

Publications of the Week

Structural Basis of Broad-Spectrum β -Lactam Resistance in *Staphylococcus aureus*

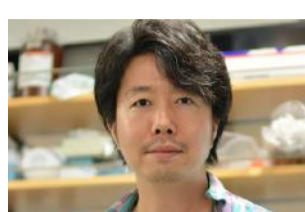
First Authors: J. Andrew Alexander (*pictured, far left, back row*) and Liam Worrall (*third from left, back row*) | Senior Author: Natalie Strynadka (*front row, seated*)
 Nature | Centre for Blood Research and UBC



Broad-spectrum β -lactam antibiotic resistance in *Staphylococcus aureus* is a global healthcare burden. In clinical strains, resistance is largely controlled by BlaR1, a receptor that senses β -lactams through the acylation of its sensor domain. This study provides a structure of a two-component signalling receptor that mediates action — in this case, antibiotic resistance — through the direct cleavage of a repressor. [Profile](#) | [Abstract](#)

A Universal Sequencing Read Interpreter

First Author: Yusuke Kijima | Senior Author: Nozomu Yachie (*pictured*)
 Science Advances | UBC



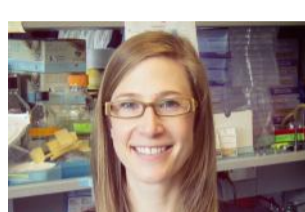
Massively parallel DNA sequencing has led to the rapid growth of highly multiplexed experiments in biology. The authors report INTERSTELLAR (interpretation, scalable transformation, and emulation of large-scale sequencing reads) that decodes data values encoded in theoretically any type of sequencing read and translates them into sequencing reads of another structure of choice. [Abstract](#)

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Awards

Dr. Elizabeth Rideout Wins 2022 End Diabetes Research Award

Life Sciences Institute



Diabetes Canada has announced \$9M in funding for 30 new research projects focusing on new developments in diabetes management, care, and risk-reduction. Dr. Elizabeth Rideout (*pictured*), an Associate Professor in the Department of Cellular and Physiological Sciences at UBC, will receive support for a project focused on understanding why women are protected from type 2 diabetes more so than men. [Read More](#)

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Local News

Research Spotlight: Wisnovsky Lab

UBC Faculty of Pharmaceutical Sciences



Cancer is a genetic disease that emerges because of many accumulated genetic mutations that happen in a normal cell, driving the cell towards the hallmarks of cancer: uncontrolled proliferation, resistance to cell death, and ability to metastasize. Dr. Simon Wisnovsky's (*pictured*) lab is using CRISPR genetic screening to systematically delete the function of thousands of different genes in parallel in the cells they grow. [Read More](#)

Researchers Find Long-Term Cumulative Exposure to Air Pollution Associated with Lung Cancer in Never-Smokers

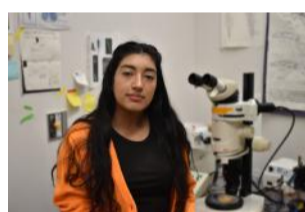
BC Cancer



In BC, approximately 33 per cent of lung cancer patients presenting to BC Cancer – Vancouver have never used tobacco products. New research from Dr. Renelle Myers' (*pictured*) team at BC Cancer suggests lifetime exposure to air pollution, specifically a particle called PM2.5, could be causing an increase in lung cancer diagnoses. [Read More](#)

Internship Program Provides Research Opportunities for Indigenous Undergraduate Student

Djavad Mowafaghian Centre for Brain Health



Thanks to the International Brain Research Organization - Centre for Brain Health UBC Indigenous Undergraduate Research Internship Program, Maiara Burgess (*pictured*) was able to get hands-on experience working in Dr. Kurt Haas' lab last summer. Maiara's primary interests are in Alzheimer's disease and autism, so she thought this program was a great opportunity to learn more about neuroscience outside of the classroom. [Read More](#)

CLIC-01 Clinical Trial: Building BC Cancer's Capabilities in Cutting-Edge Immunotherapy

BC Cancer



BC Cancer's immunotherapy team, led by Drs. Kevin Hey (*pictured*), Rob Holt, and Brad Nelson, has developed the expertise and infrastructure to create genetically engineered immune cells (called CAR T cells) for the treatment of life-threatening blood cancers. BC Cancer was the first academic group to produce and deliver CD19 CAR T cells to cancer patients in Canada. [Read More](#)

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📅 Upcoming Events in Vancouver

- | | |
|------------------------|--|
| January 26
8:00 AM | Global Health Conference 2023
BC Children's Hospital Research Institute & Online |
| January 26
9:30 AM | Blakes Speaking Series: Current Trends in Private and Public Finance
Online |
| January 26
10:00 AM | Mind the Gap: Hormonal Contraceptives and Brain Health
Online |
| January 26
4:00 PM | D.R.I.N.K.S. Vancouver
Mahony and Sons |
| February 2
8:30 AM | Precision Health Symposium
AMS Student Nest |

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- Talent Sourcing Associate**
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- Research Assistant/Technician 3**
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Amgen
- Research Associate II, Analytics (Mass Spectrometry)**
Zymeworks
- Senior Scientist, Portfolio Innovation and Target Diligence**
AbCellera
- Alliance Management Associate / Senior Associate**
Acuitas Therapeutics

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