

# NPR

Natural Product Reports

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## IN THIS ISSUE

ISSN 0265-0568 CODEN NPRRDF (2) 137–336 (2006)



### Cover

See V. J. Paul, M. P. Puglisi and R. Ritson-Williams, pp. 153–180.

Marine benthic organisms from coral reefs in the Caribbean.

Clockwise from top left: the gorgonian *Pseudopterogorgia elisabethae*; the green alga *Avrainvillea* sp.; the stony coral *Montastraea* sp. overgrown by the red sponge *Cliona* sp.; and the brown alga *Stypopodium zonale*. This article reviews the many marine benthic organisms that use natural products for defense.

Images reproduced by permission of Raphael Ritson-Williams.

## CHEMICAL BIOLOGY

### B13

Drawing together research highlights and news from all RSC publications, *Chemical Biology* provides a 'snapshot' of the latest developments in chemical biology, showcasing newsworthy articles and significant scientific advances.

## Chemical Biology

April 2006/Volume 1/Issue 4

[www.rsc.org/chemicalbiology](http://www.rsc.org/chemicalbiology)

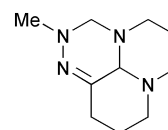
## HOT OFF THE PRESS

### 143

#### Hot off the press

Robert A. Hill and Andrew Sutherland

A personal selection of 39 recent papers is presented covering various aspects of current developments in bioorganic chemistry and novel natural products, such as cinachyramine from a *Cinachyrella* sponge.



cinachyramine

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## NPR

## Natural Product Reports

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Natural Product Reports is a bimonthly journal of critical reviews. It aims to report and stimulate progress in the study of natural products chemistry by providing regular and comprehensive reviews of the relevant literature. This coverage is augmented by frequent reviews of the wider context of bioinorganic and bioorganic chemistry and chemical biology, including developments in enzymology, nucleic acids, genetics, chemical ecology, carbohydrates, biological activity, primary and secondary metabolism, analytical techniques and synthesis, which will be of general interest to all workers in the area.

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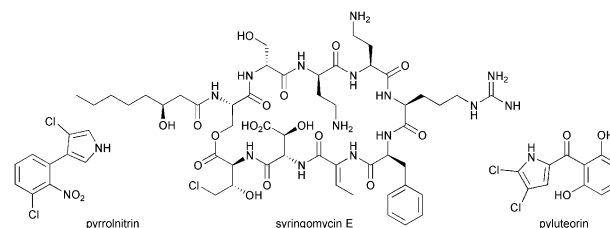
## HIGHLIGHT

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**Recent developments in enzymatic chlorination**

Cormac D. Murphy\*

This *Highlight* deals with the literature covering the enzymology of chlorometabolite biosynthesis. The mechanisms leading to carbon–chlorine bonds in nature are discussed in light of exciting new findings.



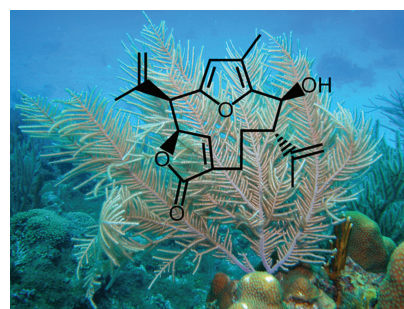
## REVIEWS

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**Marine chemical ecology**

Valerie J. Paul,\* Melany P. Puglisi and Raphael Ritson-Williams

This review covers the recent marine chemical ecology literature for phytoplankton, macroalgae, sponges, octocorals and other benthic invertebrates.

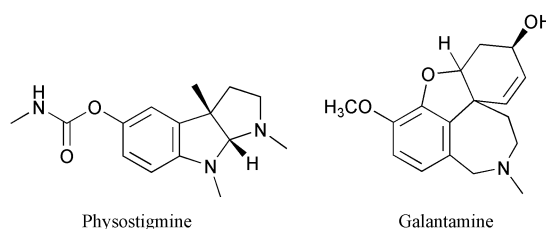


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**Acetylcholinesterase inhibitors from plants and fungi**

Peter J. Houghton,\* Yuhao Ren and Melanie-Jayne Howes

183 Acetylcholinesterase inhibitors from plants and fungi are described and their mode of action and applications are considered.

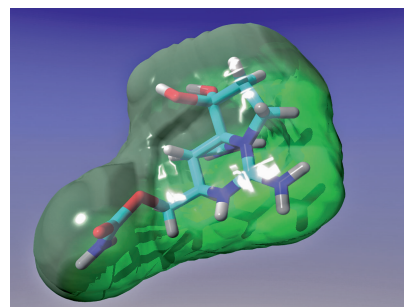


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**Saxitoxin, a toxic marine natural product that targets a multitude of receptors**

Lyndon E. Llewellyn

This review examines the history and role played by the marine natural product, saxitoxin, in food contamination, biomedical research and human and aquatic ecology.



## REVIEWS

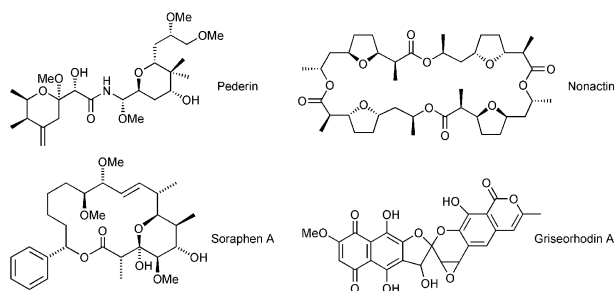
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**The nature and role of pigments of marine invertebrates**

Wickramasinghe M. Bandaranayake

Marine organisms display a multitude of colours, with brilliant hues and colour patterns (such as the blue dorid nudibranch *Hypselodoris bullockii*, shown). This review discusses the nature and function of these pigments, together with the factors responsible for and affecting bright colourations.

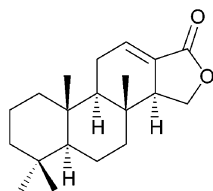
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**The biosynthesis, molecular genetics and enzymology of the polyketide-derived metabolites**

Alison M. Hill\*

This review covers the biosynthesis of aliphatic and aromatic polyketides as well as mixed polyketide/NRPS metabolites, and discusses the molecular genetics and enzymology of the proteins responsible for their formation.

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**Spongian diterpenoids from marine sponges**

Robert A. Keyzers, Peter T. Northcote and Michael T. Davies-Coleman\*

The structures and biological activities of spongian and rearranged spongian diterpenoid metabolites from marine sponges are presented.

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