

CURRICULUM VITAE  
**STEVEN DOUGLASS QUISTAD**

www.stevenquistad.com

EDUCATION

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

PROFESSIONAL EXPERIENCE

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- **Postdoctoral Scholar** - *ESPCI ParisTech*, 2015- present  
Adviser: Dr. Paul Rainey, project: Using the Evolution Machine to determine the mechanism of a novel Phage-Induced High Cell Density (PIHCD) phenotype
- **Doctoral Student** - *San Diego State University*, Department of Biology, 2010 - 2015  
Adviser: Dr. Forest Rohwer, Dissertation Title: Coral, viruses, and the origin of Metazoans
- **Teaching Assistant** - *San Diego State University*, Department of Biology, 2014-2015  
Courses: Cell and Molecular Biology Lab
- **Research Assistant** - *University of California Santa Barbara*, Marine Science Institute, 2009 – 2010. Adviser: Dr. David Valentine, Project: Anaerobic propane oxidation, viral metagenomics
- **Research Assistant (NSF REU)** - *University of California Santa Barbara*, Marine Science Institute, 2008 Advisers: Dr. Michael O'Donnell (post doc), Dr. Gretchen Hofmann (PI), Project: impact of ocean acidification on *S. purpuratus* molecular physiology
- **Research Assistant** - *University of California Santa Barbara*, Neuroscience Research Institute, 2007, Adviser: Dr. Stuart Feinstein, Project: Tau protein and neurodegeneration
- **Biological Science Aid** - *United States Geological Survey*, 2006-2007,  
Adviser: Dr. Mark Marvin-DiPasquale, Project: Methanogenesis and mercury cycling in wetlands

FUNDING

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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

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9. **Quistad SD**, Grasis JA, Barr JJ, Rohwer FL. Viruses and the origin of microbiome selection and immunity. *ISME J* (In press)
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, Bailey BA, Barott K, Cantu VA, Cobián-Güemes AG, Coutinho FH, Dinsdale EA, Felts B, Furby KA, George EE, Green KT, Gregoracci GB, Haas AF, Haggerty JM, Hester ER, Hisakawa N, Kelly LW, Lim YW, Little M, Luque A, McDole-Somera T, McNair K, de Oliveira LS, **Quistad SD**, Robinett NL, Sala E, Salamon P, Sanchez SE, Sandin S, Silva GG, Smith J, Sullivan C, Thompson C, Vermeij MJ, Youle M, Young C, Zgliczynski B, Brainard R, Edwards RA, Nulton J, Thompson F, Rohwer F. Lytic to temperate switching of viral communities. *Nature*. (2016) 531(7595):466-70.  
**News coverage:** *Nature* “Microbial oceanography: Viral strategies at sea”  
**News coverage:** *Nature Reviews Microbiology* “Microbiome ‘coral’ations”  
**News coverage:** SDSU NewsCenter “Piggybacking viruses”  
**News coverage:** Small Things Considered “Parasites, predators and piggyback rides”
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:** *National Geographic* “Half a billion years of suicide”  
**News coverage:** *The Scientist* “Ancient Apoptosis”  
**News coverage:** SDSU NewsCenter “Cellular Self Destruction”
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

## PUBLICATIONS UNDER REVIEW

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- **Quistad SD**, Hartmann AC, Wegley-Kelley L, Rohwer FL. A novel LINE-1-Like retroelement distributed across animal phyla. *Genome Biology and Evolution*
- d'Auriac IG, Quinn RA, Maughan H, Nothias LF, **Quistad SD**, Kapon CA, Smith JE, Leray M, Deheyn DD, Dorrestein PC, Rohwer F, Hartmann AC. Before platelets: the roles of platelet activating factor in a basal marine organism. *Proc. Natl. Acad. of Sci*

## ACADEMIC AWARDS

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- 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)
- Presidents 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

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- Panel Member: San Diego State University college fair STEM panel (2015)
- Public presentation: Climate change, corals, and the arctic (2015)  
Bachrodt Charter Academy, 3<sup>rd</sup> 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, 3<sup>rd</sup> grade, San Diego, USA  
Bachrodt Charter Academy, 3<sup>rd</sup> grade, San Jose, USA  
Baron Park Elementary, 2<sup>nd</sup> grade, Palo Alto, USA  
Hoover Elementary, 3<sup>rd</sup> 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: Zlamal J, Cutting A, and S.D. Quistad (2012) TB or not TB? *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

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- 2017 31<sup>st</sup> 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

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- 2013 **PristineSeas Expeditions, National Geographic Society**  
Franz Josef Land, Russian Arctic, 7 weeks ([www.pristineseas.org](http://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**  
Location: 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

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

## AD HOC REVIEWER

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*Nature Microbiology*  
*Microbiome*

## REFERENCES

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Dr. Paul Rainey (Current Post-Doc Adviser)  
Director Laboratoire de Génétique de l'Evolution  
ESPCI ParisTech, 75005 Paris, France  
Email: paul.rainey@espci.fr

Dr. Forest Rohwer (PhD Adviser)  
Professor of Biology  
San Diego State University  
San Diego, CA, 92182, USA  
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Dr. Robert Edwards (Collaborator and dissertation committee member)  
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