

Dr. John Griffith

Department Head

Microbiology Department

Southern California Coastal Water Research Project

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

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. Naaum, 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.

Diner, R.E., A.G. Zimmer-Faust, E. Cooksey, S. Allard, S.M. Koder, E. Kunselman, Y. Garodia, M.P. Verhoughstraete, A.E. Allen, J.F. Griffith, J.A. Gilbert. 2023. Host and Water Microbiota Are Differentially Linked to Potential Human Pathogen Accumulation in Oysters. *Applied and Environmental Microbiology* DOI:10.1128/aem.00318-23.

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/fmich.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.

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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.

Zimmer-Faust, A.G., J.A. Steele, J.F. Griffith, K.C. Schiff. 2020. The challenges of microbial source tracking at urban beaches for Quantitative Microbial Risk Assessment (QMRA). *Marine Pollution Bulletin* DOI:10.1016/j.marpolbul.2020.111546.

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.

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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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Arnold, B.F., T.J. Wade, J. Benjamin-Chung, K.C. Schiff, J.F. Griffith, A.P. Dufour, S.B. Weisberg,

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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.

Sinigalliano, C.D., J. Ervin, L.C. Van De Werfhorst, B.D. Badgley, E. Balleste, J. Bartkowiak, A.B. Boehm, M. Byappanahalli, K.D. Goodwin, M. Gourmelon, J.F. Griffith, P.A. Holden, J.A. Jay, B.A. Layton, C. Lee, J. Lee, W.G. Meijer, R. Noble, M.R. Raith, H. Ryu, M.J. Sadowsky, A. Schriewer, D. Wang, D. Wanless, R.L. Whitman, S. Wuertz, J.W. Santo Domingo. 2013. Multi-laboratory evaluations of the performance of *Catellibacillus marimammali* PCR assays developed to target gull fecal sources. *Water Research* 47:6883-6896.

Bourlat, S.J., A. Borja, J. Gilbert, M.I. Taylor, N. Davies, S.B. Weisberg, J.F. Griffith, T. Lettieri, D. Field, J. Benzie, F.O. Glockner, N. Rodriguez-Ezpeleta, D.P. Faith, T.P. Bean, M. Obst. 2013. Genomics in marine monitoring: New opportunities for assessing marine health status. *Marine Pollution Bulletin* 74:19-31.

Cao, Y., L.C. Van De Werfhorst, E.A. Scott, M.R. Raith, P.A. Holden, J.F. Griffith. 2013.

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Raith, M.R., C.A. Kelty, J.F. Griffith, A. Schriewer, S. Wuertz, S. Mieszkina, M. Gourmelon, G.H. Reischer, A.H. Farnleitner, J.S. Ervin, P.A. Holden, D.L. Ebentier, J.A. Jay, D. Wang, A.B. Boehm, T. Gim Aw, J.B. Rose, E. Balleste, W.G. Meijer, M. Sivaganesan, O.C. Shanks. 2013. Comparison of PCR and quantitative real-time PCR methods for the characterization of ruminant and cattle fecal pollution sources. *Water Research* 47:6921-6928.

Cao, Y., L.C. Van De Werfhorst, E.A. Dubinsky, B.D. Badgley, M.J. Sadowsky, G.L. Andersen, J.F. Griffith, P.A. Holden. 2013. Evaluation of molecular community analysis methods for discerning fecal sources and human waste. *Water Research* 47:6862-6872.

Harwood, V.J., A.B. Boehm, L.M. Sassoubre, K. Vijayavel, J.R. Stewart, T.-T. Fong, M.P. Caprais, R.R. Converse, D. Diston, J. Ebdon, J.A. Fuhrman, M. Gourmelon, J. Gentry-Shields, J.F. Griffith, D.R. Kashian, R.T. Noble, H. Taylor, M. Wicki. 2013. Performance of viruses and bacteriophages for fecal source determination in a multi-laboratory, comparative study. *Water Research* 47:6929-6943.

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associated Bacteroidales assays in a multi-laboratory comparison study. *Water Research* 47:6909-6920.

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Stewart, J.R., A.B. Boehm, E.A. Dubinsky, T.-T. Fong, K.D. Goodwin, J.F. Griffith, R.T. Noble, O.C. Shanks, K. Vijayavel, S.B. Weisberg. 2013. Recommendations following a multi-laboratory comparison of microbial source tracking methods. *Water Research* 47:6829-6838.

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Cao, Y., M. Sivaganesan, J. Kinzelman, A.D. Blackwood, R.T. Noble, R.A. Haugland, J.F. Griffith, S.B. Weisberg. 2013. Effect of platform, reference material, and quantification model on enumeration of Enterococcus by quantitative PCR methods. *Water Research* 47:233-241.

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