

Dr. Amy Zimmer-Faust

Microbiologist

Microbiology Department

Southern California Coastal Water Research Project

Education

Ph.D., Environmental Science and Engineering, University of California, Los Angeles, 2015

M.S., Environmental Health Sciences, University of California, Los Angeles, 2012

B.S., Aquatic Biology, University of California, Santa Barbara, 2009

Areas of Expertise

Amy Zimmer-Faust is a scientist at SCCWRP with experience in the application and assessment of novel indicators for microbial source identification. Her dissertation research, conducted at University of California at Los Angeles, focused on evaluating factors affecting the persistence and fate of microbial contaminants and indicators in coastal waters and sediments. Her post-doctoral research, conducted at the USEPA's Western Ecology Division, focused on application of statistical modeling and microbial source tracking tools to improve understanding of microbial pollution dynamics in estuarine watersheds.

Professional Experience

Postdoctoral Researcher/Environmental Health Scientist, National Health and Environmental Effects Research Laboratory (NHEERL), Western Ecology Division, USEPA, Newport, OR.
2016-2018

Doctoral Researcher, Civil and Environmental Engineering Department, University of California at Los Angeles, CA. 2012-2015

Environmental Scientist, Resource District of the Santa Monica Mountains, CA. 2012-2014

Environmental Science Intern, Larry Walker Associates, Santa Monica, CA. Summer 2011

Research Assistant, Maritime Environmental Research Center, Solomons, MD. 2010-2011

Graduate Trainee, UC Coastal Toxicology Course and Retreat, University of California, Davis, CA.
Fall 2009

Honors and Awards

U.S. Environmental Protection Agency Division Performance Award (2017)

U.S. Environmental Protection Agency Incentive Honor Award (2017)

U.S. Environmental Protection Agency On the Spot Service Award (2017)

NIH Grant to attend Quantitative Microbial Risk Assessment Institute (QMRA), Michigan State (2016)

Dissertation Year Fellowship, UCLA (2015)

UC Mexus Dissertation Research Grant (2015)

NextProf Fall Engineering Workshop Grant, University of Michigan (2015)

Travel Grant, Institute of the Environment, UCLA (2013, 2014)

ESE Program Fee Grant, UCLA (2012, 2013)

UCLA Regents Stipend, UCLA (2011, 2012)

UCLA Regents Registration Fee Grant, UCLA (2011, 2012)

Environmental Health Sciences/ ARCO Fellowship, UCLA (2009, 2010, 2011)

Senior Honors Research Award, UCSB (2009)

Coastal Fund Undergraduate Research Grant, UCSB (2008)

Journal Articles

Li, X., M. Sivaganesan, C.A. Kelty, P. Clinton, J.R. Reichman, Y. Johnson, W. Matthews, S. Bailey, O.C. Shanks, A.G. Zimmer-Faust. 2019. Large-scale implementation of standardized quantitative real-time PCR fecal source identification procedures in the Tillamook Bay Watershed. *PLoS One*

DOI:10.1371/journal.pone.0216827.

Zimmer-Faust, A.G., C.A. Brown, A. Manderson. 2018. *Statistical models of fecal coliform levels in Pacific Northwest estuaries for improved shellfish harvest area closure decision making. Marine Pollution Bulletin* 137:360-369.

Zimmer-Faust, A.G., V. Thulsiraj, C. Marambio-Jones, Y. Cao, J.F. Griffith, P.A. Holden, J.A. Jay. 2017. *Effect of freshwater sediment characteristics on the persistence of fecal indicator bacteria and genetic markers within a Southern California watershed. Water Research* 119:1-11.

Riedel, T.E., A.G. Zimmer-Faust, V. Thulsiraj, T. Madi, K.T. Hanley, D.L. Ebentier, M. Byappanahalli, B. Layton, M.R. Raith, A.B. Boehm, J.F. Griffith, P.A. Holden, O.C. Shanks, S.B. Weisberg, J.A. Jay. 2014. *Detection limits and cost comparisons of human-and gull-associated conventional and quantitative PCR assays in artificial and environmental waters. Journal of Environmental Management* 136:112-120.

Hamilton, K.A., Chen, A., Johnson, E., Gitter, A., Kozak, A., Niquice, A., Zimmer-Faust, A.G., Weir, M. H., Mitchell, J., Gurian, P.L. 2018. *Salmonella risks due to consumption of aquaculture-produced shrimp. Microbial Risk Analysis* 9: 22-32.

Hafeznezami, S. Zimmer-Faust, A.G., Jun, D., Rugh, M.B., Haro, H.L., Park, A., Suh, J. W., Najm, T., Reynolds, M. D., Davis, J.A., Parhizkar, T., Jay, J.A. 2017. *Remediation of Groundwater Contaminated with Arsenic Through Enhanced Natural Attenuation: Batch and Column Studies. Water Research* 122: 545-556.

Thulsiraj, V., Zimmer-Faust, A.G., Jay, J.A. 2017. *Use of viability-based methods for improved detection of recent fecal contamination in a coastal watershed near Tijuana, Mexico. Water, Air, & Soil Pollution* 228(2): 63.

Hafeznezami, S., Zimmer-Faust, A.G., Davis, J., J.A. Jay. 2016. *Adsorption and Desorption of Arsenate on Sandy Sediments from Contaminated and Uncontaminated Saturated Zones: Kinetic and Equilibrium Modeling. Environmental Pollution* 215: 290-301.

Sanchez, H. M., Echeverria, C., Thulsiraj, V., Zimmer-Faust, A., Flores, A., Laitz, M., Healy, G., Mahendra, S., Paulson, S. E., Zhu, Y., Jay, J. A. 2016. *Antibiotic Resistance in Airborne Bacteria near Conventional and Organic Beef Cattle Farms in California, USA. Water, Air, & Soil Pollution* 227(8): 280.

Riedel, T.E., Thulsiraj, V., Zimmer-Faust, A.G., Dagit, R., Krug, J., Hanley, K.T., Adaamek, K., Ebentier, D. L., Torres, R., Cobian, U., Peterson, S., Jay, J.A. 2015. *Long-term monitoring of molecular markers can distinguish different seasonal patterns of fecal indicating bacteria sources. Water Research* 71: 227-243.

Zimmer-Faust, A.G., Thulsiraj, V., Ferguson, D., Jay, J. 2014. Performance and specificity of the Cov-IMS/ATP method for rapid detection and enumeration of enterococci in coastal environments. *Applied and Environmental Microbiology* 80(9): 2705-2714.

Zimmer-Faust, A.G., Tamburri, M., Ambrose, R. A. 2014. Evaluation of approaches to quantify total residual oxidants in ballast water management systems employing chlorine for disinfection. *Water Science and Technology* 70(10): 1585-1893.

Technical Reports

Steele, J.A., D. Ebentier, A.G. Zimmer-Faust, J.F. Griffith, K.C. Schiff. 2019. Los Coches Creek Microbial Source Tracking Study. Technical Report 1087. Southern California Coastal Water Research Project. Costa Mesa, CA.

Schiff, K.C., J.F. Griffith, J.A. Steele, A.G. Zimmer-Faust, J.A. Soller. 2019. Inner Cabrillo Beach Microbial Source Tracking and Quantitative Microbial Risk Assessment (QMRA). Technical Report 1068. Southern California Coastal Water Research Project. Costa Mesa, CA.