Himay (Mickey) Makhija

ASSOCIATE SCIENTIST

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EXPERIENCE

Associate Scientist Cardiometabolic Disorders **July 2023 - Present**
Amgen **South San Francisco, CA**

• Executed multiple projects using molecular biology techniques such as western blot, qPCR, transient transfection, and imaging techniques (Matrigel/cell proliferation/cell adhesion/angiogenesis/co-culture) to characterize the relationship between various cell types.
• Designed and executed experiments to identify targets of interest with respect to cardiac disease.
• Characterized KO efficiency of Cas-9 through viral transduction, transient transfection and designing custom primers.
• Reduced research time by 85.71% by using new microplate reader. Implemented new instrument after completing a training course.
• Increased image analysis accuracy by programming a custom Sima script that automated image analysis of an angiogenesis assay.
• Improved project efficiency within laboratory through implementation of Laboratory Information Management System (LIMS/IDBS), resulting in more accurate data recording and retrieval of results.

Research Associate 2 Gene Therapy **January 2023 - July 2023**
BioMarin Pharmaceutical Inc **San Rafael, CA**

• Conducted cell culture experiments pertaining to AAV studies using serum free transient transfection, ensuring GLP and aseptic technique.
• Maintaining both suspension and adherent cell lines at various working volumes, cell feed and reagent preparation, cell banking and scale up.
• Performed Octet/BLI and ELISA assays to determine capsid Titer and optimizing of the scale up process from 125mL to 50L, working closely with bioreactors and shake flasks.
• Developed a real-time integration tool linking datasets from Monday.com to a Power BI dashboard, effectively streamlining the research process.
• Enhanced cross -department collaboration by sharing real-time data through internal presentations, contributing to informed decision-making.
• Generated and shared data through internal presentations and utility of the research to improve the inter-department collaboration and the effectiveness of the research.

Research Associate **September 2022 - January 2023**
Optimized Foods **Davis, CA**

• Optimized texture and taste of cell culture-based caviar.
• Functioned as a production associate ensuring GMP with molecular biology and cell culture techniques to produce large batches of product using bioreactors.
• Maintained cell lines and fungal cultures by following SOP.
• Conducted experiments with fungal spores and fish cells using GLP.
• Ensured downstream workflow sterility, accurately maintaining records and documenting workflow.
• Improved caviar texture and taste, increasing customer satisfaction by 20% while developing cost-effective cultivation processes to reduce manufacturing costs by 40%.

Research and Innovation Core Intern **June 2022 - September 2022**
Cepheid, a Danaher Company **Sunnyvale, CA**

• Carried out Integration and Optimization of sample preparation for a novel diagnostic upper respiratory PCR test.
• Ran multiple experiments and analysis of data ensuring GLP, presenting concise and abbreviated data to the team using presentations.
• Assisted with Project Management of HIV diagnostic tests and optimized a novel diagnostic PCR test.
• Designed primers and probes for optimal PCR diagnostics.
• Reduced analysis time by 200 hours over 60 days through the creation of an automated tool utilizing python for specific analysis increasing accuracy rate of results by 30%.

Lab Associate and Teaching Assistant **August 2021 - December 2021**
UC Davis **Davis, CA**

• Supported students' academic progress by providing one on one attention to help guide learning and comprehension. Grading assignments and maintaining records.
• Familiarized students with laboratory techniques and GLP regarding sequencing data analysis, cell culturing, SDS gel prep, handling E. coli samples and PCR machine operation.
• Performed cell transformations on DH5A E. coli cells with BglB gene.
• Performed Kinetic and Thermostability assays on mutant E. coli cells expressing BglB protein to purify and quantify the target protein.
• Increased the accuracy of student reports by 20% and strengthened student understanding of laboratory skills and protocols by facilitating one-to one instruction and guidance.

Research Intern **September 2020 - February 2021**
Snap DNA **Mountain View, CA**

• Assisted with development of a rapid benchtop assay using cell culturing skills and GLP.
• Optimized PCR performance and assisted with cell culturing and sample prep of E. coli and Salmonella.
• Maintained lab records and ensured good sanitation and workflow in lab downstream and upstream processes.

EDUCATION

Bachelor of Science in Biochemistry and Molecular Biology
Minor in Statistics **UC Davis** • Davis, CA

SKILLS

Tech Stack: R, Python, Power BI, Benchling, Excel, PowerPoint, JavaScript, Pytorch, Snap Gene/Geneious, React, SQL, GraphPad/Prism.
Lab Skills: ELISA, Western Blot, qPCR, Oligo quantification and resuspension, Assay Development, Octet/BLI, Specimen handling (mice), Cell culture (CHO, HEK293, 3T3/Fibroblasts, iPSC) DNA Sequence Analysis, Protein Expression, Reagent Preparation, Microscopy, Protein Purification (AKTA), Primer Design, Cell Staining, Bioreactors, Sterile Welding.
Languages: English, Hindi, Russian