

# 甘肃产前胡的质量研究 (Ⅲ)

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**摘要** 对甘肃产华北前胡 *Peucedanum harrý-smithii* Fedde ex Wolff, 少毛北前胡 *P. harrý-smithii* var. *subglabrum* Shan et Sheh. 两种植物的根与白花前胡 *P. praeruptorum* Dunn. 进行了从性状、组织特征到内在质量的对比研究, 结果表明三者主成分组成一致, 可进一步研究开发利用。同时观察到甘肃产白花前胡质地较次, 醇浸出物含量偏低。

**关键词** 前胡 质量 白花前胡 华北前胡 少毛北前胡 伞形科

前胡为常用中药, 系伞形科植物白花前胡 *Peucedanum praeruptorum* Dunn 和紫花前胡 *P. decursivum* (Miq.) Maxim. 的根。近年我省的陇南、天水、陇东等地以地产的华北前胡 *P. harrý-smithii* Fedde ex Wolff. 及其变种少毛北前胡 *P. harrý-smithii* var. *subglabrum* Shan et Sheh. 的根作前胡入药, 并销往外省区, 然各地在使用中发现其性状、质地均与中国药典收载前胡不同, 前文〔宋平顺, 等. 中药材, 1994, 17(7): 13〕已报道了商品调查和原植物鉴定, 本文就其药材的内在质量与正品前胡进行了对比。

## 1 实验部分

1.1 样品来源: 华北前胡 *Peucedanum harrý-smithii* Fedde ex Wolff (华亭、灵台、平凉), 少毛北前胡 *P. harrý-smithii* var. *subglabrum* Shan et Sheh (清水、徽县、康县), 白花前胡 *P. praeruptorum* Dunn (天水、康县、西和、长沙), 紫花前胡 *P. decursivum* (Miq.) Maxim. (长沙商品)

1.2 药材性状、显微组织区别: 见表1。

表1 甘肃产前胡与白花前胡性状、显微区别表

药材	性 状	显微特征
华北前胡 少毛北前胡	根头部较长, 常残留较长的茎基及纤维状叶鞘, 主根明显, 下部有分枝, 支根细长。表皮紧密, 纵纹细而浅。质坚硬, 难折断, 断面不平坦, 木质部约占直径的2/3—3/4。 味淡, 久嚼微苦辛。	韧皮部窄, 散在疏密不等的纤维群和油室, 木质部无油室, 木纤维发达, 薄壁细胞壁增厚。
白花前胡 (长沙)	根头部粗短, 多见残留茎基及纤维状叶鞘, 主根不明显, 下部分枝, 支根短且扭曲, 表皮疏松具纵沟纹。质硬脆, 易折断, 断面较平坦, 木质部约占断面直径的1/3。 味微苦辛。	韧皮部宽厚, 散有众多油室, 无韧皮纤维, 木质部少见或无纤维, 有油室分布。
白花前胡 (康县产)	根头部较长, 易见残留茎基及叶鞘纤维, 有些主根明显, 下部少有分枝。 味淡, 久嚼有胡萝卜味。 其余同上白花前胡。	韧皮部无或少有纤维, 木质部纤维断续成环, 有油室分布。

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1.3 醇浸出物：根据中国药典1990年版附录浸出物测定方法对各前胡样品进行测定，结果见表2。

表2 醇浸出物

药名	白花前胡				少毛北前胡			华北前胡				紫花前胡	
序号	1	2	3	4	*5	6	7	8	*9	*10	11	12	13
来源	湖南长沙	天水	康县	西和	康县	清水	徽县	平凉	平凉	华亭	华亭	灵台	湖南长沙
醇浸出物	28.33	23.95	11.52	13.90	12.73	18.47	10.65	9.60	/	/	17.72	12.03	25.87

1.4 理化鉴别：依中国药典1990年版前胡项下方法操作，结果各样品均呈阳性反应，无明显差异。

1.5 薄层层析：依中药志（Ⅰ）第2版（中国医学科学院药物研究所等编，人民卫生出版社出版，1982.463），前胡项下方法进行，紫外灯下检视，结果见图所示。

## 2 结果讨论

2.1 实验结果可看出，华北前胡、少毛北前胡的醇浸出物稍低于药典规定，且不同产地样品间差距也较大，但薄层层析显示其醚提取液所显主荧光斑点与白花前胡相对应，主成分组成基本一致。

