



中华中医药学会系列期刊



CSCD来源期刊  
北大中文核心期刊  
中国科技核心期刊  
RCCSE权威学术期刊(A+)  
美国《化学文摘》统计源期刊

ISSN 1005-9903  
CN 11-3495/R



QK1719390

— CHINESE JOURNAL OF EXPERIMENTAL TRADITIONAL MEDICAL FORMULAE —

# 中国实验方剂学杂志

ZHONGGUO

SHIYAN

FANGJIXUE

ZAZHI

## 本期推荐

- 药用植物学教学研究专栏
- 经典方剂网络药理学研究专栏
- 中药复方抗肿瘤机制研究进展
- 苓桂术甘汤与茵陈蒿汤合方对非酒精性脂肪性肝炎大鼠Nrf2/ARE信号通路的影响



# 16 2017

2017年8月 第23卷 第16期  
August Vol.23 No.16



杂志官方微信

主管：国家中医药管理局  
主办：中国中医科学院中药研究所  
中华中医药学会

万方数据

中国实验方剂学杂志
Zhongguo Shiyang Fangjixue Zazhi

半月刊 1995 年 10 月创刊 第 23 卷 第 16 期 2017 年 8 月 20 日出版

主管 国家中医药管理局
(100027 北京市东城区工体西路 1 号)
主办 中国中医科学院中药研究所
(100700 北京市东直门内南小街 16 号)
中华中医药学会
(100029 北京市朝阳区樱花园东街甲 4 号)
主编 吴以岭
编辑出版 中国实验方剂学杂志编辑部
(100700 北京市东直门内南小街 16 号)
电话:(010)84076882
传真:(010)84076882
E-mail:syfjx\_2010@188.com
网址:www.syfjxzz.com
广告 中国实验方剂学杂志广告部
(100700 北京市东直门内南小街 16 号)
电话:(010)84076882
传真:(010)84076882
印刷 北京顶佳世纪印刷有限公司
(100076 北京市大兴区西红门镇)
国内发行 北京报刊发行局
(100055 北京丰台区莲花池东路 126 号)
订阅 全国各地邮局
邮发代号 2-417
国外发行 中国国际图书贸易集团有限公司
订阅代号 SM4655
邮购 中国实验方剂学杂志社
(100700 北京市东直门内南小街 16 号)
电话:(010)84076882
ISSN 1005-9903
CN 11-3495/R
广告许可证 京东工商广登字 20170076 号
国内定价 每期 35 元,全年 840 元

目次

· 药用植物学教学研究专栏 ·

论《药用植物学》教学改革
刘春生 ( 1 )

《药用植物学》混合式教学模式改革的研究与探索
郭庆梅, 宋艳梅, 万鹏, 孙稚颖, 包华音, 高德民 ( 4 )

野外实习教学与应用型人才的培养——以贵阳中医学院
《药用植物学》野外实习教学为例
江维克, 周涛 ( 8 )

“望、闻、问、切”在《药用植物学》野外教学中的应用
裴莉昕, 宰炎冰, 纪宝玉 ( 12 )

《药用植物学》慕课的学习实践与教学启示
吴晓毅, 刘长利, 高伟, 王秀娟, 李佳, 张夏楠 ( 16 )

由点到线及面的教学内容设计在《药用植物学》中的应用
李先宽, 张坚, 马琳, 王海英, 向蓓蓓, 王丽芝 ( 20 )

智能手机与“互联网+”在药用植物教学与学生(职业)
能力培养中的实践
欧阳蒲月, 梁永枢, 莫小路, 张宏伟, 田恩伟,
晁志 ( 24 )

《药用植物学》多重实践教学平台的构建
齐伟辰, 朱妮娜, 张天柱, 林喆 ( 28 )

运用影视作品辅助《药用植物学》教学的探索与思考
朱芸, 王翔飞, 李鹏, 唐辉 ( 32 )

智能手机在《药用植物学》教学中的应用
樊锐锋, 马伟, 苏连杰 ( 36 )

· 资源与鉴定 ·

茅苍术 DXS 基因的克隆与分析
邓娟, 万倩芸, 龚玲, 刘合刚, 余坤 ( 39 )

乌头萜类生物合成代谢的转录组学分析
张大燕, 文欢, 王伟, 彭成, 高继海 ( 45 )

· 化学与分析 ·

基于生物热力学的黄连不同提取部分抑菌活性分析

杨宏博, 苏敏, 刘慧浪, 王京昆, 赵艳玲 ..... ( 51 )

苦皮藤种子的化学成分分析

张海艳, 王志尧, 常霞, 马艳妮, 魏悦, 赵天增 ..... ( 57 )

丰城鸡血藤的化学成分分析

廖辉, 张凌, 金晨, 何玉琴, 黄斌, 赵艳红, 周彩虹 ..... ( 62 )

