



Volume 9.10: March 17, 2025

Publications of the Week

Brain Pericytes and Perivascular Fibroblasts Are Stromal Progenitors With **Dual Functions in Cerebrovascular Regeneration After Stroke**

First Authors: Louis-Philippe Bernier (pictured) and Jasmin Hefendehl | Senior Author: Brian MacVicar Nature Neuroscience | Djavad Mowafaghian Centre for Brain Health and UBC



Stromal progenitor cells (SPCs) are critical for tissue regeneration following injury in many organs, yet their identity in the brain remains elusive. Here, researchers show that the perivascular niche of brain SPCs includes pericytes, venular smooth muscle cells, and perivascular fibroblasts that together help cerebral microvasculature regenerate following experimental stroke. Abstract

Epstein-Barr Virus Infection Promotes T Cell Dysregulation in a Humanized Mouse Model of Multiple Sclerosis

First Author: Jessica Allanach (pictured) | Senior Author: Marc Horwitz Science Advances | Fraser Health Multiple Sclerosis Clinic and UBC



Latent infection with Epstein-Barr virus (EBV) is a strong risk factor for the development of multiple sclerosis (MS), although the underlying mechanisms remain unclear. To investigate this association, researchers induced experimental autoimmune encephalomyelitis in immunodeficient mice reconstituted with peripheral blood mononuclear cells from individuals with or without a history of EBV infection and/or relapsing MS. Abstract | Press Release

View All Publications

Awards

Driving Scientific Research and Medical Innovation

The Centre for Heart Lung Innovation



The Centre for Heart Lung Innovation (HLI) is celebrating the achievements of three principal investigators who have been awarded funding through the Canadian Institutes of Health Research (CIHR) Project Grants, Fall 2024 competition. The HLI winners of the CIHR grants are Drs. Scott Tebbutt (pictured), James Russell, and Pascal Bernatchez. Read More

Terry Fox Research Institute Names Five 2025 Terry Fox New Investigator Awardees

The Terry Fox Research Institute



The Terry Fox Research Institute has named five early-career scientists as the 2025 Terry Fox New Investigator awardees. Each recipient will receive \$525,000 over the next three years to support groundbreaking cancer research. The awardees from BC are both researchers from UBC, Drs. Emilia Lim (pictured) and

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Local News

Right-Side Low-Frequency rTMS Improved Major Depressive Symptoms Djavad Mowafaghian Centre for Brain Health (DMCBH)



The first study of its kind into low-frequency repetitive transcranial magnetic stimulation (rTMS) on a specific region of the brain shows promising results for individuals with treatment-resistant depression. Led by DMCBH member Dr. Fidel Vila-Rodriguez (pictured), the study offers new potential inroads for the safe and effective treatment of depression and suicidal ideation. Read More

Uplifting the Next Generation of Women in Science Vancouver Coastal Health Research Institute (VCHRI)



At VCHRI, women from diverse backgrounds and career stages are challenging the status quo and uplifting one another to succeed. VCHRI spoke with three teams from the inaugural VCHRI Summer Program Advancing Research Knowledge and Skills (SPARKS) cohort, who exemplify research excellence and leadership. These inspiring investigator and trainee duos include Dr. Amina Zoubeidi (pictured, right) and Rainie Fu (left). Read More

How a Mobile App Developed by BCCHR Could Help Save Lives Around the World

BC Children's Hospital Research Institute (BCCHR)



An innovation from BC Children's Hospital Research Institute could have a positive impact on children worldwide. A team of researchers at the Institute for Global Health have developed the RRate app — a mobile application that measures respiratory rate. "We invented, validated, and used this app in clinical studies, and recent data confirms that thousands of children in East Africa are benefiting hugely from it," says Dr. Mark Ansermino (pictured), the study's lead. Read More

How IHID is Shaping the Future of Health Research—and Why It Matters Genome BC



The future of transformative health research depends on the ability to access and connect vast amounts of data. For years, patient data has been siloed in different systems, making it difficult for researchers to get the full picture. But Integrated Health Informatics Datalab (IHID), developed through a key partnership with Genome BC, is changing that. Read More

Tissue Biobanks Powering Scientific and Medical Discovery and Innovation Centre for Heart Lung Innovation (HLI)



Established in 1977, and now directed by HLI's Dr. Tillie Hackett (pictured), the James Hogg Lung Biobank is the longest-running lung biobank in Canada and contains more than 90,000 specimens from over 3000 patients. It has been a significant resource for lung research, contributing to over 800 published research projects since its founding. Read More

Therapies for Rare Diseases UBC Michael Smith Laboratories

Leveraging the Power of Model Organisms to Diagnose and Develop New

Prior to 2010, it was very difficult to pinpoint the specific genes and genetic



mutations that cause rare human diseases. However, extraordinary advancements in technology have completely changed the landscape of human genetics. By sequencing the genomes of individuals who have rare diseases, geneticists are able to identify genetic variants that could be causing disease, which are then studied in follow-up experiments. Read More

Harnessing the Power of Portable Neuroimaging Djavad Mowafaghian Centre for Brain Health MRI, or magnetic resonance imaging, is a powerful imaging technique that uses a



magnetic field and radio waves to generate a detailed map of internal organs and structures. Dr. Shannon Kolind (pictured) and her team are among the first researchers in Canada testing the power of low-field portable MRI, which could bring the diagnostic power of MRI to patients with multiple sclerosis. Read More

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28 Graduate Students Compete in UBC's Three Minute Thesis

Interesting Articles

UBC Graduate School Nearly thirty graduate students competed in the UBC Three Minute Thesis semi-



April 8

finals with ten students moving on to the finals. The Three Minute Thesis (3MT) is an academic competition that assists current graduate students with fostering effective presentation and communication skills. Originally developed at the University of Queensland, the 3MT is now held worldwide. Read More View All Interesting Articles 👂 | Submit an Article 😜

March 20 **BIG Research Day** 8:00 AM Life Sciences Institute

April 2 Precision Oncology: Bridging Research and Community 6:00 PM Robert H. Lee Alumni Centre

Upcoming Events in Vancouver

April 7 SBME Official Opening: Public Open House 12:00 PM School of Biomedical Engineering

9:00 AM School of Biomedical Engineering April 8 WYMM Tour: Vancouver 9:30 AM Morris J Wosk Centre for Dialogue

SBME Symposium 2025

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Postdoctoral Research Fellow **UBC Michael Smith Laboratories**

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