
EDUCATION

Massachusetts Institute of Technology (MIT)

December 2022 | GPA: 4.9/5.0

Degree: Bachelor of Science in Biological Engineering, Minor in Computer Science

Relevant courses: Biomolecular Systems Analysis, Genetics, Biochemistry, Cell Biology, Organic Chemistry, Python Intermediate Programming

SKILLS

| | |
|----------------------|---|
| Laboratory | Bacterial/mammalian cell culture, mass spectrometry, HPLC, NGS sequencing analysis, gene cloning, plasmid assembly, sequencing, PCR, and protein purification |
| Computer | Python, R, MATLAB, and Bash shell scripting |
| Communication | Scientific writing (research proposals, experimental papers), presentations, figure design |

EXPERIENCE

Alnylam Pharmaceuticals

Cambridge, MA

RNAi Discovery Department, Analytical Chemistry Co-op

January 2021 - Current

- Prepare and analyze siRNA for research and drug discovery collaboration
- Analyze purity and identity of oligonucleotide single strands and duplexes through mass spectrometry
- Contribute to hundreds of *in vitro* and *in vivo* preclinical drug development studies
- Perform analysis through software tools such as ChemStation and Pyros eXpress
- Founded and led co-op journal club and presented relevant papers

Novel Biotherapeutics

Cambridge, MA

Student

September 2020 – December 2020

- Designed and wrote 12-page, independent, original research grant proposal: “T cell Epitope Modification of AAV for Immune Escape”
- Reviewed and discussed 50+ scientific papers
- Presented 4 times on recent literature and own original proposal
- Provided written and verbal feedback on peers’ original proposals

AbbVie Pharmaceuticals

Worcester, MA

Biologics Discovery Department, Bioinformatics Intern

May - August 2020

- Worked with Protein Engineering and Expression group
- Optimized ribosome profiling (ribo-seq) analysis pipeline and added small open reading frame (sORF) detection by testing 12 software packages
- Conducted literature review of rapidly evolving technology in ribo-seq and sORFs
- Presented work to 30+ group members
- Contributed to drug development discovery pipeline for engineering stable cell lines and target discovery

Timothy Lu Lab, MIT Synthetic Biology Center

Cambridge, MA

Undergraduate Researcher

September 2019 - March 2020

- Designed and built genetic circuits for gum disease regeneration
- Expanded on previous work by finding an unfinished project on campus and quickly familiarizing myself
- Created cells that detect inflammation and emit appropriate levels of growth factors for cell proliferation
- Performed mammalian cell culture and molecular cloning

LEADERSHIP

Associate Advisor, Biological Engineering Department

August 2020 – Current

Team Captain, MIT Intercollegiate Sailing

August 2018 – Current

Teacher, MIT Global Teaching Labs Kazakhstan; Germany

January 2019; January 2020

Operations Lead, MIT Spokes (teaching STEM along cross-country cycling route)

May 2019 – August 2019