NATURAL PRODUCT RESEARCH
https://doi.org/10.1080/14786419.2019.1644634

Taylor & Francis
Taylor & Francis Group

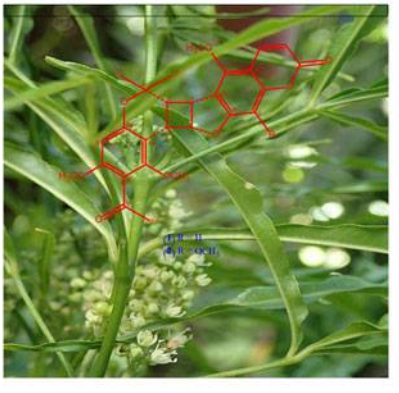
Two novel coumarins bearing an acetophenone derivative from the leaves of *Melicope Quercifolia*

Ratih Dewi Saputri, Tjitjik Srie Tjahjandarie and Mulyadi Tanjung

Natural Products Chemistry Research Group, Organic Chemistry Division, Faculty of Science and Technology, Department of Chemistry, Universitas Airlangga, Surabaya, Indonesia

ABSTRACT

Meliquercifolins A (**1**), and B (**2**), two new coumarins are bearing an acetophenone derivative were isolated from the leaves of *Melicope quercifolia* along with three known compounds, melicodenines E (**3**), F (**4**) and I (**5**). Structures of two new compounds were identified based on spectroscopic analyses (UV, HR-ESI-MS, 1 D and 2 D NMR). Cytotoxic activities of compounds (**1–5)** towards three human cancer cells (HeLa, MCF-7, P-388), compounds **1**, **4** and **5** showed very potent activity against Hela cells with IC_{50} values 2.6; 0.8; 1.1 μM, respectively.



ARTICLE HISTORY
Received 5 June 2019
Accepted 13 July 2019

KEYWORDS
Cytotoxicity; *Melicope quercifolia*; Meliquercifolins A and B

1. Introduction

Melicope quercifolia (Rutaceae) is a small tree and found as an endemic plant in West Java, Indonesia. The leaves of *M. quercifolia* have been used to treat skin diseases (Appelhans et al. 2018). Acetophenones (Nguyen et al. 2016), alkaloids (George et al. 2017), coumarins (Xu et al. 2016), flavonoids (Saputri et al. 2018), and phenylpropanoids (Nakashima et al. 2012) are phenolic compounds from the *Melicope* plants. Some of the phenolic compounds showed various Diels-Alder adduct and [2 + 2]

CONTACT Mulyadi Tanjung mulyadi-t@fst.unair.ac.id
Supplemental data for this article can be accessed at https://doi.org/10.1080/14786419.2019.1644634