

Publications of the Week

Sex Differences in Islet Stress Responses Support Female β Cell Resilience

First Author: George Brownrigg (pictured, centre) | Senior Author: Elizabeth Rideout (left) | Molecular Metabolism | UBC



Pancreatic β cells play a key role in maintaining glucose homeostasis; dysfunction of this critical cell type causes type 2 diabetes. Emerging evidence points to sex differences in β cells, but few studies have examined male-female differences in β cell stress responses and resilience across multiple contexts, including diabetes. The authors address the need for high-quality information on sex differences in β cell and islet gene expression and function using both human and rodent samples. [Profile](#) | [Abstract](#)

Human *In Vitro* Spermatogenesis as a Regenerative Therapy — Where Do We Stand?

First Authors: Meghan Robinson and Sydney Sparanese | Senior Author: Ryan Flannigan (pictured) | Nature Reviews Urology | Vancouver Prostate Centre and UBC



Spermatogenesis involves precise temporal and spatial gene expression and cell signalling to reach a coordinated balance between self-renewal and differentiation of spermatogonial stem cells through various germ cell states including mitosis, and meiosis I and II, which result in the generation of haploid cells with a unique genetic identity. Continued advances in reproductive bioengineering led to successful generation of mature, functional sperm in mice and humans. [Abstract](#)

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Awards

CIHR Fall 2022 Project Grant Competition Results Announced

Centre for Health Evaluation & Outcome Sciences (CHEOS)



The results of the Canadian Institutes for Health Research's Fall 2022 Project Grant Competition have just been announced. CHEOS Scientists are leading five of the projects funded in this round, plus a further five projects are supported by CHEOS Scientists as co-investigators. Dr. Linda Li (pictured) is a co-principal investigator of a study using a home-based exercise program app in conjunction with physical therapists to work on exercise goals and action planning specific to each individual. [Read More](#)

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Local News

Women in Science: Vriti Bhagat, in Her Words

BC Children's Hospital Research Institute



Vriti Bhagat (pictured) is a graduate student pursuing a PhD in Pathology and Laboratory Medicine at UBC. She works as a graduate research assistant in Dr. Bruce Verchere's lab at BC Children's Hospital with a focus on understanding diabetes in children. She is studying how hormones involved in regulating blood sugar levels (e.g., insulin) are produced in healthy individuals, and how these processes become impaired in individuals living with diabetes. [Read More](#)

The CBR Celebrates #WomenInScience: Meet Dr. Patricia de Oliveira Benedet, Postdoctoral Fellow in the Dr. Conway Lab

The Centre for Blood Research (CBR)



Dr. Patricia de Oliveira Benedet (pictured) is a pharmacologist who specializes in the discovery and development of preclinical drugs. She has been working across academia and in a contract research organization. She has a Master's and PhD in Pharmacology and her key current areas of interest include type two diabetes, obesity, and cardiovascular research. [Read More](#)

First Study of Its Kind on HIV Genetic Diversity for Ghana Developed by MSc Student

SFU Faculty of Health Sciences



In Ghana, remarkably diverse HIV strains cocirculate, but the full extent of this diversity remains unresolved. Faculty of Health Sciences MSc student Anna Appah (pictured) published a study examining HIV-1 subtype diversity in Ghana, increasing the country's mere 31 full-genome HIV sequences in the public domain by over 200%. [Read More](#)

The CBR Celebrates #WomenInScience: Meet Tseday Zewdu Tegegn, PhD Candidate in the Dr. Prydzial lab

The Centre for Blood Research (CBR)



According to the World Health Organization, about 50% of the world's population lives in regions where the dengue virus (DENV) is endemic. The most common clinical manifestation observed in all forms of DENV infection is the reduction of platelet numbers which can lead to clinical bleeding. Tseday Zewdu Tegegn's (pictured) research focuses on DENV-infected platelets and megakaryocytes. [Read More](#)

The CBR Celebrates #WomenInScience: Meet Marie-Soleil Smith, PhD Candidate in the Dr. Côté Lab

The Centre for Blood Research (CBR)



Each year, approximately 1.1 million children are exposed to antiretrovirals (ARVs) *in utero* to prevent vertical transmission of HIV from mother to child. Most ARVs can cross the placenta, but the short- and long-term safety of many ARVs have not been fully characterized in the context of pregnancy. Marie-Soleil Smith (pictured) is comparing the effects of ARVs on cultured human embryonic stem cells as a model of a developing embryo and examine the mechanisms of adverse effects observed. [Read More](#)

DMCBH Trainee Spotlight: Dr. Mehwish Anwer

Djavad Mowafaghian Centre for Brain Health (DMCBH)



Dr. Mehwish Anwer (pictured) has always been intrigued by the complexity of the human brain, from its ability to carry out highly intricate functions to the abnormalities caused by disease. As a postdoctoral fellow in Dr. Cheryl Wellington's lab, she is investigating the patterns of neuronal activity after traumatic brain injury and its link to dementia. [Read More](#)

AcuraBio Expands cGMP Plasmid DNA CDMO Services with Cytiva's Latest Single-Use Purification Technology to Alleviate Supply Constraints for mRNA and Cell & Gene Therapies

Cytiva



AcuraBio, a leading Australian biopharmaceutical contract development and manufacturing organization (CDMO), will provide a cGMP plasmid DNA CDMO service to the world using Cytiva's new process platform technology. AcuraBio expects to produce more plasmid DNA for its customers around the world using Cytiva's latest bacterial plasmid two-step purification protocol. [Read More](#)

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Interesting Articles

Funding Opportunity for Life Sciences Research via the HFSP Research Grant Program

Natural Sciences and Engineering Research Council of Canada



The Natural Sciences and Engineering Research Council is pleased to remind the community of an important funding opportunity for Canadian researchers interested in ambitious, international projects in the life sciences. Human Frontier Science Program (HFSP) Research Grants support innovative basic research into fundamental biological problems with emphasis placed on novel and interdisciplinary approaches that involve scientific exchanges across national and disciplinary boundaries. [Read More](#)

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Upcoming Events in Vancouver

- February 21 5:00 PM **Cellular and Physiological Sciences Careers Fair 2023** Life Sciences Institute
- February 23 8:00 AM **Access to Innovation** Vancouver Convention Centre West
- February 24 4:00 PM **D.R.I.N.K.S. Vancouver** Mahony and Sons
- February 28 3:00 PM **In Good Company: The Human Trial** Gordon and Leslie Diamond Health Care Centre
- March 3 1:00 PM **Three Minute Thesis: VCHRI and UBC Heat** Vancouver General Hospital

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- Research Associate II, Pharmacology** Chinook Therapeutics
- Manufacturing Technical Specialist, Drug Product** Pall

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