

## *Curriculum Vitae*

JASON EARL ADOLF

Assistant Professor

<http://www.plankton.uhh.hawaii.edu>

University of Hawai'i Hilo  
Department of Marine Science  
200 W. Kawili St.  
Hilo, HI 96720  
808.933.3903  
jadolf@hawaii.edu

### 1. EDUCATION

2002 – Ph.D., Marine Estuarine and Environmental Sciences, University of Maryland, College Park, Maryland, Dissertation: “Photosynthetic physiology and carbon metabolism in the mixotrophic dinoflagellate, *Karlodinium micrum*”. Advisor: Lawrence W. Harding, Jr.

1996 – M.S., Botany, University of Hawai'i, Manoa. Thesis: “Isolation and characterization of a non-specific nuclease produced by *Scytonema ocellatum* FF-66-3”. Advisor: Gregory M.L. Patterson

1993 – B.S., Marine Biology, Roger Williams University, Bristol, Rhode Island

### 2. POSITIONS HELD

2006 – 2008 - Adjunct Assistant Professor, Gettysburg College, PA

2004 – 2008 – Postdoctoral Assistant Research Scientist, UMBI COMB

2003 – 2004 – Postdoctoral Assistant Research Scientist, Horn Point Laboratory

2001 – 2002 - Maryland Sea Grant Traineeship, Horn Point Laboratory

1996 – 2001 - Graduate Research Assistant, Horn Point Laboratory

1994 – 1996 - Graduate Research Assistant, Department of Chemistry, University of Hawai'i Manoa

1993 – Teaching Assistant, Department of Biology, University of Hawai'i Manoa

### 3. RESEARCH INTERESTS

My research interests are in the field of phytoplankton ecology and evolution. Particularly, understanding the mechanisms that drive changes in community composition, and how these change impact the ecological function of phytoplankton.

### 4. PUBLICATIONS

#### **2012 (submitted or in prep)**

\*\*Adolf, J.E., Bachvaroff, T.R., Deeds, J.R. and Place, A.R. Ichthyotoxic *Karlodinium veneficum* (Ballantine) Moestrup in the Upper Swan River Estuary (Western Australia): Ecological conditions leading to a fish kill. Submitted Aug 2012 to *Limnology and Oceanography* (in review).

Adolf, J.E. and Gamiao, S. Phytoplankton abundance and size structure in Kaloko fish pond, Hawaii, USA. In prep for *Pacific Science* (Fall 2012).

## 2011

\*\*Place, A.R., Bowers, H.A., Bachvaroff, T.R., **Adolf, J.E.**, Deeds, J.R., and Sheng, J. 2011. *Karlodinium veneficum* – the little dinoflagellate with a big bite. *Harmful Algae*

## 2010

\*\*Sheng, J., Malkiel, E., Katz, J., **Adolf, J.**, Place, A.R. (2010) A dinoflagellate exploits toxin to immobilize prey prior to ingestion. *Proc. Nat. Acad. Sci.* 107: 2082-2087.

## 2009

\*\***Adolf, J. E.**, Bachvaroff, T.R., and Place, A.R. (2009). Environmental modulation of Karlotoxin levels in strains of the cosmopolitan dinoflagellate, *Karlodinium veneficum* (Dinophyceae). *J. Phycol.* 45(176-192).

\*\*Bachvaroff, T. R., **Adolf, J.E.**, and Place, A.R. (2009). Strain variation in *Karlodinium veneficum* (Dinophyceae): toxin profiles, pigments, and growth characteristics. *J. Phycol.* 45: 137-153.

## 2008

\*\***Adolf, J. E.**, Bachvaroff, T.R., and Place, A.R. (2008). Can cryptophyte abundance trigger toxic *Karlodinium veneficum* blooms in eutrophic estuaries? *Harmful Algae* 8: 119-128.

**Adolf, J.E.**, Bachvaroff, T.R., and Place, A.R. (2008) *Manger à trois* : Toxic vs. non-toxic *Karlodinium veneficum* strains with a predator, *Oxyrrhis marina*, and prey, *Stoeratulula major*. *Proceedings of the 12th International Conference on Harmful Algae, Copenhagen Denmark*. pp. 107-10

Hall, N.S., Litaker, R.W., Fensin, E., **Adolf, J.E.**, Place, A.R., and Paerl, H.W. (2008) Environmental Factors Contributing to the Development and Demise of a Toxic Dinoflagellate (*Karlodinium veneficum*) Bloom in a Shallow, Eutrophic, Lagoonal Estuary. *Estuaries and Coasts* DOI 10.1007/s12237-008-9035-x

Bachvaroff, T. R., **Adolf, J. E.**, and Place, A. R. (2008) Phylogeography of Atlantic Coast *Karlodinium veneficum* Strains: A Genetic Marker Correlates with Toxin Type. *Proceedings of the 12th International Conference on Harmful Algae, Copenhagen Denmark*, pp. 55-58.

