

GREGORY JOHN DOUCETTE

NOAA/National Ocean Service
Center for Coastal Environmental Health &
Biomolecular Research
219 Fort Johnson Rd.
Charleston, SC 29412

EDUCATION:

Bowling Green State University	Major: Biology	B.Sc. cum laude/1979
Texas A&M University	Major: Oceanography	M.Sc./1982
University of British Columbia	Major: Botany	Ph.D./1989
Woods Hole Oceanographic Institution	Harmful Algal Blooms	Postdoctoral/1989-1992
National Marine Fisheries Service	Marine Biotoxins	Postdoctoral/1992-1995

PROFESSIONAL EXPERIENCE:

- ♦ Research Oceanographer/Project Leader, NOAA/National Ocean Service, Center for Coastal Environmental Health & Biomolecular Research, Marine Biotoxins Program (Feb. 1999-present).
- ♦ Faculty Member, Marine Biomedical and Environmental Sciences Program/College of Graduate Studies, Medical University of South Carolina (Jan. 1996-present).
- ♦ Adjunct Faculty Member, Graduate Faculty of the University, Marine Biology Program, University of Charleston (Oct. 1992-present).
- ♦ Project Leader, Marine Biotoxins Program, Charleston Laboratory, National Marine Fisheries Service (Jan. 1996-Jan. 1999).

NATIONAL/INTERNATIONAL WORKSHOPS AND COMMITTEES (selected since 2002):

- ♦ Workshop on “Biosensors for Harmful Algal Blooms,” Alliance for Coastal Technologies, Solomons, MD (Mar. 2002). Plenary lecture – “Detection of HAB species, toxins, & toxicities: current approaches & potential for *in-situ* applications.”
- ♦ Workshop on “Real Time Coastal Observing Systems for Ecosystem Dynamics and Harmful Algal Blooms,” Villefranche-sur-mer, France (June 2003). Plenary lecture - “Biosensors & toxin detection.”
- ♦ Member, Council of the International Society for the Study of Harmful Algae (ISSHA) (2003-present).
- ♦ Technical Cooperation Expert, International Atomic Energy Agency; Project: Application of Nuclear Techniques to Address Harmful Algal Bloom Impacts in the Benguela Region (2002-continuing).
- ♦ Workshop on U.S. National Plan for Algal Toxins and Harmful Algal Blooms, Charleston, SC (March 2004).
- ♦ Member, AOAC Task Force on Algal Toxins (2004-continuing).
- ♦ Member, International Advisory Board, EC BioCop Project on New Technologies to Screen Multiple Contaminants in Foods (2005-continuing).
- ♦ Member, U.S. National HAB Committee (July 2007-June 2010).
- ♦ Workshop on “National Scientific Research, Development, Demonstration, and Technology Transfer Plan on Reducing Impacts from HABs”, Woods Hole, MA (June 2007).
- ♦ Workshop on “National Scientific Research, Development, Demonstration, and Technology Transfer Plan on Reducing Impacts from HABs”, Woods Hole, MA (25-28 June 2007).

FIVE MOST RELEVANT REFEREED PUBLICATIONS (80 total):

