

Publications of the Week

Suppressive and Gut Reparative Functions of Human Type 1 T-Regulatory Cells

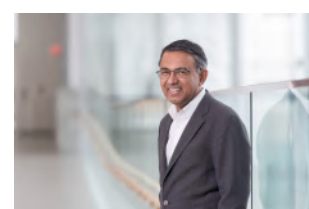
First Author: Laura Cook | Senior Author: Megan Levings
Gastroenterology | BC Children's Hospital Research Institute and UBC



Type 1 T-regulatory (Tr1) cells secrete the anti-inflammatory cytokine interleukin (IL) 10, so Tr1 cells might be used in treatment of inflammatory bowel diseases. The authors found that human Tr1 cells suppressed the proliferation of effector T cells and the production of IL1 beta and TNF by myeloid cells. They also secreted IL22 to regulate repair of the epithelium and promote barrier function. [Profile](#) | [Abstract](#)

Cryo-EM Structure of a Dimeric B-Raf:14-3-3 Complex Reveals Asymmetry in the Active Sites of B-Raf Kinases

First Author: Yasushi Kondo | Corresponding Author: Sriram Subramaniam (pictured) | Senior Author: John Kuriyan
Science | UBC



Raf kinases are important cancer drug targets. Paradoxically, many B-Raf inhibitors induce the activation of Raf kinases. Cryo-EM structural analysis of a phosphorylated B-Raf kinase domain dimer in complex with dimeric 14-3-3, at a resolution of ~3.9 Å, showed an asymmetric arrangement in which one kinase was in a canonical "active" conformation. [Profile](#) | [Abstract](#)

Recent Advances in Lipid Nanoparticle-Mediated mRNA Therapy

First Author: Norbert Maurer | Senior Author: Jay Kulkarni (pictured)
American Pharmaceutical Review | Evonik



The entry of nucleic acid products into clinical development is largely dependent upon delivery technologies and applied chemistry that enable functionality. An FDA approval of a lipid nanoparticle (LNP)-based formulation of siRNA has validated LNP technology for the cytosolic delivery of most nucleic acid-based therapeutics. This article discusses the composition and manufacturing of LNP systems, as well as their current and future applications for mRNA delivery. [Abstract](#)

[View All Publications](#)

Spotlight

Ruini Xiong and Crystal Zheng Talk Biodegradable Plastic Alternatives



In their last year of high school, Crystal Zheng (left) and Ruini Xiong (second from left) partnered with Open Science Network to study silk fibre protein and shellfish chitosan to determine how they could be manipulated to create a biodegradable plastic alternative. Their work achieved the top score at the Vancouver District Science Fair and won silver medals at the Regional Science Fair. We sat down with Ruini and Crystal to discuss the project, and their hopes for the future. [Read More](#)

[View All Spotlights](#)

Awards

Simon Fraser University Honours Inaugural Distinguished SFU Professors

SFU News



Eight of SFU's leading academic scholars, including Dr. Fiona Brinkman (pictured) from the Faculty of Science, have become the first to receive the prestigious title of Distinguished SFU Professor. This new designation recognizes their outstanding performance and achievements, and celebrates their international pre-eminence in their fields. [Read More](#)

MSFHR Funds Nine BC Health Researchers Moving Innovations towards Practical Application

Michael Smith Foundation for Health Research



Nine BC health researchers, including Dr. Bruce Verchere (pictured) at UBC, have been funded in the Michael Smith Foundation for Health Research's (MSFHR) third Innovation to Commercialization competition. Each will receive funding to advance their medical treatments, diagnostic tools and assistive technologies towards practical application to improve health outcomes and enrich the health innovation ecosystem in BC. [Read More](#)

2019 Neil Mackenzie Mentorship Excellence Award

Centre for Blood Research



Dr. Georgina Butler (pictured) has received the Neil Mackenzie Mentorship Excellence Award for demonstrating significant contributions and excellence in mentorship. This award is given annually to a Centre for Blood Research member in memory of Dr. Neil Mackenzie, a former postdoctoral fellow in Dr. Dieter Brömme's lab. [Read More](#)

