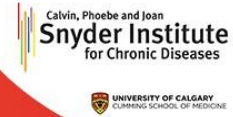




A NEWSLETTER FROM
**The Snyder Institute
for Chronic Diseases**



Jan/Feb 2022

Research news

The Province of Alberta has made a multimillion-dollar investment into diagnostic research through Alberta Innovates



The Government of Alberta announced new investment – \$3 million – into diagnostic research through Alberta Innovates on Monday. The Alberta Diagnostics Ecosystem Platform for Translation (ADEPT), as the project is known, will establish three laboratories where researchers can collaborate with licensed, and accredited medical and scientific staff to test new diagnostic technologies.

Snyder member **Dr. Dylan Pillai, MD, PhD**, is a co-lead in the ADEPT project. Dr. Pillai and researchers at the Universities of Calgary and Alberta will work together with Alberta Precision Labs and DynaLIFE to create a province-wide diagnostics platform for medical research, including samples, data, infrastructure, equipment and expertise. [Read more.](#)

Azrieli Accelerator will fuel gut-brain axis research at International Microbiome Centre to shed light on neurodevelopmental disorders



Recent research has pointed to the microbiome — that miraculous “community” of bacteria that lives in our bodies — to be potentially associated with the modulation of brain development. In other words, it’s possible that, if we can understand how the gut influences the brain, we may be able to treat symptoms that commonly occur for people with neurodevelopmental disabilities such as autism, ADHD and

Tourette syndrome. The newly created **Azrieli Accelerator** will help advance research treatments and understanding of the influence of the microbiome, on both brain development and gut-health side-effects common to certain neurodevelopmental disorders (NDDs).

As a globally recognized centre for game-changing exploration, by experts in microbiome research, the cutting-edge International Microbiome Centre (IMC) at UCalgary attracts supporters and researchers from around the world. For Snyder member **Dr. Kathy McCoy, PhD**, scientific Director of the IMC, and her team, the IMC provides the best facilities in the world to undertake this kind of research. [Read more.](#)

Recent study reveals FMT (Fecal Microbial Transplant) capsules, a.k.a. the Poop Pill, containing only helpful bacteria, restore bowel health in patients with *C. difficile* infection



Clostridioides difficile or *C. diff* can affect anyone, and the risk of getting it is highest for people who have been treated with antibiotics, have a weakened immune system, have spent time in a hospital or long-term care facility, or are age 65+. It is a debilitating intestinal infection that has high potential to recur.

A study recently published by Dr. Paul Feuerstadt, MD and **Snyder Institute member Dr. Tom Louie, MD**, shows that treatment with an oral microbiome therapy involving a Fecal Microbial Transplant (FMT) called SER-109 – a purified

poop pill containing only Firmicutes, which are ‘helpful’ bacteria – can prevent further infections in patients with recurring and difficult-to-treat episodes of *C. difficile*.

A pioneer in the development of FMT, Dr. Louie has spent more than 20 years researching *C. difficile* treatments, testing designer antibiotics that kill the infection but do not harm normal protective bacteria. He has improved lives for patients suffering with recurrent *C. difficile* infections using FMT since 1996. [Read more.](#)

New study led by Snyder member Dr. Morley Hollenberg identifies the molecule essential for success of commonly used diabetes drug



A discovery by researchers at the University of Calgary has the potential to open doors to new treatments for the approximately 3.4 million Canadians living with diabetes. A Cumming School of Medicine research team, led by **Dr. Morley Hollenberg, MD, PhD** (far left in this photo), found that a receptor, NR4A1, produced in the body, plays an essential role in supporting metformin, the drug used to lower blood sugar levels and improve how someone with diabetes responds to insulin. The team's findings were recently published in the *Journal of Molecular Pharmacology*.

Insulin is produced in the pancreas and is necessary to allow the body to use blood sugars. People with diabetes either can't produce insulin or can't properly respond to the insulin they produce. The condition can not only negatively impact quality of life, but it can also double the risk of heart disease and stroke, due to the damage it causes blood vessels. This damage is caused by high blood-sugar levels and an accumulation of oxygen reactive species molecules in cells and tissues — often called free radicals — that create a toxic environment. The result is a breakdown in the lining of the blood vessels.

Using mouse models, Hollenberg's team found that metformin helps remove these free radicals from the blood vessels, but only when NR4A1 is present.

