

Publications of the Week

KCC2 Drives Chloride Microdomain Formation in Dendritic Blebbing

First Author: Nicholas Weilinger | Senior Author: Brian MacVicar (*pictured*)
Cell Reports | Djavad Mowafaghian Centre for Brain Health and UBC



Intracellular chloride ion concentration ($[Cl^-]_i$) homeostasis is critical for excitatory/inhibitory balance and volume regulation in neurons. The authors quantitatively map spatiotemporal dendritic $[Cl^-]_i$ dynamics during N-methyl-D-aspartate excitotoxicity to determine how Cl^- changes contribute to localized dendritic swelling (blebbing) in stroke-like conditions. [Abstract](#)

Highly Sensitive, Flow Cytometry-Based Measurement of Intestinal Permeability in Models of Experimental Colitis

First Author: Kevin Tsai | Senior Author: Bruce Vallance (*pictured*)
Cellular and Molecular Gastroenterology and Hepatology | British Columbia Children's Hospital Research Institute and UBC



Elevated intestinal permeability is seen in a variety of inflammatory conditions such as enteric infections and inflammatory bowel disease. The authors directly compared their orally gavaged ovalbumin assay against the fluorescein isothiocyanate-conjugated dextran assay by co-administering both probes orally to the same animals and subsequently using their respective methodologies to measure intestinal permeability by detecting probe levels in the plasma. [Abstract](#)

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Awards

Seven Faculty of Medicine Graduate Students Named as Public Scholars

UBC Faculty of Medicine



Now entering its eighth year, the Public Scholars Initiative recognizes UBC doctoral students who are doing research that extends beyond the traditional approach. These students are doing work for the public good, in collaborative, interdisciplinary ways. Kevin Kuchinski (*pictured*) is using genomic sequencing of sediment specimens from wild bird habitats for avian influenza surveillance. [Read More](#)

Friedman Award Recognizes Ten Students and Residents Working in Health

UBC Graduate and Postdoctoral Studies

Named after Dr. Sydney Friedman and his wife Dr. Constance Livingstone-



Friedman, the Friedman Award for Scholars in Health supports learning and research opportunities for graduate students or medical residents working in the broad area of health. Winners stem from a variety of programs, including Zoology, Engineering, Experimental Medicine, and Political Science. Bev Larssen's (*pictured*) project investigates brain biomarkers for sensory and motor recovery after stroke. [Read More](#)

SBME's 2022 D&ID Faculty Award Winners Aim to Transform Healthcare for All

UBC School of Biomedical Engineering



On April 7, 2022, design teams from across UBC competed in this year's Design & Innovation Day. Student teams from various engineering-affiliated departments presented their design solutions for technical challenges that industry and community partners had set out for them eight months prior. Justin Kuan, Eric Lyall, Benjamin McMaster, Alexander Jake Moersch (*pictured*), and Bruno Ozaki partnered with Aspect Biosystems to develop an automated glucose-stimulated insulin secretion assay. [Read More](#)

Outstanding Achievement Award by an Undergraduate or Medical Student: Isabella Parrotta

BC Children's Hospital Research Institute



Isabella Parrotta (*pictured*) hasn't quite decided yet where her life will go after she finishes her kinesiology undergraduate degree at UBC later this year. She's mulling over medical school or physiotherapy, but right now, the 22-year-old wants to keep her options open. As the winner of this year's BC Children's Hospital Research Institute Outstanding Achievement by an Undergraduate or Medical Student award, Parrotta has already gained a lot of experience in both fields. [Read More](#)

SBME Student Wins Irving K. Barber Women in Technology Scholarship

UBC School of Biomedical Engineering (SBME)



Equity, Diversity, and Inclusion advocacy, Biomedical Engineering Student Team co-captaining, software development, a Skunkworks Hackathon commercialization victory, conferences presentations, Biomedical Engineering Undergraduate Society Association projects... this well-rounded Cansbridge Fellow and Wesbrook Scholar has been on a steady path to changing biomedical engineering and healthcare for the better since starting at SBME in 2018. Now in her fourth year, Coralie Tcheune (*pictured*) has won the Irving K. Barber Women in Technology Scholarship.

