E2-22: Chemical investigation of *Gordonia dassanayakei*

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Gordonia dassanayakei belongs to family Theaceae which consists of approximately 520 species categorised under 25 genera found mainly in the tropical and warm temperature areas of the world. Twelve Theaceae species distributed in Sri Lanka belong to 5 different genera and 4 of these species were categorised under genus *Gordonia*. All of them (*G. ceylanica, G. dassanayakei, G. speciosa* and *G. elliptica*) are endemic. Though all these *Gordonia* plants are being used in traditional medicine in Sri Lanka, neither chemical nor biological investigations have been reported.

The stem bark of *G. dassanayakei* collected from Nuwara Eliya district was air dried, ground and successively extracted with hot hexane, dichloromethane and methanol. The concentrated hot hexane extract was fractionated by medium

pressure column packed with silica gel using gradient elution with hexane, dichloromethane and methanol. These fractions were further purified by small scale medium pressure, flash and thin layer chromatography to give 10 pure compounds.

Six of them were identified as oleanane type of triterpenoids and the structures were established as 3β-hydroxyolean-12-en-11-one (**I**), 3β-acetoxyolean-12-ene (**II**), 3β-hydroxyolean-12-ene (**III**), 12-oleanene-3, 11-dione (**IV**), 3β-acetoxy-11, 13-dihydroxyolean-12-one(**V**) and 3β,11-diacetoxy-13-hydroxy olean-12-one (**VI**) and another one as stigmasterol (**VII**) by spectroscopic evidence (IR, ^{1}H NMR, ^{13}C NMR and MS). The structures of compounds (**I**), (**II**), (**III**), (**IV**) and (**VII**) were further confirmed by comparison of the spectral data with previously reported values. The proposed structures of 2 new compounds (**V**) and (**VI**) were further confirmed by using the correlation studies of Heteronuclear Multiple Quantum Coherence (HMQC) and Heteronuclear Multiple-Bond Correlation (HMBC) spectral data of the compounds.