The researchers also found that dosage is important — while therapeutic dosages are beneficial, too much metformin causes damage to the blood vessels. [Read more.](#)

Now hiring: Adaptive Immunologist

The Snyder Institute is looking for an Adaptive Immunologist to join our exciting team. The Department of Microbiology, Immunology and Infectious Diseases, in conjunction with Snyder Institute for Chronic Diseases at the Cumming School of Medicine, University of Calgary, invites applications for a Tenure Track position at the rank of Assistant Professor or early Associate Professor in Adaptive Immunology. Apply by February 28. [Apply here.](#)

Welcome new Snyder members

Welcome **Dr. Nargis Khan, PhD**, Assistant Professor, Dept. of Microbiology, Immunology and Infectious Diseases and **Dr. Cathy Lu, MD**, Clinical Assistant Professor, Gastroenterology section with interests in Inflammatory Bowel Disease and Crohn's Disease structures. We look forward to working with you!

Snyder Institute internal reagent/in vivo research model repository

The Snyder institute is planning to gather information to establish a new internal repository list for reagents and protocols used in immune cell characterization as well as to expand and update our *in vivo* research model database.

Further information will be communicated in the future directly to the laboratories. If you have any questions or suggestions, or if you are interested in support and help with new as well as established *in vivo* models and related screening opportunities please feel free to contact [Dr. Bjoern Petri \(bpetri@ucalgary.ca\)](mailto:bpetri@ucalgary.ca).

New deadlines for the Spring 2022 CIHR Project Grant Competition

In light of the disruptions caused by the Omicron variant of COVID-19, CIHR has extended the registration and application deadlines for the Spring 2022 Project Grant Competition.

- The registration deadline is now **Wednesday, February 16, 2022.**
- Research Services' final internal deadline for the full application is now **9:00 a.m. on Monday, March 14, 2022.** [More information here.](#)

Education news

For Trainees, Faculty and Staff: Snyder Institute Trainee Committee presents Equity, Diversity & Inclusion (EDI) Workshop Series



*In partnership with the UCalgary Office of Equity, Diversity & Inclusion, the Snyder Institute Trainee Committee is pleased to offer a virtual workshop series, beginning with an introductory session offered on two different dates in February. The remainder of the series will feature two different workshops each month. Upon completing 11 of the 14 courses, workshop participants will be eligible to receive an **Equity, Diversity and Inclusion (EDI) Education Certificate presented by the Snyder Institute**. A description of each workshop can be found [here](#).*

- Tuesday February 15, 1 – 3 PM – Equity, Diversity & Inclusion (EDI): An Overview of the Basics [Register here](#).
- Tuesday February 22, 1 – 3 PM – Equity, Diversity & Inclusion (EDI): An Overview of the Basics [Register here](#).
- Tuesday March 1, 1 – 3 PM – Intent & Impact: Promoting a Culture of Equity and Inclusion [Register here](#).

Important change to Postdoctoral Fellowship application process



As of **February 1, 2022** the process for applying for Postdoctoral Fellowships internally will be changing. Previously the Research Funding Application Approvals form for all Postdoctoral Fellowship applications in the Cumming School of Medicine were provided faculty-level signature by the Graduate Science Education (GSE) office. As of February 1, this signature, provided as soon as the fellow, supervisor and Department Head have signed, will be provided via the Grant Development Office. More information [here](#).

The Canadian Graduate and Professional Student Survey

The **Canadian Graduate and Professional Student Survey (CGPSS)** is a Canada-wide survey run by the Canadian Association for Graduate Studies (CAGS) that is administered to grad students every three years. UCalgary has participated in CGPSS for nearly 20 years and it has been an invaluable source of feedback to help steer improvements in students services and programming. The 2022 CGPSS began a roll out on Monday, January 31. Grad students are being emailed a personal link to the survey and will have until April 15 to complete. Participants will be entered to win 1 of 6 \$150 bookstore gift cards. More information [here](#).

Congratulations!

Snyder researchers and trainees are winning awards and grants for exceptional research



Congratulations to the recent recipients of the *Beverly Phillips Rising Star Program*, and the awardees of the *Snyder Institute Clinical Problems in Chronic & Infectious Diseases Incubator Grants*.

