



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



October 2023

In Memoriam



It is with profound sadness we share the news that our colleague, Dr. Lee Anne Tibbles, passed away on October 9 at the age of 62.

Lee Anne was a stalwart and valued member of the Snyder Institute for Chronic Diseases and the Libin Cardiovascular Institute at the Cumming School of Medicine.

Passionate about transplantation research and patient care, Lee Anne served as President of the Canadian Society for Transplantation from 2009-2010. She was instrumental in the development of the Southern Alberta Transplant Program, and served as its medical director for several years, advocating for stronger organ donation and transplantation policies and contributing to a national transplant strategy. Lee Anne also made substantial contributions to the body of knowledge about kidney transplant loss due to BK virus.

Lee Anne's legacy will live on through the impacts she made to improve healthcare in Alberta. She will be deeply missed and fondly remembered by all of us who had the pleasure of knowing and working with her. A memorial service was held on Oct. 19, 2023, at Eden Brook Funeral Home and Cemetery in Calgary.

Lee Anne's family requests that, in lieu of flowers, [donations be made in her honour](#) to the Kidney Foundation of Canada. For more information, please see [Lee Anne's obituary](#) and a [UToday article](#).

Research news



Dr. Antoine Dufour: Liquid-biopsy proteomics combined with AI identifies cellular drivers of eye aging and disease *in vivo*

Single-cell analysis in living humans is essential for understanding disease mechanisms, but it is impractical in non-regenerative organs, such as the eye and brain, because tissue biopsies would cause serious damage.

Dr. Antoine Dufour, PhD and his research colleagues resolve this problem by integrating proteomics of liquid biopsies with single-cell transcriptomics from all known ocular cell types to trace the cellular origin of 5,953 proteins detected in the aqueous humor.

The research team identified hundreds of cell-specific protein markers, including for individual retinal cell types. Surprisingly, their results reveal that retinal degeneration occurs in Parkinson's disease, and the cells driving diabetic retinopathy switch with disease stage. Finally, they developed artificial intelligence (AI) models to assess individual cellular aging and found that many eye diseases not associated with chronological age undergo accelerated molecular aging of disease-specific cell types. Their approach, which can be applied to other organ systems, has the potential to transform molecular diagnostics and prognostics while uncovering new cellular disease and aging mechanisms. The team's [recent paper is published in Cell](#), and their [video](#) explains the process further.



Researchers tackling surveillance of infection after cardiac implantable electronic device implantation

Cardiac implantable electronic devices (CIED), such as pacemakers, can be lifesaving, but complex infections following surgical implantation of a device can be serious and even deadly. Although rare, typically occurring in between one and four per cent of surgeries, these infections are devastating for patients and put pressure on the health care system.

Monitoring and tracking these infections is critical for prevention, but a comprehensive surveillance program requires Infection Prevention and Control (IPC) experts to comb through patient charts and test results looking for possible infections, which is time consuming and costly for the medical system.

Snyder Institute member [Dr. Elissa Rennert-May, MD](#), an infectious diseases physician, says although Calgary has implemented a gold standard of infection surveillance for patients who have undergone CIED surgery, the cost of implementing such a program is prohibitive for most centres in Canada. Dr. Rennert-May partnered with Dr. Jenine Leal, PhD, a research scientist working in Infection Prevention and Control, and cardiologist and researcher Dr. Derek Chew, MD, to tackle the problem of a lack of surveillance across the country. [Read more.](#)

Published Papers

Dr. Antoine Dufour (First-author Ejaife O. Agbani): [Membrane procoagulation and N-terminomics/TAILS profiling in Montreal platelet syndrome kindred with VWFp.V1316M mutation.](#) *Nature - Communications Medicine*, 3(125): 1-9

Ejaife O. Agbani, Daniel Young, Si An Chen, Sophie Smith, Adrienne Lee, Alastair W. Poole, Antoine Dufour*, Man-Chiu Poon* (*co-senior authors).

Well done Dufour research team!

