E2-59: Larval growth inhibitor from *Vernonia anthelmintica*

Vijaya Kumar, Subodhi Karunaratne
(*Dept of Chemistry, University of Peradeniya*)

In our continuing search for insecticidal compounds from plants, we have examined the extracts of seeds of *Vernonia anthelmintica* (Compositae) for activity against the second instar larvae of *Aedes aegypti*. The hexane, dichloromethane and methanol extracts of the seeds of *V. anthelmintica* were found to be toxic to the second instar larvae of *A. aegypti* with LC_{50} values of 48, 53 and 110 ppm respectively. The dichloromethane extract on fractionation with medium pressure liquid chromatography (MPLC) gave a compound which showed growth inhibition activity against the second instar larva. At concentrations above 1.25 ppm, the mosquito larvae remained at the second instar stage for periods exceeding 20 days before dying, although larvae in the control had emerged as adults by then. Spectral analysis of the growth inhibiting compound showed it to have the molecular formula $C_{22}H_{12}O_8$ and that it was full of unsaturated linkages and was probably aromatic.

Financial assistance from SAREC, SIDA and IPICS, Uppsala University, Sweden is acknowledged.