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**CHEMICAL INVESTIGATION OF *GONIOTHALAMUS GARDNERI*  
(ANNONACEAE)**

A THESIS PRESENTED

BY

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to the Board of Study in Chemical Sciences of the

**POSTGRADUATE INSTITUTE OF SCIENCE**

*In partial fulfillment of the requirement  
for the award of the degree of*

**MASTER OF PHILOSOPHY**

of the

**UNIVERSITY OF PERADENIYA  
SRI LANKA**

**2004**

**591011**

**ABSTRACT**  
**CHEMICAL INVESTIGATION OF *GONIOTHALAMUS GARDNERI***  
**(ANNONACEAE)**

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This thesis describes the chemistry of *Goniothalamus gardneri* with special reference to the Annonaceous acetogenins. It describes the isolation and characterization of three acetogenins and their biological activities against the second instar mosquito larvae of *Aedes aegyptii* and the fungus *Cladosporium cladosporioides*. Among the three acetogenins two were found to be new **80 & 83**. Among the three acetogenins, compound **80** showed potent biological activity against the second instar larvae of *A. aegyptii*. Interestingly, none of them showed activity against the fungus *C. cladosporioides*. Comparing the activity of the isolated acetogenins, we can conclude that activity varies with the number of hydroxyl functions of the molecule.

The flowers of *G. gardneri* also yielded a styryl lactone, goniothalamine **88**, the sterol poriferasterol **89**, the sitgmasta-4, 22-dien-3-one **91** and a new unsaturated fatty acid **92**.