Brownlee, E.F., Sellner, S.G., Sellner, K.G., Nonogaki, H., **Adolf, J.E.**, Bachvaroff, T.R., and Place, A.R. 2008. Responses of *Crassostrea virginica* (Gmelin) and *C. ariakensis* (Fujita) to bloom-forming phytoplankton including ichthyotoxic *Karlodinium veneficum* (Ballantine). *J. Shellfish Res.* 27(3): 581-591.

Place, A. R., Brownlee, E. F., Sellner, S. G., Sellner, K. G., Nonogaki, H., **Adolf, J. E.**, and Bachvaroff, T. R., (2008). Bivalve responses to ichthyotoxic *Karlodinium veneficum* (Ballantine). *Proceedings of the 12th International Conference on Harmful Algae, Copenhagen Denmark* pp. 5-8.

Stoecker, D. K., **Adolf, J. E.**, Place, A. R., Glibert, P., M., and Meritt, D. (2008). Effects of the dinoflagellates *Karlodinium veneficum* and *Prorocentrum minimum* on early life history stages of the Eastern Oyster, *Crassostrea virginica*. *Marine Biology*. Published online 25 Jan. 2008 <http://dx.doi.org/10.1007/s00227-007-0901-z>

## **2007**

**Adolf, J. E.**, Place, A.R., Stoecker, D.K., and Harding, L.W. Jr., 2007. Modulation of polyunsaturated fatty acids in mixotrophic *Karlodinium veneficum* (Dinophyceae) and its prey, *Storeatula major* (Cryptophyceae). *J. Phycol.* 43, 1259-1270.

**Adolf, J.E.**, Krupatkina, D., Bachvaroff, T., and Place, A.R. 2007. Karlotoxin mediates grazing of *Oxyrrhis marina* on strains of *Karlodinium veneficum*. *Harmful Algae* 7, 400-412 <http://dx.doi.org/10.1016/j.hal.2006.12.003>.

Bachvaroff, T.R., **Adolf, J.E.**, Squier, A., Harvey, H.R., and Place, A.R., (2007) Liquid chromatographic-mass spectroscopic characterization, detection, and quantification of karlotoxins. *Harmful Algae* <http://dx.doi.org/10.1016/j.hal.2007.10.003>

Bai, X., **Adolf, J.E.**, Bachvaroff, T., Place, A.R., and D.W. Coats (2007). The interplay between host toxins and parasitism by *Amoebophyra*. *Harmful Algae* 6: 670-678. <http://dx.doi.org/10.1016/j.hal.2007.01.003>

Sheng, J., Malkiel, E., Katz, J., **Adolf, J.**, Belas, R., Place, A.R., 2007. Digital holographic microscopy reveals prey-induced changes in swimming behavior of predatory dinoflagellates 10.1073/pnas.0704658104. *Proc. Nat. Acad. Sci.* 104(44), 17512-17517.

## **2006**

**Adolf, J.E.**, Yeager, C.L., Mallonee, M.E., Miller, W.D., and Harding, L.W. Jr. 2006a. Environmental forcing of phytoplankton floral composition, biomass, and primary productivity in Chesapeake Bay, USA. *Estuarine, Coastal and Shelf Science* 67:108-122.

**Adolf, J.E.**, D.K. Stoecker, and L.W. Harding, Jr. 2006b. The balance of autotrophy and heterotrophy during mixotrophic growth of *Karlodinium micrum* (Dinophyceae) *J. Plank. Res* 28(8):737-751.

**Adolf, J. E.**, Bachvaroff, T.R., Krupatkina, D.N., Nonogaki, H., Brown, P.J.P., Lewitus, A.J., Harvey, H.R., and Place, A.R. 2006c. Species specificity and potential roles of *Karlodinium micrum* toxin. *African Journal of Marine Science Harmful Algae 2004*. P. G. C. Pitcher, T.A., Verheye, H.M. [Eds.], 28: 415-421.

Brownlee, E. F., Place, A. R., Nonogaki, H., **Adolf, J. E.**, Sellner, S. G., and Sellner, K. G. (2006). *Crassostrea ariakensis* and *C. virginica* responses to ichthyotoxic *Karlodinium veneficum*. *J. Shellfish. Res.* 25(2):714

Miller, W.D., L.W. Harding, Jr., and **Adolf, J.E.** 2006. Hurricane Isabel generated an unusual fall bloom in Chesapeake Bay, *Geophys. Res. Lett.*, 33, L06612, doi:10.1029/2005GL025658.

