

PREP Research Associate

This position is part of the National Institute of Standards and Technology (NIST) Professional Research Experience Program (PREP). NIST recognizes that its research staff may want to collaborate with researchers at academic institutions on specific projects of mutual interest and, therefore, requires those institutions to be recipients of a PREP award. The PREP program involves staff from a wide range of backgrounds conducting scientific research across various fields. Individuals in this position will perform technical work supporting the collaboration's scientific research.

Research Title:

Senior Research Associate - Fit-for-Purpose Cellular Measurements for Process Analytical Technologies (U.S. Citizens preferred)

The work will entail:

The Material Measurement Laboratory of the National Institute of Standards and Technology is seeking qualified persons (U.S. Citizens preferred) to contribute to cutting-edge research projects aimed at developing process analytical technologies to support cell-based manufacturing and cell-based assays. A successful applicant will join a dynamic, multidisciplinary team working with cutting-edge cell analytical technologies within the NIST Biomaterials Group to address critical cell measurement challenges in biotechnology. They will contribute to international standardization efforts in cell characterization, and the development of reference strategies to support reproducibility for cell culture and cell-based assays.

U.S. Citizen Preferred

Key responsibilities will include but are not limited to:

- Conduct mammalian cell culture
- Design and execute cell characterization experiments, develop and conduct data analysis workflows including statistical analyses, and interpret results
- Ensure that protocols and results are well-documented
- Present findings at meetings and conferences and prepare manuscripts
- Collaborate with stakeholders and multidisciplinary teams

Qualifications

- Ph.D. in biomedical engineering, molecular biology, biochemistry, or a related field
- 3+ years of experience in mammalian cell culture with 1+ year of specialized experience in adherent cells
- 3+ years of experience in mammalian cell health assays (e.g., viability, apoptosis, DNA damage)
- 3+ years of experience in mass spectrometry with 1 year of specialized experience in cell-based metabolomics
- 3+ years of experience in cytometry (e.g., image-based, flow-based)
- Proficiency in operating advanced cell analysis instrumentation and developing protocols
- Strong oral and written communication skills
- Demonstrated ability to lead research efforts to successfully achieve research goals
- Experience with cell process analytical technologies (e.g., real-time, label-free, non-destructive) (preferred)
- Familiarity with statistical analysis tools and design of experiment strategies (preferred)

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.