



A NEWSLETTER FROM  
**The Snyder Institute  
for Chronic Diseases**



**August 2025**

**NSERC Discovery Grants 2025 Faculty Results**



- Congratulations to our Snyder members who have been awarded NSERC Discovery Grants this year. We are incredibly proud of your remarkable achievement.
- Marie Claire Arrieta Mendez – Influence of fungal symbionts in early-life microbiome establishment and host metabolism
- Khrisendath Chadee – Modeling *Entamoeba histolytica* host-parasite interactions
- Katharina Lahl – Maternal and offspring-derived antibodies in shaping the intestinal microbial ecosystem
- Pierre-Yves von der Weid – TRPV4 and cyclooxygenase-derived metabolites as central players in the mechanoregulation of lymphatic contractility
- Bryan Yipp – Using behavioromics to study dynamic inflammatory neutrophil migration in vivo
- In addition, we celebrate the early-career researchers who received both a Discovery Grant and a Discovery Launch ECR Supplement:
- Cameron Semper – Addressing cost drivers in cultured meat production
- Bas Surewaard – Rewilded Mouse Models to Study the Impact of the Wild Microbiome on Immune Responses

## Dr. Valerie Taylor Elected to Canadian Academy of Health Sciences



We proudly celebrate Dr. Valerie Taylor's recent appointment as a Fellow of the Canadian Academy of Health Sciences. This distinguished honor acknowledges outstanding contributions and leadership within the health sciences community. Dr. Taylor, who serves as Professor and Chair of Psychiatry at the Cumming School of Medicine, has established herself as a leading voice in psychiatric research. Her work as both a clinician and scientist has yielded significant insights into the bidirectional relationships between mental health conditions and chronic diseases such as obesity, diabetes and cardiovascular disorders. Our congratulations go to Dr. Taylor for this remarkable recognition. [Read more.](#)

## Snyder Institute Research Day 2025 | September 23

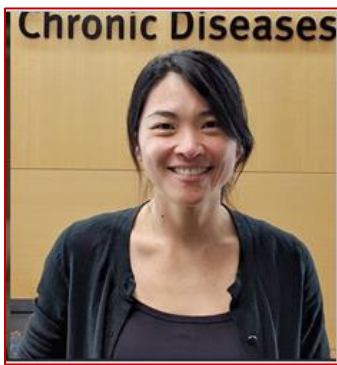


We are pleased to announce that this year's Snyder Institute Research Day will be held on Tuesday, September 23, in HSC Theatre 4 and the HRIC Atrium. The 2025 Snyder Research Day will spotlight exciting discoveries in the multi-omics era, with presentations by Drs. Yasmin Nasser, Arshad Ayyaz, Christophe Altier, Jeff Biernaskie, Justin Chun, Craig Jenne, Jonathan Canton and Franz Zemp. This is a great opportunity for Snyder members to connect with colleagues, trainees and staff. The day will conclude with a reception in the HRIC Atrium. Registration is required, and lunch and a reception will be provided to all registered attendees. Please register by Tuesday, September 16, 2025. We look forward to seeing you there! [Click here to register.](#)

## Welcome to our new members Dr. Chunlong Mu and Dr. Fuiboon Kai



Dr. Chunlong Mu (left) is an Assistant Professor in the Department of Microbiology, Immunology and Infectious Diseases, CSM and holds the Azrieli Accelerator Professorship in Microbiome & Neurodevelopment. His research focuses on the role of gut microbiome in pediatric neurodevelopmental disorders, including infantile epilepsy and autism to advance prevention and intervention strategies, such as microbiome-based therapies and ketogenic metabolic therapies and improve child health and wellness.



Dr. Fuiboon Kai is an Assistant Professor in the Department of Physiology and Pharmacology, CSM. Her research employs a combination of biophysical, bioengineering and biochemical approaches to unravel the role of ECM dysregulation in fibrotic lung diseases. She believes that better understanding the aberrant crosstalk between cells and the ECM will reveal the best strategies to target mechanically regulated signaling pathways for therapeutic benefit in lung disease.

We're excited to have you join the Snyder family!

