

Publications of the Week

Putrescine and Its Metabolic Precursor Arginine Promote Biofilm and Cyclic-Di-GMP Synthesis in *Pseudomonas aeruginosa*

First Author: Zhexian Liu (pictured, far left) | Senior Author: Cara Haney (far right)
Journal of Bacteriology | Michael Smith Laboratories and UBC



Pseudomonas aeruginosa, an opportunistic bacterial pathogen, can synthesize and catabolize a number of small cationic molecules known as polyamines. The authors used a genetic approach to demonstrate that putrescine accumulation, either through disruption of the spermidine biosynthesis pathway or the catabolic putrescine aminotransferase pathway, promoted biofilm formation in *Pseudomonas aeruginosa*. [Profile](#) | [Abstract](#)

Transcription Factor SOX4 Facilitates BMP2-Regulated Gene Expression during Invasive Trophoblast Differentiation

First Author: Yuyin Yi | Senior Author: Peter Leung (pictured)
The Journal of the Federation of American Societies for Experimental Biology | BC Children's Hospital Research Institute and UBC



The interplay between growth factors, signalling pathways and transcription factors during placental development is key to controlling trophoblast differentiation. Bone morphogenetic protein 2 (BMP2) has been implicated in trophoblast invasion and spiral artery remodeling during early placental development. The authors identified SOX4 as a direct target gene induced by BMP2 in first-trimester placental trophoblasts. [Abstract](#)

Remote Regulation of Type 2 Immunity by Intestinal Parasites

First Author: Sarah Poppel | Senior Author: Lisa Osborne (pictured)
Seminars in Immunology | Life Sciences Institute and UBC



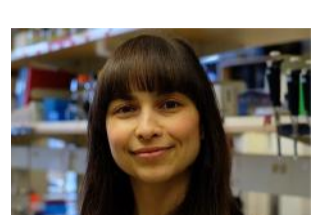
The intestinal tract is the target organ of most parasitic infections, including those by helminths and protozoa. These parasites elicit prototypical type 2 immune activation in the host's immune system with striking impact on the local tissue microenvironment. Despite local containment of these parasites within the intestinal tract, parasitic infections also mediate immune adaptation in peripheral organs. [Abstract](#)

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Awards

Outstanding Trainee Paper Competition 2020 Winners

Terry Fox Laboratory



The Terry Fox Laboratory is proud to announce the winners of the Outstanding Trainee Publications 2020. The Program Evaluation Committee reviewed 29 nominations and granted four awards. Katharina Rothe (pictured) won first place in the Basic/Translational category for her paper, "Integrin-linked kinase mediates therapeutic resistance of quiescent chronic myeloid leukemia stem cells to tyrosine kinase inhibitors". [Read More](#)

Dr. Alison McAfee Awarded L'Oréal-UNESCO 2021 Excellence in Research Fellowship

Michael Smith Laboratories



Congratulations to Dr. Alison McAfee (pictured) of the Michael Smith Laboratories for receiving the highly competitive L'Oréal – United Nations Educational, Scientific and Cultural Organization (UNESCO) 2021 Excellence in Research Fellowship from the For Women in Science program. This fellowship was created "...to support major postdoctoral research projects undertaken by young Canadians at a pivotal time in their career." [Read More](#)

Vancouver Diabetes Research Day 2021 Awards

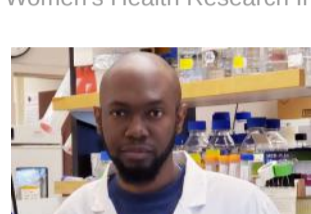
BC Diabetes Research Network



The Vancouver Diabetes Research Day 2021 Awards have been announced. Drs. Daniel Gamu, Howard Cen, and Yi-Chun Chen (pictured) received awards for the Best Poster Presentations. Their posters described the enrichment of global histone 3 lysine 27 trimethylation within oxidative skeletal muscles, insulin-dependent and -independent dynamics of insulin receptor trafficking in muscle cells, and elevated islet prohormone ratios as predictors of human islet transplant failure, respectively. [Read More](#)

Announcing the 2021 Graduate and Fellowship Award in Women's Health Researchers

Women's Health Research Institute at BC Women's



The Women's Health Research Institute congratulates the recipients of the 2021 Graduate and Fellowship Research Award in Women's Health. This competition was funded thanks to the dedicated support of the BC Women's Health Foundation. Dwayne Tucker (pictured) received the Graduate-Level Award to develop and validate a model that uses clinical and molecular (biomarker) variables to predict pain-related outcomes after endometriosis surgery. [Read More](#)

Dr. Florian Kuchenbauer Receives a BC Cancer Excellence Award in the Category of Patient Care Champion

BC Cancer



Dr. Florian Kuchenbauer (pictured) received a BC Cancer Excellence Award in the category of Patient Care Champion, nominated by patients. Dr. Florian Kuchenbauer is a Clinician-Scientist at the Leukemia/Bone Marrow Transplant Program of BC, Senior Scientist at the Terry Fox Laboratory, and Associate Professor of Medicine at UBC. [Read More](#)

UBC Engineering's Vikram Yadav Named One of Canada's Top 40 Under 40

UBC Applied Science



Dr. Vikram Yadav (pictured), an Associate Professor of Chemical and Biological Engineering and Biomedical Engineering at UBC, has been named one of Canada's Top 40 Under 40 — "the country's most coveted award for young business and community leaders." Dr. Yadav has built a highly interdisciplinary and impactful innovation portfolio that includes breakthrough technologies such as bacteria-powered solar cells and enhanced toxin-eating microorganisms. [Read More](#)

