

**MarBEF Theme 2: Marine Biodiversity and Ecosystem Functioning**

# The ROSEMEB project

## – progress and plans

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**Fig 1.** The ROSEMEB group.

THE ROSEMEB RESPONSIVE was launched in Ischia, Italy, in November 2005. ROSEMEB is an RMP within Theme 2, coordinated by Adrianna Ianora of the Stazione Zoologica A. Dohrn of Naples, Italy. The objective of this project is to develop and apply novel ecological methodologies to study the many functions of secondary metabolites found within marine organisms. For example, certain secondary metabolites have been connected to allelopathy, antipredation, antifouling and antimicrobial activity. The results of this research will allow a better understanding of their diversity and what environmental factors trigger increased production of these compounds.

Research such as this requires a multidisciplinary approach and, while most institutes can provide part of the know-how and facilities needed, in order to address the overall problem a large-scale combined effort is required. ROSEMEB was designed with this problem in mind and therefore eight institutes from the MarBEF consortium are participating in this project. Information on metabolites in terms of structure, function, and biosynthetic pathways, etc., will be freely exchanged between the institutes. Furthermore, facilities in both the laboratory and field will be shared among partners, as well as the opportunity for partners to use sophisticated instruments (e.g. NMR, flow cytometry, confocal microscopy). Samples for chemical and biological screening will be exchanged among network members, and inter-calibration of methods will be achieved. The result of the first integration activity within the project was a conceptual paper written on the role of chemical interactions in ecosystem functioning, submitted to the journal *Estuaries*.

An upcoming activity within the project is the organisation of a theoretical course on "Bioassay Methods in Chemical Ecology," to be

organised next summer in Tjarno, Sweden. The course will last six days and it targets graduate students or young researchers who wish to develop their knowledge and skills in the growing field of chemical ecology. Speakers from both within the MarBEF community and outside, who have knowledge on any of the different methodologies and topics from bacteria and algae to macroinvertebrates in chemical ecology, are invited to teach and to interact with the students for the duration of the course. The course will be announced on the MarBEF website within the next month. Details on other activities can be found on the MarBEF website. Within these, an annotated list of relevant publications in the field of chemical ecology will be made available soon, to be offered to the MarBEF community and to those wishing to start working in the field, or simply to be informed about existing work.

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