

论文

沙参属沙参组18种植物根的组织学研究

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摘要:

为了澄清沙参类生药的混乱,并为生药鉴定提供科学依据,作者等对沙参属Adenophora 30种药用植物根的组织构造进行了研究,并对其组织分类学进行了初步探讨。本文报道沙参属沙参组Sect. Microdiscus 18种药用植物根的组织学比较研究结果,并对本属植物的组织分类学进行初步探讨。

关键词: 沙参属 组织学 组织分类学

HISTOLOGICAL STUDIES ON THE ROOTS OF EIGHTEEN SPECIES OF SECT. MICRODISCUS OF THE GENUS ADENOPHORA

Tu Pengfei; Xu Luoshan; Xu Guojun and Namba Tsuneo

Abstract:

The Chinese materia medica "Nanshasheng" (Radix Adenophorae) specified in Chinese Pharmacopoeia (1995) is the dried root of Adenophora tetraphylla (Thunb.) Fisch. or A. stricta Miq. (Fam. Campanulaceae). Results of an investigation on the botanical origin of the drug showed that the roots of 30 species (subspecies, varieties) of the genus Adenophora are also used in certain districts in China. Thus, it is necessary to study and compare the histological characters of these roots. In this paper, the root structure of 18 species from Sect. Microdiscus are reported, viz. Adenophora brevidiscifera Hong, A. coelestis Diels, A. stricta Miq., A. stricta Miq. var. qinglongshanica P. F. Tu et G. J. Xu, A. stricta Miq. var. nanjingensis P. F. Tu et G. J. Xu, A. stricta Miq. subsp. henanica P. F. Tu et G. J. Xu, A. stricta Miq. subsp. sessilifolia Hong, A. longipedicellata Hong, A. gmelinii (Spreng.) Fisch., A. polyantha Nakai, A. micrantha Hong, A. stenophylla Hemsl., A. potaninii Korsh., A. bockiana Diels, A. wawreana Zahlbr., A. tricuspidata (Fisch. ex Roem. et Schult.) A. DC., A. pereskiiifolia (Fisch. ex Roem. et Schult.) G. Don and A. divaricata Franch. et Sav.. According to the presence, arrangement and thickening of cell walls of sclerified cork cell (SCC) in cork tissue and the rate of secondary and anomalous structures, the histological structures of Adenophora roots are classified into types A, B and C. In type A, SCC are arranged in ring shape. Type A can be further classified into subtypes A1 and A2. Only the outer and anticlinal walls of SCC are thickened in subtype A1, and all cell walls of SCC are thinckened in subtype A2. In type B, SCC are arranged scatteredly, not in ring shape. In type C, there is no SCC. Type C can be classified into subtypes C1, C2 and C3. In type C1, the secondary structure occupies more than 50% of the root diameter. In type C2, the anomalous structure is more than 50% of the root diameter, and the anomalous vascular bundles are in band form. The anomalous structure occupiees more than 50% of the root diameter in subtype C3, and the anomalous vascular bundles are branched.

Keywords: Histology Histo-taxonomy Adenophora

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