

Sebastian Kharileh, M.Sc.

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Professional Summary

Versatile and detail-oriented life sciences professional with a Master of Science in Biomedical Engineering with strong academic and laboratory research experience in controlled drug delivery, biomaterials, and cell biology. Strong ability to work in cross-functional teams to support clinical research and preclinical lab operations. Proficient in experimental design, SOP documentation, and maintaining compliance in regulated environments. Seeking an opportunity to further develop as a scientist and professional.

Research & Industry Experience

Operations Intern

Epinal, Irvine, CA | May 2025 – Present

Research and assist with grant/SBIR funding applications

- Support with locating and acquiring lab space to begin prototype assembly and testing
- Assist with research for and drafting of NIH grant applications and NSF Seed Funding applications
- Assist with marketing efforts by researching trade shows and podcasts that Epinal would be suited to attend
- Designated internal resource for biomedical engineering, providing expertise on product development, compliance, and troubleshooting

Project Associate

Silicon Artist, Irvine, CA | Sept 2024 – May 2025

- Supported the development of semiconductor products through technical project tracking and resource planning
- Utilized Microsoft Project and Gantt charts to identify critical path dependencies and manage timelines
- Assisted with circuit layout and IC design using Cadence Virtuoso

Graduate Research Assistant – Biomedical Sciences

The Taylor Lab, University of Florida, Gainesville, FL | Oct 2021 – July 2024

- Developed polymer-based two-factor controlled drug delivery system for inflammation and tissue repair
- Developed and optimized factor release to align with temporal therapeutic targets
- Utilized SEM imaging, DLS, and ImageJ analysis to validate particles met quality standards
- Created and optimized SOPs and kept a record of all experiments in electronic lab notebook
- Conducted viability assays (MTS) and validated biofactor release via spectrophotometry
- Designed an electrospinner used for two main projects in the lab which incurred ~90% cost savings
- Managed chemical inventories and trained lab members in proper instrument and reagent use
- Drafted lab safety protocols and liaised with Environmental Health & Safety for regulatory compliance

Presentations & Publications

- Kharileh, S., Shama, K., Turner, M. et al. Temporally controlling the release of biofactors from polymeric microspheres. MRS Communications (2024). <https://doi.org/10.1557/s43579-024-006>
- “Temporally Controlling the Release of Biofactors from Polymeric Microspheres” Society For Biomaterials 2023 Annual Meeting and Exposition, San Diego, CA, April 2023

Education

University of Florida, Gainesville, FL

Master of Science in Biomedical Engineering – May 2024

- Certificate: Engineering Innovation
- Academic Achievement Awards (2022–2024)

Rutgers University, New Brunswick, NJ

Bachelor of Science in Biomedical Engineering – May 2021

- Dean's List: Spring 2020, Fall 2020, Spring 2021

Laboratory Skills

- GLP & GCP
- Drug Delivery Systems
- Microparticle Synthesis (PLGA)
- Spectrophotometry
- DLS
- SEM Imaging
- Lyophilization
- Mammalian Cell Culture (primary)
- MTS Viability Assay
- Almar Blue staining
- Mechanical Testing (Instron)
- Sterile Technique
- Gel Electrophoresis
- ISO 10993
- ISO 13485
- FDA Sections 351, 361

Research Tools & Software

- Prism
- ImageJ
- R
- Microsoft Office
- SolidWorks
- Python
- MATLAB

Certifications

- Fundamentals of Good Clinical Practice (Novartis)
- Introduction to Drug Hunting (Novartis)
- Lean Six Sigma Yellow Belt