

Traditional medicinal uses of *Acorus* in China

S Zhang, P Li, W Huang, L Hong, S Dai, R Gu, F Li, B Liu, C Long

Three species of the genus *Acorus* [Acoraceae], i.e., *A. calamus* L., *A. tatarinowii* Schott, *A. gramineus* Soland and *A. calamus* has been important medicinal plants in China for more than 2000 years as well as important festival items in the whole country. The ethnic people and Han Chinese have hanged these plants on the doors as powerful weapons to drive evil spirits out of houses and to keep healthy environment during the Dragon-Boat Festival (May 5th of the lunar calendar). To document medicinal and other uses of the genus *Acorus*, field surveys were conducted from August 2013 to May 2015. We interviewed 213 people selected randomly, including Zhuang, Dong, Miao, Yao, Buyi, Shui, Tujia and Han people. The genus *Acorus* have been used for multiple purposes, such as ethnomedicine and traditional Chinese medicine, fiber extraction, insecticidal properties and cultural uses [1]. In addition to ethnomedicine, *A. calamus* has been treated as holy or symbolic plant on Dragon-boat Festival, while *A. tatarinowii* was used by ethnic people for cooking meat as spice and flavouring in southwest China. In Guangxi, Guizhou, Yunnan, Chongqing and Hunan provinces, 96% of the traditional healers interviewed in the present study used rhizomes of *Acorus* for various ailments. In six prefectures of southwest China, with a population of 21 millions, people grow *A. tatarinowii* in their home gardens or buy it from local markets for spice and medicine. *Acorus* is very important and valuable for every linguistic group in the whole country. Their medicinal value is due to phenylpropanoids and sesquiterpenoids that are recognized as the main active components [2, 3]. Compounds isolated from *A. calamus*, for example, exhibited hepatoprotective activities against APAP-induced HepG2 cell damage. Phenolic constituents from the rhizomes of *A. gramineus* exhibited both antitumor and anti-inflammatory properties. Better understanding of *Acorus* is not only important to the protection of plant resources, but also in the study of their traditional culture and uses.

Acknowledgements: This study was supported by the National Natural Science Foundation of China (31161140345), the Ministry of Science and Technology of China (2012FY110300), the Ministry of Education of China (B08044), and Minzu University of China (YLDX01013 & 2015MDTD16C).

Keywords: *Acorus*; ethnomedicine; ethnobotany; Dragon-boat Festival; plant culture; phytochemistry; pharmacology.

References:

[1] Li SM, Long CL, Liu FY, Lee SW, Guo Q, Li R, Liu YH. Herbs for medicinal baths among the traditional Yao communities of China. J Ethnopharmacol 2006; 108: 59 – 67

[2] Hao ZY, Liang D, Luo H, Liu YF, Ni G, Zhang QJ, Li L, Si YK, Sun H, Chen RY, Yu DQ. Bioactive Sesquiterpenoids from the rhizomes of *Acorus calamus*. J Nat Prod 2012; 75: 1083 – 1089

[3] Tong XG, Wu GS, Huang CG, Lu Q, Wang YH, Long CL, Luo HR, Zhu HJ, Cheng YX. Compounds from *Acorus tatarinowii*: Determination of absolute configuration by quantum computations and cAMP regulation activity. J Nat Prod 2010; 73: 1160 – 1163