608/E2

Antifungal and antioxidant properties of alkaloids from *Xylopia championii* (Annonaceae)

S Puvanendran[1], A. Wickramasinghe[1], D N Karunaratne[1], D S A Wijesundara[2] and V Karunaratne[1*]
[1]*Department of Chemistry and Post-Graduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka.*
[2] *Department of Royal Botanic Gardens, Peradeniya, Sri Lanka.*

The plant *Xylopia championii* Hook. f. & Thoms. (Annonaceae) is endemic to Sri Lanka. The antifungal and antioxidant activities of five alkaloids, oxopurpureine, (+)-laudanidine, (-)-discretine, nordicentrine and dehydrocorytenchine isolated from the stem bark and stem of *X. championii* were studied.

Alkaloid wash of the dichloromethane extract of the stem bark and stem of *X. championii* upon medium pressure liquid chromatography, flash chromatography and preparative thin layer chromatography yielded oxopurpureine and (+)-laudanidine. Crude alkaloids obtained from the methanol extract of the stem bark and stem of *X. championii* yielded three alkaloids; (-)-discretine, nordicentrine and dehydrocorytenchine.

All these five alkaloids were evaluated for their free radical scavenging activity using 1,1- Diphenyl-2-picrylhydrazyl (DPPH) radicals. At a concentration of 0.5 mg/1 mL (in methanol); the alkaloids, (+)-laudanidine (72.66 ± 0.45 %) and (-)-discretine (57.01 ± 0.17 %) exhibited high antioxidant activity while nordicentrine (11.41 ± 0.41 %) and dehydrocorytenchine (16.39 ± 0.22 %) showed moderate activity as compared to the standard antioxidant DL-α-tocopherol (55.84 ± 0.05 %) in the DPPH assay. All five alkaloids were subjected to the antifungal bioassay against *Cladosporium cladosporioides*. Nordicentrine showed the most potent antifungal activity at 6 µg/spot while (-)-discretine showed moderate activity at 30.0 µg/spot.

Structures determination of all compounds isolated from *X. championii* were carried out by detailed analysis of spectroscopic data (1D and 2D NMR, EIMS and UV) and with those reported for the compounds. They were found to be identical to those reported in the literature for these compounds.

Acknowledgement: National Sciences Foundation

*veranjak@pdn.ac.lk Tel: 081-2389129