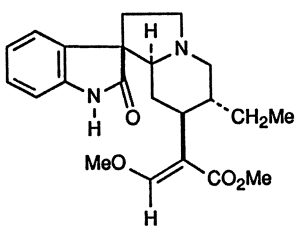
Uncaria rhynchophylla (Miq.) Jacks. 120

120.1 Introduction

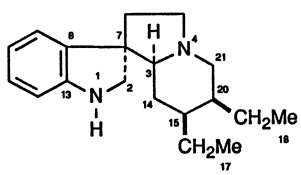
Gouteng, Ramulus Uncariae cum Uncis, is the dry branches bearing hooks of *Uncaria rhynchophylla* (Miq.) Jacks., *U. macrophylla* Wall., *U. hirsuta* Havil., *U. sinensis* (Oliv.) Havil., or *U. sessilifructus* Roxb. (Rubiaceae), which are collected in the fall and winter. It is officially listed in the Chinese Pharmacopoeia and is used as an antipyretic and anticonvulsant for the treatment of headache, vertigo, and epilepsy.

120.2 Chemical Constituents

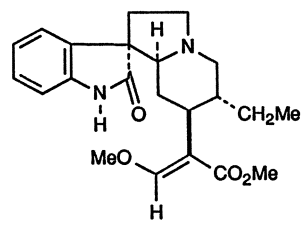
The main chemical constituents in the stems and hooks of *U. rhynchophylla* are alkaloids. The first isolated alkaloid was rhynchophylline (*120-1*) [1–3], which has a tetracyclic system composed of an indole moiety and an indolizidine moiety and is related to corynoxan (*120-2*). Later, isorhynchophylline (*120-3*), the 7-epimer of rhynchophylline, was isolated [4].



Rhynchophylline (*120-1*)



Corynoxan (*120-2*)



Isorhynchophylline (*120-3*)

Two further related alkaloids were the isomers corynoxeine (*120-4*) and isocorynoxeine (*120-5*) [5]. It was reported that approximately 97% of the total alkaloids detected in the hook, small stem, and leaf represented the oxindole alkaloids rhynchophylline, isorhynchophylline, corynoxeine, and isocorynoxeine. The bark of the underground part contains mainly the indole alkaloids hirsuteine (*120-6*) and hirsutine (*120-7*). Further more, the alkaloids corynantheine (*120-8*) and dihydrocorynantheine (*120-9*) were isolated from the wood of *U. rhynchophylla* [5]. The latter four alkaloids are derived from corynan (*120-10*).