

Publications of the Week

Inhaled Diesel Exhaust Alters the Allergen-Induced Bronchial Secretome in Humans

First Author: Neeloffer Mookherjee | Senior Author: Christopher Carlsten (*pictured*)
European Respiratory Journal | The Institute for Heart and Lung Health and UBC



Diesel exhaust (DE) is a paradigm for traffic-related air pollution. DE promotes allergic responses, but protein expression changes mediated by this interaction have not been systematically investigated. Using label-free quantitative proteomics, the authors comprehensively defined DE-mediated alteration of allergen-driven secreted proteins (secretome) in bronchoalveolar lavage. [Profile](#) | [Abstract](#)

Heterogeneity within the Frontoparietal Control Network and Its Relationship to the Default and Dorsal Attention Networks

First Author: Matthew Dixon | Senior Author: Kalina Christoff (*pictured*)
PNAS | The Centre for Brain Health and UBC



The frontoparietal control network (FPCN) plays a central role in executive control. It has been predominantly viewed as a unitary domain general system. The authors examined patterns of FPCN functional connectivity (FC) across multiple conditions of varying cognitive demands, to test for FPCN heterogeneity, and identified two distinct subsystems within the FPCN based on hierarchical clustering and machine learning classification analyses of within-FPCN FC patterns. [Abstract](#)

REVIEW: Smooth Muscle Cell Fate and Plasticity in Atherosclerosis

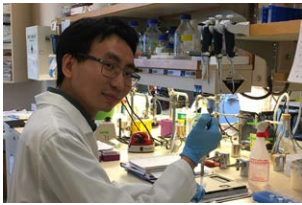
First Author: Sima Allahverdian (*right*) | Senior Author: Marie-Luce Bochaton-Piallat
Cardiovascular Research | The Centre for Heart Lung Innovation, the Providence Health Care Institute, and UBC



Current knowledge suggests that intimal smooth muscle cells (SMCs) in native atherosclerotic plaque derive mainly from the medial arterial layer. This review highlights mechanisms of SMC plasticity in different stages of native atherosclerotic plaque formation, their potential for monoclonal or oligoclonal expansion, as well as recent findings demonstrating the underestimated deleterious role of SMCs in this disease. [Abstract](#)

VPC Scientist Receives Award for Fundamental Research Publication

The Vancouver Prostate Centre



Yinan Li (*pictured*), a graduate student in Dr. Xuesen Dong's lab at the Vancouver Prostate Centre (VPC), has won the Best Scientific Paper on Fundamental Research published in *European Urology* in 2017 for the paper "*SRRM4 Drives Neuroendocrine Transdifferentiation of Prostate Adenocarcinoma Under Androgen Receptor Pathway Inhibition*". This award will be presented at the 2018 European Association of Urology Annual Meeting, held this March in Copenhagen, Denmark.

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HLI Postdoctoral Research Grants Awarded to Amrit Singh, Alex Leung, and Miranda Kirby

Centre for Heart Lung Innovation (HLI)



St. Paul's Foundation is grateful to the Ajaib (Jab) and Nirmal (Munni) Sidhoo Charities Endowment Fund and donors to the St. Paul's Hospital Pulmonary Research Endowment Fund for supporting a Postdoctoral Research Grant Program. The award winners are Drs. Amrit Singh and Alex Leung in the cardiovascular category, and Dr. Miranda Kirby (*pictured*) in the pulmonary category! [Read More](#)

Three UBC Faculty Members Awarded the 2018 CAME Certificate of Merit Award

UBC Faculty of Medicine



Three members of the UBC Faculty of Medicine have received the 2018 Canadian Association for Medical Education (CAME) Certificate of Merit Award. This award promotes, recognizes and rewards faculty committed to medical education in Canadian medical schools. The recipients, Drs. Brenda Hardie, Adam Peets (*pictured*) and Joana Gil-Mohapel will be recognized at the Canadian Conference on Medical Education in Halifax. [Read More](#)

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An Unexpected Target — and Weapon — for One of the Deadliest Cancers

UBC Faculty of Medicine



Dr. Dermot Kelleher (*pictured*) and Dr. Shane Duggan at UBC have found that a drug currently being tested for autoimmune disorders of the blood might also hold promise for treating esophageal cancer. Dr. Duggan and Dr. Kelleher conducted a screen of about 6,000 genes found in all cells that are known or emerging drug targets in esophageal cancer. They noticed a surprising trend: The genes were

more associated with immune cells than with the epithelial cells of the esophagus.

