Discovery Digest

BE WHAT THE WORLD NEEDS



November 2026 - Issue 106

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



Nutrien gift helps launch new chapter for digital agriculture and Indigenous knowledge at USask

The University of Saskatchewan (USask) is officially opening the Nutrien Digital Agriculture Centre and the kihci-okâwîmâw askiy (Great Mother Earth) Knowledge Centre thanks to a transformational $15-million gift from Nutrien to the university.

The donation, made last year during the university's Be What the World Needs campaign, is supporting renewed spaces and programming in the two centres — both housed in the College of Agriculture and Bioresources. Together, these centres will support cutting-edge agricultural research, student success, Indigenous engagement, and community-building. Nutrien's gift has also supported scholarships for engineering and agriculture and bioresources students.

“Nutrien’s investment in USask is a powerful example of what can be achieved through partnership,” said **Dr. Vince Bruni-Bossio (PhD)**, president and vice-chancellor at USask. “Thanks to Nutrien’s generosity, we are creating spaces where innovation, Indigenous knowledge, research, and collaboration can thrive. We are grateful for their gift and the lasting impact it will have across our university and beyond.”

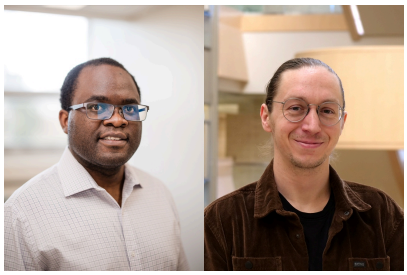
USask appoints Patricia McDougall as provost and vice-president academic



USask is pleased to announce that **Dr. Patricia McDougall (PhD)** has been appointed as Provost and Vice-President, Academic for a five-year term, beginning November 1, 2026.

The Provost and Vice-President, Academic serves as Chief Academic Officer for the university and provides institution-wide leadership in shaping and advancing the USask's academic strategy, including teaching and learning, student support services, academic policies, and faculty relations. The Provost also oversees Indigenous Engagement, the University Library and the university’s Galleries & Museums.

McDougall is widely recognized for her collaborative approach and strong relationship-building skills, traits that are perfectly suited to help lead the university into its next chapter.



USask researchers receive new Canada Research Chairs in environmental sciences, protein sciences

Dr. Edmond Saganyado (PhD), an associate professor in the USask School of Environment and Sustainability (SENS) and a member of the USask Toxicology Centre, received a Tier 2 Canada Research Chair (CRC) in Exposure Science and Environmental Risk. Sanganyado’s research involves developing new polymer-based systems that imitate how animals are exposed to chemical contaminants in the environment.

Dr. Michael Wozny (PhD), an assistant professor in the Department of Biology, Microbiology and Immunology in the USask College of Medicine, received a Tier 2 CRC in Protein Science for Pathogen Defence. His work explores structural biology — how proteins are shaped in cells, and how they interact with each other and with proteins introduced by pathogens such as viruses.

Dr. Kristina Bidwell (PhD), a professor in the Department of English in USask's College of Arts and Science, has received a renewal for her Tier 2 Research Chair in Applied Indigenous Storytelling. Bidwell's research explores modes of storytelling, specifically how stories interact between communities.

USask engineering professor earns Distinguished Researcher Award



Dr. Carey Simonson (PhD), a professor in USask's College of Engineering, is the most recent recipient of the USask Distinguished Researcher Award, presented to faculty members in recognition of significant contributions to knowledge or artistic creativity.

Simonson is a leading researcher in the realm of heating, ventilation, and air conditioning (HVAC) engineering, specializing in heat and mass transfer. His work in energy recovery in heat exchangers, particularly in the development of more sustainable and energy-efficient heating systems called liquid-to-air membrane energy exchangers (LAMEEs), has earned him recognition worldwide.



SENS researchers link energy security and northern community development

Dr. Greg Poelzer (PhD), a researcher with SENS and a co-lead for the Energy and Mineral Resources for a Sustainable Future Signature Area of Research, has spent decades studying energy security, critical minerals, and northern development across the circumpolar North, and their implications for global policy.

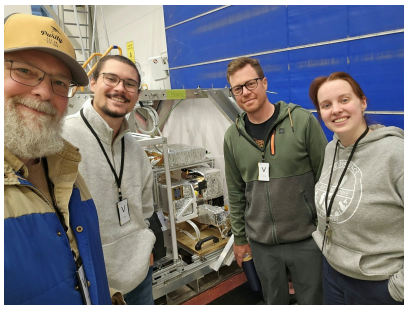
Across the North, access to reliable energy shapes how communities heat their homes and power their lives. In Canada and Alaska, many remote communities still rely on imported fossil fuels.

