

Jeffrey Miller

PhD Candidate, Pharmacology and Toxicology, University of California-Davis

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EDUCATION:

University of California-Davis, Ph.D., Pharmacology and Toxicology expected August 2018

- Designated Emphasis: Organism-Environment Interactions

Saint Cloud State University, MS, Cell and Molecular Biology May 2011

- Designated Emphasis: Aquatic Toxicology

Minnesota State University-Moorhead, BA, Ecology and Evolutionary Biology May 2009

- Minor in Geosciences

RESEARCH:

I investigate how wild populations respond to human-altered environments through physiology and evolution by linking genotype and gene-expression data to whole-organism phenotypes.

PUBLICATIONS:

Miller J., Nacci, D., Champlain, D., Proestou, D., Whitehead, A. Gene expression responses to Benzo [a] Pyrene in PCB and PAH resistant populations of *Fundulus heteroclitus*. In preparation.

Miller J., Clark, B., Reid, N., Nacci D., Champlain, D., Whitehead A. Genetic Architecture of Pollution Resistance in Parallel Populations of Killifish. In preparation.

Miller J., Reid N., Nacci D., Whitehead A. Meiotic Map and Synteny Analysis of the *Fundulus heteroclitus* Genome. In preparation.

Rochman, C., Tahir, A., Williams, S., Baxa, D., Lam, R., Miller, J., Teh, F.C., Werorilangi, S., Teh, S. J. (2015) Plastic in seafood: Plastic debris in fish and bivalves sold for human consumption. *Scientific Reports* 5, 14340

Dubansky, B., Whitehead, A., Miller, J. T., Rice, C. D., & Galvez, F. (2013) Multitissue molecular, genomic, and developmental effects of the deepwater horizon oil spill on resident Gulf killifish (*Fundulus grandis*). *Environmental Science and Technology*, 47, 5074–5082.

Kolok, A., Miller, J., Schoenfuss, H. (2012) The mini mobile environmental monitoring unit: a novel bio-assessment tool. *Journal of Environmental Monitoring* 14 (1), 202-208

Wisenden, B., Karst, J., Miller, J., Miller, S.D. Fuselier, L. (2008) Anti-Predator Behavior in Response to Chemical Cues in *Umbra limi*. *Environmental Biology of Fishes* 82: 85-92

PLATFORM PRESENTATIONS:

Miller, J.T., Clark, B., Champlin, D., Nacci, D., Whitehead, A.W. May 2018. Genetic Architecture of Pollution Resistance in Multiple Populations of Killifish. Genetics Society of America: Population, Evolution, and Quantitative Genetics.

Miller, J.T., Cherr, G., Whitehead, A. April 2015. 'Aquatic Copper-Oxide Nanoparticle Exposure May Target Osmoregulatory Plasticity of Fish from Salinity Variable Environments.' Northern California Society of Environmental Toxicology and Chemistry.

Miller, J.T., Martinovic, D., Bartel, SE., Schoenfuss, HL. May 2011. 'Abiotic Influences on Estrogenic Biomarker Expression in Riverine Conditions of Exposure to Treated Wastewater.' International Conference on Pollutant Responses in Marine Organisms.

Miller, J.T., Martinovic, D., Bartel, SE., Schoenfuss, HL. March 2011. 'How does treated wastewater effluent affect the biology of fish in receiving streams?' Minnesota Pollution Control Agency Wastewater Operations Conference.

Miller, J.T., Martinovic, D., Bartel, SE., Schoenfuss, HL. March 2011. 'Bioassessment of Wastewater's Estrogenic Impacts: Various Methods of Exposure Can Biomarkers Be Altered Differentially?' Mid-West Society of Environmental Toxicology and Chemistry.

POSTER PRESENTATIONS:

Miller, J.T., Clark, B., Champlin, D., Nacci, D., Whitehead, A.W.(2017) 'The Genetic Architecture of Pollution Resistance Among Convergent Populations of Killifish (*Fundulus heteroclitus*)'. National Meeting for Society for Environmental Toxicology and Chemistry.