## Publications

- Teferi, M., Tegegne, B., **Claire Kamaliddin**, Gebresenbet, R. F., Bayih, A. G., Mekuria, F., Mekonnen, Z., Solomon, B., Tilahun, H., **Jack Burke-Gaffney**, **Nolan Shelley**, Yewhalaw, **Dylan Pillai**... Hunegnaw, S [Active case detection using loop-mediated isothermal amplification technology and treatment versus standard of care for malaria in pregnancy in Ethiopia \(LAMPREG\): A pragmatic randomised diagnostic outcomes trial](#). The Lancet Primary Care, 2025
- Perera, D., Li, E., Gordon, P. M., **Frank van der Meer.**, **Tarah Lynch**, **John Gill**, **Deirdre Church**, de Koning, A. P. J., Huber, C. D., **Guido van Marle**, Platt, A., & Long, Q. [Apollo: A comprehensive GPU-powered within-host simulator for viral evolution and infection dynamics across population, tissue, and cell](#). Nature Communications, 2025

- Ryerson, C. J., Bankier, A., Beasley, M. B., Brown, K., Colby, T., Cottin, V., Desai, S., Galvin, J., Haramati, L. B., Hariri, L. P., Inoue, Y., Johkoh, T., Lee, H. Y., Leung, A., Lynch, D., Muller, N., Nicholson, A., Raoof, S., Revel, M.-P., ... **Kerri Johansson**. [Standardized Clinical Terms and Definitions for Interstitial Lung Disease: A Consensus Statement from the Fleischner Society](#). American Journal of Respiratory and Critical Care Medicine, 2025
- **Cameron Semper**, Pham, T. T. M., Ram, S., Palys, S., Evdokias, G., Ouedraogo, J.-P., Moisan, M.-C., Geoffrion, N., Reid, I., Di Falco, M., Bailey, Z., Tsang, A., Benoit-Gelber, I., & **Alexei Savchenko**. [Global survey of secondary metabolism in \*Aspergillus niger\* via activation of specific transcription factors](#). PNAS Nexus, 2025
- Gorman, H., Moreau, F., Beaupré, E., Nitin, N., Zandberg, W. F., Bergstrom, K., Gordon, P. M. K., **Antoine Dufour**, & **Kris Chadee** (2025). [Using MUC2 mucin producing tumorigenic human goblet-like cells to uncover functional properties of the mucus barrier](#). Gut Microbes, 2025

## Education News

### Striking Image Competition 2025



The Advanced Imaging and Microscopy (AIM) Network invites submissions for the Striking Image Competition 2025, celebrating microscopy excellence and promoting colour blind friendly images. This competition provides an opportunity to showcase your research by submitting biology-related images captured on any optical microscope across the University of

Calgary. To submit an entry, you must be a member of the University of Calgary with a valid @ucalgary.ca email address. The submission form is open from September 15th to November 7th. [Register here](#).

## Summer Student Research Day winners



Congratulations to our Summer Student Research Day winners. In the oral presentations category, Sraddha Uppili took 1st place, Gayatri Dronamraju earned 2nd place, and Sarah Wilson secured 3rd place for their outstanding performances. For poster presentations, Michelle Tang claimed 1st place, Heba Badahman achieved 2nd place, and Sherri Huynh & Sophie Wu shared 3rd place.

Special recognition goes to our People's Choice winners: Yvonne Chen for oral presentation and Jaida Fuder for poster presentation. We celebrate all participants for their hard work and outstanding contributions in making it a success.

## Grad Seminar Series Schedule (September)



All lectures begin at noon. Pizza (2 pcs. per person, please) provided first-come, first-served; best to arrive by 11:50 am.

