**Sylvia Gong**

*Research Associate/Master’s Candidate* [svagong@gmail.com](mailto:svagong@gmail.com) *(510) 857-3549*

**Education**

M.S Environmental Health Sciences est June 2021

San Diego State University

*Thesis title*: “GenX induced embryotoxicity and altered transcriptomics in *Danio rerio*”

Advisors: Dr. Richard Gersberg, Dr. Goran Bozinovic

B.S. Molecular Biology 2018

University of California, San Diego

**Research Experience**

*Research Associate and Instructor March 2019 – Current*

Boz Life Science Research and Teaching Institute, The Science Center, San Diego, CA

Principal Investigator: Goran Bozinovic

*Research Topics*

* Toxicological and transcriptomic effects of HFPO-DA (GenX) on embryogenesis of *Danio rerio*
* Microbiome effects on biological phosphorous removal during wastewater treatment
* DNA Barcoding and diversity analysis of *A.S. shawii, A.S Goldmaniana, and A. Sebastiana* for potential inter-subspecific/interspecific hybridization
* Sexual dimorphism in *D. melanogaster* braingene expression
* Critically assessing orthodox education system modeling based on undergraduate biology laboratory students’ assessment

*Relevant Experience*

* Designed and conducted molecular biology and toxicology assays to answer research questions.
* Prepared manuscripts for publications, grants, scientific and business proposals.
* Analyzed data for research projects and assessed results relative to known literature.
* Presented project data and scientific ideas for general and scientific audiences.
* Established and managed a sustainable *Danio rerio* (zebrafish) system.
* Developed and taught curriculum in molecular biology for up to 30 high-school students.
* Participated in administration, development, and discussions necessary to help grow new nonprofit institute as core team member.
* Established online presence for institute through graphic and web design.
* Managed inventory for laboratory equipment.

*Intern June 2016-November 2016*

Feeney Lab, Scripps Research Institute, Department of Immunology and Microbial Science, La Jolla, CA

Principal Investigator: Dr. Ann Feeney

* Conducted molecular biology assays for the study of VD(J) recombination: Antigen Diversification in Immunology.
* Assisted in daily tasks necessary to maintain the lab and maintain mouse colony.

**Papers**

Goran Bozinovic, Kesten Bozinovic, Zuying Feng, Christine Stewart, Darcy Engelhart, **Sylvia Gong**, Jeanne Vu, and Miguel Vasquez. “Reevaluate How to Evaluate: Systemic Assessment Biases Affect Students' Confidence in College Upper-Division Biology Laboratory Courses.” *Submitted for publication.*

Gong, Sylvia. “Effects of HFPO-DA (GenX) on embryogenesis of zebrafish (*Danio rerio).” In preparation.*

**Conferences**

Sep 2020. Gong, Sylvia. “Data-Driven, Long-Range Forecasting of Biological Phosphorus Removal (BPR) Stability.” Pacific Northwest Clean Water Association Annual Conference and Exhibition, Spokane, WA. *Accepted.*

**Relevant Coursework**

Environmental Health Risk Assessment, Water Quality Investigation, GIS & Public Health, Principles of Toxicology, Epidemiology, Hazardous Waste Management, Environmental Determinants of Human Health, Molecular Basis of Human Disease, Molecular Biology.

**Other Skills**

* Programming for data analysis (R).
* Proficient with Microsoft Office
* Proficient with Wordpress.org
* Conversational Japanese and Chinese

**Teaching Experience**

*Department of Biological Science, UCSD San Diego, CA*

Undergraduate Instructional Assistant, Genetics January 2018 - March 2018

*Boz Life Science Research and Teaching Institute San Diego, CA*

Instructor, Molecular Biology Techniques March 2019 – August 2020

**Volunteer Activity**

San Diego Humane Society 2018-current

Mission Creek Restoration and Conservation Effort 2014-2016

Furry Friends Animal Shelter Volunteer 2011-2013

**Practical Skills**

* Polymerase Chain Reaction Agarose/Polyacrylamide Gel Electrophoresis/qRT-PCR
* DNA/RNA Extractions, Western Blots, ELISA, SDS-Page
* Chromatography Purifications (Size Exclusion and Affinity)
* Buffer/Reagent preparations
* Environmental water quality sampling
* Zebrafish embryo toxicity test
* Laboratory mice, zebrafish, and fruit fly husbandry
* Dissections/specimen post-mortem processing
* Science Communication/Curriculum Development
* Selection and application of appropriate statistical tests
* Photography

**Memberships**

Society of Environmental Toxicology and Chemistry

Society of Toxicology