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SFU Innovation Revolutionizes the Microscope, Allows R&D to Accelerate Discovery

SFU News



A new microscope developed by SFU researchers Mike Kirkness and Nancy Forde spins thousands of times faster than a fairground swing ride, and subjects its contents to forces hundreds of times higher than in a NASCAR race or rocket liftoff. The invention holds promise for industries that conduct research and development (R&D) on consumer products like pharmaceuticals and adhesives. [Read More](#)

Viruses – Lots of Them – Are Falling from the Sky

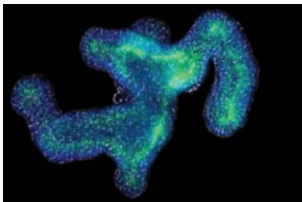
UBC Science



An astonishing number of viruses are circulating around the Earth's atmosphere – and falling from it – according to new research from scientists at UBC. The study marks the first time scientists have quantified the viruses being swept up from the Earth's surface into the free troposphere. The viruses can be carried thousands of kilometres there before being deposited back onto the Earth's surface. [Read More](#)

Using Human Kidney Organoids to Model Disease

The Centre for Blood Research



As part of an ongoing collaboration, the laboratories of Dr. Kelly M. McNagny and Dr. Benjamin S. Freedman have demonstrated that human kidney organoids grown in a culture dish can accurately model kidney development and disease. This work, recently published in *Stem Cells*, is a culmination of decades of fundamental research into mammalian kidney and stem cell biology. [Read More](#)

Zucara Therapeutics Receives Funding to Advance Lead Drug Candidate

Centre for Drug Research and Development



Zucara Therapeutics Inc., a pre-clinical life sciences company advancing a novel long-term therapeutic approach to prevent hypoglycemia in patients with diabetes, has received support of up to \$350,000 from the National Research Council of Canada Industrial Research Assistance Program. In addition, The Centre for Drug Research and Development and MaRS Innovation have contributed follow up funding to the company's existing convertible note. [Read More](#)

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Interesting Articles

Canada's Budget to Make Significant Investments in Basic Science and Research

The National Post



Canada's research community has long yearned for a consequential funding boost for science — and 2018 is poised to be its year. The Liberal government's federal budget, now believed to be only a few weeks away, is expected to contain a major financial lift for basic scientific research across the country — one that will address some of the concerns laid out last year in a national review of the state of fundamental science. [Read More](#)

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Upcoming Events in Vancouver

February 19 - 23 **Molecular Biology Workshop**
9:00 AM AMBL Lab at Michael Smith Building

February 22 **Student Biotechnology Network Biotech Expo 2018**
5:30 PM Jack Poole Hall, Robert H. Lee Alumni Centre

February 23 **Discussions Relevant to Inspiring New Knowledge and Science**
4:00 PM Mahony and Sons, Stamps Landing

February 27 **Cafe Scientifique**
7:30 PM Yagger's Downtown

February 28 **Dr. Michael Rudnicki Public Lecture - Regenerative Medicine: The Potential of Stem Cells**
7:00 PM Life Sciences Institute, UBC

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Science Jobs in Vancouver

Research Technologist
STEMCELL Technologies

Scientific Communications & Publishing Coordinator
STEMCELL Technologies

Clinical Research Coordinator, Surgical Research
Providence Health Care Research Institute

Quality Assurance Manager
BioLytical Laboratories

Postdoctoral Fellow
International Collaboration on Repair Discoveries, UBC

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HOW ARE HUMANIZED MOUSE MODELS FACILITATING IN VIVO STUDIES OF HEMATOPOIESIS?

Live Webinar by Dr. Satiro De Oliveira, UCLA



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