



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

Calvin, Phoebe and Joan
Snyder Institute
for Chronic Diseases

 UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE

February 2024

Celebrating CIHR Fall 2024 Grant Competition Winners



We are pleased to announce the success of Snyder Institute members in the CIHR Fall 2024 Grant Competition. The results, released in January 2025, show that our team secured 40% of the total funding awarded, well above the national average of 13%. We congratulate the following researchers on their success: Khrisendath Chadee, Gilaad Kaplan, Katharina Lahl (new recruit), Shan Liao, Kathy McCoy, Braedon McDonald and Christina S Thornton, Yasmin Nasser (early career researcher), Bryan Yipp, Mark Gillrie, Ranjani Somayaji and Bas Surewaard who received five-year awards, and Raynell Lang (early career researcher) and Timothy Shutt, who received one-year awards. Together, these grants total \$8,000,000 in funding, which will support ongoing research and further the Institute's impact. We look forward to seeing the continued success of our researchers.

King Charles III Coronation Medal to Dr. Richard Leigh



Congratulations to Dr. Richard Leigh on being awarded the King Charles III Coronation Medal, following his nomination by the Canadian Lung Association. On May 6, 2023, this medal was established to commemorate the Coronation of King Charles III and has been awarded to only 30,000 Canadians to date. This prestigious honor recognizes Dr. Leigh's outstanding contributions to lung health in Canada. Congratulations on this well-deserved honor!

Research News



Snyder member Dr. Marie Arrieta and her team, including Mackenzie W. Gutierrez, have shown that early-life exposure to specific gut fungi influences metabolism and obesity. Their study found that *Candida albicans* promoted leanness, while *Rhodotorula mucilaginosa* and *Malassezia restricta* increased fat accumulation. These fungi also altered gut bacteria and immune cell populations, highlighting their role in metabolism and inflammation. The findings suggest that gut fungi play a crucial role in metabolic health and may lead to future

therapies targeting fungi to manage obesity. [Read more.](#)



Snyder Institute member Dr. Bryan Yipp and his team have discovered a link between *Pseudomonas aeruginosa* infections and lung transplant rejection. In their study, published in *Science Translational Medicine*, the team analyzed lung transplant patient case histories and found a higher-than-expected rate of lung rejection among those infected with *P. aeruginosa*. To investigate further, they conducted lab experiments with mice, showing that the infection spread to lymphoid tissue, where it killed CD4+

cells and triggered the production of donor-specific antibodies by B cells. [Read more.](#)



Led by Snyder Institute members, Drs. Constance Finney and Khrisendath Chadee, the Host-Parasite Interactions (HPI) Group taught students across Alberta about parasitology through hands-on activities and mentorship. They help Grade 5 and 6 students identify parasites in simulated cattle infections and support high school students in the Calgary Youth Science Fair. The team visits classrooms, partners with the Minds in Motion Summer Camps, and creates educational materials such as board games, puppet shows, and picture books. The program began with three schools, led by post-doctoral

students Micky Ahn and Emily DeMichele, MSc '24. In 2023-24, HPI mentored over 400 students in more than 10 schools, and the program has expanded this year, with four schools already involved and more welcome. Their monthly blog and open-access resources provide reliable information, helping connect academic research with the public. [Read more.](#)



Snyder Institute member Dr. Pere Santamaria discusses advancements in the treatment of autoimmune diseases in an interview with New Scientist magazine. He focuses on therapies aimed at reprogramming the immune system to prevent it from attacking the body's own tissues. Dr. Santamaria highlights the promising progress in autoimmune treatment, particularly with CAR-T therapy, which has shown potential in lupus patients, even leading to long-term remission after just one treatment. However, he acknowledges the high cost and risks associated with such

therapies. Another promising approach he is working on involves "Navacims," nanomedicines designed to reprogram rogue immune cells into protective ones, which have shown effectiveness in animal models. These innovative treatments offer hope for a future where autoimmune conditions can be controlled or even cured. [Read more.](#)

