

Short Note

# 5,9,11-Trihydroxy-2,2-dimethyl-10-(3'-methyl-2'-butenyl)-3-(2''-methyl-3''-butenyl)pyrano[2,3-a]xanthen-12(2H)-one from the Stem Bark of *Calophyllum pseudomole*

Mulyadi Tanjung <sup>1,\*</sup>, Ratih Dewi Saputri <sup>1</sup> and Tjitjik Srie Tjahjandarie <sup>1,2</sup>

<sup>1</sup> Natural Products Chemistry Research Group, Organic Chemistry Division, Department of Chemistry, Faculty of Science and Technology, Universitas Airlangga, Surabaya 60115, Indonesia; duffputri@gmail.com (R.D.S.); tjitjiktjahjandarie@fst.unair.ac.id (T.S.T.)

<sup>2</sup> Airlangga Health Science Institute, Universitas Airlangga, Surabaya 60115, Indonesia

\* Correspondence: mulyadi-t@fst.unair.ac.id; Tel.: +62-31-593-6501; Fax: +62-31-593-6502

Academic Editor: Norbert Haider

Received: 7 July 2016; Accepted: 15 August 2016; Published: 22 August 2016

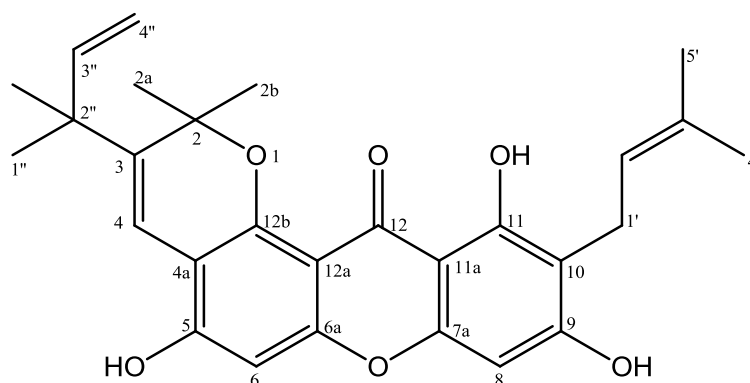
**Abstract:** 5,9,11-Trihydroxy-2,2-dimethyl-10-(3'-methyl-2'-butenyl)-3-(2''-methyl-3''-butenyl)-pyrano[2,3-a]xanthen-12(2H)-one (**1**) was isolated from the stem bark of *Calophyllum pseudomole*. The structure of **1** was established by spectroscopic analysis which included UV, IR, HRESIMS and NMR experiments.

**Keywords:** 5,9,11-trihydroxy-2,2-dimethyl-10-(3'-methyl-2'-butenyl)-3-(2''-methyl-3''-butenyl)-pyrano[2,3-a]xanthen-12(2H)-one; xanthone; *Calophyllum pseudomole*

## 1. Introduction

The *Calophyllum* genus (Clusiaceae) comprises more than 180 species found mainly in Southeast Asia. This genus has been shown to produce a number of secondary metabolites, particularly xanthenes [1–3], coumarins [4–6], chromanone acids [7–9], and flavonoids [10]. In Indonesia, the local name of *Calophyllum* is 'bitangor' [11].

Herein, we report the isolation and structural elucidation of a new isoprenylated xanthone, 5,9,11-trihydroxy-2,2-dimethyl-10-(3'-methyl-2'-butenyl)-3-(2''-methyl-3''-butenyl)-pyrano[2,3-a]xanthen-12(2H)-one (**1**) (Figure 1) from the stem bark of *Calophyllum pseudomole* as well as its antioxidant activity.



**Figure 1.** Structures of 5,9,11-trihydroxy-2,2-dimethyl-10-(3'-methyl-2'-butenyl)-3-(2''-methyl-3''-butenyl)pyrano[2,3-a]xanthen-12(2H)-one (**1**).