

Publications of the Week

Use of Treatment-Focused Tumour Sequencing to Screen for Germline Cancer Predisposition

First Author: Tammy Lau (pictured) | Senior Author: Aly Karsan  
The Journal of Molecular Diagnostics | Canada's Michael Smith Genome Sciences Centre, BC Cancer, and UBC



Next-generation sequencing assays are capable of identifying cancer patients eligible for targeted therapies and can also detect germline variants associated with increased cancer susceptibility. The authors developed the Oncology and Hereditary Cancer Program targeted capture panel, which uses tumour tissue to simultaneously screen for both clinically actionable solid tumour variants and germline variants across 45 genes. [Profile](#) | [Abstract](#)

De Novo and Cell Line Models of Human Mammary Cell Transformation Reveal an Essential Role for YB-1 in Multiple Stages of Human Breast Cancer

First Author: Sylvain Lefort | Senior Author: Connie Eaves (pictured)  
Cell Death & Differentiation | Terry Fox Laboratory, Canada's Michael Smith Genome Sciences Centre, BC Cancer, Michael Smith Laboratories, and UBC



Breast cancer heterogeneity has made it challenging to identify mechanisms critical to the initial stages of their genesis *in vivo*. The authors sought to interrogate the role of Y box binding protein 1 (YB-1) in newly arising human breast cancers, as well as in established cell lines. They found that short-hairpin RNA-mediated knockdown of YB-1 in MDA-MB-231 cells blocked both their local tumour-forming and lung-colonizing activity in immunodeficient mice. [Abstract](#)

Molecular Events in Neuroendocrine Prostate Cancer Development

First Author: Yong Wang | Senior Author: Yuzhuo Wang (pictured)  
Nature Reviews Urology | Vancouver Prostate Centre, BC Cancer, and UBC



Neuroendocrine prostate cancer (NEPC) is a lethal subtype of prostate cancer. NEPC arises *de novo* only rarely; the disease predominantly develops from adenocarcinoma in response to drug-induced androgen receptor signalling inhibition, although the mechanisms behind this transdifferentiation are a subject of debate. To improve clinical outcomes, understanding of the biology and molecular mechanisms regulating NEPC development is crucial. [Abstract](#)

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Awards

Six LSI Research Teams Awarded More than \$5.5M through Spring Project Grant Competition

UBC Life Sciences Institute (LSI)



As part of the Spring 2021 Project Grant competition launched by the Canadian Institutes of Health Research, six research teams at the LSI were awarded more than \$5.5 million in grants. Dr. Yossef Av-Gay (pictured) aims to progress two lead compounds for tuberculosis treatment into the clinical development stream by conducting preclinical, animal, and mode of action studies. [Read More](#)

VPC Investigators Awarded Three CIHR Spring 2021 Project Grants

Vancouver Prostate Centre (VPC)



Projects led by Drs. Xuesen Dong (pictured), Lucia Nappi, and Alexander Wyatt were awarded Canadian Institutes of Health Research grants in the Spring 2021 Project Grant competition, for a total of \$1.72 million over five years. Dr. Dong's project aims to produce a "double-bolt lock" to control cancer cell growth by identifying new DNA topoisomerase II inhibitors. [Read More](#)

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Local News

How Genomics Is Changing Health Care

Beyond UBC



Sitting in an office cluttered with books and papers, Dr. Terry Snutch (pictured), Professor at UBC's Michael Smith Laboratories and Djavad Mowafaghian Centre for Brain Health, picks up a small rectangular object. Compact and light enough to carry in a pocket, it could easily be mistaken for a flip phone. But it is, in fact, a portable DNA sequencer — and it costs less than an iPhone 12. [Read More](#)

Canada Needs to Take a Clinical Look at How It Supports Biomedical Discoveries

UBC Faculty of Medicine



In this editorial, Drs. Dermot Kelleher (pictured) and David Anderson argue that while Canada is known internationally for the excellence of its medical research, particularly in the field of infectious disease, there is a lack of support for translating basic research into business growth and job creation, and that the pandemic has exposed significant flaws in Canada's ability to respond effectively to health care priorities on a large scale. [Read More](#)

New Discovery Provides Insight into Diagnostics and Treatment for Severe C. difficile Infection

Vancouver Coastal Health Research Institute



*Clostridioides difficile* (*C. difficile*) is the leading cause of gastroenteritis-associated death in North America, and infects around half a million Americans annually. While most people affected will fully recover, new research from Vancouver Coastal Health Research Institute scientist Dr. Theodore Steiner (pictured) explores how to identify the around 25-35 percent of patients who will experience recurrent or severe infection. [Read More](#)

Canadian Genomics Team Joins International Initiative to Study and Protect Global Biodiversity

Genome BC



The Earth BioGenome Project aims to resolve in detail the genomes of all complex life on Earth. With new funding of approximately \$6.5 million, Canada is now joining this global initiative through the Canadian BioGenome Project, led by Dr. Steven Jones (pictured), Co-Director and Head of Bioinformatics for Canada's Michael Smith Genome Sciences Centre, and Dr. Maribeth Murray, Director of the Arctic Institute of North America at the University of Calgary. [Read More](#)

Acutas Therapeutics Names Director of Chemistry

Acutas Therapeutics



Acutas Therapeutics has announced that Dr. Steve Arns (pictured) has joined the team as Director of Chemistry. Dr. Arns comes to the newly created position on the Acutas executive team from adMare BioInnovations, where he most recently was a Senior Scientist in the medicinal chemistry department. Prior to that, Dr. Arns was a Scientist with the Centre for Drug Research and Development. [Read More](#)

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Interesting Articles

The Government of Canada Announces Biomanufacturing and Life Sciences Strategy

Innovation, Science, and Economic Development Canada



The Biomanufacturing and Life Sciences Strategy is driven by two objectives: to grow a strong, competitive domestic life sciences sector with cutting-edge biomanufacturing capabilities while creating good jobs for Canadians, and to make sure Canada is prepared for pandemics and other health emergencies in the future. This includes increasing domestic capacity through investments and partnerships to produce life-saving vaccines and therapeutics. [Read More](#)

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Upcoming Events in Vancouver

August 5 9:00 AM	<b>ADDC Webinar — "Things I Wish I Knew": Cell-Based Imaging</b> Online
August 6 12:30 PM	<b>Brain-Tech 2021: Idea Generation and Hackathon for Brain Wellness</b> Online
August 6 4:00 PM	<b>Online Open House: Synthetic Biology Laboratories at UBC's SBME</b> Online
August 12 2:00 PM	<b>3 Minute Postdoc Slam</b> Online
September 8 12:00 PM	<b>New Genomics for Non-Invasively Monitoring Canada's Polar Bear Populations</b> Online

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AbCellera
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