2.2 表1、2反映出甘肃产白花前胡药材外观质地较次，且醇浸出物偏低，这可能与产地及采时有关。

2.3 鉴于华北前胡及变种少毛北前胡在我省分布使用广泛，事实上已成为我省药材商品的主流，我们认为可在进一步研究的基础上更好地开发利用。

致谢：表2中●者为自采并经兰州大学生物系张国梁老师、兰州医学院中草药研究所赵汝能教授鉴定。

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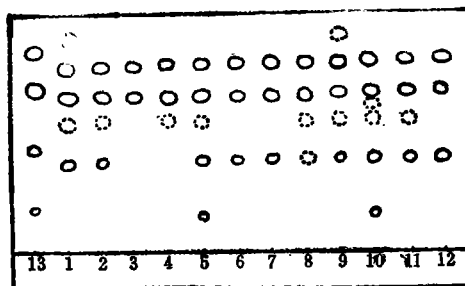


图 薄层层析图  
样品序号见表2

## 一九九五年度《医药工程设计》征订启事

《医药工程设计》为化工、医药的专业性刊物，由国家医药管理局医药设计情报中心站编辑、出版。

本刊内容包括：西药、中成药制剂设备、制剂机械；化工单元设备及药厂工艺、自控、土建、公用工程、环保等专业设计和设计基础知识讲座；医药工业基建、革新、改造、发展动态；国内外化工设备文稿及通讯等。

本刊辟有：化工单元设备、工厂设计、制药厂与GMP、制剂机械、计算与测定、自控与检测、算图、技术改造、节能措施、三废治理、国外考察、国外设备、设计讲座、问题讨论及消息报道等10余种栏目，内容丰富、图文并茂，以普及、实用为主。

本刊可供从事医药、化工、轻工、食品等行业技术人员、工人作技术参考。

# ABSTRACTS OF ORIGINAL ARTICLES

## Studies on the Alkaloids of Shezushishan (*Huperzia serrata*)

Yuan Shanqin, Feng Rui, Gu Guoming

Four alkaloids were isolated from *Huperzia serrata* (Thunb.) Trev., The structures of these alkaloids were identified as des-N-methyl- $\beta$ -obscurine (I), lycopodine (II), lycodoline (III), and 6- $\alpha$ -hydroxy-lycopodine (IV) by means of spectral analysis (UV, IR, NMR, MS). Compounds I and IV were isolated for the first time in the species.

(Original article on page 115)

## Studies on the Chemical Constituents of Hairyleaf

### *Taxillus* (*Taxillus nigrans*)

Li Liangqiong, Li Meirong, Yang Zhibiao, et al

From the leave of *Taxillus nigrans* Danser eight compounds were isolated. On the basis of physico-chemical properties and spectroscopic analysis, they were identified as (+)-catechin (I), 7-O-galloyl (+)-catechin (II), isoquercitrin (III), avicularin (IV), quercetin-3-O-(6'-galloyl)- $\beta$ -D-glucoside (V), quercetin-3-O-(6'-galloyl)- $\beta$ -D-galactoside (VI), rutin (VII), and quercetin-3-O- $\beta$ -D-glucuronide (VIII). All of them were found in this plant for the first time.

(Original article on page 118)

## Studies on the Chemical Constituents of Austral

### *Akebia* (*Akebia trifoliata* var. *australis*)

Ma Shuangcheng, Chen Dechang, Zhao Shujie, et al

A triterpenoid glycoside was isolated from the seed of *Akebia trifoliata* (Thunb.) Koidz. var. *australis* (Diels) Rehd. by column chromatography. The structure was identified on the basis of IR,  $^1\text{H}$ ,  $^{13}\text{C}$ NMR, FAB-MS, acidic hydrolysis and basic hydrolysis as 3-O- $\beta$ -D-xylopyranosyl (1 $\rightarrow$ 2)- $\alpha$ -L arabinopyranosyl hedercagenin-28-O- $\beta$ -D-glucopyranosyl (1 $\rightarrow$ 6)- $\beta$ -D-glucopyranoside. This compound was obtained from this plant resources for the first time and named as saponin E.

