Zachary A. Quinlan
Scripps Institution of Oceanography
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Education

B.S., Marine Biology, University of Hawai'i at Mānoa, Honolulu, HI, 2017
PhD. Cell and Molecular Biology, San Diego State University & University of California San Diego, CA, 2018 - current

Awards and Funding:

IDENTIFICATION OF CORAL EXOMETABOLITES FOR BIOMARKERS OF STRESS
National Science Foundation Graduate Research Fellowship Program
Fall 2019- Spring 2024, $138,000

FLUORESCENCE OF DISSOLVED ORGANIC MATTER OF CORAL EXUDATES
University of Hawai'i Undergraduate Research Opportunity Program Grant
Fall 2016- Spring 2017, $3500

CORAL PRODUCES AROMATIC PROTEINACEOUS DISSOLVED ORGANIC MATTER
University of Hawai'i Undergraduate Research Opportunity Program Grant
Fall 2016- Spring 2017, $1500

MICROBIAL COMMUNITY DIVERSITY OF CORAL IN KANEOHE BAY IN COMPARISON TO ORGANIC EXUDATES
University of Hawai'i Undergraduate Research Opportunity Program Grant
Spring 2017, $5000

Academic Employment:

San Diego State University Foundation
August 2018-Present

Job Title: Graduate Teaching Assistant & Graduate Research Assistant
Principle Investigator: Dr. Linda Wegley Kelly

Center for Microbial Oceanography: Research and Education
University of Hawai'i at Manoa, Honolulu, HI
Dec. 2015 - Dec. 2017

Job Title: Undergraduate Research Assistant
Principal Investigator: Dr. Craig E. Nelson; craig.nelson@hawaii.edu

Duties: Principal lab manager, oversight for fluorescent dissolved organic matter analysis, dissolved organic matter extraction, data processing (Excel, matlab, JMP), manuscript preparation, flow cytometry, assisted with laboratory and field experiments on corals, field sampling in coastal waters, lab processing of nucleic acid samples and programming in matlab and python.

Peer-Reviewed Manuscripts:

Quinlan, Z.; Remple, K.; Fox, M.; Silbiger, N.; Putnam, H.; Sevilla, J.; Lager, C.; Donahue, M.; Oliver, T.; Nelson, C. (2018) Fluorescent organic exudates on corals and algae in tropical reefs are compositionally distinct and increase with nutrient enrichment. Limnology and Oceanography Letters. DOI: 10.1002/lol2.10074.

Silbiger, N. J.; Remple, K.; Fox, M. D.; Lager, C.; Nelson, C.; Putnam, H. M.; Sevilla, J.; **Quinlan, Z.**; Donahue, M. J. (2018) Scaling up from organisms to ecosystem: Individual and combined community metabolic responses of four distinct benthic assemblages to nutrient addition. Proceedings of the Royal Society B: Biological Sciences. DOI: 10.1098/rspb.2017.2718

Wegley Kelly, L., Haas, A.F.; Nelson, C.E.; Naliboff, D.; Calhoun, S.; Carlson C.A.; Edwards, R.A.; Fox M.D.; Hatay, M.; Johnson, M.; Wei Lim, Y. ; Macherla, S.; **Quinlan, Z.A**.; Silva, G; Vermeij, M.J.A.; Sandin, S.A.; Smith, J.E.; Rohwer, F.A. (2019) Largescale population and metabolic shifts in day-night microbial communities on coral reefs. Nature Communications. 10, 1691. DOI: 10.1038/s41467-019-09419-z

Quinlan, Z.A.; Ritson-Williams, R.; Caroll, B.; Carlson, C.; Nelson, C.E. (2019). Species-specific differences in the microbiomes and organic exudates of crustose coralline algae influence bacterioplankton communities. Frontiers in Microbiology 10. doi: 10.3389/fmicb.2019.02397

Michael D. Fox, Craig E. Nelson, Thomas A. Oliver, **Zachary A. Quinlan**, Kristina Remple, Jess Glanz, Jennifer E. Smith, Hollie M. Putnam. Differential resistance and acclimation of two coral species to chronic nutrient enrichment reflect life-history traits. Functional Ecology. DOI: 10.1111/1365-2435.13780

Andreas F. Haas*, Linda Wegley Kelly*, Daniel Petras, Irina Koester, Zachary Quinlan, Milou Arts, Jacqueline Comstock, Brandie White, Ellen C Hopmans, Fleur van Duyl, Craig A Carlson, Lihini Aluwihare, Pieter Dorrestein and Craig E. Nelson*. Distinguishing the molecular diversity and energetic potential of coral and algal exometabolomes in tropical reefs. Second revision. PNAS.

Conferences and presentations:

Ocean Sciences Meeting (American Society of Limnology and Oceanography). 2020. San Diego, CA. Talk.

Western Society of Naturalists Meeting. 2019. Ensenada, Mexico. Talk.

University of Hawai'i Undergraduate Showcase. 2017. Honolulu, HI. Talk.

American Society of Limnology and Oceanography Meeting. 2017. Honolulu, Hawai'i. https://www.sgmeet.com/aslo/honolulu2017/viewabstract.asp?abstractid=29199. Poster.

University of Hawai'i Undergraduate Showcase. 2016. Honolulu, HI. Talk.

100th Anniversary Western Society of Naturalists Meeting. 2016. Monterery, CA. Talk.

13TH International Coral Reef Symposium. 2016. Honolulu, Hawai'i. https://www.sgmeet.com/icrs2016/viewabstract.asp?AbstractID=29769. Poster.

Outreach and Associations:

Ocean Discovery Institute, Collage Access Mentorship Program (CAMP), San Diego, CA. Year long mentorship of a high school senior. Meet weekly to help mentor the student through the application process and discover what the student wants to do and help them attain not only college acceptance but scholarships for university.

Pre-K-12 Outreach: Sunshine House (pre-K), Louisville Middle School, Boulder High School. Class workshops and lectures about marine sciences, natural product chemistry and scuba diving.

Member of: American Society for Limnology & Oceanography (ASLO), International Society for Reef Studies (ISRS), Western Society of Naturalists (WSN).

Ac.IO (Academia to IO): A static site generator for github repositories. Developed for the easer dissemination of academic research and code in a less jargon filled manner.

References:

Dr. Linda Wegley Kelly
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1950 East-West Rd.
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Dr. Forest Rohwer
Assistant Professor
San Diego State University

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5500Campanile Dr.
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Dr. Andreas Haas
Assistant Researcher
Department of Marine Microbiology and Biogeochemistry
Royal Netherlands Institute for Sea Research, Texel, Netherlands
andreas.florian.haas@gmail.com

Dr. Megan Donahue
Associate Researcher
Hawaii Institute of Marine Biology
University of Hawaii
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Kaneohe, HI 96744
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