Publications

- Aydin I. Herik, Sarthak Sinha, Rohit Arora, Caleb Small, Antoine Dufour, Jeff Biernaskie, Eduardo R. Cobo, and Derek M. McKay, [In silico integrative scRNA analysis of human colonic epithelium indicates four tuft cell subtypes](#), American Journal of Physiology-Gastrointestinal and Liver Physiology 2025
- Baggio, C.H., J. Shang, L.L. Périco, R.C. dos Santos, M.H. Gordon, B.B. Da Luz, M. Stephens, A.M. Nascimento, M.F.P. Werner, P.-Y. von der Weid, T.R. Cipriani, W.K. MacNaughton. [Rhamnogalacturonan promotes intestinal mucosal repair through increased cell migration](#). American Journal of Physiology: Gastrointestinal and Liver Physiology, 2025
- Baruta, G., Flannigan, K. L., Alston, L., Zhang, H., De Buck, J., Colarusso, P., Hirota, S. A. (2024). [Mycobacterium avium subspecies paratuberculosis targets M cells in enteroid-derived monolayers through interactions with \$\beta\$ 1 integrins](#). bioRxiv 2025
- Kollath VO, Pulakazhi Venu VK, Saifeddine M, Mihara K, Hirota S, Hollenberg MD, Karan K. [Polynorepinephrine nanoparticles activate vascular smooth muscle alpha-1 adrenergic receptors Nanoscale](#) Adv. 2024

Congratulations

- Congratulations to the recipients of the Snyder Institute Research Equipment Grant and the Catalyst Grant winners. The Research Equipment Grant has been awarded to Tim Shut & Pina Colarusso, Guido van Marle, Carla Coffin, Craig Jenne and Frank van der Meer. The Catalyst Grant has been awarded to Bas Surewaard & Mark Gillrie. These grants will significantly contribute to the advancement of research within the Snyder Institute and beyond. Congratulations!
- Congratulations to Atena Sombolestani and Stephanie Hindle for receiving the Beverley Phillips Rising Star Award. Atena, a postdoctoral associate in Dr. Christina Thornton's lab, is studying the effects of wildfire smoke on microbes. Her research helps us understand how environmental factors affect microbial health. Stephanie is working on a project to develop fluorescent probes to study blood clotting and related diseases. Congratulations on a well-deserved recognition!

- Congratulations to Dr. Wallace K. MacNaughton on receiving the Canadian Association of Gastroenterology Distinguished Service Award. This prestigious honor will be presented at the Canadian Digestive Diseases Week conference in Quebec City.

Education News

Schedule for Grad Seminar Series for March



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

March 3, Theater Four

- Rory Mulloy, MDMI PhD Graduate Student, Dr. Corcoran's Laboratory, Department of Microbiology, Immunology & Infectious Diseases

March 10, Theatre Four

- Bjoern Ziehr, MDMI PhD Graduate Student, Dr. MacDonald's Laboratory, Department of Biochemistry and Molecular Biology

- Paula Brandt, MDSC PhD Graduate Student, Dr. Stys' and Dr. Muruve's Laboratories, Department of Medicine

March 17, Theatre Four

- Jessica Lopez Espinosa, MDIM MSc Graduate Student
Dr. Lee & Hay Laboratories, Department of Microbiology, Immunology & Infectious Diseases

March 24, Theatre Four

- Stephanie Hindle, MDIM PhD Graduate Student, Dr. Jenne's Laboratory, Department of Microbiology, Immunology & Infectious Diseases
- Ghadir Alhindal, MDCV MSc Graduate Student, Dr. Leidal's Laboratory, Department of Physiology and Pharmacology

March 31, Theatre Four

- Shane Ram, MDMI PhD Graduate Student, Dr. Savchenko's Laboratory, Department of Microbiology, Immunology & Infectious Diseases
- Simran Deo, MDMI MSc Graduate Student, Dr. Gillrie & Dr. Surewaard's Laboratories, Department of Microbiology, Immunology & Infectious Diseases

Snyder Endowed Chair Seminar Series | March 21

Endowed Chair Seminar Series

Microbial Proteolytic Activity in Inflammatory Bowel Disease
Hosted by **Dr. Derek McKay**

