Discovery Digest

BE WHAT THE WORLD NEEDS

May 2026 - Issue 100

Discovery Digest **is a glimpse into how University of Saskatchewan research, scholarly and artistic works are making a difference for Saskatchewan, Canada and the world. Curated by the Research Profile and Impact unit, Office of the Vice-President Research. Feedback welcome!**

This Month's Stories

USask researchers discover new reproductive method that will revolutionize cattle production

Dr. Jaswant Singh (DVM, PhD), researcher at USask's Western College of Veterinary Medicine (WCVM), has spent his career researching the reproductive management of cattle and working on new methods to help farmers increase the number of healthy herd members.

In two recent papers published in **Biology of Reproduction** and **Theriogenology**, Singh and graduate student, Dylan Farmer, demonstrated their findings on a revolutionary method of cattle reproduction that has been in the making for over 25 years.

"This is going to have a positive impact on millions of animals around the world and promote a much better protocol for beef cattle. I believe it will revolutionize production in Canada and South America," said Singh.

Walking together: USask marks 10th ohpahotân | oohpaahotaan symposium

On April 17, 2026, the Office of the Vice-Provost, Indigenous Engagement (OVPIE) welcomed the campus community to the University of Saskatchewan's (USask) 10th ohpahotân | oohpaahotaan symposium.

While many are at different stages of engagement with ohpahotân | oohpaahotaan, the focus of this symposium was the Phase 4 reporting that many are undertaking this spring. The reporting framework asks the college, school, and senior administrative portfolios to share stories from the past, present, and future, grounded in the seven commitments.

"Reporting is not simply a technical exercise," said **Vince Bruni-Bossio**, USask's president and vice-chancellor. "It is an act of relationship. It is an act of transparency, and it is an act of respect for the Indigenous communities who entrusted us with this strategy."

Elders Linda Young, Roland Duquette and Norman Fleury each offered reflections on the gift and how they have or haven't seen it in action over the past five years. Though some changes have been gradual, progress continues to advance the university community.

USask celebrates opening of state-of-the-art dental clinic

USask marked a major milestone in dental education and patient care on May 1 with the grand opening of the College of Dentistry's newly renovated clinic. The $24-million project, supported by the Government of Saskatchewan and generous corporate donors, reflects a shared commitment to strengthening health-care training and improving access to oral health services in the province.

The upgraded clinic will support innovative approaches to teaching and research for students, reinforcing USask's role in advancing health sciences education in Saskatchewan.

"With these leading-edge facilities and technologies, I am proud to say we have the most advanced infrastructure in Canada, and maybe in North America," said **Dr. Walter Siqueira (DDS, PhD)**, Dean of the College of Dentistry. "This investment ensures our graduating dentists, dental hygienists, dental therapists, and dental assistants are trained using the same advanced technology used in today's dental practices."

Can soybeans counteract ergot's effects on cattle health?

Ergot alkaloids are toxic compounds produced by a type of fungus (*Claviceps purpurea*) that thrives in cold and moist environments. In the past decade, ergot contamination has become more prevalent in forage and cereal crops grown in Western Canada. Ergot mainly affects cereal grains like wheat, barley and rye.

Dr. Vanessa Cowan (DVM, PhD) is a veterinary toxicologist and assistant professor at the Western College of Veterinary Medicine (WCVM) on the USask campus, is conducting a study focused on ergot exposure in beef cattle. Cowan and her team aim to determine if soybean meal can be used as a safe and cost-effective way to reduce the negative health effects of ingesting ergot-contaminated feed.

Top 5 things to know about hantavirus and how VIDO is helping reduce risk

As Canadians open garages, sheds, basements, and storage spaces after winter, they may also be exposing themselves to an often-overlooked health risk: hantavirus.

Hantaviruses are carried by rodents and can cause hantavirus pulmonary syndrome (HPS), a rare but often severe lung illness that can be fatal in about 30 to 40 per cent of cases. People can become infected by breathing in virus particles from rodent urine, droppings or saliva that get stirred into the air during cleaning.

Dr. Bryce Warner (PhD) and his team at VIDO are studying how hantaviruses interact with the immune systems of rodent hosts, particularly deer mice. Their goal is to understand how the virus can remain in these animals without making them sick.

Looking for more research stories? Visit Discovery Digest online.

USask to celebrate honorary degree recipients

At this year's USask Spring Convocation ceremonies the university will award honorary degrees to USask alumnus **Murad Al-Katib**, a celebrated entrepreneur from Saskatchewan who turned his Canadian startup into a billion-dollar global plant-based protein company, and **Dr. Gagandeep Kang (MD, PhD)**, a world leader in microbiology from India whose innovative interdisciplinary infectious disease research supports international initiatives and organizations like the World Health Organization (WHO).

