

Debashish Bhattacharya

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Professional Preparation Dalhousie University, Biology, B.Sc. (Hons.), 1981. Dalhousie University, Environmental Studies, M.E.S., 1984. Simon Fraser University, Biology, Ph.D., 1989. Marine Biological Laboratory, Woods Hole, Massachusetts, Alfred P. Sloan Postdoctoral Fellow with Dr. Mitch Sogin, 1988-1991. Institute of Botany, University of Cologne, Germany, Humboldt Scholar with Prof. Michael Melkonian, 1991-1994.

Appointments University of Iowa, Interdisciplinary Program in Genetics, Faculty, 1999-present. University of Iowa, Dept. of Biological Sciences, Associate Professor 2003-present, Assistant Professor 1997-2003. Max Planck Institute for Biophysical Chemistry, Department of Biochemistry, Research Scientist in the department of Klaus Weber, Göttingen Germany, 1994-1997.

Competitive Grants

WORDEN, A.Z. (PI), ARMBRUST, E.V, BHATTACHARYA, D., HEIDELBERG, J.F., MOREAU, H., PARTENSKY, F. (KEY INVESTIGATORS): US DOE – Proposal for genome sequencing of *Micromonas pusilla* spp., abundant marine picoplanktonic primary producers.

BHATTACHARYA, D. (PI), VAN DOLAH, F.M.: DOE Joint Genome Institute (CSP #200407), A genomics resource for the toxic dinoflagellate *Karenia brevis*, October 2004 – September 2005; In a collaborative project, JGI determines 30 Mb of *Karenia* sequence.

BHATTACHARYA, D. (PI), LOGSDON, J.: NSF – Emerging Frontiers (EF 0431117), ATOL: Collaborative Research: Reconstructing eukaryotic phylogeny through multigene analyses of microbial eukaryotes, October 2004 – September 2009.

BHATTACHARYA, D. (PI), SOARES, M.B., CASAVANT, T.L.: NASA – Exobiology and Evolutionary Biology (EXBO3-0000-0014), Endosymbiotic gene transfer and the evolution of the first photosynthetic eukaryotes, June 2004 – May 2007.

BHATTACHARYA, D. (PI), KATZ, L.: NSF – Emerging Frontiers (EF 0346532), Workshop - Frontiers in Genomics: Insights into Protist Evolutionary Biology, held on May 19-21, 2004 in Iowa City, IA and Special Symposium on Genome Evolution in Microbial Eukaryotes, held at the Society of Protozoologists Annual meeting on June 3, 2004 at Bryant College, Rhode Island.

BHATTACHARYA, D. (PI), SOARES, M.B.: NSF (MCB 02-36631), An EST approach to understanding endosymbiotic gene transfer, September 2002 – August 2004 (extended to August 2005).

BHATTACHARYA, D. (PI), MÜLLER, K.M., SHEATH, R.G.: NSF (DEB 01-07754), Secondary symbiotic origin of algal plastids and the phylogeny of the Bangiophycidae (Rhodophyta), September 2001 – August 2004 (extended to August 2005).

BHATTACHARYA, D. (PI), HUANG, J., LUTZONI, F., GUTELL, R.R.: NSF (MCB 01-10252), Testing the reverse-splicing model of intron spread with ribosomal DNA, October 2001 – September 2004.

BHATTACHARYA, D. (PI): Developing a bioinformatics tool for detecting horizontal gene transfer, Biosciences Initiative Pilot Grant Program, November 2003 – October 2005.

Recent Publications (from 76 total)

Hackett, J.D., D.M. Anderson, D. Erdner, and D. Bhattacharya. 2004. Dinoflagellates: a remarkable evolutionary experiment. *Am. J. Bot.* 90:1523-1534.

Bhattacharya, D., H.S. Yoon, and J.D. Hackett. 2004. Chromalveolates unite: endosymbiosis connects the dots. *BioEssays* 26:50-60.

