

Water Microbiology Technician - Research Assistant
Technician III
University of Guelph

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Posted Aug. 26, 2025, set to expire Dec. 28, 2025

Job Title	Water Microbiology Technician - Research Assistant Technician III
Department	University of Guelph
Institution	University of Guelph Guelph, Ontario
Date Posted	Aug. 26, 2025
Application Deadline	Sep. 12, 2025
Position Start Date	Available immediately
Job Categories	Professional Staff Research Scientist/Associate
Academic Field(s)	Marine/Freshwater Sciences Environmental Sciences/Ecology/Forestry Biology - Microbiology Sciences - General
Apply Online Here	https://careers.uoguelph.ca/job/Guelph-Water-Microbiology-Technician-Research-Assistant-Technician-III-ON-N1G-2W1/1290245347/
Apply By Email	
Job Description	

Temporary, full-time position (09/09/2025 to 09/09/2028)

Guelph, ON

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Are you a skilled and detail-oriented microbiologist passionate about advancing research in water quality, pathogens, and antimicrobial resistance? Do you thrive in roles that combine laboratory expertise, fieldwork, and collaboration within a dynamic research environment?

The University of Guelph is hiring a **Water Microbiology Technician (Research Assistant Technician III)** to support its world-class research program on the Surveillance and Control of Pathogens and Antimicrobial Resistance (AMR) in the Environment. As part of a Canada Excellence Research Chair (CERC) initiative, you will play a critical role in developing innovative solutions to monitor, predict, and mitigate risks posed by waterborne pathogens and pollutants.

In this impactful role, you'll carry out laboratory-based pathogen and AMR detection using culture-based and molecular methods, contribute to the planning and execution of water sampling campaigns, and ensure data is collected and managed with precision. You'll also support the smooth operation of the laboratory by maintaining equipment, preparing reagents, guiding students on technical procedures, and contributing to research documentation and reports.

This is an exciting opportunity for someone who values scientific excellence, enjoys problem-solving in both lab and field settings, and thrives in a collaborative, interdisciplinary team. Whether conducting experiments, supporting field research, or helping translate findings into real-world impact, your work will directly contribute to the University of Guelph's leadership in water and environmental sciences.

If you're motivated by discovery, energized by teamwork, and ready to make a meaningful impact on environmental health, we invite you to explore this opportunity.

Your key responsibilities will include:

- Collaborate with the Principal Investigator, students, and staff to meet project milestones
- Work proactively, alongside the Principal Investigator, to anticipate future research needs and resources when possible
- Independently perform routine water sampling and analysis. Assist with conducting or running experiments or research work following standardized guidelines and procedures, including recording and/or coding data, requiring some judgment/interpretation
- Develop, validate, and execute new or optimized methods. This will include the preparation of research documentation, including but not limited to lab protocols and manuals, data collection

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forms, SOPs, and records, including those required to meet regulatory compliance and quality assurance.

- Communicate technical information accurately and effectively in oral, written, visual, and electronic forms. The applicant will be expected to serve as a source of information on standard research techniques, train others in technical procedures or operations, including the use of precision laboratory equipment and instruments, and provide guidance to students on the use of equipment or standard research techniques for their research projects
- Set up tests, calibrate, operate, and maintain complex laboratory and other equipment; communicate equipment status to team members; perform some troubleshooting to resolve equipment malfunctions before arranging for repairs.
- Support data management, perform preliminary analysis, and report to meet program deliverables for research projects and grants. Recognize obvious deviations in research results and flag for the senior researcher to address
- Support the knowledge translation and transfer of research outcomes to project stakeholders. This may include contributing to initial drafts of scientific reports, manuscripts, grant proposals, and other research presentations.
- Organize laboratory and stock, maintain inventory, and replenish/order supplies as required. This includes the preparation of media, buffer, reagents, solutions, cultures, and related material according to specifications for routine laboratory use.
- Initiate/sign off on LVPOs and complete account reconciliations, following specific guidelines and processes.
- Perform work responsibilities adhering to standards of professional conduct, professional ethics, and team guidelines and expectations
- Contribute to the technical proficiency of the team through the acquisition of knowledge and abilities related to tools, technologies, software, and systems relevant to the research program

Requirements

- Bachelor of Science in Microbiology, Environmental Science, Environmental Microbiology, Water Sciences, Water Quality, Water Science and Environmental Health, or Water Resource Management, combined with 3 years of relevant laboratory experience in water or environmental microbiology. Equivalent combination of education and experience is encouraged to apply (e.g., College Diploma in Environmental Technology and relevant experience).
- Demonstrated experience in setting up, testing, optimizing, and validating a variety of culture-based and molecular microbiology techniques, including aseptic culture, strain isolation, DNA extraction, qPCR, primer design, and validation.
- Strong understanding of scientific principles and data management, and quality control
- Knowledge of and experience with Biosafety Level 2 (BSL-2) pathogens

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- Demonstrated experience with the operation, maintenance, and/or calibration of general laboratory equipment: centrifuges, autoclaves, analytical balances, thermocyclers, incubators, spectrophotometers, sample blenders (e.g., bead beaters or stomachers), vacuum filters.
- Demonstrated experience with general administrative duties, including sourcing and procurement of reagents and supplies; tracking and maintenance of inventory; documentation and tracking of lab-related expenses; preparing and ensuring compliance with standard operating procedures; training students and staff on established protocols and procedures; overseeing daily operations and lab information systems.
- Proficient in word processing and spreadsheet software
- Proven ability to work independently and collaboratively within a team, providing innovative and creative contributions and seeking opportunities for improvement
- Demonstrated attention to detail, effective time management, and strong organizational skills that include setting priorities and meeting deadlines
- Valid Driver's License, as travel to field sites may be required

Preferred experience:

- Demonstrated experience with specialized laboratory techniques or instruments would be considered an asset, including: IDEXX assays (e.g., Colilert), multiplex PCR assays (e.g., TaqArray), KingFisher instruments, 3D printers, and/or Nanopore Sequencers (e.g., GridION).
- Demonstrated field work experience in water sampling and assessment, including grab sampling and on-site measurement of water quality indicators (pH, DO, temperature, EC, salinity, etc.) would be considered an asset.
- Demonstrated experience with advanced field sampling and monitoring techniques and equipment would be considered an asset, including passive sampling, ultrafiltration, and/or installation and maintenance of water sensors.
- Experience in a research environment (academic or industry) would be considered an asset.
- Expertise in any of the following areas is considered an asset: water policy, water resources, watershed management, hydrology, water chemistry, freshwater ecology, remote sensing, water quality data management, and analysis

The University of Guelph (www.uoguelph.ca) is one of Canada's leading research-intensive comprehensive institutions, with a record of outstanding scholarship in the arts, humanities, social sciences, life sciences, physical and engineering sciences, agriculture, and veterinary sciences. This is your chance to join us in our endeavor to improve life.

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To view a detailed posting for the role of **Water Microbiology Technician (Research Assistant Technician III)**, please go to our website at <https://careers.uoguelph.ca/>.

At the University of Guelph, fostering [a culture of inclusion](#) is an institutional imperative. The University invites and encourages applications from all qualified individuals, including from groups that are traditionally underrepresented in employment, who may contribute to further diversification of our Institution.

Contact Information

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

Contact

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Canada