



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



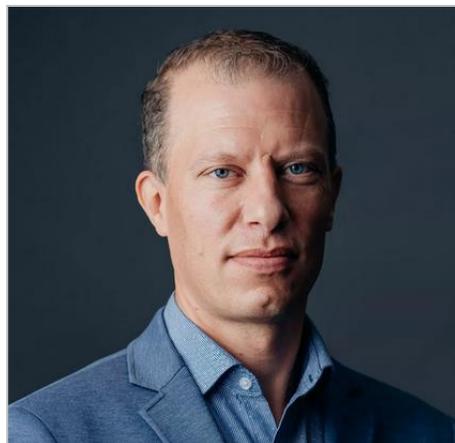
August 2024

Research News



Snyder Member [Dr. Valerie Taylor](#)'s research has shown innovative treatment approach using fecal microbiota transplantation (FMT), or "poop pills," to address major depressive disorder (MDD) and obsessive-compulsive disorder (OCD). This treatment involves introducing healthy gut bacteria from a donor into a patient's digestive system that is aimed to enhance communication between the gut and brain and reduce symptoms of mental illness.

Dr. Taylor's research taps into the emerging understanding of the gut-brain connection. Her early findings suggesting that FMT could be a promising, low-risk therapy for these conditions. [Read more.](#)



Snyder Member [Dr. Jeroen De Buck](#) has led a pioneering study that introduces a preventive phage therapy to protect dairy cows from Johne's disease. This fatal and untreatable infection, caused by *Mycobacterium avium* subsp. *paratuberculosis* (MAP), has long plagued the dairy industry. Dr. De Buck's research showcases the innovative use of bacteriophages—viruses that target and kill specific bacteria—as a preemptive measure to prevent the disease before it can infect calves. His work not only demonstrated the efficacy of this approach in curbing

the infection but also in reducing fecal shedding, a major transmission route. Dr. De Buck's contributions providing a new perspective on phage therapy and its potential as a viable alternative to antibiotics in animal health, with far-reaching implications for livestock protection and food security. [Read more.](#)

Publications

- Chang SC, Arifin MI, Tahir W, McDonald KJ, Zeng D, Schatzl HM, Hannaoui S, **Gilch S**. [Extraneural infection route restricts prion conformational variability and attenuates the impact of quaternary structure on infectivity](#). PLoS Pathogens 2024
- Arifin MI*, Hannaoui S*, Ng RA, Zeng D, Zemlyankina I, Ahmed-Hassan H, Schatzl HM, Kaczmarczyk L, Jackson W, Benestad S, **Gilch S**. [Norwegian moose CWD induces clinical disease and neuroinvasion in gene-targeted mice expressing cervid S138N prion protein](#). PLoS Pathogens 2024
- Harman-McKenna VK, Eshraghisamani R, Shafer N, **De Buck J**. [Lining the small intestine with mycobacteriophages protects from Mycobacterium avium subsp. paratuberculosis and eliminates fecal shedding](#). Proc Natl Acad Sci USA 2024
- **Rajeev S**, Li S, Leon-Coria A, Wang A, Kraemer L, et al. [Enteric tuft cells coordinate timely expulsion of the tapeworm Hymenolepis diminuta from the murine host by coordinating local but not systemic immunity](#). PLOS Pathogens 2024
- **Aamanda G**, **Kerri J**, et al. [Bronchoalveolar Lavage Fluid Cellular Analysis and Radiologic Patterns in Patients with Fibrotic Interstitial Lung Disease](#), CHEST 2024

Congrats



We are delighted to congratulate Snyder member [Dr. Kristina Rinker](#) for securing over C\$3 million in funding from the U.S. Department of Defense for an international research project focused on breast cancer detection. This grant will fund a three-year clinical study, led by Dr. Massimo Cristofanilli from Cornell and Dr. Kristina Rinker from

UCalgary, involving 2,000 participants across six sites in the U.S. and the U.K. The funding supports the continued development and evaluation of the Syantra DX Breast Cancer molecular lab test, an innovative blood test that Dr. Rinker's lab has developed over the past decade. The grant will enable researchers to expand their clinical data, particularly in diverse social and racial populations, aiming to improve early detection of breast cancer. [Read more.](#)

Education News



The Synder Summer Student Research Day was held on August 20th, where over 40 undergraduate researchers presented their work through posters and oral presentations. We extend our thanks to all participants, attendees and organizers for their dedication and effort. Special congratulations to our award-winning students: Martin Bardhi, Sophie Hoyer, Ken Kont, Nazeefa Ahmed, Madeline Day,

Yvonne Chen, Nathan Barreth and Rajpreet Randhawa.