September 15, Theater One

- Welcome and Expectations for the Series & SCoRe Lab Presentations

September 22, Theatre Four

- Noga Sharlin, MDMI PhD Graduate Student Dr. Corcoran's Laboratory Department of Microbiology, Immunology, and Infectious Diseases
- Barbara Waddell, MDMI MSc Graduate Student Dr. Parkins' Laboratory Department of Microbiology, Immunology, and Infectious Diseases

September 29, Theatre One

- Ayva Lewis, MDSC MSc Graduate Student Dr. Raman's Laboratory Department of Medical Science

- Cassie Wood, MDIM PhD Graduate Student Drs. Canton & Mahoney Laboratories  
Department of Microbiology, Immunology & Infectious Diseases

## Upcoming Events

### Health and Life Sciences Industry Partnership Initiative | Sept 22



Join us for an industry-academia research partnerships initiative on September 22, 2025, in partnership with Alberta Innovates. This initiative will bring together the healthcare and life science industry, post-secondary institutions and agnostic sectors to partner on their R&D pipeline, sponsored research opportunities and identify aligned research paths within the ecosystem. Attendees are expected from across Alberta, including Alberta startups, SMEs, MNEs, the not-for-profit sector,

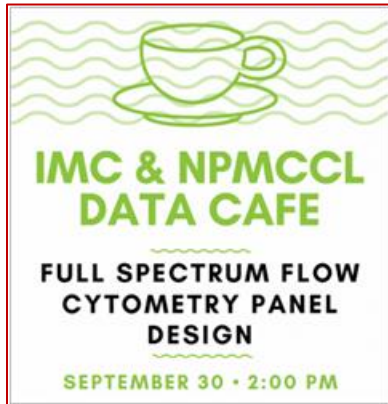
support organizations such as MedTech Canada and BioAlberta, foundation organizations and members from healthcare partners at Alberta Health Services. The event will take place from 8 am to 6 pm at the Azrieli (HRIC) Atrium & Theatre, Foothills Campus, University of Calgary. [Register here](#).

### SCoRe Data Cafe - The Ethics of Digital Image Manipulation | Sep 16



Join us for an exploration of best practices in scientific image editing and discover the reasons behind these important guidelines. Editing images is easier than ever, and while some edits may make images more readable, others can twist the image's truthfulness. All Snyder members are welcome to register. Bring your curiosity, questions, and a mug! Space is limited, so please register below. Coffee, tea, and snacks will be provided. [Register here](#).

## SCoRe Data Cafe - Full Spectrum Flow Cytometry Panel Design



Join Karen from the Nicole Perkins Microbial Communities Core Labs and Carolyn from the McCoy lab for an interactive workshop on full spectrum flow cytometry panel design. In this hands-on session, you will learn the fundamentals and best practices for designing effective panels. All Snyder members are welcome to register. Bring your curiosity, questions, and a mug! Space is limited, so please register below. Coffee, tea, and snacks will be provided. [Register here.](#)

## Congratulations



Congratulations to Dr. Michelle Asbury from the Arrieta Lab on receiving the prestigious Banting Postdoctoral Fellowship. Her research explores understanding human milk as a biological system and its role in shaping the microbial and immune development of preterm infants.

## In The News

- **CBC News**

**This lab asks research volunteers to breathe in toxic fumes — and they do it willingly**

Dr. Kerri Johansson spoke to CBC about the effects of wildfire smoke and air pollution on the human body. [Read more.](#)

- **UToday**

**Ask Me Something: How to stay healthy when wildfire smoke is in the air**

Dr. Brandie Walker answers frequently asked questions about smoky air and other air-quality concerns. [Read more.](#)

- **Western Standard**

**Alberta influenza deaths reach 16-year high**

Dr. Daniel Gregson discusses the new strain of measles and its impact. [Read more.](#)

- **City News, Economic Times, CBC, EL Pais, CTV News, Calgary Herald**

**Alberta influenza deaths reach 16-year high**

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## **Innovation and Commercialization Office**

The Innovation and Commercialization Office at the Cumming School of Medicine is launching a new newsletter focused on helping faculty, staff and students explore the commercialization potential of their research. Whether you're developing a translational project, considering a start-up, or just curious about how discoveries move from lab to market, this Commercialization Office will share resources, success stories and support available at CSM. Learn how health research can lead to real-world products, services and companies—and how you can be part of that journey. [Learn more.](#)

## **Pillai Lab ddPCR Services**

### Pillai Lab ddPCR Services

ddPCR is a highly sensitive and robust nucleic acid amplification test (NAAT) that offers several key advantages over traditional qPCR:

