

Phytochemical Screening of Ayer Hitam Forest Reserve : Isolation of Ariskanin-A from *Thottea corymbosa* (Griff.) Ding Hou (Aristolochiaceae)

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Keywords: *Thottea corymbosa*, Aristolochiaceae, Ariskanin-A, aristolochic acid, herbal medicine.

ABSTRAK

Semasa penyaringan fitokimia ke atas tumbuhan tinggi dari Hutan Simpan Ayer Hitam, Puchong, Selangor, suatu sampel akar *Thottea corymbosa* telah dikutip dengan banyaknya untuk kajian lanjutan ke atas juzuk bioaktifnya. Tumbuhan ini yang telah diguna sebagai ubat tradisi ialah suatu syrab yang senang dijumpai di rintis terbuka dalam hutan. Akar telah diekstrakkan secara berjajukan menggunakan petroleum eter, kloroform dan metanol dan diikuti oleh pemisahan pecahan kloroform dengan kromatografi turus dan kromatografi lapisan nipis. Dalam kajian ini kita ingin melaporkan pemencilan suatu aristolaktam, Ariskanin-A dengan nilai ketoksikan LC50 <200 ppm dalam Bioasai Kemautan Anak Udang Air Masin, berdasarkan data spektroskopik dan perbandingan kepustakaan.

ABSTRACT

During a phytochemical screening of higher plants at Ayer Hitam Forest Reserve, Puchong, Selangor, we collected a large amount of sample of *Thottea corymbosa* roots for further investigation of its bioactive constituents. The plant is a shrub commonly used in herbal medicine and could easily be found along the open forest trails. The roots of the collected sample were consecutively extracted with petroleum-ether, chloroform and methanol followed by separation of the chloroform fraction by column chromatography and preparative thin-layer chromatography. In this study we reported the isolation of an aristolactam, Ariskanin-A with a toxicity value of LC50 <200 ppm in Brine-Shrimp Lethality Bioassay based on spectroscopic data and comparison with literature.

INTRODUCTION

As a continuation of our previous preliminary work (Mat So'ad and Nik Idris Yusoff 2001) on the phytochemistry of *Thottea tomentosa* (Blume) Ding Hou to isolate bioactive components of some pharmacological interests (or possibly toxic) especially Aristolochic acids and aristolactam, we chose to investigate the chemical constituents of its next-of-kin, *T. corymbosa*. The plant is called 'hempedu beruang' in Malay, a shrub found growing commonly along the open trails of lowland forests throughout Malaysia. In herbal medicine, the pounded leaves are applied to sore gums or tooth cavity for toothache. Also it is claimed that the shrub can be used even in drug form as an analgesic, antiasthmatic, antifertility and for treating impo-

tence and snake-bite. Although the plant is widely used among the locals, to date no study on the phytochemistry and biological activity has ever been reported.

In Peninsular Malaysia the family Aristolochiaceae is represented by two genera, namely *Aristolochia* and *Thottea*. The former consists of five species, namely *A. curtisii*, *A. foveolata*, *A. jackii*, *A. minutiflora* and *A. tagala* and the latter contains a total of seven species, namely, *T. corymbosa*, *T. dependens*, *T. grandiflora*, *T. parviflora*, *T. sumatrana*, *T. tomentosa* and *T. tricornis*. The species within *Aristolochia* have a very narrow range of distribution except *A. tagala* which is widespread. Turner (1995) stated that *A. curtisii* is only found in Penang, *A. foveolata* is found in Terengganu, *A. jackii* is found in Pahang