

Publications of the Week

### Sunflower Pan-Genome Analysis Shows that Hybridization Altered Gene Content and Disease Resistance

First Author: Sarel Hübner | Senior Author: Loren Rieseberg *(pictured)*  
Nature Plants | UBC



Despite domestication and improvement bottlenecks, the cultivated sunflower remains highly variable genetically, possibly due to hybridization with wild relatives. To characterize genetic diversity in the sunflower and to quantify contributions from wild relatives, the authors sequenced 287 cultivated lines, 17 Native American landraces and 189 wild accessions representing 11 compatible wild species. [Abstract](#)

### Differential Regulation of TNL-Mediated Immune Signalling by Redundant Helper CNLs

First Author: Zhongshou Wu *(front row, left)* | Senior Author: Xin Li *(front row, right)*  
New Phytologist | Michael Smith Laboratories and UBC



Higher plants utilize nucleotide-binding leucine-rich repeat domain proteins (NLRs) as intracellular immune receptors to recognize pathogen-derived effectors and trigger a robust defense. The Activated Disease Resistance 1 (ADR1) family of coiled-coil NLRs (CNLs) have evolved as helper NLRs that function downstream of many TIR-type sensor NLRs (TNLs). Close homologs of ADR1s form the NRG1 family in *Arabidopsis*, the function of which is unclear. [Abstract](#)

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Local News

### Scientists Grow Perfect Human Blood Vessels in a Petri Dish

UBC Faculty of Medicine



Scientists at UBC, led by Dr. Josef Penninger *(pictured)*, have managed to grow perfect human blood vessels as organoids in a petri dish for the first time. The breakthrough engineering technology dramatically advances research of vascular diseases like diabetes, identifying a key pathway to potentially prevent changes to blood vessels — a major cause of death and morbidity among those with diabetes. [Read More](#)

### Legalization Sparks Boom in Once-Stigmatized Field of Marijuana Research

CTV News



Canada is poised to become a cannabis research leader, after it became the first G7 nation to legalize recreational cannabis in the fall. Pot companies are rapidly expanding and have a tremendous need for qualified staff, including scientists and researchers. The federal government is investing in marijuana research too. CIHR announced \$1.4 million in funding for 14 pot-related projects last January, and it helped launch a \$3-million grant opportunity in July. [Read More](#)

### An Atlas of the Brain – New MRI Technology Makes Mapping Nerve Connections Easier

Vancouver Coastal Health Research Institute



Diagnosed with multiple sclerosis, Janet Uribe *(pictured)* jokingly says she now volunteers as a 'brain model' at the Djavad Mowafaghian Centre for Brain Health, where she regularly takes part in clinical trials and studies. One of the studies Uribe is involved with is a new research project that aims to map myelin levels in the brain. "It may mean nothing for me in the short term," says Uribe. "But down the road this mapping study will help others. I'm very excited to be part of it." [Read More](#)

### Dr. Kevin Hay Appointed Clinician-Scientist at the Terry Fox Laboratory

Terry Fox Laboratory



Congratulations to Dr. Kevin Hay *(pictured)* on his new appointment as Clinician-Scientist at the Terry Fox Laboratory and the Leukemia/Bone Marrow Transplant Program of BC. Dr. Hay's translational research focuses on the development and clinical application of novel cellular immunotherapies, particularly chimeric antigen receptor-modified (CAR)-T cells. [Read More](#)

### From Computers to Clinics: Advances in Designing Polyphosphate Inhibitors as Novel Anti-Thrombotics

The Centre for Blood Research



Thrombosis remains one of the leading causes of death and disability worldwide. While there are several antithrombotic drugs available on the market, many suffer from undesirable side effects, particularly bleeding. Currently, Dr. Jayachandran Kizhakkedathu's *(pictured)* research group is pursuing a number of avenues towards the development of novel anti-thrombotics without the limitations associated with current medications. [Read More](#)

### Controlling Blood Pressure Protects Cognitive Health after Spinal Cord Injury

Vancouver Coastal Health Research Institute



Vancouver Coastal Health Research Institute scientists at ICORD (The International Collaboration on Repair Discoveries) are focusing on cardiovascular problems in spinal cord injury patients, in particular their inability to regulate blood pressure. They're especially interested in how blood pressure dysregulation is linked to cognitive impairment. [Read More](#)

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Interesting Articles

### Researchers Scramble to Meet Deadline for New Frontiers Research Fund

University Affairs



While many Canadian academics were enjoying a bit of time off over the holidays, some early-career researchers were scrambling to put together applications for the New Frontiers in Research Fund, the new funding program designed to support risky interdisciplinary research. But some researchers are unhappy with how the program was rolled out, citing a lack of clarity about what reviewers will be looking for and the extremely tight deadlines over a holiday period. [Read More](#)

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### Upcoming Events in Vancouver

- January 22 8:30 AM **ICTC Women's Roundtable Workshop**  
Morris J Wosk Centre for Dialogue
- January 24 6:30 PM **Science World After Dark**  
Telus World of Science
- January 30 - 31 8:00 AM **LifeSciences BC Access to Innovation Conference 2019**  
Vancouver Convention Centre West
- January 30 7:00 PM **Brews, Builds 'N' Bytes Night – Simple Machines**  
Storm Crow Alehouse
- January 31 4:00 PM **2019 UBC Undergraduate Neuroscience Conference**  
Djavad Mowafaghian Centre for Brain Health

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### STEMCELL Jobs in Vancouver

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