

Publications of the Week

**Modulation of Vascular Endothelial Inflammatory Response by Proprotein Convertase Subtilisin-Kexin Type 9**

First Authors: Alex Leung and Yuan Chao Xue | Senior Author: Keith Walley (pictured) | Atherosclerosis | Centre for Heart and Lung Innovation



Endotoxins carried within low-density lipoprotein (LDL) are cleared from the circulation via hepatic LDL receptor (LDLR)-mediated endocytosis. Proprotein convertase subtilisin-kexin type 9 reduces this clearance by down-regulating LDLR density on hepatocytes. The authors found that lipopolysaccharides (LPS) are internalized by human umbilical vein vascular endothelial cells and LPS uptake dose-dependently increased with increasing LDL concentration. [Abstract](#)

**Obtaining Genetics Insights from Deep Learning via Explainable Artificial Intelligence**

First Authors: Gherman Novakovsky and Nick Dexter | Senior Authors: Maxwell Libbrecht, Wyeth Wasserman (pictured), and Sara Mostoslavsky | Nature Reviews Genetics | Children's Hospital Research Institute, SFU, and UBC



Artificial intelligence (AI) models based on deep learning now represent the state of the art for making functional predictions in genomics research. However, the underlying basis on which predictive models make such predictions is often unknown. The authors review progress in the emerging area of explainable AI, a field with the potential to empower life science researchers to gain mechanistic insights into complex deep learning models. [Abstract](#)

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Awards

**September 2022 Award Winners**

Science in Vancouver



Dr. Jessica Dennis (pictured) from UBC and BC Children's Hospital Research Institute received a Michael Smith Health Research BC Scholar Award to investigate the genomic mechanisms underlying the prenatal and early childhood origins of mental illness in children. See which other Vancouver researchers received grants, awards, and fellowships in September. [Read More](#)

**Pieter Cullis Wins Bloom Burton Award**

Nanomedicines Innovation Network (NMIN)



At a gala celebration in Toronto on September 29<sup>th</sup>, NMIN Founding Director Dr. Pieter Cullis (pictured) was announced as the winner of the 2022 Bloom Burton Award. "Pieter's determination to understand, formulate, and commercialize lipid nanoparticles helped everyone beat back a global pandemic in record time, saving millions of lives, and also having a multitude of other, dramatic therapeutic impacts and advancements," said Jolyon Burton, President of Bloom Burton & Company. [Read More](#)

**The BC Cancer Foundation and BC Cancer Research Institute Announce the 2022 Rising Star Recipients!**

BC Cancer



The Rising Stars program was established to celebrate Dr. Connie Eaves' Gairdner Wightman Award, her election to the Royal Society in the UK, and her appointment to the Order of Canada. To honour this legacy, the awards are dedicated to the advancement of the next generation of women and BIPOC leaders in research at BC Cancer. Recipients include Lorenzo Lindo (pictured) in the Terry Fox Lab. [Read More](#)

**2022 Faculty of Medicine Award Recipients**

UBC Faculty of Medicine



Each year, the Faculty of Medicine recognizes faculty and staff members for excellence in teaching, research, administration, innovation, and public service. The Bill and Marilyn Webber Lifetime Achievement Award recognizes extraordinary members of the Faculty of Medicine who have had sustained distinguished careers at UBC in the areas of research, teaching and/or service, and was awarded to Dr. Connie Eaves (pictured). [Read More](#)

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Local News

**Indigenous Scientist Dustin King's New Lab Seeks Natural 'Carbon Capture' Solutions**

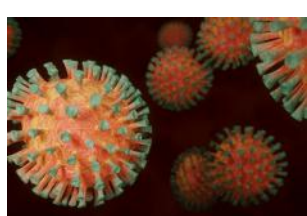
SFU News



Biochemist Dr. Dustin King (pictured) is weaving an Indigenous worldview into western science through his role in leading a new laboratory at SFU. His father instilled in him a deep respect for nature from an early age, growing up in a remote northern community near Burns Lake, BC. Dr. King, who is half Ojibwe, combines this respect for nature with a passion for biochemistry, embodying Indigenous teachings of interconnectedness and sustainability in his work. [Read More](#)

**COVID-19 Driven IgA Autoimmune Assault on Lung Surface Proteins Predictive of Severe Outcomes**

Life Sciences Institute



Scientists in the Penninger lab at UBC and the Institute of Molecular Biotechnology in Austria, in collaboration with Swiss researchers, have found that patients with severe COVID-19 mount IgA antibodies against pulmonary surfactant proteins, blocking their function and potentially contributing to the collapse of alveolae and poor oxygenation. The researchers did not see these autoantibodies in the lungs of patients with other respiratory infections, such as severe influenza. [Read More](#)