"We are grateful to have the opportunity to pay tribute to these remarkable individuals and to recognize the global impact they have made throughout their careers," said **Vince Bruni-Bossio**, USask's president and vice-chancellor. "It is a privilege to spotlight these two leaders in their respective fields and to express our admiration and appreciation by bestowing the university's highest honour at this year's USask Spring Convocation."

Unexplored trace fossils give USask researchers climate change insights

What can fossils teach us about our future?

That's one of the questions being tackled by **Dr. Gabriela Mángano (PhD)**, a distinguished professor and MacLeod Research Chair in the Department of Geology in the College of Arts and Science at USask.

In a recently published article in ***Nature Ecology & Evolution***, Mángano and a team of interdisciplinary researchers from institutions around the world explored a collection of trace fossils – fossilized evidence of the small things living organisms left behind hundreds of millions of years ago, like the tiniest of footprints or winding serpentine paths preserved for researchers to explore.

But as Mángano puts it, these tiny trace fossils can give us insights into how organisms responded to significant environmental changes that in some ways aren't dissimilar to changes happening today in some regions of our oceans.

Take 5: Five ways USask researchers are working with the UN to reverse climate change

USask researchers are working with the United Nations Educational, Scientific and Cultural Organization (UNESCO) to raise awareness and contribute to an action plan to save the Earth's cryosphere.

The cryosphere refers to all of Earth's water in solid form. This can be glaciers, snow, ice caps, sea and freshwater ice, permafrost, and frozen ground. Cryospheric sciences make up one of five components of the climate system.

Dr. John Pomeroy (BSc, PhD), a USask graduate and distinguished professor in the Department of Geography and Planning in the College of Arts and Science, and USask PhD

student **Zoë Johnson** recently participated in, presented and facilitated discussions on the world stage about how to save the cryosphere.

Researchers uncover unexpected limit to SARS-CoV-2's immune defences

A new collaborative study has revealed a hidden weakness in how the COVID-19 virus (SARS-CoV-2) evades the immune system.

The study was co-led by **Dr. Arinjay Banerjee (PhD)**, a principal scientist and Canada Research Chair in Zoonotic Virus and Animal Reservoirs at VIDO at USask, and members of his lab, in partnership with the Overall lab at the University of British Columbia.

They found that while the virus can interfere with one of the body's early defences, it may also unintentionally trigger another response that helps slow infection. **The study was published in the journal *Cell Reports*.**

From Fujian province to Saskatchewan: USask researcher rooted in agriculture

You could say **Dr. Yongfeng Ai (PhD)** was born to be a food scientist.

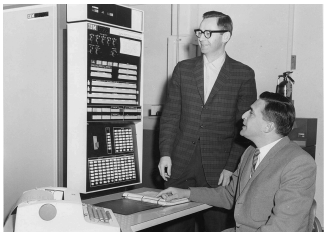
Originally from a farm in Fujian province, China, he has uprooted three times, but always to regions with important agricultural economies.

Ai is an associate professor in the College of Agriculture and Bioresources, as well as Ministry of Agriculture Endowed Research Chair in Carbohydrate Quality and Utlization.

As a research chair on campus, Ai said he enjoys a good balance of fundamental and applied research.

"I work closely with companies in the agri-food sector in Saskatchewan, Canada and North America. That's one thing I really like," he said. "I support research and development efforts of those companies."

Inside VIDO's work to stay ahead of the next pandemic



Looking Back: Reflecting on research excellence in USask computer science

[Global Institute for Food Security announces new Chief Executive Officer]

USask Signature Series Podcast - Season 2

The USask Signature Series Podcast is an exploration and celebration of the interesting and the innovative, the fun and the fantastic, the cutting-edge and creative of USask research.

You'll hear from USask experts across a variety of disciplines and research areas as they tackle the questions and opportunities the world needs today.

Check out the podcast on Spotify, Apple Podcasts or wherever you get your podcasts!

Here are the newest episodes of the USask Signature Series:

- S2E10 – What should your children be eating for lunch?
- S2E09 – How are we encouraging young scientists? (International Day of Women and Girls in Science special!)
- S2E08 – How does a curling rock curl?

If you have an idea for an episode of the podcast, please email research.communications@usask.ca.

Stay connected with USask research news

Make sure to follow USask Research on Instagram at @usaskresearch, and on LinkedIn and Twitter/X to stay in-the-know, with exciting research news delivered right to your newsfeed. Don't forget to also follow @VPR_USask and @USask on Twitter/X for more of the latest research and university news.

