

Alex D. Vompe, PhD

Postdoctoral Scholar

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Areas of Interest: microbiomes, symbiosis, microbial ecology, metagenomics, bioinformatics, disease ecology

Education:

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| 2019 – 2024 | Oregon State University PhD, Microbiology <i>College:</i> College of Science <i>Cumulative GPA:</i> 3.97 |
| 2015 – 2019 | Cornell University BA, Biological Sciences: Microbiology <i>College:</i> Arts and Sciences <i>Cumulative GPA:</i> 3.8 |

Grants, Fellowships, Honors, and Awards:

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| 2023 – 2024 | Middlekauf Award for Outstanding Teaching & Service in Microbiology |
| 2019 – 2020 | Provost Fellow, College of Science, Oregon State University |
| 2015 – 2019 | Dean's List, Cornell Arts and Sciences |
| 2018 | Best Undergraduate Poster (Sigma Xi) |
| 2018 | NSF REU/Betty Miller Intern at Friday Harbor Labs |

Published Work:

- (1) Vompe, A. D., Epstein, H. E., Speare, K. E., Schmeltzer, E. R., Adam, T. C., Burkepile, D. E., ... & Vega Thurber, R. (2024). Microbiome ecological memory and responses to repeated marine heatwaves clarify variation in coral bleaching and mortality. *Global Change Biology*, 30(1), e17088.
- (2) Eisenlord, M. E., Agnew, M. V., Waddingham, M., Lobo, O. J., Vompe, A. D., Wippel, B., ... & Burge, C. A. (2024). High infectivity and waterborne transmission of seagrass wasting disease. *Royal Society Open Science*, 11(8), 240663.
- (3) Groner, M. L., Eisenlord, M. E., Yoshioka, R. M., Fiorenza, E. A., Dawkins, P. D., Graham, O. J., ... & Harvell, C. D. (2021). Warming sea surface temperatures fuel summer epidemics of eelgrass wasting disease. *Marine Ecology Progress Series*, 679, 47-58.
- (4) Gavrilin, M. A., Prather, E. R., Vompe, A. D., McAndrew, C. C., & Wewers, M. D. (2021). cAbl kinase regulates inflammasome activation and pyroptosis via ASC phosphorylation. *The Journal of Immunology*, 206(6), 1329-1336.

Conference Presentations and Posters:

“Linking gill raker morphology to diet in suction feeding sculpins (Cottoidea)”: poster at Society for Integrative and Comparative Biology (SICB) Annual Meeting (2018)

“Ecology and transmission mechanisms of *Labyrinthula zosterae* in beds of *Zostera marina* seagrass”: presentation at Society for Integrative and Comparative Biology (SICB) Annual Meeting (2019)

“Global and Local Stress Affects Fore Reef Coral Microbiomes”: presentation at the Moorea Coral Reef Long Term Ecological Research All Investigators Meeting at UC Santa Barbara (2021)

“Thermal Stress, Nutrient Pollution, and Herbivore Reduction Differentially Affect the Microbiomes of Dominant Moorea Stony Corals”: presentation at the International Coral Reef Society Meeting (2022)

“Interconnectedness of Microbiome and Coral Ecological Memory During Repeated Marine Heatwaves”: presentation at the Western Society of Naturalists Annual Meeting (2023) and at the Moorea Coral Reef Long Term Ecological Research All Investigators Meeting at UC Santa Barbara (2023)

Employment and Experience:

2015 – 2016 Undergraduate **Research Assistant** at the Robert W. Holley Center for Agriculture and Health (USDA and Cornell University)

2016 – 2018 **Research Assistant** for Dr. Mikhail Gavrilin and **Research Scientist** at DHLRI (Davis Heart and Lung Institute—The Ohio State University Wexner Medical Center)

2016 **Research Assistant** in Dr. Ian Hewson’s Laboratory (Wing Hall, Cornell University)

2018 **Teaching Assistant** for General Microbiology Laboratory (Wing Hall, Cornell University)

2017 – 2019 **Research Assistant and Research Scientist** in Dr. Drew Harvell’s Laboratory (Corson Hall, Cornell University)

2019 – 2024 **PhD candidate (Fellow/GTA/GRA)** under the advisement of Drs. Rebecca Vega Thurber Thomas Sharpton (Nash Hall, Oregon State University)

2024 – present **Postdoctoral Scholar** under the advisement of Drs. Carolee Bull and Kevin Hockett (Buckhout Laboratory, The Pennsylvania State University)

Media/Press:

<https://www.eurekalert.org/news-releases/1011292>

https://whatayear.org/04_24.php

<https://today.oregonstate.edu/news/some-coral-species-might-be-more-resilient-climate-change-previous-thought>

Skills:

Biology Laboratory skills: Amplicon sequencing, metagenomic sequencing, RB-TnSeq, PCR, gel electrophoresis, CRISPR/Cas9, cloning, microscopy (compound light, fluorescent, confocal, SEM), bacterial transformation, bacterial conjugation, bacterial/slime mold culture, tissue cell culture

Field Skills: AAUS diver, CPR/first aid, coral sampling (tissue, mucus), coral mesocosms, freediving, transect survey, plankton tow, marine invertebrate identification, environmental sampling of seawater and sediment

Bioinformatics skills: R, Unix/Linux, Python, amplicon sequence analysis, metagenomic analysis

Other skills: Russian, German, French, advanced rock-climbing techniques (self-rescue, multi-pitch climbing), sidemount diver, drysuit diver

Outreach and teaching experience:

2025 Penn State One Health Microbiome Center Data Analysis Working Group workshop chair (incumbent)

2025 Penn State Postdoctoral Society Social Co-Chair

2025 Led 16S amplicon sequence analysis workshop for Bull and Hockett labs

2024 Guest lecture for BI-289 (Frontiers in Biology Seminar) at Juniata College

2019 – 2024 Mentor to 5 undergraduates and 3 graduate students in the Vega Thurber Lab

2024 Support diver for the 2024 MATE ROV competition

2023, 2024 Activity assistant for the Bessie Coleman Elementary Science Night

2023 Instructor for Allied Health Microbiology at Oregon State University

2022 Mentor for the Pernot Microbiology Camp for high school students

2021 – 2022 Graduate teaching assistant for General Microbiology and Introductory Microbiology at Oregon State University

2020 Climate change panelist for 2020 Corvallis Eco-Film Festival

2018 Teaching assistant for General Microbiology at Cornell University

2017 Undergraduate mentor in Dr. Mark Wewer's laboratory (Davis Heart and Lung Institute—The Ohio State University Wexner Medical Center)

2017 Marine invertebrate diversity activity mentor at Friday Harbor Elementary School (Friday Harbor, WA)

References for Recent Work:

Dr. Carolee T. Bull Professor of Plant Pathology; Bacterial Systematics Head; Director of Microbiome Sciences Dual-Title Degree Program at The Pennsylvania State University
Email: ctb14@psu.edu

Dr. Kevin L. Hockett Associate Professor of Microbial Ecology at The Pennsylvania State University
Email: klh450@psu.edu

Dr. Rebecca L. Vega Thurber Professor of Ecology, Evolution, and Marine Biology and the Director of the Marine Science Institute at UC Santa Barbara
Email: rvegathurber@ucsb.edu

Dr. Thomas J. Sharpton Associate Professor of Microbiology at Oregon State University
Email: thomas.sharpton@oregonstate.edu