**Reformation of the Chondroitin Sulfate Glycocalyx Enables Progression of AR-Independent Prostate Cancer**

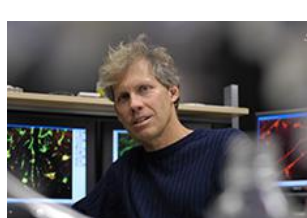
Vancouver Prostate Centre



According to research published in *Nature Communications*, changes in chondroitin sulfate are androgen receptor (AR)-regulated and promote the adaptive progression of castration-resistant prostate cancer after AR pathway inhibition. Drs. Mads Daugaard (pictured) and Nader Al-Nakouzi, with other researchers from Vancouver Prostate Centre, collaborated with the University of Washington and the Pacific Northwest Prostate Cancer Specialized Program of Research Excellence for this study. [Read More](#)

**New iMAP Project Uses Advanced Imaging Tools to Understand and Treat Neurological Disorders**

Djavad Mowalaghian Centre for Brain Health



The Dynamic Brain Circuits research excellence cluster's new iMAP (in vivo Mesoscale Assessment of the neuroProjectome) project is using advanced imaging tools to assess and manipulate brain circuits in animal models of human brain disorders. Led by Dr. Tim Murphy (pictured) and managed by Research Associate Jeff LeDue, iMAP discoveries will lead to new treatments, called circuit-based therapeutics, which can be personalized to an individual's needs. [Read More](#)

**New Partnership between Genome Canada and adMare BioInnovations to Drive Commercialization of Genomics Solutions in Healthcare**

adMare BioInnovations



The leaders of Genome Canada and adMare BioInnovations have announced a new strategic partnership to support the translation of genomics research into commercialization opportunities in healthcare. Genomics-enabled precision health tools are speeding up diagnoses and improving health outcomes and disease management for Canadians. [Read More](#)

**Introducing the VCHRI Strategic Plan 2022–2027: Integrating Research Innovation and Health Care**

Vancouver Coastal Health Research Institute



The Vancouver Coastal Health Research Institute (VCHRI) has launched the VCHRI Strategic Plan 2022–2027: Integrating Research Innovation and Health Care. Primary areas of focus of this five-year strategic plan are: improving cohesion between researchers, integrating research into patient care, and providing support for shared core technology platforms to efficiently and cost-effectively accelerate health research. [Read More](#)

**New Cancer Cell Observatory Will Provide New Insights into Breast Cancer Behaviour and Improve Treatments**

BC Cancer



BC Cancer's leading edge Cancer Single Cell Dynamics Observatory, a first-of-its-kind in Canada, is bringing a whole new understanding of how breast, and other types of cancer cells, interact with other cells in the body and change over time. "The Cancer Cell Observatory will help us fight variants by localizing, tracking, and visualizing gene activity in single cells, something that was impossible even a few years ago" says Dr. Samuel Aparicio (pictured). [Read More](#)

**BioVaxys Further Expands Vaccines Intellectual Property Portfolio**

BioVaxys



BioVaxys has announced that in an action that further expands the value of its intellectual property portfolio, the company has broadened the patent coverage for its viral vaccine platform by filing an international patent application through the Patent Cooperation Treaty for BVX-1021, its vaccine for SARS1 and other sarbecoviruses. [Read More](#)

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**Upcoming Events in Vancouver**

- October 19 12:00 PM **WiP Seminar: Dr. Annalijn Conklin** St. Paul's Hospital & Online
- October 25 4:00 PM **The Future of Regenerative Medicine** Pan Pacific Hotel
- October 26 11:00 AM **Know Your Payers: Will Insurers Pay for Your Health Technology?** Online
- November 2-3 9:00 AM **Invest in BC Presented by Lumira Ventures** Online
- November 3-6 6:00 PM **9<sup>th</sup> TFRI Scientific Meeting** Vancouver Convention Centre

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**STEMCELL Jobs in Vancouver**

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- Program Associate, Custom Services** STEMCELL Technologies
- Scientist, Immunology and Immunotherapies** STEMCELL Technologies
- Program Associate, Operations Management** STEMCELL Technologies
- Sales Development Representative** STEMCELL Technologies

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**Other Science Jobs in Vancouver**

- Associate Director, Validation (GMP)** AbCellera
- Senior Scientist, Synthetic Organic Medicinal Chemistry** adMare BioInnovations
- Microscopist** UBC
- QC Associate II, Testing & Validation Compliance** Evonik
- Development Manager, Nucleic Acid Therapeutics** Cytiva

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