We commend the hard work and commitment of all our students and look forward to the advancements their research will bring.

Schedule for Grad Seminar Series for 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 16, Theatre One

- Welcome and Expectations for the Series

September 23, Theatre One

- Noga Sharlin, MDMI PhD Graduate Student

Dr. Corcoran's Laboratory - Department of Microbiology, Immunology, and Infectious Diseases

Upcoming Events

Fall 2024 SPARK Alberta Cohort | Sep 4



Applications are now being accepted for the Fall [2024 SPARK Alberta](#) cohort! Hosted at the W21C Research and Innovation Centre and supported by Alberta Innovates, SPARK Alberta is committed to advancing digital health innovation across Alberta's post-secondary institutions.

An informational session will be held on Wednesday, September 4, at 12:00 pm MT to provide detailed information about the program and the application process. This session will include a comprehensive overview of the program and a Q&A segment. To participate, please register for the information session [here](#). The application deadline is 11:59 pm MT on Wednesday, September 11. To access the application form, [click here](#).

One Health in the Park: Pooches, Plants & Pests Family-Friendly Nature Walk at Fish Creek Park | Sep 4 @ 2-4 PM



Join Parachutes for Pets on Sunday, **September 15, 2024**, at **2:00 pm** at the Native Gardens of Fish Creek Provincial Park for an exciting event combining education, fun, and nature. Bring your family and furry friends for a guided nature walk led by knowledgeable experts who will introduce you to Calgary's unique plants and wildlife. You'll also learn how to keep your children and pets safe from potential dangers like parasites, wildlife-related diseases, and toxic plants. This **free in-person outdoor event** will feature a range of activities for all ages,

including face painting, pet photo sessions, games, prizes, a pop-up pet thrift store, and a tick removal demonstration. RSVP: <https://bit.ly/ohinthepark>

Snyder Research Day | Oct 9



The Snyder Research Day 2024 is scheduled for **October 9, 9:00 am - 5:30 pm**. This event provides a platform for researchers and innovators to present their groundbreaking work. The event will also offer an opportunity to connect with colleagues, trainees and staff. For more details about the event schedule and registration, please visit the [Snyder Research Day 2024 event page](#). Lunch and reception will

be provided to all registered attendees. Please register before October 2, 2024.

Talk on Interrogating Host-Pathogen Interactions Through Novel Mouse Models by Jamie Fegan | Oct 4

Currently a research associate at the University of Toronto, Jamie Fegan works with a large, multi-national team focusing on developing and evaluating novel bacterial vaccines and developing transgenic mouse models to better understand host-pathogen interactions. The talk is being held on **October 4**, in room **1405A**, from **11:30 am to 12:30 pm**, with a trainee lunch to follow until 1:30 pm. **RSVP** to Glenda Maru glenda.maru@ucalgary.ca for the trainee lunch.

In The News

- **Global News, CTV News, Calgary Herald**
Could poop pills improve your mental health? Alberta studies aim to find out

Dr. Valerie Taylor's research explores an innovative treatment for major depressive disorder (MDD) and obsessive-compulsive disorder (OCD) using fecal microbiota transplantation (FMT), or "poop pills." This approach introduces healthy gut bacteria to improve gut-brain communication and alleviate mental illness symptoms. Early results suggest FMT could be a promising, low-risk therapy for these conditions.

[CTV Morning Show](#), [CTV News Story \(TV and online\)](#), [Calgary Herald](#)

- **Calgary Herald**

Snyder researcher developing blood test to detect breast cancer

Dr. Kristina Rinker's lab is working on a precision medicine tool that analyzes a set of gene expression biomarkers from a blood sample and employs a machine learning-based software package to interpret the data, delivering a positive or negative result. [Read more.](#)

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

Is your equipment calibration up to date?



- Calibration of lab equipment (i.e., balances, pipettes, calipers, etc.) ensures the collection of accurate and reproducible results.
- Regular calibration can also prolong the lifespan of lab equipment and can help reduce costs in the long run.

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>



snyder.ucalgary.ca/



Snyder Institute for Chronic Diseases
Cumming School of Medicine

University of Calgary
3280 Hospital Drive NW
Calgary, Alberta, T2N 4N1

© University of Calgary 2024
Privacy Policy