

Publications of the Week

The PedBE Clock Accurately Estimates DNA Methylation Age in Pediatric Buccal Cells

First Author: Lisa McEwen *(pictured)* | Senior Author: Michael Kobor
PNAS | BC Children's Hospital Research Institute



Epigenetic clocks are a promising tool for measuring biological age that show impressive accuracy across most tissues and age ranges. However, DNA methylation (DNAm) changes are more dynamic in pediatric populations as compared to adults. The authors aimed to develop a highly accurate, noninvasive, biological measure of age specific to pediatric samples using buccal epithelial cell DNAm. [Abstract](#)

Discordance in the Epithelial Cell-Dendritic Cell MHC Class II Immunoproteome: Implications for *Chlamydia* Vaccine Development

First Author: Karuna Karunakaran | Senior Author: Robert Brunham *(pictured)*
The Journal of Infectious Diseases | UBC Centre for Disease Control and the Michael Smith Laboratories



The authors hypothesized that *Chlamydia*-infected dendritic cells and epithelial cells present overlapping sets of *Chlamydia*-major histocompatibility complex (MHC) class II epitopes to link inductive and effector phases to generate protective immunity. They tested the hypothesis by infecting an oviductal epithelial cell line with *C. muridarum*, followed by immunofluorescence isolation and sequencing of MHC class I- and II-bound peptides. [Abstract](#)

Diversity of Small Molecule HIV-1 Latency Reversing Agents Identified in Low- and High-Throughput Small Molecule Screens

First Author: Pargol Hashemi *(pictured)* | Senior Author: Ivan Sadowski
Medicinal Research Reviews | UBC



The latency phenomenon produced by human immunodeficiency virus (HIV-1) prevents viral clearance by current therapies. The authors review efforts to discover novel latency-reversing agents (LRAs) via low- and high-throughput small molecule screens, and summarize characteristics and biochemical properties of chemical structures with this activity. [Abstract](#)

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Awards

Trio of SFU Science Professors Honoured

SFU Faculty of Science



SFU has honoured three outstanding faculty members in the Faculty of Science for their exceptional accomplishments. Dr. Fiona Binkman *(pictured)* was named an SFU Distinguished Professor for her work on infectious diseases. Dr. Michael Hayden was also named an SFU Distinguished Professor. And Dr. Carl Lowenberger was awarded the Chris Dagg Award for International Impact. [Read More](#)

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Local News

Systematic Review Identifies Consistencies and Gaps in MS Microbiome Studies

Djavad Mowafaghian Centre for Brain Health



Dr. Helen Tremlett *(pictured)* at the Djavad Mowafaghian Centre for Brain Health has been looking at the link between the gut microbiome and multiple sclerosis (MS) for the past four years. Her recent review has found some consistent associations with specific microbes across existing literature, cleared gaps in terms of what research has been done and what questions we still need to ask about the gut-brain connection. [Read More](#)

Canadian Breakthrough that Became the World's Most Expensive Drug, Then Vanished, Gets Second Chance

CBC News



A made-in-Canada medical breakthrough that disappeared from the market because it wasn't profitable is being revived by the National Research Council of Canada. It's the latest chapter in the saga of Glybera, the world's first approved gene therapy that was developed by scientists at UBC, which also became the world's most expensive drug after it was licensed to a Dutch company and priced at \$1 million for a one-time dose. [Read More](#)

New Finding Sheds Light on Neuroendocrine Prostate Cancer Progression

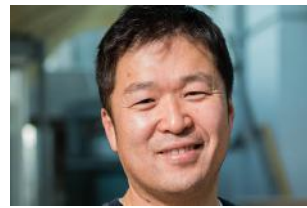
The Terry Fox Research Institute



Recent findings from a team led by Dr. Xuesen Dong *(pictured)*, a Senior Research Scientist at the Vancouver Prostate Centre, has defined a molecular mechanism by which prostate adenocarcinoma is transformed into neuroendocrine prostate tumours. According to Dr. Dong, this occurs through a process known as alternative RNA splicing. [Read More](#)

A Team Effort: Mutations Work Collectively in Complex Networks to Shape Enzyme Evolution

Michael Smith Laboratories



Researchers from the Michael Smith Laboratories, led by Dr. Nobuhiko Tokuriki *(pictured)*, have taken a closer look at the enzymatic pathway that allows a bacterium to "digest" a substance that only emerged in the industrial age. They found that several mutations hypothesized to drive enzyme evolution formed a complex interaction network that seems to carve out a specific evolutionary path for enzymatic function development. [Read More](#)

Sophia Frangou Appointed UBC President's Excellence Chair in Brain Health

UBC Medicine



The UBC Faculty of Medicine has announced that Dr. Sophia Frangou *(pictured)*, an internationally-prominent clinician scientist, has joined UBC as the inaugural UBC President's Excellence Chair in Brain Health. Dr. Frangou's research focuses on uncovering pathophysiological processes underlying psychosis, with emphasis on schizophrenia and bipolar disorder using clinical, genetic, cognitive, and neuroimaging techniques. [Read More](#)

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Interesting Articles

Canadian Scientists Relieved as Trudeau Ekes Out Election Win

Nature News



Canada's Prime Minister Justin Trudeau *(pictured)* has won a second term, but his Liberal Party lost its majority in parliament. Apart from climate change, science issues didn't feature prominently in the election campaign. But researchers are hopeful that several of the parties that won seats in parliament will work together to pass climate-change policies and increase science funding. [Read More](#)

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 **Upcoming Events in Vancouver**

- October 29
7:00 PM

Nerd Nite North Vancouver: "The Halloween Space Show"
Eagles Club
- October 29
7:30 PM

Café Scientifique with Leonard Foster: Breeding Stronger Bees by Shortcutting Nature
Yagger's Downtown
- October 30
9:00 AM

UBC Medicine Research Expo
Paetzold Auditorium
- November 1
10:00 AM

UBC Medical Genetics Research Day
UBC Life Sciences Institute
- November 4
8:00 PM

Building Biotech 2019
Coast Coal Harbour Hotel

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 **STEMCELL Jobs in Vancouver**

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- Scientific Inside Sales**
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- Scientist, Pulmonary**
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- Associate Product Manager, Mesenchymal & Myogenic**
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- Research Associate, Bioengineering**
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 **Other Science Jobs in Vancouver**

- Chief Scientific Officer & Vice President, Sector Development**
Genome BC
- Assistant Professor (Tenure-Track) in Pain Management Pharmacogenomics**
UBC
- Scientist, Protein Biochemistry**
AbCellera
- Scientific Specialist**
Precision NanoSystems Inc.
- Assistant Bioinformatics Coordinator**
BC Cancer

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