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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!](#)

This Month's Stories



[USask announces 2024 Images of Research contest winners](#)

For the 10th year in a row, University of Saskatchewan (USask) researchers, scholars and artists have showcased the impact of their work using the power of photography. The results are nothing short of amazing and provide an inside look into the beautiful world of research.

Organized by USask's Research Profile and Impact team, the Images of Research contest is an annual celebration of the beauty, diversity and impact of USask research. This year's contest featured more than 100 entries across five categories, with winning images selected by seven multi-disciplinary panels of judges, and over 2,800 public votes. The contest was viewed online over 16,000 times.

[USask rises and expands success in QS international subject rankings](#)

The University of Saskatchewan (USask) continues to make a name for itself on the world stage, increasing the number of ranked subjects in the international ranking system, QS World University Rankings by Subject.



The QS rankings are produced through the analysis of more than 5,000 institutions globally and are separated into five broad subject areas and 55 narrow subject areas.

USask ranked in two additional narrow subject areas in 2024: Physics and Astronomy (551-600 tier) and Materials Science (401-420 tier). The university also increased its rank in the Chemistry subject area, moving up one tier to 451-500.

The university's highest rankings in the 2024 listing are in Veterinary Science (51-70), Agriculture and Forestry (101-150), and Environmental Sciences (128).



[USask-led reproductive health and rights initiative receives \\$20 million](#)

Health-care researchers from USask received \$20 million from the Government of Canada for a massive international development project to improve education, treatment, infrastructure, and service for sexual, reproductive health and rights of girls and young women in Mozambique.

Spearheaded by **Dr. Nazeem Muhajarine (PhD)**, a professor in Community Health and Epidemiology in the College of Medicine and the director of the Saskatchewan Population Health and Evaluation Research Unit, the project will explore innovative solutions to support the rights and health of women and young girls across six districts and 30 partner communities in the Inhambane province of Mozambique.

[USask's VIDO selected to join DIANA innovation accelerator](#)

The University of Saskatchewan's (USask) Vaccine and Infectious Disease Organization (VIDO) has been selected to join the North Atlantic Treaty Organization's (NATO) Defence Innovation Accelerator for the North Atlantic (DIANA) program. VIDO is one of 13 new Canadian test centres chosen to be part of the network—and the only centre with biotechnology as its focus.



“Global collaborations are needed for global solutions. The partnership announced is another example of USask's VIDO continuing to use its research infrastructure and expertise to drive

research and development world-wide.”

- **Peter Stoicheff**, President, University of Saskatchewan



[Métis cancer survivor experiences documented in digital storytelling project](#)

A storytelling project supported by USask and the Saskatchewan Network Environments for Indigenous Health Research (SK-NEIHR) is sharing powerful stories of survival in the hopes of raising awareness for healthcare access among Métis communities.

Dr. Robert Henry (PhD), an associate professor in USask’s Department of Indigenous Studies in the College of Arts and Science who holds a Canada Research Chair in Indigenous Justice and Wellbeing, co-led this project with **Dr. Chelsea Gabel (PhD)** from McMaster University that highlighted stories of Métis cancer survivors in Saskatchewan.

They worked with **Terri Hansen-Gardiner**, a Knowledge Keeper with SK-NEIHR and a cancer survivor and support worker, to help bring the project to life.

Looking for more research stories? [Visit Discovery Digest online.](#)

[USask research making a splash on World Water Day](#)

On March 22, USask celebrated World Water Day to raise awareness about access to water and water security issues for people around the world.

Dr. Corinne Schuster-Wallace (PhD), the executive director of the Global Institute for Water Security (GIWS) and an associate professor in USask’s Department of Geography and Planning in the College of Arts and Science, said recognizing World Water Day is critical for a forward-thinking research institute like GIWS at USask.



“It really is a celebration, but also a recognition of the challenges that the world faces around water and obviously those challenges differ from place to place,” she said. “So, bringing the focus down to Saskatchewan and the University of Saskatchewan, we're in a unique ecosystem here, with unique waterscapes and an opportunity to generate and share solutions.”

