

Position: NIST-UMD PREP Program Post-doctoral fellowship

Project Title: Development of a reference method and reference materials for high accuracy cell counting

Project Description:

Cell count is a fundamental measurement for biotechnology and is critical in the release of cellular therapeutic products. There is a need for accurate cell counting, which will require the development of appropriate reference methods and reference materials. In this project, we will develop a reference method for cell counting based on genome enumeration, via droplet digital (dd) PCR and complementary imaging and flow cytometry method. Cell counting reference materials will also be developed based on the reference method. This approach for cell counting has advantages over traditional cell counting where it is necessary to identify objects as cells, which can be subjective and prone to error due to debris and heterogeneity in the cell sample. The genome-based enumeration of cells will serve as a reference to establish the accuracy of a novel kinetic cytometer under development at NIST. This project is directly applicable to the development and characterization of cell-based therapies and will advance measurement capabilities critical for the success of these novel therapeutics.

Desired Research Training:

Flow cytometry, dPCR/ddPCR, genomic measurements, microscopy, cell-based assays, microfluidics, cell therapy manufacturing

Relevant Degrees:

Biology, Molecular Biology, Biomedical Engineering, Immunology, Biotechnology

Salary/Stipend: \$68K/Year

Primary Location: NIST, Gaithersburg MD 20899

Period of Performance: 2 years period, position is currently open.

Contact Information:

For more information please contact:

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