

Assaf Vardi

Institute of Marine and Coastal Sciences, Rutgers University, 71 Dudley Road, New Brunswick, NJ. 08901-8521

Phone at Work: 732 932-6555, extension 337
FAX 732 932-4083
E-mail: vardi@marine.rutgers.edu

Research Interests

The molecular basis for Programmed Cell Death in phytoplankton; The role of ROS, RNS and infochemical signaling in stress responses; Functional genomics approaches to elucidate the signal transduction pathways that mediate biotic interactions, as intra/interspecies and host-virus interactions, in marine phytoplankton.

Education

The Hebrew University of Jerusalem	B.Sc. in Biology with " <i>magna cum laude</i> "	1996
The Hebrew University of Jerusalem	M.Sc. in Environmental Sciences	1999
The Hebrew University of Jerusalem	Ph.D. in Molecular ecology	2004

Appointments

Graduate Research Assistant The Hebrew University of Jerusalem, Israel	1997-2003
--	-----------

Marie Curie Postdoctoral Research Fellow Ecole Normale Supérieure, Paris France	2004-2006
--	-----------

Institutional Postdoctoral Fellow Institute of Marine and Coastal Sciences, Rutgers University	2007
---	------

Teaching experience:

1998-2003 "Microbial Ecology" course, The Hebrew University of Jerusalem.
1998 "Biology of Algae" course, the Interuniversity Institute, Eilat.

List of selected publications:

Vardi, A., Berman-Frank, I., Rozenberg, T., Hadas, O., Kaplan, A., Levine, A. (1999)
Programmed cell death of the bloom-forming dinoflagellate *Peridinium gatunense* is mediated by CO₂ limitation and oxidative stress. **Current Biology**. 9: 1061-1064.

Vardi, A., Schatz, D., Beeri, K., Motro, U., Sukenik, A., Levine, A., Kaplan, A.. (2002)
Dinoflagellate-cyanobacterium communication may determine the composition of phytoplankton assemblage in a mesotrophic lake. **Current Biology**. 12: 1767-1772.

Armbrust, E.V, [...], **Vardi, A.**, Wilkerson, F.P, and. Rokhsar D. S. (2004). The genome of the diatom *Thalassiosira pseudonana*: Ecology, evolution and metabolism. **Science** 306: 79-86.

Assaf Vardi, Fabio Formigini, Raffaella Casotti, Alessandra de Martino, François Ribalet, Antonio Miralto and Chris Bowler (2006). A stress surveillance system based on calcium and nitric oxide in marine diatoms. **PLoS Biology** 4(3):e60. This research was highlighted in: **a. Nature Chemical Biology** (2006) 2(4):184. **b. Faculty of 1000 Biology** <http://www.f1000biology.com/article/16475869/evaluation>.

Allen, A.E., **Vardi, A.**, Bowler, C.P. (2006). An ecological and evolutionary context for integrated nitrogen metabolism and cell signaling pathways in marine diatoms. **Current Opinion in Plant Biology** 9 (3):264-273.

Vardi, A., Eisenstadt, D., Murik, O., Berman-Frank, I., Zohary, T., Kaplan, A., and Levine, A. (2007). Coordinated collapse of a dinoflagellate bloom is synchronized by an extracellular thiol protease. **Environmental Microbiology** 9 (2), 360–369.

Anton Montsant, [...], **Vardi, A** [...], Chris Bowler (2007). Insights into Diatom Cell Regulation from the Genome Sequence of *Thalassiosira pseudonana*. **Journal of Phycology** Volume 43, Issue 3: 585-604.

Daniella Schatz, Yael Keren, **Assaf Vardi**, Assaf Sukenik, Shmuel Carmeli, Thomas Börner, Elke Dittmann and Aaron Kaplan (2007). The biological role of the cyanobacterial toxins, microcystins. **Environmental Microbiology** (2007) 9(4), 965–970

Other significant publications:

Hadas, O., Pinkas, R., Delphine, E., **Vardi, A.**, Kaplan, A. Sukenik, A. (1999) Limnological and ecological aspects of Aphanizomenon ovalisporum bloom in Lake Kinneret, Israel. *J. Plankton Research*. 21: 1439-1453.

Sukenik, A., Eshkol, R., Livne, A., Hadas, O., Rom, M., Tchernov, D., **Vardi, A.**, Kaplan, A. (2002). Inhibition of growth and photosynthesis of the dinoflagellate *Peridinium gatunense* by *Microcystis* sp. (cyanobacteria): A novel allelopathic mechanism. *Limnology and Oceanography*. 47(6), 1656–1663.

Honors and Awards

Rieger Foundation award for excellence in Ecology and Environmental Sciences, 1998.
Rieger Foundation award for excellence in Ecology and Environmental Sciences, 2000.
The Hebrew University Rector fellowship for outstanding PhD Students, 2002-2003.
Short term EMBO fellowship, 2002.
The “Golda Meir” fellowship fund, 2003.
Postdoc fellowship from the French Ministry of Research and Technology.
Marie Curie Intra-European Fellowship for 2005-2006.

Funding Awards

“The role of metacaspases in mediating cell fate during viral infection of unicellular, marine phytoplankton”; National Science Foundation, Integrated Organismal Systems, Physiological and Structural Systems ;IOS-0717494; \$578,198; 1 August 2007- 31 July 2010; Co-Principle Investigator

Presentations:

- 1) Oral presentation American Society Limnology and Oceanography ASLO conference, Copenhagen, Denmark June 2000.
- 2) Invited speaker in "The 5th European Workshop on the Molecular Biology of Cyanobacteria" Stockholm, Sweden, June 2002.
- 3) Invited seminar in the Plant Sciences department, Weizmann institute, Israel, January 2003.
- 4) Invited seminar for Prof. Chris Lamb, Department of Disease and Stress Biology, John Innes Centre, Norwich, UK, April 2003.
- 5) Oral Presentation at the "Third European Phycological Congress" (EPC3), Queen's University-Belfast, Ireland, July 2003.
- 6) Poster presentation, Gordon meeting for Marine Microbes Roscoff, France June 2004.
- 7) Oral presentation "Margene" meeting, Naples Italy, July 2004
- 8) Oral presentation "Diatomics" meeting, Paris France 2005
- 9) Oral presentations in special sessions: "Algal and Bacterial Cell death" and "Pelagic infochemistry", American Society Limnology and Oceanography ASLO, Santiago de Compostela, Spain June 2005.
- 10) Poster presentation, Gordon meeting for Marine Microbes University of New England Biddeford, ME, USA July 2006.
- 11) Oral presentation, ASLO-Aquatic Sciences Meeting, Santa Fe, New Mexico, USA, February 2007.
- 12) Invited key note speaker, Advances in Phycology: From Genes to Global Ecology and Beyond EPC-4, Oviedo Spain, July 2007.

Reviewer for Scientific journals

Journal of Phycology, Plant cell and Environment, Aquatic Microbial Ecology, Marine Biotechnology and Science.

Other activities

1997-2003 Volunteer work with handicapped children in "ALIN" hospital.