



# Discovery Digest

Highlights of U of S research news



Each month, U of S Research Profile and Impact assembles a selection of research stories from across campus. It's 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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## [University of Saskatchewan a Key Partner in Agri-Food Supercluster Announced Today](#)

As a world-leading agricultural research university, the University of Saskatchewan will be a pivotal partner in Canada's agricultural supercluster—Protein Industries Canada—announced today in Ottawa by Innovation, Science, and Economic Development Minister Navdeep Bains as one of five national superclusters awarded a total of \$950 million.

The industry-led supercluster will create new products that add value to crops such as wheat, canola, and lentils and other pulses, generating over \$700 million in new commercial activity and approximately 4,700 job over the next decade. The supercluster involves more than 120 corporate, industry and post-secondary partners, with total cash, in-kind venture capital investment from partners of \$400 million.

“Drawing on decades of agricultural research success, the U of S is home to globally

recognized centres of excellence, including the Crop Development Centre, Global Institute for Food Security, and the Canadian Light Source synchrotron,” said U of S President Peter Stoicheff. “This unparalleled research capacity reinforces the university’s key role in the success and sustainability of Canada’s agricultural supercluster.”

With world-leading expertise in plant genetics and breeding, crop production and processing, and molecular imaging and analysis, the U of S is set to help train hundreds of students—across multiple disciplines such as IT, business leadership and plant sciences—as innovative leaders in the plant-based agri-food sector.

“The unique combination of vital infrastructure and world-class researchers at the U of S will provide the companies participating in the supercluster with the innovative edge to accelerate commercialization and add value at every point along the supply chain,” said Maurice Moloney, executive director and CEO of the U of S Global Institute for Food Security.

[Read our press release here](#)

[Read the Innovation, Science and Economic Development Canada news release here.](#)

[Visit the Protein Industries Canada website](#)

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[Compute Canada makes major investment in U of S research computing](#)

With a renewed investment of \$2.2 million from the Government of Saskatchewan, U of S researchers are poised to unlock new discoveries through big data.

Combined with matching funding from Canada Foundation for Innovation of \$2.2 million and \$1.1 million from U of S, Compute Canada Major Science Initiative 2.0 will offer advanced research computing infrastructure, support personnel and services until 2022. [Read more here.](#)

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### **U of S chickpea research in *Nature* publication**

Bunyamin Tar'an, Agri-Food Innovation Chair at the U of S Crop Development Centre (CDC), and CDC researcher Donna Lindsay are part of a large collaborative international research project that will improve chickpea production in countries such as Canada, Russia, Turkey, Ethiopia and India by making a wide array of genetic material available to crop breeders.

The unique research project has generated about 10,000 seed progeny from crossing wild chickpea varieties with cultivated lineages to improve the genetic traits for cope with extreme environmental conditions, improving nutritional value and overall plant performance. CDC expertise and facilities such as the phytotron contributed to studying nutrition quality, stress tolerance and disease resistance.

The research paper was published Feb. 13 in **Nature Communications**.

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### **Identifying new markers for Parkinson's disease**

An estimated 55,000 Canadians over age 18 have been diagnosed with Parkinson's disease, characterized by symptoms such as tremors, muscle rigidity and unstable balance. Using fluorine-18 from the Saskatchewan Centre for Cyclotron Sciences at U of S, chemistry researcher Chris Phenix is leading a multidisciplinary team from three provinces to identify Parkinson's markers sooner.

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## [Indigenous peoples are leaders in biodiversity conservation](#)

Indigenous peoples and local communities around the world are critical players in environmental sustainability and biodiversity conservation, according to U of S researcher Jim Robson. Customary territories of Indigenous and traditional peoples account for more than one-fifth of the global landmass, and around four-fifths of the planet's terrestrial (land-based) biodiversity. Environmental change and globalization are putting particular pressure on the places and people.

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## In THE CONVERSATION



## [The agony of defeat: How Olympians can deal with failure](#)

Kinesiology researchers Leah Ferguson and Kent Kowalski writing in *the Conversation* reveal what might be the secret key to getting back up after being knocked down – being kind to yourself. [Read the whole story here.](#)



### [The sparse use of Canada's notwithstanding clause](#)

Ken Norman, Professor Emeritus of Law, details the fraught history of the notwithstanding clause in Canadian politics in *the Conversation*. While many have threatened, only Saskatchewan and Quebec have invoked the clause over 35 years. When will it next be used?

[Read here.](#)

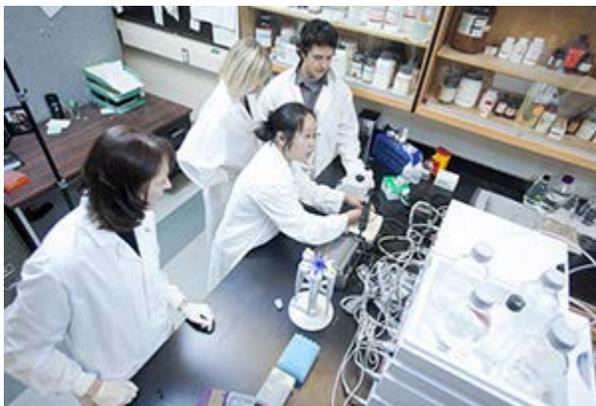


### [The magic of love and sex](#)

U of S history professor Frank Klaassen reflects upon modern forms of magic that are part of our everyday life: a whole industry capitalizes on people's vulnerabilities promising power over love and sex, but also health, wealth and good luck. [Read here.](#)

