PREP Research Associate

This position is part of the National Institute of Standards (NIST) Professional Research Experience (PREP) program. NIST recognizes that its research staff may wish to collaborate with researchers at academic institutions on specific projects of mutual interest, thus requires that such institutions must be the recipient of a PREP award. The PREP program requires staff from a wide range of backgrounds to work on scientific research in many areas. Employees in this position will perform technical work that underpins the scientific research of the collaboration.

Research Title: Real-time 3D Monitoring of Cell Viability in Tissue Scaffolds

The work will entail:
Join our research team to explore the dynamic world of cell growth and survival within 3D environments. This exciting project aims to develop and validate an advanced platform for real-time monitoring of cell dynamics in tissue-engineered scaffolds. This project leverages advanced imaging technologies, including digital holographic microscopy (DHM), optical coherence tomography (OCT), and impedance tomography, to gain deeper insights into the behavior of human cells in 3D environments. Your contributions will be crucial in advancing regenerative therapies, in hopes to improve patient outcomes and push the boundaries of medical innovation.
Come work alongside experienced researchers in a supportive setting and gain practical skills with cutting-edge imaging technologies.

Key responsibilities will include but are not limited to:
- Conducting cell culture.
- Running microscopy protocols for cell viability.
- Collecting and analyzing data.
- Maintaining a database of acquired images and handling large data files.
- Working with software programs including MATLAB, Image J/Fiji, and Excel.
- Presenting findings at team meetings.
- Ensuring that results, protocols, software, and documentation have been archived or otherwise transmitted to the larger project.

Desired Majors: Biology, Biochemistry, Engineering, Chemistry, Microbiology, or related field.

Qualifications
- Completed undergraduate level lab and course work in biochemistry, biology, biotechnology, or related field.
- One year of relevant biotechnology lab experience.
- Familiarity with cell culture.
- Proficiency in biological sample handling, including pipetting and aseptic techniques.
- Strong attention to detail.
- Excellent communication skills.

Please upload the following (preferably in a single PDF) with your application:
- Cover Letter
- CV/Resume with contact information

Privacy Act Statement

Authority: 15 U.S.C. § 278g-1(e)(1) and (e)(3) and 15 U.S.C. § 272(b) and (c)

Purpose: The National Institute for Standards and Technology (NIST) hosts the Professional Research Experience Program (PREP) which is designed to provide valuable laboratory experience and financial assistance to undergraduates, post-bachelor's degree holders, graduate students, master's degree holders, postdocs, and faculty.

PREP is a 5-year cooperative agreement between NIST laboratories and participating PREP Universities to establish a collaborative research relationship between NIST and U.S. institutions of higher education in the following disciplines including (but may not be limited to) biochemistry, biological sciences, chemistry, computer science, engineering, electronics, materials science, mathematics, nanoscale science, neutron science, physical science, physics, and statistics. This collection of information is needed to facilitate administrative functions of the PREP Program.

Routine Uses: NIST will use the information collected to perform the requisite reviews of the applications to determine eligibility, and to meet programmatic requirements. Disclosure of this information is also subject to all the published routine uses as identified in the Privacy Act System of Records Notices: NIST-1: NIST Associates.

Disclosure: Furnishing this information is voluntary. When you submit the form, you are indicating your voluntary consent for NIST to use of the information you submit for the purpose stated.