[Read More](#)

Neil Mackenzie Mentorship Excellence Award Recipient 2022: Dr. Samantha Grist

The Centre for Blood Research

Dr. Samantha Grist (*pictured*) works as part of an interdisciplinary team with Drs. Karen Cheung, Sudip Shekhar, and Lukas Chrostowski on developing accurate, quantitative technologies for diagnostic testing that are suitable for point-of-need



measurements, in places like remote and rural communities that are far from diagnostic testing labs. She received the 2022 Neil Mackenzie Mentorship Excellence Award. [Read More](#)

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Local News

Single-Cell Genome Sequencing Provides New Insights into Deadly Cancers

UBC Faculty of Medicine



By sequencing the genomes of individual cells from the biopsies of 158 BC Cancer patients, researchers were able to observe the processes of evolution as it occurred within individual cells. The team, led by UBC Pathology and Laboratory Medicine Professor Dr. Samuel Aparicio (*pictured*), sequenced more than 35,000 single-cell genomes from tumour samples. [Read More](#)

Medical School Was Dr. Quynh Doan's Ticket Out of Singing, and Where She Found Her Calling

BC Children's Hospital Research Institute



Dr. Quynh Doan (*pictured*) is a pediatric emergency physician at BC Children's Hospital, Investigator, Director of Clinical Research, and Interim Senior Executive Director at BC Children's Hospital Research Institute. She talks about her background, career, research, and passions. She is working on youth mental health resource access, which includes screening, identifying the right resources, and seeing whether screening actually leads to accessing resources. [Read More](#)

Sick Queen Bees Have Shriveled Ovaries, Putting Their Colonies at Risk

UBC News



Viral infections in honey bees are becoming more intense and widespread. UBC researchers Abigail Chapman and Dr. Alison McAfee (*pictured*) found that virus-infected queen bees in the field have shriveled ovaries compared with healthy ones. The researchers then infected queen bees in the lab with a different virus, and noticed the same result. [Read More](#)

Characterizing COVID-19-Associated Cardiac Injury

Centre for Heart Lung Innovation



Dr. Bruce McManus' (*pictured*) team recently studied the explanted hearts of 21 COVID-19 positive decedents. Using a custom tissue microarray on regions of pathological interest and immunohistochemistry and *in situ* hybridization, they compared these hearts to clinically matched controls and patients with other causes of viral myocarditis. [Read More](#)

BIOCAPS Spotlight: Dr. Wayne Vogl

Faculty of Medicine Department of Cellular & Physiological Sciences



The UBC Department of Cellular & Physiological Sciences is shining a spotlight on Dr. Wayne Vogl (*pictured*) this month for their BIOCAPS Spotlight Series in honour of his 40 years of excellence in teaching, research, and service. Dr. Vogl was appointed Assistant Professor at UBC in 1981, and rose through the ranks to become Professor in 1992. His major research field is the cell biology of the seminiferous epithelium. [Read More](#)

STEM + Social Media: SBME Student Hannah Meaney Taps into a New Platform for Connection and Student Engagement

UBC School of Biomedical Engineering (SBME)



Third year Biomedical Engineering student Hannah Meaney (*pictured*) had the hurdle of transitioning from in-person campus life partway through her first year with the onset of COVID-19. Day in and day out, Hannah's inaugural year at UBC became a barrage of screens. So Hannah took matters into her own hands and used screens to her advantage. Hannah started making TikTok and Youtube videos featuring her study methods, "day in the life" walkthroughs, course prep, school hauls, and more. [Read More](#)

Genomic Data Can Improve Pandemic Modelling, SFU Researchers Say

SFU News



In a paper recently published in *Nature Microbiology*, SFU mathematics researchers Drs. Caroline Colijn (*pictured*), Pengyu Liu, and Jessica Stockdale note that genomic sequencing technologies have improved to the point where it is possible to consistently sample over time to understand how pathogens mutate and evolve to produce new variants or strains. [Read More](#)

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Upcoming Events in Vancouver

November 2–3 **Invest in BC Presented by Lumira Ventures**
9:00 AM Online

November 3–6 **9th TFRI Scientific Meeting**
6:00 PM Vancouver Convention Centre

November 4 **Medical Genetics Research Day 2022**
10:30 AM Life Sciences Centre

November 4 **Lost in Translation: Leveraging Preclinical Models to Interrogate Effects of Developmental Cannabis Exposure**
11:00 AM Djavad Mowafaghian Centre for Brain Health & Online

November 17 **Vancouver Diabetes Research Day 2022**
9:00 AM BC Children's Hospital Research Institute

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STEMCELL Technologies

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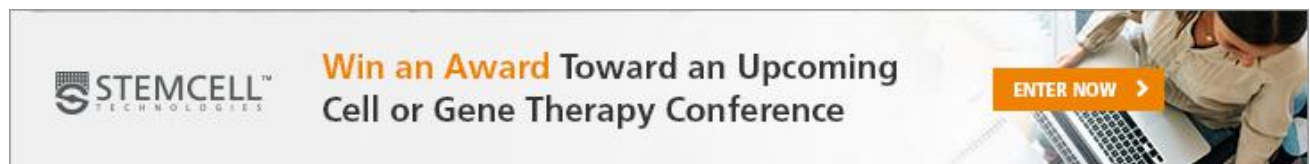
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