sector, there needs to be a plan in place to build a critical mass towards sustaining industry. One way to do this, according to Dr. Michael May, President and CEO of the Centre for Commercialization of Regenerative Medicine, is to focus on building an ecosystem akin to the one seen in Canada's auto sector where we manufacture and also have supply chains that are robust and deep. [Read More](#)

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Upcoming Events in Vancouver

- April 22 3:00 PM **Science-Informed Policy: COVID-19 and Beyond** Online
- April 23 9:00 AM **Reproductive Cycle Effects on Brain and Cardiac Health** Online
- April 23 12:00 PM **Mapping your Career Journey: Lessons on Academia to Industry and Beyond** Online
- April 26 8:00 AM **International Workshop on HIV & Women 2021** Online
- April 30 9:00 AM **Microbiology and Immunology Undergraduate Research Symposium** Online

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