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Allelopathic activity studies of Sri Lankan flora

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The definition of allelopathy is the directly or indirectly harmful or beneficial effects of one species (Plants, bacteria, fungi) on another species through the production of chemical compounds that escape into the environment. It is estimated that there are about 1,400,000 compounds in plants with allelopathic activities, of which only 3% have been examined. The remainder is unknown and might contain very promising growth inhibitors that could be successfully exploited for the development of bio-pesticides and herbicides.

The water extract of leaves of *Tithonia diversifolia,* leaves and stem of *Mikania scandens, Clidemia hirta, bark of Canarium Zeylanicum, rhizome of Calamus totang* have shown significant difference in the average radicle length, compared to the control. The water extract of leaves of *Tithonia diversifolia, Myristica fragrans, Tagete erecta, Impatience balsamina, Morinda citrifolia,* leaves and stem of *Mikania scandens, Wedelia trilobata,* bark of *Alstonia scholaris,* have shown significant difference in the average hypocotil length, compared to the control. When EC_{50} values of tested plants compared, it is showed that *Mikania scandens, Tithonia diversifolia, Lantana camara* and *Canarium Zeylanicum* showed remarkable activity. *Tithonia diversifolia* and *Lantana camara* are previously

reported as allelopathic active plants. The present studies were focused on plant *Mikania scandens.* The shade dried and milled leaves and stem were successively extracted with hexane, dichloromethane, ethylacetate and methanol. Seed germination bioassy was carried out for these extracts. Dichloromethane extract of *Mikania scandens* showed 100% seed inhibition activity and isolation of allelochemicals from this extract will be in progress.

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