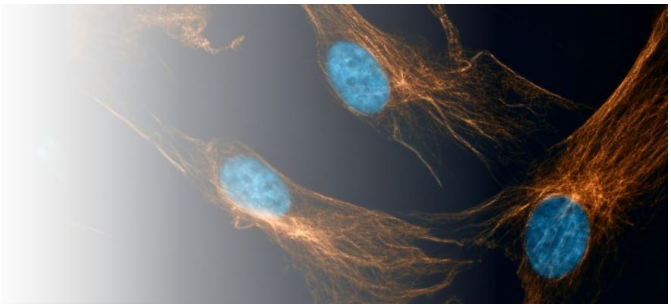
Discovery Digest

BE WHAT THE WORLD NEEDS



June 2025 - Issue 89

Discovery Digest **is a glimpse into how University of Saskatchewan research, scholarly and artistic work is 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!**

Applications for TEDxUniversityofSaskatchewan 2026 now open!

From untapped sustainability solutions and new healthcare interventions to the power of art and the future of social change, addressing the challenges of tomorrow means taking the ideas of USask researchers, scholars and artists to the edge of possibility.

The TEDxUniversityofSaskatchewan 2026 theme of **'Exploring the Edges'** calls for a celebration of the boundary-pushing, hope-inspiring work that is courageously building a better world for all.

Faculty, staff, students and alumni ready to share discoveries, ask questions and explore the future of ideas worth spreading are encouraged to apply to speak or perform at the 2026 event.

Those ready to take to the TEDx stage are invited to join event organizers for a pre-application workshop on **June 18, 2025** (12:00pm) to learn more about the process and how to craft a compelling application.

For full details, to register for the application workshop and to submit your application, **click here**

NEW - USask Signature Series Podcast

World-leading research and innovation - right in the heart of Canada.

The **USask Signature Series Podcast** explores the cutting-edge research taking place at USask across the university's Signature Areas of Research.

Listen today! Streaming online or wherever you get your podcasts.

- Episode 1: **Are your pets good for your health?**
- Episode 2: **How will Saskatchewan lead the energy transition?**
- Episode 3: **How will quantum technology change our lives?**
- Episode 4: **What makes Saskatchewan farmers so efficient?**
- Episode 5: **What should we know about our changing waterscapes?**
- Episode 6: **How does the synchrotron advance innovation?**
- Episode 7: **How do we create a sustainable built environment?**
- Episode 8: **How have we seen trust in science, academia and public health change?**

This Month's Stories

USask hosts Nobel Prize winner and honorary degree recipient

Dr. Emmanuelle Charpentier (PhD) received the Nobel Prize in Chemistry alongside **Dr. Jennifer Doudna (PhD)** in 2020 for their development of the CRISPR-Cas9 gene editing methodology. That work, which allows scientists to precisely examine, cut and edit genes, has led to massive strides in fields like molecular genetics, genomics, agriculture and environmental biology.

In 2024, Charpentier was given an Honorary Doctor of Science from the University of Saskatchewan (USask), the university's most prestigious award. Her visit to USask on May 12-13 was a tremendous boon to the university and signified USask's position as a critical research institution and ecosystem to be what the world needs in research and innovation.

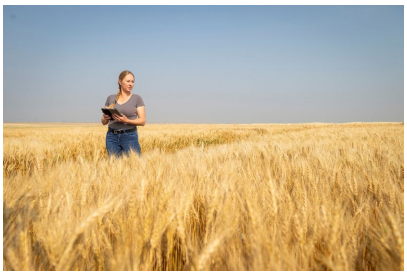
"USask is honoured and humbled to receive Dr. Charpentier at our beautiful campus," said USask Vice-President Research **Dr. Baljit Singh (PhD)**. "Her incredible insights are respected and renowned worldwide, and this is truly a once-in-a-lifetime opportunity for many to receive wisdom from a Nobel Prize-winning researcher."

USask's Centre for Forensic Behavioural Science and Justice Studies receives $3M investment

The Centre for Forensic Behavioural Science and Justice Studies (CFBSJS) at USask has received funding that will provide significant support for its research and operations.

At the June 9 event hosted at the CFBSJS, the research centre celebrated a memorandum of agreement (MOA) with Correction Services Canada (CSC) that will provide a total of $2 million in investment over the next 10 years. Additionally, the CFBSJS entered into a collaborative research agreement (CRA) with the Government of Saskatchewan. This CRA extends a strong partnership that began many years ago with the Ministry of Corrections, Policing and Public Safety (CPPS) and will provide CFBSJS with a total of $1 million over the next five years.