Paerl, H.W., L.M. Valdes, **J.E. Adolf**, B.L. Pierls, and L.W. Harding Jr. 2006. Anthropogenic and climatic influences on the eutrophication of large estuarine ecosystems. *Limnology and Oceanography* 51(1, part 1): 448-462.

## **2005**

W.M. Kemp, W.R. Boynton, **J.E. Adolf**, D.F. Boesch, W.C. Boicourt, G. Brush, J.C. Cornwell, T.R. Fisher, P.M. Glibert, J.D. Hagy, L.W. Harding, E.D. Houde, D.G. Kimmel, W.D. Miller, R.I.E. Newell, M. R. Roman, E.M. Smith, J.C. Stevenson. 2005. Eutrophication of Chesapeake Bay: Historical trends and ecological interactions. *Marine Ecology Progress Series* 303:1-29. open access @ <http://www.int-res.com/abstracts/meps/v303/>

Roman, M.R., **J.E. Adolf**, J. Bichy, W.C. Boicourt, L.W. Harding, Jr., E.D. Houde, S. Jung, D.G. Kimmel, W. D. Miller, and X. Zhang. 2005. Enhancement of plankton and fish abundance in Chesapeake Bay by Hurricane Isabel. American Geophysical Union *Eos* newsletter July 12, 2005

#### **2004**

Magnuson, A., Harding, L.W. Jr., Mallonee, M.E., and **Adolf, J.E.** 2004. Bio-optical model for the Chesapeake Bay and Middle Atlantic Bight. *Estuarine, Coastal and Shelf Science* 61:403-424.

#### **2003**

**Adolf, J.E.**, D.K. Stoecker, and L.W. Harding, Jr. 2003. Autotrophic growth and photoacclimation of *Karlodinium micrum* (Dinophyceae) and *Storeatula major* (Cryptophyceae). *Journal of Phycology* 39: 1109-1115.

#### **2002**

Deeds, J.R., D.E. Terlizzi, **J.E. Adolf**, D.K. Stoecker, and A.R. Place. 2002. Toxic activity from cultures of *Karlodinium micrum* (= *Gyrodinium galatheanum*) (Dinophyceae)- a dinoflagellate associated with fish mortalities in an estuarine aquaculture facility. *Harmful Algae* 1: 169-189.

#### **1999**

Li, A., D.K. Stoecker, and **J.E. Adolf**. 1999. Feeding, pigmentation and growth of the mixotrophic dinoflagellate *Gyrodinium galatheanum*. *Aquatic Microbial Ecology* 19: 163-176.

#### **1996**

**Adolf, J.E.** 1996. Isolation and characterization of *Scytonema ocellatum* extracellular nuclease. *Pacific Science* 50: 236.

#### **Manuscripts in preparation (UHH Work) (\*\* = UHH Undergraduate author)**

**Adolf, J.E.** and Walker, J.K. Coastal SGD influences phytoplankton size structure and abundance in coastal waters of West Hawaii Island. Targeting *Marine Ecology Progress Series*.

**Adolf, J.E.**, \*\*Collins, T. Walker, J.K., and \*\*Mooteb, J. Spatial and temporal variability in Hilo Bay water quality.

Gamiao, S., **Adolf, J.E.** Phytoplankton abundance and size structure in a groundwater-fed traditional Hawaiian fish pond.

## 5. PRESENTATIONS (\* = invited) (\*\* = UHH Undergraduate author)

*While at UH Hilo*

\***Adolf, J.E.**, \*\*Gamiao, S., Walker, J.K., Bachvaroff, T., Harding, L.W. Jr., and Place, A.R. 2012. Linking phytoplankton to environmental variability in the coastal ocean. Poster at the National Academies of Science Kavli Frontiers of Science symposium, July 2012, Solo, Indonesia.

Kimura, M., **Adolf, J.E.**, and Binder, P. 2011 *Update on Primary Production Simulation Model*. Presented at EPSCoR statewide meeting, Oct 2011

**Adolf, J.E.**, Walker, J.K., and Gamiao, S\*\*. 2011. What happens to SGD nutrients in the surface ocean at Kiholo and Kaloko Bay? NOAA-sponsored Symposium on Kona's Marine Ecosystem. King Kamehameha Hotel Sept 2011

Walker, J.K. and **Adolf, J.E.** The influence of submarine groundwater discharge on vertical structure of phytoplankton communities in West Hawaii. NOAA-sponsored Symposium on Kona's Marine Ecosystem. King Kamehameha Hotel Sept 2011

**Adolf, J.E.**, Walker, J.K., and Gamiao, S\*\*. 2011. What happens to SGD nutrients in the surface ocean at Kiholo and Kaloko Bay? EPSCoR Science Retreat, Kilauea Military Camp July 2011 (Presented by J.K. Walker due to my absence from the meeting)

