

Cytotoxic Steroids from the Bark of *Aglaiia argentea* (Meliaceae)

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ABSTRACT

*The study aimed to find a potential anticancer agent by isolating and identifying the chemical structure of compounds from *Aglaiia argentea* and testing their cytotoxic effects against P-388 murine leukimia cells. Five steroids – stigmast-5-en-3 β -ol (β -sitosterol) (1), stigmast-5-en-3 β -ol-3 β -oleate (β -sitosterol oleate) (2), stigmast-5-en-3 β -ol-3-O-(6'-O-oleoyl)- β -D-glucopyranoside (sitoindoside II) (3), stigmast-5-en-3 β -ol-3-O- β -D-glucopyranoside (β -sitosterol glucoside) (4), stigmast-5,22-dien-3 β -ol-3-O- β -D-glucopyranoside (stigmasterol glucoside) (5) – were isolated from the bark of *Aglaiia argentea*. The chemical structures of 1-5 were identified with spectroscopic data, including IR, NMR (¹H, ¹³C, DEPT 135°, HMQC, HMBC, ¹H-¹H COSY) and HRTOFMS, as well as by comparing with previously reported spectral data. All compounds were evaluated for their cytotoxic effects against P-388 murine leukemia cells. Compounds 1-5 showed cytotoxicity against P-388 murine leukemia cell with IC₅₀ values of 12.45 ± 0.050, 85.25 ± 0.050, >100, 52.27 ± 0.031 and 62.52 ± 0.076 μ g/mL, respectively.*

Keywords: *Aglaiia argentea*, Cytotoxic activity, Meliaceae, P-388 murine leukemia cells, Sterol

INTRODUCTION

Sterols, a type of steroid, are an important class of bioorganic molecules similar to cholesterol in structure and found widely in plants, animals, and fungi (Saaidnia et al., 2014). They include β -sitosterol, campesterol, stigmasterol, and