"This continued investment by CSC and CPPS will help support the longevity of the Centre for Forensic Behavioural Science and Justice Studies and allow us to expand our training, continue our collaborative research, and sustainably support our operations," said **Dr. Mansfield Mela (MBBS)**, director of CFBSJ.



USask researchers discover genes that protect wheat from disease

To get ahead of pathogens harmful to crops, USask researchers like **Dr. Valentyna Klymiuk (PhD)** and **Dr. Curtis Pozniak (PhD)** are studying wild wheat varieties that carry resistance to these harmful pathogens. This led them to discover something they've never encountered before — a unique pair of genes that work together to protect against disease.

To support its variety development program, USask's Crop Development Centre (CDC) has been diving back into the gene pool of wheat and screening its wild relatives for useful traits that can be effectively deployed in new wheat cultivars.

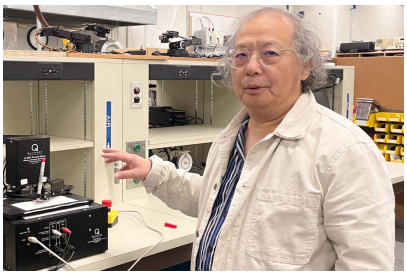
"The interconnectivity of research and breeding lets us keep the eye on the prize and develop the most productive varieties for farmers. This project also really helps us understand and appreciate the complexity of plant biology. Plants really need to adapt, and they do it in cool and interesting ways," said Pozniak.

Verge, Yang, Lang honoured as top USask researchers

USask is honouring groundbreaking neuroscientist **Dr. Valerie Verge (PhD)**, a professor in the College of Medicine's Department of Anatomy, Physiology and Pharmacology, with its top academic honour of Distinguished Researcher. The

award will be was presented June 5 during Spring Convocation at Merlis Belsher Place.

As well, USask is recognizing with New Researcher awards two outstanding community-engaged researchers in the areas of economics and fine arts: **Dr. Yang Yang (PhD)** is an applied microeconomist and associate professor at the Johnson Shoyama School of Public Policy (JSGS); **Dr. Jennifer Lang (PhD)** is interim vice-dean academic in the College of Arts and Science and professor of choral/music education. The awards will be presented June 26 at USask's Faculty and Staff Awards Ceremony.



USask researchers developing non-invasive tool for removing lung cancer tumours

The best option for treatment of lung cancer today is surgery. However, **Dr. Chris Zhang (PhD)**, a professor in USask's College of Engineering, said that the surgical process still takes many difficult weeks for the patient to completely recover from due to the invasive nature of the operation.

Zhang is devising a new and far less invasive method for treating lung cancer tumours that will reduce trauma to the body and decrease recovery time post-surgery.

"Lung cancer is a very serious problem in Canada," said Zhang. "I want this tool to add value by avoiding any significant complications with diagnosis and surgery."

The project has received funding from the Saskatchewan Health Research Fund's (SHRF) Solutions program, which supports interdisciplinary health research projects that address prevalent health issues in the province.

Looking for more research stories? Visit Discovery Digest online.

Leading USask researcher recognized for excellence with YWCA STEM award

Dr. Ingrid Pickering (PhD), chief science officer of the Canadian Light Source (CLS) and professor of Geological Sciences at USask, is the recipient of this year's STEM award

at the Graham YWCA Saskatoon Women of Distinction Awards.

The award, sponsored by USask, honours women who have excelled in the pursuit of science, technology, engineering and math. Women nominated in the category must demonstrate excellence through achievements, including conducting groundbreaking original research, outstanding practical innovation or invention, and creating opportunities for women in their field through mentoring.

Pickering's groundbreaking synchrotron-based research examines heavy metals in the environment with a particular focus on the impact to human health. Her investigations into arsenic contaminated water and mercury toxicity in fish have informed new strategies and provided tangible solutions that can help improve health outcomes globally.

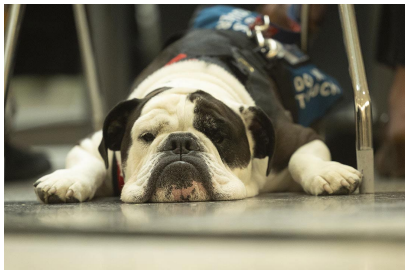
Celebrated USask structural engineer receives prestigious university award

Dr. Lisa Feldman (PhD), the department head of Civil, Geological and Environmental Engineering in the College of Engineering, is the 2025 recipient of the Publicly Engaged Scholarship Team Award (PESTA).

