

GORAN BOZINOVIC
3370 Dale Street
San Diego, CA 92104
(919) 607-3155; goran@bozinate.org

Education

Ph.D. Environmental and Molecular Toxicology <i>North Carolina State University, Raleigh, NC</i>	2009
M.S. Public Health; Environmental Health / Toxicology <i>San Diego State University, San Diego, CA</i>	2002
B.S. Biology <i>California State University, Carson, CA</i>	1997

Professional Activities

President and CEO, Boz Life Science Research & Teaching Institute	2018-present
Continuing Lecturer, University of California San Diego	2009-present
Assistant Adjunct Professor, San Diego State University	2019-present
Research Faculty, Portland State University	2023-present
Consultant and Data Analyst, Biocom, San Diego, CA	2014-2018

Academic Appointments

Continuing Lecturer, University of California San Diego Division of Biological Sciences <u>Courses:</u> Bioinformatics, Genetics, Metabolic Biochemistry, Biochemical Techniques, Recombinant DNA Techniques, Graduate Biostatistics, Molecular Methods in Ecology and Evolution	2010-present
Assistant Adjunct Professor, San Diego State University Graduate School of Public Health	2019-present
Research Member Faculty Portland State University, Center for Life in Extreme Environments	2023-present
Postdoctoral Fellow, University of California San Diego Institute of Genomic Medicine; Division of Dermatology Stem Cell Program	2012-2013
Postdoctoral Associate, University of California San Diego Division of Biological Sciences Section of Ecology, Behavior and Evolution	2009-2010
Course Instructor, Miramar College Department of Natural Sciences; <i>Human Physiology</i>	2010-2012
Course Instructor, Cuyamaca College Sciences and Engineering Department; <i>Biology</i>	2010-2011
Research Associate, Department of Environmental and Molecular Toxicology, North Carolina State University	2003-2009
Marine Quest Science Program Director, University of North Carolina, Wilmington, NC	2003

Publications

- McLamb, F., Feng, Z., Shea, D., Bozinovic, K., Vasquez, M. F., Stransky, C., Gersberg, R. M., Wang, W., Kong, X., Xia, X., & **Bozinovic, G.** (2024). Evidence of transboundary movement of chemicals from Mexico to the U.S. in Tijuana River estuary sediments. *Chemosphere*, *348*, 140749.
- Vu, J. P., McLamb, F., Feng, Z., Griffin, L., Gong, S., Shea, D., Szuch, M. A., Scott, S., Gersberg, R. M., & **Bozinovic, G.** (2023). Locomotion and brain gene expression exhibit sex-specific non-monotonic dose-response to HFPO-DA during *Drosophila melanogaster* lifespan. *NeuroToxicology*, *96*, 207-221.
- Coleman, A. B., Lorenzo, K., McLamb, F., Sanku, A., Khan, S., & **Bozinovic, G.** (2023). Imagining, designing, and interpreting experiments: Using quantitative assessment to improve instruction in scientific reasoning. *Biochemistry and Molecular Biology Education*, 1-16.
- Lehmeidi Dong, M., Feng, Z., McLamb, F., Griffin, L., Vasquez, A., Hirata, K. K., Bozinovic, L., Vasquez, M. F., & **Bozinovic, G.** (2023). Life Science Research Immersion Program Improves STEM-Specific Skills and Science Attitudes among Precollege Students. *Journal of Microbiology & Biology Education*, e00078-22.
- Gong, S., McLamb, F., Shea, D., Vu, J. P., Vasquez, M. F., Feng, Z., Bozinovic, K., Hirata, K. K., Gersberg, R. M., & **Bozinovic, G.** (2022). Toxicity assessment of hexafluoropropylene oxide-dimer acid on morphology, heart physiology, and gene expression during zebrafish (*Danio rerio*) development. *Environmental Science and Pollution Research*, 1-17.
- Feng, Z., McLamb, F., Vu, J. P., Gong, S., Gersberg, R. M., & **Bozinovic, G.** (2022). Physiological and transcriptomic effects of hexafluoropropylene oxide dimer acid in *Caenorhabditis elegans* during development. *Ecotoxicology and Environmental Safety*, *244*, 114047.
- Bozinovic, G.**, Feng, Z., Shea, D., & Oleksiak, M. F. (2022). Cardiac physiology and metabolic gene expression during late organogenesis among *F. heteroclitus* embryo families from crosses between pollution-sensitive and -resistant parents. *BMC Ecology and Evolution*, *22*(1), 1-20.
- Bozinovic, K., McLamb, F., O'Connell, K., Olander, N., Feng, Z., Haagensen, S., & **Bozinovic, G.** (2021). U.S. national, regional, and state-specific socioeconomic factors correlate with child and adolescent ADHD diagnoses pre-COVID-19 pandemic. *Scientific Reports*, *11*(1), 22008.
- Bozinovic, K., Feng, Z., Stewart, C. M., Engelhart, D. C., Gong, S., Vu, J. P., Vasquez, M. F., & **Bozinovic, G.** (2021). "Reevaluate how to evaluate: Systemic assessment biases affect students' confidence in college upper-division biology laboratory courses." *Biochemistry and Molecular Biology Education*.
- Bozinovic, G.**, Shea, D., Feng, Z., Hinton, D., Sit, T., & Oleksiak, M. F. (2021). "PAH-pollution effects on sensitive and resistant embryos: Integrating structure and function with gene expression." *PloS one*, *16*(4), e0249432.
- Vu, J. P., Vasquez, M. F., Feng, Z., Lombardo, K., Haagensen, S., & **Bozinovic, G.** (2021). "Relative genetic diversity of the rare and endangered *Agave shawii* ssp. *shawii* and associated soil microbes within a southern California ecological preserve." *Ecology and Evolution*, ece3.7172.

