

NEW FINDINGS OF DOCTORAL DISSERTATION

Name of Doctoral candidate: TRAN THI THUY LINH

Dissertation title: "Study on chemical constituents and some biological effects of *Pogostemon auricularius* (L.) Hassk.) - Lamiaceae"

Specialty: Medicinal Materials - Traditional Pharmacy

Code of specialty: 9720206

Name of academic advisors:

1. Prof. Dr. Nguyen Thi Hoai
2. Assoc. Prof. Dr. Le Viet Dung

Name of academic institute: National Institute of Medicinal Materials

Summary of new findings of the dissertation:

1. Chemical constituents

Structure of 11 compounds isolated from *Pogostemon auricularius* (L.) Hassk. were identified, in which,

- 9 new compounds, including 3 meroterpenoids (Pogostemin A, Pogostemin B, and Pogostemin C), 5 phloroglucinol derivatives (Pogostemonon A, Pogostemonon B, Pogostemonon C, Pogostemonon D, and Pogostemon D) and 1 triterpene (Pogostem).
- 2 compounds were isolated from *Pogostemon auricularius* (L.) Hassk. for the first time: geranylinalool and stigmasterol

2. Toxicity and Biological activities:

- Acute toxicity of the ethyl acetate extracts of *Pogostemon auricularius* (L.) Hassk. were published for the first time.
- The thesis is the first publication on:
 - + The *in vitro* anti-inflammatory activity via inhibiting NO production of extracts, including methanol crude extract, *n*-hexane, dichloromethane, ethyl acetate, and aqueous fractions from *Pogostemon auricularius* (L.) Hassk.
 - + The *in vitro* anti-inflammatory activity of eight new compounds via inhibiting NO production. The effects of Pogostemin C toward IL-10 and TNF- α concentrations in RAW 264.7 cells.
 - + The cytotoxic effects of eight new compounds on five cell lines, including Hep-G2 (human hepatocellular carcinoma), AGS (human gastric carcinoma), KB (human epidermoid carcinoma), LU-1 (human lung carcinoma), and SW-480 (human colon adenocarcinoma). The inducement of apoptosis and activation of caspase-3 in LU-1 cell line by Pogostemin A.

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ACADEMIC ADVISORS

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