The award is given annually to a member of the USask faculty in recognition of outstanding collaboration with students, post-doctoral fellows, other faculty or community partners to create impact in the community.

"When you write a building code, it affects every single project," said Feldman. "And then working with industry partners and connecting with them in terms of what they see their needs to be, and then doing research that might help move towards finding solutions for them, it makes the research – at least to me – more meaningful, that I know I'm helping people today."

USask hosts international conference highlighting human-animal interconnectednes



The International Society for Anthrozoology (ISAZ) 2025 Conference will take place in Saskatoon from June 19-22. The conference, hosted by USask's PAWSitive Connections Lab, will explore the diversity and broad applicability of

anthrozoology across disciplines of research and scholarship as well as their translation into community practice.

“I am so excited for our team to be hosting this conference, bringing awareness about the ground-breaking findings of our own community research and others into one space – only good things can come of this,” said **Dr. Colleen Dell (PhD)**, a sociology professor at USask in the College of Arts and Science, Centennial Enhancement Chair in One Health & Wellness and founder of the PAWSitive Connections Lab.

The upcoming conference will place an emphasis on addressing Indigenous cultural practices and worldviews, through programming and guest speakers. The disproportional impact of recent wildfires on Indigenous peoples and the relationship to animals and the land will also be discussed.

USask researchers exploring brain-gut connection in new Alzheimer’s disease treatments

Could a potential treatment for Alzheimer’s disease be sitting in the dairy cooler of your local grocery store?

Dr. Ana Mendes-Silva (PhD), assistant professor in the Department of Psychiatry at USask, is leading a new research project that aims to answer that question while gaining deeper insight into the connection between our gut and our brain.

Mendes-Silva’s research investigates three compounds in milk kefir—a fermented drink rich in beneficial microbes—that may slow the progression of and even prevent Alzheimer’s disease. Kefir has been consumed for centuries but recently becomebecame a popular drink among health enthusiasts. Produced by Canadian diary companies it can be purchased in grocery stores across the country. Kefir is similar to other fermented dairy products like yogurt, but its profile of bacteria and yeast sets it apart.

Building nuclear expertise: Saskatchewan hosts renowned IAEA program

Saskatchewan is helping to build nuclear expertise in the region by offering the Canadian National Nuclear Energy Management School (NEMS) at USask.

This is the first time the world-class, two-week program from the International Atomic Energy Agency (IAEA) has been hosted in Canada outside of Ontario.

The school is a nuclear-intensive series of courses aimed at mid-level professionals who want to supplement their existing experience with a specific focus on nuclear energy. The program ran from May 26-June 6 on USask campus in Saskatoon and welcomed 50 students from Saskatchewan, Alberta, Manitoba, Ontario and the Northwest Territories.

"From clean energy to health care and beyond, USask has a long and distinguished history in nuclear science. Hosting NEMS underscores our mission to develop the knowledge, talent and innovation that can build a more sustainable future for all," said USask Vice-President Research, **Dr. Baljit Singh (PhD)**. "We look forward to hosting changemakers from across Canada during this exciting two-weeks."

New USask infrastructure to bolster agricultural research

Located on the USask Saskatoon campus, the Harrington Plant Growth Facility and the Soil Science Field Facility will provide capacity to expand research programs and enhance training opportunities for students in the College of Agriculture and Bioresources and the CDC at USask.

The project will also include a renovation to a portion of the Crop Science Field Lab at USask to provide additional workspace for the CDC. Construction is underway and is expected to be completed in July 2026.

“We are grateful to all of our partners and government supporters who have contributed to this important infrastructure project,” said USask President and Vice-Chancellor **Peter Stoicheff**. “These new facilities will be instrumental in advancing critical agricultural research and will set the stage for addressing global challenges as we aim to be the university the world needs.”

USask celebrates distinguished honorary degree recipients at 2025 ceremonies

Regional veterinary college at USask celebrates 60 years

GIFS at USask to welcome Dr. Karen Churchill as new Chief Scientific Officer

Stay connected with USask research news

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

USask Research also has a new Instagram page! Follow **@usaskresearch** for research-related news, features, events and more happening at USask.

