Jason R. Hernandez

jrh@heatshockpineapple.com | linkedin.com/in/jrh318 | personal website

Biochemist with 3+ years of experience in early drug discovery, specializing in protein science and assay development. Drawn to work that integrates wet-lab and computational tools to drive discovery.

Technical Skills

Protein purification: FPLC (AKTA), affinity, and size exclusion chromatography; *E. coli* expression
Protein characterization: FP, MST, DSF, luminescence-based luciferase refolding, SDS-PAGE, Western blot
Molecular biology: PCR, site-directed mutagenesis, bacterial transformation, mammalian cell culture
HTS & analysis: 384-well plate setup, BioTek EL406 bulk dispensing
Small molecule synthesis: Liquid–liquid extraction, HPLC purification, LC-MS, $^{1}H/^{13}C$ NMR
Computational skills: Python (pandas, numpy), R (ggplot2, tidyr), AlphaFold3, GraphPad Prism, ChimeraX, Adobe Illustrator

Research Experience

Gestwicki Lab - UCSF Institute for Neurodegenerative Diseases
Staff Research Associate II | August 2022 – July 2025
Staff Research Associate I | September 2021 – August 2022

- Independently managed a HTS campaign of 1,857 small molecules targeting the HscA/HscB/IscU chaperone system; used a 384-well format with BioTek EL406 bulk dispensing to validate 253 hits (0.136%).
- Optimized a collaborator-sourced peptide binder to the Hsc70 SBD—improved Kd from 30 nM to 5 nM via SAR, site-directed mutagenesis, and structure-guided analog design using AlphaFold, FP, and MST assays.
- Generated in vitro binding data for a new class of J-domain mimics in collab with the Baker Lab (UW)

PINC - SFSU
Peer Mentor | Jun 2021 – Jan 2022

- Mentored students in analyzing glioma methylation data using R and Bioconductor visualization tools

Anderson Lab – SFSU
Undergraduate Researcher | Aug 2019 – Jan 2021

- Synthesized TMEM16A inhibitors and characterized compounds using HPLC, LC-MS, and NMR
- Performed extractions, rotovap concentration, and reactions under inert atmosphere

Blatti Lab – PCC
Student Researcher | May 2016 – Jun 2019

- Designed DNA origami demos for ACS outreach and STEM education events

Education

Postbaccalaureate Research Training (PROPEL) - *University of California, San Francisco*
B.S. Biochemistry, Minor in Computing Applications - *San Francisco State University*
A.S. Engineering and Technology - *Pasadena City College*
A.S. Natural Sciences - *Pasadena City College*

Publications & Presentations:

- Zhang JZ, Greenwood N, **Hernandez J**, et al. *De novo designed Hsp70 activator dissolves intracellular condensates.* **Cell Chem Biol** (2025)
- Tanaka M, Fujikawa R, Sekiguchi T, **Hernandez J**, et al. *A missense mutation in Hspa8 causes neuroaxonal dystrophy in rats.* **Front Neurosci** (2024)
- *Development of Peptide Probes for Hsp70 and Hsp90*, Proteostasis Consortium Meeting (2023)
- *HTS of HscA Inhibitors*, UCSF PROPEL Symposium (2022)