

Milo J. Hooper

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Work Experience

Mytide Therapeutics

(Aug 2021 - Present)

- *Mechanical Engineer II (Jan 2023 - Present)*
- *Mechanical Engineer I (Aug 2021 – Jan 2023)*
- System layout and design for 2nd-Gen peptide manufacturing operation
 - SCARA robot incorporation, pneumatic tube and tray gripper end effector design
 - Design for manufacturability, assembly, and maintenance
 - Eliminate expensive redundancies, streamline process steps in new system
 - Ensure interoperability between robot and all process modules
 - Guide process module requirements under tight resource constraints
 - Coordinate as primary liaison between engineering team and a mechanical design contractor
 - Process module development including synthesizer heater, UV sensor package, and weigh station
- 1st-Gen peptide manufacturing operation process reliability improvements
 - Root cause failure mode analysis, CAPA, verification & validation of new processes & parts
 - Reduce 1st-Gen robot-tray crashes by >90% by changing robot motions, modifying trays
 - Reduce synthesizer overpressure failures by >90% through sensors, automatic shutoffs
 - Eliminate synthesizer motor failures from reagent leakage through pump-catch diverters

Eli Lilly & Co.

(Summer 2020)

- *Medical Device Engineering Intern (Summer 2020)*
- Electronics & firmware prototyping for small connected drug delivery device
- Mechanical design and testing of dual-stage diaphragm pump for drug delivery device

Education

Massachusetts Institute of Technology

(Fall 2017 – Spring 2021)

S.B. Mechanical Engineering

Courses: Thermal-Fluids Engineering, Design & Manufacturing, Mechanics & Materials, Dynamics & Controls, Medical Device Design, Design of Implants, Biomaterials & Tissue Engineering, Circuits & Electronics, Measurement & Instrumentation, Bio-Inspired Robotics, Photonic Biochemical Sensing

Skills

Solidworks CAD, PDM, Drawings; Ansys CFX & Static Structural; Python & C++ programming; KiCAD (circuit and PCB layout); DFM/A; Linux; prototyping & machine tool use (mill/lathe)

Leadership

President, W1XM (MIT Radio Society / UHF Repeater Association) (Feb 2020 – Jun 2021)

- Oversaw successful \$2M fundraising campaign to save MIT's Large Radome & W1XM station
- Led weekly & monthly meetings, coordinated alumni and administration interactions

Projects

- Low-cost ward-level 15LPM 92% purity oxygen generator (Senior Capstone Fall 2020)
- Novel pericardial adhesion barrier concept utilizing NSAID eluting nanoparticles embedded in spray-on hydrogel to prevent postoperative adhesions (Implants class project, Spring 2020)

References

Contact information available on request

Tom Davidson, Mytide Therapeutics, VP of Product Development