Congrats



- **Dr. Braedon McDonald, MD, PhD** is one of three faculty members presented with the [2023 Killam Emerging Research Leader award](#) for his exemplary contributions to critical care medicine.
- **Dr. Tom Louie, MD, and Dr. Dylan Pillai, MD, PhD** were named [Fellows of the Infectious Disease Society of America](#), one of the highest honours in the field of infectious diseases, bestowed on those who have achieved professional excellence and provided significant service to the profession.
- **Dr. Kristina Rinker, PhD, P.Eng**, and her co-founders of the innovative molecular diagnostic technology [Syantra DX](#) received the [Technology Innovation Award](#) at the 2023 BioAlberta Achievement Awards.
- PhD student Mahana **Mahana Sabachvili** (Dr. Kathy McCoy and Dr. Lukas Mager) is the recipient of the first **Cartier Family Research Award**.

Congratulations to you all!

Education news

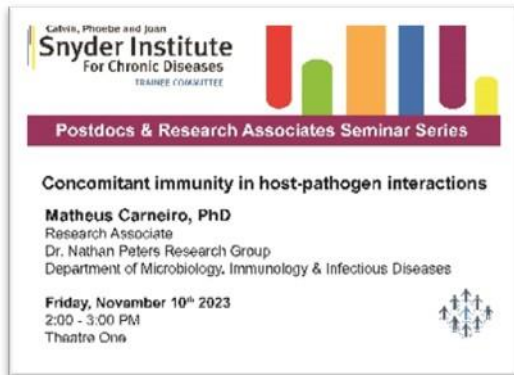


Beverly Phillips Rising Star Program applications now open; applications due December 15, 4 PM MST

This award aims to recruit outstanding PhD students and postdoctoral fellows to innovative basic science and translational research training in autoimmune, inflammatory, immunological and

infectious disorders within the Snyder Institute through the offer of highly competitive scholarships/fellowships. **Application deadline is December 15, 4:00 PM MST.** [Find out more here.](#)

SITC Postdocs and Research Associates Seminar Series Friday, November 10, 2 – 3 pm, HSC Theatre One



Our next Postdocs & Research Associates Seminar Series lecture will be [Concomitant immunity in host-pathogen interactions](#), presented by [Matheus Carneiro, PhD](#).

As part of the series of events on professional development and education for members within the Snyder Institute, the Snyder Institute Trainee Committee (SITC) holds 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 take place monthly. If you are interested in joining this and further opportunities, please provide your contact information [here](#).

Snyder Graduate Seminar Series – November



All lectures begin at noon. Pizza provided first come first served; best to arrive by 11:50 am.

November 6, Theatre One:

- Diana Changirwa, MDIM PhD Graduate Student, Dr. McDonald's Laboratory, Department of Microbiology, Immunology & Infectious Diseases
- Regan Penner, MDGI MSc Graduate Student Dr. Lu and Dufour Laboratories, Dept. of Microbiology, Immunology & Infectious Diseases

November 13, *University Holiday (in lieu of Remembrance Day), no seminar*

November 20, Theatre One:

- Isla Skalosky, MDIM PhD Graduate Student Dr. Geuking's Laboratory, Department of Microbiology, Immunology & Infectious Diseases

- Anjali Kapilan, MDSC MSc Graduate Student
Drs. Dufour & Colarusso Laboratories, Department of Physiology & Pharmacology

November 27, Theatre One:

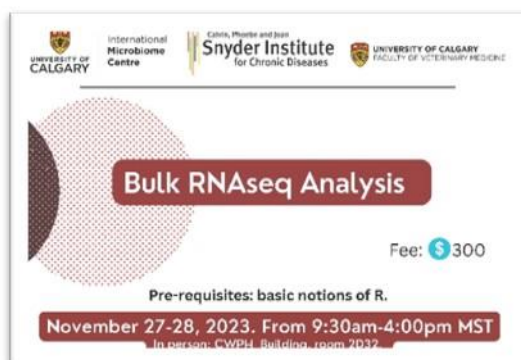
- Melanie Finkbeiner, MDIM MSc Graduate Student
Drs. Mahoney & Beaudry Laboratories, Department of Microbiology, Immunology & Infectious Diseases
- Sasha Shcherbakova, MDBC MSc Graduate Student
Dr. Chaconas' Laboratory, Department of Biochemistry and Molecular Biology

