Emilia Roberts

+1 856 417 5232 | emiliaroberts991@gmail.com | Philadelphia, PA | emilia-roberts | eroberts91

Summary

Biomedical Engineer who possesses strong technical and interpersonal skills, and is able to collaborate on projects with a wide variety of scientific applications. Willing and able to learn all skills needed to be a successful member of any research group in the biomedical field.

Experience

University of Pennsylvania, Data Analytics and Visualization Boot Camp — Sep 2023 - Mar 2024

- A 24-week intensive coding program focused on Python, Machine Learning, Big Data, Tableau, VBA, Javascript, SQLPostgres/Mongodb database management and Microsoft Excel

University of Pennsylvania School of Medicine, Research Specialist C — Philadelphia, PA, Sep 2022 - Jul 2023

- Worked under Dr. Dave Schultz in the High Throughput Screening Core at the University of Pennsylvania running assays for virus and cancer drug research.
- Maintained cell lines, ran assays and performed data analysis while managing an accelerated weekly viral assay testing pipeline.

University of Pennsylvania School of Medicine, Research Specialist B — Philadelphia, PA, Dec 2016 - Aug 2022

- Interacted directly with collaborators of I.T.M.A.T. Bio-mechanics Core services, to organize orders for both existing services as well as newly developed services.
- Lead researcher for new service adaptation including: atomic force microscopy-based mechanical testing, cell-embedded 3D biodegradable hydrogels, cellular traction force microscopy, and pressure myography mechanical testing.
- Developed and tested new protocols for self-driven experiments as well as adoption by other researchers.

Education

MS **Drexel University**, Biomedical Engineering — Sep 2014 - Jun 2016

- **Concentration:** Biomedical technology development

BS **University of Delaware**, Biomedical Engineering — Aug 2010 to May 2014

- **Minors:** Bio-electrical Engineering and Chemistry

Publications

University of Pennsylvania School of Medicine

- Author, "Cell contractility and focal adhesion kinase control circumferential arterial stiffness" Vascular Biology, 2022
- Co-author, "Decreased vascular smooth muscle contractility in Hutchinson–Gilford Progeria Syndrome linked to defective smooth muscle myosin heavy chain expression" Scientific Reports, 2021
- Co-author, "Arterial stiffness and cardiac dysfunction in Hutchinson–Gilford Progeria Syndrome corrected by inhibition of lysyl oxidase" Life Science Alliance, 2021
- Co-author, "Efemp1 modulates elastic fiber formation and mechanics of the extrahepatic bile duct" bioRxiv, 2021
- Co-author, "RAGE antagonist peptide mitigates AGE-mediated endothelial hyperpermeability and accumulation of glycoxidation products in human ascending aortas and in a murine model of aortic aneurysm" bioRxiv, 2021

Personal Technical Skills

Collaboration: Collaborating with different research groups, detail-oriented reporting, working with and presenting ideas both individually and as a team, working directly with other laboratories

Software: MS Office products, Python, Machine Learning, Big Data, Tableau, VBA, Javascript, SQLPostgres/Mongodb database management, Matlab, Minitab, Bruker Nanoscope Analysis, DMT Myoview, TeX

Technical: Atomic force microscopy, immunohistochemistry, mammalian cell culture, microscopy, tissue dissection, pressure myography, hydrogel development