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Local News

Suturing Draft Genomes: LongStitch Software Helps to Mend Long Read Sequences

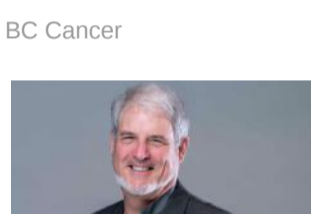
Canada's Michael Smith Genome Sciences Centre



At present, multiple tools are available to assemble draft genomes using long reads and, separately, to correct errors. In a recent innovative development from Dr. Inanc Bro's (pictured) lab at the Genome Sciences Centre, researchers have created LongStitch, a scalable pipeline that contains multiple tools customized specifically for long read sequences to correct and scaffold draft genome assemblies. [Read More](#)

Lung Cancer Research Advancements in BC Part II: A New Way of Looking at Tissue and Cell Composition

BC Cancer



Dr. Calum MacAulay (pictured) is a Distinguished Scientist at the BC Cancer Research Institute. With a background in physics and engineering, his work on lung cancer is predominantly focused on new and innovative ways of early cancer detection methods. A prime example of this is Dr. MacAulay's work on tissue sections, which includes identifying various biomarkers and cell composition. [Read More](#)

Meet Carl Hansen, the Scientist-Turned-CEO behind AbCellera's Life-Saving COVID-19 Treatment

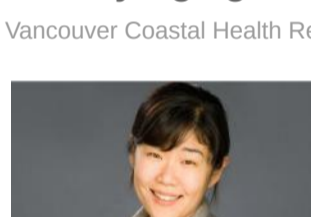
The Globe and Mail



The company garnered lots of attention for a COVID-19 treatment that has been administered to hundreds of thousands of patients and led to a huge IPO. But AbCellera is no one-hit wonder. Dr. Carl Hansen (pictured) has proven its drug discovery process works — fast — and now he wants to build a giant right here in Canada. [Read More](#)

\$12 Million Initiative to Help Advance Brain Health and the Science of Healthy Aging

Vancouver Coastal Health Research Institute



The Canadian Longitudinal Study on Aging is launching a new project called the Healthy Brains, Health Aging Initiative, which will shed light on the many factors that influence brain health as we age, including lifestyle and the human microbiome. Dr. Teresa Liu-Ambrose (pictured), Canada Research Chair at the Djavad Mowafaghian Centre for Brain Health and Professor of Physical Therapy at UBC, will be one of the neuroimaging leads on the project. [Read More](#)

Could mRNA Make Us Superhuman?

The British Broadcasting Corporation



Barely a year ago, Dr. Anna Blakney (pictured) was working in a relatively inconspicuous, niche field of science in a lab in London. Few people outside of her scientific circles had heard of mRNA vaccines. Because none yet existed. Attendees at an annual conference talk she gave in 2019 could be counted in the tens, not hundreds. Today, she's in hot demand: an Assistant Professor at UBC, and a science communicator with 253,000 followers and 3.7 million likes on TikTok. [Read More](#)

St. Paul's Hospital Moves Forward with New Research Centre

BC Government News



People are a step closer to a new clinical support and research centre at St. Paul's Hospital as the Province shortlists three proponents to participate in the request for proposal to design and build the new centre. The clinical support and research centre at 1002 Station Street will be built directly adjacent to the future St. Paul's Hospital at the Jim Pattison Medical Centre, with multi-building facilities that total approximately 74,000 square metres (800,000 square feet). [Read More](#)

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Interesting Articles

Canada Grants Full Approval to Johnson & Johnson's COVID-19 Shot

Global News



Canada gave full approval to Johnson & Johnson's single-shot COVID-19 vaccine for people aged 18 years and older, making it the first full approval for the vaccine globally. The vaccine was previously authorized by the country under an interim order. Canada gave full approval to Moderna's and Pfizer's coronavirus vaccines in September. [Read More](#)

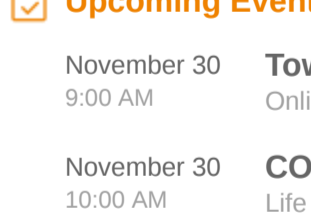
Health Canada Authorizes Use of Comirnaty (the Pfizer-BioNTech COVID-19 Vaccine) in Children Five to Eleven Years of Age

Health Canada



Health Canada has authorized the use of the Pfizer-BioNTech Comirnaty COVID-19 vaccine in children five to eleven years of age. This is the first COVID-19 vaccine authorized in Canada for use in this age group and marks a major milestone in Canada's fight against COVID-19. After a thorough and independent scientific review of the evidence, the Department has determined that the benefits of this vaccine for children between five to eleven years of age outweigh the risks. [Read More](#)

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Upcoming Events in Vancouver

November 30 9:00 AM	Townhall on the Future of Genomics in Canada Online
November 30 10:00 AM	COVID-19 Global Health Equity Symposium Life Sciences Institute and Online
November 30 12:00 PM	Technology Meets Biology: Changing How We Fight Disease Online
November 30 3:30 PM	Biotech Trends and Must Have Skills for Career Success Online
December 1 10:00 AM	World AIDS Day: COVID, Inequality & the Future of HIV Online

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STEMCELL Jobs in Vancouver

Scientific Communications Coordinator
STEMCELL Technologies

Research Associate, Immunology
STEMCELL Technologies

Marketing Specialist
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Quality Assurance Specialist, Systems
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Sales Development Representative
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Other Science Jobs in Vancouver

Research Programmer
Canada's Michael Smith Genome Sciences Centre

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Genome BC

Postdoctoral Research Fellow
UBC

Research Associate/Technician, Analytical
Precision NanoSystems

Research Coordinator
Providence Health Care

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