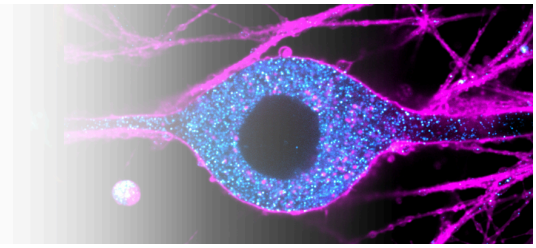
Discovery Digest

BE WHAT THE WORLD NEEDS



March 2026 - Issue 98

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 supports exploration of new Pulse Protein Centre of Excellence in India with government partners

As part of the ongoing mission to India, Premier Scott Moe along with officials from Canada, India, and the University of Saskatchewan (USask) have agreed to explore the creation of the Canada-India Pulse Protein Centre of Excellence at the National Institute of Food Technology Entrepreneurship and Management (NIFTEM) in Kundli, India.

The proposed centre will be a hub for food innovation in India with a focus on advancing pulse protein processing and fortified foods development. The centre will also help strengthen the longstanding relationship between countries.

“We are committed to addressing the global demand for plant-based proteins and applying our world-class researchers, labs and infrastructure to address these needs. We look forward to working alongside our partners in India and the Government of Saskatchewan to create sustainable solutions through the new India-Canada Joint Pulse Protein Centre of Excellence,” said USask Vice-President Research **Baljit Singh**.

New USask poultry laying facility receives $6.2 million CFI funding boost

A proposed, cutting-edge poultry laying facility at USask has received more than $6.2 million from the Canada Foundation for Innovation (CFI) Innovation Fund, which supports developing infrastructure to further world-leading research in Canada. In addition, $3 million has been contributed to the new facility by Saskatchewan Egg Producers, an independent farmer-run organization of egg producers in the province, and an additional $1 million has been contributed by USask’s College of Agriculture and Bioresources.

Dr. Karen Schwean-Lardner (PhD) is a professor in USask's Department of Animal and Poultry Science in the College of Agriculture and Bioresources and the lead researcher on the project. She and **Dr. Deborah Adewole (PhD)**, an assistant professor and poultry expert in the same department, are excited for the opportunity to set a new standard in Canadian poultry research with these new facilities.

Building the next chapter: USask launches new strategic plan

University Plan 2035 (UPlan 2035) will outline a shared understanding of the university's identity, reaffirm the principles and values that guide its work, and provide a framework to strengthen alignment and effectiveness across the institution. The aim is to ensure that students, faculty, staff, and USask partners can clearly understand USask's direction and how their work contributes to it. This work builds on a strong foundation established by the previous plan, while positioning the university to address future opportunities and challenges.

"Now more than ever, we must move forward together, to define a collective identity grounded in the strengths and the values that continue to guide our work as a community," said USask President and Vice-Chancellor **Vince Bruni-Bossio**. "This plan will reflect the realities we face today and will face tomorrow and be informed by the voices of the people who shape USask and contribute to our identity both on and beyond our campuses."

Six years later: How VIDO helped respond to the COVID-19 pandemic

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic. By then, scientists at the Vaccine and Infectious Disease Organization (VIDO) at USask were already working on finding a solution to one of the world's greatest challenges.

Six years later, that work still matters. It strengthened Canada's research capacity, deepened global partnerships, and reinforced why domestic high-containment research and vaccine development expertise are essential.

"When COVID-19 emerged, VIDO quickly redirected its research and resources to support the global response," said **Volker Gerdts**, director and CEO of VIDO. "Within weeks, our scientists developed the assays and animal models needed to study the virus and test new vaccines and medicines. At the same time, we worked with partners from around the world while advancing our own vaccine candidate into human clinical trials. Each of these efforts alone would have been a major undertaking, but accomplishing them together highlights the depth of expertise and capability at VIDO."

New polar bear research gives insight into human-animal encounters

A new research paper published in Arctic Science, with contributions from USask and University of Manitoba researchers, suggests increased polar bear-human encounters can be linked to years with less time on the sea ice – probably not because they're starving.

