

# Saskatchewan – Mitacs Research and Innovation Partnership

## Backgrounder

May 2023

In 2023-24, Saskatchewan’s Ministry of Advanced Education will provide \$1.15 million to Mitacs. This funding supports internships and fellowships through seven Mitacs programs and multiple partnerships between Saskatchewan industries, businesses, non-profit organizations and post-secondary institutions.

## Post-Secondary Institution Partnerships with Mitacs

Mitacs furthers Canadian research through partnerships with academic leaders. In Saskatchewan, Mitacs partners with the University of Regina, University of Saskatchewan, Saskatchewan Polytechnic and Parkland College.

## Mitacs

Mitacs is a national not-for-profit organization that facilitates collaboration between the private and post-secondary sectors, driving impactful innovation, enabling valuable research and development activity, and deploying highly skilled post-secondary talent into the economy. Mitacs connects businesses and academic institutions through unique work-integrated learning programs.

These programs provide top post-secondary students with opportunities to expand their skills, gain real-world experience in their fields, and establish their professional networks locally, helping to attract and retain highly educated post-secondary students, postdoctoral fellows, and recent graduates.

Mitacs programming also enables organizations to tap into academic knowledge networks. Internships attract highly skilled talent that can help businesses develop cutting-edge technologies, increase productivity, solve complex challenges, and design new or improved products or services.

## Mitacs Programs in Saskatchewan

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| <b>The Accelerate Program</b><br>125 research and development internships that enable students to apply research and technology expertise to improve the productivity and innovation of Saskatchewan organizations. | <b>The Globalink Research Internship Program</b><br>80 international student internships that enable Saskatchewan to recruit top international students and researchers from rapidly developing countries. |
| <b>The Globalink Research Awards Program</b><br>Enables placement of five Saskatchewan students in international universities and companies to gain international research and work experience.                     | <b>Globalink Graduate Fellowship</b><br>Five former Globalink Research Interns who return to Canada for full master’s, PhD programs, or postdoctoral fellowships.  |
| <b>Mitacs Elevate</b><br>10 post-doctoral fellowship internship units to assist organizations with need for high-level expertise to address complex challenges.   | <b>Indigenous Pathways Initiative</b><br>15 Indigenous student internships to assist Indigenous businesses and organizations achieve their innovation goals.   |
| <b>Business Strategy Internships:</b> 25 student internships to develop innovative projects designed to help organizations thrive.  |  |

## University of Saskatchewan Mitacs Interns Research Projects

### **Grace Gowera**, *Croptimistic Technology*

Grace was developing low-cost sensors for rapid estimation of soil properties in the field. Grace is working to predict crop yields using Artificial Intelligence (AI) tools. This technology allows producers to identify crop quality and more accurately assess value.

### **Midhun Sebastian Jose**, *Saskatchewan Beekeeper Development Commission*

Midhun is working to improve honeybee health by researching disease prevention and antimicrobial resistance. Improving honeybee health will lead to an increase in honey yields, which leads to better pollination services and increased agricultural crop yields.

### **Travis Gray**, *Nuseed, Canada*

Travis is using AI to develop a tool that identifies more optimal crop seed varieties quicker. This will allow companies to select new crop varieties more efficiently, including those that can withstand frost. He has since been hired as an employee.

### **Bipinlal Unni**, *Environmental Material Science*

Bipinlal Unni is investigating the role of iron minerals in remediation of soils. This work is important to Environmental Material Science in advancing their service offering to the sector. It delivers value to the SK Ag sector in both mitigating and managing external risks from adjacent land use impacts. He has since been hired as an employee.

### **Bahareh Vafakish**, *Prairie Clean Energy*

Bahareh is helping to understand the combustion properties of flax straw as a fuel for clean power generation. His focus is on characteristics of biomass, pelletization, combustion properties (including efficiency and emissions, fouling and corrosion potentials, effects of pre-treatment and co-firing opportunities). The introduction of a new value stream for flax diversifies crop production, which adds to both land health and the strength of the sector.

## University of Saskatchewan

The University of Saskatchewan (USask) is committed to building the future through creativity, collaboration, and research the world needs. USask has benefited from over a decade of research and development activities made possible by Mitacs. Since 2011, Mitacs has given USask 552 total awards that have fostered entrepreneurial endeavours and innovation. Mitacs grants have benefited many disciplines at USask, including agriculture, Indigenous research and the social sciences.