Volume 2.07: February 26, 2018

Publications of the Week

## Clptm1 Limits Forward Trafficking of $GABA_A$ Receptors to Scale Inhibitory Synaptic Strength

First Author: Yuan Ge | Senior Author: Ann Marie Craig *(pictured)*
Neuron | The Djavad Mowafaghian Centre for Brain Health and UBC

In contrast with numerous studies of glutamate receptor-associated proteins and their involvement in the modulation of excitatory synapses, much less is known about mechanisms controlling postsynaptic $GABA_A$ receptor ($GABA_AR$) numbers. Using tandem affinity purification from tagged $GABA_AR$ γ2 subunit transgenic mice and proteomic analysis, the authors isolated several $GABA_AR$-associated proteins, including Cleft lip and palate transmembrane protein 1 (Clptm1). **Abstract**

## CDKL Family Kinases Have Evolved Distinct Structural Features and Ciliary Function

First Author: Peter Canning | Senior Author: Michel Leroux *(right)*
Cell Reports | SFU

Various kinases, including a cyclin-dependent kinase (CDK) family member, regulate the growth and functions of primary cilia, which perform essential roles in signaling and development. Neurological disorders linked to CDK-Like (CDKL) proteins suggest that these underexplored kinases may have similar functions. The authors present the crystal structures of human CDKL1, CDKL2, CDKL3, and CDKL5. **Abstract**

## Harnessing Innate Lung Anti-Cancer Effector Functions with a Novel Bacterial-Derived Immunotherapy

First Author: Mark Bazett *(pictured)* | Senior Author: Stephanie Wong
OncoImmunology | Qu Biologics and UBC

Acute infection is known to induce strong anti-tumour immune responses, but clinical translation has been hindered by the lack of an effective strategy to safely and consistently provoke a therapeutic response. These limitations are overcome with a novel treatment approach involving repeated subcutaneous delivery of a *Klebsiella*-derived investigational immunotherapeutic, QBKPN. **Abstract**

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Awards

## Dr. Natalie Strynadka Chosen as 2018 Biophysical Society of Canada Fellow

The Centre for Blood Research

Dr. Natalie Strynadka *(pictured)* recently received the honour of being chosen as the 2018 Fellow of the Biophysical Society of Canada. Dr. Strynadka is a Distinguished Professor and researcher in the Department of Biochemistry and Molecular Biology at the University of British Columbia and a member of the Centre for Blood Research. She is known for her research in the fields of antibiotic resistance and biophysics. **Read More**

## Congratulations to the CIHR 2017 Project Grant Recipients

BC Children's Hospital Research Institute

The BC Children's Research Institute is pleased to congratulate the investigators who were awarded funding from the CIHR Fall 2017 competitions, including Dr. Francis Lynn *(pictured)*. The institute received more than $8 million in new grants and awards, and BC Children's and BC Women's investigators obtained 10 of the 59 full Project Grants awarded to UBC. **Read More**

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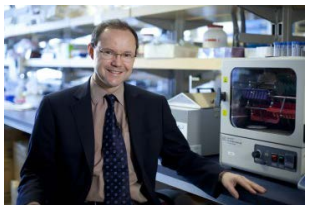
Local News

## Therapeutic Target EZH2 Discovered for Aggressive, Untreatable Ovarian Cancer Affecting Young Women

The Terry Fox Research Institute (TFRI)



A Vancouver team led by TFRI-funded investigator Dr. David Huntsman has discovered an important therapeutic target for treating small cell carcinoma of the ovary, hypercalcemic type (SCCOHT). This is a rare, but extremely lethal, ovarian cancer in young women with no effective treatment. The study suggests that SCCOHT tumour cells need the activity of an enzyme called EZH2 for their survival. **Read More**

