



Discovery Digest

Highlights of U of S research news

In this issue: USask health researchers awarded \$4.85M from CIHR and \$1.2M in SHRF Sprout Grants, USask Conversation articles surpass 1M reads, USask researchers awarded \$1.85M from SSHRC grants, new videos released, and much more!

Every month, USask Research Profile and Impact highlights research from across campus. *Discovery Digest* is a glimpse into how U of S research, scholarly and artistic work is making a difference for Saskatchewan, Canada, and the world.

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[USask awarded \\$4.9 million for Indigenous health research, HIV and cancer](#)



Five USask research teams have been awarded a total of \$4.85 million by the Canadian Institutes of Health Research (CIHR) for cutting-edge health research in cancer, HIV and Indigenous health. The grants include \$2.26 million for research into re-awakening and applying Indigenous knowledge of wellness, a project led by College of Medicine professor Dr. Malcolm King (PhD) and Dr. Alexandra King (MD), Cameco Chair in Indigenous Health at USask. [Read the details.](#)

[\\$1.85M in federal grants awarded for USask social science and humanities research](#)



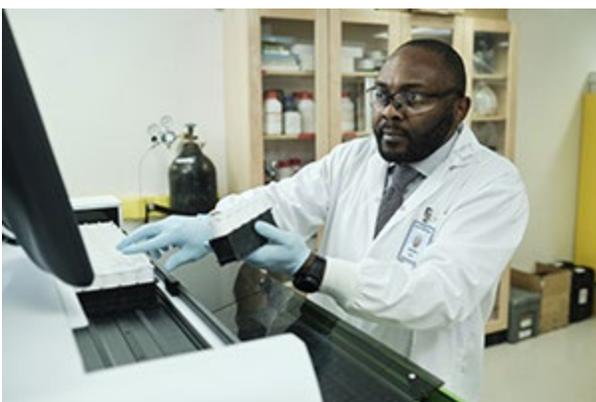
USask has been awarded a total of \$1.85 million for 10 wide-ranging faculty research projects and 30 graduate student scholarships and fellowships. The research projects will look at the implications of stereotypes for women and First Nations, and others will delve into Canadian history, examining the successful integration of the Doukhobors in Saskatchewan, the legacy of the Indian Act's band-membership rules, and the classification of First Nations, Inuit and Métis peoples by the federal government as 'Indians.' [Read the details of the projects.](#)

[New USask treatment for bone cancer in young people and dogs](#)



USask research into the development of a novel bone cancer therapy that uses radioactive antibodies has been awarded \$765,000 the Canadian Institutes for Health Research (CIHR). Dr. Ekaterina (Kate) Dadachova (PhD), the Fedoruk Centre for Nuclear Innovation Chair in Radiopharmacy, and pathologist Dr. Maruti Uppalapati (PhD) are targeting osteosarcoma – a cancer which particularly affects teenagers and large-breed dogs, and is difficult to treat with traditional approaches. [Read the details.](#)

[Colorectal cancer cells killed by 'assassin' antibody, USask team finds](#)



A novel treatment for advanced colorectal cancer—using a radioactive antibody that attaches to cancer cells and kills them—is being developed by a USask College of Medicine team led by radio-pharmacist Dr. Humphrey Fonge (PhD). The project has been awarded more than \$872,000 by the Canadian Institutes for Health Research (CIHR).

Colorectal cancer is the second leading cause of death from cancer in North America and is often diagnosed at an advanced stage, after it has spread to other parts of the body. Patients with advanced colorectal cancer generally have a life expectancy of around 24 to 30 months. [Read the full story.](#)

[Nine USask health research projects awarded more than \\$1.2M from SHRF](#)



The Saskatchewan Health Research Foundation (SHRF), in partnership with the Saskatchewan Centre for Patient-Oriented Research (SCPOR), has awarded more than \$1.2 million in Sprout Grants to teams led by nine USask health researchers. Sprout Grants support health research where patients are engaged as research partners, and are considered part of the research team.

