DAVID A. CARON
Professor of Biology
USC Associates Captain Allan Hancock Endowed Chair in Marine Science
Department of Biological Sciences, University of Southern California
3616 Trousdale Ave., AHF 301, Los Angeles, CA 90089-0371
Phone: (213) 740-0203 Fax: (213) 740-8123
Email: dcaron@usc.edu

Chief Science Officer
Aquatic EcoTechnologies, LLC
20370 Skyhawk Lane
Topanga, CA 90290
9310)455-1659

Education and Professional Experience

1975	B.S. University of Rhode Island, Microbiology
1977	M.S. University of Rhode Island, Oceanography
1984	Ph.D. Massachusetts Inst. of Technology and Woods Hole Oceanographic Inst., Joint Program in Biological Oceanography
1984 - 1985	Associate Research Scientist, Lamont-Doherty Geological Observatory of Columbia University.
1985 - 1989	Assistant Scientist, Woods Hole Oceanographic Institution.
1989 - 1993	Associate Scientist, Woods Hole Oceanographic Institution.
1993 - 1997	Associate Scientist with tenure, WHOI.
1997 - 1999	Senior Scientist, WHOI.
1975 - present	Participation on 30 major research cruises.
1975 - present	Field research at field stations in Bermuda (BBSR), Jamaica (DBRS), Barbados (BRI), Catalina Island (USC marine station), Caribbean Marine Research Center (LSI, Bahamas).
1999 - present	Professor, University of Southern California
2010 - 2011	Interim Director, Wrigley Institute for Environmental Studies
2000 - 2003	Section Head, Marine Environmental Biology Section
2003 - 2006	Chair of the Department of Biological Sciences, USC

Recent Awards and Honors

Mary Sears Endowed Chair for Excellence in Biological Oceanography (Woods Hole Oceanographic Institution), 1999
Seymour Hutner Award (Society of Protozoologists), 2002
President, International Society of Protistologists, 2004-2005
Fellow, American Academy of Microbiology, 2007-present
Albert S. Raubenheimer Award for Excellence in Teaching, Research and Service (University of Southern California), 2010
Fellow, American Academy for the Advancement of Science, 2010-present
Fellow, Simons Collaboration on Ocean Processes and Ecology (Simons Foundation), 2014-present

USC Associates Captain Allan Hancock Endowed Chair in Marine Science, USC, 2017

Research Interests

Marine and freshwater microbial ecology, with emphasis on the life histories and trophic relationships among protists (microalgae including harmful species, and protozoa), and their relationships with other planktonic and benthic microorganisms; emphases on the biogeography, genetics, physiology and biogeochemical significance of protists.

Memberships in Professional Societies

Association for the Sciences of Limnology and Oceanography
International Society of Protistologists
International Society for Microbial Ecology
American Society for Microbiology
The Oceanography Society

Professional Teaching Experience

1980	Teaching Assistant, Marine Biological Laboratory.
1983 - 1984	Visiting Lecturer, Bridgewater State College. Course: Introductory Oceanography
1986 - 1999	Visiting Lecturer, Bridgewater State College. Course: Introductory Oceanography I (physical, chemical and geological oceanography) Course: Introductory Oceanography II (biological oceanography).
1988-1993	MIT/WHOI Joint Program in Biological Oceanography. Course: Megacourse in Biological Oceanography.
1993-1994	MIT/WHOI Joint Program in Biological Oceanography. Course: Molecular Methods and Approches in Biological Oceanography.
1995-1999	MIT/WHOI Joint Program in Biological Oceanography. Course: Biological Oceanography.
1996-1999	Visiting Lecturer, University of Massachusetts, Dartmouth. Course: Biological Oceanography.
1996	Short course on microbial ecology, Instituto Oceanográfico, University of São Paulo, São Paulo, Brazil.
1997	Mini-course on microbial ecology, Universität Rostock, Rostock, Germany
1997-1999	Semester in Environmental Science, Microbial Ecology Section, Marine Biological Laboratory, Woods Hole, MA.
2000	BISC 373L Biological Oceanography (Catalina Semester) BISC 581 Seminar in Ecology
2001	CORE 103 Human Impact on the Blue Planet BISC 419 Environmental Microbiology BISC 530 Marine Biology Graduate Seminar BISC 582 Advanced Biological Oceanography Mini-course in Plankton Biology (Catalina Island)
2001 - 2002	BISC 113 Introduction to Biology II BISC 582 Advanced Biological Oceanography

2003 BISC 493/494 Undergrad. Biology Honors Seminar and Thesis
2002 - present BISC 121 Intro Biology: Organismal and Evolutionary Biology
2003 - present BISC 584 Graduate Seminar in Marine Biology
2003 - present BISC 585 Scientific Writing: NSF Proposal Reviewing
2004 - present BISC 530 Plankton Biology
2005 - 2006 BISC 455 Molecular Approaches to Microbial Diversity
2017 - present BISC 419 Environmental Microbiology
2017 - present BISC 493/494 Biology Honors Seminar and Thesis

Editorial Advisorship/Reviewer Board Service (Past & Present)

The ISME Journal (present)
Journal of Eukaryotic Microbiology (past)
Limnology & Oceanography (past)
Aquatic Microbial Ecology (past: Deputy Managing Editor; North America)
Marine Ecology Progress Series (past)
Microbial Ecology (past)
Applied & Environmental Microbiology (past)
Presently ad hoc reviewer for >20 other journals

