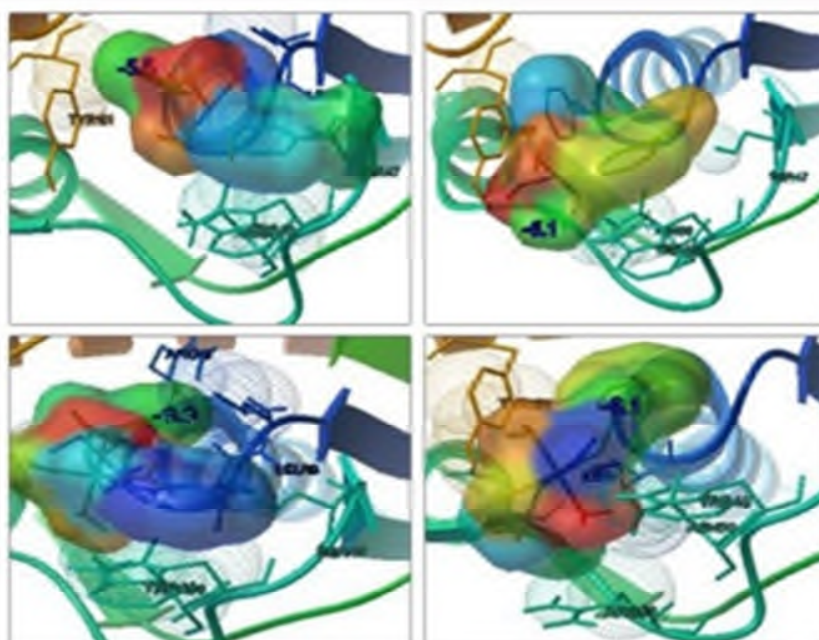


p-ISSN : 2460-6065; e-ISSN : 2548-3013

Jurnal Kimia **VALENSI**

Volume 3 No.2, November 2017



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Jurnal Kimia VALENSI Volume 3, No. 2, November 2017

Available online 2017

Jurnal Penelitian dan Pengembangan Ilmu Kimia

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Flavanoids from the Stembark of *Chisocheton pentandrus* (Meliaceae)

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Received: October 2017; Revised: November 2017; Accepted: November 2017; Available Online: November 2017

Abstract

Two flavanoid compounds, catechin (**1**) and epicatechin (**2**), have been isolated from the stembark of *Chisocheton pentandrus*. The chemical structure of compounds **1** and **2** were identified by spectroscopic data including, UV, IR, NMR (¹H, ¹³C, DEPT 135°, HMQC, HMBC, ¹H-¹H COSY) and MS and by comparing with previously reported spectral data. Compounds **1** and **2**, were isolated in this plant for first time and showed no cytotoxic activity against MCF-7 breast cancer cells.

Keywords: *Chisocheton pentandrus*, catechin, epicatechin, Meliaceae, MCF-7.

DOI: <http://dx.doi.org/10.15408/jkv.v3i2.6077>

1. INTRODUCTION

The tropical plant of *Chisocheton* belong to Meliaceae family is a higher plant that can grow up to 25m in height (Mabberly and Pannell, 1989). This plant is widespread in the tropical and subtropical countries including Indo-China, Papua New Guinea, Southern China, Thailand, Malaysia, Nepal, India, Bhutan and Myanmar (Vossen and Umali, 2002). Some of these plant species have been traditionally used as laxatives, medicinal and cosmetic ingredients as well as for toxins in fish (Lim, 2008). *Chisocheton* species were known to produce bioactive compounds with complex molecular structures such as erythrocarpine E and chisomecine A (Awang *et al.*, 2007, Najmuldeen *et al.*, 2011). Plant from this genus have been known to be a rich source of secondary metabolites including various sterols, terpenoids and alkaloids with biologically properties such as antifungal, antibacterial, antiviral, anti-inflammatory, and antiplasmodial agents (Mohamad *et al.*, 2009, Joshi *et al.*, 1987, Agbedahunsi *et al.*,

2004). During the course of our continuing search for novel secondary metabolites from Indonesia *Chisocheton* plants, we isolated and described a new limonoid, dysobinol, from the bark of *C. macrophyllus* (Nurlelasari *et al.*, 2017) and a new lanostane-type triterpenoid, 3 β -hydroxy-25-ethyl-lanost-9(11),24(24')-diene, from the stembark of *A. cumingianus* (Katja *et al.*, 2016). In the further search for novel compounds from Indonesia *Chisocheton* plants, recently we explore the phytochemistry of the stembark of *C. pentandrus*. The plant is a higher plant and mainly distributed in northern part of Sulawesi in Indonesia (Inada *et al.*, 1997; Mabberley *et al.*, 1995). Its stembark have been used as an Indonesian folk medicine for reducing fever, moisturizing the lungs, and for treating contused wound (Heyne., 1982). Although secondary metabolite compounds of other *Chisocheton* plants have been investigated previously, the chemical constituents of *C. pentandrus* is yet to be reported. In this paper, we describe the isolation and structural elucidation of two flavanoids, **1** and **2**.