# Celeste Forester

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## SUMMARY OF QUALIFICATIONS

- Biomedical engineer with experience in medical product design, R&D, and FDA / ISO regulations
- Proven ability in rapid prototyping, CAD modeling, and ergonomic design to create cost-effective and innovative devices
- 2+ years of leadership experience in biomedical research and industry, including managing timelines and mentorship
- Strong communication and presentation skills honed through international conferences and investor engagement

## EDUCATION

**University College London** **London, UK**
*MPA in Health, Technology, and Public Policy* *Sep. 2024 - Sep. 2025*
Thesis: Development of South Africa's local production of antiretrovirals to decrease dependency on foreign markets

**University of Michigan** **Ann Arbor, MI**
*BSE in Biomedical Engineering | Minor in Materials Science* *Jan. 2021 - Dec. 2023*
GPA: 3.61/4.00, Magna cum laude
Coursework: Biomechanics, Biophysical Chemistry, Biomedical Instrument Design, Quantitative Physiology, Statistics, Computation

## WORK EXPERIENCE

**Department of Biomedical Engineering, University of Michigan** **Ann Arbor, MI**
*Supervisor for Biomedical Engineering Design Space* *Mar. 2023 - Dec. 2023*
- 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** **West Chester, PA**
*Product Development Engineering Co-op* *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** **Ann Arbor, MI**
*Laboratory Manager at the Larkin Skeletal Tissue Engineering Laboratory* *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 (FEA), 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 (DFM), 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