

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

Education

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

Professional Activities

President and CEO, Boz Life Science Institute (www.bozinate.org) 2018-present
Lecturer and Research Associate, University of California San Diego 2009-present
Consultant, Biotech Course Development, Biocom, San Diego, CA 2015-2018
Data Analyst, Biocom, San Diego, CA 2014-2018
Bioassay Laboratory Technician, AMEC, Inc., San Diego, CA 2001-2002
Research Assistant, Rigel, Inc., South San Francisco, CA 1999-2000

Academic Appointments

Lecturer, University of California San Diego 2010-present
Division of Biological Sciences
Courses: Genetics, Metabolic Biochemistry,
Recombinant DNA Techniques, Biochemical Techniques,
Molecular Methods in Ecology and Evolution
Postdoctoral Fellow, University of California San Diego 2012-2013
Institute of Genomic Medicine; Division of Dermatology
Stem Cell Program
Postdoctoral Associate, University of California San Diego 2009-2010
Division of Biological Sciences
Section of Ecology, Behavior and Evolution
Research Associate, Department of Environmental and Molecular 2003-2009
Toxicology, North Carolina State University
Marine Quest Science Program Director, University of North Carolina, 2003
Wilmington, NC

Publications

- Gallant, T.B, Picciotto, M, **Bozinovic, G.** and 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., and 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.** and 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 (other)

- 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

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:

- 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>

Publications (in preparation)

- Bozinovic, G.**, Shea, D., Hinton, D.H., and Oleksiak, M.F. "Pollution Effects on Sensitive and Resistant Embryos: Integrating Structure and Function with Gene Expression." *PNAS Plus*.
- Bozinovic, K., Liu, Sophie and **Bozinovic, G.**" Self-evaluation in undergraduate biology laboratory courses correlate with instructor's assessment but reveal systemic bias". *Journal of Biochemistry Education*
- Vu, Jeanne, Gong, S., and **Bozinovic, G.** "Phylogenetics of Shaw's Agave (*Shawii shawii*) and Soil Microbial Diversity at Cabrillo Point Loma National Monument". *Molecular Ecology*
- Parris, J., Gallant, T.B., **Bozinovic, G.**, and Tour, E. "Influencing Writing Integrity: An Experiment in Biological Sciences". *Journal of Biochemistry and Molecular Biology Education*.
- Eri Lynn T. Heinrichsen, E.T., **Bozinovic, G.**, Song, L., Totri C.R., Gutierrez, J., Lefkowitz, K.G., and Yu, B.D.:"RNA remnants in human nail and hair tissue survive under ambient conditions for sequencing" *Journal of Investigative Dermatology*
- Bozinovic, G.** Feng, Z., Vu, J., and Oleakisak, M.F. "Metabolic gene expression of pollutant resistant, sensitive, and hybrid *Fundulus heteroclitus* embryos during late organogenesis." *Heredity*.

Mentoring

Boz Life Science Research and Teaching Institute Research Projects

- Englehart, Darcy: "Gender-specific stress-coping mechanisms and gene expression in Fruit Fly heads (*Drosophila melanogaster*) (2018-present)
- Witte, C. and Bozinovic, K: "Yeast Intelligence" (2017-Present).
- Zuying Fang: "Protein Aggregation during stress and Aging in *C. elegans*". (2017-present)
- Vu, Jeanne: "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-present).
- Vu, Jeanne: "Genetics and Chemistry of Irish Strawberry (*Arbutus unedo*): were all of the Linnaeus' taste buds functional?". (2017-present)
- Witte, C. Comparative fate and transcriptional record of skin appendages RNA among several mammalian species". (2017-Present)
- Villareal, C and Amulae, A. Host-pathogen interactions: mechanism of viroid infection in *Nicotiana Benthamiana* (2019 - present)
- Gong, S. Chemical Assessment of Forrester Creek Water samples and estrogenic effect on zebrafish early embryogenesis. (2019-present)

UCSD Undergraduate Research Projects

- UCSD Dream Scholarship Program Student Sponsorship. Jeeyoung Park: "Gender-Specific Differential Gene Expression of Fruit Fly (*Drosophila Melanogaster*) Brains" (2017-Present)
- Liu, Sophie:" Self-evaluation in undergraduate biology laboratory classes correlate with instructor's assessment but reveal systemic bias". UCSD instructional research. (2017-present).