As climate change, rising costs, and economic and geopolitical uncertainty drive communities to seek alternatives, renewable energy is becoming more than a source of power. It's creating opportunities for community-led economic development and greater self-determination.

Poelzer and PhD student **Tim Kalke** are exploring how renewable energy projects can create new opportunities for northern communities.

Looking for more research stories? Visit Discovery Digest online.

USask scientists aiming to put Canadian tech in upcoming European space mission



Researchers from USask were recently in Sweden to test a new atmospheric sensor designed and built by members of the Institute of Space and Atmospheric Studies (ISAS) in the College of Arts and Science.

The new spectrometer would give highly specialized measurements of gases in the atmosphere and stratosphere, leading to better understandings of climate and weather changes.

The satellite instruments from USask are part of a test flight for the Keystone mission, which is a candidate to be part of the European Space Agency's (ESA) 12th Earth Explorer satellite mission. The Keystone mission is one of three candidates currently in consideration for the next Earth Explorer.

Dr. Adam Bourassa (PhD) and **Dr. Doug Degenstein (PhD)** are the leading researchers on the innovative project.



Governor General's Gold Medal honours researcher advancing mental health science

The Governor General's Gold Medal is awarded to the USask graduate student who achieves the most outstanding academic record at the doctoral level. It is one of the highest academic honours a Canadian university can bestow on a graduate student.

The fall 2026 recipient of the Governor General's Gold Medal is **Dr. Amir Khajavinia (PhD, PharmD)** from the College of Pharmacy and Nutrition. Khajavinia was presented with the Governor General's Gold Medal during USask Convocation on Nov. 10 at Merlis Belsher Place.

Under the supervision of **Dr. Anas El-Aneed (PhD)** in the College of Pharmacy and Nutrition, Khajavinia's doctoral research focused on developing highly sensitive methods to detect and measure psilocin, the active compound responsible for the psychedelic effects associated with "magic mushrooms." The tools he developed can help researchers better understand how psychedelic compounds behave in the body. It's work that supports ongoing investigation into potential mental health therapies.

USask health researcher receives prestigious Fulbright Canada Research Chair



A USask health researcher has received a sought-after research chair position to explore the main factors causing health issues for long-haul truckers, as well as potential interventions to improve their health.

Dr. Alexander Crizzle (PhD), a professor in the USask School of Public Health and the director of USask's Driving Research and Simulation Laboratory, is an expert in road safety and transportation systems — especially when it comes to the health and wellness of drivers.

He received a Fulbright Canada Research Chair in public health to go to Johns Hopkins University in Baltimore to pursue a four-month research project. The overall aim is to develop a study that will identify the factors having negative health effects on truckers, in the hopes of developing ways to mitigate those issues.



USask's latest Maclean's rankings showcase research and reputation

USask ranked sixth out of 19 universities in the mid-sized category in the recent Maclean's University Rankings and will carefully review its results under a significantly revised ranking system introduced for 2027.

"These results are just one indicator that shows USask is a national leader in research, scholarly and artistic works," said **Baljit Singh**, vice-president research. "Our research and innovations are making stronger communities here at home and around the world and our performance in these rankings reinforces our achievements in this area."

USask analyzes many national and international rankings to confirm areas of strength and to identify potential areas for improvement, said **Patti McDougall**, provost and vice-president academic.

"We understand that rankings may be a source of information for students, families and other stakeholders when they are forming a view of a university" McDougall said. "No single ranking reflects the breadth of a university's teaching, research and community impact but rankings alongside other considerations help students and their families make important choices."

USask postdoctoral researcher finalist for SSHRC Talent Award



Saskatchewan has one of the highest rates of reported intimate partner violence (IPV) in Canada, a reality USask researcher **Dr. Crystal Giesbrecht (PhD)** is working to address.

Giesbrecht was recently named one of three finalists for the Social Sciences and Humanities Research Council (SSHRC) Talent Award, one of the prestigious SSHRC Impact Awards. These awards recognize outstanding Canadian researchers and celebrate their SSHRC-funded research achievements, research training, knowledge mobilization, and outreach activities.

In her role as a postdoctoral researcher, Giesbrecht is conducting a first-ever outcome evaluation of SAFE, an IPV intervention program delivered by the Saskatchewan Ministry of Community Safety. She is analyzing the reoffending outcomes and characteristics that are connected to participation and completion of any treatment or intervention programming.



[USask researchers show value of Saskatoon's safe consumption site]



[English graduate receives prestigious awards from College of Arts and Science]



[USask soil science class partners with Wanuskewin on restoration project]

USask Signature Series Podcast – Season 3 is here!

