

NEW FINDINGS OF DOCTORAL DISSERTATION

Name of Doctoral candidate: Le Quoc Hung

Dissertation title: Study on chemical constituents and antiproliferative activity against cancer cell lines of the roots of *Salvia miltiorrhiza* Bunge (Lamiaceae)

Speciality: Traditional Pharmacy

Code of speciality: 9720206

Name of academic advisors:

1. Assoc. Prof. Dr. Phuong Thien Thuong
2. Assoc. Prof. Dr. Nguyen Huu Tung

Name of academic institute: Vietnam National Institute of Medicinal Materials

Summary of new findings of the dissertation:

1. Chemical constituents

Seventeen compounds (1-17) were isolated from roots of *S. miltiorrhiza*, among these compounds:

- Three firstly isolated compounds from genus *Salvia*: 7 β ,24-dihydroxy ursolic acid (7), 24-hydroxy corosolic acid (8), iriflophenone-2-*O*- α -L-rhamnopyranoside (13)
- Four firstly isolated compounds from species *S. miltiorrhiza*: maslinic acid (11), asiatic acid (12), ethyl rosmarinate (16) và ethyl salvianolate A (17)

2. Biological activities

The thesis is the first report on:

- The antiproliferative effects on human leukemia cells HL-60 of EtOH and *n*-hexan extracts of roots of *S. miltiorrhiza* collected in Vietnam.
- The cytotoxic activity of trijuganone C (2) against the cancer cell lines including human leukemia HL-60, Jurkat, U937, colon cancer DLD-1, COLO 205, Caco-2, HCT-15, prostate cancer PC-3, LNCap FGC, breast cancer MCF-7.
- The inhibitory activity against human leukemia cells HL-60 of iriflophenone-2-*O*- α -L-rhamnopyranoside (13).

- The antiproliferative activity of **2** against human leukemia cells HL-60 related to apoptosis. The mechanism was determined *via* caspase-3, 8, 9 activation and mitochondrial dysfunction.

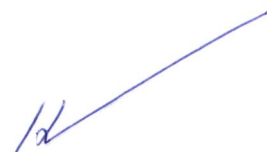
Hanoi, Julyth, 2022

ACADEMIC ADVISORS

DOCTORAL CANDIDATE



Assoc. Prof. Dr. Phuong Thien Thuong



Le Quoc Hung



Assoc. Prof. Dr. Nguyen Huu Tung