SALLY JONES

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EDUCATION

University of New Hampshire (UNH), Durham, NH
MS Molecular and Cellular Biotechnology May 2022
BS Biomedical Science: Medical Laboratory Science, GPA: 3.52 May 2021

***Relevant Coursework**:* Endocrinology, Biochemistry of Cancer, Immunology, Molecular Microbiology, Protein Structure and Function, Experimental Design and Analysis

LABORATORY EXPERIENCE

Cell Phenotyping and Tissue Engineering August – December 2021

- Practiced sterile techniques, cell culture, cell proliferation, survival, migration, adhesion, and drug response
- Maintained and passaged mammalian cell lines for an extended period of time
- Performed numerous experiments including stem cells, cloning, and karyotyping

Genomics and Bioinformatics August– December 2020

- Examined methods and applications of genomics using range of bioinformatics approaches
- Identify computer values of parameters of biological sequence data: patterns search and motif discovery scripts
- Access, query manipulate, retrieve, analyze data from local and remote databases

Technology and Programming: R, JMP, Matlab, Advanced Excel

Laboratory Skills: PCR, Western Blots, Vector Cloning; SDS-PAGE, Native-PAGE Gel Electrophoreses; IEX, Affinity, and Gel Filtration Chromatography; Plasmid Purification and Protein Expression; Protein and Enzymatic Assays; Isolation of organisms via quadrant steaking; Manual hematocrits and RBC sedimentation rates; and Sysmex, Advia, Coulter Hematology analyzer reading

PROJECTS AND RESEARCH

Master's Industry Project at Lonza Biologics, Portsmouth, NH December 2021-May 2022

- Description of project topic
- Description of techniques used
- Description

Honors Thesis, Dr. Xuanmao Chen's Neurobiology Laboratory, UNH, **Durham, NH** September 2021-May 2022

- Researched changes in neurological patterns in mice with PTSD by using Sirenia Sleep Software to compare EEG signals of mice before and after shock conditioning
- Assist other researchers in the lab with EEG and cortical injury mouse surgeries and assessments, mouse profusion surgeries, and PCR genotyping procedures

Summer Undergraduate Research Fellowship, Dr. Joe Smith's Lab, UNH, Durham, NH September 2020-May 2021

- Investigated histone modifications on variations of the same stem cell line to locate the role of modifications in determining cell fate and to discover the difference in cell fate between endoderm, mesoderm and neural progenitor cells
- Used mass spectrometry data to see the differences in histone modifications
- Differentiated three types of cells from an E14 line and used number of processes to extract proteins: analyzed proteins to learn modifications they went through

INDUSTRY EXPERIENCE

Takeda Pharmaceuticals May 2021 - August 2021
Upstream Pilot Plant Process Development Intern

- Performed data analysis in a team of two to evaluate and implement Raman spectroscopy technology in Pilot Plant with goal of improving bioreactor analysis techniques
- Used SIMCA-16 to create Raman spectroscopy models for glucose, lactate, and viable cell density
- Presented results to full department: glucose and lactate models were successfully implemented to Pilot Plant activities; viable cell density model will be implemented upon the addition of more data to the model

CLINICAL EXPERIENCE

Dartmouth-Hitchcock Medical Center, Lebanon, NH Summer 2019

Phlebotomist Intern

- Obtained blood through venipuncture from arm or hand and observed blood bank draw procedures
- Batched blood onto computer system and transported it to the lab with urine, semen, and stool specimens

EDUCATIONAL LEADERSHIP

Alpha Chi Sigma, University of New Hampshire, Durham, NH September 2020 – May 2021

Tutor

- Provide weekly tutoring for up to 15 students in general and organic chemistry courses; facilitate exam review sessions
- Teach critical thinking skills, develop problem-solving strategies, and help students apply these skills to new material

Department of Molecular, Cellular, and Biomedical Sciences, **UNH**, Durham, NH February 2019 – May 2020

Undergraduate Teaching Assistant

- Assisted in the development of lesson plans and improved lab protocols for current and future students
- Guided and supervised undergraduate students during laboratory experiments while promoting critical thinking skills
- Taught specific laboratory protocols and aseptic laboratory techniques, such as protein purification
- Maintained the safety and cleanliness of the laboratory, specimens, and equipment

PRESENTATIONS

UNH Undergraduate Research Conference April 2021

- Research Topic: Investigated histone modifications on variations of the same stem cell
- Presented research poster and engaged with UNH community and general public