"Our observations are more consistent with the observations of locals than with the assumptions that really became dogma in the polar

bear scientific community," said **Dr. Doug Clark (PhD)**, a professor in USask's School of Environment and Sustainability (SENS) and the corresponding author on the study. "This happens in research, finding out 'Oh, that really wasn't the way we thought it worked,' and I'm happy we were able to reveal it."

Looking for more research stories? Visit Discovery Digest online.

Young Innovators: USask researcher develops tool to protect the gut health of dairy cows

Claire Bertens, a graduate student in USask's College of Agriculture and Bioresources, is exploring how environmental and nutritional stressors affect the gut barrier of dairy cows.

A large part of Bertens' research centers around strategies to prevent or help leaky gut. She's discovered that nutritional strategies like dietary buffer supplements may be quite effective. For example, Bertens found that feeding dairy cows calcium-magnesium carbonate, a substance similar to antacids that humans take for heartburn, reduced the leakiness of the intestines during heat stress.

Bertens is part of **Dr. Greg Penner's (PhD)** research team, focused on cattle nutrition, nutritional physiology and gut function. Penner is the Centennial Enhancement Chair in Ruminant Nutritional Physiology at USask.

The journey to investigate a new therapy for multiple sclerosis

During her undergraduate degree, **Dr. Nataliya Tokarska (PhD)** realized she had an interest in neuroscience.

This led her to **Dr. Valerie Verge (PhD)** and to investigate acute intermittent hypoxia (AIH) as a non-invasive therapeutic approach for multiple sclerosis (MS).

MS is a progressive inflammatory, mostly autoimmune disease that causes inflammation, demyelination (damage to the protective cover of nerves), and neurodegeneration. Approximately 2.9 million people are affected worldwide—and Canada has one of the highest rates in the world.

Their most recent paper builds on their earlier findings and continues to highlight AIH as a promising novel, non-invasive therapy that may support myelin repair and neurological recovery in MS in both sexes.

SENS secures $500,000 to support graduate research in Indo-Pacific

USask's School of Environment and Sustainability (SENS) has received more than $500,000 from the Government of Canada through Global Affairs Canada to support graduate student research focused on sustainability and climate resilience in coastal regions in the Indo-Pacific.

Beginning in spring 2026, the funding will establish six annual scholarships for USask graduate students to travel to three partnering communities in Sri Lanka, the Philippines, and New Zealand. Successful students will travel to their awarded location to conduct research related to climate-related issues affecting at-risk coastal communities.

Dr. Varuni Jayasooriya (PhD), assistant professor at SENS and project lead, said the initiative is designed to provide students with meaningful, hands-on experience while contributing to urgent global sustainability challenges.

New radiation oncologist and equipment strengthen Veterinary Medical Centre

With a new radiation oncology specialist and a new linear accelerator in place, the Western College of Veterinary Medicine's (WCVM) Veterinary Medical Centre (VMC) on the USask campus has resumed offering a full range of veterinary oncology services—including radiation oncology—to its patients and their families.

The new linear accelerator optimizes image-guided radiotherapy and provides high-speed radiation treatment for treating pets with cancer. The advanced technology was installed last August and became fully operational in late 2025. Another addition is the WCVM's new magnetic resonance imaging (MRI) machine, which began operating in fall 2025.

To maximize the linear accelerator's use for treating cancer patients at the veterinary teaching hospital, the VMC created a new clinical-focused role and hired **Dr. Eric Walther (DVM)**, a board-certified specialist in veterinary radiation oncology. These resources are allowing the VMC to expand its oncology services for all western Canadian animal owners and veterinarians—working toward the goal of building the most advanced pet cancer therapy centre in the country.

For Neil Chilton, teaching starts with having faith in students

Dr. Neil Chilton (PhD), a professor in the USask Department of Biology, has grown throughout his storied career to become an internationally recognized researcher of parasites and one of USask's most decorated teachers. Last fall, he accepted the Lieutenant Governor's Post-Secondary Teaching Award in the distinguished teaching category—Saskatchewan's top post-secondary teaching honour.