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

Want to reach a broad audience with your research? Consider submitting an item to the *Conversation*, an academic journalism hub of which U of S is a co-founding member. [Read more here](#) or [get in touch with Sarah Peiris.](#)



### **[Now live: Funding Successes Database](#)**

The latest funding announcements are now available in one centralized, easy-to-use, filterable database. The Research Profile and Impact unit, working with research specialists at OVPR Research Services and ICT's UnivRS and web teams, has launched a brand new database, showcasing projects recently awarded funding. **[New projects are added on a rolling basis, so bookmark now, and check back for updates !](#)**



### **[People Around the World 'PAW' Conference, featuring Dr. Alaa Murabit](#)**

On February 7, 2018, **U of S International Research and Partnerships Office** hosted the first People around the World 'PAW' Conference, highlighting the impact of the university's international research. The conference featured a keynote address from Dr. Alaa Murabit, medical doctor and U.N. Global Sustainable Development Goal Advocate, recently named as one of Forbes Magazine's 30 Under 30 for 2017.

**[Watch a U of S interview](#)** with Dr. Murabit on what needs to be done to ensure access to education for girls, and what stands in the way of global peace.

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### **[Global Water Futures \(GWF\) Inception meeting](#)**

The U of S-led Canada First Research Excellence Fund GWF network held its inception meeting at Wilfrid Laurier University at Waterloo, Ont. (Jan. 21-23) to review progress in the early stages of 33 funded projects, and to discuss program needs and plans for the future. The meeting was also an opportunity for partners to review the operational status, reporting, and plans across GWF.

The Global Water Futures network involves 388 Canadian researchers and 170 partners around the world . Over the next three years, GWF will fund 33 projects and teams with more than \$185 million, and train 84 undergrads and 330 graduate students and post-doctoral fellows.

**[For more information and a complete set of presentations from the meeting, visit the GWF website.](#)**

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### **[AIMday Big Data \(April 11\) – Registration opens Feb. 28](#)**

Innovation Enterprise, in collaboration with Innovation Saskatchewan, the University of Regina and Saskatchewan Polytechnic, will host a third AIMday, bringing together academic and industry partners, on April 11, 2018 with a focus on solving challenges in agriculture, health care, information technology, etc. as they relate to “big data.” **[Industry partners can submit questions until Feb. 28., when academic registration opens.](#)**

The last AIMday event, **[AIMday Imaging 2017](#)**, saw teams submit 69 proposals of which 24

were each awarded \$1,000 to develop their ideas into research proposals. Those projects successful in securing external funding will receive top-up funding from Innovation Enterprise.

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## Young Innovators



### [Carlos and the Blighted Wheat](#)

U of S student Carlos Ochoa, working with supervisor Fiona Buchanan, has been turning unsellable fusarium-blighted wheat into feed stock for chickens by first feeding the wheat to mealworms. Ochoa and Buchanan demonstrated they could reduce the amount of mycotoxin in the tiny critters to well below safe levels for animal feed. His work was featured in the latest edition of [Young Innovators](#) in the *Saskatoon StarPhoenix*.

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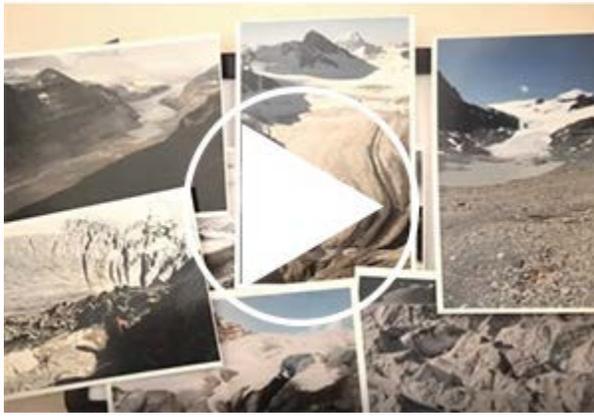
## Vote by watching! UofS students finalists in national video contest

Two U of S students --one in Chemistry and one Geography-- have been named among the top 75 finalists in [NSERC's Science, Action! Competition](#) by submitting 1-minute videos describing their research.

### Watch the videos now!



### [Chasing the sun - Derek Zomeran](#)



### [Let's talk about ice - Caroline Aubry-Wake](#)

The top 25 videos with the most views before March 2 go on to the next stage of judging, so *share widely!*

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## In the Arts



### [Only 3 Nights Left for \*The Beaux Stratagem\*](#)

Greystone Theatre's third production of the year is *The Beaux' Stratagem*, a 1707 comedy by [George Farquhar](#) adapted for a modern audience by [Thornton Wilder](#) and [Ken Ludwig](#). Directed by Prof. [Julia Jamison](#), the play features two fortune hunting scoundrels who more than meet their match as they set out to woo young heiresses and steal their money. The rollicking play features sword fights, courtly dances and period costumes. It runs till Feb. 17 with a cast of about 20 students and a support crew of more than 50 from the U of S drama department, which is the oldest degree-granting program in the Commonwealth.

[Get tickets now!](#)

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