ABSTRACT

SYNTHESIS OF ANALOGUES OF KUANONIAMINE A AND SHERMILAMINE B

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The synthesis of marine alkaloids has become a central theme of many chemists, not only because these alkaloids possess a wide range of biological activity but also because their structural intricacies present immense synthetic challenge. In this thesis, approaches to the synthesis of analogues of the marine pyridoacridine alkaloids, kuanoniamine A and shermilamine B, are described.

In Chapter One an overview of marine alkaloids, with emphasis on pyridoacridine alkaloids, is given. The different strategies utilized in the synthesis of a number of these pyridoacridines are illustrated.

The synthesis of a benzothiazolo[4,5,6-*i,j*][2,7]naphthyridine analogue of kuanoniamine A is described in Chapter Two. Using the readily available 2,5-dimethoxyaniline as starting material a number of pathways are explored, including the novel Jacobson cyclization of a nitrothiobenzamide, the Skraup reaction, and the hetero Diels-Alder cycloaddition.