**Adolf, J.E.** Phytoplankton in SGD plumes of West Hawaii. EPSCoR Science Meeting, April 2011

**Adolf, J.E.**, Walker, J.K. 2011. What can phytoplankton and bacteria tell us about coastal water quality of Hawaii Island? Presented at Big Island Water Resources 1<sup>st</sup> Annual Meeting, March 21, 2011

\***Adolf, J.E.**, \*\*Collins, T.P., and Walker, J.K. 2011. Water quality and phytoplankton around Hawaii Island. Given to an Environmental Science Class at Hilo High School, March 2011

**Adolf, J.E.** 2010. Coastal phytoplankton dynamics around Hawaii Island. Hilo Seminar Series, hosted by the Institute for Pacific Island Forestry, Hilo, HI. Dec 7, 2010.

\***Adolf, J.E.** and Wiegner, TW. 2010. The Hilo Bay water quality buoy: A new community resource. Presentation to the Big Island Water Garden Club. July 2010.

\***Adolf, J.E.** and Wiegner, TW. 2010. The Hilo Bay water quality buoy: A new community resource. Presentation to the UHH / CCECS Lectures series (coordinator Seabe Calhoun). May 2010.

**Adolf, J.E.**, Collins, T.P.\*\*, and Walker, J.K.\*\* 2010. Comparing nutrient – groundwater – phytoplankton relationships in coastal waters of East and West Hawaii Island. PACON conference, UH Hilo

**Adolf, J.E.**, Collins, T.P.\*\*, and Walker, J.K.\*\* 2010. Comparing nutrient – groundwater – phytoplankton relationships in coastal waters of East and West Hawaii Island. ASLO – NABS 2010, Sant Fe, NM June 6-11, 2010. Session on SGD

**Adolf, J.E.** 2009. Coastal Phytoplankton dynamics around Hawai'i Island: Ecology and Water Quality. Oral Presentation to BIOL 495AB seminar class, Sept 24, 2009

**Adolf, J.E.** 2009 Phytoplankton ecology of Hilo Bay. Oral Presentation at the Hawai'i Ecosystems Conference, UHH, Hilo, HI June 24, 2009

Wiegner, T. and **Adolf, J.** 2009. Past, present and future water quality research in Hilo Bay. Hosted by the Hilo Bay Watershed Advisory Group, Mokupapapa Discovery Center, May 14, 2009

**Adolf, J.E.**, and Wiegner, T. (2009). Phytoplankton Ecology of Hilo Bay: Real-time continuous monitoring and high resolution spatial mapping. Poster presentation at the Statewide EPSCoR Conference, Jan 9-10, 2009, Waikiki, HI

**Adolf, J.E.** 2008. Phytoplankton Ecology of Hilo Bay. Oral presentation given to TCBES Graduate Program, October 29, 2008, UH Hilo.

#### *While at Previous Institutions*

Belas, R. J. Sheng, E. Malkiel, J. Katz, **J. Adolf**, and A.R. Place. 2008. Digital Holographic Microscopy Reveals Prey-Induced Changes in Swimming Behavior of Predatory Dinoflagellates. Sensory Transduction in Microorganisms Gordon Research Conference. 01/13-18/2008. Ventura Beach, CA.

**Adolf, J.E.**, Bowers, H.A., and Place, A.R. 2008. Cryptophytes, karlotoxins and bloom formation by the ichthyotoxic dinoflagellate, *Karlodinium veneficum*. Ocean Sciences meeting, Orlando, Florida, March 2 – 7, 2008.

**Adolf, J.E.**, Bowers, H.A., Bachvaroff, T.R., and Place, A.R. 2007. Cryptophytes in Chesapeake Bay and their potential relationship to mixotrophic harmful algal blooms. Oral presentation at Fourth Symposium on Harmful Marine Algae in the U.S., Woods Hole, MA Oct.28 – Nov. 1, 2007.

**Adolf, J.E.** and Place, A.R. 2007. Toxic dinoflagellate blooms in the Inner Harbor, Baltimore MD and a proposal for real-time continuous monitoring of water quality in this highly visible urban environment. Poster presented at the Baltimore Ecosystem Study Annual Meeting, October 17, 2007

\***Adolf, J.E.** Cryptophytes drive mixotrophic harmful algal blooms: a hypothesis based on *K. veneficum* as a model harmful algal species. *Invited seminar at Wallops Flight Facility, Jan. 16, 2007.*

**Adolf, J.E.**, Krupatkina, D., Bachvaroff, T., and Place, A.R. The role of karlotoxins in microbe-microbe interactions involving the mixotrophic dinoflagellate, *Karlodinium veneficum*, its prey, and its predators. Gordon Research Conference on Marine Microbes, July 23-28, 2006 University of New England, Biddeford, ME.