[Cross-continental bird tracking network receives \\$3.1-million boost](#)



USask is one of several Canadian universities involved in the Motus Wildlife Tracking System – a one-of-a-kind system that uses a series of tracking stations set up across countries in North and South America to record the movements of various birds, bats and insects. Spearheaded by Birds Canada, the system uses tiny tags which allow researchers to track individuals and groups of animals as they enter and exit the range of different receiver towers – giving a unique snapshot of travel and migratory patterns.

Dr. Christy Morrissey (PhD), a professor in USask's Department of Biology in the College of Arts and Science, is one of the two co-principal investigators on the project. Together with **Dr. Chris Guglielmo (PhD)** at Western University, they will lead the expansion of Motus further west and strengthen research collaborations across the country.

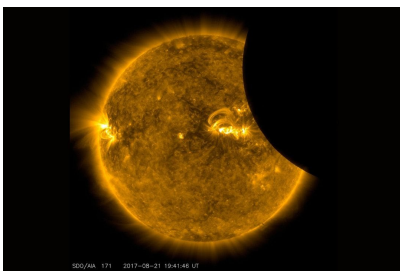
[USask researchers use foxes to solve health mystery in Northern communities](#)

A combination of ecological and biological methods in studying wildlife has helped USask researchers track a parasite dangerous to humans.

The parasite *Toxoplasma gondii* (*T. gondii*), more colloquially known as the parasite associated with kitty litter, is found in humans in Northern communities at a disproportionately high rate. The reason for the high exposure rates of *T. gondii* in the North has long been a mystery, but researchers from USask believe they've found a critical answer by examining not humans, but foxes.



Research spearheaded by **Dr. Emily Jenkins (PhD)** in the Western College of Veterinary Medicine (WCVN) and her then-PhD student **Dr. Émilie Bouchard (PhD)** and published in [Scientific Reports](#) highlights a heightened presence of *T. gondii* in foxes in the Nunavik region of northern Quebec. Nunavik has the highest human exposure rate of the parasite of anywhere in Canada.



[Five things to know about the solar eclipse: USask space expert](#)

Dr. Carley Martin (PhD) is a programmer at the Super Dual Auroral Radar Network (SuperDARN) Canada, an international collaboration and a global network of scientific radars that monitor conditions in the near-Earth space environment. With a doctoral degree in planetary physics and a master's degree in astrophysics, and as a staff member of the USask College of Arts

and Science Institute of Space and Atmospheric Studies, Martin is passionate about all things space and planetary physics.

“A solar eclipse occurs when the moon passes between the sun and Earth,” Martin said. “The moon covers all or part of the sun from the Earth’s perspective, and we see a dimming of the sun during partial eclipses. During total eclipses it can appear as nighttime or dawn/dusk for a few moments.”

[USask, City of Saskatoon researching sustainable theatre strategies](#)

USask drama professor and head of the Department of Drama **Carla Orosz** is working with City of Saskatoon Arts and Grants Consultant **Kathy Allen** to figure out the best ways to share resources among theatre organizations across Saskatchewan and build a sustainable theatre production ecosystem for the future.



“If artists don’t have those resources, some artists will pay out of their own pocket to entertain and bring arts and culture into our province. That shouldn’t happen. They might make the decision that they can’t afford to do it in the future,” Orosz said. “In order for artists and companies to not sacrifice themselves, we need to support them.”



[USask water researcher discusses impact of microplastics on planet](#)

This year’s theme for Earth Day on April 22 is “Planet vs. Plastics.” An increasingly concerning issue is microplastics found in the environment and water sources.

Microplastics are microscopic pieces of plastic, from fractions of a millimetre to five millimetres in size. They are a result of larger plastic pieces wearing down. One of the major issues with plastics is that they do not completely break down or decompose.

