

Research Associate in Environmental Engineering and Microbial Ecology

Job Description:

The Safe WaTER Lab at San Diego State University (safewater.sdsu.edu) is seeking a research associate to work on projects related to the development of molecular tools for wastewater surveillance and the detection of waterborne pathogens and microbial source tracking markers in sewage and in treated wastewater. The successful candidate will also lead a systematic literature review to help develop recommendations for Title 22 reports (for potable reuse of wastewater). Candidates must have either: 1) a PhD or doctoral degree in environmental engineering, environmental science, public health, microbiology, or related field; or 2) a Master's degree plus several years of related industry experience. Compensation will be commensurate with experience. The position is full-time and based in San Diego, but qualified candidates who prefer to work remotely may be considered for a part-time remote position (to lead the systematic literature review only). Interested applicants should email their resume/CV and the names and contact information for three professional references to Matthew Verbyla (mverbyla@sdsu.edu).

Responsibilities:

The responsibilities include Research Design and Execution (80%) and Lab Leadership and Management (20%). Specifically, the successful candidate will:

- Design new virus concentration, nucleic acid extraction and purification, and RT-qPCR based research protocols for the lab.
- Conduct literature reviews on pathogen reduction and methods for pathogen detection in wastewater.
- Summarize findings and publish results in research journals.
- Assume general responsibility for scientific operations of the laboratory.
- Provide supervision and guidance to junior technicians, students, and researchers.
- Enhance professional skills and research independence through mentored, advanced training.

Qualifications:

Core Knowledge and Abilities

- Strong written and oral communication skills, including a sound foundation in English grammar, spelling, and punctuation.
- Ability to interact effectively with co-workers and/or advisory board members.
- Ability to understand and follow posted work rules and procedures.
- Ability to relate well to others within the project environment.
- Ability to display motivation and strong interpersonal skills.
- Ability to communicate effectively, both orally and in writing.

- Ability to display organization, meet deadlines, display detail orientation, possess good judgment and common sense.
- Ability to demonstrate a high level of cross-cultural sensitivity.
- Ability to be independent while valuing collaboration and a diverse lab environment.
- Ability to coach and manage others effectively.

Role Specific Knowledge and Abilities

- Computer competency in general computer software, Microsoft Office suite.
- Ability to use statistical and image analysis software
- Ability to report to work on time and follow directions from a supervisor.
- Knowledge of the cardiopulmonary field and training in laboratory techniques relevant to studies of cell and molecular biology.
- Ability to accept constructive criticism.

Experience/Education:

PhD or equivalent doctoral degree in a related field such as environmental engineering, environmental science, microbiology, or public health. Alternatively, candidates with a Master of Science degree and relative industry experience may also apply.

Preferred Experience/Education

Expertise in one or more of the following areas:

- Laboratory experience detecting pathogens or microbial source tracking markers in water, wastewater, or environmental samples.
- A co-author on at least two peer reviewed research publications.