The funding will be used to investigate health challenges such as improving lung cancer diagnosis with artificial intelligence imaging analytics and improving care for those living with inflammatory bowel disease. Five of the nine projects focus on Indigenous health by addressing patient-driven priorities from First Nations and Métis communities across Saskatchewan. [See a list of recipients.](#) [Read the details from SHRF.](#)

USask Conversation Canada articles surpass 1M readers

THE CONVERSATION

Articles written by USask researchers have been read 1.03 million times since the university entered into a partnership with the SSHRC-funded Conversation Canada in June 2017. USask is a founding member of The Conversation Canada, an online academic journalism hub/newswire where researchers write plain-language editorials and explainers articles about their research.

If you are a faculty member, post-doctoral fellow or doctoral student, consider writing something. Dr. Doug Clark (PhD)'s [article](#) has netted over 125K reads – he discusses

- [the benefits of writing](#) (1min),
- [the writing process](#) (1 min), and
- [the importance of sharing your knowledge](#) (1 min).

Read our most recent articles:



[Benefits of pulses: Good for you and the planet](#), Dr. Mary Buhr (PhD)

Today's production of more, better food from the same amount land means that tomorrow's population may not go hungry. Dr. Buhr's article was also republished in the National Post and Toronto Star.



[How to keep your pets safe from marijuana poisoning](#)

Dr. Colleen Dell (PhD), Erin Wasson, and Dr. Kevin Cosford (DVM),

Pets are vulnerable to cannabis toxicity - by ingesting cannabis products and also by inhaling second hand smoke. In some cases this can be lethal. This article was also republished in French.



[Back pain? A physiotherapist may offer the most effective treatment, if you can afford it](#)

Dr. Brenna Bath (PhD) and Dr. Catherine Trask (PhD),

Back pain is a common and costly health problem. It is the leading cause of disability worldwide and a "call to action" recently published in The Lancet highlights the risks of over-medicalization of back pain globally.

[Write about your own research in The Conversation](#)

Want to reach a broad audience with your research? Consider submitting an item to the Conversation. [Wondering where to start? Read a short explainer on how to write for the Conversation Canada.](#) [Read previous USask articles here](#) and [get in touch with Daniel Hallen.](#)

[\\$625,000 award enables Global Institute for Food Security \(GIFS\) researcher to accelerate novel breeding program](#)



Dr. Martin Mau (PhD), post-doctoral fellow at the USask Global Institute for Food Security (GIFS), has been awarded funding from the Saskatchewan Agricultural Development Fund to enhance a research project that could speed up plant breeding Saskatchewan and around the world by introducing apomictic reproduction—a natural, asexual form of producing seeds from flowering plants without fertilization—into canola hybrids. Mau first became involved in the study of apomixis during his PhD at Apomixis Research Group at the IPK Gatersleben, Germany, which is led by USask's Dr. Tim Sharbel (PhD).

[Study examines how Indigenous languages apps can benefit First Nations older adults living with dementia](#)



Dr. Carrie Bourassa (PhD), USask professor and scientific director of the CIHR Institute of

Indigenous Peoples' Health, will lead a 15-month study with older adults and caregivers from 11 First Nations in southern Saskatchewan to test how participants' minds can be stimulated using Indigenous language apps.

Through presenting shared activities via an app—learning, games, and quizzes— to caregivers and their charges, the researchers also hope to identify the needs of users in adopting new dementia technologies. The research is funded by a grant from the Centre for Aging and Brain Health Innovation (CABHI)'s Strategic Opportunity Fund. [Read the details](#)

[USask scientists investigating effects of sulphates on cattle health](#)



Dr. Greg Penner (PhD) is leading a team of livestock researchers to investigate high sulphate levels found in the drinking water of cattle across the Prairies. The research is being conducted using a unique-in-North America metabolism barn at the university's Livestock and Forage Centre of Excellence.

The catastrophic results of poor quality water made headlines in the summer of 2017 when 200 cattle died in a pasture near Shamrock, Sask., southwest of Moose Jaw. Researchers determined that the extremely high level of sulphates ($\text{SO}_4(2-)$) in the animals' drinking water contributed to their deaths.