Python for Biologists Workshop Series – Applications due November 24



Python for Biologists is a 10-session workshop series intended for Snyder trainees and postdocs with a biological background but limited or no previous programming experience. This course will introduce basic programming concepts with plenty of time to practice writing code and work with your own data. The Python for Biologists workshop series will run daily on weekday mornings from Jan. 22 to Feb 2. Course fees are fully covered by the Snyder Institute. **Spots are limited - apply by Nov. 24.** [Find out more & apply here.](#)

RNAseq Analysis Workshop, November 27 & 28, 9:30am – 4pm, CWPB Building, Rm. 2D32



The IMC, Snyder Institute and Faculty of Veterinary Medicine are excited to announce their upcoming RNAseq Analysis Workshop. This comprehensive workshop will unfold over two insightful days, starting with RNA-seq Quantification and culminating in advanced sessions on Differential Expression Analysis & Gene Ontology. The event is scheduled for November, with hands-on sessions led by Dr. Juan Jovel and Dr. Ewandson L. Lameu. The workshops are standalone and will be

conducted in person. Details can be found on the attached poster, don't miss out on this exciting opportunity! [Learn more and register here.](#)

[Journal Club Series](#)

[More upcoming SITC events](#)

Other news

Striking Image Competition – submissions due October 31

Hosted and organised by the Advanced Imaging and Microscopy Network (AIM), the competition celebrates microscopy excellence and promotes colour-blind-friendly images. Showcase your research by submitting biology-related images captured on any optical microscope across the University of Calgary! **Submission deadline is Oct. 31.** [Find out more and submit images here.](#)

New equipment in the Mouse Phenomics Resource Lab

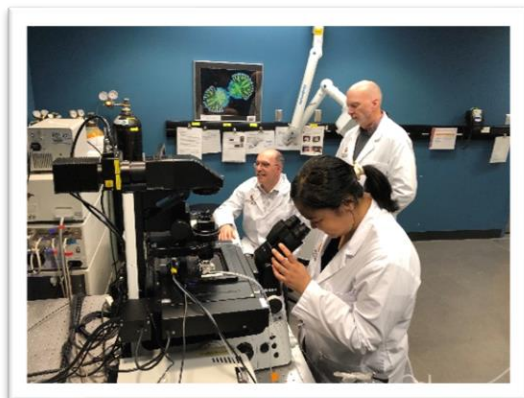


The Snyder Institute Mouse Phenomics Resource laboratory has extended its research equipment portfolio with a new automated hematology



analyzer. The VETSCAN HM5 is a hematology analyzer that reports a full, 5-part CBC (including WBC, RBC, platelets) differential with 22-parameters. Based on highly-reproducible impedance technology, the VETSCAN HM5 supports 15 species and provides direct and fast analysis of blood samples and other body fluids (species dependent). If you have further questions, would like to test the system or set up a collaborative screen, please contact Dr. Björn Petri directly: bpetri@ucalgary.ca

Snyder Institute Catalyst Grant



The Snyder Institute is pleased to announce its new Catalyst Grant program. A \$1-million gift from the McKay Family Foundation is providing critical seed funding for researchers at the Snyder Institute. This grant program will help launch bold, innovative and unfunded research investigations which could lead to future new medical treatments.

