

Publications of the Week

Optimized CRISPR-Mediated Gene Knockin Reveals FOXP3-Independent Maintenance of Human Treg Identity

First Author: Avery Lam (pictured, front row, right) | Senior Author: Megan Levings
Cell Reports | BC Children's Hospital Research Institute and UBC



Regulatory T cell (Treg) therapy is a promising curative approach for a variety of immune-mediated conditions. CRISPR-based genome editing allows precise insertion of transgenes through homology-directed repair, but its use in human Tregs has been limited. The authors report an optimized protocol for CRISPR-mediated gene knockin in human Tregs with high-yield expansion. [Profile](#) | [Abstract](#)

The Role of Mitochondrial Apoptotic Pathway in Islet Amyloid-Induced β -Cell Death

First Author: Helen Wong | Senior Author: Lucy Marzban (pictured)
Molecular and Cellular Endocrinology | BC Children's Hospital Research Institute and UBC



Islet amyloid, formed by aggregation of human islet amyloid polypeptide (hIAPP), contributes to β -cell death in type 2 diabetes. The authors previously showed that extracellular hIAPP aggregates promote Fas-mediated β -cell apoptosis. Here, they tested if hIAPP aggregates can trigger the mitochondrial apoptotic pathway. [Abstract](#)

Biomaterial and Cellular Implants: Foreign Surfaces Where Immunity and Coagulation Meet

Authors: Jayachandran Kizhakkedathu (pictured, left) and Edward Conway (right)
Blood | The Centre for Blood Research and UBC



Exposure of blood to a foreign surface in the form of a diagnostic or therapeutic biomaterial device or implanted cells or tissues elicits an immediate, evolutionarily conserved thrombo-inflammatory response by the host. In this review, some of the complex mechanisms by which biomaterials and cellular transplants provide a "hub" for activation and amplification of coagulation and immunity — thrombo-inflammation — are discussed, with a view toward the development of innovative means of overcoming the innate challenges. [Abstract](#)

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Awards

UBC Team Receives Funding to Profile Biological Properties of SARS-CoV-2 VoCs and Evaluate Their Susceptibility to Therapeutics

UBC Life Sciences Institute



A UBC team led by Dr. François Jean (pictured) has been funded to produce rapid and detailed characterizations of emerging SARS-CoV-2 variants of concern (VoCs) by CoVaRR-Net, a Canadian research network focused on emerging variants. The funding will support the interdisciplinary team in systematically profiling the biological properties of SARS-CoV-2 VoCs and investigating the susceptibility of VoCs to potential life-saving treatments. [Read More](#)

BC-CfE Joins REACH Collaboratory in HIV Cure Research

BC Centre for Excellence in HIV/AIDS (BC-CfE)



The BC-CfE's Laboratory and its Director, Dr. Zabrina Brumme (pictured), are celebrating another recent success in being awarded grant funding for research. The BC-CfE, along with frequent collaborating partner Simon Fraser University, are now a part of the U.S.-based Research Enterprise to Advance a Cure for HIV (REACH) Collaboratory. [Read More](#)

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Local News

Is Aging More Reversible Than We Thought?

Signals Blog



Can our life span be extended, and if yes what is the limit? Dr. Fabio Rossi (pictured), Director of Research at the UBC School of Biomedical Engineering and Canada Research Chair in Regenerative Medicine, details what we know about aging and our ability to reverse it in this blog written for *Signal's* sixth annual blog carnival. [Read More](#)

Life Outside the Lab at the Centre for Blood Research

UBC Centre for Blood Research



Kevin Gonzalez (pictured, far left), a graduate student in the labs of Drs. Ed Conway and Jay Kizhakkedathu, describes opportunities for networking and involvement that can be found within the Centre for Blood Research (CBR), including the CBR Graduate Award Program, the Outreach Committee, and the Health and Wellness Committee. [Read More](#)

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Upcoming Events in Vancouver

- September 8 12:00 pm **New Genomics for Non-Invasively Monitoring Canada's Polar Bear Populations** Online
- September 9 9:00 am **ADDC Webinar — "Things I Wish I Knew": Venture Funding** Online
- September 13 10:00 am **World Sepsis Day 2021 Panel: Bridging Gaps in Post-Sepsis Care for Sepsis Survivors** Online
- September 15 12:00 pm **Investigating Drought Resistant Soy Bean Cultivars** Online
- September 18 - 19 6:00 am **"I Move for Immigrant Women in Science" 2021** Online

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- Senior Quality Control Analyst, Microbiology**
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