

Publications of the Week

Cryo-EM Analysis of the T3S Injectisome Reveals the Structure of the Needle and Open Secretin

First Author: Jinhong Hu | Senior Author: Natalie Strynadka *(pictured)*
Nature Communications | Centre for Blood Research, High Resolution Macromolecular Cryo-Electron Microscopy Facility, and UBC



The authors present the near-atomic resolution structure of a needle complex from the prototypical *Salmonella* Typhimurium SPI-1 type III secretion system, with local masking protocols allowing for model building and refinement of the major membrane spanning components of the needle complex base in addition to an isolated needle filament. [Abstract](#)

Brain Organoids: A New, Transformative Investigational Tool for Neuroscience Research

First Author: Roza Vaez Ghaemi | Senior Author: Vikramaditya Yadav *(pictured)*
Advanced Biosystems | UBC



Brain organoids are self-assembled, three-dimensionally structured tissues that are typically derived from pluripotent stem cells. Although the use of brain organoids represents a quantum leap over existing investigational tools used by the pharmaceutical industry, they are nonetheless imperfect systems that could be greatly improved through bioengineering. [Abstract](#)

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Awards

2018 Till & McCulloch Award Winner – Dr. Fabio Rossi

Cvent



Dr. Fabio Rossi *(pictured)* has been named winner of the 2018 Till & McCulloch Award for his research identifying a key mechanism driving muscle repair. The annual Award recognizes the most impactful stem cell research paper originating from a Canadian lab in the past year. Dr. Rossi will be presenting the award lecture at the upcoming Till & McCulloch Meetings. [Read More](#)

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Local News

Researchers Hope Power of ‘Death Cap’ Mushroom Can Help Fight Cancer

NEWS 1130



In the 1980s, it was hypothesized that the toxin in the death cap mushroom could be used to target cancer cells. However, it's been difficult to do further research on the effects of the toxin, because it's so difficult and dangerous to extract it from death caps directly. That's why Dr. David Perrin and his team at UBC have created it in the lab. They're hoping it can be used in the fight against cancer. [Read More](#)

UBC Researchers Find Gene Signature that Predicts Outcome after Spinal Cord Injury

UBC Faculty of Medicine



UBC researchers have determined a gene signature that is linked to the severity of spinal cord injury in animals and humans, according to a study in the open-access journal *eLife*. "We have identified gene signatures that predict injury severity and, if reversed therapeutically, could potentially increase functional recovery," says lead author Jordan Squair *(pictured)*, an MD/PhD student at the International Collaboration on Repair Discoveries. [Read More](#)

Child Abuse Could Leave ‘Molecular Scars’ on Its Victims

UBC News



Children who are abused might carry the imprint of that trauma in their cells – a biochemical marking that is detectable years later, according to new research from UBC's Michael Kobor *(pictured)*. The difference in methylation between those who had been abused and those who had not might one day be useful as a biomarker for investigators or courts in weighing allegations of child abuse. [Read More](#)

Genetic Mutation Provides Potential Clue to Non-Hodgkin Lymphoma

SFU News



Ryan Morin *(pictured)* and Sarah Arthur became intrigued when they noticed that about one third of study subjects with one sub-type of diffuse large B-cell lymphoma showed some form of mutation affecting the *NFKB1Z* gene, but most of these did not change the gene in a way that would be expected to modify its protein product. [Read More](#)

25th Anniversary Celebration of Michael Smith's Nobel Prize Symposium: In Review

Michael Smith Laboratories



Hosted by the Michael Smith Laboratories at UBC, this symposium celebrated the legacy of Dr. Michael Smith *(pictured)* and his ground-breaking research on site-directed mutagenesis, a discovery earning him a Nobel Prize in Chemistry in 1993. Dr. Smith was B.C.'s first Nobel Prize winner, bringing national and international attention to B.C.'s biotechnology landscape. [Read More](#)

Some Gut Bugs Keep Us Healthy: New Research

Richmond Sentinel



Brett Finlay *(pictured)*, a Peter Wall Distinguished Professor in the Michael Smith Laboratories at UBC, looks at how gut bacteria might influence the immune system. The immune system weeds out bad bugs, but when it goes into overdrive people can suffer from allergies and asthma. In what Finlay calls a major finding, he discovered that people who had four specific bacteria in their digestive tract had a low risk of developing asthma. [Read More](#)

Lowering Levels of Mutant Protein that Causes Huntington Disease Can Restore Cognitive Function in Mice

UBC News



New research from UBC's Michael Hayden *(pictured)* suggests that reducing mutated Huntington disease protein in the brain can restore cognitive and psychiatric impairments in mice. Huntington disease is a genetic, progressive disorder that causes mental decline, psychiatric problems and uncontrolled movements. [Read More](#)

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Interesting Articles

Stem Cell Clinics in B.C. and Elsewhere Need More Oversight by Health Canada, Researcher Says

Vancouver Sun



Stem-cell clinics across Canada, including eight in B.C., are marketing "unproven treatments" directly to health consumers and charging thousands of dollars, a study concludes. Many of the approximately four dozen clinics are making claims of exaggerated benefits and minimizing potential complications, says the study by Leigh Turner, an Associate Professor at the University of Minnesota. [Read More](#)

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Upcoming Events in Vancouver

- October 19 4:00 PM **D.R.I.N.K.S (Discussions Relevant to Inspiring New Knowledge and Science)**
Mahony and Sons, Stamps Landing
- October 22 3:30 PM **2018 International Gairdner Symposium**
Life Sciences Institute, UBC
- October 25 8:00 AM **LifeSciences BC Investor Summit**
Fairmont Pacific Rim
- October 26 7:00 PM **SFU Café Scientifique**
Boston Pizza, New Westminster
- November 1 - 2 8:00 AM **Human Airway Epithelial Cell Training**
STEMCELL Technologies

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