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The Molecular Life of Diatoms: From Genes to Ecosystems

Guest Editor:

Prof. Dr. Thomas Mock

1. School of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ, UK
2. Department of Environmental Science and Engineering, Ocean University of China, Qingdao 266100, China

Deadline for manuscript submissions:

closed (15 April 2020)

Message from the Guest Editor

Dear Colleagues,

Diatoms are the most species-rich group of algae and contribute about 20% of annual global carbon fixation. They play major roles in ocean food webs and global biogeochemical cycles. They are also a target of the biotechnology industry because of their nano-patterned silica cell wall and high lipid content. Diatoms have received increasing attention as more genomes became available and because of the development of genome-editing tools. CRISPR/Cas9 technology has made diatoms as genetically tractable as well-established biological model species. In this Special Issue, we will bring together diverse contributions from the field of molecular diatom research. Our community is currently experiencing a step change in understanding diatoms from genes to ecosystems. The aim of this Special Issue is to offer a forum for new scientific concepts and ideas in the form of review articles and perspectives in addition to research papers based on the application of molecular tools and genomic information to give examples of the fascinating lifestyle of diatoms and their significance for many different fields of science.

Prof. Thomas Mock

Guest Editor



mdpi.com/si/28394

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Research Programme in
Molecular and Integrative
Biosciences, Faculty of Biological
and Environmental Sciences,
University of Helsinki, P.O. Box
56, FI-00014 Helsinki, Finland

Prof. Dr. Andrés Moya

Integrative Systems Biology
Institute, University of Valencia
and CSIC, 46980 Valencia, Spain

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Biology Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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