The seminar is followed by an informal reception in the HMRB Atrium

DR. ELENA VERDU

21 MARCH, 2025
12:00-1:00 PM
HSC G500

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Join us for the Next Endowed Chair Seminar with [Dr. Elena Verdu](#). It will take place on March 21, 2025, from 12:00-1:00 PM in HSC G500. We are pleased to welcome Dr. Verdu, who will present on "Microbial Proteolytic Activity in Inflammatory Bowel Disease." An informal reception will follow in the HRIC atrium from 1:00-2:30 PM, and all members, including trainees and postdocs, are encouraged to attend. Additionally, Snyder trainees and postdocs are invited to a roundtable lunch with Dr. Verdu from 10:45-11:45 AM in HRIC 4AC56.

Dr. Verdu is a Professor at McMaster University with extensive expertise in gastroenterology, microbiology, and gnotobiology. Her research focuses on the gut microbiome's role in digestive diseases. [Register here](#).

APPLY NOW
PHD/PDF/ECR TRAINING AWARDS
ON OUR NEW WEBSITE

AWARDS

- 3 ECR awards
- 6 PDF awards
- 6 PhD awards

3-year duration

For GI and Liver research being conducted in Canada

DEADLINE TO APPLY
June 1st 2025

VISIT THE AWARDS TAB AND
APPLY NOW
[https://www.triangleawards.com](#)

The TRIANGLE Awards provide valuable opportunities to support research in GI and liver studies across Canada at all levels of training. The Early Career Researcher (ECR) SECURE Awards offer three-year funding, with the deadline on June 1st. Postdoctoral awards are also available, with funding ranging from AMPLIFY Research Fellows to AMPLIFY Clinical Research Fellows and ENRICH Fellows. For doctoral candidates, there is an AMPLIFY award and

an ENRICH award, both for a three-year period. The CONNECT Summer Student Award offers a stipend for four months, with a deadline of February 28th. Additionally, the Experiential Learning Opportunity offers variable funding on a rolling basis. For more details and to apply, [click here](#).

Upcoming Events

Health misinformation & its consequences: A critical conversation | March 4

Health misinformation & its consequences
A critical conversation

Facts **Fiction**

Town Hall
Tuesday, March 4
6:30 - 8:30 p.m.
Red & White Club

This timely discussion is open to anyone invested in safeguarding their health, and the health of their loved ones, through facts, not fiction.

LIBIN Children's HOSPITAL UNIVERSITY OF CALGARY UNIVERSITY OF CALGARY UNIVERSITY OF CALGARY

Join the O'Brien Institute for Public Health and partners for a Town Hall on the rise of health misinformation and its impact on health and decision-making. Learn how to navigate conflicting information, find trustworthy sources and promote evidence-based choices. Date: March 4, 2025 | Time: 6:30 - 8:30 p.m., Venue: Red & White Club, Calgary. [Register here](#).

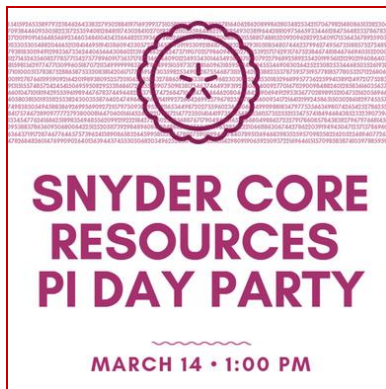
LCI Data Cafe – Prototyping | March 04



Join us for a hands-on data café on 3D design and prototyping with TinkerCAD. If you've ever needed a research tool that doesn't exist or found that available options don't quite fit your project, this session will introduce you to the principles of prototyping and how to create your own designs. Open to all Snyder Institute members, the event will take place on March 4, 2025, at 2:00 pm MST in the LCI Education Room. Space is limited, so register early. Bring your curiosity, questions, and a mug—coffee, tea, and snacks will be provided. For more

information, contact Bronwen Parry, Research Operations Specialist, at bronwen.parry@ucalgary.ca.