- Gallant, T.B, Picciotto, M., **Bozinovic, G.**, & Tour, E. (2019). "Plagiarism or Not? Investigation of Turnitin-Detected similarity hits in Biology Laboratory Reports." *Biochemistry and Molecular Biology Education*. 47(3).
- Bozinovic, G.**, Wills, L. P., L., Hinton, D., DiGuilio, R., & Oleksiak, M.F. (2013). "Genomic and physiological responses to strong selective pressure during late organogenesis: few gene expression changes found despite striking morphological differences." *BMC Genomics* 14:779.
- Bozinovic, G.**, Sit, T., Hinton, D.H., and Oleksiak, M.F. (2011). "Gene expression throughout vertebrate embryogenesis". *BMC Genomics*. 12: 132.
- Bozinovic, G.** and Oleksiak, M.F. (2011). "Genomic approaches with natural fish populations from polluted environments". *Environmental Toxicology and Chemistry*. 30 (2): 283-9.
- Bozinovic, G.** and Oleksiak, M.F. (2010). "Embryonic gene expression among pollutant-resistant and sensitive *Fundulus heteroclitus* populations". *Aquatic Toxicology*. 98 (3): 221-9.
- Matzkin, L.M., Paight, C., Johnson, S., **Bozinovic, G.**, & Markow, T.A. (2011). "Dietary Protein and Sugar Differentially Affect Development and Metabolic Pools in Ecologically diverse *Drosophila*". *Journal of Nutrition*. 141: 1127-33.

Publications (in-review)

- McLamb F, Feng Z, Vu JP, Griffin L, Vasquez, M, **Bozinovic, G.** (2024). "Sexually dimorphic transcriptome of *Drosophila melanogaster* young adult brains reveals delayed differential gene expression in males." *Molecular Neurobiology*

Publications (in preparation)

