

A NEWSLETTER FROM The Snyder Institute for Chronic Diseases



April 2023

Research news

Dr. George Chaconas and a Calgary family share important story to raise awareness of Lyme disease



May is National Lyme Disease Awareness Month. Until three years ago, it wasn't something to which Jordan Bentz or her mother, Julie, ever gave much thought.

But in September 2020, 10 year old Jordan developed a strange bulls-eye-shaped rash on her leg, after a summer of playing outside and taking camping trips. Jordan's mother took her to a walk-in clinic in Calgary.

"Because we didn't see a tick, (they) said oh, there's no way she could have Lyme (disease)", says Julie. The doctor prescribed Benadryl and the pair headed home.

Within days, Jordan developed a persistent cough, and over the next few months, her symptoms worsened dramatically.

The Bentz family went from doctor to doctor hoping to find someone to identify the cause of Jordan's decline and offer treatment, but the physicians they saw in Calgary couldn't agree on the cause or a course of action.

In his lab at the University of Calgary's Cumming School of Medicine, Snyder Institute member <u>Dr. George Chaconas, PhD</u>, researches the Borrelia bacteria, which causes Lyme disease. "I call it a stranger from another planet," Chaconas says. <u>Read more.</u>

What else is in a flush? UCalgary researchers are about to find out, thanks to a \$6M award to expand their wastewater monitoring program



UCalgary researchers behind the hugely successful COVID-19 wastewater monitoring program and online COVID tracker are convinced of the potential of wastewater as a public health tool, and they're not alone.

Genome Canada, through regional partner Genome Alberta, has awarded the research group \$2M through their Genomic Applications Partnership Program (GAPP) to investigate the potential of wastewater monitoring to detect and track more viruses, in partnership with Alberta Health. An

additional combined \$4M in funding for the project was awarded by Alberta Health, Genome Quebec, and the Government of Canada.

Snyder Institute member <u>Dr. Michael Parkins, MD</u> is part of the research team who are optimistic that wastewater monitoring can offer public health officials and citizens evidence they can use in the event of future outbreaks of other viruses. The project's overarching goal is to have wastewater monitoring included in Alberta's public health policy. <u>Read the full story</u>.

Experts warn of a deadly fungus likely to threaten Alberta hospitals and care homes, as four cases of the superbug *Candida auris* have been confirmed in the province since 2020



A deadly, drug-resistant fungus sparking concern in the U.S. has been detected in very small numbers in Alberta, and experts say vigilance will be key in the battle to prevent outbreaks in hospitals and care homes. Calling it a "serious global health threat," the Centers for Disease Control and Prevention warned recently that *Candida auris* (*C. auris*) is spreading at an alarming rate in U.S. health-care facilities.

According to Alberta Health, four cases have been confirmed in the province since the fungus started being tracked as a "disease under surveillance" in 2020 (three in 2022 and one in 2021). "It will be a threat here as it will be in every major health-care facility in the developed world," says Dr. John Gill, MD, infectious disease specialist and

professor in the Department of Medicine and Department of Microbiology, Immunology and Infectious Diseases at UCalgary. He is also a member of the Snyder Institute. <u>Read</u> the full story.

Winston family gift brings to UCalgary a new critical care medicine lecture series inspired by parents



"We always said, 'If there's a worthy cause, Mom was on it.' It was in her blood — that's all she did," says <u>Dr. Brent</u> <u>Winston, MD</u>, BSc'80, a professor in the Department of Critical Care Medicine and member of the Snyder Institute at UCalgary. Of his mom Miriam, he says, "There were no barriers for her. For charity work, her motto was, 'I'm not shy about asking somebody for a donation.' And she would do that with reckless abandon." Dad – Arnold – was right by her side throughout. When Miriam was named a member of the Order of Canada in 2002 for her volunteering contributions, she said she couldn't have done it without Arnold.

Now, to honour the indelible stamp their parents put on the medical-advocacy landscape in this country, Miriam and Arnold's children are funding a lecture series at the University of Calgary.

