

Publications of the Week

Plasma ctDNA Is a Tumour Tissue Surrogate and Enables Clinical-Genomic Stratification of Metastatic Bladder Cancer

First Author: Gillian Vandekerckhove (pictured) | Senior Author: Alexander Wyatt
Nature Communications | Vancouver Prostate Centre and BC Cancer



The authors profiled minimally-invasive plasma circulating tumour DNA (ctDNA) samples from 104 metastatic urothelial carcinoma patients, and compared to same-patient tumour tissue obtained during invasive surgery. Patient ctDNA abundance was independently prognostic for overall survival in patients initiating first-line systemic therapy. ctDNA analysis reproduced the somatic driver genome as described from tissue-based cohorts. [Abstract](#)

The Genome Atlas: Navigating a New Era of Reference Genomes

First Author: Alice Kaye | Senior Author: Wyeth Wasserman (pictured)
Trends in Genetics | BC Children's Hospital Research Institute



Current approaches to generating a new reference genome are misguided because they often conflate the two distinct roles of the reference: (i) enabling knowledge exchange; and (ii) increasing computational efficiency. This dichotomy needs to be reflected in the underlying design of a new reference. The authors explore how the reference genome is used and suggest an alternative structure, the Genome Atlas, to fulfill the bipartite role of the reference genome. [Abstract](#)

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Awards

UBC Pharmaceutical Sciences Professor Dr. Helen Burt Appointed Officer of the Order of Canada

UBC Faculty of Pharmaceutical Sciences



Dr. Helen Burt (pictured) has been appointed an Officer of the Order of Canada. Dr. Burt is a Professor at the UBC Faculty of Pharmaceutical Sciences and serves as Associate Vice-President Research & Innovation at UBC. Dr. Burt was a founding scientist of the Centre for Drug Research & Development — now adMare BiInnovations, a central leader in Canada's innovation landscape. [Read More](#)

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Local News

Peripheral Blood Analysis Shows Benefit of Peptide Immunotherapy for Cat Allergy

AllerGen



A pilot study, led by PROOF Centre of Excellence researchers from UBC, has shown that an experimental vaccine for cat allergy can reduce the systemic immune response and symptoms of allergic rhinitis in individuals allergic to cats. The vaccine, called Cat-PAD, uses peptide immunotherapy to train the immune system not to overreact to the cat allergen Fel d1 – a protein excreted in a cat's skin, saliva, and urine. [Read More](#)

Challenging the Dogma of Innate Lymphoid Cell Development

UBC Centre for Blood Research (CBR)



Samuel Shin (pictured), an MSc student in Dr. Kelly McNagny's research group at the CBR, challenges the current dogma of innate lymphoid cell (ILC) development. In his recent paper, Sam examined the T cell receptor gene status of type 2 ILCs – a subset of ILCs with an important role in mucosal immunology and allergic lung disease. He aimed to use TCR gene rearrangements as a tracer to delineate the origins of these cells. [Read More](#)

Molecular Subtypes of Common Pancreatic Cancers Can Be Predicted from Tumour Characteristics

Canada's Michael Smith Genome Sciences Centre at BC Cancer



Molecular subtyping remains cost-prohibitive and is not yet part of routine cancer care. A new study led by Dr. David Schaeffer (pictured) from UBC and BC Cancer used prior gene expression data to show that tumour characteristics can predict molecular subtypes, extending the benefit of gene expression analysis to patients for which it remains unavailable. [Read More](#)

AbCellera Biologics' Billionaire Boss Planning Hiring Spree in Vancouver Hometown after Record-Setting IPO

LifeSciences BC



Former UBC Professor Dr. Carl Hansen (pictured) is Canada's newest multibillionaire. AbCellera had a historic initial public offering on the NASDAQ stock market last month, raising US\$555-million. That's good news for the company's hometown of Vancouver, where Dr. Hansen plans to hire hundreds of people and eventually expand laboratory operations to one million square feet – and hopes to build AbCellera into Canada's first true pharmaceutical industry giant. [Read More](#)

Scientists Discover Key Enzyme Responsible for Skin Blistering in the Elderly

Vancouver Coastal Health Research Institute



The Granzyme B (GzmB) enzyme has been identified as a driver of itchy and sometimes life-threatening pemphigoid diseases: autoimmune conditions that cause blistering and skin erosion that originate below the skin's surface. New research led by Vancouver Coastal Health Research Institute scientist Dr. David Granville (pictured) has found that a gel containing a specific and potent inhibitor of GzmB activity, VTI-1002, resulted in significant skin improvements. [Read More](#)

The CBR Welcomes Dr. Dana Devine as Director

UBC Centre for Blood Research



The Centre for Blood Research (CBR) is pleased to welcome Dr. Dana Devine (pictured) as its new Director. She succeeds Dr. Ed Conway, the CBR's previous Director of 11 years. "I'm honoured to accept the position of Director, and look forward to building on the CBR's successes," said Dr. Devine. As one of the CBR's founding members, Dr. Devine has been an integral part of the Centre since the beginning. [Read More](#)

New Method Helps Pocket-Sized DNA Sequencer Achieve Near-Perfect Accuracy

UBC Applied Science



Researchers have found a simple way to eliminate almost all sequencing errors produced by a widely used portable DNA sequencer, potentially enabling scientists working outside the lab to study and track microorganisms like the SARS-CoV-2 virus more efficiently. "The MiniON has revolutionized the field of genomics by freeing DNA sequencing from the confines of large laboratories," says Ryan Ziels, Assistant Professor of Civil Engineering at UBC and co-lead author of the study. [Read More](#)

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Upcoming Events in Vancouver

- January 20
12:00 PM

Brown Bag Series: Repairing the Impaired Brain Machinery
Online
- January 21
7:00 PM

UBC School of Biomedical Engineering Industry Night
Online
- January 22
8:45 PM

The Brain, Behaviour & Development 5th Annual Research Day
Online
- January 22
10:00 AM

LifeSciences BC Career Connect Day
Online
- January 28
3:00 PM

Discovery to Commercialization: Shaping our Health: Microbiome in Immunity and Inflammation
Online

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- Research Scientist, Sequencing & Molecular Biology**
AbCellera
- Scientist, Preclinical/Immunology**
Acuitas Therapeutics
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Michael Smith Laboratories
- Post Doctoral Fellow, Cancer Immunotherapy**
BC Cancer

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