

Hady Palgunadi, 2018, ISOLASI SENYAWA TURUNAN ASAM KROMANOAT DARI KULIT BATANG *Calophyllum biflorum* SERTA AKTIVITASNYA SEBAGAI ANTIMALARIA. Skripsi ini di bawah bimbingan Dra. Tjitjik Srie Tjahjandarie, Ph.D. dan Dr. Mulyadi Tanjung, M.S., Departemen Kimia, Fakultas Sains dan Teknologi, Universitas Airlangga

ABSTRAK

Telah dilakukan isolasi senyawa turunan asam kromanoat baru dari kulit batang *Calophyllum biflorum*. Senyawa metil 3-(6-(4,8-dimetil-2-(prop-1-en-2-il)nona-3,8-dien-1-il)-4-hidroksi-2,3-dimetil-6-(3-metilbut-2-en-1-il)-5,7-diokso-kromen-8-il)-3-fenilpropanoat berhasil diisolasi melalui metode maserasi, kromatografi cair vakum, kromatografi kolom dan kromatografi radial. Struktur senyawa hasil isolasi ditentukan melalui analisis spektroskopi, meliputi UV, 1D NMR ($^1\text{H-NMR}$ dan $^{13}\text{C-NMR}$) serta 2D NMR (HMBC dan HMQC). Senyawa hasil isolasi juga diuji aktivitas antimalariannya terhadap *Plasmodium falciparum* strain 3D7 menggunakan metode Trager dan Jansen yang dimodifikasi, memperlihatkan nilai IC_{50} sebesar 0,393 $\mu\text{g/mL}$ yang dikategorikan aktif.

Kata kunci : *Senyawa turunan asam kromanoat, Calophyllum biflorum, Antimalaria*

Hady Palgunadi, 2018, ISOLATION OF CHROMANONE ACID DERIVATIVE COMPOUND FROM THE STEM BARK OF *Calophyllum biflorum* AND THEIR ANTIMALARIAL ACTIVITY. This thesis is supervised by Dra. Tjitjik Srie Tjahjandarie, Ph.D. and Dr. Mulyadi Tanjung, M.S., Departement of Chemistry, Faculty Science and Technology, Universitas Airlangga

ABSTRACT

A new chromanone acid derivative compound has been isolated from the stem bark of *Calophyllum biflorum*. A methyl 3-(6-(4,8-dimethyl-2-(prop-1-en-2-yl)nona-3,8-dien-1-yl)-4-hydroxy-2,3-dimethyl-6-(3-methylbut-2-en-1-yl)-5,7-dioxo-chromen-8-yl)-3-phenylpropanoic compound has successfully isolated through maceration process, vacuum liquid chromatography, column chromatography and radial chromatography. The structure of isolated compound was determined based on spectroscopic data, includes UV, 1D NMR (¹H-NMR and ¹³C-NMR) and 2D NMR (HMBC and HMQC). The antimalarial activity of isolated compound also observed against *Plasmodium falciparum* 3D7 using modified Trager and Jansen method, shows an IC₅₀ value of 0.393 µg/mL that is categorized as active.

Keywords : *Chromanone acid derivative compound, Calophyllum biflorum, Antimalarial*