- Ciniglia, C., H.S. Yoon, A. Pollio, G. Pinto, and D. Bhattacharya. 2004. Hidden biodiversity of the extremophilic Cyanidiales red algae. *Mol. Ecol.* 13:1827-1838.
- Hackett, J.D., H.S. Yoon, M.B. Soares, M.F. Bonaldo, T.L. Casavant, T.E. Scheetz, T. Nosenko, and D. Bhattacharya. 2004. Migration of the plastid genome to the nucleus in a peridinin dinoflagellate. *Curr. Biol.* 14: 213-218.
- Hagopian, J.C., M. Reis, J.P. Kitajima, D. Bhattacharya, and M.C. de Oliveira. 2004. Comparative analysis of the complete plastid genome sequence of the red alga *Gracilaria tenuistipitata* var. *liui*: insights on the evolution of rhodoplasts and their relationship to other plastids. *J. Mol. Evol.* 59:464-477.
- Yoon, H.S., J.D. Hackett, C. Ciniglia, G. Pinto, and D. Bhattacharya, D. 2004. A molecular timeline for the origin of photosynthetic eukaryotes. *Mol. Biol. Evol.* 21:809-818.
- Williford, A., B. Stay, and D. Bhattacharya. 2004. Evolution of a novel function: nutritive milk in the viviparous cockroach *Diploptera punctata*. *Evol. Dev.* 6:67-77.
- Haugen, P., and D. Bhattacharya. 2004. The spread of LAGLIDADG homing endonuclease genes in rDNA. *Nucleic Acids Res.* 32:2049-2057.
- Haugen, P., H.J. Runge, and D. Bhattacharya. 2004. Long-term evolution of the S788 fungal nuclear small subunit rRNA group I introns. *RNA* 10:1084-1096.
- Haugen, P., V. Reeb, F. Lutzoni, and D. Bhattacharya. 2004. The evolution of homing endonuclease genes and group I introns in nuclear rDNA. *Mol. Biol. Evol.* 21:129-140.

Synergistic Activities

Executive Committee, Interdisciplinary Genetics Ph.D. Program, University of Iowa, July 2004-present.

Associate Editor, Journal of Molecular Evolution, January 2004-present.

Editorial Board, Botanica Marina, August 2004-present.

Organizer, NSF-funded workshop - Frontiers in genomics: insights into protist evolutionary biology, held on May 19-21, 2004 in Iowa City, IA. *Co-Organizer (with Laura Katz)*, NSF-funded symposium - Genome Evolution in Microbial Eukaryotes, held June 2-5, 2004 in Bryant College, RI.

Panel Member, NSF Microbial Genome Sequencing Program, 2003-2004.

Chair, Darbaker Prize Committee, Botanical Society of America, 2004.

Member, Darbaker Prize Committee, Botanical Society of America, 2003.

Associate Editor, Journal of Phycology, March 1998-December 2003.

Awards Committee, Botanical Society of America (Phycology Section [2002]), International Society of Evolutionary Protistology (2002).

Advisory Board, Plant Systematics and Evolution (1993-1998, position ended on Dec. 31, 1998).

Major Collaborators in the Past 48 months

Tom Casavant (University of Iowa), Gloria Culver (Iowa State University, Ames), Thomas Friedl (University of Göttingen), Robin R. Gutell (University of Texas, Austin), Jian Huang (University of Iowa), Laura Katz (Smith College), John Logsdon (University of Iowa), François Lutzoni (Duke University), Kirsten Müller (University of Waterloo), John Nason (Iowa State University), Mariana Oliveira (University of Sao Paulo), Gabriele Pinto (University of Naples), Valérie Reeb (Duke University), Todd Scheetz (University of Iowa), Robert Sheath (University of Guelph), Bento Soares (University of Iowa), Barbara Stay (University of Iowa).

Dissertation Advisor

Dr. Louis Druehl (Simon Fraser University)

Postdoctoral Advisors

Dr. Mitch Sogin (Marine Biological Laboratory), Dr. Michael Melkonian (University of Cologne, Germany)