

Publications of the Week

Synaptic Activity-Dependent Changes in the Hippocampal Palmitoylome

First Authors: Glory Nasseri (pictured, right) and Nusrat Malin (centre) | Senior Author: Sharmaz Bamji (left) | Science Signaling | Life Sciences Institute, Djavad Mowafaghian Centre for Brain Health, and UBC



Palmitoylation is a lipid-associated modification that regulates protein stability, localization, and function and has been implicated in synaptic plasticity — changes in synaptic strength that mediate learning and memory. The authors used proteomics analysis to uncover the dynamics of palmitoylation in the fear-conditioned mouse hippocampus. [Profile](#) | [Abstract](#)

Mapping the Iceberg of Autonomic Recovery: Mechanistic Underpinnings of Neuromodulation following Spinal Cord Injury

First Author: Soshi Samejima | Senior Author: Andrei Krassioukov (pictured) | The Neuroscientist | ICORD, Vancouver Coastal Health, and UBC



Spinal cord injury leads to disruption in autonomic control resulting in cardiovascular, bowel, and lower urinary tract dysfunctions, all of which significantly reduce health-related quality of life. Based on current preclinical and clinical evidence, this narrative review provides the most plausible mechanisms underlying the effects of spinal cord stimulation for autonomic recovery, including activation of the somatoautonomic reflex and induction of neuroplastic changes in the spinal cord. [Abstract](#)

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Awards

Alzheimer Disease Research Grants Paving the Way for Earlier Diagnosis and Treatment

Djavad Mowafaghian Centre for Brain Health



Alzheimer disease (AD) is a progressive, chronic neurodegenerative disease that destroys brain cells, causing thinking ability and memory to deteriorate over time. Thanks to continued funding from the Djavad Mowafaghian Centre for Brain Health's Alzheimer Disease Research Grants, researchers are able to continue investigating new ways to better diagnose and treat AD. Dr. Sophia Frangou's (pictured) project uses large-scale datasets to identify environmental factors that can accelerate or delay brain aging. [Read More](#)

Natalie Strynadka Appointed to UBC's Highest Faculty Honour: University Killam Professor

UBC Medicine



Dr. Natalie Strynadka (pictured), a Professor in the Faculty of Medicine's Department of Biochemistry and Molecular Biology, has been awarded with UBC's highest honour conferred on a faculty member. The University Killam Professorship recognizes exceptional teachers and researchers who are leaders in their fields, and who have received international recognition for their talents and achievements. [Read More](#)

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Local News

Computational Modelling Breakthrough from the Zandstra Lab Reveals New Insights into the Potential Emergence and Treatment of Disease

Michael Smith Laboratories



A breakthrough paper from the Zandstra lab has scientists excited about the potential impacts of their findings on personalized medicine. The research in the *Stem Cell Reports* publication showcases a new computational modelling technique that helps understand the relationship between genes, cells, and their microenvironments. Lead author Dr. Himanshu Kaul (pictured) describes the impact of these findings on personalized medicine and stem cell therapies. [Read More](#)

A Day in the Life of a Platelet Scientist

UBC Centre for Blood Research



Steven Jiang is a second year Masters of Science student at UBC in the Department of Biochemistry and Molecular Biology and the Centre for Blood Research, under the supervision of Dr. Hugh Kim. Steven's research focuses on the effect of platelets on rheumatoid arthritis, an inflammatory disease that causes joint pain in more than 1% of Canadians. [Read More](#)

SFU Scientists Developing Early Alzheimer's Disease Detection Sensor

SFU News



Researchers with the SFU Nanodevice Fabrication Group are developing a new biosensor that can be used to screen for Alzheimer's disease and other diseases. Their sensor works by detecting a cytokine known as tumour necrosis factor alpha, which is involved with inflammation in the body. "Our goal is to develop a sensor that's less invasive, less expensive, and simpler to use than existing methods," says Dr. Michael Adachi (pictured), the project's co-lead. [Read More](#)

3, 2, 1: Houston, We Have Liftoff

Genome BC



"Fly me to the moon, let me play among the stars" – while this is the start of a Frank Sinatra song, it's also how UBC Pharmaceutical Sciences Professor Dr. Corey Nislow (pictured) may be feeling as he begins to analyze baker's yeast and algae samples, that returned to Earth on December 11 after travelling around the moon for 42 days on NASA's Artemis One lunar mission. [Read More](#)

