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#### LIMONOIDS FROM THE SEEDS OF Chisocheton macrophyllus

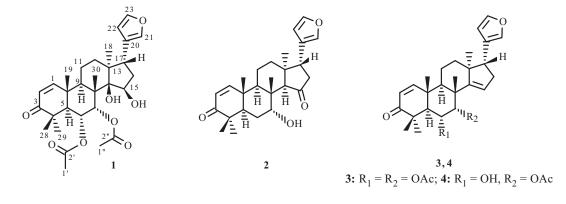
Nurlelasari,<sup>1</sup> Dewa Gede Katja,<sup>1</sup> Desi Harneti,<sup>1</sup> Moelyono Moekti Wardayo,<sup>2</sup> Unang Supratman,<sup>1\*</sup> and Khalijah Awang<sup>3</sup>

A new limonoid compound, dysobinol (1), along with three known limonoid compounds,  $7\alpha$ -hydroxyneotricilenone (2), dysobinin (3), and nimonol (4), was isolated from the seeds of Chisocheton macrophyllus (Meliaceae). Their structures were established by spectroscopic techniques such as UV, IR, MS, 1D, and 2D NMR. Compounds 1–4 showed cytotoxic activity against P-388 murine leukemia cells with  $IC_{50}$  values of 49.7, 79.4, 19.5, and 64.5 µg/mL, respectively.

Keywords: dysobinol, limonoid, Chisocheton macrophyllus, P-388 murine leukemia cells.

The *Chisocheton* genus, a member of the Meliaceae family, consists of approximately 50 species that are distributed mainly in India, Thailand, Malaysia, and Indonesia [1, 2]. The genus *Chisocheton* belongs to the subtropical and tropical plant family widely known for its insecticidal limonoid constituents [3]. Previous phytochemical studies on *Chisocheton* species have yielded a number of interesting compounds, including limonoids [4, 5], antifungal meliacin-type compound [6], dammarane triterpenoids [7], and spermidine alkaloids [8]. As part of our studies on novel compounds from Indonesian Meliaceae plants [9, 10], we carried out a study on *Chisocheton macrophyllus* seeds. *C. macrophyllus* is a higher plant found growing in the rain forest in the northern part of Sulawesi Island, Indonesia [2, 11]. The plant is known as Ma-aa in Indonesia, and the seed oil from this plant is used in Indonesia for lighting [12]. Its leaves have been reported to yield dammarane triterpenoids [7], but the seeds of this plant have never been phytochemically investigated. In this communication, we describe the isolation and structure elucidation of a new limonoid (1) and three known limonoids (2–4) from the seeds of *C. macrophyllus* along with their cytotoxic activity against P-388 murine leukemia cells.

The dried and powdered seeds of *C. macrophyllus* (3.5 kg) was extracted with methanol at room temperature and filtered. After removal of the solvent *in vacuo*, the residue was partitioned between water and *n*-hexane, EtOAc, and *n*-butanol.



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