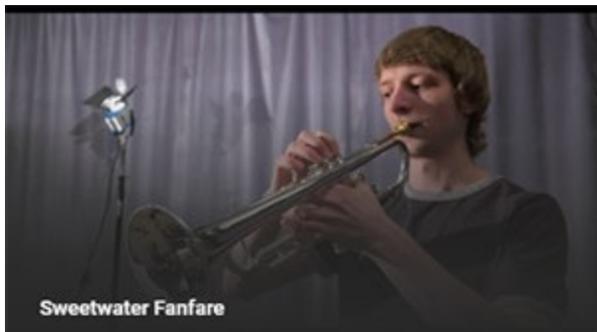
[USask discovery may help improve CF treatment](#)



A USask medical research team led by Dr. Juan Ianowski (PhD) and Dr. Julian Tam (MD), has made a ground-breaking finding with potential to lead to more effective, longer-lasting and better-tolerated treatments for cystic fibrosis. The research team used a specially designed living swine model—one of the best models for human CF disease—at the USask-owned Canadian Light Source synchrotron to analyze the body's response to spraying a hypertonic saltwater solution as treatment for clogged airways. The results were published in the online

Watch now: New videos [Sweetwater Fanfare](#) and [The University the World Needs](#)

The Research Profile and Impact unit, in collaboration with Media Production, has just released two new videos featuring USask musicians and aerial drone footage of campus.



[Sweetwater Fanfare](#) features USask professor Dean McNeill, student Aaron Bueckert, and Wilfrid Laurier University professor Guy Few, as well as footage of locations USask researchers are conducting water research. The video will be used at many university events to highlight the interdisciplinary of research, scholarly, and artistic work being done together, across campus.



[The University the World Needs](#) features the USask Wind Orchestra conducted by Dr. Darrin Oehlerking (DMA), performing I.S.S. Flyover, a piece commissioned by a consortium of Canadian universities, including USask. The three-minute video will be used at alumni, donor, recruitment, and public events.

[New director appointed at the USask Centre for the Study of Co-operatives](#)



Dr. Marc-André Pigeon (PhD) has been appointed the new director of the USask Centre for

the Study of Co-operatives at the Johnson Shoyama Graduate School of Public Policy (JSGS). Prior to joining USask as an assistant professor and strategic research fellow in autumn 2018, Pigeon was most recently the vice-president of public policy at the Canadian Credit Union Association.

USask, AgWest Bio host World Pulse Day roundtable



The USask College of Pharmacy and Nutrition, together with AgWest Bio, hosted a conference and series of panel discussions Feb. 7 in celebration of the very first UN World Pulse Day. The event featured the Canadian launch of 2018 Global Nutrition Report, the world's foremost account on the status of malnutrition around the world, as well as a tribute to Dr. Edith Rowles Simpson, former Dean of the USask College of Home Economics.

Major Accolades

[Three from USask on global list of most-cited researchers](#)

Three USask researchers have been named in the annual Highly Cited Researchers 2018 list released by Clarivate Analytics:

- Dr. Alan Barr (PhD), Global Institute for Water Security
- Dr. Ajay Dalai (PhD), College of Engineering, Canada Research Chair in Bioenergy and Environmentally Friendly Chemical Processes
- Dr. Leon Kochian (PhD), Associate Director of the Global Institute for Food Security (GIFS)

Honorary doctorate awarded to toxicology researcher



Dr. John Giesy (PhD) will be awarded an honorary Doctorate of Environmental Sciences by Masaryk University in Brno, Czech Republic at a ceremony on Dec. 5th of 2019. For its centenary this year, the university is celebrating outstanding figures whose contributions to the development of science, culture and the arts are recognized internationally.

The conferring of this honour by the Masaryk University Scientific Board is meant to recognize Giesy's progress in his field and his contributions to Masaryk University, the Czech Republic's second largest university where Gregor Mendel, the original founder of the study of genetics, did his seminal work in pea plant hybrids.

Giesy won the Chinese Academy of Sciences' Einstein Professorship in 2009, which recognizes international leaders in their particular fields, as measured by awards and prizes, invited lectures, national or international committee membership and/or leadership, and history of publications.