Use the hashtag **#USaskResearch** when sharing USask-related research findings, publications or achievements on social media.

In *The Conversation*

Why do polar bears approach human infrastructure? The answer is more complex than we thought

By: **Dr. Doug Clark (PhD)**, USask School of Environment and Sustainability

Polar bears are intensely curious animals. That curiosity often brings them into contact with people and can put both species at risk from one another.

As the Arctic climate warms, some polar bears are spending more time on shore, away from the sea ice habitats they rely on to hunt seals. As the bears are under nutritional stress due to ice loss, some wonder if they're being forced to take more risks around people as they seek food, increasing interactions and conflicts between polar bears and people. But until now, there're been little research into this relationship.

Being involved in *The Conversation* is a unique and renowned avenue for sharing research and study with both colleagues and the public. We strongly encourage researchers to explore *The Conversation* as a way to share and distribute their expertise! Feel free to reach out to research.communications@usask.ca if you have questions.

Upcoming events

Early Bird Registration - PAW 2026

Early bird registration is now open for the People Around the World (PAW) 2026 International Congress at USask!

Take advantage of discounted rates and join researchers, scholars, industry partners, government representatives and community members for this dynamic three-day event at USask Oct. 20-22, 2026.

Students are eligible for discounted registration rates. To access your student discount code, please email international.office@usask.ca with the following information:
Name, NSID, Student Number, College and Program, and Supervisor.

Learn more and register **here**.

USask 2026 Honorary Degree recipient Dr. Gagandeep Kang presents talk on Next Generation Rotavirus Vaccines

In partnership with the Gairdner Foundation, USask is proud to host a special lecture with internationally recognized scientist **Dr. Gagandeep Kang**, Director of Enteric, Diagnostics, Genomics and Epidemiology, at the Gates Foundation. Dr. Kang's talk, Next Generation Rotavirus Vaccines, will be focused on her current work, explaining the under-performance of oral vaccines in developing countries and the approaches we are taking to make better performing vaccines.

Register **here**.

- Gairdner Connects Lecture with Dr. Gagandeep Kang – Wednesday, June 3, 2:30-4pm – Leslie and Irene Dubé Theatre (Room 1150, E-Wing), Health Sciences Building

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VIDO Community Liaison Committee public meeting

The Community Liaison Committee (CLC) of VIDO invites you to join their upcoming public meeting at the Willows Club.

The meeting will feature presentations from scientist **Dr. Darryl Falzarano** on working safely with high-containment pathogens: lessons from the pandemic and VIDO director **Dr. Volker Gerdts** on why high-containment research is needed, and how VIDO is growing. Question and answer period to follow.

The CLC was created by USask in 2007 to serve as an independent organization working to ensure full and open communication on safety issues related to VIDO's biocontainment facilities.

Register at the link **here**.

- VIDO Community Liaision Committee Public Meeting – Wednesday, June 24, 7-8:30pm – Willows Club

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21st Biennial Symposium on Violence and Aggression

The 21st Violence and Aggression Symposium on May 25 and 26 will focus on "Advancing Responses to Violence" and will feature four plenary sessions and 12 concurrent sessions, involving more than 20 local and national presenters. Presenters will share their knowledge and experience on an array of topics, including:

- Frontline responses to violence
- Indigenization of justice responses
- Current issues in violence

Targeted to frontline workers, as well as clinicians and other professionals and administrators in criminal justice and forensic mental health, the Symposium translates research and theory into practice and provides an opportunity to highlight excellence and innovation within a variety of correctional and criminal justice environments.

Click the **link here** to register and see early bird discounts.

- 21st Biennial Symposium on Violence and Aggression – May 25 and 26, 2026 – Multiple rooms across USask campus

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Have any upcoming research events?

Please email research.communications@usask.ca with your event title, information and any links links for registration to include in the Discovery Digest.

Information and Community for Researchers

Open access publishing discounts available for USask authors

Did you know that the University Library has agreements with many publishers to provide USask corresponding authors with full or partial discounts on their open access (OA) article processing charges (APCs)?

See the full list of publisher agreements on **this page** of the library's Open Access guide. Or search for your favourite journal on our **Journal Search Tool** to see if it is included in one of these agreements.

And don’t forget, you can still publish in a conventional closed journal and make a copy of your article OA in an open online repository. This is free and legal and in compliance with the Tri-Agency OA Policy. You can do this through USask's repository **HARVEST**. We also have a free **HARVEST Upload Service** where library staff will upload your work for you.

- For help with these agreements, contact your **liaison librarian** or **open.collections@library.usask.ca**.
- For help with HARVEST, contact **harvest@library.usask.ca**.