**Adolf, J.E.**, Krupatkina, D., Bachvaroff, T., and Place, A.R. Karlotoxins mediate interactions between the mixotrophic dinoflagellate, *Karlodinium veneficum*, its prey, and its predators. Presented (by A.R. Place) at the *12th International Conference on Harmful Algae, Copenhagen Denmark, Sept. 2006*

**Adolf, J.E.**, W.D. Miller, and L.W. Harding, Jr. 2005. Variability of phytoplankton floral composition and size structure in Chesapeake Bay. Oral presentation at Estuarine Research Federation meeting, Norfolk, VA Oct 16-21, 2005.

**Adolf J.E.**, T.R. Bachvaroff, J.R. Deeds, A. Begum, W. Hosja, T. Reitsema, P. Ringeltaube, M. Robb, A.R. Place. 2005. Ichthyotoxic *Karlodinium micrum* in the

- Swan River Estuary (Western Australia): an emerging threat in a highly eutrophic estuarine system. Poster presentation at Third Symposium on Harmful Marine Algae in the U.S., Asilomar, CA Oct.2-7, 2005
- \***Adolf, J.E.**, T.R. Bachvaroff, and A.R. Place. Variable toxicity in *Karlodinium micrum*: causes and consequences. Invited oral presentation given at the Smithsonian Environmental Research Center, Edgewater, MD, March 3, 2005
- Adolf, J.E.**, T.R. Bachvaroff, G.F. Reidel, and A.R. Place. Effects of micro- and macro-nutrient starvation on karlotoxin production in *Karlodinium micrum* strains. Oral presentation given at GEOHAB Open Science Meeting, Baltimore, MD March 7, 2005.
- \***Adolf J.E.** Chl-a, carotenoids and more: looking inside phytoplankton assemblages. *Invited Oral Presentation* given at MD Sea Grant Fellows luncheon, March 18, 2005.
- Adolf, J.E.**, T.R. Bachvaroff, D.N. Krupatkina, H. Nonogaki, A.R. Place, P.J.P. Brown and A.J. Lewitus. Specificity and potential roles of *Karlodinium micrum* toxins (karlotoxins). Oral presentation given at the XI International Symposium on Harmful Algae in Cape Town, South Africa, Nov. 2004.
- Adolf, J.E.** and L.W. Harding, Jr. Interpreting phytoplankton indicators against a backdrop of high spatial and temporal variability in Chesapeake Bay. Oral, EPA, Duluth, MN, October 2004.
- Adolf, J.E.**, Mallonee, M.E., Miller, W.D., Hoover, M., and Harding, L.W. Jr. Integrating phytoplankton indicators: relationships between phytoplankton floral composition and size structure in Chesapeake Bay, Poster Presentation at EPA all-EAGLES meeting in Duluth, MN, October 2004.
- Adolf, J.E.**, Jordan, C.J., Mallonee, M.E., Miller, W.D., and Harding, L.W. Jr. 2004. Phytoplankton floral composition and primary productivity in Chesapeake Bay. Poster, ASLO – TOS meeting, Honolulu, HI, 15 - 20 Feb 2004.
- Adolf, J.E.**, Mallonee, M.E., Miller, W.D., Hoover, M., Benjamin, J., and Harding, L.W. Jr. Phytoplankton indicators in two differentially impacted sub-estuaries of Chesapeake Bay. Poster, EPA ALL EaGLes meeting, University of California, Bodega Marine Laboratory, Bodega Bay, California, 3-6 Dec 2003.
- \***Adolf, J.E.** 2003. Photosynthesis and carbon metabolism in the mixotrophic dinoflagellate, *Karlodinium micrum*. *Invited seminar*, Dept. of Biology, University of Wisconsin, Milwaukee, Wisconsin, 28 Mar 2003.
- Adolf, J.E.**, A.R. Place, D.K. Stoecker, and L.W. Harding, Jr. 2002. Autotrophic and heterotrophic C metabolism during mixotrophic growth of the dinoflagellate *Gyrodinium galatheanum*: <sup>14</sup>C tracer studies. *Phytoplankton Productivity: An Appreciation of 50 Years of the Study of Oceans and Lakes*. Bangor, Wales, UK, 18-22 Mar 2002.

## 6. ANALYTICAL SKILLS (alphabetical)

CHEMTAX software, flow cytometric analyses of bacteria and phytoplankton (BD FACSCalibur), FPLC, GC, HPLC, isotope analysis (<sup>14</sup>C, <sup>3</sup>H, <sup>32</sup>P), LC-MS, PAM fluorometry, phytoplankton and water quality sampling methods, phytoplankton culture, protein chromatography (Ion exchange, Gel permeation), protein (1D and 2D) and nucleic acid electrophoresis and autoradiography, Surfer software, UV-VIS spectrophotometry. Extensive oceanographic research cruise (>20) experience, coastal and offshore.

