Special Issue

The Molecular Life of Diatoms: From Genes to Ecosystems

Message from the Guest Editor

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.

Guest Editor

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A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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