



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



February 2023

## Research news

### Study finds link between fungal microbes in infant gut and body weight/metabolism



Obesity has been called a non-infectious pandemic. Fifteen per cent of Canadian, and 22 per cent of American — children and adolescents — are classified as obese. Obesity is associated with several health conditions and diseases, and childhood obesity increases the risk of obesity later in life.

Many studies have shown that bacteria in the intestinal microbiome — the community of

microbes in the human gut — play an important role in metabolism. However, little is known about the role that gut fungi, known as the mycobiome, play in early childhood health and development.

Now, a national study has found a link between the diversity, or number, of fungal species in the infant gut and the body-mass index (BMI) of infants. The study was led by [Dr. Marie-Claire Arrieta, PhD](#), and PhD candidates [Mackenzie Gutierrez](#) and [Emily Mercer](#) and their research team in the Snyder Institute and Alberta Children's Hospital Research Institute at UCalgary's Cumming School of Medicine. [Read the full story.](#)

## Research news

### UCalgary researchers develop new imaging technique for a clearer picture of the gut's nervous system



Gastrointestinal disorders, such as irritable bowel syndrome and Crohn's disease, impact 10 to 20 per cent of North America's population and cost billions of dollars in health care. Yet, because GI disorders are poorly understood, current treatments work for only a fraction of patients, and may lose their effectiveness over time or cause serious side effects.

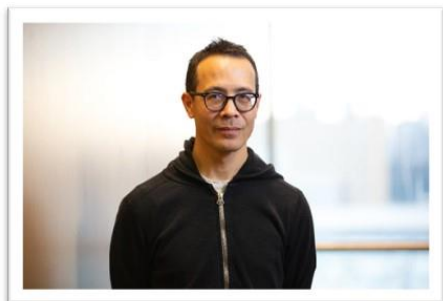
Having a solid understanding of the physiology of the human gut is fundamental to understanding what happens when it doesn't work properly,

and to developing effective treatments.

Now, a new study dramatically improves that understanding. Led by [Drs. Keith Sharkey, PhD](#) and [Wallace MacNaughton, PhD](#) and their research team at the Snyder Institute for Chronic Diseases, the team designed a novel imaging and experimental preparation system in mice that allows them to record the activity of neurons in the gut's enteric nervous system. [Read the full story.](#)

### In an interview on CBC's *The Current*, Dr. Bryan Yipp discusses the global threat posed by fungi

Fungal pathogens infect billions of people worldwide, posing a threat to human health and food security, and they are the only organisms causing extinctions in real time, wiping out some species such as amphibians.



A recent scene from HBO's new hit series *The Last of Us* has a fungal infection taking over the world, turning humans into zombie-like creatures whose aim is to spread the infection. Yes, it's science fiction, but [in an interview](#) on CBC's *The Current*, [Dr. Bryan Yipp, MD](#) (clinician-researcher, Snyder Institute, UCalgary)

and Dr. Leah Cowen, PhD (professor, Molecular Genetics, UToronto) explain that although we probably won't turn into zombies, the global threat posed by fungi is very real.

## **New study by Dr. Jennifer Corcoran provides example of damage to normal cellular processes by cancer-causing viruses**



A study by Snyder Institute member [Dr. Jennifer Corcoran, PhD](#), and her research colleagues shows autophagy in viral control of inflammation, and provides another striking example of damage to normal cellular processes by cancer-causing viruses. See the study in [PLOSPathogens](#), and learn more at the next **Mini-Medical School lecture on March 13**, held in person and online, as Dr. Corcoran and Dr. Wayne Matthews (Charbonneau Cancer Institute) will discuss viruses that cause cancer. Details below in the **Upcoming events** section.

## **Congrats**



- **Maxwell Bui-Marinos (Dr. Jennifer Corcoran)** and **Bruno Marcel (Dr. Kathy McCoy)** are the successful recipients of the [2022 Beverley Phillips Rising Star](#) PDF and PhD competitions, respectively.
- **Idaira Maria Guerrero Fonseca (Dr. Bryan Yipp)**, **Lucas Kraemer (Dr. Derek McKay)** and **Mathieu Lesouhaitier (Dr. Paul Kubes)** were each awarded a two-year [Cumming School of Medicine PDF fellowship](#).
- [Dr. Johnathan Canton, PhD](#), was awarded the [Bhagirath Singh Early Career Prize in Infection and Immunity](#) by the CIHR.

Congratulations to each of you!

## Education news

### Postdocs and Research Associates Seminar Series



As part of the series of events on professional development and education for members within the Snyder Institute, the Snyder Institute Trainee Committee (SITC) is organizing a seminar series dedicated to Postdocs and Research Associates seeking an opportunity to present their research or improve their teaching skills by giving a chalk talk for the Snyder community. The seminars will take place monthly. If you are interested in joining this and further

opportunities, please provide your contact information [here](#).

## Welcome



Please join us in welcoming **Bronwen Parry** to the Snyder Business Team. Bronwen joins the Team as Research Operations Assistant. Originally from Calgary, Bronwen moved to Nova Scotia to attend Dalhousie University where she completed her BSc in Microbiology and Immunology in 2018. After graduation she worked as a quality control technician in Halifax before moving across the country in 2020 to Vancouver. As of 2023 Bronwen has returned home to

Calgary to be closer to family. In her free time, you can find Bronwen reading, baking, and re-acquainting herself with the city.

## Other news

### Data and research security and awareness

You may be aware of increasing discussions regarding secure data storage and protection against loss or access by a foreign interest. This is an area of some importance, and Dr. Zamponi has provided some information to ensure the Snyder Institute membership is aware of this issue. [Learn more.](#)

### Tri-Council Survey for Snyder Institute Faculty

Faculty members, please take a few moments to answer our [brief, six-question survey](#) about Tri-Council Funding. This is a confidential survey for our internal use only.

