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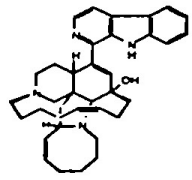
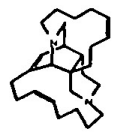
A BIOMIMETIC APPROACH TO THE MANZAMINE ALKALOIDS

D. R. Spring, J. E. Baldwin, R. C. Whitehead, L. Bischoff and T. D. W. Claridge. The Dyson Perrins Laboratory, University of Oxford, Oxford, OX1 3QY, UK

The manzamines are a newly discovered class of marine alkaloids, many of which display interesting cytotoxic, antibacterial and antifungal properties. Their molecular complexity, exemplified by Manzamine A (1) and biological activities make them challenging targets for total synthesis.



Manzamine A (1)



Keramaphadin B (2)

Recently we have proposed a biogenetic theory to these compounds. We are now able to show that the hypothesised key step in the proposal, a Diels-Alder reaction, occurs in related model systems. One of the Diels-Alder adducts is being transformed to keramaphidin B (2), an isolated marine natural product and one of the intermediates in the proposal.

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