

Publications of the Week

**MEK Inhibitor Resistance in Lung Adenocarcinoma Is Associated with Addiction to Sustained ERK Suppression**

First Author: Dylan Farnsworth (pictured, second from right) | Senior Author: William Lockwood (far right)  
npj Precision Oncology | BC Cancer Research Institute and UBC



MEK inhibitors (MEK) have limited efficacy in *KRAS* mutant lung adenocarcinoma (LUAD) patients, and this is attributed to both intrinsic and adaptive mechanisms of drug resistance. The authors established trametinib-resistant *KRAS* mutant LUAD cells through dose escalation and performed targeted MSK-IMPACT sequencing to identify drivers of MEK1 resistance. [Profile](#) | [Abstract](#)

**Towards Clinical Implementation of Circulating Tumour DNA in Metastatic Prostate Cancer: Opportunities for Integration and Pitfalls to Interpretation**

First Author: Edmond Kwan | Senior Author: Kim Chi (pictured)  
Frontiers in Oncology | Vancouver Prostate Centre, BC Cancer, Michael Smith Genome Sciences Centre, and UBC



Plasma circulating tumour DNA (ctDNA) represents short fragments of tumour-derived DNA released into the bloodstream primarily from cancer cells undergoing apoptosis. In metastatic castration-resistant prostate cancer, characterizing genomic alterations in ctDNA identifies mutations, copy number alterations, and structural rearrangements with predictive and prognostic biomarker utility. [Abstract](#)

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Local News

**CBR Graduate Profile: Bronwyn Lyons**

The Centre for Blood Research (CBR)



Bronwyn Lyons (pictured) previously completed her MSc at the University of Guelph and came to UBC for her PhD in the Department of Biochemistry and Molecular Biology under the supervision of Dr. Natalie Strynadka. Her research focused on virulence machinery that bacteria use to help cause infections in humans. More specifically, she studied the proteins that make up the type 3 secretion system in enteropathogenic *E. coli* using a variety of structural biology methods including cryo-electron microscopy and X-ray crystallography. [Read More](#)

**New Branch on Tree of Life Includes ‘Lions of the Microbial World’**

UBC News



There's a new branch on the tree of life and it's made up of predators that nibble their prey to death. These microbial predators fall into two groups, which both comprise a new ancient branch on the tree of life called "Provora." Like lions, cheetahs, and more familiar predators, these microbes are numerically rare but important to the ecosystem, says senior author Dr. Patrick Keeling (pictured), Professor in the UBC Department of Botany. [Read More](#)

**CBR Graduate Profile: Avineet Randhawa**

Centre for Blood Research (CBR)



Avineet Randhawa (pictured) obtained a Master's of Applied Science in Biomedical Engineering with Dr. Karen Cheung. He developed an organ-on-chip model of the small airways in the human lung and used it to study effects associated with aerosol exposure. He also used the silicon photonics platform for real-time molecular sensing of the SARS-CoV-2 spike protein. [Read More](#)

**\$33.8M Gift to Transform MS Research and Save More Lives, Sooner**

UBC Medicine



A \$33.8 million gift has been donated to UBC and the Vancouver General Hospital & UBC Hospital Foundation for multiple sclerosis (MS) research and care — the largest known donation ever for MS research worldwide. "Thanks to this investment, I can envision a future where we deliver innovative, lifesaving therapies that have the potential to conquer MS one day," says Dr. Anthony Trabousee (pictured). [Read More](#)

**Rabbit Line Enables Quick Transport of Radiopharmaceuticals for Brain Research**

Djavad Mowafaghian Centre for Brain Health



An underground pipeline runs 2.5 km from TRIUMF to the Djavad Mowafaghian Centre for Brain Health at the UBC Hospital and is used to transport radiopharmaceuticals used in research. Beginning with early studies into the origins of Parkinson's disease using a TRIUMF-built positron emission tomography (PET) scanner in the 1980s, this partnership has evolved over the years into a multi-modal neuroimaging program. "PET was instrumental in discovering the neurochemical underpinning of the placebo effect," says Dr. Vesna Sossi (pictured). [Read More](#)

**Antibiotics Taken During Labour and Delivery Not Linked to Autism**

Vancouver Coastal Health Research Institute



A connection between autism spectrum disorder (ASD) and early life antibiotic exposure has been found in some studies. However, research led by Vancouver Coastal Health Research Institute investigator Dr. Gillian Hanley (pictured) found no relationship between the development of ASD among children born to mothers who took antibiotics during labour and delivery of their infant. [Read More](#)

**University of Pennsylvania Studies Show Early Promise for New mRNA Flu Vaccine**

Acuitas Therapeutics



A new study co-authored by scientists from the University of Pennsylvania and Acuitas Therapeutics shows early promise for an mRNA vaccine targeting all known flu strains. The study provides data from pre-clinical trials and shows that the vaccine produces high levels of antibodies against all known strains of the flu, which may allow for a universal flu shot in the future. [Read More](#)

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Interesting Articles

**In Canada, Scientists Are Struggling with Stagnant Funding**

Scienceinsider



Earlier this month, researchers attending Canada's major annual science policy conference here got some seemingly good news when science minister François-Philippe Champagne announced the government would be awarding CA\$1 billion to research projects. But disappointment soon set in. The \$1 billion, scientists realized, was existing, not new, money. The episode added to researchers' gloom about Canada's science funding. [Read More](#)

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**Upcoming Events in Vancouver**

- December 14 4:00 PM **D.R.I.N.K.S Vancouver**  
Mahoney and Sons
- January 20 8:30 AM **Life Sciences BC Career Connect Day**  
Vancouver Marriott Pinnacle Downtown
- February 2 8:30 AM **Precision Health Symposium**  
AMS Student Nest
- February 2 11:30 AM **Women in Life Science – Panel Discussion 2023**  
Element Vancouver Metrotown
- February 7 10:00 AM **Academic–Industry Partnerships Roundtable**  
Online

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**Other Science Jobs in Vancouver**

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- Associate Director, Biotherapeutic Analytics**  
AbCellera
- Research & Sequencing Technologist**  
UBC
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Zymeworks
- Research Associate, Cell Isolation and Processing**  
Aspect Biosystems

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