

## THEME SECTION

# Marine chemical ecology

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**ABSTRACT:** Marine chemical ecology has emerged as a vibrant subdiscipline of marine ecology over the past 20 yr. The first symposium devoted specifically to marine chemical ecology was held, in conjunction with the 29th Annual Benthic Ecology Meeting, at the University of North Carolina at Wilmington, USA, from March 9 to 10, 2000, with over 70 symposium participants from around the world. Topics of oral presentations and posters ranged from chemical antipredatory defenses of algae and invertebrates to antifouling, allelopathy, sunscreens agents, antimicrobial defenses, and chemical cues for larval settlement and metamorphosis. Articles in this MEPS Theme Section were submitted as original research contributions to the symposium. Abstracts of all symposium presentations are available at the Benthic Ecology Meeting Web site: <http://www.uncwil.edu/cmsr/bem2000>.

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## INTRODUCTION

For the past 4 decades, marine organisms have provided natural products chemists with a remarkable source of novel secondary metabolites (Faulkner 2000, and reviews cited therein). Because these compounds are often structurally complex, or present at high concentrations, chemists generally assumed that secondary metabolites provided some ecological function, often without any observational or experimental evidence. At the same time, ecologists were observing patterns of the distributions of marine organisms, or direct interactions of predators and prey or of competitors, and often assuming that chemistry played a specific role. Beginning in the 1980s collaborations began between chemists and ecologists. They resulted in an increasing number of studies in which up-to-date techniques of chemical isolation and identification were paired with ecologically relevant laboratory and field experiments. Since then, marine chemical ecology has developed rapidly, as evidenced by the number of pertinent reviews (e.g. Bakus et al. 1986, Hay & Fenical 1988, 1996, Hay & Steinberg 1992, Paul 1992, Pawlik 1992, 1993, Fenical 1993, Hay 1996, McClintock & Baker 1997).

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