

Publications of the Week

Optogenetic Rewiring of Thalamocortical Circuits to Restore Function in the Stroke Injured Brain

First Author: Tennant, K.A. (*right*) | Senior Author: Brown, C.E. (*left*) | Nature Communications | UBC



The thalamus is critical for processing and relaying sensory information to the cortex, but little is known about how stroke affects the structure and function of these connections, or whether a therapeutic approach targeting these circuits can improve recovery. The authors revealed with *in vivo* calcium imaging that stroke in somatosensory cortex dampens the excitability of surviving thalamocortical circuits.

[Profile](#) | [Abstract](#)

Myelin Regulatory Factor Drives Remyelination in Multiple Sclerosis

First Author: Duncan, G.J. | Senior Author: Tetzlaff, W. (*pictured*) | Acta Neuropathologica | ICORD and UBC



The authors found a relative scarcity of oligodendrocyte lineage cells expressing myelin regulatory factor in demyelinated multiple sclerosis lesions, which demonstrates, for the first time, that chronic lesions lack oligodendrocytes that express this necessary transcription factor for remyelination and supports the notion that a failure to fully differentiate underlies remyelination failure. [Abstract](#)

REVIEW: Synthetic Lethality and Cancer

First Author: O'Neil, N.J. | Senior Author: Hieter, P. (*pictured*) | Nature Review Genetics | Michael Smith Laboratories and UBC



A synthetic lethal interaction occurs between two genes when the perturbation of either gene alone is viable but the perturbation of both genes simultaneously results in the loss of viability. Advances in next-generation sequencing technologies are enabling the identification of hundreds of tumour-specific mutations and alterations in gene expression that could be targeted by a synthetic lethality approach.

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Awards

Dr. Keith Walley Wins the PHC Research and Mission Award for 2017



Congratulations to Dr. Keith Walley, Director of the Centre for Heart Lung Innovation (HLI), for winning the Providence Health Care (PHC) Research and Mission Award! This award is given out annually in recognition of a scientist who demonstrates the mission and values of PHC while conducting outstanding research. Dr. Walley is the 7th investigator at the HLI to win this award since its inception in 2005. [Read More](#)

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Local News

The Michael Smith Laboratories Welcomes a New Director

Michael Smith Laboratories



The Michael Smith Laboratories is delighted to announce the newly appointed Professor Peter Zandstra as its Director. Zandstra is a pioneer in the field of stem cell bioengineering, applying engineering principles to stem cell biology. His research group aims to understand the complex communication networks between stem cells and their progeny and how they affect self-renewal and differentiation.

[Read More](#)

Bromme Lab Makes an Osteoporosis Mouse Model That Is More Similar to Humans

The Centre for Blood Research



Excessive production of cathepsin K (CatK) is a known cause of osteoporosis, as its primary role is to digest collagen, a matrix protein that forms 80% of all bone tissue. Mice that have been genetically modified to be deficient in CatK have long been used to understand the role of CatK in bone breakdown. The Bromme lab at UBC have improved upon these mice, such that they more closely correspond to humans. [Read More](#)

LifeArc, Dstl & CDRD Collaborate to Identify Antibacterial Drug Targets

The Centre for Drug Research and Development



To date, the majority of antibacterial drug discovery programs have focused on very specific aspects of resistance, or single pathogen species. This new collaborative project will take a more holistic approach, looking at commonality across pathogens to identify which genes or “targets” express proteins that lead to the production of multi-drug resistant bacteria, and are therefore the most promising from a biophysical and drug discovery based perspective. [Read More](#)

Delineating Different Decision Duties for Dopamine in the Frontal Lobes

Djavad Mowafaghian Centre for Brain Health

Researchers have begun thinking about disease more broadly, with less emphasis



on diseases as syndromes – conditions characterized by specific correlating symptoms – and more on symptom clusters, which can be similar across a variety of disorders. By clarifying the role of specific neurotransmitters and their receptors, Dr. Stan Floresco's team hopes to be able to find a neural basis for treating symptom clusters at the cellular level. [Read More](#)

Sirona Biochem Announces Positive Efficacy Results for Skin Lightening Library

Sirona Biochem



Sirona Biochem Corp. announced positive preclinical efficacy data for its library of skin lightening compounds. The study looked at each of six compounds' ability to inhibit melanin synthesis induced by L-tyrosine for ten days in normal human epidermal melanocytes. Results showed a significant decrease in melanin synthesis with a similar efficacy across the library. [Read More](#)

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Upcoming Events in Vancouver

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|---------------------|---|
| July 20
4:00 pm | Discussions Relevant to Inspiring New Knowledge and Science
Mahony and Sons, Stamps Landing |
| July 20
5:00 pm | Beaty Nocturnal: Summer Nights
Beaty Biodiversity Museum |
| July 26
6:30 pm | Networking Night
Steamworks Pub |
| July 27
5:30 pm | MedTech Summer Social
Tap and Barrel Olympic Village |
| August 6
1:00 pm | Slime Molds Are Way Cool Because...
Beaty Biodiversity Museum |

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Science Jobs in Vancouver

Product Marketing Manager, Pluripotent Stem Cells

STEMCELL Technologies

Product Marketing Manager, Neural

STEMCELL Technologies

Research Assistant, Nephrology

UBC Faculty of Medicine

Clinical Research Assistant

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