- Feng, Z., McLamb, F., Hirata, K. K., Stransky, C., & **Bozinovic, G.** Ecological and Environmental Risk Assessment of Water Quality in Tijuana River Estuary.
- Lehmeidi Dong, M., Feng, Z., McLamb, F., Griffin, L., Vazquez, A., ... & **Bozinovic, G.** (2023). The Efficacy of Pre-College Life Science Virtual Research Immersion Programs during the COVID-19 Pandemic.
- Vu, J. P., McLamb, F., Feng, Z., Griffin, L., & **Bozinovic, G.** Temporal shift of gene co-regulation between sexes in *Drosophila melanogaster* brains.
- McLamb, F., Feng, Z., Shea, D., & **Bozinovic, G.** Targeted Chemical Analysis of sediments and water reveals site-specific contaminants of concern at Tijuana River Estuary.
- Bozinovic, K., Shea, D., Vasquez, M., Hirata, K., Vazquez, A., Feng, Z., and **Bozinovic, G.** Non-targeted Chemical Analysis of Bioaccumulative Contaminants at Tijuana River Estuary via Composite Integrative Passive Samplers.
- Vazquez, A., Vasquez, M. F., O'Connell, K., Olander, N., Bozinovic, L., Feng, Z., & **Bozinovic, G.** Phylogenetics and Metagenomics of North American and European *Arbutus* Trees.

Publications (other)

- McLamb, F., Feng, Z., Bozinovic, Z., & **Bozinovic, G.** (2024). Talent Recruitment and Retention in the Post-COVID Era within a Growing Oregon Biosciences Industry. *Oregon Bioscience Association*.
- Bozinovic, G.** and Coleman, A. (2018). "Tools for Evolutionary Genomics: Why Are Humans Less Hairy Than Other Primates". Biochemical Techniques (BIBC103) Course Bioinformatics Module. BIBC103 Laboratory Instruction Manual, UCSD

Bozinovic, G. and Susek, R. (2016). "Talent Integration: California Workforce Trends in the Life Science Industry". California Life Science Initiative and Biocom Institute Annual Report. www.califescienceworkforcetrends.org

Bozinovic, L., Susek, R., Lindburg, L, and **Bozinovic, G.** (2016). "Life Science Workforce Trends Report". The Coalition of state Bioscience Institutes (CSBI). www.csbioinstitutes.org

Bozinovic, G. (2019). "Evolutionary Toxicology and Genomics: Utility of Natural Populations' Sensitivity and Resistance Mechanisms to Persistent Organic Pollutants". *AJBSR*. 5 (1): 12

Funding for Boz Life Science Research and Teaching Institute (www.bozinate.org)

University of California San Diego, Division of Extended Studies, in partnership with Inamori Foundation and Girard Foundation, sponsors the development and implementation of "Futures" Life Sciences student research immersion program at the Boz Life Science Research and Teaching Institute.

Dissertation and Thesis

Ph.D.: "Development and Population Divergence" (2009). North Carolina State University, Department of Molecular and Environmental Toxicology. Advisor: Margie Oleksiak

Master's: "Reproductive Toxicity Assessment of Water and Sediments at Four Sites in Mission Bay, California, Using Bay Mussel (*Mytilus Galloprovincialis*), Purple Urchin (*Strongylocentrotus Purpuratus*), and Sand Dollar (*Dendraster Excentricus*). (2002). San Diego State University, Graduate School of Public Health, Toxicology. Advisor: Ann de Peyster

Manuscript Reviews:

Kiah Lee, Stephen Raverty, Paul Cottrell, Zeinab Zoveidadianpour, Brendan Cottrell, Dana Price & Juan José Alava (2023): "Polycyclic aromatic hydrocarbon (PAH) contaminant source identification and *in-utero* maternal transfer in threatened killer whales (*Orcinus orca*) of British Columbia, Canada". *Scientific Reports*

Tetrault, Emily; Swenson, John; Aaronson, Ben; Marcho, Chelsea; Albertson, Craig. (2023) "The transcriptional state and chromatin landscape of cichlid jaw shape variation across species and environments". *Molecular Ecology* (MEC-22-1253).

Wei Song; Keji Jiang; Fengying Zhang; Yu Lin; Lingbo Ma. (2016). "RNA-sequencing of the sturgeon *Acipenser baeri* provides insights into expression of morphogenic differentiation and developmental regulatory genes in early versus late developmental stages". *BMC Genomics*. PMC4977659.

