

## DOCTORAL THESIS

### Pharmacognostical studies on Hakka herbal medicine Wuzhimaotao

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**Pharmacognostical Studies on Hakka Herbal Medicine  
Wuzhimaotao**

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**A thesis submitted in partial fulfillment of the requirements  
for the degree of  
Doctor of Philosophy**

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## ABSTRACT

Hakka is a relatively large subgroup of Han, which is one of the 56 ethnic groups in China. The Hakka people speak their own dialect and have their own customs and beliefs. They typically live on hills or mountains in Lingnan area (southern China), that is why they are also called 'highlanders'. Meanwhile, they relied largely on medicinal herbs to combat disease and maintain their health. Over the years and years, they have built up a substantial amount of medical knowledge.

This study is divided into two parts. The first part is an ethnobotanical study of Hakka medicinal herbs. Another part is a pharmacognostical study of one popular Hakka herbal medicine, Wuzhimaotao (*Ficus hirta* Vahl).

The main purpose of this ethnobotanical study of Hakka medicine herbs was to document valuable traditional knowledge. Information was obtained from semi-structured interviews, personal conversations with practitioners, direct observation, and by reviewing studies of Hakka and Cantonese herbal medicine reported in the literature. Our data covered 94 species belonging to 77 genera in 40 families. We found that most species used for medical purposes were for hepatitis (14 species) and skin diseases (12 species). For treatment, the plants were mainly used as teas (Luica, Busingca and Lopêdca), medicinal baths and soups.

Wuzhimaotao is mainly derived from the roots of *Ficus hirta* Vahl. However, according to our previous literature researches and field investigations, a total of four species of *Ficus* has been found in use as the customary source species of Wuzhimaotao in various regions of southern China; these are *Ficus hirta* Vahl, *F. simplicissima* Lour., *F. hirta* Vahl var. *imberbis* Gagnep. and *F. esquiroliana* Lévl. This part focuses on authentication of the different source species of Wuzhimaotao and related herbs of *Ficus*, through the following four-pronged approach: taxonomy

and morphology, microscopy, DNA fingerprinting, and HPLC fingerprinting.

To ensure the reliable, safe and effective use of Hakka herbal medicine, both in homes and in clinics, the herbs must be standardized and authenticated. This will also be conducive to the rational application and development of Lingnan medicinal resources.

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