Participation on National Funding Panels

NSF - Polar Programs,
NSF - Biological Oceanography
NSF - Life in Extreme Environments
NOAA – Ecology of Harmful Algal Blooms
NASA – Exobiology

10 Recent Scientific Publications (from >260 peer-reviewed articles and book chapters)

1. Smith, J., D. Shultz, M.D.A. Howard, G. Robertson, V. Phonsiri, V. Renick, D.A. Caron, R.M. Kudela and K. McLaughlin. 2021. Persistent Domoic Acid in Marine Sediments and Benthic Infauna along the Coast of Southern California. Harmful Algae. 108: 102103. DOI: https://doi.org/10.1016/j.hal.2021.102103.
2. Howard M.D.A., R.M. Kudela, K. Hayashi, A.O. Tatters, D.A. Caron, S. Theroux, S. Oehrle, M. Roethler, A. Donovan, K. Loftin and Z. Laughrey. 2021. Multiple co-occurring and persistently detected cyanotoxins and associated cyanobacteria in adjacent California lakes. Toxicon 192: 1-14. doi:https://doi.org/10.1016/j.toxicon.2020.12.019.
3. Tatters A.O., J. Smith, R.M. Kudela, K. Hayashi, M.D.A. Howard, A.R. Donovan, K.A. Loftin and DA. Caron. 2021. The tide turns: Episodic and localized cross-contamination of a California coastline with cyanotoxins. Harmful Algae 103: 102003. doi:https://doi.org/10.1016/j.hal.2021.102003.
4. Smith, J.C., A. Lie, E.L. Seubert, N. Crowley, G. Robertson and D.A. Caron. 2019. Co-occurring dissolved algal toxins observed at multiple monitoring stations off southern California via Solid Phase Adsorption Toxin Tracking (SPATT). Toxicon. 171: 62-65.
5. Tatters, A.O., M.D.A. Howard, C. Nagoda, A.B. Fetscher, R.M. Kudela and **D.A. Caron**. 2019. Heterogeneity of toxin-producing cyanobacteria and cyanotoxins in coastal watersheds of Southern California. Estuaries and Coasts. DOI: 10.1007/s12237-019-00546-w.

6. Smith, J., P. Connell, R.H. Evans, A.G. Gellene, M.D.A. Howard, B.H. Jones, S. Kaveggia, L. Palmer, A. Schnetzer, B.N. Seegers, E.L. Seubert, A.O. Tatters and **D.A. Caron**. 2018. A decade and a half of *Pseudo-nitzschia* spp. and domoic acid along the coast of southern California. Harmful Algae. DOI: 10.1016/j.hal.2018.07.007
7. Hu, S.K., Z. Liu, H. Alexander, V. Campbell, P.E. Connell, S.T. Dyhrman, K.B. Heidelberg, and **D.A. Caron**. 2018. Shifting metabolic priorities among key protistan taxa within and below the euphotic zone. Environmental Microbiology. DOI: https://doi.org/10.1111/1462-2920.14259.
8. Carpenter, K.J., M. Bose, L. Polerecky, A. Lie, K.B. Heidelberg, **D.A. Caron**. 2018. Single-cell view of carbon and nitrogen acquisition in the mixotrophic alga *Prymnesium parvum* (Haptophyta) inferred from stable isotope tracers and NanoSIMS. Frontiers in Marine Science (Marine Ecosystem Ecology). 5:157. DOI: 10.3389/fmars.2018.00157.
9. **Caron, D.A**. 2017. Acknowledging and incorporating mixed nutrition into aquatic protistan ecology, finally. Environmental Microbiology Reports (Crystal Ball 2017). 9: 41-43.
10. **Caron, D.A**., H. Alexander, A.E. Allen, J.M. Archibald, E.V. Armbrust, C. Bachy, A. Bharti, C.J. Bell, S.T. Dyhrman, S. Guida, K.B. Heidelberg, J.Z. Kaye, J. Metzner, S.R. Smith and A.Z. Worden. 2016. Probing the evolution, ecology and physiology of marine protists using transcriptomics. Nature Reviews Microbiology. DOI:10.1038/nrmicro.2016.160.

Synergistic Activities

Present Activities:

Co-chair of the California Cyanobacteria and Harmful Algal Bloom (CCHAB) Network. Also a member of the CCHAB Mitigation Subcommittee.

Member of the Management Practices working group within the Harmful Cyanobacteria Bloom (HCB) team of the Interstate Technology & Regulatory Council (ITRC).

Member of the Technical Advisory Committee (TAC) to develop a framework and implementation guidance for monitoring Freshwater Harmful Algal Blooms (FHAB) in state waters.

Member of the Steering Committee for the California Harmful Algal Bloom Monitoring and Alert Program (HABMAP).

Past Activities:

Short-courses offered on Marine Microbial Ecology and Microbial Food Webs, conducted for Instituto Oceanográfico, Universidade de São Paulo, Brazil, and the University of Rostock, Rostock, Germany.

Participation in Centers for Ocean Science Education Excellence, working with K-12 teachers in LA school district to improve curricula. Facilitation high school biology course offered on USC campus to local inner city school (32nd Street School).

Outreach program involving 13 regional aquaria and informal learning centers to develop monitoring and educational program for local harmful and toxic species of algae (Community HAB Watch Network).

Lectures for local middle schools, high school on careers in science and engineering. Seminars for science library guilds, local aquaria, state and county water boards and toxicological societies.