五倍子抑制流感病毒神经氨酸酶活性及活性部位的 UPLC-Q-TOF-MS 分析

杨贤英, 李金花, 段宝忠, 黄林芳 ..... ( 68 )

滇北球花报春的化学成分及镇痛活性分析

杨艺玲, 陈颖志, 单华, 邱琳, 董相, 姜北 ..... ( 73 )

华蟾素注射液中酯蟾毒配基的分离及体内外抗肿瘤活性筛选

高波, 魏晓露, 韩玲玉, 边宝林 ..... ( 78 )

红外光谱及色谱技术共同评价芫花条饮片及水提物的质量

崔亚慧, 姚俊娜, 张志杰, 李尧尧, 贾陆, 张海燕, 华瑞, 王晓蓉 ..... ( 85 )

$\beta$ -谷甾醇标准样品的研制

马玉翠, 吴晓毅, 王尉, 张贵峰, 杜宁, 王淳, 吴翠, 巢志茂 ..... ( 90 )

眼树莲的化学成分分析

余邦良, 刘寿柏, 黄内利, 杨柳, 杨梦成, 樊好飞, 戴好富 ..... ( 96 )

· 药物代谢 ·

基于 GC-MS 代谢组学分析刺五加总苷提取物的降糖作用

常晋霞, 刘文虎, 王仕宝, 张建武 ..... (101)

· 药理 ·

苓桂术甘汤与茵陈蒿汤合方对非酒精性脂肪性肝炎大鼠 Nrf2/ARE 信号通路的影响

郭一, 李军祥, 毛堂友, 陈晨, 谢添弘, 韩亚飞, 石磊, 谭祥, 韩海啸 ..... (108)

养心通脉有效部位方干预 AMI 大鼠 BMSCs miRNA 组学分析

朱梓铭, 郑景辉, 黄金龙, 陈建军, 莫云秋, 黄修解, 马晓聪, 张健, 罗蔚, 伍燕宏 ..... (114)

基于护场理论探讨红肿消酊箍围法对皮肤脓肿大鼠创周组织 IL-10, IL-1 $\beta$  基因表达的影响

徐强, 朱朝军, 张杨, 郭悦, 赵丽坤, 王婉莹, 刘婷婷, 冀晓娜, 张朝晖 ..... (121)

二至丸预防和治疗性给药对大鼠损伤后肝细胞再生障碍的保护作用

赵海梅, 周步高, 王馨, 邹勇, 徐荣, 岳海洋, 左铮云, 刘端勇 ..... (128)

肝龙胶囊联合复方甘草酸苷体外抗肝纤维化的作用

邵明园, 焦素月, 杨强丽, 周玄, 曹昌娥, 赖泳 ..... (133)

黄芩素对 UVB 诱导 HaCaT 细胞光老化及相关 p38 信号通路的影响

杨柳, 王业秋, 张宁, 李建民 ..... (139)

祛瘀活血颗粒对 NAFLD 模型大鼠脂肪组织 AQP7, p38MAPK 表达的影响

杨香香, 朱晓宁, 彭孟云, 汪静 ..... (145)

· 临床 ·

|                                                             |       |
|-------------------------------------------------------------|-------|
| 从 p38MAPK 通路探讨复方参鹿颗粒对较低危 MDS 骨髓患者 CD34 <sup>+</sup> 细胞凋亡的影响 |       |
| 张旭峰, 赵琳, 徐培 .....                                           | (152) |
| 沙参麦冬汤联合化疗对气阴两虚型肺癌患者免疫功能及炎性反应的影响                             |       |
| 杨忠光, 梁鑫, 赵远桥 .....                                          | (158) |
| 滋阴助阳抗衰汤联合西药治疗阳虚水泛型慢性心力衰竭疗效及对患者氧化应激、生活质量的影响                  |       |
| 张志刚, 芮素芳, 赵新芳, 边文贵 .....                                    | (164) |
| 防己黄芪汤合真武汤加减治疗气虚血瘀型慢性心力衰竭患者临床观察                              |       |
| 郭继芳, 高晶 .....                                               | (171) |
| 加味桃核承气汤内服和灌肠对腹部术后早期肠梗阻神经-炎症机制的影响                            |       |
| 高聪, 韩勇, 林大勇, 张宇, 陈云飞 .....                                  | (176) |
| 化湿解毒汤对高级别 CIN 高危型 HPV 感染者 LEEP 术后湿热下注证患者转归的影响               |       |
| 孙桂霞, 李艳云, 杨少琴 .....                                         | (182) |
| 基于交感神经皮肤反应评价芪黄通络汤治疗尿毒症周围神经病变                                |       |
| 刘文俊, 林赞, 陈海霞 .....                                          | (188) |