Windisch, H.S., Frickenhaus. S, John, U., Knust, R., Portner, H. O., Luccase, M. (2014). "Stress response or beneficial temperature acclimation: Transcriptomic signatures in Antarctic fish (*Pachycara brachycephalum*)". *Molecular Ecology*. <https://doi.org/10.1111/mec.12822>

Conference Proceedings and Abstracts:

Maysoon Lehmeidi Dong, Armando Vazquez, Zuying Feng, Lindsey A. Griffin, Flannery McLamb, Ken K. Hirata² and **Goran Bozinovic**. (2022): "Estuarine Toxicology: The Tijuana River Estuary Research as a Teaching Model to Promote Community Science Literacy and Student Engagement in Local and International Environmental Issues". SETAC North America 43rd Annual Meeting, Pittsburgh, PA, USA

Jeanne P Vu, Flannery McLamb, Zuying Feng, Damian Shea, Richard M. Gersber, and **Goran Bozinovic**. (2022) "Locomotor Ability and Brain Gene Expression in *Drosophila melanogaster* Exhibit Nonmonotonic Dose-Response to HFPO-DA". SETAC North America 43rd Annual Meeting, Pittsburgh, PA, USA

Lindsey A. Griffin and **Goran Bozinovic**. (2022). Exposure to Polycyclic Aromatic Hydrocarbons Induces Sex-Specific Transgenerational and Heritable Epigenetic Modifications in *Drosophila melanogaster*. SETAC North America 43rd Annual Meeting, Pittsburgh, PA, USA

Zuying Feng, Flannery McLamb, Jeanne P. Vu, Sylvia Gong, Richard M. Gersberg and **Goran Bozinovic**. (2022). Physiological and Transcriptomic Effects of Hexafluoropropylene Oxide Dimer Acid in *Caenorhabditis elegans* During Development. SETAC North America 43rd Annual Meeting, Pittsburgh, PA, USA

Flannery McLamb, Damian Shea, and **Goran Bozinovic**. (2022). "Targeted Chemical Analysis of sediments and water reveals site-specific contaminants of concern at Tijuana River Estuary". SETAC North America 43rd Annual Meeting, Pittsburgh, PA, USA

Kesten Bozinovic, MacKenzie King, Damian Shea, and **Goran Bozinovic** (2022). "Non-Targeted Analysis of Environmental Contaminants in Tijuana River Estuary via Composite Integrative Passive Sampler". SETAC North America 43rd Annual Meeting, Pittsburgh, PA, USA

Ella Tour, Tricia Bertram-Gallant, Madeleine Picciotto, and **Goran Bozinovic** (2015). "Plagiarism in Lab Reports in the Age of Turnitin." Experimental Biology Meeting Abstracts. FASEB Journal 29(S1). https://doi.org/10.1096/fasebj.29.1_supplement.559.21

Goran Bozinovic, Gloria K Lefkowitz, Christopher Cowing-Zitron and Benjamin D Yu. (2012). "Generation of a small RNA library from normal human nails reveals nail-selective expression of genes implicated in psoriasis". Society of Investigative Dermatology Annual Meeting, Raleigh, NC, USA

Goran Bozinovic, David Hinton, Tim Sit, Damina Shea, and Marjorie F. Oleksiak (2009): "Physiology, Morphology, and Gene Expression of Sensitive and Resistant *Fundulus heteroclitus* Embryos". SETAC Annual Meeting, New Orleans, LA. 2009.

Goran Bozinovic, Lauren F. Wills, Richard Di Giulio, and Marjorie F. Oleksiak. (2008): "Synergistic effects of representative PAH-type CYP1A inducers and inhibitors on morphology, physiology and gene expression in developing embryos". Superfund Basic Research Program Annual Meeting. Pacific Grove, California, December 7-9, 2008.

Goran Bozinovic, Tim Sit, David Hinton, Damian Shea, and Majorie F. Oleksiak (2008): "Gene Expression, Physiology, Morphology, and Chemical Exposures on Sensitive and Resistant Embryos". SETAC; Tampa, FL, 2008.

