Immunomodulatory Triterpenoids from the Oleogum Resin of *Boswellia carterii* Birdwood

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The immunomodulatory bioassay-guided fractionation of the oleogum resin of frankincense (*Boswellia carterii* Bird wood) resulted in the isolation and identification of 9 compounds; palmitic acid and eight triterpenoids belonging to lupane, ursane, oleanane, and tirucallane skeleta were isolated form the resin. These triterpenoids are lupeol, β-boswellic acid, 11-keto-β-boswellic acid, acetyl β-boswellic acid, acetyl 11-keto-β-boswellic acid, acetyl-α-boswellic acid, 3-oxo-tirucallic acid, and 3-hydroxy-tirucallic acid. The structures of the isolated compounds were deduced based on spectroscopic evidences. The lymphocyte transformation assay of the isolated compounds proved that the total extract retained more activity than that of any of the purified compounds.

Key words: Boswellia carterii, Triterpenoids, Immunomodulation