

Publications of the Week

## Computational Identification of Micro-Structural Variations and Their Proteogenomic Consequences in Cancer

First Author: Yen-Yi Lin | Senior Author: Cenk Sahinalp (*pictured*)  
Bioinformatics | The Vancouver Prostate Centre and SFU



Rapid advancement in high throughput genome and transcriptome sequencing and mass spectrometry technologies has enabled the acquisition of the genomic, transcriptomic and proteomic data from the same tissue sample. The authors introduce a computational framework, MiStrVar, to integratively analyze all three types of omics data for a complete molecular profile of a tissue sample. [Abstract](#)

## TGF- $\beta$ 1 Up-Regulates Cadherin-11 Expression through Snail: A Potential Mechanism for Human Trophoblast Cell Differentiation

First Author: Jung-Chien Cheng | Senior Author: Peter Leung (*pictured*)  
Cellular Signalling | BC Children's Hospital Research Institute and UBC



Cadherins are transmembrane proteins that mediate cell-cell adhesion by promoting the formation of adherens junctions. Cadherin-11, also known as OB-cadherin, is expressed in human placenta and has been shown to be involved in regulation of trophoblast cell differentiation. The authors demonstrated that transforming growth factor-beta1 (TGF- $\beta$ 1) up-regulates cadherin-11 expression in human trophoblast cells. [Abstract](#)

## REVIEW: Proteolytic Cleavage-Mechanisms, Function, And “Omic” Approaches for a Near-Ubiquitous Post-Translational Modification

First Author: Theo Klein | Senior Author: Christopher Overall (*pictured*)  
Chemical Reviews | The Life Sciences Institute and UBC



Proteases enzymatically hydrolyze peptide bonds in substrate proteins, resulting in a widespread, irreversible post-translational modification of the protein's structure and biological function. Often regarded as a mere degradative mechanism in destruction of proteins or turnover in maintaining physiological homeostasis, recent research in the field of degradomics has led to the recognition of two main yet unexpected concepts. [Abstract](#)

## Spotlight

### Artem Babaian Talks Endogenous Retroviruses and Cancer



Artem Babaian (*pictured*) is a doctoral candidate in the laboratory of Dr. Dixie Mager at the B.C. Cancer Agency. When he's not exploring mountains, Artem studies endogenous retroviruses as a contributor to Hodgkin's Lymphoma. We sat down with Artem to discuss his research and where he plans to take it once he's finished his graduate studies. [Read More](#)

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## Awards

### December 2017 Award Winners



Dr. Thalia Field (*pictured*), a stroke neurologist at the Djavad Mowafaghian Centre for Brain Health at the University of British Columbia, is one of many Vancouver researchers who won CIHR grants and other awards this past December. Find out who else in Vancouver won grants, awards, fellowships, and scholarships in our monthly award summary! [Read More](#)

### Drs. Illes, Werker, and Martin-Matthews Appointed to the Order of Canada

Djavad Mowafaghian Centre for Brain Health



On Friday, December 29, Her Excellency the Right Honourable Julie Payette, Governor General of Canada, announced 125 new appointments to the Order of Canada. Three Djavad Mowafaghian Centre for Brain Health members were included in this year's appointments: Drs. Judy Illes (*pictured*), Anne Martin-Matthews, and Janet Werker. [Read More](#)

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## Local News

### UBC Contributes to International Hunt for Asthma Genes

UBC Faculty of Medicine



The world's largest genetic study on asthma has identified five new genes associated with the condition and produced the most comprehensive list of genes and gene locations involved in the development of asthma and allergic disease. Dr. Denise Daley, an Associate Professor in the Department of Medicine at UBC, led the Canadian arm of the international collaboration. [Read More](#)

### A Repurposed Drug Could Open Door to More Stem Cell Transplants

Michael Smith Laboratories



Transplants of blood stem cells can be a cure for life-threatening blood cancers. But the treatment is often not pursued, because some of the differentiated cells have a self-destructive tendency to produce tumour necrosis factor-alpha (TNF-a), a protein that kills healthy cells when overproduced. Dr. Peter Zandstra (*pictured*) has explored whether one of several existing drugs that block TNF-a could overcome this obstacle. [Read More](#)

## Deeply Personal Research Highlighted during MP Visit to Cashman Lab

Djavad Mowafaghian Centre for Brain Health



In November, the Honourable Francis Drouin (*pictured, right*), Member of Parliament (MP) for Glengarry-Prescott-Russell, visited the Djavad Mowafaghian Centre for Brain Health. In a year when scientists have been rallying in support of the Fundamental Science Review and its implications for Canadian science funding, it was an opportunity to share the importance and broad scope of basic science in a less formal way. [Read More](#)

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### Interesting Articles

## Patients on Biologics Need to Be Wary of Substitutions

The Vancouver Sun



Over the last decade, biologic medicines have improved health outcomes in some of the most difficult-to-treat chronic conditions, greatly improving the lives of millions of patients. There are exciting and inspirational advancements on the horizon, with many B.C. companies at the forefront of this pioneering science. But there is a growing concern involving biologics — and related drugs called biosimilars. [Read More](#)

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### Upcoming Events in Vancouver

- |                        |   |
|------------------------|---|
| January 12<br>4:00 PM  | <b>Social Practice and the Science of Climate Change</b><br>Emily Carr University |
| January 17<br>8:00 AM  | <b>Access to Innovation 2018</b><br>Vancouver Convention Centre                   |
| January 22<br>12:00 PM | <b>Introduction to R Workshop Series</b><br>Life Sciences Institute, UBC          |
| January 22<br>1:00 PM  | <b>UBC Medical School FLEX Research Day</b><br>Life Sciences Institute, UBC       |
| January 23<br>7:00 PM  | <b>Written In Ice – Glaciers and Climate Change</b><br>Telus World of Science     |

## [Science Jobs in Vancouver](#)

### **Research Technologist, Cell Separation**

STEMCELL Technologies

### **Scientific Sales Representative, Cell Culture Products**

STEMCELL Technologies

### **Sector Director, Agrifood & Natural Resources**

Genome BC

### **Co-op Student, Protein Technology**

Centre for Drug Research and Development

### **Senior Technician**

Precision NanoSystems



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The banner features a black background with white and orange text. On the right side, there is a photograph of two cocktails: one in a red glass with an orange drink and one in a green glass with a green drink. A white button with a right-pointing arrow is overlaid on the bottom right of the image.

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