Goran Bozinovic, Tim Sit, David Hinton, Damian Shea, and Majorie F. Oleksiak (2007). "Physiology, morphology and chemical exposures in sensitive and resistant embryos". Superfund Basic Research Program National Scientific Meeting. Durham, NC 2007.

Goran Bozinovic and Marjorie Oleksiak (2007). "Developmental gene expression within and among natural *Fundulus* populations". Superfund Basic Research National Meeting. San Diego, CA 2007.

Goran Bozinovic and Marjorie Oleksiak (2005). "Embryonic gene expression among natural *Fundulus* populations: sensitivity and resistance to pollution". Society of Environmental Toxicology and Chemistry 26th Annual Meeting. Baltimore, MD, 2005

Goran Bozinovic and Chris Stransky (2002). "Assessment of Water and Sediment Quality Effects at Three Sites in Mission Bay Using a Multi-Species Approach". Southern California Society of Environmental Toxicology and Chemistry Annual Meeting, Long Beach, CA. 2002.

Goran Bozinovic, Christ Stransky, and Ann dePeyster (2001): "Effects of Water and Sediments Assessed at Three Sites in Mission Bay, California Using Blue Mussel and Sea Urchin Reproductive Toxicity Bioassays". Southern California Chapter Society of Toxicology annual meeting. La Jolla, CA 2001.

Mentoring

UCSD Graduate Faculty Committee Member and Advisor

John Kim (2023): "Short-term Exposure to Burn Pit Combustion Products Induces Neutrophilia and Expansion of ILC1-like Cells in Innate Type-2 Lung Inflammation in a STING-Dependent Manner". M.S. Thesis, Biology

Elija Horowitz (2022): "Evolvability is an important trait in the selection of bacteriophages for therapeutic use". M.S. Thesis, Biology

Armando Vasquez. (2022): "A network approach to investigating SBWRKY10's role sorghum's sugar cane aphid resistance". M.S. Thesis, Biology

Bessinger, K. E. (2018): "Assessing the Mediating Effect of Obesity-Linked SNPs in Nuclear Mitochondrial Genes on Exercise-Enhanced Insulin Sensitivity". M.S. Thesis, Biology

Burkenroad, A. (2013): "A Common Model for Phospho-regulation of Pexophagy and Mitophagy Receptors in Yeast". M.S. Thesis, Biology

Boz / SDSU Graduate School of Public Health M.S. Environmental Health Program

Gong, Sylvia (2022): "GenX-induced embryotoxicity and altered transcriptomics in *Danio rerio*" (Thesis co-Chair)

Vu, Jeanne (2022): "Effect of PFOA-replacement chemical GenX on brain gene expression in female and male *D. melanogaster*" (Thesis co-Chair)

Feng, Zuying (2022): "Effects of GenX on *C. elegans* gene expression, protein aggregation and life span" (Thesis co-Chair)

Boz Life Science Research and Teaching Institute / UCSD Academic Internship (AIP197) Research Mentorship

Carelli, Emma. "Using Psul (BstYI) restriction enzyme to differentiate between black abalone (*Haliotis cracherodii*) and red abalone (*Haliotis rufescens*) cytochrome c oxidase I gene region after polymerase chain reaction."

Galang, Eliza. "Isolation of *Bacillus velezensis*, a strain of bacteria with antimicrobial potential, from the Tijuana River Estuary sediment."

Galang, Elkay. "Isolation and identification of Psychrobacter species with phenol and polycyclic hydrocarbon degradation potential from the Tijuana River Estuary."

Martinez, Victor. "Isolation of chloramphenicol-resistant bacteria and metagenomic characterization of pathogenic bacteria in a public recreational park, Chula Vista, California."

