

CURRICULUM VITAE
STEVEN DOUGLASS QUISTAD

www.stevenquistad.com

EDUCATION

- San Diego State University and University of California San Diego
Cell and Molecular Biology, PhD in Biology 2015
Adviser: Dr. Forest L. Rohwer
- University of California Santa Barbara
Biology, B.A. 2010 (High Honors)
Adviser: Dr. David L. Valentine

RESEARCH EXPERIENCE

- 2015 – Present Marie Sklodowska-Curie Research Fellow- ESPCI Paris
Project 1: Using the Evolution Machine to determine the mechanism of a novel phage-induced high cell density phenotype
Project 2: Evolution of horizontal gene transfer in complex microbial communities
- 2010 – 2015 Doctoral Student - San Diego State University/University of California San Diego
Dissertation Title: Coral, viruses, and the origin of Metazoans
- 2009 – 2010 Research Assistant - University of California Santa Barbara
Project: Anaerobic propane oxidation, viral metagenomics
- 2008 Research Assistant (NSF REU) - University of California Santa Barbara
Project: impact of ocean acidification on *S. purpuratus* molecular physiology
- 2007 Research Assistant - University of California Santa Barbara
Project: Tau protein and neurodegeneration
- 2009 – 2010 Biological Science Aid - United States Geological Survey
Project: Methanogenesis and mercury cycling in wetlands

FUNDING

- 2017 – 2019 Marie Sklodowska-Curie Individual Fellowship (\$185,000)
2013 – 2015 Achievement Rewards for College Scientists (ARCS) fellow (\$6,200)
2010 – 2013 National Science Foundation Graduate Research Fellowship (\$126,000)
2009 Summer Undergraduate Research Fellow (\$5,000)
2006 – 2010 Innovator of the Future Scholarship, Rambus Inc. (\$10,000)
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PUBLICATIONS IN PRESS

11. Galtier d'Auriac I, Quinn RA, Maughan H, Nothias LF, Little MJ, Kapon CA, Cobian A, Reyes BT, Green K, **Quistad SD**, Leray M, Smith JE, Dorrestein PC, Rohwer F, Deheyn DD, Hartmann AC. Before platelets: the roles of platelet activating factor in a basal marine organism. *Proceedings of the Royal Society B*. (Accepted).
 10. **Quistad SD**. (2018) Cnidaria – An emerging model phylum to investigate the evolution of metazoan immunity. *Old Herborn University Monograph 31*: Evolutionary biology of the virome and its impact on human health and disease.
 9. **Quistad SD**, Grasis JA, Barr JJ, Rohwer FL. (2017) Viruses and the origin of microbiome selection and immunity. *International Society for Microbial Ecology (ISME J)* 11(4):835-840
 8. **Quistad SD**, Lim YW, Silva GGZ, Nelson CE, Haas AF, Wegley-Kelly L, Edwards RA, Rohwer FL. Using viromes to predict novel immune proteins in non-model organisms. *Proceedings of the Royal Society B* **283**: 20161200.
 7. **Quistad SD**, and Traylor-Knowles N. Precambrian origins of the TNFR superfamily. *Cell Death Discovery* (2016) 2, e16058; doi:10.1038/cddiscovery.2016.58
 6. Quinn RA, Vermeij MJA, Hartmann AC, Galtier d'Auriac I, Benler S, Haas A, **Quistad SD**, Lim YW, Little M, Sandin S, Smith JE, Dorrestein PC, Rohwer F. (2016). Metabolomics of reef benthic interactions reveals a bioactive lipid involved in coral defense. *Proceedings of the Royal Society B*. 20160469.
 5. Knowles B, Silveira CB, et al. **Quistad SD**, Rohwer F. Lytic to temperate switching of viral communities. *Nature*. (2016) 531(7595):466-70. **News coverage in *Nature*, *Nature Reviews Microbiology*, and *Small Things Considered*.
 4. Hisakawa N, **Quistad SD**, Hester ER, Martynova D, Maughan M, Sala E, Gavrilov MV, Rohwer F. *PeerJ*. Metagenomic and satellite analysis of red snow in the Russian Arctic (2015). 3:e1491;DOI 10.7717/peerj.1491
 3. **Quistad SD**, Stotland A, Barott KL, Hilton B, Smurthweites C, Grasis J, Wolkowicz R, and Rohwer F. (2014). The evolution of TNF-induced apoptosis reveals 550 million years of functional conservation. *Proc. Natl. Acad. of Sci.* 11 (26). ** News coverage in *National Geographic* and *The Scientist*.
 2. Haas AF, Nelson CE, Rohwer F, Wegley-Kelly L, **Quistad SD**, Carlson CA, Leichter JJ, Hatay M, JE Smith (2013). Influence of coral and algal exudates on microbially mediated metabolism. *PeerJ*. 1e:108 <http://dx.doi.org/10.7717/peerJ.108>
 1. **Quistad SD**, Valentine DL. (2011). Anaerobic oxidation of propane in marine sediments. *Geochimica et cosmochimica*. 75, 2159-2169
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PUBLICATIONS IN PREPARATION

Quistad SD, Dulcier G, and Rainey PB. Horizontal Gene Transfer (HGT) facilitates evolution of community function.

Quistad SD and Rainey PB. Investigating the impact of novel bacteriophages on host physiology using droplet-based microfluidics.

