D-05: A preliminary comparative study of flavonoid compounds and morphological features in the genus *Ocimum* in Sri Lanka

Chandima Moonemalle, Priyangani Senanayake
(Dept of Botany, University of Kelaniya)

Ocimum is a genus, which belongs to the family Lamiaceae (Labiatae). Mostly these are aromatic herbs and used in Ayurvedic medicine. The main objective of this study was to make an inventory of the flavonoid compounds of the *Ocimum* species found in Sri Lanka. *O. sanctum* (Maduruthala) *Ocimum* sp 1 (Maduruthala) *O. gratissimum* (Gasthala) and *O. basilicum* (Suwandathala) were studied. Out of these *O. sanctum* and *Ocimum* sp 1, are locally known as Maduruthala. Another objective of this study was to investigate the chemical relationship between these two species. Morphological features of the four different species were examined and the voucher specimens were submitted to the herbarium, Dept. of Botany, University of Kelaniya.

In this survey fourteen different flavonoid glycosides were identified from the leaves of four *Ocimum* species, by using paper chromatography, thin layer chromatography and UV visible spectroscopy.

According to the two dimensional chromatographic studies glycosides of flavone, flavonone, flavonols and isoflavone were found in the leaves of the four species. Luteolin 7-glucoside, apigenin 7-glucoside and luteolin 5-glucoside were identified from *O. sanctum* and luteolin 5-glucoside was identified from *O. gratissimum* according to their spectral properties, colour changes and the Rf values in paper chromatography. The only morphological difference of *O. sanctum* and *Ocimum* sp 1 is the colour of the stem and flowers. But those species are different according to the flavonoid distribution pattern. Four different flavonoids were isolated from *O. sanctum* while five flavonoid compounds were found in *Ocimum* sp 1. Two of those compounds which were similar by their colour changes, Rf values and the spectral properties, were isolated from both species.

This study concluded that those two species have differences in their chemical nature. This preliminary work would provide important information to identify the importance of flavonoid compounds in the genus *Ocimum*, which would be useful for systematic studies in the future.