The inaugural *Miriam and Arnold Winston Lectureship* is scheduled for May 10 as part of the Department of Critical Care Medicine's Research Day. This event is made possible through the Winstons' endowment at the Canadian Intensive Care Foundation. Read more.

Published papers

Dr. Antoine Dufour: <u>Tryptase b regulation of joint lubrication and inflammation via</u> <u>proteoglycan-4 in osteoarthritis</u>

Nabangshu Das, Luiz G. N. de Almeida, Afshin Derakhshani, Daniel Young, Kobra Mehdinejadiani, Paul Salo, Alexander Rezansoff, Gregory D Jay, Christian P. Sommerhoff, Tannin A. Schmidt, Roman Krawetz³, **Antoine Dufour**, *Nature Communications*, in press.

Congrats



Congratulations to the recipients of the *Snyder Institute Clinical Problems in Chronic and Infectious Diseases Incubator Grants*:

1. Principal investigators: <u>Dr. Justin Chun, MD,</u> <u>PhD; Dr. Pina Colarusso, PhD</u> Title: Automated Imaging for Exostosin 1/Exostosin 2–Associated Membranous Nephropathy. Co-investigator: <u>Dr. Craig Brideau, PhD</u>.

 Principal investigators: <u>Mark Swain, MD</u>, <u>Craig Jenne, PhD</u>, <u>Henry Nguyen</u>, <u>MD</u>, <u>Margaret Kelly, MD</u>, <u>PhD</u>. Title: Untitled - NAFLD-related (Non-alcoholic fatty liver disease)

Congratulations also to **Dr. Justin Chun**, awarded CFI/JELF for Spatial Profiling and Multiomics for the Precision Medicine in Nephrology Program.

And to **Shahina Wiehler, MSc**, Medical Laboratory Technician for Dr. Andrew Leidal (previously Dr. David Proud) and Dr. Richard Leigh at the Department of Physiology and Pharmacology, who received the *GSA Excellence in Research – Senior Research Affiliate Award* at the GSA Awards Gala on April 26.

Well done! Congratulations to you all!

Education news

Investment in trainees boosts healthcare research



The contribution of trainees – undergraduate students, MSc and PhD graduate students, post-doctoral fellows, and clinical residents and fellows – to clinical, translational and discovery research at the Calvin, Phoebe and Joan Snyder Institute for Chronic Diseases is foundational to success at the Institute and to the advancement of health care. Put simply: investment in top quality trainees pays dividends many times over.

In 2014, Beverley and Gordon Phillips made a generous donation to the Snyder Institute, with the vision of attracting the best and brightest trainees to conduct research in chronic inflammatory and infectious disease, creating the Beverley Phillips Rising Star Award. To date, 37 talented young scientists have been supported by a Beverley Phillips Award and, aided by world-class research facilities and outstanding principal investigators in the Snyder Institute, these awards have been remarkably successful. <u>Read more.</u>

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 <u>here</u>.

Journal Club Series

Snyder Trainee breakfast and lunch events

- Free breakfast May 5, June 9, in the HMRB atrium starting at 9 am
- Free pizza lunch May 31, June 21, in the HMRB atrium starting at noon

Spring Python workshops: May 25-26

More upcoming SITC events

Other news

EDI: Announcing the Snyder Institute Equity, Diversity, Inclusion and Anti-Racism Action Group

We're pleased to announce <u>Dr. Laura Sycuro, PhD</u>, as the new Portfolio Lead of the Snyder EDIA Action Group. Launched in Fall 2022 by Snyder trainees Dr. Karen Lithgow and Diana Changirwa, the Group currently has 30 members working to initiate policies and advance practices that address structural inequities, celebrate diversity and promote an inclusive environment for all.

Three sub-committees will each be managed by Action Leaders: one faculty member and one staff or trainee member. Learn more and get involved.