Information you provide will be collated, helping us measure our Institute's granting activities for year-end reporting purposes. Thank you in advance, and **please respond by March 7, 2023.**

## **Equity, Diversity and Inclusion at the Snyder Institute**

As information for new Snyder members, we at the Snyder Institute would like to affirm that collectively, we value diversity of all kinds, including race, ethnicity, colour, sexual orientation, gender identity and expression, age, religion, and disability, and seek to promote the success and well-being of all our members. Thus, we are dedicated to creating a safe, secure, inclusive, positive, and supportive environment for all trainees, faculty, and staff. [Learn more.](#)

## **Paediatric oncology funding opportunities for multiple career levels**

Alex's Lemonade Stand Foundation (ALSF) is pleased to announce the opening of three grant opportunities for 2023: the Reach Grant, the R Accelerated Grant and the 'A' Award Grant. [Learn more.](#)

## **Do you want to contact someone at the Snyder Institute?**

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

## **Upcoming events**

### **The Snyder Institute presents Mini-Medical School: *Viruses That Cause Cancer*, March 13, 6:30 – 8 pm, in-person and online**



Join us for the Snyder Institute's Mini-Medical School: *Viruses That Cause Cancer*, presented in person and also online by [Dr. Jennifer Corcoran, PhD](#), and [Dr. Wayne Matthews, MD](#). Learn how viruses like HPV cause cancer and how HPV-associated viral cancers are treated. **This interactive lecture will be presented in person at the Libin Theatre at UCalgary's Foothills campus, and also online via zoom.** Mini-Medical School lectures are free, but you must register to attend. [Register here.](#)

### **APEX Access Program Workshop: Crafting Impactful Research Proposals, March 3, 1:30 – 3 pm, in-person and online**

Presenter Dr. Ian Lewis is Associate Professor in Biochemistry at UCalgary and Director of the Alberta Centre for Advanced Diagnostics, an organization designed to connect



researchers with facilities, resources, and partnerships in the Alberta diagnostic ecosystem. In this workshop, Dr. Lewis will present strategies that have helped him successfully obtain large-scale collaborative grants involving industry partners and internationally recognized research institutions, including Harvard University and the Broad Institute. He will also discuss incorporating meaningful and authentic EDI statements into research proposals. [Register here.](#)

## **The OADR Infrastructure, Strategic Projects & Endowments presents the 2023 Southern Alberta Scientific Equipment (SASE) Trade Show March 22, 9 am – 2 pm**

This trade show is a unique opportunity for vendors of research supplies and equipment to showcase their wares and provide one-stop shopping for the Cumming School of Medicine research community. [Find out more.](#)

### **One Health at UCalgary presents:**



### **Principles of Biostatistics online course, May 8 – June 2 (Mon-Fri, 1-4 pm)**

Understanding the basics of biostatistics is essential for every health researcher. This online course, offered by One Health at UCalgary in collaboration with the University of Calgary Biostatistics Centre, is comprised of two sections: I) *Fundamentals of Biostatistics*; and II) *Applied Statistical*

*Modelling for Data Analysis in R*. Sections can be taken separately or together. Cost: \$300 per section.

[More information and registration here.](#)



### **One Health Summer Institute, June 10-17, in person at Barrier Like Field Station, Kananaskis, AB**

The One Health Summer Institute is an in-person summer program for students to explore the concept of One Health as a multisectoral, systems-based and collaborative approach to complex problems. This one-week class and field-based program will be an engaged learning experience whereby students will 'learn by doing'. Using climate change in montane ecosystems as a case study,

participants will learn how scientific inquiry from different disciplinary perspectives and engaging people on all sides of the challenge can lead to more constructive, sustainable, and socially just solutions.

Cost: \$500 (includes instruction, learning materials, accommodation, food, and transportation). [More information and registration here.](#)

## Save the date, register now: Lymphatic Forum 2023 June 13 – 17 registration now open



The **Lymphatic Forum, June 13 – 17, 2023 in Banff, Alberta** is a biennial event that brings together researchers from around the

world to present and discuss studies on the lymphatic system in health and disease. Under the sponsorship of LE&RN and NAVBO and the Lymphatic Research and Education Program, the Snyder Institute for Chronic Diseases is organizing the **Lymphatic Forum 2023 (LF2023)**, the fifth iteration of this meeting. For more information, including the program, registration, and abstract submission, please visit <http://lymphaticforum.org>. We look forward to seeing you there.

## Save the date, register now: Neuroimmunophysiology of the Gastrointestinal Tract 2023 conference, September 28 – 30, 2023



Held in Banff, Alberta, the **Neuroimmunophysiology of the GI Tract 2023 conference** will focus attention on the complex interrelationships that exist among and between the regulatory systems that contribute to normal intestinal homeostasis. The meeting

will also explore the ways in which deviations from this norm can lead to gastrointestinal disease states. The breadth and diversity of the program will challenge and inspire you. The concepts that will be developed over the two days of the meeting will broaden your thinking and can provide a new impetus to your research.

The meeting will be a success if lasting friendships are formed, and new collaborations emerge. We hope that you will enjoy some great science surrounded by the awe-inspiring Rocky Mountains. For more information, including the program, registration, and abstract submission, please visit <https://snyder.ucalgary.ca/neuroimmunophysiology-conference>.

## **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 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 Holly if you have any questions ([holly.kerr@ucalgary.ca](mailto:holly.kerr@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 Holly Kerr, [holly.kerr@ucalgary.ca](mailto:holly.kerr@ucalgary.ca)**

[snyder.ucalgary.ca/](https://snyder.ucalgary.ca/)

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