

JAMES HUA.

EXPERIENCE

Ionis Pharmaceuticals. Drug Screening Development Intern
Carlsbad, CA · Jun. 2020 - Aug. 2020

Developed protocol to optimize the isolation and culture of primary mouse oligodendrocyte precursor cells. Conducted rapid throughput *in vitro* screening of antisense oligonucleotides followed by RT-qPCR to characterize dose dependent knockdown. Performed *in vitro* - *in vivo* correlation analysis of drug response.

Sutro Biopharma. Process Development Intern
(Remote) South SF, CA · May. 2020 - Aug. 2020

Studied optimization of elution conditions for downstream antibody purification via high throughput Protein A chromatography in 96-well resin plates. Designed user-friendly scripts to automate and expedite process of stock buffer dilution using liquid handling robots.

PGEC, Fletcher Lab. Undergraduate Researcher
Albany, CA · Jan. 2020 - May. 2020

Investigated role of CLV-WUS cell signaling pathway in the regulation of meristem cell growth and maintenance in transgenic *Arabidopsis*.

UCSD, Akbari Lab. Undergraduate Researcher
La Jolla, CA · May. 2019 - Aug. 2019

Performed Gibson assembly and molecular cloning and to study genes relating to reproduction in *Aedes* and *Drosophila* mutants. Interpreted PCR data and evaluated results from sequencing.

PROJECTS

Scheme Interpreter. Python-based Interpreter

Developed python-based program to parse and interpret the Scheme programming language.

BearMaps. Map Routing Application

Implemented back-end code in Java for a map service by applying the A* search algorithm and object oriented programming to a data set of intersections and streets in Berkeley, CA.

Plotches! Puzzle Game

Collaboratively wrote a tile based maze game in Java that incorporated class hierarchy, data structures, recursion and GUI. Additionally, designed the graphics and interface.

EDUCATION

University of California, Berkeley.
Berkeley, CA · Class of 2021

Bachelor of Science Bioengineering
Minor Electrical Engineering
and Computer Sciences
Certificate Design Innovation
Cumulative GPA 3.7 / 4.0

Coursework

Biomechanics, Transport, Fluid Dynamics, Statistical Thermodynamics, Organic Chemistry, Biochemistry, Drug Delivery, Synthetic Biology, Metabolic Engineering, Tissue Engineering, Circuits, Data Structures, Data Science, Artificial Intelligence

Organizations

Biomedical Engineering Society,
Bioengineering Honors Society

SKILLS

Lab.

Journaling, Pipetting, Sterile Technique, Molecular Cloning, Primary Cell Culture, Agarose Gel Electrophoresis, PCR, qPCR, RT-PCR, Confocal Microscopy, High Throughput Screening

Software.

Adobe Creative Suite, Microsoft Excel, SolidWorks, Autodesk Fusion 360, COMSOL Multiphysics, ImageJ

Programming.

Java, Python, pandas, seaborn, SQL, HTML, CSS, Javascript, JQuery

Rapid Prototyping.

3D Printing, Laser Cutting, Breadboard