Security awareness sessions

Do you have questions about protecting yourself and your devices when travelling internationally? **Lisa Belhumeur**, Senior Research Security Specialist, provides tailored travel security awareness sessions for researchers and administrators travelling internationally on university business. Travel security addresses Canadian research security policies, international funding requirements, national security obligations (such as sanctions and export controls), IT security, and some limited personal safety considerations.

Lisa offers tailored travel security briefings that consider who is travelling, where they are going, and what they will be doing. Attention is paid to **higher-risk destinations as defined by the Government of Canada**. The intent is to equip travellers with practical information so they can make informed decisions and recognize situations that may warrant caution or follow-up.

Travelers will be directed to engage with ICT to receive best practices for device security when traveling.

To request a briefing, please email Lisa at: **Belhumeur.lisa@usask.ca**.

Updates to Fedoruk Centre user access model

To better support innovation, discovery, and access, the Sylvia Fedoruk Canadian Centre for Nuclear Innovation (Fedoruk Centre) and the Saskatchewan Cyclotron Facility (operated by the Fedoruk Centre) is updating its user access model. The new structure, which was developed in collaboration with USask, reduces or, in some cases, eliminates user fees that were found to discourage academic research use.

The new fee system went into place starting April 1, 2026.

To learn more about the new structure and what this means for academic research, visit: **https://fedorukcentre.ca/newsmedia/notices-policies.php**

If you have any important information for USask researchers, please contact research.communications@usask.ca!

Submitting to Discovery Digest

If you would like to submit a research-focused event or news item for consideration for Discovery Digest, please submit a link and a description of no more than 150 words to **research.communications@usask.ca** with the subject line “Submission – Discovery Digest,” along with the month and year you are submitting for.

Please indicate whether your submission is a recommendation for a news item, event or information for researchers. If you would also like to submit a photo, please make sure it is a 3:2 aspect ratio image.

The Discovery Digest goes out on or as close to the 15th of each month as possible. **Please ensure any submissions are sent in by at least the 8th of each month to be considered for**

inclusion.

In the news

- May 14 – The Canadian Press – **What we know about Hantavirus now that people have returned to Canada**
- May 11 – The Vancouver Sun, The National Post – **The return of BC First Nations' territory: Despite recent gains, less than 1 per cent is in their hands**
- May 11 – The Globe and Mail – **Improving food security through a partnership focused on pulse protein**
- May 8 – Global News – **'All hands on deck': Saskatoon greenhouses, green thumbs gear up for busy weekend**
- May 7 – CBC News – **Cat dies after catching highly pathogenic avian flu in southeast Sask.**
- May 6 – Regina Leader-Post, Saskatoon StarPhoenix – **Nippi-Albright says she left Sask. NDP because of Beck's 'performative' response to Bill 48**
- April 28 – The Globe and Mail – **Quantum-powered progress**
- April 25 – The Globe and Mail – **Looking Back: Reflecting on research excellence in USask computer science**
- April 24 – Saskatoon StarPhoenix, Regina Leader-Post – **Prairie Harm Reduction's legacy: Nearly 40 years of 'no strings attached' care**
- April 23 – The Cool Down – **'Absolutely everywhere': Giant goldfish, wild pigs, and beetles wreak havoc across Canada**
- April 22 – CBC News, Global News – **Overdose prevention study cited by Sask. government 'dangerous' and 'flawed,' critics say**
- April 14 – Discover Humboldt – **Part I - ICU bereavement project born from loss, compassion in Saskatoon hospitals**

Banner image photo credit: **Capturing the Radiance of USask's Beloved Airplane Room -** by **Dr. Ian Stavness (PhD)**, Department of Computer Science, College of Arts and Science

Images of Research 2026 - *Grand Prize winner*

Rendering of a 3D radiance-field capture of the Henry Taube Lecture Theatre in the Thorvaldson Building at the University of Saskatchewan. This near-visually-perfect virtual replica of the theatre can be explored like a video game or viewed in immersive virtual reality, allowing off-campus community members to visit this treasured space from afar. The upper-left cutaway reveals the millions of optimized 3D points that conform to every nook and cranny of the room, outlining individual desks, the lamps and projectors on the wall, and even the paper airplanes embedded in the ceiling. Our research in 3D capture aims to comprehensively measure buildings for historical preservation, plants for detailed phenotyping, and natural spaces for artistic expression.

UNIVERSITY OF SASKATCHEWAN

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We want your feedback! **What do you think of Discovery Digest?**

You are receiving this email because you either subscribed manually to Discovery Digest or were a former subscriber to USask Monthly Research Update. Questions? Comments? Send an email to Research Profile and Impact.