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 the creative side 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.

New this season, the USask Signature Series will be available in both audio and video formats!

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

Here are the newest episodes of the USask Signature Series:

- S3E03 – **VIDEO: What can medicine learn from bats?**
- S3E02 – **VIDEO: Can we customize cancer treatments?**
- S3E01 – **VIDEO: What makes your shoulders so complex?**

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*



Does time really exist, or is it a persistent illusion?

By **Daryl Janzen**, Observatory Manager, USask

Imagine you are sitting on a train, moving at a constant speed. The blinds are drawn so you can't tell you are moving. A light bulb hangs on a chain in the centre of the car. When someone turns it on, your human eye perceives the whole carriage lighting up.

What actually happens is that light first reaches the two sides of the car simultaneously. A moment later, the light reaches the front and back of the car, again simultaneously. The light has travelled at the exact same speed in all four directions.

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.

Interested in submitting an article for *The Conversation*? Learn more at the link here.

Upcoming events



Join Vice-President Research Baljit Singh for the next Campus Conversations event on December 10

Campus Conversations are a series of drop-in, constructive discussions between members of the campus community to promote research, scholarly and artistic work (RSAW) excellence at USask. Join Vice-President Research Baljit Singh on December 10, 2026 from 12:00 – 12:45pm in Administration Building C280. All faculty, staff, postdoctoral fellows and students welcomed. Registration not required.

- Campus Conversations – Thursday, Dec. 10 – 12:00-12:45pm. Administration Building C280

SURE Speed Networking Event



The Society for Undergraduate Research Experience (SURE) is hosting our annual **Speed Networking Event** for faculty and undergrads. Faculty will meet dozens of eager undergraduate researchers curious to learn about your research programs. With the Tri-Agency USRAs just around the corner this is a great opportunity to find that student partner to support a strong application.

Register at the **link here**.

- SURE Speed Networking Event – Tuesday, Nov. 17, 4–5:30pm, Louis' Loft

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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

2027 SSHRC Storytellers Challenge has launched

The Social Sciences and Humanities Research Council (SSHRC) Storytellers Challenge asks postsecondary students to show Canadians, in up to three minutes or 300 words, how social sciences and humanitites research is impacting our lives, our world and our future for the better.

The deadline to submit your story is Tuesday, January 19, 2027 at 5pm Eastern time. For more information, check out the **link here**.

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

- Nov. 10 – CBC News – **Zero-till farming has improved Sask. soil. Producers believe more can be done**
- Nov. 6 – CBC News – **Too many people posting 'gotcha' clips from surveillance cameras online, Sask. mayor says**
- Nov. 6 – SaskToday – **Simple temperature change could keep oil refineries running twice as long**
- Nov. 3 – SaskToday, The Prince Albert Daily Herald – **James Smith Cree artist to blend tradition and technology at Wanuskewin**

- Nov. 2 – CBC News – **Researchers cooking up healthier options for Sask. sports centres**
- Oct. 28 – The Saskatoon StarPhoenix – **U of S study aims to put dollar value on Prairie Harm Reduction's supervised consumption site**
- Oct. 27 – AP News – **Breast Cancer Canada and AstraZeneca Canada advance next-generation survivorship research**
- Oct. 26 – CBC Radio – **A group of U of S archaeologists are at the forefront of the search for missing residential school children**
- Oct. 23 – 980 CJME, The Saskatoon StarPhoenix, The Regina Leader-Post – **Yorkton case tied to '764' extremist group highlights how online violence targets vulnerable youth**
- Oct. 21 – Farms.com – **Female mice show effects of airborne ag contaminants after five days**

Banner image photo credit: **Survival Mode** - Photo by **Gabriela Sieminski-Hauck**, Alumnus, Art and Art History, School for the Arts

Images of Research 2026 - *Research in Action winner*

This apple remains frozen on its branch through a Saskatchewan winter; its tissues fractured by ice crystal formation during repeated freeze–thaw cycles. In temperatures below –30°C, cellular water expands, rupturing membranes, and accelerating decomposition. Meanwhile, the tree enters deep dormancy, slowing metabolism, sealing vascular pathways, and conserving energy until spring. My research studies living organisms in extreme prairie climates, observing how stress reshapes biological form. These transformations inform my art practice and therapeutic inquiry: how cycles of rupture, suspension, and renewal in nature parallel psychological endurance. By translating organic structures into sculptural and expressive forms, I explore how creative processes can model resilience. What appears frozen and lifeless is not failure; it is adaptation in progress.

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.**