The new [Snyder Institute Catalyst Grant](#) program bridges the gap for ambitious research projects which have the potential to attract substantial government support once promising initial data can be gathered. The grants support innovative, high-risk, high-reward research that aligns with the Snyder Institute's mandate and priorities and

makes significant use of its [Live Cell Imaging Lab](#) and other core research platforms and affiliated platforms. [Learn more and apply !](#)

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](#)

Nominations for the 2024 Equity, Diversity and Inclusion Awards now open, deadline November 15



At UCalgary, equity, diversity, inclusion, and accessibility are foundational values, practices, and strategic commitments across all areas of teaching, learning, research, service, and community engagement. The annual EDI Awards aim to recognize the knowledge, passion, dedication and campus engagement of individuals and teams who are actively promoting equity, diversity, inclusion, and accessibility in teaching and learning, research

and scholarship, community engagement, and the living and working environments across our campus communities. [Learn more.](#)

CIHR Team Grants in Lung Health funding opportunity

The Canadian Institutes of Health Research are collaborating with the Canadian Cancer Society, the Canadian Lung Association, and the Heart and Stroke Foundation of Canada on the upcoming [Team Grants: Lung Health](#). This funding opportunity is also supported by in-kind contributions from Cystic Fibrosis Canada and Children's Healthcare Canada.

Alex's Lemonade Stand Foundation for Childhood Cancer 2024 Young Investigator Grant, Applications due December 11

The Young Investigator grant is a three-year award designed to support early career researchers, such as postdoctoral fellows, clinical fellows, or instructors, pursuing promising childhood cancer research ideas. These grants aim to cultivate the best and brightest researchers of the future who demonstrate a commitment to a research career in pediatric cancer. [Learn more.](#)

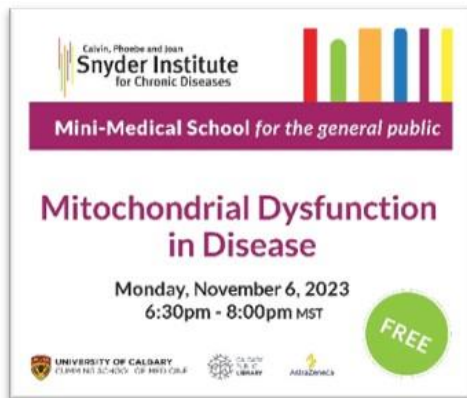
Do you have new trainees or new staff working with you?

If you do, please send us their contact information so we can add them to our mailing list and ensure they receive all pertinent Snyder news. Email snyderadmin@ucalgary.ca.

Upcoming events

Invited talk: Dr. Tohid Didar, McMaster University: *Micro and nano engineered bio-interfaces for diagnostics and preventing the spread of infectious diseases*, November 2, 11 am – noon, Schulich School of Engineering, Room ENG 207.

The Snyder Institute presents Mini-Medical School: *Mitochondrial Dysfunction in Disease*, November 6, 6:30 – 8 pm, in-person and online



Join us for the Snyder Institute's Mini-Medical School: *Mitochondrial Dysfunction in Disease*, presented in person and also online by Dr. Derek McKay, PhD, and Dr. Tim Shutt, PhD. Mitochondria are best known as the 'powerhouse of the cell', however, they have several additional roles that highlight their importance for cellular function. As such, it should come as no surprise that mitochondrial dysfunction is increasingly recognized to play an important role in human disease. **This interactive lecture will be presented in person at Health Sciences Centre**

Theatre 4, UCalgary's Foothills campus, and also online via zoom. Mini-Medical School lectures are free, but you must register to attend. [Register here.](#)

Upcoming CSM United Way fundraising events – November

We are proudly part of the UCalgary United Way campaign team. Here are the latest updates on the Campaign, including how to get involved, fundraising events, impact stories and frequently asked questions. **CSM Community Pantry – Hot Chocolate Bar November 2, HSC Mall !** <https://cumming.ucalgary.ca/unitedway>

Critical Discussion: Animal Care changes to satisfy CCAC requirements – November 7 & 14



The recent assessment by the Canadian Council on Animal Care (CCAC) has led to UCalgary being placed on probationary status with the CCAC. This is a matter of utmost seriousness, and it necessitates immediate action. Your participation in the upcoming Town Hall sessions is crucial as we collectively address the future of UCalgary's animal research program. All Snyder faculty and staff are encouraged to attend.

