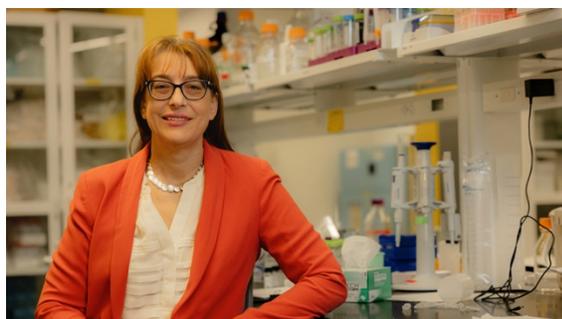


For immediate release — Thursday, March 19, 2026

Beyond the bounds of Earth — examining the effects of being in space

Travelling and living in space places extreme stress on the human body, with effects similar to those of aging on Earth, including loss of muscle, decreased bone density, vision problems and metabolic changes.



Most research has focused on the effects on male astronauts, but more female astronauts are going into space, and Dr. Gerlinde Metz, University of Lethbridge neuroscientist, and co-investigator Dr. Afshin Beheshti, a scientist at the University of Pittsburgh, in collaboration with Tony Montana, director of ULethbridge's NMR Facility, want to find out if being in space

affects men and women differently. They've been awarded a \$100,000 grant from the Canadian Institutes for Health Research (CIHR) to answer the question.

"It's critical to evaluate sex-specific responses to spaceflight to uncover shared and divergent biological pathways," says Metz. "This project allows Canadian scientists to contribute to NASA's first comprehensive analysis of the largest astronaut cohort to date."

The researchers will determine how male and female biology adapts to spaceflight by integrating biochemical, hormonal, immune, environmental and exercise data from astronauts aboard the International Space Station (ISS). Their analyses could lead to insights on how to improve health, both in space and on Earth.

Metz and her team suspect that being in space disrupts how cells make energy, triggering pathways that drive vision problems, loss of bone density and muscle mass, akin to what happens to people as they age on Earth.

"This research will lead the way to identifying personalized protective measures for astronaut health and insights into how extreme stress accelerates the aging process," says Metz. "Ultimately, this project could also lead to strategies that improve healthy aging on Earth."

Metz is scheduled to deliver a public talk titled *The Stressed Brain: Lessons from Earth and Space* as part of Brain Awareness Week at 5:30 p.m. on Friday, March 27, at the Galt Museum.

[Read online.](#)

—30—

Contact:

Caroline Zentner, public affairs advisor
University of Lethbridge
403-394-3975 or 403-795-5403 (cell)
caroline.zentner@uleth.ca

Our University's Blackfoot name is Iniskim, meaning Sacred Buffalo Stone. The University is located in traditional Blackfoot Confederacy territory. We honour the Blackfoot people and their traditional ways of knowing in caring for this land, as well as all Indigenous Peoples who have helped shape and continue to strengthen our University community.