

PAUL G. FALKOWSKI

Educational Background:

<i>Degree</i>	<i>Institution Conferring</i>	<i>Field</i>	<i>Year</i>
B.S.	City College of the City University of New York	Biology	1972
M.A.	City College of the City University of New York	Biology	1973
Ph.D	University of British Columbia (Advisor: Prof. F.J.R. Taylor)	Biology	1975

Professional Background:

Professor II, Institute of Marine and Coastal Sciences and Dept of Geology, Rutgers University	1998-
Visiting Research Scholar, University of Hawaii 2002	
Group Leader, Environmental Biophysics and Molecular Biology Program, Brookhaven National Laboratory	1995-1998
Visiting Research Director, CNRS - Laboratoire de physique et chimie marines, Villefranche-sur-Mer, France (with Dr. A. Morel)	1992
Head, Oceanographic Sciences Division, Brookhaven National Laboratory	1987-1991
Visiting Research Scientist, National Institute for Basic Biology, Okazaki, Japan	1985
Scientist, Brookhaven National Laboratory (with tenure from 1984)	1976-
Adjunct Professor, State University of New York, Stony Brook	1976-
Post-doctoral associate, University of Rhode Island (with Dr. Theodore Smayda)	1975-6

Awards:

Fellow, American Academy of Microbiology (2008)
Member, National Academy of Sciences (2007)
Board of Governors Professor in Geological and Marine Sciences (2005)
Vernadsky Medal, European Geosciences Union (2005)
Fellow, American Academy of Arts and Sciences (2003)
Fellow, American Geophysical Union (2001)
Board of Trustees Award for Research, Rutgers University (2000)
Hutchinson Award from the American Society of Limnology and Oceanography (2000)
Huntsman Medal (1998).
Cecil and Ida Green Distinguished Professor (1996)
John Simon Guggenheim Fellow (1992-1993)

Current Research Interests:

Symbiosis, biogeochemical cycles, photosynthesis, biological oceanography, molecular biology, biochemistry and biophysics, physiological adaptation, plant physiology, evolution, mathematical modeling.

Member: National Academy of Sciences, American Society of Limnology and Oceanography, American Geophysical Union, American Society of Plant Physiologists, Phycological Society of America

Service and Synergistic Activities: Associate Editor, Limnology and Oceanography (1995-2003); Associate Editor, Environmental Microbiology; Associate Editor, Geobiology; Board of Editors, Encyclopedia of Biodiversity, Member, Earth System Science and Applications Advisory Committee for NASA; Member – Terrestrial Planet Finder Science Working Group, Board of Reviewing Editors Science Magazine, Associate Editor Photosynthesis Research, Associate Editor, Biogeosciences, Member, NSF planning committee for Ecological Determinates of Ocean Carbon Cycle (EDOCC)

and Surface Ocean Lower Atmosphere Study (SOLAS); Member - Astrobiology Oversight Committee, Member, U.S. Carbon Cycle Scientific Steering Group; Co-chair, IGBP Carbon Cycle Working Group.

Five significant publications (out of 250)

- Oliver, J.O., D. Petrov, D. Ackerly, F. Falkowski, and O.M. Schofield. 2007. The mode and tempo of genome size evolution in eukaryotes. *Science* **17**: 594-601.
- Falkowski, P.G. and J. Raven. 2007. *Aquatic Photosynthesis*, 2nd ed. Princeton 476 pp.
- Shi, T., T. S. Bibby, L. Jiang, A. Irwin and P. G. Falkowski. 2005. Protein interactions limit the rate of evolution of photosynthetic genes in cyanobacteria. *Mol. Biol. Evol.* **22**: 2179-2189.
- Falkowski, P.G., M.E. Katz, A.J. Milligan, K. Fennel, B.S. Cramer, M.P. Aubry, R.A. Berner, M.J. Novacek and W.M. Zapol. 2005. The rise of oxygen over the past 205 million years and the evolution of large placental mammals. *Science* **309**: 2202-2204.
- Bidle, K.D. and P. G. Falkowski. 2004. Cell death in planktonic photosynthetic organisms. *Nature Rev. Microbiol.* **2**: 643-655.