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

In *The Conversation*

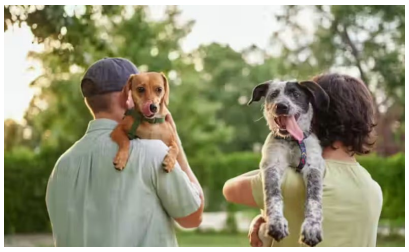
Promoting social inclusion through pet companionship

By: **Dr. Renata Roma (PhD)**, USask Centre for Forensic Behavioural Science and Justice Studies (CFBSJS) and **Dr. Christine Tardif-Williams (PhD)**, Brock University

The benefits of pet companionship have been widely researched and celebrated.

Unfortunately, pet companionship is not always easily accessible to everyone. Several groups face hurdles when it comes to sharing time or living with a pet. Some of the hurdles that people can face when accessing pets include the lack of pet-friendly housing and financial resources to afford pet food and veterinary care.

Do people really resemble their dogs?



By: **Dr. Renata Roma (PhD)**

Many dog owners wonder whether they share similarities with their dogs, including characteristics like a calm temperament, a sociable personality or even a bit of stubbornness. The idea that people and dogs resemble each other is not just a joke. In fact, some researchers have explored this question.

Understanding what is known so far about the similarities between people and dogs is crucial, as this can reveal whether perceptions of similar physical and personality traits play a role in the quality of the relationship people share with their dogs.

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

Attend the Be What the World Needs campaign finale

It's going to be a party and it's going to be BIG!

Don't miss the exciting announcement as we celebrate the many accomplishments of the Be What the World Needs campaign.

Be there as we close an incredible chapter in USask's history and celebrate the remarkable support of our faculty, staff, students, alumni, donors, and friends. **RSVP.**

- Be What the World Needs campaign finale – Wednesday, June 18, 5:30 p.m. (program at 6:15) - Merlis Belsher Place

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Early bird registration for PAW 2025 is now open!

Early bird registration is now open for the People Around the World (PAW) 2025 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. 22-24, 2025.

Learn more and register **here**.

- PAW 2025 International Congress – October 22-24, 2025 – USask Saskatoon campus

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Information and Community for Researchers

CIHR celebrates 25 years

Health research is one of the most important investments we can make as a nation. For 25 years, the Canadian Institutes of Health Research (CIHR), Canada's federal

funding agency for health research, has been supporting life-changing discoveries and innovations that make Canadians healthier. To mark CIHR's 25th anniversary, we invite you to read about some **impressive made-in-Canada health research breakthroughs** and discover more about the **impact health research has on the lives of Canadians.**

Here's to 25 years of research for a healthier Canada!

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

- June 9 – The Globe and Mail – **Nitrogen's role in food systems**
- June 7 – CNN – **A 'detox' after Covid vaccination? Experts say it's nonsense**
- June 3 – CTV News – **Sask. researchers evaluate effects of breast reconstruction surgery on cancer survivors**
- June 1 – CBC News, CBC Radio – **'This is classic climate change': Sask. faces worst wildfire season in decades**
- June 1 – Yahoo! News, ScienceAlert – **Doctors Deliver Verdict on TikTok's 'Mouth Taping' Trend**
- May 30 – The Globe and Mail – **Illuminating enzymes**
- May 27 – Saskatoon StarPhoenix, Regina Leader-Post, SaskToday – **Cameco donation helps U of S reach major fundraising target**
- May 26 – Global News, CBC News, 98 Cool FM - **Saskatchewan scientists make**

breakthrough in breast cancer research

- May 25 – CBC News – **Glen McCallum re-elected as Métis Nation—Saskatchewan president, according to preliminary results**
- May 19 – The Independent, CNN – **Mystery over sudden drop in bird flu cases across the US**

Banner image photo credit: **The Hidden Universe Inside Us -** by **Asmaa Fadl,** PhD Student, College of Dentistry

Images of Research 2025 - *Winner, More Than Meets The Eye*

You think you are a small entity, but within you is enfolded the entire universe.– Rumi. What we see under a microscope can be just as vast and complex as the universe itself. This fluorescence microscopy image captures human gingival fibroblasts, the main cells that build connective tissue in the gums. β-Tubulin (orange), a structural protein, forms the cellular framework, stretching like distant galaxies, while the nuclei (blue) resemble scattered stars. This microscopic landscape mirrors the infinite patterns of the cosmos within the fundamental building blocks of our bodies. Beyond its striking resemblance, this image reveals key insights into the structure and behavior of fibroblasts in diseases like fibrosis and cancer, deepening our knowledge and ultimately guiding new treatment approaches.

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.