- Absolute quantification without the need for standard curves
- High precision and reproducibility, even at low copy numbers
- Superior tolerance to PCR inhibitors

ddPCR is particularly well-suited for detecting low-abundance targets, resolving SNPs, and quantifying subtle changes in nucleic acid levels. Its versatility makes it a powerful tool across various research and clinical applications, including:

- Liquid biopsy
- Copy number variation (CNV) analysis
- Rare mutation and sequence detection
- Gene expression profiling
- Single-cell analysis
- Wastewater surveillance
- Pathogen detection and microbiome profiling
- Next-generation sequencing (NGS) workflows

**Contact Information**

The Pillai Lab has proudly operated a ddPCR system for over five years. For inquiries about accessing our ddPCR platform, please contact [jack.burkegaffney@ucalgary.ca](mailto:jack.burkegaffney@ucalgary.ca).



Make Droplets	Cycle Droplets	Read Droplets
		

The Pillai Lab offers droplet digital PCR (ddPCR) services, providing a highly sensitive and precise nucleic acid amplification method. Unlike traditional

qPCR, ddPCR enables absolute quantification without standard curves, maintains high accuracy even at low copy numbers and shows strong resistance to PCR inhibitors. This makes it especially useful for detecting low-abundance targets, identifying rare mutations and measuring subtle changes in nucleic acid levels. Applications include liquid biopsy, copy number variation analysis, gene expression profiling, single-cell analysis, wastewater surveillance, pathogen detection, microbiome profiling and supporting next-generation sequencing workflows. [Click here to learn more.](#)

### **Design Support for Advanced Imaging and Prototyping: LCI ProtoLab**



The LCI ProtoLab offers custom imaging adapters, fluidic devices, flow chambers, sample holders and more, enabling you to concentrate on your scientific endeavors. As a comprehensive design and prototyping laboratory, we specialize in meeting the unique needs of your experiments. Our extensive capabilities include adapters for various lab equipment, imaging flow chambers, Transwell insert tools, patterned substrate molds, custom culture

inserts, flow and shear stress chambers, bubble traps, custom sample chambers and pumping devices. Allow us to provide the design advice and technical support necessary to help you achieve your experimental goals. For more information, contact [Nicholas Pittner](#).

## **Other News**

### **Snyder Institute Funding Reminder**

- Snyder internal funding opportunities can be found on our website under [Membership & Funding](#)
- Snyder internal scholarship opportunities can be found on our website under [Education & Scholarships](#)

## Awareness Information

### Freezer Efficiency Matters: What You Need to Know



A new ultra-low temperature (ULT) freezer uses as much energy as an average household.

- Too many ULT freezers increase building heat load and strain HVAC systems.
- Freezer management helps cut costs, prevent failures, and improve performance.
- Try “Freezer Fridays” to clear out expired

or unusable samples.

- Label all samples and keep an inventory—less time searching means less time with the door open.
- ULTs take ~10 minutes to recover for every 1 minute the door is open.
- Test older freezers (10–15+ years); some use 2–4x more energy and pose a risk to stored samples.

### Would you like to contact someone at the Snyder Institute?

On our website, our [Contact Us page](#) has some useful contacts.

### We want to hear from you! Send us your news

We invite all Snyder members, trainees and staff to send us your news about successes, lectures, workshops... anything that you would like to share with the membership. We will make every effort to post it, and the best ways for us to share your news are through our:

- [Snyder Newsletter](#)
- [Snyder Website](#) (as long as your news fits the site’s guidelines)
- [X](#), [LinkedIn](#), [Instagram](#) and [Facebook](#) channels

Do you want help publicizing your event/lecture/workshop? Send us the details **at least one month before the event date**. Please contact Anurag if you have any questions ([anurag1@ucalgary.ca](mailto:anurag1@ucalgary.ca)). Thank you.

For the latest news and information, visit us at [snyder.ucalgary.ca](https://snyder.ucalgary.ca), and at



If you have news to share, please send it to Anurag: [anurag1@ucalgary.ca](mailto:anurag1@ucalgary.ca)

Calvin, Phoebe and Joan  
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