## 7. AWARDS AND GRANTS (including pending and declined applications)

*While at UH Hilo*

1. **NOAA Coastal Storms Program: 'Installation of coastal radar arrays to monitor ocean currents and improve community storm preparedness: Hilo Bay, Hawai'i Island'** PI – Jason E. Adolf. Co-PIs Steven Colbert, Henry Carson, Pierre Flament (UH Manoa). **\$180k, AWARDED**
2. **NSF EPSCoR Cross-cutting team SEED proposal: 'Modeling ecosystem functions at Kiholo and Kaloko Bay'** Stephen Colbert, Jason Adolf, Tracy Wiegner, Philippe Binder, Mark Kimura, Sharon Ziegler-Chong, Noelani Puniwai. Submitted Nov 18, \$40k, **DENIED**
3. **University of Hawaii Sea Grant: 'Microbial pollution source tracking and prediction in Hilo Bay: a spatial and temporal analysis'** PI - Tracy Wiegner. Associate PI's Jason Adolf, Stephanie Molloy, and Jonathan Awaya. **AWARDED \$60k**
4. **NSF Biological Oceanography: 'RUI: The influence of submarine groundwater discharge on coastal phytoplankton dynamics in tropical marine systems'** Jason Adolf (PI), Tracy Wiegner (Co-PI). Submitted Aug 2011. **DENIED**
5. **Integrated Ocean Observing System, National Ocean Service, National Oceanic and Atmospheric Administration, Department of Commerce, through the National Oceanographic Partnership Program – 'Developing the Pacific Islands Ocean Observing System'**, Brian Taylor (UHM, SOEST) PI. – Adolf is included as an investigator in charge of one operational (Hilo Bay) and two future-planned real-time continuous monitoring buoys around Hawaii Island. **AWARDED - \$15k per year for 6 years for the Hilo Bay Water Quality Buoy**
6. **NSF Major Research Instrumentation – "MRI: Acquisition of a Hitachi S-3400N-II Variable Pressure Scanning Electron Microscope with an Analytical Quantitative Element Detector for the University of Hawaii at Hilo"** Jason Adolf (PI), Co-PI's Marta deMaintenon, Mazen Hamad, Brian Perry, Steven Lundblad. **AWARDED – Sept 24, 2010 \$396,208**
7. **UH Hilo Research Council SEED grant – "Development of a real-time PCR assay for the toxic dinoflagellate, *Gambierdiscus toxicus*"** **AWARDED \$7k**
8. **NSF Physical Oceanography – "Collaborative Research: Exploring High Chlorophyll Signatures of Anticyclonic Eddies in Oligotrophic Hawaiian Waters"** 2009. PI; William Emery (University of Colorado) (Adolf co-PI). **DECLINED**
9. **NSF Biological Oceanography: 'Spatial and temporal variability of phytoplankton in Hilo Bay, Hawai'i: a model system of tropical estuarine productivity'** Jason E. Adolf (PI). Submitted Aug 15, 2009 **DECLINED**
10. **NSF Major Research Instrumentation – Recovery and Reinvestment (R<sup>2</sup>): "MRI-R<sup>2</sup>: Acquisition of a Hitachi S-3400N-II Variable Pressure Scanning Electron**



**Microscope with an Analytical Quantitative Element Detector for the University of Hawaii at Hilo**” Jason Adolf (PI), Co-PI’s Marta deMaintenon, Mazen Hamad, Ken Hon, Peter Mills. Submitted August 10, 2009 *DECLINED*

11. **University of Hawaii Research Council Seed Money Grant Program - Determining the community composition of primary producers (phytoplankton) in coastal Hawaiian waters using HPLC analysis of diagnostic photopigments**, PI : Jason E. Adolf, April 2, 2009, 15k, *DECLINED*
12. **NSF EPSCoR: IMUA III: Pacific High Island Evolutionary Biogeography: Impacts of Invasive Species, Anthropogenic Activity and Climate Change on Hawaiian Focal Species**. October 24, 2008. James R. Gaines (PI) \$20,000,000 (UH System Wide), J.E. Adolf is key personnel in the ENDER program within this grant. **AWARDED**
13. **Fairmont Orchid Resorts Green Committee Grant - (2008 – 2009) – monitoring grant for examining water quality in Pauoa Bay adjacent to the resort**. **AWARDED \$10,000**
14. **University of Hawaii REAP (2008) Phytoplankton ecology of Hilo Bay**. P.I. J. Adolf (J. Michaud, T. Wiegner, and J. Turner Co-PIs). **AWARDED 25k**