Chilton studies parasites at scales all the way from molecules to whole populations. Some of his most celebrated work has involved developing new tools to identify parasites and the bacteria they carry.

Some of those bacteria negatively affect human health, like the bacterium that carries Lyme disease. Others are beneficial to the parasite or even protect it from carrying pathogens harmful to humans.

Polar bears bring USask researcher, community, and visitors together

[USask Indigenous art project marks the coming of spring]

[Stonechild honoured with Indigenous Achievement Award for leadership]

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*

Dogs can overdose too: Naloxone training can save pets' lives as well as humans

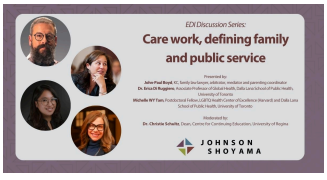
By: **Dr. Colleen Dell (PhD)**, USask College of Arts and Science; **Dr. Barbara Fornssler (PhD)**, USask School of Public Health; **Dr. Jennifer Loewen (DVM)**, WCVM; **Maryelle Gibson**, USask College of Arts and Science

Opioid-class drugs are commonly prescribed as powerful pain medications in both humans and animals, though they can also be accessed or used illicitly. These substances carry a significant risk of overdose in people and in pets because they slow the central nervous system. At high doses, this effect can slow the respiratory system to the point of stopping breathing.

While any pet can experience opioid toxicity, dogs are particularly at risk because they rely heavily on their noses to explore their surroundings. This means they are more likely to directly inhale a substance through their nose, ingest it through their mouth or be exposed indirectly through contamination on their feet and fur.

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



EDI Discussion Series: Care work, defining family, and public service

Explore the dual challenges facing today's families: the rising pressures on the "sandwich generation" caring for both aging parents and children, and the need to recognize and support LGBTQS+ and diverse family structures. Join the conversation on how evolving definitions of what constitutes

as family demands more inclusive and responsive public policy. RSVP at the **link here** to attend.

- EDI Discussion Series – Wednesday, March 25, 2026, 12:00 – 1:30pm – Online via Zoom

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Centre for Forensic Behavioural Science and Justice Studies (CFBSJS) Public Form 2026 and Strategic Plan Launch

The Public Forum will commence with the official launch of the CFBSJS Strategic Plan 2026–2029, followed by two keynote sessions on Homelessness and Inadequate Housing in Saskatoon.

- Session 1: Inadequate Housing and Homelessness in Saskatoon: A Look into the Saskatoon Fire Department's Response.
- Session 2: Homelessness in Mid-Sized Canadian Cities

This event will be perfect for university students, staff, and faculty; federal and provincial government representatives; community-based organizations; and community members!

The event will take place on Friday, April 17, 2026, at ARTS 241. Admission is free, so secure your spot by emailing us at **forensic.centre@usask.ca**.

- Public Forum and Strategic Plan Launch – April 17, 2026 – ARTS 241

Save the Date: People Around the World 2026 International Congress

Responsible minerals, sustainable energy and community engagement are important areas shaping Canada's next chapter. Don't miss the opportunity to join the conversation!

We invite you to save the date and join us for the People Around the World (PAW) International Congress taking place at the University of Saskatchewan's Saskatoon campus.

Mark your calendars for October 20-22, 2026, for this must-attend event.

You can find more information about the international event at the **link here**.

- PAW 2026 – Oct. 20-22, 2026 – Usask campus

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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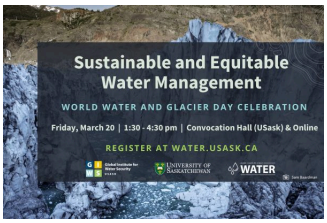

World Water and Glacier Day: Sustainable and Equitable Water Management

Celebrate World Day for Glaciers and World Water Day with the Global Institute for Water Security on Friday, March 20 from 1:30 - 4:30pm. Join community, industry, and research leaders as they share how water is being managed sustainably and equitably in Saskatchewan and beyond. The event will also showcase poster presentations featuring emerging water research by USask students.