## New Multiple Sclerosis Model Provides Hope for Better Understanding of Disease Pathology

Djavad Mowafaghian Centre for Brain Health

With the support of the National Multiple Sclerosis Society, a collaboration between Dr. Carles Vilarino-Guell, Dr. Jacqueline Quandt, Dr. Weihong Song, and Dr. Fabio Rossi at UBC has produced a mouse model that is more likely to reflect the neurodegenerative and regenerative processes in the pathogenesis of progressive

multiple sclerosis. **Read More**

## Increases in Cholinergic System Activity Affect Those with Parkinson-Linked Gene Mutation

Djavad Mowafaghian Centre for Brain Health

The results of an international collaboration led by Dr. Jon Stoessl *(pictured)* show that mutations in LRRK2, a gene associated with an inherited form of Parkinson's disease, can cause imbalances in the cholinergic system of the brain – but not in the direction that researchers anticipated. The cholinergic system is responsible for learning and memory; cholinergic imbalances have been implicated in other neurodegenerative disorders, including Alzheimer's disease. **Read More**

## BC-Led Digital Technology Supercluster Awarded Federal Funding

LifeSciences BC

The BC-led Digital Technology Supercluster is one of the funding recipients for the Government of Canada's Innovation Supercluster Initiative. A secure, anonymous Health and Genomic Platform will build the systems required to allow medical specialists to create custom, leading-edge cancer treatments that are personalized to the unique genetic makeup of each patient, building on Canada's current leadership in this area. **Read More**

## MS Researcher-Led Event Encourages Teenagers to Choose Science

Djavad Mowafaghian Centre for Brain Health

For many scientists, their earliest interest in science is sparked by someone else. Igniting a young person's passion for science or medicine is often as simple as someone showing them that opportunity is out there. For a group of students from a Vancouver high school, researchers, clinicians and students with the UBC Multiple Sclerosis & Neuromyelitis Optica Program took it upon themselves to be the spark. **Read More**

## Pascal Biosciences Identifies Molecules in Cannabis that Stimulate the Immune System to Destroy Tumour Cells

Pascal Biosciences via Globe Newswire

Pascal Biosciences Inc. has announced that it has discovered certain cannabinoids that enhance the immunogenicity of tumour cells, rendering them more susceptible to recognition by the immune system. This discovery is important because the leading class of new cancer fighting agents, termed "checkpoint inhibitors",

activates the immune system to destroy cancer cells. Enhancing recognition of cancer cells with cannabinoids may greatly improve the efficacy of this drug class. **Read More**

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Interesting Articles

## Half of Canada's Government Scientists Still Feel Muzzled

Science

More than half of government scientists in Canada—53%—do not feel they can speak freely to the media about their work, even after Prime Minister Justin Trudeau's government eased restrictions on what they can say publicly, according to a survey released by a union that represents more than 16,000 federal scientists. **Read More**

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## Upcoming Events in Vancouver

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|---|---|
| February 27<br>7:30 PM | **Cafe Scientifique**<br>Yagger's Downtown |
| February 28<br>7:99 PM | **Dr. Michael Rudnicki Public Lecture - Regenerative Medicine: The Potential of Stem Cells**<br>Life Sciences Institute, UBC |
| March 1<br>7:00 PM | **UBC and SFU Postdoctoral Association Meet and Greet**<br>Rogue Kitchen and Wetbar |
| March 4<br>1:00 PM | **Seed-Dispersing Animals are Way Cool because . . .**<br>Beaty Biodiversity Museum |
| March 7 - 9<br>8:00 AM | **Applications of the Hematopoietic Progenitor Assay Training Course**<br>STEMCELL Technologies |

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## Science Jobs in Vancouver

**Scientist, Recombinant Molecules and Antibodies**
STEMCELL Technologies

**Synthetic Organic Chemist**

STEMCELL Technologies

**Scientist, Technology Integration & Bioinformatics**
Zymeworks

**Senior Scientist, Antibody Engineering, Production & Characterization**
AbCellera

**Senior Clinical Scientist**
Aquinox Pharmaceuticals

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