Biology Seminar

12:30 - 1:30 pm
Friday, November 6, 2026
BGS 0165



Connor Fitzpatrick
Assistant Professor
Department of Biological Sciences
University of Calgary

This Drought Life

Four acts on plants, microbes, and drought

When drought hits, plants change the company they keep. Their roots become enriched in *Streptomyces*, bacteria often cast as helpful partners answering a plant's "cry for help." It's an appealing story—but does their arrival mean they've come to the rescue?

In this seminar, I'll tell our story in four acts. Act I: An iron problem. We investigate why plants suppress iron uptake during drought, a response shared across roughly 160 million years of plant evolution. Act II: A little help from bacteria. Some *Streptomyces* strains restore iron uptake and improve plant growth under drought. Act III: It just takes one. Antagonism among microbes complicates this partnership: a single antagonist can interfere with the benefits others provide. Act IV: Saviour or spandrel? We revisit the striking enrichment of *Streptomyces* in drought-stressed roots and ask whether it reflects a helpful partnership or a consequence of changes in the plant itself.

Along the way, we find that drought-induced suppression of plant immunity and iron uptake enables *Streptomyces* enrichment—but that enrichment and benefit are separate parts of the story. Who shows up matters. So does who else is there.