(Original article on page 122)

## Study on Quality Control of Fufanghuangbai Liquid

Xu Renliu, Dai Jing, Han Guiru

Fufanghuangbai Liquid is a compound prescription for topical use containing *fructus Forsythiae*, *Cortex phellodendri* and *Flos Lonicerae* as its main ingredients. A method for the identification of these ingredient by TLC was developed while the content of berberine hydrochloride in the prescription was determined with column chromatography and TLC scanning. The method can be used to control the quality of Fufanghuangbai Liquid.

(Original article on page 127)

## Studies on the Quality of Traditional Chinese

### Medicinal Herbs Qianhu Growing in Gansu

Yang Jing, Song Pingshun, et al

A comparative study on the histological and morphological characteristics and the intrinsic quality of the roots of Huabei Qianhu (*Peucedanum harringtonii*), Shaomao Bei

Qian hu (*P.harry-smithii* var.*subglabrum*) and Baihua Qianhu (*P.praeruptorum*) was carried out. Results revealed that the former two Qianhu produced in Gansu are similar to Baihua Qian hu in their main ingredients. Thus the two Qianhu are worthy for further research and development. At the same time, it was observed that Baihua Qianhu Produced in Gansu is of inferior quality and the content of EtOH extract of its root is slightly lower than that from elsewhere in China.

( Original article on page 129 )

### Determination of Schizandrin A and Tanshinone I<sub>A</sub> in Wulingwan with TLC-Scanner Method

Wang Xiaojuan, Guo Huifang, Wang Jianpo, et al

TLC-scanner method was used to determine the content of schizandrin A and tanshinone I<sub>A</sub> in Wulingwan. The average recovery of both schizandrin A and tanshinone I<sub>A</sub> are 98.31% ( CV = 2.1% ) and 99.15% ( CV = 1.1% ) respectively. This method is simple and rapid. Its reproducibility is satisfactory.

( Original article on page 131 )

### Effect of Extract Zhonghuabie (*Amyda sinensis*) on Syntheses of DNA and Protein in Mice

Huang Tiangui, Tao Zhuliang et al

Extract *Amyda sinensis* raised the levels of Plasma proteins. Plasma albumin was raised from  $2.67 \pm 0.44$  to  $3.25 \pm 0.34$  g/dl and the total plasma protein from  $5.34 \pm 0.88$  to  $6.74 \pm 1.38$  /dl. <sup>3</sup>H-TdR and <sup>3</sup>H-Leucine incorporation techniques were used to measure the syntheses rate of DAN and protein. The rates was accelerated. The specific activities of DNA and protein of liver got up to  $3.90 \pm 1.41$  from  $2.42 \pm 0.71$  dpm/ $\mu$ g, and  $21.69 \pm 4.84$  from  $12.81 \pm 5.83$  dpm/ $\mu$ g, respectively. Those of spleen got up to  $41.88 \pm 18.47$  from  $19.04 \pm 10.54$  dpm/ $\mu$ g and  $23.12 \pm 4.38$  from  $16.34 \pm 7.01$  dpm/ $\mu$ g, respectively. Extract *Amyda sinensis* had no effect on DNA synthesis of bone marrow cells and did not raise the hemoglobin level in mice. The results suggest that Extract *Amyda sinensis* has bioactive substance that accelerate syntheses of DNA and protein.

( Original article on page 138 )

### Effects of Sini Decoction on Ischemic ( Anoxic ) Electrocardiogram

Wu Weikang Jin Wentao, Luo Canhua, et al

Effects of Sini decoction ( SD ) on ischemic ( anoxic ) electrocardiogram ( ECG ) and possible action mechanism of SD were studied.

Results indicate that SD significantly improves the pituitrin induced ischemic ECG of rabbits, significantly prevents S-T segment from descending and suppresses the elevation of T wave; SD can also lengthen significantly cardioelectric activity time of anoxic mice. The protective effects of SD on ischemic ( anoxic ) myocardium may be related to the significant increase of myocardial nutritional blood flow induced by administrating SD.

( Original article on page 141 )

### Studies on the Pharmacology of Cajanin Preparation

Sun Shaomei, Song Yumei, Liu Jian, et al

Cajanin preparation could significantly reduce the mouse pinna inflammation induced