SCoRe Pi Day Party



Join the Snyder Community Resource team for a fun Pi Day party! Enjoy Pi-themed snacks, games and a chance to connect with fellow Snyder members. Coffee, tea and pie will be provided. All Snyder members, including trainees, postdocs, staff and PIs, are welcome! The event will take place on March 14, 2025, from 1:00 pm to 3:30 pm MDT in the SCoRe Office Area (HSC 2822). This event is free, but please contact Bronwen Parry at bronwen.parry@ucalgary.ca for more details.

Spinning Disk Confocal Microscope Demo – March 11-13



AMP will be hosting a Leica Thunder Spinning Disk Confocal Microscope demo from March 11 to 13 in HMRB 104. This advanced microscope is specifically designed for fast live imaging and 3D imaging of large samples, such as thick tissue sections, organoids and 3D cell cultures. To book a time, please contact hbiamp@ucalgary.ca or Greg.Plummer@leica-microsystems.com.

Juicebox Junkies Children's Choir: A Music Program for Kids with Type 1 Diabetes



Noted Music Studio's Juicebox Junkies Children's Choir invites kids aged 6 - 16 with Type 1 Diabetes to join a supportive, inclusive music program! Created by a T1D parent, this program includes mid-session health checks and snacks. Participants will learn Disney, Pop and Musical Theatre songs in 2-part harmony, develop vocal skills through games and prepare for a mini-performance. Sessions will be held on Sundays from May 4 to June 1, 6:30–7:30 PM at Citadel Community

Association in Calgary. For more information, [click here](#).

You can also join Notations Children's Glee Club Choir's Wicked Edition! Ages 6–16 will learn songs from the hit musical, 2-part harmonies and fun choreography starting Sundays (March 16th, 6–7 PM) at Citadel Community Association NW. [Register here](#).

Scientists Partnering for Research with Clinicians (SPARC) | April 15



The McCaig Institute for Bone and Joint Health invites researchers and clinicians to the SPARC (Scientists Partnering for Research with Clinicians) Event on April 15, 2025, from 5:00 PM to 8:00 PM at The Last Defence Lounge, University of Calgary. This event provides an opportunity to connect with peers, exchange ideas, and build interdisciplinary collaborations in bone and joint health research. Participants will also have access to SPARC Ignite Grants of up to \$20,000 to support their projects. Since 2016, SPARC has played a key role in securing

external funding, supporting 42 projects with \$640,000. Join us to explore new research opportunities and strengthen collaborations in the field. [Register here](#).

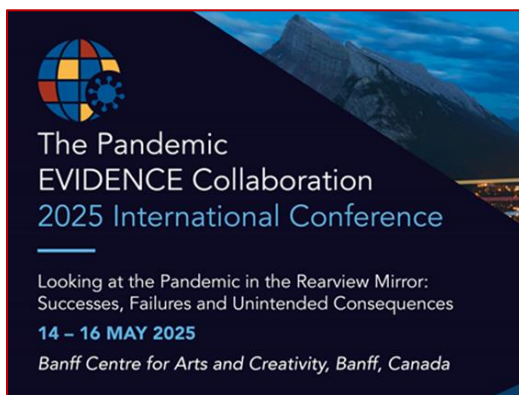
The One Health: Antimicrobial Resistance and Emerging Zoonoses Conference | March 11-14



The One Health: Antimicrobial Resistance and Emerging Zoonoses Conference will take place from March 11 to 14, 2025, at Hotel Arts in Calgary, AB. This in-person event brings together leading experts and researchers to address critical issues in antimicrobial resistance (AMR) and emerging zoonotic diseases. It offers a unique opportunity to collaborate with members of the AMR – One Health Consortium, the Canadian Antimicrobial Resistance Network and the Canadian One Health Training Program for

Emerging Zoonoses. The call for abstracts is now open, inviting submissions for oral and poster presentations. Researchers are encouraged to contribute to advancing interdisciplinary solutions to these pressing health challenges. The submission deadline is January 13, 2025. [Click here](#) to learn more details about the program.

Pandemic Evidence Collaboration International Conference | May 14-16, Banff Centre



We are pleased to share an exciting opportunity to participate in the Pandemic Evidence Collaboration 2025 Conference, taking place from May 14 to 16, 2025, at the Centre for Arts and Creativity in Banff. The conference's theme is "Looking at the Pandemic in the Rearview Mirror: Successes, Failures and Unintended Consequences," to identify, develop and implement strategies for generating high-quality evidence on non-pharmacological interventions

(NPIs) during public health emergencies to inform future policy and care decisions.