Town Hall Sessions:

Session 1: Tuesday, November 7, 10 a.m. – 12 noon

Session 2: Tuesday, November 14, 10 a.m. – 12 noon

Location for Town Halls: HSC G500, Foothills Campus – *In-person only*

[Learn more and register](#)

Erik van Tilburg Bernardes PhD Exit Seminar, November 8: The role of intestinal fungi on microbiome ecology, host immune development, and susceptibility to airway inflammation. November 8, 1 pm, Clara Christie Theatre. [More info.](#)

Rachel McKenna Annual Lecture Series 20th Anniversary November 9

This lecture series was started 20 years ago, in memory of Dr. McKenna. Open to all physicians, residents and fellows in the Department of Medicine. This year's lectures: *State of the Art Research in Solid Organ Transplantation*, and Dr. Lori West presents: *ABO as a histocompatibility system in transplantation: history, technology, and opportunities to address 21st century.* [Register here.](#)

5th Annual Skin Research Day, CSM Division of Dermatology,

November 16, Red & White Club, McMahon Stadium. Contact

Hanifa.Remtulla@albertahealthservices.ca for more information.

Snyder/MIID Coffee Meet-ups for Faculty: Next meet-up November 22, 2 – 3pm, UCVM HRIC 2AC56



Snyder Faculty members, come and get to know your Snyder/MIID colleagues! Please join us for coffee and treats in an informal setting on **November 22, 2 – 3 pm**. *We'll provide the coffee and treats; please bring your own mug or cup if possible. New location: UCVM HRIC 2AC56. [More info.](#)



Snyder EDI Action Group next meeting November 27, 10:30 – 11:45am, HSC G382

[Dr. Laura Sycuro, PhD](#), is the Portfolio Lead of the Snyder EDI 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 have formed and will be managed by Action Leaders: one faculty member and one staff or trainee member for each group.

Open to all faculty, trainees & staff who want to get involved

There are opportunities to join as a member-at-large or sub-committee leader.

Regular meetings are held on the 4th Monday of **every other month**, 10:30-11:45 am, in HSC G382

- November 27, 10:30 am in G382
- January 29, 10:30 am in G382
- March 25, 10:30 am in G382
- May 27, 10:30 am in G382

Learn more about the [Snyder Institute EDI Action Group](#).

Snyder Institute Endowed Chair Seminar Series: Molecular Phenotyping of Critical Illness: Moving Towards Precision Critical Care Presented by Dr. Carolyn Calfee – Dec. 1, 2-3 pm, HSC O1500



Please join us for the second lecture of the 2023-2024 Endowed Chair Seminar series on December 1, 2023, from 2:00-3:00 PM in HSC O1500. This lecture will feature invited speaker **Dr. Carolyn Calfee**, who will present on **Molecular Phenotyping in Critical Illness: Moving Towards Precision Critical Care**. **Snyder trainees and postdocs are also invited to attend a trainee roundtable lunch with Dr. Calfee on December 1, 2023, from 12:00-1:00 PM in HRIC 2AC56.**

Dr. Carolyn S. Calfee, MD, MAS is Professor of Medicine and Anesthesia at the University of California, San Francisco, where she attends in the intensive care units. She received her medical degree from University of Pennsylvania and completed her residency, chief residency, and fellowship at University of California, San Francisco. Her primary academic focus is the pathogenesis and treatment of the acute respiratory distress syndrome (ARDS), with special interest in molecular phenotypes and precision medicine in critical care, the role of environmental exposures in acute lung injury, and novel treatments for ARDS and sepsis. **Register for the lecture [here](#), and the trainee/postdoc roundtable [here](#).**

Mark your calendar! Snyder Institute Holiday Party – December 6, 3-6 pm, HRIC Atrium



Join us to kick off the holiday season! Great food, great wine, spirits and other beverages, and excellent company! Please [RSVP by November 27](#).

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 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). Thank you.

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



snyder.ucalgary.ca/

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