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Help fight food insecurity among students



A survey of graduate students at Foothills campus showed 50 per cent of respondents struggle with food insecurity, and 80 per cent said they can't bring enough food to get through their day. With these results, ACHRI graduate student volunteers Taylor Scheidl and Jessica Wager contacted the Graduate Students' Association and were awarded a Quality Money grant to start the **GradSnacks program**. Operating out of the ZenDen in HSC G214, it is available to all Foothills campus graduate students. <u>View feedback</u>.

Although GradSnacks has received significant support from the community, demand for the program outweighs

the current funding. GradSnacks is seeking support to sustain the program. <u>Donate to</u> <u>GradSnacks</u>.

<u>Read the UToday story.</u> Questions? Contact Taylor at <u>taylor.scheidl@ucalgary.ca</u> or Jessica at <u>jessica.wager@ucalgary.ca</u>

Foothills Campus Community Pantry



OPED has launched a grassroots initiative to support the food needs of our local campus community. To be located in the Health Sciences Centre atrium (also known as Hippocrates Mall), the community pantry will be stocked with nonperishable and hygiene essentials and available to all campus community members. This is a pilot project to support any of our community members who are in need. Campus groups and departments are invited to become involved by organizing donation collections. Please direct

questions to <u>oped@ucalgary.ca</u> about how you can help, or provide <u>feedback</u> <u>anonymously here</u>.

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Upcoming events

The Snyder Institute presents Mini-Medical School: *Asthma 2023: How research has resulted in life-changing treatments*, May 1, 6:30 – 8 pm, in-person and online



Join us for the Snyder Institute's Mini-Medical School: Asthma 2023 – How research has resulted in life-changing treatments, presented in person and also online by <u>Dr. Richard Leigh,</u> <u>MD, PhD, and Dr. Brandie Walker, MD, PhD.</u> Learn how ongoing patient-based research is resulting in paradigm-shifting and life-changing treatments for the most difficult to treat types of asthma. 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.

Save the date: Snyder Institute Town Hall for all

The next Snyder Institute Town Hall for all will be on May 23, 2 - 3 pm via zoom. Mark your calendar to hear about the latest news, budgets and upcoming exciting initiatives. More information coming to your inbox soon!

- Join Zoom Meeting <u>https://ucalgary.zoom.us/j/93695593740?pwd=czBSOGpEdksrSHV6VjFMVG9pU</u> <u>VJPZz09</u>
- Meeting ID: 936 9559 3740
- Passcode: 433975

Call for Indigenous student artists @UCalgary

The Undergraduate Biological Sciences Equity Committee is commissioning an art piece for the Biological Sciences Building. They encourage UCalgary Indigenous students with an artistic background (not necessarily professional) to apply. Learn more.

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Banff Conference on Infectious Diseases, May 17-21, Banff Centre for Arts and Creativity



Since 1982 the Banff Conference on Infectious Diseases has been a unique forum for internationally recognized experts to present their research on pathogenesis and other aspects of infectious diseases and

host defenses. Spanning clinical and fundamental science, this year's conference focuses on Emerging Pathogens:SARS-CoV2, Host Pathogen Interactions, Genomics and Transcriptomics and Antimicrobial Strategies. For more information, including the conference program and registration links, go to <u>BCID-2023</u>.

- Abstract submission deadline: April 24.
- Early Bird registration March 31; Final registration April 22.

One Health at UCalgary presents:



Principles of Biostatics 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. <u>More info here.</u>



One Health Summer Institute, June 10-17, in person at Barrier Like Field Station, Kananaskis, ABThe 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)*. <u>More information and registration here.</u>

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 <u>http://lymphaticforum.org</u>. 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 aweinspiring Rocky Mountains. For more information, including the program, registration, and abstract submission, please visit

https://snyder.ucalgary.ca/neuroimmunophysiology-conference.

Do you want 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
- <u>Snyder website</u> (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 (<u>holly.kerr@ucalgary.ca</u>). Thank you.

For the latest news and information, visit us at <u>snyder.ucalgary.ca</u>, and at



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

snyder.ucalgary.ca/

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Snyder Institute for Chronic Diseases Cumming School of Medicine

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