Check the **link here** to learn more about the event.

- World Water and Glacier Day – March 20, 1:30 – 4:30pm – Convocation Hall

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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

USask begins work on UPlan 2035

USask has begun the process of developing a **new institutional strategic plan** that will define the university's identity, priorities, and direction for the next decade. UPlan 2035 will draw on insights from students, faculty, and staff, and from community, government, and industry. It will guide our priorities, decisions, and investments, and help us remain academically strong, research-driven, financially sustainable, and socially responsive to chart a shared path forward in a rapidly changing world for the university's future. **More information**.

In the coming months, there will be many ways to take part in our University Plan 2035 planning process: through surveys, town halls, regional forums, and discussions across campus. There are UPlan 2035 Campus Conversation being held over the next several months. To register, please visit the **UPlan website**. Your participation will help ensure that our renewed strategy is clear, aligned, and reflective of our shared purpose.

Celebrate #GreenOADay!

Make your articles open access for free and legally through "**Green Open Access**" with no fees for readers or authors.

You can do this by making a version of your article available in an open repository like USask's **HARVEST**, run by the University Library. Most publisher policies will allow this, and the library has a free **Upload Service** to check copyright and upload your research for you.

Research shared in HARVEST is...

- Open access without expensive publishing fees
- Compliant with funder open access policies

- Discoverable in Google Scholar searches by anyone regardless of location or institution
- Preserved for the long term with a permanent identifier (URI)

Repositories like HARVEST are also the ideal place to share other research outputs, such as reports, posters, and presentations, that may not otherwise be published, preserved, or discoverable.

Contact **harvest@library.usask.ca** for more details.

Introducing the new Research Administration Systems PAWS channel

Starting March 24, 2026 a new PAWS channel, Research Administration Systems will replace the UnivRS PAWS channel.

This change is intended to improve access to services and support future improvements. The UnivRS research administration system will remain operational and available, and will not be impacted by this change.

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

- March 16 – Regina Leader-Post – **Sask. bovine veterinarian calls industry award 'humbling'**
- March 15 – The Canadian Press – **Ottawa earmarks half a billion dollars for labs and research equipment**
- March 15 – CBC News, CTV News, CJWW, CKOM – **University of Saskatchewan receives CFI funding for a new poultry research facility**
- March 9 – CBC Radio – **New research is looking into how forest fires could make metals in the soil more toxic**
- March 9 – CTV News – **Saskatchewan trade mission to India an 'important milestone,' Moe says**
- March 4 – CBC News, CBC Radio – **Polar bears aren't hunting people, they're just spending more time on land: Scientists**

- March 4 – The Calgary Herald, Regina Leader-Post, Saskatoon StarPhoenix – **Legal fight over propane terminal clouds Canada's energy export push**
- March 3 – The Western Producer – **Canada, India team up on new pulse protein centre**
- Feb. 20 – National Post – **Wild pigs, giant goldfish and bugs that won't die: Invaders 'absolutely everywhere' in Canada**

Banner image photo credit: **Be careful of what you are doing, the cells are watching! -** by **Minh Vu,** MSc Student, College of Medicine

Images of Research 2025 - *Runner-up, More Than Meets the Eye*

This image offers a unique glimpse into the intricate relationship between nicotinic receptors (nAChRs – dark blue) and serotoninergic type 3 receptors (5HT3Rs – light blue) within a superior cervical ganglion (SCG) neuron. Although 5HT3Rs are known to be highly expressed alongside nAChRs in SCG neurons, the underlying reason remains a mystery. The composition forms an evocative "eye" shape and a dynamic scene: a dense flow of axons encircling an SCG neuron, with a tiny vesicle appearing as a "tear drop". This artistic element evokes the sensation of the "eye" weeping, perhaps from the cellular stress induced by the intense axonal traffic. Scientifically, this tiny vesicle is on a vital journey, carrying signals to communicate with other neurons! Membrane lipid rafts (pink).

UNIVERSITY OF SASKATCHEWAN

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