



Predictive ecology in climate and plant disease

The University of Guelph resides on the treaty lands and territory of the Mississaugas of the Credit. We recognize this gathering place where we work and learn is home to many past, present, and future First Nations, Inuit, and Métis peoples. Our acknowledgement of the land is our declaration of our collective responsibility to this place and its peoples' histories, rights, and presence.

The [Bernhardt](#), [Booker](#) and [Corradini](#) Labs at the University of Guelph are seeking a postdoctoral fellow to lead a project aimed at forecasting the risk of *Fusarium* infections and mycotoxin production in corn and wheat under alternative climate and management scenarios. The postdoctoral fellow will join a larger project team focused on exploring how environmental factors and different agricultural management practices (such as using different technologies, crop kinds, cultivars, tillage practices, etc.) affect four key ecosystem services (soil bound carbon sequestration, nutrient runoff from agricultural fields that affect aquatic health, biodiversity conservation, and the presence and/or proliferation of naturally occurring fungi that produce toxins, e.g., mycotoxins) at different scales. The postdoctoral fellow will have opportunities to collaborate with researchers in the Departments of Integrative Biology, Geography, Food Science and Plant Agriculture at the University of Guelph.

As a Postdoctoral Fellow, here's what you can expect from us:

- Mentoring and support for you in your research, outreach and career goals
- A collaborative and supportive research environment committed to promoting [equity, diversity and inclusion](#)
- Opportunities to establish connections and partnerships with our partner organizations.

Job Responsibilities:

Major duties of this position include developing forecasting models to predict risk of *Fusarium* infections and mycotoxin production under a range of climate and management scenarios, building databases to synthesize existing climate and agricultural data, and visualizations to help knowledge users understand infection risks (90%). Help with organizing project meetings, mentoring undergraduate and graduate students working on similar projects (10%).

Required qualifications:

A PhD in ecology, evolution, agricultural sciences or a related field, strong interpersonal, oral and written communication skills, experience with reproducible science workflows (e.g. R, Python or Julia, Git, Github).

Preferred qualifications:

Experience developing and documenting databases.

Experience developing ecological forecasting tools and user interfaces.

Ability to perform computer-based tasks, including reading, curating, and processing large amounts of data from multiple sources.

Salary and benefits:

This is a part time or full time position for one year (with option to extend to two years), with a salary of \$36.36 per hour (\$66,000 per year) plus benefits. We are open to on-campus or remote work.

To apply, please upload the following documents to [the application portal \(https://forms.gle/tbFKQ2tdaWCgKxVL6\)](https://forms.gle/tbFKQ2tdaWCgKxVL6) by **September 1, 2023**.

- 1) A CV
- 2) Research statement with a description of past research accomplishments (1-2 pages)
- 3) Copies of 2 publications (preprints are welcome)
- 4) Contact information for three references.

Review will begin September 1, 2023, and applications will be considered until the position is filled, selected candidates will be contacted for an interview. The position has an anticipated start date of **November 1, 2023** (though we can accommodate other timelines). Questions about the position can be directed to joey.bernhardt@uoguelph.ca and mcorradi@uoguelph.ca with subject line “Climate and plant disease postdoc”, but applications must be submitted via the webform.