

OR-27**Prenylated Phloroglucinol from *Mesua Ferrea* (Bark)**Nurulfazlina Edayah Rasol^{1,2,*}, Khalijah Awang³, Humera Naz² and Nor Hadiani Ismail^{1,2}

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Mesua ferrea (Clusiaceae) known as “Penaga lilin” in Malay is widely distributed in Peninsular Malaysia Thailand, Indo-China, Myanmar, India and Sri Lanka. Parts of this plant possess therapeutic ability for treating various diseases such as skin infection, rheumatism, dandruff, snake bite and as medicine for postpartum. Ethyl acetate extract of bark *Mesua ferrea* showed potential anti-diabetic property with IC₅₀ values of 10.1 ± 0.2 µg/ml when tested for α-glucosidase inhibitory activity. Chromatographic separation of the ethyl acetate extract employing mostly reverse phase High Pressure Liquid Chromatography (HPLC) has successfully yield three interesting phloroglucinol compounds. Isolation and purification of these compounds was carried out using SUNFIRE Waters C18 semi-preparative column (9.6 x 250 mm, 5 µm particle size) eluted isocratically with 40% water (A) containing 0.1% of formic acid and 60% acetonitrile for 35 minutes with 35µl (350µg) injection volume of sample at constant flow rate of 3.7 ml/min. Multiple wavelength detector was used by selected UV spectrum at 210 and 270 nm. The structures of the compounds were established by 1D-, 2D-NMR, Q-TOF LCMS, IR and UV studies. The isolated compounds are prenylated phloroglucinols, highly oxygenated bicyclic[3,3,1]nonane-2,4,8-trione ring with prenyl and isopropylfuran substituents. These compounds are new compounds due to the presence of 3-phenylpropanoic acid group between two carbonyl groups of the phloroglucinol skeleton. All three isolated compounds have same mass of 578 for C₃₅H₄₆O₇. However, close inspection of the NMR data revealed that they are isomeric compounds with structural differences either isopropyl or *sec*-butyl substituents. This paper will report the isolation and spectroscopic analysis of this interesting new phloroglucinol compounds from *Mesua ferrea*.
