

Yael Helman, Curriculum Vitae, 2005

Professional preparation:

1990-1993: B.Sc. degree in Biology.

1993-1996: M.Sc. degree in Oceanography.

M.sc. thesis subject: “Development and Application of a New Method for the Detection of Sulfate Reduction Across Oxygen-Sulfide Microgradients in Marine Cyanobacterial Mats.”

Supervisor: Prof. Yehuda Cohen, Department of Microbial Ecology.

1999-2004: Ph.D. degree in Plant Sciences.

Ph.D. thesis subject: “Alternative Electron Flow to Oxygen in Photosynthesis, for the dissipation of excess energy, and its Influence on the Isotope Composition of Oxygen in the Atmosphere.”

Supervisors: Prof. Aaron Kaplan and Prof. Boaz Luz.

2004 – present: Postdoctoral Fellow, Institute for Marine and Coastal Sciences, Rutgers University.

University teaching experience

1993-1996: “Marine Microbiology”, the Interuniversity Institute, Eilat

1995-1996: “The Ecological System of the Bay of Eilat”, the Interuniversity Institute, Eilat.

1999-2002: “Microbial Ecology”, the Hebrew University of Jerusalem.

2003: “Advanced Botany”, the Hebrew University of Jerusalem.

Awards Received:

1993, during B.Sc. studies: The dean's award for outstanding students.

1995, during M.Sc. studies: The Avner Etzion scholarship for oceanography research.

2002, during Ph.D. studies: The Alexandra Polyakoff Prize for research in Plant Science.

2004, the "Bikura Fellowship" for post doctoral studies 2004-2005.

2005, the "Bikura Fellowship" for post doctoral studies 2005-2006.

List of Publication

Helman, Y., Barkan, E., Luz, B., and Kaplan, A. (2005) Fractionation of the three stable oxygen isotopes by oxygen producing and consuming reactions in photosynthetic organisms. *Plant Physiol*, 138, 2292-2298.

Helman, Y., Tchernov, D., Reinhold, L., Shibata, M., Ogawa, T., Schwarz, R., Ohad, I. and Kaplan, A. (2003) Genes encoding A-type flavoproteins are essential for photoreduction of O₂ in cyanobacteria. *Curr Biol*, 13, 230-235.

Tchernov, D., Helman, Y., Keren, N., Luz, B., Ohad, I., Reinhold, L., Ogawa, T. and Kaplan, A. (2001) Passive entry of CO₂ and its energy-dependent intracellular conversion to HCO₃⁻ in cyanobacteria are driven by a photosystem I- generated ΔμH⁺. *J. Biol Chem.*, 276, 23450-23455.

Kaplan, A., Helman, Y., Tchernov, D. and Reinhold, L. (2001) Acclimation of photosynthetic microorganisms to changing ambient CO₂ concentration. *Proc. Natl. Acad. Sci. USA*, 98, 4817-4818.

Sigalivich, P., Meshorer, E., Helman, Y. and Cohen, Y. (2000) Transition from anaerobic to aerobic growth conditions for the sulfate-reducing bacterium

Desulfovibrio oxyclinae results in flocculation. *Appl. Environ. Microbiol.*, 66, 5005-5012.