

# Dr. John Griffith

Department Head

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## Education

Ph.D., marine environmental biology, University of Southern California, 2006

B.S., biology, University of Southern California, 1995

B.S., environmental studies, University of Southern California, 1995

## Professional Experience

Department Head, Southern California Coastal Water Research Project, Costa Mesa, CA. 2010-present

Microbiologist, Southern California Coastal Water Research Project. Westminster, CA. 2001-2010

Research Assistant, Marine Biology Research Section, University of Southern California. Los Angeles, CA. 2000-2001

Doctoral Fellow, NSF Integrative Graduate Education and Training, Environmental Studies, Policy and Engineering - Sustainable Cities Program, University of Southern California. Los Angeles, CA. 1999-2000

Teaching Assistant, University of Southern California. Los Angeles, CA. 1995-1999

Trainee, USC Sea Grant Program. Los Angeles, CA. 1995-2001

Laboratory Assistant, University of Southern California. Los Angeles CA. 1993-1995

# Honors and Awards

US EPA Scientific and Technological Achievement Award 2014  
National Science Foundation IGERT Doctoral Fellowship (1998-2000)  
LAS Dean's Advisory Board, University of Southern California (1994-1997)  
LAS Dean's List, University of Southern California (1994, 1995)  
Phi Sigma National Biological Honor Society, Chapter President (1993-1994)  
Dean's List, University of California, Irvine (1993)  
President's Honor Roll, Fullerton College (1992)  
Golden Key National Honor Society

# Professional Societies and Certifications

American Society for Microbiology  
Association for the Sciences of Limnology and Oceanography  
The Oceanographic Society  
International Water Association

# Journal Articles

Grimm, S.L., J.A. Rothman, W.J. Bradshaw, K. Langlois, J.A. Steele, J.F. Griffith, J.T. Kaufman, K.L. Whiteson. 2026. Deep metatranscriptomic sequencing data of wastewater from Los Angeles, USA, 2023-2024. *Scientific Data* DOI:10.1038/s41597-025-06475-7.

Zhang, Y., Y. Kong, K. Osborn, E. Tsutakawa, C. Beale, E. Moreno, A. Muhammad, A. Sinacori, V. Tong, L. Tran, D. Velazquez, M.C. De Lucca, N. Bui, A. Casillas, M. Chang, A. Ding, S. Jun, J. Kuo, T. Lakhanpal, J. Lin, J. Vuong, Z. Asnani, R. Chowdhry, A. Espinoza, H. Hill, K. McMillan, M. Cheema, J.F. Griffith, J.A. Steele, C. Dickerson, L. Henning, N. Korir, J.A. Jay. 2026. Elevated Antibiotic Resistance in Escherichia coli from Surface Waters Impacted by Concentrated Animal Feeding Operations in California and Michigan. *Water* DOI:10.3390/w18020207.

Steele, J.A., A.G. Zimmer-Faust, T.J. Clerkin, A. Gonzalez-Fernandez, S.A. Lowry, A.D. Blackwood, K. Raygoza, K. Langlois, A.B. Boehm, R.T. Noble, J.F. Griffith, K.C. Schiff. 2025. Survey of pathogens and human fecal markers in stormwater across a highly populated urban region. *Environmental Science: Processes & Impacts* 27:1354-1367.

Lowry, S.A., J.A. Steele, J.F. Griffith, K.C. Schiff, A.B. Boehm. 2025. Simulated gastrointestinal risk from recreational exposure to Southern California stormwater and relationship to human-

associated Bacteroidales marker HF183. *Environmental Science: Processes & Impacts*  
DOI:10.1039/d4em00577e.

Jimenez, K., Y. Kong, Y. Zhang, D. Ferketic, S.K. Nagori, J. Yang, A.A. Yulo, B. Kramer, O.G. Prado, T. Cason, R. Chowdhry, A. Kemsley, L.M. Espinosa, J.A. Steele, J.F. Griffith, J.A. Jay. 2025. Evaluation of a modified IDEXX method for antimicrobial resistance monitoring of extended Beta-lactamases-producing *Escherichia coli* in impacted waters near the U.S.-Mexico border. *One Health* 20:100997.

Griffith, J.F., J.A. Steele, A. Gonzalez-Fernandez, K.C. Schiff. 2025. Towards quantifying exfiltration from in situ sanitary sewer pipes. *Frontiers in Environmental Science*  
DOI:10.3389/fenvs.2024.1458146.

Steele, J.A., A. Gonzalez-Fernandez, J.F. Griffith, D. Ebentier McCargar, S. Wallace, K.C. Schiff. 2025. Extrapolating empirical measurements of wastewater exfiltration from sanitary sewers to estimate watershed-scale fecal pollution loading in urban stormwater runoff. *Frontiers in Environmental Science* DOI:10.3389/fenvs.2024.1458153.

