

Editorial

To protect themselves from the photodamage of ultraviolet radiation in surface water, many phytoplankton species synthesize UV-absorbing mycosporine-like amino acids (MAAs). The featured article in this issue of *Scientia Marina*, “Effect of vertical mixing on short-term mycosporine-like amino acid synthesis in the Antarctic diatom, *Thalassiosira* sp.” written by M.P. Hernando, J.I. Carreto, M. Carignan and G.A. Ferreyra, studies the synthesis of MAAs by the typical Antarctic bloom-forming diatom *Thalassiosira* sp. under surface and vertical mixing conditions with a solar simulator. The authors found that MAA concentrations detected in the diatom increased during light exposure and decreased in the dark, while the MAA synthesis rate was higher in the surface than in the mixing treatment. This study provides new insight into how diatoms in Antarctica can flexibly respond to UV/PAR exposure by means of the rapid up-regulation of photo-protective compounds under static and mixing conditions.

This issue of *Scientia Marina* also contains two discussion articles on end-to-end models, presenting two different but not completely opposite views on the potential role of these models in the future. They set up a discussion arena on the current and future role of end-to-end models in marine sciences: What are end-to-end models? Why have they become so popular in the recent literature? Do they lead to significant progress in the way we summarize ecosystem functioning? If they do, can they be used to better manage our oceans? All these issues are important for scientists involved in marine ecosystem modelling, but also for funding agencies that are deciding how to optimize public investment, and ultimately for the potential end users of these products. One of the papers is authored by Kenneth A. Rose, a leading scientist in the development of end-to-end models, and the other is authored by Javier Ruiz and Sakari Kuikka, two key members of a large European project that explores alternatives to basic assumptions underlying some end-to-end modelling approaches. We think it is to the benefit of the scientific community to open the floor to discussion on these timely topics in marine sciences and hope that our readership will enjoy it.

Akira Kuwata, Associate Editor of the featured article
Miguel Bernal, Guest Editor of the topic on end-to-end models
Francesc Peters, Secretary and Associate Editor
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