

Celeste Forester

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SUMMARY OF QUALIFICATIONS

- Proven ability in rapid prototyping, CAD design, 3D printing, and design analysis/simulation to create innovative devices
- Industry and research experience in verification & validation, protocol writing, and ISO standards for regulatory compliance
- 2+ years of leadership in cross-functional teams, managing project deliverables, and sub-system product ownership
- Strong communication and presentation skills honed through international conferences and investor engagement

EDUCATION

University College London

MPA in Health, Technology, and Public Policy

Thesis: Development of South Africa's local production of antiretrovirals to decrease dependency on foreign markets

London, UK

Sep. 2024 - Sep. 2025

University of Michigan

BSE in Biomedical Engineering | Minor in Materials Science

GPA: 3.61/4.00, Magna cum laude

Coursework: Biomechanics, Biophysical Chemistry, Biomedical Instrument Design, Quantitative Physiology, Statistics, Computation

Ann Arbor, MI

Jan. 2021 - Dec. 2023

WORK EXPERIENCE

Department of Biomedical Engineering, University of Michigan

Supervisor for Biomedical Engineering Design Space

Ann Arbor, MI

Mar. 2023 - Dec. 2023

- Manufactured 10+ teaching models using 3D printing, laser cutting, and pressure formers to educate users on design principles
- Spearheaded weekly teaching workshops, assisting students' brainstorming to overcome unique design requirements and promote creative problem-solving to develop accessible, cost-effective, and efficient products
- Led 4 informative tours for potential investors to showcase the facility's capabilities and foster strong donor relationships, receiving over \$100,000 in financial investments
- Implemented 2 department-wide sustainability initiatives to minimize production waste, creating resource-efficient operations

DePuy Synthes, Johnson & Johnson

Product Development Engineering Co-op

West Chester, PA

Jan. 2022 - July 2022

- Designed orthopedic implants and developed rapid 3D prototypes using CREO to minimize muscle atrophy and improve patient outcomes, while ensuring compliance through verification and validation
- Integrated surgeon feedback from US/EU pre-clinical trials into 5 design revisions, improving modeled wrist ROM by 14%
- Optimized CAD models for injection molding by accounting for material cooling rates, casting shape, and parting lines to decrease production cost, increase manufacturing scalability, and improve product quality

RESEARCH EXPERIENCE

Department of Molecular and Integrative Physiology, University of Michigan

Laboratory Manager at the Larkin Skeletal Tissue Engineering Laboratory

Ann Arbor, MI

May 2021 - Sep. 2024

- Led a research team of 5, overseeing experimental design, data analysis, and financial budget to comply with grant deadlines
- Authored preclinical protocol for large animal study (30+ subjects), ensuring compliance with regulatory and ethical standards
- Automated data analysis, saving 120+ hours, then presented findings at TERMIS, an international tissue engineering conference
- Mentored students and organized trainings on data collection, analysis, and proper techniques to prepare them for presentations
- Engaged with contractors to design a bioreactor for microgravity environments in alignment with project requirements

PUBLICATION & CONFERENCES

- Forester, CE et al., *Characterization Of Myogenic and Fibrogenic Cells Within a Primary Skeletal Muscle Isolate*. TERMIS, Toronto, July 2022
- Su, EY et al., *Repairing Volumetric Muscle Loss with Commercially Available Hydrogels in the Ovine Peroneus Tertius Muscle*. Tissue Engineering, Jan 2024
- Wroblewski, OM, et al., *Impact of Passaging of Primary Skeletal Muscle Cell Isolates on the Engineering of Skeletal Muscle*. Tissue Engineering, May 2024

TECHNICAL SKILLS

- **CAD & Multiphysics:** ANSYS Finite Element Analysis, Autodesk Inventor, COMSOL, CREO, Fusion 360, SolidWorks
- **Computer Software:** C++, Excel (advanced), LabView, Python, MATLAB, Raspberry Pi, RStudio, GraphPad Prism
- **Manufacturing:** CNC Machining, Cleanroom, Design for Manufacturing, Laser Cutting, SLA / FDM 3D Printing
- **Regulations & Quality:** FDA Regulations, ISO Standards, Risk Management, 510(k) Premarket Notification
- **Professional:** Budget Management, Cross-Functional Collaboration, Public Speaking, Project Leadership, Technical Writing