*While at previous institutions*

1. NOAA/ECOHAB (Submitted Oct. 2007), ‘The interplay between prey abundance and parasite infection in a mixotrophic HAB – *Karlodinium veneficum*.’ PI Allen R. Place, Co-PI Jason Adolf & Holly Bowers, 6/1/08-5/31/11, \$460,899. *Declined*.
2. NOAA/ECOHAB (Submitted Oct. 2007), ‘Effect of Swimming Characteristics of Dinoflagellates on the Structure, Formation and Dispersion of Algal Blooms’ PI Joseph Katz, The Johns Hopkins University, Co-PI Jian Sheng, University of Kentucky, Robert Belas, UMBI/COMB, Dan Kamykowski, North Carolina State University, Allen R. Place, UMBI COMB 4/1/08-3/31/11, \$708,500 *Declined*
3. NOAA/ECOHAB (Submitted Oct. 2007), ‘Acclimative Resource Allocation and Regulation of Toxicity in *Karlodinium veneficum*’ PI Hugh MacIntyre, Dauphin Island Sea Lab, 6/1/08-5/31/11, \$393, 148. *Declined*
4. NSF (Submitted Aug. 2007), ‘How does cryptophyte biodiversity impact estuarine phytoplankton dynamics?’ (Place, A.R.. and Adolf, J.E.) May 2008 – May 2011, \$900,000 *Declined*
5. MD Sea Grant 2006 ‘ Does cryptophyte abundance drive mixotrophic harmful algal blooms? *K. micrum* as a model system’ Place, A.R. (P.I.) and Adolf, J.E. (Co-PI). (*Funded*, \$211,258; Aug. 2006)
6. Mary Parke Fund, ‘*Gymnodinium veneficum* (Ballantine) is a *Karlodinium*: Application of new knowledge to understand the type culture of this toxic dinoflagellate’, Marine Biological Association Citadel Hill Laboratory, 2006, *funded* \$880
7. Western Australia Dept. of Environment / Swan River Trust, (March – April 2005) ‘*Karlodinium veneficum* in the Swan River Estuary’, (I was a visiting scientist with the WA DOE conducting sampling of a natural *Karlodinium* bloom and training their staff on sampling methods for toxin analysis.
8. Co-PI (with Allen Place (PI) and Tsvetan Bachvaroff (co-PI) on ‘Consequences and causes of variable toxicity in *Karlodinium micrum* – a cosmopolitan dinoflagellate’ funded September 2004, NOAA ECOHAB, 3 years, *funded* \$455,000

9. Horn Point Lab (UMCES) DRIF funds proposal (Shimadzu UV-2401 PC Spectrophotometer), *funded* 25k

## 8. TEACHING EXPERIENCE

### *Courses taught:*

1. MARE 172 (Fall 2012)
2. CBES 615 (with S. Colbert) (Spr. 2012)
3. CBES 600/601 (TCBES Core Class) Fall 2011
4. MARE 470/471 (Senior Thesis Research) 2010 – present
5. MARE 201 (Oceanography), University of Hawai'i Hilo Fall 2008 – present
6. MARE 201L (Oceanography Lab) 2010 – present
7. MARE 101L (Intro to Marine Science Lab) Summ 2010
8. MARE 394b / MARE 494/L (Applied Methods in Phytoplankton Ecology) University of Hawai'i Hilo, Summer 2009 – present
9. MARE 350 (Coastal Research Methods) University of Hawai'i Hilo Fall 2008 – present
10. MARE 353 (Pelagic Research Methods) University of Hawai'i Hilo Spring 2009 – present
11. MARE 499 (Coastal Phytoplankton of West Hawai'i) University of Hawai'i Hilo Spring 2009 (dir. study)
12. MARE 499 / 699 (Microscopy and Specimen Preparation Technique) Spring 2009 (with M. deMaintenon)
13. MARE 444 (Biological Oceanography) University of Hawai'i Hilo Fall 2009 – present
14. ES 128 (Introduction to Oceanography), Gettysburg College, Gettysburg, PA 2006 – 2008
15. SCI 220 (Introduction to Biotechnology) Sojourner-Douglass College, Baltimore, MD, Fall 2005
16. Teaching Assistant, Biology 101, University of Hawai'i, Manoa, Fall 1993

