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Volume 6.12: April 4, 2022

Publications of the Week

Spinal Cord Injury Impairs Cardiac Function Due to Impaired Bulbospinal Sympathetic Control

First Authors: Mary Fossey and Shane Balthazaar | Senior Authors: Andrei Krassioukov (pictured, right) and Christopher Nature Communications | ICORD, Vancouver Coastal Health, and UBC



Spinal cord injury chronically alters cardiac structure and function and is associated with increased odds for cardiovascular disease. The authors investigate the cardiac consequences of spinal cord injury on the acute-to-chronic continuum, and the contribution of altered bulbospinal sympathetic control to the decline in cardiac function following spinal cord injury. Abstract

Nuclear Hormone Receptor NHR-49 Acts in Parallel with HIF-1 to Promote Hypoxia Adaptation in *Caenorhabditis elegans*

First Author: Kelsie Doering | Senior Author: Stefan Taubert (pictured) eLife | BC Children's Hospital Research Institute, Centre for Molecular Medicine and Therapeutics, and UBC



The response to insufficient oxygen (hypoxia) is orchestrated by the conserved hypoxia-inducible factor (HIF). However, HIF-independent hypoxia response pathways exist that act in parallel with HIF to mediate the physiological hypoxia response. The authors describe a hypoxia response pathway controlled by Caenorhabditis elegans nuclear hormone receptor NHR-49, an orthologue of

mammalian peroxisome proliferator-activated receptor alpha. Abstract

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Awards

March 2022 Award Winners



Emilie Carpentier (pictured), a PhD student in Dr. Tony Mestrovic's lab at UBC, placed first in UBC's Three Minute Thesis competition. She discussed a 4D modelling technique to better target radiation treatments for liver cancer patients. See which other Vancouver researchers received grants, awards, scholarships,

SFU Researcher Explores Brain Circuit Function in Autism SFU News

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and fellowships in March. Read More



Dr. Teresa Cheung (pictured), Assistant Professor of Professional Practice in the School of Engineering Science and a researcher with SFU's ImageTech Lab at Surrey Memorial Hospital, received the funding from the Canadian Institutes of Health Research as part of a collaboration between SFU, Fraser Health, Seattle Children's Research Institute, and the University of Washington. The research project could set the stage for new therapies to help children with autism.

DMCBH Graduate Students Receive 2021–2022 Killam Teaching Assistant Awards

Djavad Mowafaghian Centre for Brain Health (DMCBH)



Congratulations to DMCBH trainees Todd Kamensek (pictured, left) and Leah Kuzmuk (right) for receiving 2021–2022 Killam Graduate Teaching Assistant Awards. As one of six Killam institutions, UBC offers annual awards from the Killam Endowment Fund to faculty and teaching assistants in recognition of outstanding contributions to teaching and learning. Read More

UBC Medicine Researchers Awarded 2021 Faculty Research Awards UBC Faculty of Medicine

Media. Read More Winners of the Three Minute Thesis Competition

Two outstanding researchers from the Faculty of Medicine have been awarded UBC Faculty Research Awards for 2021. Dr. Aly Karsan (pictured) received a Killam Research Prize for outstanding research and scholarly contributions, and Dr. Anna Blakney received a President's Award for Public Health Education Through

UBC Graduate School Ten graduate students competed in the Three Minute Thesis final to find out who

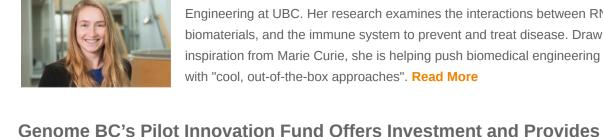


could best summarize and present years of research in only three minutes. Their research touched on topics such as lung cancer, human stem cells, sexual pain, honey bees, and infant gut microbiomes. Mopelola Akinlaja (pictured) received second place for her talk on Nosema infection in honey bees. Read More

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Local News

'What Would You Do If You Weren't Afraid?' Research2Reality



Dr. Anna Blakney (pictured) is an Assistant Professor in the School of Biomedical Engineering at UBC. Her research examines the interactions between RNA, biomaterials, and the immune system to prevent and treat disease. Drawing inspiration from Marie Curie, she is helping push biomedical engineering forward with "cool, out-of-the-box approaches". Read More