As a water researcher, **Dr. Corinne Schuster-Wallace (PhD)** knows how the environment impacts water and provides insight into the damaging affects microplastics can have on our environment.

[USask and Métis Nation–Saskatchewan collaborate on climate change mitigation research](#)

USask and Métis Nation–Saskatchewan (MN–S) have partnered together on a project that involves the environment, the community, experiential learning, and

carbon storage data.

The project started with MN–S reaching out to USask to see if it would be interested in taking peat samples from local muskegs (also known as treed wetlands or peatlands) in the Nisbet Community Forest, to see how much carbon was stored there.



Collaborating with **Dr. Bryan Mood (PhD)**, Renewable Resource Management program coordinator and lecturer for the College of Agriculture and Bioresources, a strategy was developed to obtain peat samples while providing experiential learning for students.



[USask veterinarian earns top award for bovine work in Western Canada](#)

Dr. Nathan Erickson (DVM), an associate professor in WCVN's Department of Large Animal Clinical Sciences, has received the 2024 Veterinarian of the Year Award from the Western Canadian Association of Bovine Practitioners (WCABP) and Boehringer Ingelheim Canada.

The award spotlights Erickson's dedication to the veterinary profession through his research, clinical and teaching work in beef cattle production health. Erickson's research involves the use of product and management techniques to maximize sustainable herd production, such as controlling bovine respiratory disease in calves through developing immunization protocols and implant strategies, nutritional management for reproductive efficiency, and heifer development for longevity.

[Research team awarded \\$900,000 to study effects of milk and yogurt consumption on health](#)

USask researchers have been awarded \$900,000 by Dairy Farmers of Canada (Dairy Research Cluster 4) and Agriculture and Agri-Foods Canada (AAFC) to investigate the role of milk and yogurt supplementation in the development of osteoporosis and obesity.

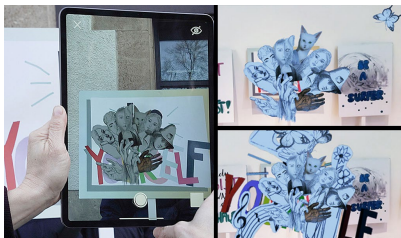


The research team, co-led by **Dr. Hassan Vatanparast, PhD** (College of Pharmacy and Nutrition; School of Public Health), **Dr. Phil Chilibeck, PhD** (College of Kinesiology) and **Dr. Sandra Clarke, PhD** (AAFC) along with co-investigators **Dr. Adam Baxter-Jones, PhD** (College of Kinesiology), **Dr. Marta Erlandson, PhD** (College of Kinesiology), **Dr. Walter Siqueira, PhD** (College of Dentistry) and **Dr. Ginny Lane, PhD** (University of Idaho; Family and

Consumer Sciences), will conduct a two-year randomized controlled trial where Canadian adults aged 19-30 years old will be asked to consume either 1.5 daily servings of milk, two daily servings of yogurt, or be part of the control group.



[USask supports new music, community organizations](#)



[International collaboration brings artwork to life with augmented reality](#)



[Advancing Indigenous governance: Danette Starblanket](#)

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Make sure to follow the USask Research [Twitter 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 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...

[Indigenous consultation is key to the Ring of Fire becoming Canada's economic superpower](#)

By: **Dr. Matthew Mitchell (PhD)**, USask Department of Political Studies, **Dr. Andrew Grant (PhD)**, Queen's University, **Badriyya Yusuf**, Queen's University, **Dr. Dimitrios Panagos (PhD)**, Memorial University



Ontario's Ring of Fire could make Canada a minerals superpower, but Indigenous consultation is essential to ensure doing so does not harm reconciliation or Canada's global reputation.



[What needs to happen next for Canada to have a successful school food program](#)

By: **Dr. Rachel Engler Stringer (PhD)** and **Dr. Amberley Ruetz (PhD)**, USask Department of Community Health and Epidemiology, College of Medicine

Researchers and co-chairs of the Canadian Association for Food Studies' School Food Working Group explain what Ottawa should prioritize to ensure its national school food program succeeds.

