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Posted Sep. 9, 2024, set to expire Jan. 9, 2025

Job Title Environmental Microbiology Post Doc

Department School of Environmental Sciences

Institution University of Guelph

Guelph, Ontario

Date Posted Sep. 9, 2024

Application Deadline Oct. 15, 2024

Position Start Date Available immediately

Job Categories Post-Doc

Academic Field(s) Water Resources Engineering

Ecological and Environmental

Civil Engineering

Apply By Email

Job Description

Postdoctoral Scholar in One Health Environmental Microbiology

Department: School of Environmental Sciences, Ontario Agricultural College

Description of the Area/Topic of Research

The research topic is waterborne disease, caused when we interact with water carrying pathogenic



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microorganisms often sourced from the feces of animals and humans. The rich sources and transport pathways in catchments combined with the vast array of pathogens that animals and humans excrete result in a complex problem that the Canada Excellence in Research Chair (CERC) in Waterborne Pathogens: Surveillance, Prediction and Mitigation aims to address through surveillance, modelling and mitigation.

This postdoctoral scholar will develop their expertise in the fate and transport of pathogens (& AMRs) through the environment, with a particular focus on enhancing our detection methods, determining the sources of waterborne pathogens and how these can be mitigated to protect human health. The scholar may also wish to explore how these pathogens can be removed through nature-based treatment systems and to conduct quantitative microbial risk assessments.

Description of Area

The postdoctoral scholar will work together in a large team together with the Canada Excellence in Research Chair (CERC) in Waterborne Pathogens: Surveillance, Prediction and Mitigation. This team will innovate, develop and validate novel sampling and sensing methods, rapid diagnostic tools, integrated models and treatment options for the surveillance, prediction and mitigation of waterborne pathogens via five deliverables: (1) smart sampling and sensing systems to detect temporal and spatial trends of pathogens in water systems, (2) rapid and near-real-time assays to detect pathogens and their sources, (3) tools/models that can provide early warning of, and mitigation options to limit, disease in our community, (4) treatment of pathogens to protect human health when water is used by humans and (5) training, standard operating procedures, reference materials and guidance manuals to ensure our outputs are useful and adopted by our partners.

General Outline of Duties

The position would involve the following duties among others: (1) developing research ideas, designing experimental protocols, setting up and executing experiments in the field or laboratory, (2) presentation and communication of results via manuscript preparation and journal submissions, presentations to national and international audiences (conference travel will be required and supported), (3) helping to coordinate and supervise graduate and undergraduate students in the execution of their activities, (4) developing skills in research grant/proposal development and securing funding to support the research team.

Teaching Requirement: There will be teaching opportunities, but there are no requirements for teaching.



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Student Supervision: There will be student supervision opportunities which will be strongly encouraged.

Required Qualifications

(1) PhD in a relevant field (e.g. water microbiology, environmental microbiology, molecular microbiology, bioinformatics), (2) minimum of 2 years of related lab research experience (e.g. conducting experiments in the lab or field, performing qPCR assays/sequencing, etc.), preferably in the field of environmental/water microbiology, (3) demonstrated experience in academic writing, preferably in top ranked journals, (4) experience or interest in gaining experience in graduate student supervision and undergraduate teaching, (5) experience or interest in gaining experience in research grant/proposal writing, preferable having some success in securing their own funding.

Start Date & Duration of Appointment: Preferably October 2024, but negotiable. 1 year duration, with renewal opportunities.

Anticipated Hours of Work (at time of posting): 35 hours per week.

Salary Range (Minimum): 40,267

Salary Range (Maximum): 76,000

This team runs a diverse and inclusive research group where everyone feels welcome and respected. In STEM fields, women and minorities are underrepresented and therefore they strongly encourage applicants from these groups to apply.

Benefits: https://graduatestudies.uoguelph.ca/postdoctoral/benefits-services

Application Requirements

Documents

- Cover Letter
- Statement outlining how you meet the key selection criteria
- CV



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Special Instructions

Please be sure to address all key selection criteria (outlined in the "required qualifications" section) in your cover letter.

Contact Information

Supervisor:

Professor David McCarthy, Professor and Canada Excellence Research Chair in Waterborne Pathogens: Surveillance, Prediction and Mitigation

david.mccarthy@uoguelph.ca

Posting Date: Tue, 07/16/2024

Closing Date: Tue, 10/15/2024

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact David McCarthy

School of Environmental Sciences

University of Guelph

Guelph, ON

Canada

Contact E-mail david.mccarthy@uoguelph.ca