

## Publications of the Week

## Selective B Cell Depletion Upon Intravenous Infusion of Replication-Incompetent Anti-CD19 CAR Lentivirus

First Author: Craig Rive (pictured, far left) | Senior Author: Robert Holt (centre, back)  
Molecular Therapy Methods & Clinical Development | Canada's Michael Smith Genome Sciences Centre, UBC, and SFU



Anti-CD19 chimeric antigen receptor (CAR) T therapy for B cell malignancies has shown clinical success, but a major limitation is the logistical complexity and high cost of manufacturing autologous cell products. If engineered for improved safety, direct infusion of viral gene transfer vectors to initiate *in vivo* CAR T transduction, expansion, and anti-tumour activity could provide an alternative, universal approach. [Profile](#) | [Abstract](#)

## Structure and Activity of Human TMPRSS2 Protease Implicated in SARS-CoV-2 Activation

First Author: Bryan Fraser | Senior Author: François Bénard (pictured)  
Nature Chemical Biology | BC Cancer Research Institute and UBC



Transmembrane protease, serine 2 (TMPRSS2) has been identified as a key host cell factor for viral entry and pathogenesis of SARS-CoV-2. The authors present a recombinant production strategy for enzymatically active TMPRSS2 and characterization of its matured proteolytic activity, as well as its 1.95 Å X-ray cocrystal structure with the synthetic protease inhibitor nafamostat. [Abstract](#)

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## Awards

## Dr. Pieter Cullis Awarded 2022 Tang Prize for Contributions to COVID-19 mRNA Vaccines

UBC Faculty of Medicine



UBC Medicine Professor Dr. Pieter Cullis (pictured) has been awarded the 2022 Tang Prize in Biopharmaceutical Sciences for his work developing the lipid nanoparticle technology that enabled mRNA-based COVID-19 vaccines. The Tang Prize recognizes biomedical research that has led to significant advances in human health by helping prevent, diagnose, or treat major diseases. [Read More](#)

## Dr. Alison McAfee Receives L'Oreal Rising Talents Award

Michael Smith Laboratories



Dr. Alison McAfee (pictured), originally from a remote island in BC, didn't expect to be travelling to Paris one day to accept the prestigious L'Oréal-UNESCO For Women in Science Rising Talents Award, but now she finds herself doing just that. An expert in honey bee fertility working in Dr. Leonard Foster's lab, this is Dr. McAfee's second accolade from L'Oréal-UNESCO. [Read More](#)

## Ly Vu Awarded Stem Cell Network Early Career Investigator Jump Start Award

BC Cancer



Congratulations to Dr. Ly Vu (pictured) for receiving the Stem Cell Network Early Career Investigator Jump Start Award for her research entitled, "Modulating Activity of RNA Regulating Proteins To Preserve Long-Term Regenerative Potential of Hematopoietic Stem Cells." This award supports early career researchers to develop a research program with a regenerative medicine focus. [Read More](#)

## Pamela Hoodless Awarded Stem Cell Network Impact Award and Fueling Biotechnology Partnerships Program Award

Terry Fox Laboratory



Congratulations to Dr. Pamela Hoodless (pictured) for receiving the Stem Cell Network Impact Award and Fueling Biotechnology Partnerships Program Award. The Impact Award supports proof-of-principle experiments, including novel therapeutic or technical approach development that will drive regenerative medicine therapies forward. [Read More](#)

## Winners of 2022 DMCBH Kickstart Grants Announced

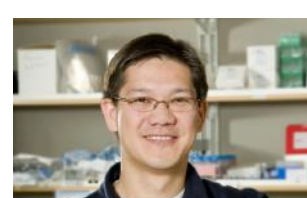
Djavad Mowafaghian Centre for Brain Health



The Djavad Mowafaghian Centre for Brain Health (DMCBH) Kickstart Grants are intended to encourage research that demonstrates new collaborations, directions, and technological developments. It supports new projects that generate preliminary data for future grant applications to external funding agencies. Congratulations to the winners, including Dr. Mark Cembrowski (pictured). [Read More](#)

## Andrew Weng Awarded Leukemia and Lymphoma Society of Canada Blood Cancer Research Jump Start Grant

Terry Fox Laboratory



Congratulations to Dr. Andrew Weng (pictured) for receiving the Leukemia and Lymphoma Society of Canada (LLSC) Blood Cancer Research Jump Start Grant for his research entitled, "Functional modeling of MYC translocation in follicular lymphoma." The LLSC has put together this award recognizing that the COVID-19 pandemic has affected researchers' capacity to conduct their regular research and training activities. [Read More](#)

## Florian Kuchenbauer Awarded Leukemia and Lymphoma Society of Canada, Pediatric Blood Cancer Research Innovation Grant

BC Cancer



Congratulations to Dr. Florian Kuchenbauer (pictured) for receiving the Leukemia and Lymphoma Society of Canada (LLSC) Pediatric Blood Cancer Research Innovation Grant for his research entitled, "MiR-193a-based LNP drug treatment for pediatric acute myeloid leukemia." The LLSC's Pediatric Blood Cancer Research Innovation Grant is a two-year grant designed to provide funding to research that will lead to a significant change in the understanding, diagnosis, or treatment of pediatric blood cancers. [Read More](#)

