

BIOGRAPHICAL SKETCH

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B.S., Mechanical Engineering, Massachusetts Institute of Technology, 1970

M.S., Civil Engineering, Massachusetts Institute of Technology, 1976

Ph.D., Aquatic Sciences, Department of Civil Engineering, MIT, 1977

Director, Coastal Ocean Institute, Woods Hole Oceanographic Institution, 2004-present

Senior Scientist, Woods Hole Oceanographic Institution, 1991-present

Associate Scientist, Woods Hole Oceanographic Institution, 1983-1991; tenure 1987

Assistant Scientist, Woods Hole Oceanographic Institution, 1979-1983

Postdoctoral Investigator, Woods Hole Oceanographic Institution, 1978-1979

Instructor, Massachusetts Institute of Technology Department of Civil Engineering, 1978

SELECTED PUBLICATIONS OVER THE PAST THREE YEARS:

- 2006 Persich, G.R., D.M. Kulis, E.L. Lilly, D.M. Anderson, and V.M.T. Garcia. Probably origin and toxin profile of *Alexandrium tamarense* (Lebour) Balech from southern Brazil. *Harmful Algae* 5: 36-44.
- 2006 Erdner, D.L. and D.M. Anderson. Global transcriptional profiling of the toxic dinoflagellate *Alexandrium fundyense* using Massively Parallel Signature Sequencing. *BMC Genomics* 7:88 (1-11).
- 2006 Nagai, S., L. McCauley, N. Yasuda, D.L. Erdner, D.M. Kulis, Y. Matsuyama, S. Itakura and D.M. Anderson. Development of microsatellite markers in the toxic dinoflagellate *Alexandrium minutum* (Dinophyceae). *Molecular Ecology Notes*. 6: 756-758.
- 2006 Ahn, S., D.M. Kulis, D.L. Erdner, D.M. Anderson, D.R. Walt. Fiber-optic microarray for simultaneous detection of multiple harmful algal bloom species. *Appl. Environ. Microbiol.* 72(9):5742-5749.
- 2006 Anderson, D.M. and K. Rengefors. Community assembly and seasonal succession of marine dinoflagellates in a temperate estuary – the importance of life cycle events and predation. *Limnol. & Oceanogr.* 51(2): 860-873.
- 2006 Dyhrman, S.T., D.L. Erdner, J. LaDu, M. Galac and D.M. Anderson. Molecular quantification of toxic *Alexandrium fundyense* in the Gulf of Maine using real-time PCR. *Harmful Algae* 5(3): 242-250.
- 2006 Gribble, K.E. and Anderson, D.M. Molecular phylogeny of the heterotrophic dinoflagellates, *Protoberidinium*, *Diplopsalis*, and *Preperidinium* (Dinophyceae), inferred from large subunit rDNA. *J. Phycol.* 42: 1081-1095.
- 2006 Anderson, D.M., D. Kulis, D. Erdner, S. Ahn, and D. Walt. Fibre optic microarrays for the detection and enumeration of harmful algal bloom species. *African Journal of Marine Science* 28(2): 231-25.
- 2006 Leblond, J.D., M.R. Sengco, J.O. Sickman, J.L. Dahmen, and D.M. Anderson. Sterols in the Syndinian dinoflagellate parasite, *Amoebophrya* sp., a parasite of the dinoflagellate *Alexandrium tamarense* (Dinophyceae). *J. Eukaryot. Microbiol.* 53(3): 1-6.
- 2007 Gribble, K.E. and D.M. Anderson. High intragenomic variability in large subunit ribosomal DNA genes in the heterotrophic dinoflagellates *Protoberidinium*, *Diplopsalis*, and *Preperidinium* (Dinophyceae). *Phycologia* 46 (3): 315-324.

