

Publications of the Week

Activation of TIR Signalling Boosts Pattern-Triggered Immunity

First Authors: Hainan Tian, Zhongshou Wu, and Siyu Chen | Senior Authors: Xin Li (pictured, bottom, right of center) and Yuelin Zhang (top, left of center)
Nature | Michael Smith Laboratories and UBC



Plant immune responses are mainly activated by two types of receptors. Pattern recognition receptors localized on the plasma membrane perceive extracellular microbial features, and nucleotide-binding leucine-rich repeat receptors recognize intracellular effector proteins from pathogens. This study reveals that activation of Toll/interleukin-1 receptor (TIR) signalling is an important mechanism for boosting plant defence during pattern-triggered immunity. [Profile](#) | [Abstract](#)

Clonamines Stimulate Autophagy, Inhibit *Mycobacterium tuberculosis* Survival in Macrophages, and Target Ptk1

First Authors: Rosanne Persaud, Sheena Li, and Joseph Chao (pictured, bottom right) | Senior Author: Raymond Andersen (top right)
Cell Chemical Biology | UBC



The pathogen *Mycobacterium tuberculosis* (Mtb) evades the innate immune system by interfering with autophagy and phagosomal maturation in macrophages, and, as a result, small molecule stimulation of autophagy represents a host-directed therapeutics approach for treatment of tuberculosis. The authors show the marine natural product clonamines activate autophagy and inhibit Mtb survival in macrophages. [Profile](#) | [Abstract](#)

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Awards

Acuitas Therapeutics Wins Global Impact Award for LNPs in COVID Vaccines

Nanomedicines Innovation Network (NMiN)



Acuitas Therapeutics, the Vancouver, BC-based biotech company co-founded by NMiN research leader Dr. Pieter Cullis (pictured), has been granted a Global Impact Award by Life Sciences British Columbia, in recognition of the company's "extraordinary leadership and efforts they made in the development of COVID-19 vaccines." Acuitas partnered with Pfizer and BioNTech in the development of their highly effective mRNA-based COVID-19 vaccine. [Read More](#)

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Local News

Michael Smith Foundation for Health Research and the BC Academic Health Science Network Unite to Drive Discovery and Innovation in BC's Vibrant Health Research System

Michael Smith Health Research BC



The boards of the Michael Smith Foundation for Health Research and the BC Academic Health Science Network have signed an agreement to join forces to create a new organization, Michael Smith Health Research BC, to support the growth and evolution of BC's health research system and life sciences sector. The new organization is being announced on the 28th anniversary of Dr. Michael Smith's Nobel Prize in chemistry. [Read More](#)

Xenon Pharmaceuticals Announces Closing of \$345 Million Public Offering Including Full Exercise of the Underwriters' Option to Purchase Additional Shares

Xenon Pharmaceuticals



Xenon Pharmaceuticals has announced the closing of its previously announced underwritten public offering of 10,000,000 common shares, which includes 1,525,423 shares sold upon the full exercise of the underwriters' option to purchase additional shares, and pre-funded warrants to purchase 1,694,915 common shares. The common shares were offered at a public offering price of \$29.50 per common share. [Read More](#)

Canadian Society for Immunology Highlights the Work of Dr. Pauline Johnson for Women's History Month 2021

Life Sciences Institute



Dr. Pauline Johnson (pictured) has been featured in a month-long campaign by the Canadian Society for Immunology for her significant contributions to advancing knowledge of the structure, function, and regulation of CD45. A type I transmembrane protein present in various isoforms on all differentiated hematopoietic cells except erythrocytes and plasma cells, CD45 is an essential regulator of T- and B-cell antigen receptor signalling. [Read More](#)

Straglr: A New Software Tool for Targeted Genotyping and Repeat Expansion Detection

BC Cancer



Several neurological diseases are characterized by abnormal accumulation of short tandem repeat sequences. Today, such repeats can be detected using short- and long-read sequencing alignments. In a study published by the lab of Dr. Inanç Birol (pictured), Distinguished Scientist at the Genome Sciences Centre, researchers have developed Straglr, a novel, robust software capable of detecting disease-causing repeats using long-read sequencing data. [Read More](#)

Psychedelic Medicine Start Up Clairvoyant Therapeutics Welcomes Biotech, Cannabis Veteran Greg Engel as Director

Life Sciences BC



Clairvoyant Therapeutics, a Canadian biotech company focused on the development of psychedelic drug therapies for addiction, has announced that Greg Engel has joined the company's Board of Directors and Long Trinh has joined as Chief Financial Officer. Mr. Engel has more than 25 years of global leadership experience in the pharmaceutical, biotechnology, and cannabis industries. [Read More](#)

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Interesting Articles

Canada's Cancer Research Excellence

TheFutureEconomy.ca



Canadian researchers lead the world in terms of their expertise on cancer therapies, especially immunotherapies. Despite a more competitive funding environment, Canadian researchers have consistently produced globally impactful work. With strong infrastructure and the right talent to keep the work going, Canada is well-positioned to keep up its excellence in cancer research. [Read More](#)

Canada's Bio-Economy Facing Severe Labour Shortage

BioTalent Canada



Canada's bio-economy is facing a severe labour shortage, with demand far exceeding supply as soon as 2024 according to a new, unprecedented labour market study released by BioTalent Canada. The national data and analysis suggests the growing bio-economy sector will need as many as 65,000 additional workers by 2029 to meet demand, and current forecasts show the talent pipeline to be three-quarters empty. [Read More](#)

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Upcoming Events in Vancouver

- October 19 12:30 PM **Seminar – Patrolling Monocyte Development and Regulation of Obesity, Tumour Metastasis, and Alzheimer's Disease**
Life Sciences Centre & Online
- October 20 10:00 AM **From Discovery to Market: The Role of IP Strategy in Drug Development**
Online
- October 21 11:30 AM **Cascadia 3.0**
University of Washington and Online
- October 29 11:00 AM **LSI & SBME Virtual Seminar — Dr. Jacky Goetz**
Online
- November 2 8:00 AM **15th Annual Earl W. Davie Symposium**
Online

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STEMCELL Jobs in Vancouver

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STEMCELL Technologies
- Project Coordinator, Corporate Projects**
STEMCELL Technologies
- Scientific Recruiter**
STEMCELL Technologies
- Scientific Support Specialist, Quality Processes**
STEMCELL Technologies
- Scientific Marketing Specialist**
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Other Science Jobs in Vancouver

- Research Assistant 2, Research Experimental Therapeutics**
BC Cancer
- Scientist, Reagent Process Development**
Notch Therapeutics
- CRISPR Core Team Lead**
UBC
- Applications Scientist**
Aspect Biosystems
- Scientist, Preclinical/Immunology**
Acuitas Therapeutics

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