Upcoming events



Global Water Futures Observatories (GWFO) Launch Event

Join us to celebrate the official launch of Global Water Futures Observatories, Canada's premier national university-operated scientific freshwater observation network of instrumented water observing sites, supported by deployable observing systems and major laboratories, that provides open access water data.

The event can be attended in-person and online, and will be held in connection with virtual launch events at the University of Windsor and the University of Waterloo. [Register to attend in-person or virtually here.](#)

- **GWFO Launch** – Wednesday, April 17, 1:00 – 2:30 p.m. CST, Convocation Hall

2024 Life & Health Sciences Research Expo

USask's Life & Health Sciences Research Expo is a free, in-person event showcasing interdisciplinary life and health science research. Explore morning and afternoon research poster presentations competing in categories such as basic, translational, clinical, and applied science as well as social



and population health. Attend the afternoon award ceremony where winners for best paper, best supervisor, and the best research posters will be announced. Everyone is welcome! For more information, visit <https://healthsciences.usask.ca/expo>.

- **2024 Life & Health Sciences Research Expo** – Thursday, May 2, Health Sciences Building
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VIDO Community Liaison Committee (CLC) Public Meeting

The Community Liaison Committee (CLC) of the Vaccine and Infectious Disease Organization invites you to join their upcoming public meeting at the Willows Club. The meeting will feature presentations from scientist **Dr. Scott Napper (PhD)** on Chronic Wasting Disease (CWD) and VIDO director

Dr. Volker Gerdts (PhD) with an update on VIDO becoming Canada's Centre for Pandemic Research. 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.

[Sign-up at the link here.](#)

- **VIDO CLC Public Meeting** – Wednesday, June 12, 7 – 9 p.m., The Willows Club
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NEW - Information for researchers

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

- April 12 – CBC Radio – [University of Sask. researchers look into animal diseases in Sri Lanka](#)
- April 4 – NPR Online, NBC News – [What to know about the risks of the bird flu outbreak](#)
- April 4 – Western Producer – [Farmers aim for higher yields with less moisture](#)
- April 3 – CBC News – [What we know — and don't — about the national school food](#)

program

- March 27 – CBC News, MSN News – [Canada building new lab to work with world's most dangerous pathogens](#)
 - March 27 – Popular Science – [The psychology of why video game farming is so satisfying](#)
 - March 25 – CTV Saskatoon – ['Sharing economy': Saskatoon theatre artists looking to share resources](#)
 - March 22 – CBC Radio – [University of Sask. researchers get \\$3.1M funding boost to track birds](#)
 - March 21 – BBC News – [Boisterous, destructive and divisive: North America's wild boar population is on the rise](#)
 - March 21 – Toronto Star Online – [U Tech Update: New funding for cutting-edge climate satellites and other tech innovations](#)
 - March 16 – CBC News – [Canada heading toward major measles outbreak without vaccine boost, new modelling suggests](#)
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Banner image photo credit: **Caribou and the Climate Calamity** - by **Dr. Kayla Buhler (PhD)**, alumnus, Department of Veterinary Microbiology, WCVU

Images of Research 2024 - *Runner-up, Best Description*

Whether it be the wild caribou herds across northern Canada or the large semi-domesticated reindeer herds in Fennoscandia, all face uncertainty as climate change rapidly alters their environment. These animals have significant cultural value for indigenous peoples. As the environment shifts, new viruses, bacteria, and parasites that impact their health move further north. Our lab partners with indigenous communities across Arctic Canada to collect hunter-harvested samples to identify the presence of food-borne and vector-borne diseases in wild caribou. Given that these animals already face significant challenges with their fitness (such as altered migration patterns and winter icing events that reduce their ability to forage), new pathogens are poised to overtake struggling herds.

Funding: ArcticNet, NSERC, Weston Family Foundation



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