E2-63 Mosquito larvicidal activity of daphnoretin, a dicoumarinylether from *Wikstroemia indica* (Thymelaeaceae)

Udeshika Piyasiri, Vijaya Kumar, Anura Wickramasinghe
(Dept of Chemistry, University of Peradeniya)

Sri Lankan farmers have been using the plants of the family Thymelaeaceae as natural insecticides against rice pests. In an attempt to identify natural insecticidal compounds from Thymelaeaceae plants and to develop these compounds as natural insecticides, the root bark of *Wikstroemia indica* was investigated and found to show mosquito larvicidal activity against the second instar larvae of *Aedes aegypti*. Bioassay directed fractionation of the dichloromethane extract using Vacuum Liquid Chromatography followed by Medium Pressure Liquid Chromatography and Flash Chromatography led to the isolation of a pale yellow crystalline compound, daphnoretin, a dimeric coumarin ether, as the active substance. Daphnoretin was identified from its spectral data and by comparison with an authentic sample. The compound was found to be active with a LC_{50} value of 1.09 ppm and has shown 65% mortality at 1.25 ppm.

Although daphnoretin had been previously isolated from *Wikstroemia indica*, its insecticidal activity has not been reported.

Financial assistance by NARESA is acknowledged.