Quick, T.: "Qiagen™ DNeasy PowerSoil Pro Kit leads to detection of *Orzyias latipes* cytochrome oxidase c gene in environmental DNA water samples (2022)

Le, J.: "Exposure effects of water from a Mexico-US border site in the Tijuana River Estuary on survival, morphology, heart rate, and hatching success during medaka embryo development (2022)

Zipkin, L.: "Increased magnesium concentration up to 4 mM improves environmental DNA PCR amplification using universal primers targeting the cytochrome c oxidase I gene" (2023)

Boz Life Science Research and Teaching Institute Research Mentorship

Lindsey, G.: "Metagenomics and Epigenetic of female and male fruit flies across their lifespan" (2021-present)

Vasquez, A.: "eDNA and whole genome sequencing of endangered Black and White Abalone along the Southern California coast" (2022-present)

Lehmeidi, M.: "Virtual, hybrid, and post-covid in-person pre-college STEM research immersion program assessment" (2019-present)

Malhotra, N.: "Phylogenetics and soil-associated metagenomics of *Arbutus unedo*" (2021-present)

Sawaya, A. "Ecological and human health risk assessment of Tijuana River Estuary" (2020-present)

Engelhart, D. and Vu, J.: "Gender-specific stress-coping mechanisms and gene expression in Fruit Fly heads (*Drosophila melanogaster*)" (2018-present)

Feng, Z.: "Protein Aggregation during stress and Aging in *C. elegans*" (2017-present)

Vu, J.: "Phylogenetics of Shaw's Agave (*Shawii shawii*) and soil Microbial diversity at Cabrillo Point Loma National Monument" Project in collaboration with Cabrillo National Monument at Point Loma (2017-2021).

Gong, S.: "GenX effect on gene expression during zebrafish early embryogenesis" (2019-present)

Witte, C.: "Comparative fate and transcriptional record of skin appendages RNA among mammalian species" (2021-present)

UCSD Undergraduate Research Project Mentorship

Salem Yohannes (BASF Program): "Heat-induced metabolic stress in female and male *D. melanogaster*". (04/2021 – Present); *Mentor*

UCSD Dream Scholarship Program Student Sponsorship. Jeeyoung Park: "Gender-Specific Differential Gene Expression of Fruit Fly (*Drosophila Melanogaster*) Brains". (2017-2018); *Faculty Advisor*

Gong, Sylvia: "Yeast Intelligence". Laboratory Volunteer Project (2017-2018). *Mentor*

Zuying Feng: "Protein Aggregation during stress and Aging in *C. elegans*". Laboratory Volunteer Project (2017-2018). *Mentor*

Liu, Sophie:" Self-evaluation in undergraduate biology laboratory classes correlate with instructor's assessment but reveal systemic bias". UCSD instructional research (2017-2021). *Faculty Advisor*

UCSD Undergraduate Faculty Advisor: Academic Internship Program

Guo, Jay (2021). "Association Between Periodontal Disease and Sleep Quality"

Lin, Wen-Ting (2017). "The Inductive Role of Orx/Hcrt-PVT neural transmission in drug-seeking behavior"

Westeinde, Elena (2017). "An Introduction to Brain-Computer Interfaces"

Westeinde, Elena (2016). "An Orexin System"

Mihaly, Anna (2017): "The Viability of Medical Marijuana as an Anxiety Treatment Related to its Epigenetic Effects"

Goubin, Fan (2016). "The Prospect of Adult Stem Cells Transplantation as a Treatment for Dry Eye Syndrome"
Gong, Sylvia (2016): "CRISPR/Cas System"
Gong, Sylvia (2016): "Mechanisms and Exceptions to the 12/23 Rule"
Lemus, Maria A. (2014): "Characterization of Mouse Trophoblast Stem Cells..."
Yao, Chuqing (Fall 2011). Project title: "Linking Herpes Simplex Virus to Alzheimer's Disease..."

UCSD Undergraduate Students – Medical School and Graduate Program Advising (2010-present)

Counseled and advised numerous UCSD undergraduate science majors on how to select and apply to medical and/or graduate programs

Pre-college Research Immersion students Mentorship:

Olander, Natalie and O'Connell, Katie: "Genetics and Chemistry of Irish Strawberry (*Arbutus unedo*): were all of the Linnaeus' taste buds functional?". Laboratory Volunteer Project. (2018-present).