26 Research Teams Receive Awards to Foster Collaboration and Improve the Uptake Of Evidence

Michael Smith Foundation for Health Research



Dr. Kyla Hildebrand (pictured) at the BC Children's Hospital Research Institute will be leading one of eight teams of BC-based researchers that have received 2019 Reach Awards from the Michael Smith Foundation for Health Research. The Reach Program provides funding for teams of researchers and research users to support the dissemination and effective uptake of research evidence. [Read More](#)

[View All Featured Awards](#) | [View Monthly Award Summaries](#)

Local News

How DNA Could Be Key to Stopping the Dangerous Decline of Canada's Bee Colonies

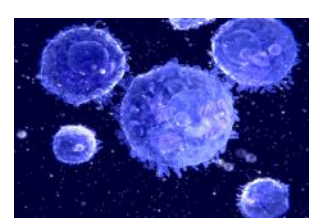
CBC News



As honey bee colonies across Canada continue to die off at alarming rates, researchers at UBC believe that solutions to the problem could be hiding in the insects' DNA. A breakthrough project will be launched in collaboration with York University. The data could yield what genomics experts call "biomarkers," signs of stress encoded in the honey bee genome that are effectively switched on or off by environmental factors. [Read More](#)

Pascal Biosciences Discovers Cannabinoids Activate the Major Histocompatibility Complex to Aid Cancer Treatment

Pascal Biosciences Inc.



Pascal Biosciences Inc. has revealed the mechanism whereby cannabinoids may directly aid in cancer treatment. Specific cannabinoids identified by Pascal scientists enhanced the immunogenicity of tumour cells, rendering them more susceptible to recognition and elimination by the immune system. This could aid cancer treatment, particularly by boosting the efficacy of checkpoint inhibitors. [Read More](#)

[View All Local News](#) | [Submit an Article](#)

Interesting Articles

Survey Suggests Canadian Trust in Science May Be Eroding

The Globe and Mail



A survey suggests that the trust Canadians place in science may be eroding. The survey also found that nearly half of those surveyed thought scientists are elitist and that a significant number of respondents discounted findings that don't accord with their personal beliefs. The Canadian figures are from a global survey of more than 14,000 people between July and September 2018. [Read More](#)

[View All Interesting Articles](#) | [Submit an Article](#)

Upcoming Events in Vancouver

October 2 4:30 PM	The Beat Must Go On: Can Personalized Medicine Intervene in Sudden Cardiac Arrest? SFU Applied Science Building
October 3 11:00 AM	BC Children's Hospital Discovery Talks BC Children's Hospital Research Institute
October 4 - 5 6:00 PM	2019 BC Regenerative Medicine 24-Hour Hackathon UBC Life Sciences Institute
October 6 1:00 PM	Scarlet Monkeyflower Adaptations are Way Cool... Beatty Biodiversity Museum
October 9 11:00 AM	UBC Career Days Robert H. Lee Alumni Centre

[View All Events](#) | [Submit an Event](#)

STEMCELL Jobs in Vancouver

- Scientist, Cell Line Development**
STEMCELL Technologies
- Associate Product Manager, Mesenchymal & Myogenic**
STEMCELL Technologies
- Scientist, B Cell Immunology**
STEMCELL Technologies
- Senior Manager, Corporate Projects**
STEMCELL Technologies
- Research Associate, Bioengineering**
STEMCELL Technologies

[View 77 Other STEMCELL Jobs](#)

Other Science Jobs in Vancouver

- Assistant Professor (Tenure Track), Medical Genetics**
UBC Faculty of Medicine, Department of Medical Genetics
- Tenure Track Assistant Professor, Immunology**
UBC Faculty of Science, Microbiology & Immunology
- Research Associate, Immuno-Oncology**
Cuprous Pharmaceuticals
- Postdoctoral Fellow, Targeted Drug Delivery and Nanomedicine**
UBC Faculty of Pharmaceutical Sciences
- Research Senior Associate, Biotherapeutic Discovery**
Amgen

[View 70 Other Science Jobs](#) | [Submit a Job](#)

ORGANIZATION AND BIOLOGY OF THE RESPIRATORY SYSTEM
STEMCELL | natureresearch
[FREE WALLCHART](#)

Submit your articles and events by reaching out to us at info@scienceinvancover.com.

BROUGHT TO YOU BY



- STEMCELL Technologies**
Products | Services
- STEMCELL's Science Newsletters**
Free Weekly Updates on Your Field
- The Stem Cell Podcast**
Interviews and Updates on Stem Cell Science