Miller, J.T., Cherr, G., Whitehead, A. (2014). 'Impairment of Killifish Osmoregulatory Function by Aquatic Nano-Copper Oxide Exposure'. Western Society of Naturalists Annual Meeting.

Miller, J.T., Pilcher, W., Champlin, D., Proestou, D., Nacci, D., Whitehead, A.W. (2012). 'Genomic responses to PAHs in 2 pollution tolerant populations of *Fundulus heteroclitus*.' National Meeting for Society for Environmental Toxicology and Chemistry.

Miller, J.T., Martinovic, D., Bartel, S. E., Schoenfuss, H. L. (2010). 'Quantifying Exposure & Effects of Endocrine Active Chemicals in the Environment through Parallel Field and Laboratory Studies of Bioindicators in *Pimephales promelas*.' National Meeting for Society of Environmental Toxicology and Chemistry.

AWARDS AND FUNDING:

National Institute of Environmental Health Sciences Predoc Training Fellowship (2016)

National Science Foundation GK-12 Graduate Fellowship (2014-2015)

Western Society of Naturalists Travel Award (2015)

Society of Environmental Toxicology and Chemistry Research Scholarship (2014)

George Freiderich Wildlife Protection Fund Fellowship (2013)

Society for Environmental Toxicology and Chemistry Attendance Travel Award (2012)

EMPLOYMENT AND TEACHING EXPERIENCE:

Instructor - Data and Software Carpentry Workshops

- Genomics (R/Bash), California State University, Monterey Bay (March 22-23 2018)
- Python (Python/Git/Bash), Minnesota State University (October 27-28 2017)

Teaching Assistant - University of California, Davis

- Analyzing Next-Generation Sequencing Data Workshop (Summer 2017 and 2018)

National Science Foundation Teaching Fellow - Bodega Marine Laboratory

- Coastal, Atmospheric, and Marine Environmental Observing Studies K-12 Education Program Coordinator (Fall 2014-Spring 2015)

Graduate Teaching Assistant - University of California, Davis

- Introduction to Biology: Essentials of Life on Earth (Fall 2017-Current)
- Introduction to Biology: Principles of Ecology and Evolution (Fall 2016-2017)
- Biological Effect of Toxicants (Fall 2014)

Graduate Teaching Assistant - Louisiana State University

- Introduction to Biology for Science Majors (Fall 2011-Spring 2012)

Graduate Research Assistant – St. Cloud State University

- Aquatic Toxicology (Spring 2010-Fall 2011)

Biological Science Technician – United States Park Service (Summer 2010)

Wilderness Technician – United States Forest Service (Summer 2008 and 2009)

Outdoor Education Coordinator - Student Conservation Assoc. (Winter 2007-Summer 2008)

AFFILIATE MEMBERSHIPS:

UC Davis Center for Population Biology (Winter 2017-Current)

UC Davis Data Science Initiative (Winter 2017-Current)

UC Davis Coastal and Marine Sciences Institute (Winter 2016-Current)

COMMITTEES AND SERVICE:

UC Davis Bodega Marine Laboratory Outreach and Marine Ecology Educator (2013-Current)

UC Davis Pharmacology and Toxicology Graduate Group - Admissions Committee (Winter 2013)

NorCal Society for Environmental Toxicology and Chemistry - Board of Directors (2014-2015)

Archbold Biological Station - Volunteer Herpetology and Stream Ecology (Summer 2011)

Student Conservation Association - Outdoors Education Program Coordinator (Winter 2008)

REFERENCES:

Dr. Andrew Whitehead – University of California, Davis
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Dr. Heiko Schoenfuss - Saint Cloud State University
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Dr. Brian Wisenden - Minnesota State University-Moorhead
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Chair of the Biosciences Department
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