

## NEW FINDINGS OF DISSERTATION

**Dissertation title:** Botanical properties, phytochemistry and biological activity studies on *Psychotria prainii* H. Lév.

**Speciality:** Medicinal Materials - Traditional Pharmacy

**Code number:** 9720206

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**Academic institution:** Vietnam National Institute of Medicinal Materials

**Summary of new findings:**

### 1. Botany

This is the first report on morphological, anatomical analysis of stem, leaf, root of *Psychotria prainii* H. Lév. and microscopy characteristics of their powders.

### 2. Chemical constituents

- Flavonoid, alkaloid, and tannin were shown as main active chemical constituents of aerial parts of *Psychotria prainii* H. Lév.. The presence of organic acid, amino acid, monosaccharide, polysaccharide, fat, sterol, and carotene were also detected.
- 3 flavonoids, 3 monoterpene glucosides, 3 megastigmans, and 1 alkaloid were isolated from *Psychotria prainii* H. Lév., their structure was identified, including:
  - + 1 compound was reported for the first time in nature: 6-ethyl ether deacetylasperulosidic acid.
  - + 7 compounds were isolated from genus *Psychotria* for the first time: Sulfuretin (3',4',6-trihydroxyauron), butein (2',3,4,4'-tetrahydroxychalcon), carbonylbis[imino(6-methyl-3,1-phenylene)]bis[carbamic acid] dimethyl ester, asperulosidic acid, degalloylmacarangioside B, 6-hydroxyjunipeionoloxide, and roseoside II.
  - + 2 compounds were isolated from *Psychotria prainii* H. Lév. for the first time: (±)-Butin and asperuloside.

### **3. Biological activities**

- This is the first study that evaluated the anti-inflammatory activity of asperulosidic acid and carbonylbis[imino(6-methyl-3,1-phenylene)]bis[carbamic acid] dimethyl ester isolated from aerial parts of *Psychotria prainii* H. Lév. by inhibition of NO production in LPS-stimulated RAW264.7 macrophage cells model.
- This is also the first research on *Psychotria prainii* H. Lév. aqueous extract activity applying mouse model of irritable bowel syndrome study. The results of the present study have partly demonstrated the traditional use of *Psychotria prainii* H. Lév. in the treatment of colitis and other gastrointestinal diseases.

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