Schiff, K.C., A. Zimmer-Faust, D. Nguyen, J.F. Griffith, J.A. Steele, D.E. McCargar, S. Wallace. 2024. Using HF183 to Estimate Watershed-Wide Annual Loadings of Human Fecal Pollution from Onsite Wastewater Treatment Systems. *Sustainability* 16:9503.

McLellan, S.L., A. Chariton, A. Codello, J.S. McClary-Gutierrez, M.K. Schussman, E.M. Marzinelli, J.M. O'Neil, E.J. Schott, J.L. Bowen, J.H. Vineis, L. Maignien, C. Lemonnier, M. Perennou, K.S. Gibbs, G.J. Zhou, K.M.Y. Leung, M. Kirs, J.F. Griffith, J.A. Steele, S.E. Wearer, A.L. O'Brien, D. Song, S. Liang, J. Li, L. Airoidi, F.P. Mancuso, P.S. Salomon, A.W. Silva-Lima RC Pereira, A.B. Boehm, E.W.X. Lim, S. Wuertz, E. Fernandez, E. Teira, M.L. Liao, Y.W. Dong, P.D. Steinberg. 2024. Universal microbial indicators provide surveillance of sewage contamination in harbours worldwide. *Nature Water* DOI:10.1038/s44221-024-00315-5.

Rothman, J.A., A. Saghir, A.G. Zimmer-Faust, K. Langlois, K. Raygoza, J.A. Steele, J.F. Griffith, K.L. Whiteson. 2024. Longitudinal Sequencing and Variant Detection of SARS-CoV-2 across Southern California Wastewater. *Applied Microbiology* 4:635-649.

Hinds, J.B., T. Garg, S. Hutmacher, A. Nguyen, Z. Zheng, J.F. Griffith, J.A. Steele, A. Gonzalez Fernandez, K.C. Schiff. 2024. Assessing the defecation practices of unsheltered individuals and their contributions to microbial water quality in an arid, urban watershed. *Science of the Total Environment* 920:170708.

Kelly, R.P., D.M. Lodge, K.N. Lee, S. Theroux, A.J. Sepulveda, C.A. Scholin, J.M. Craine, E.A. Allan, K.M. Nichols, K.M. Parsons, K.D. Goodwin, Z. Gold, F.P. Chavez, R.T. Noble, C.L. Abbott, M.R. Baerwald, A.M. Naam, P.M. Thielen, A.L. Simons, C.L. Jerde, J.J. Duda, M.E. Hunter, J.A. Hagan,

R.S. Meyer, J.A. Steele, M.Y. Stoeckle, H.M. Bik, C.P. Meyer, E.D. Stein, K.E. James, A.C. Thomas, E. Demir-Hilton, M.A. Timmers, J.F. Griffith, M.J. Weise, S.B. Weisberg. 2024. Toward a national eDNA strategy for the United States. *Environmental DNA* DOI:10.1002/edn3.432.

Rothman, J.A., A. Saghir, S. Chung, N. Boyajian, T. Dinh, J. Kim, J. Oval, V. Sharavanan, C. York, A.G. Zimmer-Faust, K. Langlois, J.A. Steele, J.F. Griffith, K.L. Whiteson. 2023. Longitudinal metatranscriptomic sequencing of Southern California wastewater representing 16 million people from August 2020–21 reveals widespread transcription of antibiotic resistance genes. *Journal of Water Research* 329:119421.

Zimmer-Faust, A.G., J.F. Griffith, J.A. Steele, B. Santos, Y. Cao, L. Asato, T. Chiem, S. Choi, A. Diaz, J. Guzman, D. Laak, M. Padilla, J. Quach-Cu, M. Woo, S.B. Weisberg. 2023. Relationship between coliphage and Enterococcus at southern California beaches and implications for beach water quality management. *Journal of Water Research* 230:119383.

Schiff, K.C., J.F. Griffith, J.A. Steele, A.G. Zimmer-Faust. 2023. Dry and Wet Weather Survey for Human Fecal Sources in the San Diego River Watershed. *Water* 15:2239.

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Kim, S., L.C. Kennedy, M.K. Wolfe, C.S. Criddle, D.H. Duong, A. Topol, B.J. White, R.S. Kantor, K.L. Nelson, J.A. Steele, K. Langlois, J.F. Griffith, A.G. Zimmer-Faust, S.L. McLellan, M.K. Schussman, M. Ammerman, K.R. Wigginton, K.M. Bakker, A.B. Boehm. 2022. SARS-CoV-2 RNA is enriched by orders of magnitude in primary settled solids relative to liquid wastewater at publicly owned treatment works. *Environmental Science Water Research and Technology* 8:757-770.

