

# ANAE ROBE

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## CONTACT INFORMATION

Department of Microbiology & Plant Pathology  
University of California, Riverside

951-555-5555  
NetID@ucr.edu

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## EDUCATION

<b>Ph.D. Microbiology</b> , University of California, Riverside	2022
<b>M.S. Environmental Science</b> , Washington State University	2017
<b>B.S. Microbiology</b> , Minor: Environmental Science, California State University, Long Beach	2015

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## RESEARCH EXPERIENCE

<b>Graduate Student Researcher</b>	2017-2022
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Department of Microbiology & Plant Pathology, University of California, Riverside

*Doctoral Thesis Topic:* Visualizing virus replication in living cells.

Developing independent research projects; assisting department and PI research goals; engaging in teaching responsibilities; mentoring and training undergraduate research assistants.

<b>Temporary Assistant Researcher</b>	2021
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Oak Ridge Institute for Science and Education - FDA Microbiology Fellowship, Raleigh, NC

Studied the complex interactions of human pathogens such as Salmonella, shiga-toxin producing E. coli and L. monocytogenes with produce commodities in pre-harvest environments at the phytotron facility at North Carolina State University.

<b>Graduate Research Assistant</b>	2015-2017
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School of the Environment, Washington State University

*Master's Thesis:* Evaluation of distribution and diversity of archaeal and bacterial ammonia oxidizers bacteria in saline estuary deposits.

<b>Undergraduate Research Assistant</b>	2013-2015
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Biological Sciences Department, California State University, Long Beach

*Senior Thesis:* Comparative genomics and polysaccharides processing by environmental microbial isolates.

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## PEER-REVIEWED PUBLICATIONS

Baeocyte, M.V., Robe, A., Chemotaxis, R.P., Organotroph, W. (2020). Molecular beacon-quantum dot-Au nanoparticle hybrid nanoprobe for visualizing virus replication in living cells. *Chemical Communications*. 46 (22): 3914-3916.

Chemotaxis, R.P., Baeocyte, M.V., Robe, A., Organotroph, W. (2020). Visualizing the dynamics of viral replication in living cells via TAT-peptide delivery of nuclease-resistant molecular beacons. *Proceedings of the National Academy of Sciences*. 105(45):17522-17525.

Robe, A., Baeocyte, M.V., Chlamydo-spore, O.I., Episome, L., Dikaryon, R.I., Lamella, M.V. (2020). Survival of adenovirus types 2 and 41 in surface and ground waters measured by a plaque assay. *ES&T*, online publication.

Robe A, Aliphatic P.O., Auxotroph D.G., Barophile T.L. (2018). Functionally distinct communities of ammonia oxidizing bacteria along an estuarine salinity gradient. *Environmental Microbiology* 9: 1439-1447.

Aliphatic P.O., Auxotroph D.G., Barophile T.L., Robe A. (2017). Distribution and diversity of archaeal and bacterial ammonia oxidizers in salt marsh sediments. *Applied and Environmental Microbiology* 75: 7461-7468.

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### **PUBLISHED ABSTRACTS**

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Baeocyte, M.V., Robe, A., Chemotaxis, R.P., Organotroph, W. (2020). Nanoprobes for visualizing virus replication in living cells. American Society for Microbiology General Meeting. Abstract published online in lieu of invited talk.

Lysosome H.W., Robe A., and Pellicle K.P. Comparative genomics and polysaccharides cellulose degradation by environmental microbial communities. (2015). Poster Presentation at American Society for Microbiology, General Meeting, Philadelphia, PA.

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### **PRESENTATIONS AND INVITED TALKS**

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\*Indicates presenting author

Chemotaxis, R.P., Baeocyte, M.V., Robe, A.\*, Organotroph, W. (2020). Visualizing viral replication in living cells via TAT-peptide delivery of nuclease-resistant molecular beacons. Invited talk at New Mexico Tech, Department of Biology Graduate Seminar. Virtual.

Baeocyte, M.V., Robe, A.\*, Chemotaxis, R.P., Organotroph, W. (2020). Nanoprobes for visualizing virus replication in living cells. Invited talk at American Society for Microbiology General Meeting. *Cancelled due to Covid-19 conditions.*

Aliphatic P.O., Auxotroph D.G., Robe A.\*, Barophile T.L. (2018). Population Dynamics and Community Composition of Ammonia Oxidizers in Salt Marshes Impacted by the Macondo Oil Spill. Poster Presentation at American Society for Microbiology General Meeting, Boston, MA

Robe A.\*, Aliphatic P.O., Auxotroph D.G., Barophile T.L. (2017). Investigating the link between ammonia-oxidizing bacterial diversity and activity in estuarine sediments. Invited talk at American Society for Microbiology, General Meeting, New Orleans, LA.

