E2-13 Isoflavonoids and a pterocarpan from *Gliricidia sepium*

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Gliricidia sepium grows as a shade plant in the tea plantations of Sri Lanka. Previous studies on the insecticidal activity of *G.sepium* have shown that all parts of this plant have activity against certain insect species such as Southern army worm, Cabbage looper, Yellow wolly bear.

The preliminary idea of planting *G.sepium* in a tea field is to cut off direct sunlight, to maintain the optimum light conditions required for tea plants. It has been found that *G. sepium* also acts as a good diversionary host plant for *Glyptotermes dilatatus*, a tea pest responsible for causing great damage in the low country tea plantations of Sri Lanka. Olfactometer experiments showed that the attraction of termite *G. dilatatus* towards the heartwood and the stem bark of *G.sepium* and their organic extracts is significantly higher than its attraction to even some of the highly susceptible tea clones. Further the feeding experiments of the different parts of the raw plant materials and the organic extracts of *G.sepium* indicated that the raw heartwood is highly toxic and the hexane and dichloromethane extracts are also significantly toxic to *Glyptotermes dilatatus*. These bioassay experimental results suggested that the chemical investigation of *G.sepium* is of great interest in order to isolate the semiochemicals which are responsible for the attraction as well as the toxic elements causing the death of termites. This report describes the isolation and structural elucidation of a new isoflavan, 7,4'-dihydroxy-2'-methoxyisoflavan (isovestitol) (I), 7-hydroxy-4'-methoxyisoflavone (formononetin) (II) and a pterocarpan, medicarpin (III) from the heartwood of *G.speium*.