

Rory Welsh

Curriculum Vitae

Contact Information:

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Education:

2001-2005 B.S. Microbiology, University of Georgia
2010-2011 Ph.D Biology, Florida International University
2011-present Ph.D Microbiology, Oregon State University

Employment and Positions:

2009- 2010 Research Technician, Florida International University
2007-2009 Research Technician, Monterey Bay Aquarium Research Institute
2005-2007 Research Associate II, Marine Biology and Fisheries Division,
Rosenstiel School of Marine & Atmospheric Science, University of Miami
2004-2005 Undergrad Researcher, Marine Microbiology Lab, University of Georgia
Summer 2003 Lifeguard Manager, Peachtree Stations Swimming Pool, Dunwoody, Ga
Summer 00' 02' Construction worker, ABCO, Atlanta, Ga

Field Work:

2012 National Science Foundation Polar Programs, McMurdo Station,
Antarctica
2009 Herbivore Exclusion Project, Key Largo, FL (long-term time series)
2009 *Acropora millepora* Virome, Australia, Great Barrier Reef (3 weeks)

Oceanographic Cruises:

R/V Western Flyer, Eastern North Pacific, Oct 2007, (one and a half weeks)
R/V Walton Smith, Straits of Florida, Sep 2007
R/V Kilo Moana, South Pacific, March 2007, (two weeks)
R/V Seward Johnson, Equatorial Atlantic, 2006, (four weeks)
R/V Walton Smith, Straits of Florida, 2006
R/V Walton Smith, Straits of Florida, Two Expeditions in 2005

Honors and Awards:

2011 Honorable Mention. National Science Foundation (NSF) Graduate Research
Fellowship Program.
2011 Travel award to attend and present at the American Society of Limnology and
Oceanography international meeting in Puerto Rico.
2010 Travel award to attend and present at the International Society of Microbial
Ecology meeting in Seattle.
2005 Deans list summer semester 2005 (3.5 GPA or higher).
2001 -04 HOPE scholarship freshman through junior year (3.0 GPA or higher)

Publications:

- 2012 Rebecca Vega Thurber, Deron E. Burkepille, Adrienne M. S. Correa, Andrew R. Thurber, Andrew A. Shantz, Rory Welsh, Catharine Pritchard, Stephanie Rosales. Macroalgae decrease growth and alter microbial community structure of the reef-building coral, *Porites astreoides*. *PLoS One*. 7(9): e44246. doi:10.1371/journal.pone.0044246
- 2012 Darcy McRose, Patrick Keeling, Jan Janouškovec, Susannah Tringe, Stephanie Malfatti, **Rory M Welsh**, and Alexandra Z Worden. Global distribution of a wild alga revealed by targeted metagenomics. *Current Biology*. 2012; 22(17): R675-R677.
- 2012 Adrienne M.S. Correa, Rebecca Vega Thurber, **Rory M Welsh**. Unique nucleocytoplasmic dsDNA and +ssRNA viruses are associated with the dinoflagellate endosymbionts of corals. *International Society for Microbial Ecology*. (2012) available online.
- 2011 Adam Monier, **Rory M. Welsh**, Chelle Gentemann, George Weinstock, Erica Sodergren, E. Virginia Armbrust, Jonathan A. Eisen, and Alexandra Z Worden. Phosphate transporters in marine phytoplankton and their viruses: cross-domain commonalities in viral-host gene exchanges. *Environmental Microbiology*. (2012) 14(1), 162–176
- 2011 Ryan William Paerl, Kenneth S Johnson, **Rory M Welsh**, Alexandra Z Worden, Francisco P Chavez, Jonathan P Zehr. Differential distributions of *Synechococcus* subgroups across the California Current System. *Frontiers in Microbiology*. (2011) 2: 59.
- 2010 Marie L. Cuvelier, Andrew E. Allen, Adam Monier, John P. McCrow, Monique Messié, Susannah G. Tringe, Tanja Woyke, **Rory M. Welsh**, Thomas Ishoey, Jae-Hyeok Lee, Brian J. Binder, Chris L. DuPont, Mikel Latasa, Cédric Guigand, Kurt R. Buck, Jason Hilton, Mathangi Thiagarajan, Elisabet Caler, Betsy Read, Roger S. Lasken, Francisco P. Chavez, and Alexandra Z. Worden. Targeted metagenomics and ecology of globally important uncultured eukaryotic phytoplankton. *Proceedings of the National Academy of Sciences of the United States of America*. (2010) 107: 14679-14684
- 2008 Guillou L.¹, Viprey M.¹, Chambouvet A.¹, **Welsh R. M.**², Kirkham A. R.³, Massana R.⁴, Scanlan D.J.³, Worden A. Z.² Widespread occurrence and genetic diversity of marine parasitoids belonging to Syndiniales (Alveolata). *Environmental Microbiology*. (2008) 10: 3349–3365
- 2006 Erinn C. Howard, James R. Henriksen, Alison Buchan, Chris R. Reisch, Helmut Bürgmann, **Rory Welsh**, Wenying Ye, José M. González, Kimberly Mace, Samantha B.

