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**CYTOTOXIC STEROIDS FROM THE STEM BARK OF *Chisocheton cumingianus*
(Meliaceae)****STEROID DENGAN AKTIVITAS SITOTOKSIK DARI KULIT BATANG *Chisocheton cumingianus* (Meliaceae)****Dewa Gede Katja¹, Kindi Farabi², Nurlelarsi², Desi Harneti², Rani Maharani², Euis Julaela², Ace Tatang Hidayat^{2,3}, Tri Mayanti², Unang Supratman,^{2,3*}**¹Department of Chemistry, Faculty of Mathematics and Natural Sciences,
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Received November 20, 2016; **Accepted** April 1, 2017; **Available online** May 30, 2017**ABSTRACT**

Three cytotoxic steroids, stigmasterol (**1**), stigmast-5-en-3 β -ol (**2**) and β -sitosterol-3-*O*-acetate (**3**) were isolated from the stem bark of *Chisocheton cumingianus*. The chemical structures of those compounds were identified based on spectroscopic data and by comparison with those data previously reported. All of the compounds isolated were evaluated for their cytotoxic effects against P-388 murine leukemia cells *in vitro*. Compounds **1-3** showed cytotoxicity activity against P-388 murine leukemia cells with IC₅₀ values of 12.4, 60.8, and > 100 μ g/mL, respectively.

Keywords: *C. cumingianus*, *Chisocheton*, cytotoxic activity, Meliaceae, Steroids**ABSTRAK**

Tiga senyawa steroid yang beraktivitas sitotoksik, stigmasterol (**1**), stigmast-5-en-3 β -ol (**2**) dan β -sitosterol-3-*O*-acetate (**3**) telah diisolasi dari kulit batang *Chisocheton cumingianus*. Struktur kimia senyawa tersebut diidentifikasi berdasarkan data-data spektroskopi dan perbandingan dengan data spektra yang diperoleh sebelumnya. Semua senyawa hasil isolasi dievaluasi sifat sitotoksiknya terhadap sel murine leukimia P-399 secara *in vitro*. Senyawa **1-3** menunjukkan aktivitas sitotoksik terhadap sel murine leukimia P-388 dengan nilai IC₅₀ beturut-turut 12,4; 60,8 dan > 100 μ g/mL.

Kata kunci: *C. cumingianus*, *Chisocheton*, sifat sitotoksik, Meliaceae, Steroids.**INTRODUCTION**

The *Chisocheton* genus belongs to the Meliaceae family is a second largest genus in the family of Meliaceae comprising more than 50 plant species and distributed in Nepal, India, Burma, Myanmar, South China, Thailand, Malaysia, Papua New Guinea and Indonesia (Vossen and Umali, 2002). Previous phytochemical studies on *Chisocheton* plants reported the presence of compounds with interesting biological activities such sesquiterpenoids (Phongmaykin, Kumamoto, Ishikawa, Suttisri, & Saifah, 2008), dammarane-type triterpenoids (Inada et al., 1993; Phongmaykin et al., 2008), tirucallane-type triterpenoids (Zhang, Feng, Bin, Sheningg, & Mian, 2012; Yang, Wang, Luo, Wang, & Kong, 2011),

apo-tirucallane-type triterpenoids (Zhang et al., 2012), limonoids (Maneerat, Laphoohiero, Koysomboon, & Chantrapromma., 2008; Laphookhieo et al., 2008; Mohamad et al., 2009; Yang, Wang, Luo, Wang, & Kong, 2009; Najmuldeen et al., 2010; Wong et al., 2011; Lim, 2008), steroids and phenolics (Phongmaykin et al., 2008).

As a part of our studies on anticancer candidate compounds from Indonesia *Chisocheton* plants, we already isolated a 7-hydroxy coumarin from the stem bark of *C. celibicus* (Katja et al., 2015), and a 30-nor trijugin-type limonoid, chisotrijugin and lanostan-type triterpenoid, 3 β -hydroxy-25-ethyl-lanost-9(11),24(24')-diene from the stem bark of *C. cumingianus* (Katja et al., 2016a, Katja et al., 2016b). In further search of cytotoxic compounds from Indonesia