



# Seminar Series

## Fall 2024

Hybrid

**Alex 265**

Thursday,

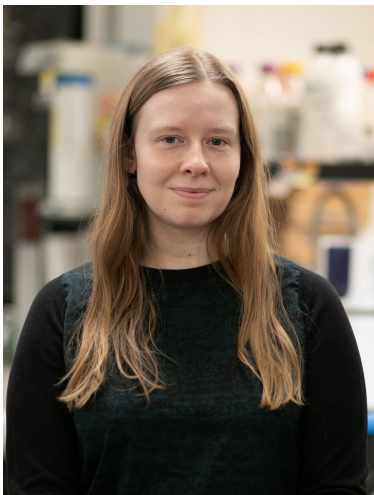
**October 31**

**12 noon**

## Dr. Elisse Magnuson

School of Environmental Sciences, University of Guelph

Microbial life and activity in a Martian analogue



Light refreshments  
will be served

Dr. Elisse Magnuson is a postdoctoral scholar with Dr. Jackie Goordial. Her research examines **microbial diversity and activity in extreme environments** on Earth.

Recent evidence indicates that not only did ancient Mars once have a vast network of surface waters, but that liquid water likely persists in the Martian subsurface to this day. **Study of analogue environments provides insights into potential life forms that could exist on Mars and other worlds.** Lost Hammer Spring, Axel Heiberg Island in the Canadian high Arctic, is one of the coldest and saltiest terrestrial springs, the coldest known terrestrial methane seep, and a close analogue of putative Martian waters. A multi-omics approach utilizing metagenome, metatranscriptome, and single-amplified genome sequencing revealed an active microbial community in the spring sediments providing evidence that similar extant microbial life could potentially survive in similar habitats on Mars.

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