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Alkaloids and diterpenoids of *Xylopia parvifolia* (Annonaceae)

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The Annonaceae family is known as a rich source of aporphinoid and other isoquinolinne type alkaloids. It also contains a number of non-alkaloidal natural products with interesting biological

activities. Annonaceae is a large family of tropical and subtropical trees and shrubs comprising about 120 genera and more than 2000 species. In Sri Lanka, the family Annonaceae is represented by 46 species distributed in 17 genera. *Xylopia parvifolia* (Wight) Hook. f. & Thoms. is a tree belonging to the family Annonaceae. In the literature there are no published reports regarding the phytochemistry or bioactivity of *X. parvifolia.* Six alkaloids namely, oxopurpureine, *O*-methylmoschatoline, (+)-laudanidine, (-)-discretine, nordicentrine and dehydrocorytenchine and two terpenoids *ent*-kaur-16-ene-19-oic acid and 15β hydroxyl-(-)-kaur-16-ene-19-oic acid, were isolated from this plant.

Crude extract of alkaloids and isolated pure alkaloids showed no activity against second instar larvae of *Aedes aegypti*. However, *ent*-kaur-16-ene-19-oic acid and the extracts of *X. parvifolia* showed activity against second instar larvae of *A. aegypti*. The LC_{50} values of *ent*-kaur-16-ene-19-oic acid were 7.33 ppm (at 24 h) and 3.28 ppm (at 48 h).

Alkaloid wash of the dichloromethane extract of the stem bark of *X. parvifolia* upon medium pressure liquid chromatography, flash chromatography and preparative thin layer chromatography yielded oxopurpureine, *O*-methylmoschatoline and (+)-laudanidine. Crude alkaloids obtained from the methanol extract of the stem bark of *X. parvifolia* yielded three alkaloids: (-)-discretine, nordicentrine and dehydrocorytenchine. Activity guided fractionation of alkaloid-free crude extract of dichloromethane extract of stem bark of *X. parvifolia* yielded *ent*-kaur-16-ene-19 oic acid along with a non-active compound 15β hydroxyl-(-)-kaur-16-ene-19-oic acid.

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

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