Jasmine Dioguardi

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RESEARCH INTERESTS

My research interests are focused on the development of precision medicine and genetics to create working therapies as a method for cures. As a graduate student, I would like to improve my skills in genetic/genomic engineering.

EDUCATION

Aug 2020 – present

Human Genetics, M.S.

Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA

Oct 2013 – Dec 2017

Bioengineering (Biomolecular), B.S.

Jack Baskin School of Engineering, University of California, Santa Cruz, CA

- Minor: Bioinformatics
- Undergraduate Thesis: "Engineering *B. subtilis* for Erythritol Production from Agricultural Co-Products", David Bernick (Advisor)

RESEARCH EXPERIENCE

March 2021 – Present

Graduate Researcher

University of Pittsburgh Bernstein Lab, Pittsburgh, PA

- Sarah Hainer (Principal Investigator)
- Researched the regulatory role of BAF complex on MYC transcription factor in the role of survival and proliferation of acute myeloid leukemia
- Determined epigenomic landscape of ulcerative colitis (IBD) in patients samples to determine key histone marks

Jan 2021 – Feb 2021

Lab Rotation Student

University of Pittsburgh Hainer Lab, Pittsburgh, PA

- Kara Bernstein (Principal Investigator)
- Researched the effects of RAD51D variants on double strand breaks in breast and ovarian cancer
- Developed mammalian vectors containing variants for creating new cell lines

May 2015 – Dec 2017

Undergraduate Researcher

UCSC Strome Lab, Santa Cruz, CA

- Susan Strome (Principal Investigator), Paul Goetsch (Mentor)
- Researched and conducted genetic manipulation of C. elegans with the development of new strains through knockouts
- Live imaging time courses of modified organisms at various larval stages
- Germ cell studies involving DAPI staining, immunofluorescent staining, and GFP-tagging for observations
- Genotyped and studied resulting phenotypes of specific DNA mutations

June 2016 – Oct 2016

Researcher/Engineer

UCSC iGEM 2016, Santa Cruz, CA

- David Bernick (Principal Investigator)
- Genetically engineered a bacteria's pentose phosphate pathway to produce erythritol from sugars inside a chemostatic system
- Developed inexpensive 3D-printable filtration system to separate compounds physically and on AutoCAD
- Established method to extract sugars from almond shells
- Prepared presentations for students and conducted interviews with field specialists to understand the ethics of the project

PROFESSIONAL EXPERIENCE

Oct 2019 – July 2020

Scientist I

Roche Molecular Diagnostics, Santa Clara, CA

- Completed high-throughput testing and data analysis for identification and antimicrobial susceptibility of bacteria isolates using smarticles and qPCR
- Determined optimal assay media and additives for increased growth of bacterial strains

Mar 2018 – Oct 2019

Manufacturing Associate I

Twist Bioscience, South San Francisco, CA

- Produced highly custom vectors for manufacturing operations pipeline
- Updated and established new work instructions/procedures on vector production workflow
- Improved and automated QC design processes and batch records
- Created experiments to validate new equipment and procedures
- Enforced 5S methodology to improve workplace efficiency and organization
- Project(s): ccdA Cell Line Testing, Sanger Sequencing Primer Database

July 2017 – Sep 2017

Genomics/Genetics Intern

Basegenes, San Francisco, CA

- Developed databases and researched information about genetic conditions and their underlying mutation(s)
- Helped to create website and categorize data based on inheritance pattern, environmental factors, etc.

VOLUNTEER EXPERIENCE

July 2020 – August 2020

Social Justice Action Committee

University of Pittsburgh, Pittsburgh, PA

- Developed actionable recommendations for culture, hiring, and curriculum within the University of Pittsburgh

April 2019 – June 2020

Neighborhood Adoption Center Assistant

Human Society of Silicon Valley, San Jose, CA

- Assisted clients with finding the best fit companion and information on animal care
- Daily care of various animal species (rats, dogs, cats, guinea pigs, rabbits)

PRESENTATIONS

”Strengthening Health Systems in Liberia Post-Ebola”

University of Pittsburgh, Pittsburgh, PA

- Global Health Case Competition
- Oct 30 2020
- Award(s): 2nd place

”Engineering *B. subtilis* for Erythritol Production from Agricultural Co-Products”

Internationally Genetically Engineered Machine (iGEM), Boston, MA

- iGEM 2016 Giant Jamboree
- Oct 27 - 31 2016
- Award(s): Silver Medal, Nominated for Best Education Public Engagement (Overgrad)

”Determining the antagonizing relationship between MES-4 and DRM complex on germ cell development in *C. elegans*”

University of California, Santa Cruz, Santa Cruz, CA

- 19th Annual Undergraduate Research Poster Symposium
- Jun 9 2016

Susan Strome

- Distinguished Professor of Molecular, Cell, and Developmental Biology
- University of California, Santa Cruz
- sstrome@ucsc.edu

Paul Goetsch

- Assistant Professor, Biological Sciences
- Michigan Technological University
- pdgoetsc@mtu.edu

Louisa D'Lima

- Senior Manager, Process Development
- Twist Bioscience
- ldlima@twistbioscience.com