Campus: 305 Memorial Dr Cambridge, MA 02139

Massachusetts Institute of Technology (MIT)

Cambridge, MA

Frederick, MD 21704

Home: 9218 Shafers Mill Dr

June 2014

Candidate for Bachelor of Science degree in Biological Engineering

Relevant Coursework: Differential Equations; Organic Chemistry I;

Thermodynamics of Biological Systems; Genetics; Molecular, Cellular, and Tissue

Biomechanics; General Biochemistry

Fall '12: Cell Biology; Analysis of Biomolecular and Cellular Systems; Corporate Financial Accounting; Finance Theory I; Fundamentals of Biological Engineering

Urbana High School

Ijamsville, MD May 2010

Research Experience

Education

National Cancer Institute at Frederick, Laboratory of Experimental Immunology, Synthetic Biologics and Drug Discovery Facility

Frederick, MD June 2009 - August 2011

Researcher

- Developed peptides, using rational drug design, as the first specific antagonists of cytokine signaling, specifically for interferon gamma (IFNγ) and interleukin 10 (IL10)
- Experienced with using both microwave and conventional peptide synthesizers
- Familiar with using High Pressure Liquid Chromatography (HPLC), mass spectrometry (LC/MS), and circular dichroism (CD) spectroscopy to purify and characterize the mass and secondary structure of peptides
- Used Microscale Thermophoresis (MST) for use of studying protein association
- Cultured different cell lines for use in a variety of cell based assays (mammalian)
- Performed several assays, including MTT cell proliferation assay, Western Blots, Fluorescence Spectroscopy, and FACS analysis to assess peptide efficacy

Work Experience

CORE Education and Consulting Solutions, Inc

July 2012- Present

Item Developer

- Developed questions to meet national standards for use in standardized tests for K-12 students
- Elementary writing expert, and used when emergency writing is needed

MATCH Charter School

Boston, MA

Data Entry Assistant

January - May 2012

Fulfilled weekly deadlines in locating professor contact information for MATCH Charter School

Leadership

MIT Associate Advisor, Biological Engineering Department

August 2012 – Present

August 2011 - September 2012

Dorm Government Floor Representative

Managed the floor budget (\$1000) for the year

- Organized study breaks for the floor
- Coordinated with the Graduate Resident Tutors in planning floor events

Legislature Member

- Represented the floor in the dorm government and voted on issues pertaining to the dorm, such as dorm budget, dorm rules, and Committee appointments
- Acted as an Associate Justice in the event of a dorm dispute

Skills **Programming Languages:** Python (basic)

Databases: PubMed, ExPASy

Protein Modeling Software: Molsoft, ChemBioDraw

Activities

MIT Varsity Swimming & Diving Team

NCAA Division III National Qualifier

September 2010 - Present