E2-13 Hypolipidaemic activity of some medicinal plants of Sri Lanka

W R Wimalasiri[1], P H P Fernando[2]
([1]*Div. of Biochemistry, Dept. of Basic Science, Faculty of Dental Sciences,* [2]*Dept. of Biochemistry, Faculty of Medicine, Univ. of Peradeniya*)

Hypolipidaemia is a predisposing factor for coronary heart disease (CHD). Elevation of blood cholesterol leads to its deposition in the arterial walls. High density lipoproteins (HDL), in contrast, could scavenge the deposited cholesterol and prevent predisposition to CHD. Hence, it is advantageous to lower the serum Total: HDL cholesterol ratio by therapeutic or dietary intervention.

In this study, *Allium sativum* bulbs, *Murraya koenigii* leaves, *Sida acuta* roots, *Tinospora cordifolia* stems were investigated for hypocholesterolaemic activity. Hypolipidaemic male Sprague Dawley rats were treated with aqueous extracts of the above plants (200 mg/kg orally) for 6 weeks, and bled following a 14h fast, and the sera were analyzed for the lipid profiles. using 'Randox' cholesterol assay kits. The data was analyzed by the t-test.

The total and HDL cholesterol levels of the control group were 71.04 ± 6.58 and 38.76 ± 3.09 mg/dL, respectively. (Total:HDL = 1.83). The test groups administered with the extracts of *A. sativum*, *M. koenigii*, *S. acuta* and *T. cordifolia* displayed Total:HDL ratios of 1.63, (Total 63.28±3.16, HDL 38.19±7.38), 1.76, (Total 73.72±4.83, HDL 41.77±7.38), 1.45 (Total 64.80±7.51, HDL 44.63±7.38) and 1.70, (Total 66.31±6.64, HDL 39.00 ±7.38), respectively.

The data show that there was a reduction in the total:HDL cholesterol ratio in all the test groups. Also the HDL cholesterol levels were higher in the test groups, especially in the *S. acuta* treated group. Further, compared to the control group, in all the test groups the LDL cholesterol levels have decreased. This shows that while all 4 plants show hypocholesterolaemic effect, *S.acuta* roots were most effective in improving the lipid profile and relieve the risk of CHD.