Robe A.\*, Lysosome H.W., and Pellicle K.P. Comparative genomics and polysaccharides processing by environmental microbial isolates. (2015). Poster Presentation at Undergraduate Research Symposium, California State University, Long Beach.

Lysosome H.W., Robe A.\*, and Pellicle K.P. Comparative genomics and polysaccharides cellulose degradation by environmental microbial communities. (2015). Poster Presentation at American Society for Microbiology, General Meeting, Philadelphia, PA.

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### **PRIMARY RESEARCH INTERESTS**

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Viral microbiology, microbial ecology and environmental microbiology: linking ecosystem functions with microbial diversity; visualizing viral replication; determining survival circumstances of adenoviruses in ground water and protected environmental habitats.

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### **GRANTS AND FELLOWSHIPS**

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**NSF-Scholarships in Science, Technology, Engineering, and Mathematics Program**, *NSF Lab Science Scholarships*, (Co-Authored Proposal) Co-Principal Investigator, 2021-2022, \$34,900

**ORAU Travel/Training Allowance**, *Oak Ridge Institute for Science and Education - FDA Microbiology 4-Month Fellowship*, 2021, \$3,500

**Sherman Fairchild Foundation**, *Summer Stipends in the Sciences*, 2019 (1-year), \$17,500

**Washington State Department of Ecology**, *Seasonal study on ammonia oxidizer in salt marshes*, 2016-

2017, \$4,500.

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## AWARDS AND HONORS

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**Outstanding Teaching Assistant Award**, University of California Riverside, 2020  
**Graduate Student Association Travel Grant**, University of California, Riverside, 2018  
**Boeing Environmental Endowed Graduate Fellowship**, Washington State University, 2016  
**Outstanding Student Presentation Award**, Undergrad Research Symposium, California State University, Long Beach, 2015  
**Student Travel Award**, American Society of Microbiology General Meeting, Philadelphia, PA, 2015  
**Phi Kappa Phi Honor Society**

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## TEACHING EXPERIENCE AND STUDENT DEVELOPMENT

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Teaching Assistant Development Program, University of California, Riverside  
*University Teaching Certificate Earned, 2019*

### **Instructor**

Environmental Microbiology, University of California, Riverside, Fall 2020

### **Teaching Assistant**

Environmental Microbiology, University of California, Riverside, Spring 2020 (Virtual)  
Intro to Cell and Molecular Biology, University of California, Riverside, Fall 2018, Winter 2019  
Public Health Microbiology (Lower Division), Washington State University, Fall 2016  
Intro to Biology Laboratory (Upper Division), California State University, Long Beach, Spring 2014

### **Undergraduate Students Mentored**

Rhi Zomorph, Undergraduate Research Assistant, 2021-Present  
Peptido Glycan, Summer Laboratory Intern, 2019

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## WORK EXPERIENCE

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### **Green Business Intern**

City of Long Beach Office of Sustainability, Long Beach, CA June 2013 August 2013  
Supported the certification and recognition of sustainable businesses in Long Beach through outreach, marketing, and technical assistance to businesses.

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## CAMPUS INVOLVMENT

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### **University of California, Riverside**

Active Member and Mentor, African Americans United in Science (AAUS), 2019-Present  
Officer, Graduate Student Association, Dept. of Microbiology & Plant Pathology, 2018-2020  
Treasurer, American Society of Microbiology, Student Chapter, 2017-2019

### **Washington State University**

SoE Connections Student Editor, School of the Environment Newsletter, 2016-2017  
VP, American Society of Microbiology, Student Chapter, 2015-2017  
Active Member, Environmental Science Club, 2015-2017

**California State University, Long Beach**

Secretary, American Society of Microbiology, Student Chapter, 2014-2015

Active Member, Environmental Science & Policy Club, 2012-2013

“Trash Talkers” Volunteer (spread awareness of the university’s Compost Happens Program & Zero Waste goals), 2012-2013

**Professional Service**

Ad hoc Reviewer: *Applied and Environmental Microbiology*

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**PROFESSIONAL MEMBERSHIPS**

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American Society of Microbiology

Soil Science Society of America

International Society for Microbial Ecology