The call for abstracts is now open, and submissions include posters, poster elevator pitches, oral presentations, workshops and seminars. [Learn more and register here](#). For questions, please contact [John Conly](#).

In The News

- **The Gauntlet**
67 doctors sign open letter against Alberta's final COVID-19 task force report
Dr. Craig Jenne, co-author of the open letter talks about how this report puts the risk of COVID-19 to Albertans into perspective. [Read more.](#)
- **CBC News**
Alberta faces another uptick in flu cases as season intensifies in North America
Dr. Chris Mody talks about an increase in influenza A cases. [Read more.](#)
- **Business Insider**
A scientist who studies the link between our gut and brain shared 3 diet tweaks that could improve your mental health
Dr. Valerie Taylor talks about the link between our gut health and mental health. [Read more.](#)
- **CBC News**
Recent finding of 'bird flu' in an Oregon pig a cause for vigilance, not panic
Snyder Member Dr. Jim Kellner talks about hospitalizations for respiratory illnesses among Alberta children. [Read more.](#)
- **CBC News**
Alberta mulls roll out of H5N1 avian flu vaccine while Ottawa stockpiles doses for provinces
Dr. Craig Jenne talks about Alberta's consideration of rolling out the H5N1 avian flu vaccine. [Read more.](#)

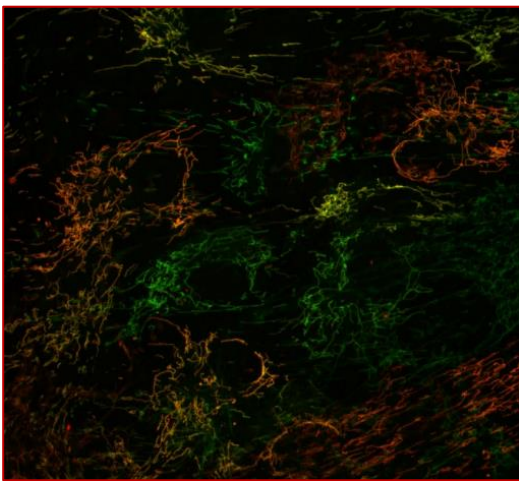
Design Support for Advanced Imaging and Prototyping: LCI ProtoLab



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](#).

Why Accessible Color Representations Matter?



Ever wondered how color choices in fluorescence microscopy impact data interpretation? Did you know red/green palettes can be difficult for those with color vision deficiencies? How can magenta/yellow improve visibility, and what role do colorblind simulations play? Why are some journals now requiring accessible color representations? Find out how small changes can make a big difference in scientific communication.

[Read here.](#)

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](#)

UCalgary Giving Day (Coming Soon)



Awareness Information

Disinfectant solutions: efficacy, use and expiry?



- 70% ethanol is effective against lipid viruses and bacteria but not spore-forming bacteria, fungi, or non-enveloped viruses; good for residue removal.
- 0.15% bleach is effective against bacteria, fungi, and spores but corrosive to stainless steel; must be rinsed off after use.
- Virkon S (1%) works against bacteria, yeasts, and viruses; use 2-3% for fungi; also corrosive to metals and must be rinsed off.
- Disinfectants must stay wet on surfaces for the required contact time; reapply if the surface dries.
- Contact times: 70% ethanol, 0.15% bleach, and Virkon S all require 10 minutes.
- Always check disinfectant expiry dates before use.

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:

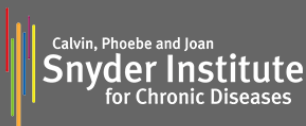
- [Snyder Newsletter](#)
- [Snyder Website](#) (as long as your news fits the site's guidelines)
- Twitter, LinkedIn, Instagram and Facebook channels

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). Thank you.

For the latest news and information, visit us at snyder.ucalgary.ca, and at



If you have news to share, please send it to Anurag, <mailto:anurag1@ucalgary.ca>



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