Hilary Hoffman

1450 Albion St #105, Denver, CO 80218• *Cell: (408)489-2284 • hilary.amara@gmail.com*

Highly focused and adaptable individual seeking to expand upon molecular experience and utilize talent for mastering new research techniques.

EDUCATION

University of California Santa Cruz
Bachelor of Science in Biology
Graduated August 2014

EXPERIENCE

Professional Research Assistant
March 2017-Present

Crombleholme Lab, Department of Surgery, University of Colorado Denver

Came onboard as Dr. Tim Crombleholme's Research Assistant in the Laboratory for Fetal and Regenerative Medicine.

- Cell culture work including bioassays, endothelial cell isolation from tissue, and genetic and protein expression
- Viral work (Lenti and Adeno) inserted custom genes, packaging viral genomes, plasmid isolation and modification, viral titer assays
- Worked on RNA, microRNA, DNA isolation for submission and further analysis in sequencing and microarray
- Created unique protocols and was responsible for all troubleshooting
- Liaison between other labs and fostered collaborations
- Took initiative to extend myself into areas of the lab and department that needed it
- Managing DEA licenses, purchasing and reimbursements, and administrative assistance for multiple PIs as a way to increase productivity and cohesion amongst the group
- Played critical role in initiating and continuing animal colony and timed pregnant breeding
- Performed mesenteric uterine artery branch ligation on pregnant mice, tissue and organ collection, and viral injections

Professional Research Assistant
January 2017-July 2017

Pukatzki Lab, Department of Immunology and Microbiology, University of Colorado Denver

Helped Dr. Stefan Pukatzki get his lab up and running at the Anschutz Medical campus. Study area focused on molecular mechanisms that drive microbial pathogenesis in *Vibrio cholera*.

- Assisted in day to day operations, on both the administrative and wet lab side
- Created genetically modified bacteria strains, ran protein and genetic assays, as well as ran and analyzed Roche microarrays
- Ran competition assays, created electrocompetent cells, transduction, transformation, and conjugation of various strains
- Responsible for creating and troubleshooting protocols, supervising and training new lab members
- Vital in the initiation and modification of the animal experiments
- Assisted in animal protocol approval/submission as well as some grant writing

Research Assistant
January 2015 – October 2016

Molecular Neuroscience Lab (Xin Jin), The Salk Institute

Managed logistics and finances for growing lab of both post-docs and graduate students.

- Colony manager for 400 cages of mice
- Performed intracranial injections of adeno-associated virus and implantations of optical fibers
- Perfused mice, sliced brains on microtome and cryostat, performed histology using antibodies and stains
- Helped verify mouse lines using RNAscope brand in situ detection
- Worked closely with the IACUC and EH&S departments to ensure lab was educated on institute and federal policies
- Responsible for creating and implementing SOPs as well as training all new and incoming staff/volunteers on lab protocol and techniques

Bee Behavior Research Assistant **March 2013-June 2013**

University of Otago, New Zealand

Worked with published PhD student Fanny Mondet on an experiment on a relationship between honeybees and the parasite varroa.

- Responsible for tagging, observing, and collecting bees for later RNA extraction and analysis
- Learned bee keeping skills and live animal safety/handling

HHMI Genomics Researcher **September 2010-June 2012**

Phage Hunter Lab, University of California Santa Cruz

Recruited for honors lab partnered with Howard Hughes Medical Institute Science Education Alliance.

- Collected samples, isolated bacteriophage and annotated its DNA
- Chosen from the class to represent UC Santa Cruz at the Annual HHMI SEA national symposium and made a presentation of that year's findings
- Techniques used include growing bacterial cultures, isolating phage, electron microscopy, use of NCBI blast, and gene annotation
- Investigated self-splicing in phage viral gene

PUBLICATIONS

Smith JB, Klug JR, Ross DL, Howard CD, Hollon NG, Ko VI, **Hoffman H**, Callaway EM, Gerfen CR, Jin X. 2016. Genetic-Based Dissection Unveils the Inputs and Outputs of Striatal Patch and Matrix Compartments. *Neuron*, Volume 91, Issue 5, 1069-1084

Pope WH, Bowman CA, Russell DA, Jacobs-Sera D, Asai DJ, Cresawn SG, Jacobs WR, Hendrix RW, Lawrence JG, Hatfull GF, **Science Education Alliance Phage Hungers Advancing Genomics and Evolutionary Science**, Phage Hunters Integrating Research and Education, Mycobacterial Genetics Course. 2015. Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity. *eLife* 4:e06416

VOLUNTEER WORK

Greeter **July 2016-October 2016**

Volunteers in Medicine San Diego

Served in a free clinic that offered care to underserved area residents. Was responsible for working directly with both the patients and physicians to help create and organize patient files and schedule appointments. Conducted routine patient outreach and served as point of contact for clinic. Worked as a liaison between patients and physicians by conducting follow up treatment administrative duties such as overseeing prescription refills, assisting patients with proper documentation, and coordinating transfers to specialists. Worked in compliance with HIPAA.