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APPROACHES TO THE SYNTHESIS
OF
ANTHRACYCLINONES

A THESIS
PRESENTED TO THE UNIVERSITY OF AUCKLAND
FOR THE DEGREE OF

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ABSTRACT

The Claisen rearrangement of 1,4-bis(prop-2'-enyloxy)anthraquinone under reducing conditions is investigated. The elaboration of the product of double Claisen rearrangement towards an anthracyclinone skeleton is reported.

The insertion of methyl ketone and aldehyde functions into the C-2 and C-3 positions of the anthraquinone skeleton and the subsequent elaboration towards an anthracyclinone skeleton is investigated.

Methods for the conversion of hydroxymethylantraquinones to side chains suitable for anthracyclinone syntheses are reported.

A total synthesis of 7,9-didesoxydaunomycinone from 1,4-dihydroxy-2-methylantraquinone is described.