UBC Biotech Spin-Off Raises \$75M to Bring Cancer Treatments to Patients

UBC Medicine



Alpha-9 Theranostics, a UBC spin-off company founded by three university researchers, has raised \$75 million to develop next-generation radiopharmaceuticals that promise to meaningfully improve treatment for people with cancer. "We founded this company to turn the research we were doing at UBC and BC Cancer into treatments that will help patients thrive and, ultimately, save lives," says Dr. François Bénard (pictured), one of the company's Co-Founders. [Read More](#)

"To Live with Hope Instead of Despair" — Could a Simple DNA Test Help Improve the Lives of People with Depression?

Genome BC



For people with mental health conditions, finding a medication that works without causing severe side effects is often a matter of trial-and-error. Pharmacogenomics can improve a person's health by helping them know whether a drug is likely to work for them without triggering an adverse reaction. In 2020, a \$1.5 million project investigated if pharmacogenomic testing should be routinely used in BC for people with depression. [Read More](#)

Canada's Bioscience Employers Recognized for Their Commitment to Diversity

BioTalent Canada



BioTalent Canada has announced the recipients of its inaugural I.D.E.A.L. Bioscience Employer™ designation. The program recognizes organizations in the Canadian bio-economy who embody the principles of inclusion, diversity, equity, and accessibility leadership (IDEAL), as best practices needed to promote growth and success in the biotech sector. Recognized companies include Vancouver's STEMCELL Technologies. [Read More](#)

Mads Daugaard: SnapCyte Solutions Helping Life Science Researchers with Fast, Accurate, and Affordable Tools For Analytical Cell Biology

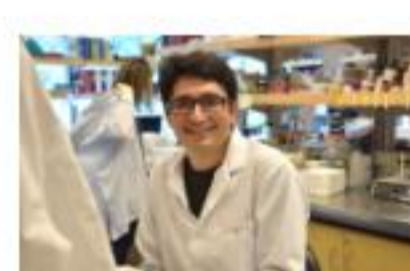
Made in Canada



SnapCyte Solutions believes it's time to democratize life science research. Their mission is to provide intelligent and easy-to-access analytical tools to scientists around the world. Dr. Mads Daugaard's (pictured) team operates in the translational cancer research space, integrating discovery research with biotechnology development. [Read More](#)

New Treatment Option for a Deadly Muscle Disease: An Arduous Journey for the Advancement of Medicine

UBC Centre for Blood Research



What role do tissue-resident macrophages play during *in vivo* regeneration in dystrophic muscle, and how can we rebuild the healthy tissue? Duchenne's muscular dystrophy (DMD) is a deadly disease caused by genetic mutations. In a recent study published by Drs. Farshad Babaeijandaghi (pictured) and Fabio Rossi, they discovered a new drug for DMD called colony-stimulating factor 1 receptor inhibitor. [Read More](#)

Charting a New Course for MS Treatment

UBC Faculty of Medicine



Multiple sclerosis (MS) is a progressive autoimmune disease that attacks nerve cells in the brain and spine, causing a bewildering array of symptoms. Most MS drugs are powerful immunosuppressants that leave patients vulnerable to infection. But new technologies and new research are opening up new possibilities for MS treatment and care. "Truly, we're in the midst of a golden age of biomedical innovation," says Dr. Peter Zandstra (pictured). [Read More](#)

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Upcoming Events in Vancouver

- February 2 8:30 AM Precision Health Symposium AMS Student Nest
- February 2 11:30 AM Women in Life Science – Panel Discussion 2023 Element Vancouver Metrotown
- February 7 10:00 AM Academic-Industry Partnerships Roundtable Online
- March 9 3:00 PM Global Health Access & Equity Issues in LMICs and HICs: Compare & Contrast UBC
- March 28 9:00 AM BIG Research Day Life Sciences Institute

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- Communications Specialist CHEGS
- Research Project Manager, Level 7 Canada's Michael Smith Genome Sciences Centre
- Director, Potency Assays Development (CMC) AbCellera
- Development Manager, Nucleic Acid Therapeutics Cytiva

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