

metabolites

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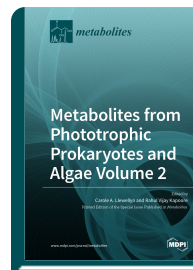
Special Issue Reprint

Metabolites from Phototrophic Prokaryotes and Algae Volume 2

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Microalgae are photosynthetic organisms with the ability to sequester and convert atmospheric carbon dioxide into high-value bioactives, and are therefore seen as a renewable and sustainable bioresource in the fields of biofuels, aquaculture and animal feeds, bioremediation of waste, nutraceuticals, pharmaceuticals, cosmeceuticals and agriculture. Moreover, algae can adjust their metabolism according to surrounding growth conditions, and this metabolic flexibility can be exploited in industrial biotechnology with genetic and metabolic engineering, when compared to other photosynthetic organisms. The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating the mechanisms which underlie fundamental biological processes, including disease pathology. This book represents research papers based around metabolomics, to improve knowledge on the metabolome and metabolism in algae, with a focus on carbon and nitrogen resource allocation. It also describes many bioanalytical techniques and emphasizes their usefulness in microalgal biotechnology. Other aspects from an ecological, biotechnological and waste-water remediation perspective are also covered.



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