Step-up Biotech Laboratory Technician Program

San Diego City College, San Diego, CA (08/2010 -12/2010): Mentored ten students enrolled in biotechnology laboratory technician certificate program to include (a) tutoring in math, biology, chemistry, and genetics / biotechnology, (b) development of research skills and (c) career development planning and job search assistance (including interviewing and job readiness skills). All students successfully completed the biotechnician certificate program.

Selected Presentations

Innovative STEM research and education symposium: "The STEM paradox: let them play early (and often)!" Boz Life Science Research and Teaching Institute & UCSD Division of Extended Studies, San Diego. 10/2022

Environmental Science Research and Innovative Stem Education Virtual Seminar Symposium: "Community-based research immersion as a metric for diversity and success in STEM". Seminar symposium organizer and keynote speaker. Boz Life Science Research and Teaching Institute, San Diego. 06/2021

"In-Vivo Biosciences: 17-minutes of Science Program" guest speaker (Q/A format). The importance of a comprehensive research immersion experience for pre-college and college students". 05/2021

San Diego Cloudcast (podcast) "Spotlight on the Community" Program guest: "Underrepresented students thrive in a research-rigorous immersion program". San Diego (08/2020)

Southern California Society of Environmental Toxicology and Chemistry meeting: "Early education life science community-based research immersion program: long-term commitment to ecological and human health risk assessment". (03/2020)

"King Corn". Media Arts Center San Diego Digital Gym; Fresh Cinema: Discover the Science of Healthy eating on Big Screen. Community Lecture. San Diego, CA. 2017

"It is All About Numbers". UCSD BSSA Last Lecture Seminar Series. UCSD, CA. 2016

"Numbers tell the best stories". STEAM Career Days: Biology Research Scientist Presentation. Jefferson Elementary School, San Diego, CA. 2016.

“A sequential and cumulative record of cellular responses stored in human hair and nail, and digitized through RNA Sequencing”. Gates Foundation meeting, WA, USA 2013.

“Genomic and physiological responses to strong selective pressure during late organogenesis: how natural fish populations cope with persistent pollution”. *Auckland University; Waikato University, New Zealand. 2013*

“Effects of pollution exposures on physiology, morphology, histology, chemistry and gene expression throughout embryogenesis in sensitive and resistant embryos”. *Cawthron Institute, Nelson, New Zealand. 2013.*

“9,000+ things your nails say about you”. Research Day, UCSD Division of Dermatology. 2013.

“Development and Population Divergence.”. UCSD Division of Biology, Department of Ecology, Behavior and Evolution Seminar. San Diego, CA 2009.

“Physiology, Morphology, and Gene Expression of Sensitive and Resistant *Fundulus Heteroclitus* Embryos”. SETAC Annual Meeting, New Orleans, LA. 2009.

“Synergistic effects of representative PAH-type CYP1A inducers and inhibitors on morphology, physiology and gene expression in developing embryos”. Superfund Basic Research Program Annual Meeting. Pacific Grove, California, December 7-9, 2008.

"Gene Expression, Physiology, Morphology, and Chemical Exposures on Sensitive and Resistant Embryos". SETAC; Tampa, FL, 2008.

“Physiology, morphology and chemical exposures in sensitive and resistant embryos”. Superfund Basic Research Program National Scientific Meeting. Durham, NC 2007.

“Developmental gene expression within and among natural *Fundulus* populations”. Superfund Basic Research National Meeting. San Diego, CA 2007.

“Embryonic gene expression among natural *Fundulus* populations: sensitivity and resistance to pollution”. Society of Environmental Toxicology and Chemistry 26th Annual Meeting. Baltimore, MD, 2005

“Assessment of Water and Sediment Quality Effects at Three Sites in Mission Bay Using a Multi-Species Approach”. Southern California Society of Environmental Toxicology and Chemistry Annual Meeting, Long Beach, CA. 2002.