The **Beverly Phillips Rising Star Program** is a scholarship/fellowship program established at the Snyder Institute in 2014 with a generous donation by the Phillips family to promote graduate education in autoimmune, inflammatory, immunological and infectious disorders. The most recent recipients are:

- Marie Siwicki, Postdoctoral Fellow in the Kubes Lab
- Rory Mulloy, graduate student in the Corcoran Lab

The **Clinical Problems Incubator Grants** are designed to move a novel or poorly understood clinical observation(s) into hypothesis driven experimental research leading to a better understanding of disease and identify potential therapeutic intervention strategies. [Next deadline is July 1, 2022.](#) Congratulations to the Clinical Problems Incubator Grant recipients:

- PI: Braedon McDonald; Co-PI's: Claire Arrieta and Christina Thornton, *Combatting Infections in the ICU by Targeting the Fungal Microbiome*
- PI: Ranjani Somayaji; Co-PI's: Joe Harrison and Margaret Kelly, *Mechanisms of Silver Resistance in Wound Healing*

And there's more...

Congratulations also to Dr. Kelly Burak on receiving the [Outstanding Achievement Award in the Evaluation of Clinical Competence from the Medical Council of Canada](#)

And, Dr. Burak's study on the COVID-19 outbreak at the Edmonton curling bonspiel in March, 2020 was the [most read article in CMAJ Open, 2021!](#) Kudos!

And there's still more...

We are pleased to announce the most recent successes made by faculty members in the Snyder Institute in receiving 'new' research funding over the past few months.

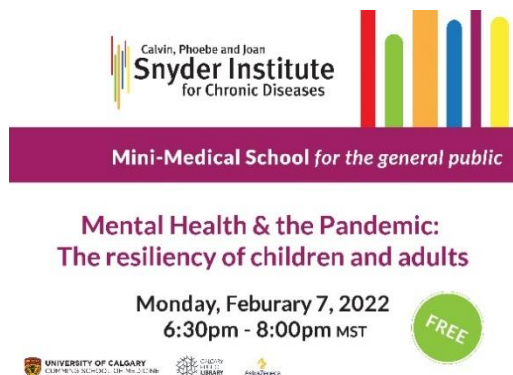
On behalf of the Snyder Institute, the OADR Grant Development Office and members of CSM, we extend our congratulations!

- Dr. Carla Coffin; CIHR Catalyst Grant: STBBI Research in Canada: Beyond HIV/AIDS/Hepatitis C - General; *The Development of a Canadian Hepatitis B Virtual Centre of Excellence*

- Dr. Dylan Pillai; CIHR Operating Grant: 13th JPIAMR transnational call for research projects; *Combining Antibiotic Resistance in Philippine Lakes: One-Health upstream interventions to reduce the burden*
- Dr. Kathy McCoy; Diabetes Canada 2021 Research Competition; *Protecting children from Type 1 Diabetes by harnessing the microbiota of the mom and the infant*
- Dr. Laura Sycuro; CIHR Catalyst Grant: STBBI Research in Canada: Beyond HIV/AIDS/Hepatitis C - Chlamydia; *Microbial modification of the cervicovaginal glycome as a risk factor for chlamydia*
- Dr. Somayaji Ranjani; CIHR Catalyst Grant: STBBI Research in Canada: Beyond HIV/AIDS/Hepatitis C – General; *Paving a path to improved access: The STBBI-CARE study*

Community outreach and upcoming events

Mini-Medical School presents Mental Health & the Pandemic: The resiliency of children and adults, Feb. 7, 6:30 – 8 pm



It has been almost two years since the COVID-19 pandemic started, and we are now learning about its impact on the mental health of children and adults. Join Dr. Sheri Madigan, PhD, and Snyder member Dr. Valerie Taylor, MD, PhD, for an interactive discussion about the resiliency of children and adults during the pandemic.

[Register for free here.](#)

Having IMPACCT 2: Advancing Microbiome Research: Registration and call for abstracts now open

IMPACTT (Integrated Microbiome Platforms for Advancing Causation Testing and Translation) and the **IMC** (International Microbiome Centre) are organizing a symposium on **June 2 & 3, 2022** of interest to microbiome researchers, clinicians, and trainees. The goal for this symposium is to bring together leading minds and highlight the latest findings and new discoveries from microbiome research teams across Canada and around the world. From causation testing to translational studies, world-class researchers will share their findings on how our microbiome shapes our health, and how we can harness the power of our microbes to improve global wellbeing. [More information here.](#)

4th Symposium of the Canadian Society for Virology: Registration and call for abstracts now open



CSV2022 Meeting, June 5-7, UAlberta, Edmonton, AB. Early Bird registration March 1, 2022.

[More information here.](#)

CSV2022 Meeting, 5-7 juin 2022
University of Alberta, Edmonton, Alberta

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



If you have news to share, please send it to Holly Kerr,
holly.kerr@ucalgary.ca

snyder.ucalgary.ca/

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