Joye, Ronald P. Kiene, William B. Whitman, Mary Ann Moran, Bacterial Taxa That Limit Sulfur Flux from the Ocean. *Science*. (2006) 314: 649-652.

Professional Meetings:

- 2012 12th International Coral Reef Symposium, Cairns Convention Centre; Cairns, Queensland, Australia, Oral Presentation: Predatory *Bacteriovorax* give corals a fighting chance against pathogens
- 2011 American Society for Microbiology, Florida Branch, The Islander Resort, Islamorada, Florida, Oral Presentation: *Bacteriovorax*: Speedy predators of the Caribbean coral mucus microbiome
- 2011 American Society of Limnology and Oceanography international meeting in Puerto Rico, Poster Isolation and Characterization of the Predatory *Bacteriovorax* from Caribbean Corals
- 2010 American Society for Microbiology, Florida Branch, The Islander Resort, Islamorada, Florida
- 2010 13th International Symposium on Microbial Ecology, Washington State Convention and Trade Center, Seattle, WA, Poster *Bacteriovorax* isolated from coral reefs exert sideways control of the polymicrobial communities
- 2009 American Society for Microbiology, Florida Branch, The Islander Resort, Islamorada, Florida
- 2009 Microbial Genomics and Metagenomics Workshops, DOE Joint Genome Institute, Walnut Creek, CA
- 2008 American Society for Microbiology, Boston Convention & Exhibition Center, Boston, MA
- 2008 Prochlorococcusfest 20th Anniversary Colloquium, MIT Cambridge, MA, Poster The application of flow cytometry to enumeration and sizing of marine phytoplankton populations.
- 2007 *Micromonas pusilla* Jamboree, DOE Joint Genome Institute, Walnut Creek, CA
- 2006 Metagenomics, Calit2/UCSD, San Diego, CA

Mentoring:

- Summer 2010 MBARI, Flow Cytometry and Cell Sorting Workshop for Research Technician
- Summer 2008, MBARI, Flow Cytometry Workshop for Post Doctorates and Interns
- Summer 2008, MBARI, Intern Undergrads
- Summer 2007, RSMAS, University of Miami, High School Research Project
- 2006 and 2007, RSMAS, University of Miami, Research Undergrad

Certifications and Skills:

- Laser Capture Microdissection (trained by CGRB core)
- Lab manager and lab website developer
- Website developer for the Florida Branch of the American Society of Microbiology.
- American Academy of Underwater Sciences Standards for Scientific Diving (AAUS)
- Motorboat Operator Certification Course, Department of Interior
- Flow Cytometry, Instrument Verification & Validation, Sorting, At Sea Flow Cytometry, and Analysis. Instruments used Cytopeia influx, Coulter Epics XL, and Accuri C6

- WinList 3D and cytometry analysis software
- Epifluorescent microscopy, Gas chromatography, Electroporating electrocompetent cells
- DNA and RNA extractions; PCR, Genomiphi, WGA and WTA DNA and RNA amplification
- Sterile techniques maintaining several axenic cultures
- Successfully generated multiple viral metagenomes