Five additional publications

- Helman, Y., F. Natale, R.M. Sherrell, M. LaVigne, V. Starovoytov, M.Y. Gorbunov, P.G. Falkowski. 2008. Extracellular matrix production and calcium carbonate precipitation by coral cells *in vitro*. *PNAS* **105**: 54-58.
- Falkowski, P.G., M.E. Katz, A.H. Knoll, A. Quigg, J.A. Raven, O. Schofield, and F.J.R. Taylor. 2004. The evolution of modern eukaryotic phytoplankton. *Science*: **305**: 354-360.
- Tchernov, D. M. Gorbunov, C. de Vargas, S. Narawan Yadav, A. J. Milligan, M. Haggblom and P.G. Falkowski. 2004. Membrane lipids of symbiotic algae are diagnostic of sensitivity to thermal bleaching in corals. *Proc. Nat. Acad. Sci.* **101**: 13531-13535.
- Gorbunov, M. and P.G. Falkowski. 2002. Photoreceptors in cnidarian hosts allow symbiotic corals to sense the light of the blue moon. *Limnol. Oceanogr.* **47**: 309-315
- Falkowski, P.G., P. Jokiell, and R. Kinzie. 1990. Irradiance and corals. In *Coral Reefs*, Vol. 7 in *Ecosystems of the World*, Z. Dubinsky, ed., pp. 89-107, Elsevier, Amsterdam.

Post-doctoral fellows: Dr. Assaf Sukenik, Dr. Zbigniew Kolber, Dr. Jonathan Zehr, Dr. Ronny Herzig, Dr. Julie LaRoche, Dr. Anne Mortain-Bertrand, Dr. Paul Kemp, Dr. Richard Greene, Dr. Jean-Michel Escoubas, Dr. Ilya Vasil'ev, Dr. John Berges, Dr. Michael Behrenfeld, Dr. Ondrej Prasil, Dr. Juan Vergara, Dr. Dion Durnford, Dr. Maxim Gorbunov, Dr. YiBu Chen, Dr. Ilana Berman-Frank, Dr. Debora Iglesias-Rodriguez, Dr. Yoram Gerchman, Dr. Michal Koblizek, Dr. Yi Sun, Dr. Kay Bidle, Dr. Elena Litchman, Dr. Andrew Irwin, Dr. Yael Helman, Dr. Diana Nemergut, Dr. Lin Jiang, Dr. Daniel Grzybek, Dr. Thomas Bibby, Dr. Tracy Quan, Dr. Huiyan Yang, Dr. Matthew Johnson, Dr. Eric Hajanirana Andrianasolo, Dr. Pedro Cermeno.

Students: Dr. Miguel Olaizola (Ph. D. Stony Brook 1993); Dr. Ajit Subramaniam (Ph. D. Stony Brook, 1996), Sasha Tozzi, (M. Sc. Rutgers, 2003), Tuo Shi (Ph. D. Rutgers, 2006), Zoe Finkel (Ph. D. Rutgers, 2005), Felisa Wolfe (Ph.D. Rutgers, 2006), Mathew Oliver (Ph. D. Rutgers, 2006), Sherrie Whittaker (Ph. D., Rutgers, in progress) Racheal Howard (Ph. D., Scripps Institute of Oceanography, in progress), Chengyi Yan (Ph.D., Rutgers, in process), Gillian Robbins (Ph.D., Rutgers, in process).

Collaborators (last 48 months): Michael Bender, Bob Bidigare, Tim Bralower, Chuck Dismukes, Scott Doney, Zvy Dubinsky, Mick Follows, Arthur Grossman, Aaron Kaplan, Andy Knoll, Edward Laws, Michael Lesser, Michael Matz, David Mauzerall, Charlie Mazel, Francois Morel, Yair Rosenthal, Robert Sherrell, Victor Smetacek, Bob Tabita, Taro Takahashi.