Wade, T.J., B.F. Arnold, K.C. Schiff, J.M. Colford Jr, S.B. Weisberg, J.F. Griffith, A.P. Dufour. 2022. Health risks to children from exposure to fecally-contaminated recreational water. *PLOS One* DOI:10.1371/journal.pone.0266749.

Zimmer-Faust, A.G., J.F. Griffith, J.A. Steele, L. Asato, T. Chiem, S. Choi, A. Diaz, J. Guzman, M. Padilla, J. Quach-Cu, V. Ruiz, B. Santos, M. Woo, S.B. Weisberg. 2022. Assessing cross-laboratory performance for quantifying coliphage using EPA Method 1642. *Journal of Applied Microbiology* DOI:10.1111/jam.15523.

Ahmed, W., S.L. Simpson, P.M. Bertsch, K. Bibby, A. Bivins, L.L. Blackall, S. Bofill-Mas, A. Bosch, J. Brandão, P.M. Choi, M. Ciesielski, E. Donner, N. D'Souza, A.H. Farnleitner, D. Gerrity, R. Gonzalez, J.F. Griffith, P. Gyawali, C.N. Haas, K.A. Hamilton, H.C. Hapuarachchi, V.J. Harwood, R. Haque, G. Jackson, S.J. Khan, W. Khan, M. Kitajima, A. Korajkic, G. La Rosa, B.A. Layton, E. Lipp,

S.L. McLellan, B. McMinn, G. Medema, S. Metcalfe, W.G. Meijer, J.F. Mueller, H. Murphy, C.C. Naughton, R.T. Noble, S. Payyappat, S. Petterson, T. Pitkänen, V.B. Rajal, B. Reyneke, F.A. Roman Jr, J.B. Rose, M. Rusiñol, M.J. Sadowsky, L. Sala-Comorera, Y.X. Setoh, S.P. Sherchan, K. Sirikanchana, W. Smith, J.A. Steele, R. Sabburg, E.M. Symonds, P. Thai, K.V. Thomas, J. Tynan, S. Toze, J. Thompson, A.S. Whiteley, J.C. Wong, D. Sano, S. Wuertz, I. Xagorarakis, Q. Zhang, A.G. Zimmer-Faust, O.C. Shanks. 2022. Minimizing errors in RT-PCR detection and quantification of SARS-CoV-2 RNA for wastewater surveillance. *Science of the Total Environment* DOI:10.1016/j.scitotenv.2021.149877.

Rothman, J.A., T.B. Loveless, J. Kapcia III, E.D. Adams, J.A. Steele, A.G. Zimmer-Faust, D. Wanless, M.L. Griffith, L. Mao, J. Chokry, J.F. Griffith, K.L. Whiteson, K. Langlois. 2021. RNA Viromics of Southern California Wastewater and Detection of SARS-CoV-2 Single-Nucleotide Variants. *Applied and Environmental Microbiology* 87:e01448-21.

McClary-Gutierrez, J.S., M.C.M. Mattioli, P. Marcenac, A.I. Silverman, A.B. Boehm, K. Bibby, M. Balliet, F.L. de los Reyes III, D. Gerrity, J.F. Griffith, P.A. Holden, D. Katehis, G. Kester, N. LaCross, E.K. Lipp, J. Meiman, R.T. Noble, D. Brossard, S.L. McLellan. 2021. SARS-CoV-2 Wastewater Surveillance for Public Health Action. *Emerging Infectious Diseases* 27:e210753.

Zimmer-Faust, A.G., J.A. Steele, X. Xiong, C. Staley, M.L. Griffith, M.J. Sadowsky, M. Diaz, J.F. Griffith. 2021. A Combined Digital PCR and Next Generation DNA-Sequencing Based Approach for Tracking Nearshore Pollutant Dynamics Along the Southwest United States/Mexico Border. *Frontiers in Marine Science* DOI:10.3389/fmicb.2021.674214.

Diner, R.E., D. Kaul, A. Rabines, H. Zheng, J.A. Steele, J.F. Griffith, A.E. Allen. 2021. Pathogenic Vibrio Species Are Associated with Distinct Environmental Niches and Planktonic Taxa in Southern California (USA) Aquatic Microbiomes. *mSystems* DOI:10.1128/mSystems.00571-21.

Crain, C., K. Kezer, S. Steele, J. Owiti, S. Rao, M. Victorio, B. Austin, A. Volner, W. Draper, J.F. Griffith, J.A. Steele, M. Seifert. 2021. Application of ddPCR for detection of Enterococcus spp. in coastal water quality monitoring. *Journal of Microbiological Methods* DOI:10.1016/j.mimet.2021.106206.