- ♦ Doucette, G.J., Logan, M.M., Ramsdell, J.S., Van Dolah, F.M. 1997. Development and preliminary validation of a microtiter plate-based receptor binding assay for paralytic shellfish poison toxins. *Toxicon* 35:625-636.
- ♦ Scholin, C.A., Marine, R. III, Miller, P.E., Doucette, G.J., Powell, C.L., Haydock, P., Howard, J., Ray, J. 1999. DNA probes and a receptor binding assay for detection of *Pseudo-nitzschia* (Bacillariophyceae) species and domoic acid activity in cultured and natural samples. *Journal of Phycology* 35:1356-67.
- ♦ Babin, M., Cullen, J.J., Roesler, C.S., Donaghay, P.L., Doucette, G.J., Kahru, M., Lewis, M.R., Scholin, C.A., Sieracki, M.E., Sosik, H.M. 2005. New approaches and technologies for observing harmful algal blooms. *Oceanography* 18:210-227.
- ♦ Doucette, G.J., Turner, J.T., Powell, C.L., Keafer, B.A., Anderson, D.M. 2005. ECOHAB-Gulf of Maine. Trophic accumulation of PSP toxins in zooplankton during *Alexandrium fundyense* blooms in Casco Bay, Gulf of Maine, April – June, 1998. I. Toxin levels in *A. fundyense* and zooplankton size fractions. *Deep-Sea Research II* 52:2764-2783.
- ♦ Campbell, K., Stewart, L.D., Doucette, G.J., Fodey, T.L., Haughey, S.A., Vilariño, N., Kawatsu, K., Elliott, C.T. 2007. An assessment of specific binding proteins suitable for the detection of paralytic shellfish poisons using optical biosensor technology. *Analytical Chemistry* 79:5906-5914.

FIVE RELATED REFEREED PUBLICATIONS:

- ♦ Powell, C.L., Doucette, G.J. 1999. A receptor binding assay for paralytic shellfish poisoning toxins: recent advances and applications. *Natural Toxins* 7:393-400.
- ♦ Parsons, M.L., Scholin, C.A., Miller, P.E., Doucette, G.J., Powell, C.L., Fryxell, G.A., Dortch, Q., Soniat, T. 1999. *Pseudo-nitzschia* species (Bacillariophyceae) in Louisiana coastal waters: molecular probe field trials, genetic variability, and domoic acid analyses. *Journal of Phycology* 35:1368-78.
- ♦ Pitcher, G.C., Franco, J.M., Doucette, G.J., Powell, C.L., Mouton, A. 2001. Paralytic shellfish poisoning in the abalone *Haliotis midae* on the west coast of South Africa. *Journal of Shellfish Research* 20:895-904.
- ♦ Ruberu, S.R., Liu, Y.-G., Wong, C.T., Perera, S.K., Langlois, G.W., Doucette, G.J., Powell, C.L. 2003. A receptor binding assay for paralytic shellfish poisoning toxins: optimization and interlaboratory comparison. *Journal of the Association of Official Analytical Chemists* 86:737-745.
- ♦ Doucette, G.J., Cembella, A.D., Martin, J.L., Michaud, J., Cole, T.V.N., Rolland, R.M. 2006. PSP toxins in north Atlantic right whales (*Eubalaena glacialis*) and their zooplankton prey in the Bay of Fundy, Canada. *Marine Ecology Progress Series* 306:303-313.

MOST RELEVANT BOOK CHAPTERS (9 total):

- ♦ Cembella, A.D., Doucette, G.J., Garthwaite, I. 2003. *In vitro* assays for phycotoxins. In: Hallegraeff, G.M., Anderson, D.M., Cembella, A.D. (eds.), *Manual on Harmful Marine Microalgae*. Second Edition. Monographs on Oceanographic Methodology, 11. IOC-UNESCO, Paris. pp. 297-345.
- ♦ Doucette, G.J., Maneiro, I., Riveiro, I., Svensen, C. 2006. Phycotoxin pathways in aquatic food webs: transfer, accumulation and degradation. In: Granéli, E., Turner, J.T. (eds.) *Ecology of Harmful Algae*. Springer-Verlag, Heidelberg. pp. 283-295.
- ♦ Scholin, C.A., Doucette, G.J., Cembella, A.D. In press. Prospects for developing automated systems for *in situ* detection of harmful algae and their toxins. In: Babin, M., Cullen, J., Roessler, C. (eds.), *Real time coastal observing systems for ecosystem dynamics and harmful algal blooms*. Monographs on Oceanographic Methodologies, Vol. 10. Paris: Intergovernmental Oceanographic Commission of UNESCO.