[USask fruit breeders receive prestigious award](#)



Dr. Bob Bors (PhD) and Rick Sawatzky, fruit breeders with the USask plant sciences department, are the joint recipients of the prestigious Stevenson Award for their development of sour cherries and haskaps. The award, named for prominent Scottish-born Manitoba horticulturalist A. P. Stevenson and granted by the Manitoba Horticultural Association, honours those who have "made a conspicuous achievement in the field of practical horticulture." It has been given only 21 times in 83 years. [Read the full story.](#)

A "Green and White" Globe

[Planetary Health: Connecting Food, People and Planet \(PAW2019\) – March 12-13](#)



The USask International Research and Partnership Office will host the second annual People Around the World (PAW) conference in March, 2019. The conference, co-led by the School of Public Health, will focus on the theme of planetary health – the interdependence of human health and the health of the planet – and bring together health, environment, Indigenous, and policy researchers, as well as community and industry partners with a goal of improving human health outcomes in a manner that is respectful to Earth's ecosystems and inhabitants. Visit <https://planetaryhealth.usask.ca> for conference details.

Telling your research story

Images of Research 2019 - opens March 6



Get your shutters clicking now! The USask *Images of Research Photo and Imaging Competition* enters its fifth edition in 2019. With cash prizes in four categories, plus prizes for Best Description, Viewer's Choice and a grand prize of \$500, now is your chance to show the world what research looks like from your perspective.

Learning to make technically accurate, interesting images can be an asset to your scientific career! [\(Frankel, F. \(2019\). *Every scientist should learn to make strong visual images of science \(opinion\)*. \[online\] Inside Higher Ed.\)](#)

If a photo is worth 1,000 words, how much is a one-minute video worth? Show us how your research has impact in a one-minute video and you could win a cash prize of \$300!

The competition **opens March 6, 2019**. [See previous winners for inspiration.](#)

[CFI's #IamInnovation Twitter contest](#)



Are you a student or post-doc doing CFI-funded research? Tweet a creative video or photo showcasing your research using the hashtags [#IamInnovation](#) and [#Contest](#) to [@InnovationCA](#). The winning entrants will win a trip to Ottawa, where they will participate in a science communications workshop and attend a networking event with other students, researchers and decision-makers. The most popular entries will win up to \$500 in cash. [Read the details](#) - [See last year's submissions](#)

Commercialization

[AimDay– Internet of Things](#)

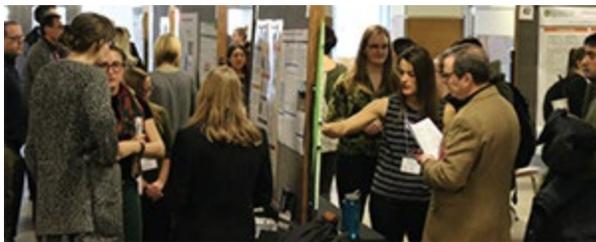


The next AimDay event, hosted by USask Innovation Enterprise, will be held Mar. 27 at Innovation Place, in collaboration with University of Regina and Saskatchewan Polytechnic. The event, the fifth AIMday held in North America, will focus on specific challenges within Internet of Things (IoT) research. Some estimates anticipate the Internet of Things has the potential for a \$10-\$15-trillion contribution to global GDP in the next 20 years (https://www.frontier-economics.com/media/1167/201803_the-economic-impact-of-iot_frontier.pdf). Questions will be divided among five main areas: connectivity, sensors, analytics, regulatory, and security and privacy.