### *Undergraduate students supervised at University of Hawai'i Hilo*

1. Danielle Silver (MARE Senior Thesis) Fall 2009
2. Javez Mooteb (MARE Senior Thesis) Fall 2009
3. Judy Walker (MARE Senior Thesis) Fall 2009, co-advised with Karla Mcdermid
4. Gillian Wysock (MARE Senior Thesis) Fall 2009, co-advised with Michael Childers
5. Nicole Zellner (MARE Senior Thesis) Fall 2009, co-advised with Jason Turner
6. Topaz Collins, PIPES / Keaholoa Scholar and NSF REU intern, Fall 2008 – Spring 2009
7. Kehau Hagiwara (MARE Senior Thesis, 2010-2011)
8. Justin Praast (MARE Senior Thesis, 2010-2011)
9. Timothy Glick (MARE Senior Thesis, 2010-2011)
10. Sydney Gamiao (REU student and PIPES intern, 2011-2012)
11. Aleuikaimaikala Lyman (MARE Senior Thesis, 2011-2012)
12. James Everglade (MARE Senior Thesis, 2011-2012)
13. Jennifer Lefevre (MARE Senior thesis and C-MORE scholar, 2012-2013)
14. Kenneth Smith (MARE Senior thesis 2012-2013)
15. Jon Marusek (Hilo Bay buoy technician)

16. Stephen Brown (Hilo Bay buoy technician and internship student under my supervision)

#### *Graduate Students Supervised*

1. M.S. Committee Member - Ms. Trisha Atwood, UHH TCBES, graduated 2009
2. Primary M.S. Advisor – Ms. Judy Walker, UHH TCBES (started Fall 2010, NSF-EPSCoR IMUA III Graduate Scholar)
3. Primary M.S. advisor – Ms. Jessica Manton, UHH TCBES (graduated Spr. 2012)
4. M.S. Committee Member – Mr. Erik Johnson, UHH TCBES (Graduated spring 2012)
5. M.S. Committee Member – Mr. Andrew Walsh, UHH TCBES (Graduated Spring 2011)
6. M.S. Committee Member – Ms. Kailea Carson (2011 – present)
7. M.S. Committee Member – Mr. Aaron Mickleson (2011 – present)
8. PhD Committee Member – Ms. Kehau Hagiwara (2011 – present, Pharmacy)

#### *Students supervised at previous institutions*

1. Supervisor, Elizabeth Unger and Linwood Terrell (Howard High School), Oct. – Apr. 2007
2. Mentor, Kelly Garton, Walt Whitman HS (Teacher-Intern), 2005
3. Supervisor, Jessica Hayden, St. Mary's College of MD, 2005-2006
4. Mentor, Jennifer Benjamin, Cambridge-South Dorchester High School intern, Fall 2003
5. Advisor, Miranda Hoover, NSF Research Experience for Undergraduates (REU) program, Maryland Sea Grant, Summer 2003

#### **9. SERVICE HIGHLIGHTS**

1. Coordination of MARE assessment exam preparation
2. Coordination of MARE 'tri-fold' flyer (Spr 2011)
3. Community Mentor for Keaau HS student, Chloe Frizel, 2009-2010 Science Fair
4. Judge, 2008-2009 Science Fair (*'Imiloa* Astronomy Center of Hawai'i, Feb 14, 2009)
5. Judge, 2009-2010 Science Fair (*'Imiloa* Astronomy Center of Hawai'i, Feb 14, 2009)
5. Judge, 2008-2009 MARE Awards for Science Fair Projects
6. Public Presentation on Hilo Bay Water Quality - Wiegner, T. and **Adolf, J.** 2009. Past, present and future water quality research in Hilo Bay. Hosted by the Hilo Bay Watershed Advisory Group, Mokuapapapa Discovery Center, May 14, 2009
7. Judge, UHH TCBES Student Research Symposium (April 17, 2009)
8. Hiring Committee Member, UHH Analytical Services Manager (Winter 2009)
9. Member of TCBES Admissions Committee (2010 – present)
10. Member of TCBES PHD program committee (2011 – present)
11. MARE representative on CAS Strategic Planning Committee (2011 – present)

**-Reviewer:** *Aquatic Ecology, Aquatic Microbial Ecology, Estuarine, Coastal & Shelf Science, European Journal of Phycology, Hydrobiologia, Journal of Phycology, Journal of Plankton Research, Marine Biology, NSF (Biological Oceanography).*

#### *While at previous institutions*

1. President (2005-2006), Center of Marine Biotechnology '*Et al*' association of postdoctoral scientists and faculty research assistants

2. Chair, Environmental Committee, Linover Improvement Association, Overlea-Fullerton, MD
3. Co-chair of special session, "*Mixotrophic Plankton – Combining phototrophic and heterotrophic nutrition*", American Society of Limnology and Oceanography, Albuquerque, New Mexico, 12-16 Feb 2001.
4. Advised 6<sup>th</sup> grade student, Zak Yaffe, '**ALGAE, FERRUM, ET LUX- QUID EST CONNECTIO?** (Algae, Iron and Light- What is the connection?)', Maret School Science Fair (Washington, D.C.), 2<sup>nd</sup> place winner

## 10. PROFESSIONAL SOCIETIES

American Association for the Advancement of Science (AAAS)  
American Society for Limnology and Oceanography  
Phycological Society of America