UCSD Graduate Faculty Committee Member and Advisor

- 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

UCSD Undergraduate Faculty Advisor: Academic Internship Program

Wen-Ting Lin (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"

Maria A. Lemus (2014): "Characterization of Mouse Trophoblast Stem Cells and characterizing the expression of knockout and transgenic placental phenotypes *in vitro* vs. *in vivo*"

Chuqing Yao (Fall 2011). Project title: "Linking Herpes Simplex Virus to Alzheimer's Disease: Prevention and Treatment".

National University Graduate Master's Thesis Committee Member

"Microarray Gene Expression Analysis of Sensitive and Resistant Natural Populations during late organogenesis" – PI and committee chair

"Effects of pH on Aflatoxin Induction: *aflR* and *aflO* Gene Expression Analysis" – committee member

"A Comparison of Methods Utilized to Demonstrate Metanotroph Diversity and Function in Soil Samples" – committee member

"A Proposed Model to Determine if Glyphosate-Exposed Glycine (Max.) Merr. at 13.5% Moisture Seed Stage Shows Gene Expression Changes in RS2, RS3, and LPA1" – committee member

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

Bozinovic, G. "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

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

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

Bozinovic, G., Sit, T., Hinton, D., DiGuilio, R., and Oleksiak, M.F. "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*

- Bozinovic, G.**, Shea, D., Hinton, D.H., and Oleksiak, M.F. "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.
- Li, C and **Bozinovic, G.** "9,000+ things your nails say about you". Research Day, UCSD Division of Dermatology. 2013.
- Bozinovic, G.** K. Lefkowitz, C. Cowing-Zitron, B. D. Yu. "Generation of a small RNA library from normal human nails reveals nail-selective expression of genes implicated in psoriasis. SID Annual Meeting, Raleigh, NC 2012.
- Bozinovic, G.** K. Lefkowitz, C. Cowing-Zitron, B. D. Yu. "Generation of a small RNA library from normal human nails reveals nail-selective expression of genes implicated in psoriasis. SID Annual Meeting, Raleigh, NC 2012.
- Bozinovic, G.** "Development and Population Divergence.". UCSD Division of Biology, Department of Ecology, Behavior and Evolution Seminar. San Diego, CA 2009.
- Bozinovic, G.** "Physiology, Morphology, and Gene Expression of Sensitive and Resistant *Fundulus Heteroclitus* Embryos." SETAC Annual Meeting, New Orleans, LA. 2009.
- Bozinovic, G.**, Battle, L, Di Giulio, R, and Oleksiak, M: "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.
- Bozinovic, G.**, Shea, D., and Oleksiak, M. "Gene Expression, Physiology, Morphology, and Chemical Exposures on Sensitive and Resistant Embryos." SETAC; Tampa, FL, 2008.
- Bozinovic, G.** "Physiology, morphology and chemical exposures in sensitive and resistant embryos." Superfund Basic Research Program National Scientific Meeting. Durham, NC 2007.
- Bozinovic, G.** "Developmental gene expression within and among natural *Fundulus* populations." Superfund Basic Research National Meeting. San Diego, CA 2007.
- Bozinovic, G.** "Embryonic gene expression among natural *Fundulus* populations: sensitivity and resistance to pollution." Society of Environmental Toxicology and Chemistry 26th Annual Meeting. Baltimore, MD, 2005
- Bozinovic, G.** "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.
- Bozinovic, G.** "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.
- Bozinovic, G.** "Mechanisms of Toxicity and Copper Regulation in Mussels". AMEC Earth and Environmental, Sorrento Valley, CA, 2001.

Service and Outreach

- "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

- UCSD Panhellenic Association: Distinguished Professor Award 2017-2018 (05.25.2018)
- National University "Pathway to Success" Teaching Award 2016 (05.13.2016)
- 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

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