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## Local News

## First Made-in-Canada CAR T Cell Therapy for Cancer Shows Promise in Clinical Trial

BC Cancer Research



More than a dozen people with cancer who had exhausted all treatment options are alive and cancer-free today thanks to a pioneering Canadian clinical trial of a highly personalized kind of immunotherapy. Patients in the trial had their immune cells (T cells) removed and genetically engineered in a lab to enhance their cancer-killing ability. [Read More](#)

## Precision NanoSystems and Aurora Vaccines Join Forces to Accelerate the Development of Vaccine Candidate for Hepatitis C Virus

Precision NanoSystems



Precision NanoSystems (PNI) has entered into a strategic collaboration agreement with Aurora Vaccines to accelerate the development and manufacture of its Hepatitis C vaccine candidate. PNI will share its expertise in the development of the RNA payload platform and its proprietary lipid nanoparticle (LNP) platforms to help bring Aurora's RNA-LNP vaccine candidate for the prevention of Hepatitis C virus infection to a Phase I clinical trial. [Read More](#)

## Norman Bethune Symposium 2022: Personalized Medicine in Focus

The Centre for Blood Research



On April 6, 2022, the 11<sup>th</sup> annual Norman Bethune Symposium returned to UBC Robson Square, in its first-ever hybrid format since the beginning of the COVID-19 pandemic. The symposium honours Dr. Norman Bethune (pictured), a pioneer in the field of blood transfusion during the Spanish Civil War. The symposium was packed with talks from celebrated international and local scientists, clinicians, trainees, and a moving patient testimonial. [Read More](#)

## Addressing Challenges Associated With Genome Analysis When Nucleic Acids Are Extracted From Formalin-Fixed Paraffin-Embedded Tissue Samples

Canada's Michael Smith Genome Sciences Centre



Formalin fixation of paraffin-embedded (FFPE) tissue samples is widely used to preserve tissue for clinical investigation. However, the integrity of the genomic material extracted from such samples is not always preserved, and it can lead to errors in downstream sequencing analysis, including somatic variant calling. Scientists, including Richard Corbett (pictured), conducted a comprehensive comparison of variant caller performance and established a bioinformatics-based approach to improve somatic variant calling from FFPE tissue samples. [Read More](#)

## Alpha Cognition Announces Positive Results from Pivotal Study with ALPHA-1062 in Development for Alzheimer's Disease

Alpha Cognition



Alpha Cognition, a biopharmaceutical company committed to developing novel therapies for people with debilitating neurodegenerative disorders, has announced positive results from its pivotal bioequivalence study with ALPHA-1062, a proprietary, delayed release oral tablet formulation in development for the treatment of mild to moderate Alzheimer's Disease. [Read More](#)

## Algermon Pharmaceuticals Announces Issuance of Patent for Ifenprodil for the Treatment of Idiopathic Pulmonary Fibrosis

Globe Newswire



Algermon Pharmaceuticals, a Canadian clinical stage pharmaceutical development company, has announced that it has been issued a patent from the Canadian Intellectual Property Office for the treatment of interstitial lung disease with NP-120. The invention claims treating interstitial lung disease, including idiopathic pulmonary fibrosis. [Read More](#)

## How a Young Scientist Turned His Research Career Into Community Outreach

Djavad Mowafaghian Centre for Brain Health



Ryan Tomm (pictured) never expected to end up in the lab. He just knew he wanted to help his community, the Cree Nation in Northern Alberta. Maybe by working as a counsellor, or a psychologist. But neuroscience research turned out to be his path. Now, Tomm is a behavioural neuroscience and psychology PhD candidate at UBC. Tomm spoke with BrainFacts.org about his research, his science outreach, and how both can benefit his community. [Read More](#)

## Fine-Tuning Fibrin(ogen)

The Centre for Blood Research



Fibrinogen plays multi-faceted roles in many processes that are essential for the maintenance of human health and the prevention of disease. The formation of a stable blood clot, for example, relies on thrombin-mediated cleavage of fibrinogen to fibrin. In a recent study published by Dr. Christian Kastrup's (pictured) lab at the UBC Centre for Blood Research and Michael Smith Laboratories, the authors investigated a strategy to modulate fibrinogen expression using lipid nanoparticle delivery of small interfering RNA. [Read More](#)

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## Upcoming Events in Vancouver

June 29 12:00 PM	BC-CfE Celebrates 30 Years of Excellence Online
June 29 2:00 PM	MSL BBQ, Poster Session & Recognition Event Michael Smith Laboratories
June 30 11:00 AM	SBME Virtual Seminar: Carl de Boer Online
July 8 4:00 PM	D.R.I.N.K.S. Vancouver Mahony and Sons
August 16 9:00 AM	SBME Synergy Research Day Life Sciences Centre

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## STEMCELL Jobs in Vancouver

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