

1.1 Introduction

Ciwujia, Radix *Acanthopanax senticosi*, is the dry root and rootstock of *Acanthopanax* (*Eleutherococcus*) *senticosus* (Rupr. et Maxim.) Harms (Araliaceae), which is collected in spring and fall. It is listed officially in the Chinese Pharmacopoeia and commonly known as “Siberian ginseng”. It belongs to the same plant family as *Panax ginseng*. In addition, two galenic preparations of *A. senticosus* are also included in the Chinese Pharmacopoeia:

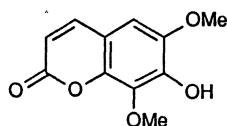
- Ciwujia Jingao, Extractum *Acanthopanax senticosi*, prepared by extraction of the powdered root of *A. senticosus* with 75% ethanol and concentration of the extract
- Ciwujia Pian, Tabellae *Acanthopanax senticosi*, prepared from the extract

The roots and rootstock of *A. senticosus* and its preparations have been used as a tonic in Chinese traditional medicine for a long time.

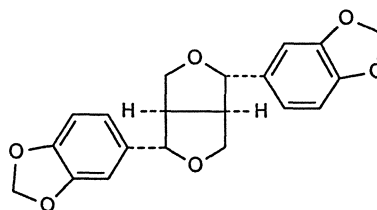
1.2 Chemical Constituents

From the roots and stems of *A. senticosus* collected in China, isofraxidin (1-1), sesamin (1-2), β -sitosterol (1-3), friedelin (1-4), and several polysaccharides have been isolated in addition to eleutherosides A, B (1-8), B₁ (1-9), C, D, E, I, K, L, and M [1]. The eleutherosides I, K, L, and M have also been isolated from the leaves of *A. senticosus* [2].

Isofraxidin is a derivative of coumarin, the lactone of coumarinic acid; sesamin is a lignan derivative; and β -sitosterol, a widely distributed plant sterol, has a stigmasterane (1-5) carbon skeleton, whereas friedelin belongs to triterpenes derived from D:A-friedooleanane (1-6).



Isofraxidin (1-1)



Sesamin (1-2)