ACADEMIC AWARDS

- Achievement Rewards for College Scientists (ARCS) Fellowship, (2013 – 2015)
- Provost Award, Student Research Symposium, San Diego State University (2013)
- Most Collaborative Poster, Graduate Student Symposium, SDSU (2012)
- President's Award, Student Research Symposium, SDSU (2012)
- National Science Foundation Graduate Research Fellowship (2010 - 2013)
- Award of Distinction, University of California Santa Barbara (2010)
- Award of Excellence, College of Creative Studies, UCSB (2010)
- Summer Undergraduate Research Fellowship, UCSB (2009)
- Innovator of Future Scholarship, Rambus Inc. (2006 - 2010)

SCIENTIFIC OUTREACH

- Panel Member: San Diego State University college fair STEM panel (2015)
- Public presentation: Climate change, corals, and the arctic (2015)
Bachrodt Charter Academy, 3rd grade, San Jose, USA
- Public Presentation: *How viruses control the world, seriously* Art-Phage Collab. (2014)
- Public Presentation: 81° North: A tale of two coral biologists lost in the Russian Arctic (2013)
- Moderator: SDSU Undergraduate Research Symposium (2014)
- Public presentation: *The microbial ocean: tales of a marine virus hunter* (2013 - 2014)
Alice Birney Elementary, 3rd grade, San Diego, USA
Bachrodt Charter Academy, 3rd grade, San Jose, USA
Baron Park Elementary, 2nd grade, Palo Alto, USA
Hoover Elementary, 3rd grade, Palo Alto, USA
- Public presentation: *Two scientists walk into a bar*, Reuben H. Fleet Science Center (2014)
- Public presentation: SDSU Scholarship Donor Recognition Luncheon (2013)
- Judge: Greater San Diego Science and Engineering Fair (2013, 2014, 2015)
- Graduate Student Representative: Cell and Molecular Biology Doctoral Program, (2013-2014)
- Blog post: S.D. Quistad. (2012) The rise of genomic superspreaders *Small Things Considered*
- Blog post: S.D. Quistad (2011) Microbes: the world of the unseen. *NOAA Coral Reef Ecosystems Mission Blog*
- Founder and President: *Society of Undergraduate Biologists at UCSB* (2008-2010)

ACADEMIC PRESENTATIONS

- 2018 Viruses of Microbes EMBO Conference, Wroclaw, Poland (invited talk)
- 2017 31st Old Herborn University (Focus:Virome), Herborn, Germany (invited talk)
- 2017 Chemistry and Biology Institute (CBI) Seminar, ESPCI Paris, Paris, France
- 2016 Viruses of Microbes EMBO Conference, Liverpool, United Kingdom (poster)
- 2015 Hopkins Marine Station, Monterey, CA, USA (invited talk)
- 2015 Viral Immunity Keystone Symposia, Breckenridge, CO, USA (poster)
- 2014 APS: Comparative Approaches to Grand Challenges in Physiology (poster)
- 2014 SDSU Student Research Symposium, San Diego, USA (oral)
- 2014 Graduate Student Symposium, San Diego, USA, (oral)
- 2013 Immunology 2013, Hawaii, USA, (poster)
- 2013 Symbiosis Workshop, Yosemite, USA, (oral)
- 2013 SDSU Student Research Symposium, San Diego, USA, (poster)
- 2013 Graduate Student Symposium, San Diego, USA, (oral)
- 2013 San Diego Coral Club, San Diego, USA, (invited talk)
- 2012 International Coral Reef Symposium (ICRS), Cairns, Australia, (oral)
- 2012 Lower Reef Invertebrate Symbiosis with Microorganisms, Eilat, Israel, (poster)
- 2012 California State University Research Competition, Long Beach, USA (oral)
- 2012 SDSU Student Research Symposium, San Diego, USA (oral)
- 2012 Graduate Student Symposium, San Diego, USA (oral)
- 2011 Graduate Student Symposium, San Diego, USA (oral)
- 2010 UCSB Undergraduate Research Symposium (poster)

FIELD EXPEDITIONS

- 2013 **PristineSeas Expeditions, National Geographic Society**
Franz Josef Land, Russian Arctic, 7 weeks (www.pristineseas.org)
National Geographic Documentary (2015): “Behind the Frozen Curtain”
National Geographic Article (August 2014): Franz Josef Land: The meaning of North
Description: Established and shipped a fully functional microbiology laboratory which was used aboard the Russian vessel *Polaris*. This lab included equipment for DNA isolation, phenotypic microarrays, bacterial/viral concentrates, and water chemistry.
- 2011 **Richard B. Gump South Pacific Research Station**
French Polynesia, 4 weeks
Description: Characterization of Dissolved Organic Carbon (DOC) flux on coral reefs, also collected coral viruses for my dissertation work
- 2011 **NOAA Pacific Reef Assessment and Monitoring Program**
Wake Island, *Hi'ialakai*, 4 weeks
Description: Collection of microbial and water chemistry samples from US Minor Outlying Islands
- 2009 **Study of Ecology and Evolution of Petroleum Seeps (SEEPS) Cruise**
Southern California, *R/V Atlantis*, 2 weeks, Dive 4547 of the *DSV Alvin*
Description: Understanding the flux and consumption of hydrocarbons by microbes in the Santa Barbara Channel.

TEACHING EXPERIENCE

2014 – 2015 Principles of Cell and Molecular Biology (Two semesters)
San Diego State University

AD HOC REVIEWER

Nature Microbiology
Microbiome

REFERENCES

Dr. Paul Rainey (Current Post-Doc Adviser)
Director Laboratoire de Génétique de l'Evolution
ESPCI ParisTech, 75005 Paris, France
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Dr. Forest Rohwer (PhD Adviser)
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