**Steroid Compounds from Endophytic Mangrove *Avicennia marina* Genus Penicillium sp**

**Syaiful Bahri1,\*, Annisa Elcentia Fajarwati1, Andi Setiawan1 and John Hendri1**

1Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Lampung, Jalan Soemanatri Brojonegoro No.1 Bandar Lampung 35145

Corresponding author : [syaiful.bahri@fmipa.unila.ac.id](mailto:syaiful.bahri@fmipa.unila.ac.id)

**Abstract**

In this study, the endophytic microbe of *Avicennia marina* was isolated and characterized. Samples were taken randomly as a source of microbes including roots, stems, and leaves of mangroves from the mangrove area of ​​Pesawaran District of Lampung Province. The isolation and enrichment method using chitin agar media produced 15 microbial isolates, from 10 root isolates, 2 stem isolates, and 3 leaf isolates. The results of microscopic characterization showed that the selected isolates were fungi of the Penicillium sp. Furthermore, the isolation of bioactive compounds from the isolates of Penicillium sp was carried out. The isolated compound was purified through several chromatographic steps to produce the 14MA15 fraction. The results of the analysis using a UV-Vis spectrometer showed an absorption of C=O cyclic ketones with a peak at a wavelength of 206 nm. The IR spectrum interpretation shows that there is a stretching vibration of the O-H group of the alcohol at a wave number of 3410 cm-1, the C-O group of the alcohol at 1055 cm-1, and the C=O group of the ketone at 1712 cm-1. Based on GC-MS data, the compound is known to have a molecular formula of C26H40O2 with a skeleton similar to ergosterol compounds.

**Keywords:** *Avicennia marina*; endophytes; Penicillium sp.; ergosterol