- 2007 Godhe, A., C. Cusack, J. Pedersen, P. Andersen, D.M. Anderson, E. Bresnan, A. Cembella, et al. Intercalibration of classical and molecular techniques for identification of *Alexandrium fundyense* (Dinophyceae) and estimation of cell densities. *Harmful Algae* 6: 56-72.
- 2007 Lilly, E.L., K.M. Halaynch, and D.M. Anderson. Species boundaries and global biogeography of the *Alexandrium tamarense* complex (Dinophyceae). *J. Phycol.* 43: 1329-1338.
- 2007 Orlova, T.Y., M.S. Selina, E.L. Lilly, D.M. Kulis, and D.M. Anderson. Morphogenetic and toxin composition variability of *Alexandrium tamarense* (Dinophyceae) from the east coast of Russia. *Phycologia* 46(5): 534-548.
- 2007 Anderson, D.M. The ecology and oceanography of harmful algal blooms: multidisciplinary approaches to research and management. Bruun Memorial Lecture, IOC, UNESCO, Paris.
- 2007 Gribble, K.E., G. Nolan, and D.M. Anderson. Biodiversity, biogeography and potential trophic impact of *Protoperidinium* spp. (Dinophyceae) off the southwestern coast of Ireland. *J. Plankt. Res.* 29(11): 931-947.
- 2008 Juhl, A.R., C.A. Martins, and D.M. Anderson. Toxicity of *Alexandrium lusitanicum* to gastropod larvae is not caused by paralytic-shellfish-poisoning toxins. *Harmful Algae* 7: 567-573.
- 2008 Glibert, P.M., R. Azanza, M. Burford, K. Furuya, E. Abal, A. Al-Azri, F. Al-Yamani, P. Andersen, D.M. Anderson, et al. Ocean urea fertilization for carbon credits poses high ecological risks. *Mar. Poll. Bull.* 56: 1049-1056.
- 2008 Anderson, D.M. Harmful algal blooms and ocean observing systems: needs, present status and future potential. In: *Fisheries for Global Welfare and Environment*, K. Tsukamoto, T. Kawamura, T. Takeuchi, T.D. Beard, Jr., and M.J. Kaiser (Eds.), Terrapub, Tokyo, p. 317-334.
- 2008 Erdner, D.L., J. Dyble, M.L. Parsons, P. Moeller, R.C. Stevens, K.A. Hubbard, M.L. Wrabel, S.K. Moore, K.A. Lefebvre, D.M. Anderson, P. Bienfang, R.R. Bidigare, M.S. Parker, P. Moeller, L.E. Brand, and V.L. Trainer. Centers for Oceans and Human Health: a unified approach to the challenge of harmful algal blooms. *Environ. Health* 7(Suppl): S2.
- 2008 McGillicuddy, D.J., Jr., D.M. Anderson, C.A. Stock, D.R. Lynch, and D.W. Townsend. Modeling blooms of *Alexandrium fundyense* in the Gulf of Maine. In: *Real-time Coastal Observing Systems for Marine Ecosystem Dynamics and harmful Algal Blooms: Theory, Instrumentation and Modelling*, Babin, M., C.S. Roesler, and J.J. Cullen (Eds.), UNESCO, Paris, France, pp. 599-626.

OTHER SIGNIFICANT PUBLICATIONS

(Publications selected from over 240 authored or co-authored publications)

- 2005 Anderson, D.M., B.A. Keafer, D.J. McGillicuddy, M.J. Mickelson, K.E. Keay, P.S. Libby, J.P. Manning, C.A. Mayo, D.K. Whittaker, J.M. Hickey, R. He, D.R. Lynch, and K.W. Smith. Initial observations of the 2005 *Alexandrium fundyense* bloom in southern New England: General patterns and mechanisms. *Deep-Sea Res. II* 52(19-21): 2856-2876.
- 2005 Anderson, D.M., B.A. Keafer, W.R. Geyer, R.P. Signell, and T.C. Loder. Toxic *Alexandrium* blooms in the western Gulf of Maine: The plume advection hypothesis revisited. *Limnol. Oceanogr.* 50(1): 328-345.
- 2005 Ramsdell, J.S., D.M. Anderson, and P.M. Glibert (Eds). HARRNESS. Harmful Algal Research and Response: A National Environmental Science Strategy 2005-2015. Ecological Society of America, Washington, DC, 96 pp.
- 2005 Anderson, D.M. and J.S. Ramsdell. HARRNESS – a framework for HAB research and monitoring in the United States for the next decade. *Oceanography* 18(2): 238-246.
- 1995 Anderson, D. M. ECOHAB - The Ecology and Oceanography of Harmful Algal Blooms: A National Research Agenda. Woods Hole Oceanographic Institution, Woods Hole, MA. 66 pp.