Rothman, J.A., T.B. Loveless, M.L. Griffith, J.A. Steele, J.F. Griffith, K.L. Whiteson. 2020. Metagenomics of Wastewater Influent from Southern California Wastewater Treatment Facilities in the Era of COVID-19. *Microbiology Resource Announcements* 9:e00907-20.

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Gomez-Alvarez, V., N.J. Ashbolt, J.F. Griffith, J.S. Domingo, J. Lu. 2019. Whole-Genome Sequencing

of Four Campylobacter Strains Isolated from Gull Excreta Collected from Hobie Beach (Oxnard, CA, USA). *Microbiology Resource Announcements* 8:1-3.

Steele, J.A., A.D. Blackwood, J.F. Griffith, R.T. Noble, K.C. Schiff. 2018. Quantification of pathogens and markers of fecal contamination during storm events along popular surfing beaches in San Diego, California. *Water Research* 136:137-149.

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Cao, Y., M.R. Raith, P.D. Smith, J.F. Griffith, S.B. Weisberg, A. Schriewer, A. Sheldon, C. Crompton, G.G. Amenu, J. Gregory, J. Guzman, K.D. Goodwin, L. Othman, M. Manasjan, S. Choi, S. Rapoport, S. Steele, T. Nguyen, X. Yu. 2017. Regional Assessment of Human Fecal Contamination in Southern California Coastal Drainages. *International Journal of Environmental Research and Public Health* 14:874.

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.

Benjamin-Chung, J., B.F. Arnold, T.J. Wade, K.C. Schiff, J.F. Griffith, A.P. Dufour, S.B. Weisberg, J.M. Colford Jr. 2017. Coliphages and gastrointestinal illness in recreational waters: pooled analysis of six coastal beach cohorts. *Epidemiology* 28:644-652.

Soller, J.A., M. Schoen, J.A. Steele, J.F. Griffith, K.C. Schiff. 2017. Incidence of gastrointestinal illness following wet weather recreational exposures: Harmonization of quantitative microbial risk assessment with an epidemiologic investigation of surfers. *Water Research* 121:280-289.

Cao, Y., M. Sivaganesan, C.A. Kelty, D. Wang, A. Boehm, J.F. Griffith, S.B. Weisberg, O.C. Shanks. 2017. A human fecal contamination score for ranking recreational sites using the HF183/BacR287 quantitative real-time PCR method. *Water Research* 128:148-156.

Haugland, R.A., S. Siefring, M. Varma, K.H. Oshima, M. Sivaganesan, Y. Cao, M.R. Raith, J.F. Griffith, S.B. Weisberg, R.T. Noble, A.D. Blackwood, J. Kinzleman, T. Anan'eva, R.N. Bushon, E.A. Stelzer, V.J. Harwood, K.V. Gordon, C. Sinigalliano. 2016. Multi-laboratory survey of qPCR enterococci analysis method performance in U.S. coastal and inland surface waters. *Journal of Microbiological Methods* 123:114-125.

Maraccini, P.A., M.C.M. Mattioli, L.M. Sassoubre, Y. Cao, J.F. Griffith, J.S. Ervin, L.C. Van De Werfhorst, A.B. Boehm. 2016. Solar Inactivation of Enterococci and *Escherichia coli* in Natural

Waters: Effects of Water Absorbance and Depth. *Environmental Science and Technology* 50:5068-5076.

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gull fecal sources. *Water Research* 47:6883-6896.

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Cao, Y., L.C. Van De Werfhorst, E.A. Scott, M.R. Raith, P.A. Holden, J.F. Griffith. 2013. Bacteroidales terminal restriction fragment length polymorphism (TRFLP) for fecal source differentiation in comparison to and in combination with universal bacteria TRFLP. *Water Research* 47:6944-6955.

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Ebentier, D.L., K.T. Hanley, Y. Cao, B.D. Badgley, A.B. Boehm, J.S. Ervin, K.D. Goodwin, M. Gourmelon, J.F. Griffith, P.A. Holden, C.A. Kelty, S. Lozach, C.M.c.G.e.e. , L.A. Peed, M.R. Raith, H. Ryu, M.J. Sadowsky, E.A. Scott, J.S. Domingo, A. Schriewer, C.D. Sinigalliano, O.C. Shanks, L.C. Van De Werfhorst, D. Wang, S. Wuertz, J.A. Jay. 2013. Evaluation of the repeatability and reproducibility of a suite of qPCR-based microbial source tracking methods. *Water Research* 47:6839-6848.

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