

SOME SYNTHETIC MODIFICATIONS OF PRISTIMERIN,
A NATURAL PRODUCT WITH ANTI-TUMOUR ACTIVITY
AND STUDIES ON THE EFFECTS OF KALUKAMBERIYA
(Solanum nigrum) ON THE SLEEP AWAKE
CYCLE OF RATS

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During the year under review, the IFS programme on Natural Products and Medicinal Chemistry concentrated its efforts to deal with two primary objectives initially intended in the programme. These were,

1. Structural modification of natural products with a view to enhancing their biological activity, and
2. Isolation of biologically active constituents from medicinal and related plants of Sri Lanka.

In the first project we have carried out structural modification of pristimerin, a quinone -methide triterpenoid with moderate cytotoxic activity abundant in plants of Celastraceae, in order to obtain its structural analogues with enhanced anti-tumour activity and less toxic effects. Several of these analogues have been prepared and characterised. The second project was directed towards the isolation of the constituent(s) responsible for the 'sleep inducing' effect of Kalukamberiya (Solanum nigrum). The freeze-dried methanol extract of the fresh twigs

of S. nigrum has been confirmed to have effects on the sleep awake cycle of rats. In this study we collaborated with Prof. Guenter Rose of Bowdoin College, U.S.A.