“Effects of Water and Sediments Assessed at Three Sites in Mission Bay, California Using Blue Mussel and Sea Urchin Reproductive Toxicity Bioassays”. Southern California Chapter Society of Toxicology annual meeting. La Jolla, CA 2001.

“Mechanisms of Toxicity and Copper Regulation in Mussels”. AMEC Earth and Environmental, Sorrento Valley, CA, 2001.

Service and Outreach

- Boz Life Science Research and Teaching Institute: pre-college research immersion program. San Diego Science Center, SD. 06/2019-Present
- UCSD Undergraduate Life Science Journal Club - Mentor 01/2024 – Present
- Neurobiology Virtual Research Experience – online course for pre-college underrepresented students from US and Ghana. Boz Institute, San Diego (10/2020)
- “Bridge-to-Employment” in Life Sciences Industry Program Development - in partnership with Rady Children’s Hospital, Janssen, Biocom Institute, California Endowment Foundation, and San Diego School District – 05/2018 – Present

- STEAM Career Days: Biology Research Scientist Presentation: “Numbers tell the best stories”. Jefferson Elementary School, San Diego, CA. 03 / 2016
- Biotechnology Immersion Course. Lecture. CBIZ & MHC, San Diego, CA. June 2015
- Biocom Institute Teacher Fellows Program, Volunteer (providing teacher-shadowing opportunities for local K-12 STEM teachers) (2015-Present)
- San Diego Festival of Science & Engineering Volunteer (2013-16)
- CSBI (Coalition of State Bioscience Institutes) STEM Voice national video competition for middle and high school students - Judge (2015 - Western Region Judge, 2014 - National Judge)
- National University Career Development Alumni Presentation Organizer – Nursing (2014)
- Mayor Kevin Falconer's Office, Mayor’s TEDx talk - Designed and supplied materials for science experiment (2014)
- Grant Middle School, Science Olympiad Coach (2012/2013)
- Veteran’s Initiatives Committee Member, Biocom Institute’s Veteran Committee and Career Mentoring Program provides mentoring and training programs for veterans seeking employment in the local biotechnology industry. The Institute partners with local companies providing internships and programs promoting veteran’s employment within the life science industry in San Diego. (2014 – present)
- Step-up Biotech Laboratory Technician Program: San Diego City College, San Diego, CA Mentored students enrolled in biotechnology laboratory technician certificate program; all students successfully completed the biotechnician certificate program. (08/2010 -12/2010)
- Co PI on NSF ATE grant proposal with Cuyamaca College for “Fatigues to Lab Coats”, a military veteran biotech program (2014)
- San Diego Naval Hospital - Anatomy and Physiology advisor for military active duty and veteran personnel transitioning into nursing and healthcare careers (2011-2013)
- “Girls in Science” Environmental Biology Summer Program Director, Brunswick Community College (2003)

Honors and Awards

- *Sigma Xi* Scientific Research Honor Society (full member) 2023
- Revelle College, UCSD: Most Influential Faculty Member Award 2023
- UCSD Panhellenic Association: Distinguished Professor Award 2018, 2019
- National University “Pathway to Success” Teaching Award 2016
- Mediterranean Institute for Life Science Symposium Fellowship Recipient – Split, Croatia (2007)
- North Carolina Universities (Duke, University of North Carolina Chappell Hill and North Carolina State University) Professional Development Workshop Fellowship Recipient – North Carolina State University (2006)
- Society of Environmental Toxicology and Chemistry 26th Annual Meeting, 2nd Place Student Poster Presentation - Baltimore, MD (2005)

Professional Affiliations & Membership

Society of Investigative Dermatology (2012-present)

Society of Environmental Toxicology and Chemistry (2003 – present)

Superfund Basic Research Program (2003-present)

Society of Environmental Toxicology and Chemistry, Southern California Chapter (2000 – Present)

Society of Toxicology, Southern California Chapter (2000 – Present)

NAUI Advanced Scuba Diver Certified; AAUS Scuba Diver Certified