Mentorship Genome BC



Genome BC has funded several unique projects as part of a commitment to support innovation. This means the practical translation of ideas and research outcomes into new or improved products, services, processes, systems, or social interactions. The Pilot Innovation Fund aims to fund a diverse set of innovation projects with a credible probability of success. Read More

COVID-19 Linked to Changes in the Brain Djavad Mowafaghian Centre for Brain Health

Researchers have discovered evidence of brain shrinkage and cognitive decline among individuals with mostly mild SARS-CoV-2 virus infection. The first longitudinal imaging study of its kind compares the brain scans of people taken before and after the start of the global COVID-19 pandemic. "Study participants who had a positive COVID-19 test showed greater loss of grey matter as well as greater abnormalities in brain tissue, mostly found in the olfactory area related to the sense of smell," says study co-author Dr. Soojin Lee (pictured). Read More

Government of Canada Invests \$92 Million in adMare to Help Translate **Health Research into Innovative New Therapies in Canada** adMare BioInnovations



The Honourable François-Philippe Champagne, Minister of Innovation, Science and Industry, has announced a \$92 million investment in adMare BioInnovations to drive company innovation, scale-up and training activities in Canada's life sciences sector. This investment will help translate commercially promising health research into innovative new therapies and will see Canadian anchor companies provide the training required and drive the growth of Canada's life science companies. **Read More**

Newly Discovered Biopolymer Made From Bacterial Enzyme Azo Materials



Dr. Spence Macdonald's (pictured) research throughout graduate school focused largely on discovering new enzymes that can be used to synthesize carbohydratebased materials from inexpensive starting materials. A component of this research involved developing high-throughput methods that could identify a desired enzyme activity from large DNA libraries derived from diverse biological samples. This work led to the discovery of a handful of new enzymes and a previously unknown carbohydrate-based biopolymer called acholetin. Read More

New Nasal Spray Treats Delta Variant Infection in Mice, Indicating Broad **Spectrum Results UBC** Science



Researchers have shown a new compound delivered in a nasal spray is highly effective in preventing and treating COVID-19 caused by the Delta variant in mice. Variants of concern, including the recent Omicron variants, have reduced vaccine effectiveness, but senior author Dr. François Jean (pictured), Associate Professor in the UBC Department of Microbiology and Immunology, says early, still unpublished results from his team show promise that N-0385 is also effective at blocking Omicron variant infections in human lung cells. Read More

"Other Pandemic" Life Sciences Institute The world's most devastating infectious agent, *Mycobacterium tuberculosis*, the

World TB Day 2022 Urges Investment to Save Lives and Put an End to the



bacteria that causes tuberculosis (TB), is carried by one third of all humans — and kills more than 1 million people annually. Dr. Yossef Av-Gay (pictured) has developed novel assays for finding new anti-TB compounds. This work enables rapid testing for efficacy and toxicity of individual drug candidates in infected immune cells. Read More

Tackling Technical Problems, Managing Risk, and Making a Difference: A **Q&A** with Entrepreneur in Residence, Dr. Linh Le UBC Faculty of Pharmaceutical Sciences



has a BSc in Chemistry from Vietnam National University, an MSc from Columbia University, and a PhD in Chemical Engineering from Stevens Institute of Technology. He spoke about his experiences and advice regarding the world of high-tech ventures, and his goals as EiR. Read More

Entrepreneur in Residence (EiR) in partnership with entrepreneurship@ubc. Dr. Le

Dr. Linh Le (pictured) recently joined UBC Pharmaceutical Sciences as an

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Upcoming Events in Vancouver April 6

Norman Bethune Symposium 8:00 AM Online Life Sciences BC Showcase Series: Vancouver Island April 6

9:30 AM SFU Molecular Biology and Biochemistry Colloquium 2022 April 14 9:00 AM Burnaby Lake Pavilion

How to Effectively Communicate Your Science to the General Public April 27 12:00 PM

10:00 AM Riley Park Farmer's Market

Soapbox Science Vancouver

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April 30

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(iii) Other Science Jobs in Vancouver Research Assistant, Pathology & Laboratory Medicine

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