AIMday -- Academic Industry Meeting day – is a series of workshops where questions submitted by industry partners are discussed by academics from diverse disciplines. [Industry can submit question until Feb. 18, when registration will open for researchers.](#)

Undergraduate Research

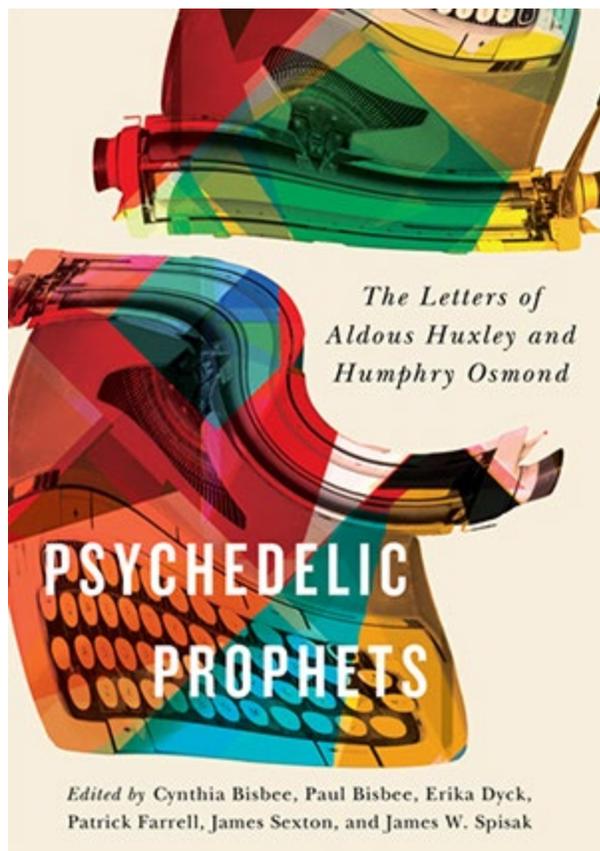
[USSU Undergraduate Project Symposium Awards](#)



Forty-four USask undergraduate student researchers presented on their research, scholarly and artistic work on Jan. 31 at the fifth annual USSU Undergraduate Project Symposium. For the first time, the symposium also included a “Mini-Conference”—undergraduates in the humanities gave five-minute presentations. Twelve undergraduate projects in subject areas ranging from antimicrobial resistance to isotope development to experiences of marginalized people were presented with awards. [Read the details of recipients.](#)

Humanities and Arts

[History book launch](#)



The USask history department celebrated its research through a book launch event on Jan. 29. Researchers Dr. Erika Dyck (PhD), Dr. Frank Klaassen (PhD), Dr. Karissa Patton (PhD), Dr. Robert Sider (PhD) and Kyle McLeister presented their published or upcoming works that showcase the variety of projects undertaken by the department.

[Psychedelic Prophets: The Letters of Aldous Huxley and Humphry Osmond](#), edited by Erika Dyck, is a finalist for the Association of American Publishing [PROSE Awards](#) for the Award of Excellence in the category of Biology and Life Sciences.

Topics of the other books include Elizabethan magic, conservatism in Alberta, the scholarship of Erasmus, and medical terminology.

[Read more about the books featured.](#)

[New exhibit uses popular culture to explore Canada's colonial past](#)



The Diefenbaker Canada Centre is hosting an exhibit that looks at settler colonial responsibility. *Grand Theft Terra Firma*, curated by The Reach Gallery in Abbotsford, unfolds as a strategy guide to an imaginary video game (the title of the exhibit is a reference to the

wildly popular *Grand Theft Auto*). Artists David Campion and Sandra Shields disrupt the celebratory mythology of nation building and invite visitors to evaluate their own continued and complicated relationship to colonial practices. [The exhibition runs until Mar. 10 at the Diefenbaker Canada Centre.](#)

Upcoming events

[The Writing on the Wall: The Work of Joane Cardinal-Schubert](#) – until April 27



Joane Cardinal-Schubert, 1996, oil and graphite on canvas, 60 x 84. Collection of the estate of Joane Cardinal-Schubert. Photo by Dave Brown, LCR Photo Services.

Although never claiming to be political and rejecting a feminist label, the work of Joane Cardinal-Schubert (1942-2009) recognizes the personal lived life of an indigenous Canadian woman is political.

The Writing on the Wall includes pivotal pieces of Cardinal-Schubert's work in painting, drawing, printmaking, collage, ceramic, and installation, and is being circulated by the University of Calgary Nickle Galleries. [See the exhibition at College Art Gallery 1 until April 27, 2019.](#)

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