· 经典方剂网络药理学研究专栏 ·

|                          |       |
|--------------------------|-------|
| 基于网络药理学的四君子汤作用机制分析       |       |
| 刘鑫旭, 吴嘉瑞, 蔺梦娟, 张晓滕 ..... | (194) |
| 基于网络药理学的吴茱萸汤作用机制分析       |       |
| 刘鑫旭, 吴嘉瑞, 蔺梦娟, 张晓滕 ..... | (203) |
| 基于网络药理学的参附汤作用机制分析        |       |
| 刘鑫旭, 吴嘉瑞, 张丹, 张晓滕 .....  | (211) |
| 基于网络药理学的生脉散作用机制分析        |       |
| 刘鑫旭, 吴嘉瑞, 张丹, 张晓滕 .....  | (219) |

· 综述 ·

|                     |       |
|---------------------|-------|
| 中药复方抗肿瘤机制研究进展       |       |
| 朱元章, 张贵彪, 朱国福 ..... | (227) |

· 信息 ·

|                            |      |
|----------------------------|------|
| 关于开展中医药健康文化作品推荐活动的通知 ..... | (封二) |
| 《中国实验方剂学杂志》稿约 .....        | (封三) |

[ 期刊基本参数 ] CN11-3495/R \* 1995 \* s \* 16 \* 234 \* zh \* P \* ¥35.00 \* 5000 \* 41 \* 2017-16

本期责任编辑: 刘德文

CHINESE JOURNAL OF EXPERIMENTAL TRADITIONAL  
MEDICAL FORMULAE

Semimonthly      Established in October, 1995      Vol. 23 No. 16      August 2017

**Responsible Institution**  
State Administration of Traditional Chinese  
Medicine  
(No.1, Gongtixilu, Dongcheng District,  
Beijing, 100027)

**Sponsor**  
Institute of Chinese Materia Medica, China  
Academy of Chinese Medical Sciences  
(No.16, Nanxiaojie, Dongzhimennei, Beijing,  
100700)  
China Association of Chinese Medicine  
(No. 4, Yinghuayuandongjie, Chaoyang  
District, Beijing, 100029)

**Editor-in-Chief**  
WU Yi-ling

**Edited and Published by**  
Editorial Office of China Journal of  
Experimental Traditional Medical Formulae  
(16, Nanxiaojie, Dongzhimennei, Beijing,  
100700)  
Tel: (010)84076882  
Fax: (010)84076882  
E-mail: syfjx\_2010@188.com  
Website: http://www.syfjxzz.com

**Printed by**  
Beijing Topcent Printing Co., Ltd.  
(No.5, Jinfu Street, Daxing District,  
Beijing, 100076)

**Domestic Subscription**  
Distributed by Beijing Subscription Bureau  
(126, Lianhuachidonglu, Fengtai District,  
Beijing, 100055)  
Subscription Code 2-417

**Overseas Subscription**  
China International Book Trading  
Corporation  
(P. O. Box 399, Beijing, 100044)  
Code SM4655

**Order from local post office**  
Order from mail Publishing House of China  
Journal of Experimental Traditional  
Medical Formulae  
(16, Nanxiaojie, Dongzhimennei, Beijing,  
100700)  
Tel: (010)84076882

ISSN 1005-9903  
CN 11-3495/R

CONTENTS IN BRIEF

**Thinking and Practice of Teaching Reform on *Pharmaceutical Botany***  
LIU Chun-sheng ..... ( 1 )

**Research and Exploration on Reform of Blended Teaching**  
**Model of *Pharmaceutical Botany***  
GUO Qing-mei, SONG Yan-mei, WAN Peng, SUN Zhi-ying,  
BAO Hua-yin, GAO De-min ..... ( 4 )

**Field Practice Teaching and Cultivation of Applied Talents**  
——Based on Case of Field Practice Teaching of  
***Pharmaceutical Botany* in Guiyang University of Chinese Medicine**  
JIANG Wei-ke, ZHOU Tao ..... ( 8 )

**Application of Look, Listen, Question and Feel Pulse in**  
**Field of Teaching of *Pharmaceutical Botany***  
PEI Li-xin, ZAI Yan-bing, JI Bao-yu ..... ( 12 )

**Learning Practice and Teaching Enlightenment of**  
***Pharmaceutical Botany* Based on MOOC**  
WU Xiao-yi, LIU Chang-li, GAO Wei, WANG Xiu-juan,  
LI Jia, ZHANG Xia-nan ..... ( 16 )

**Application of Teaching Contents Design with Points to**  
**Line and Surface in *Pharmaceutical Botany***  
LI Xian-kuan, ZHANG Jian, MA Lin, WANG Hai-ying,  
XIANG Bei-bei, WANG Li-zhi ..... ( 20 )

**Application of Smartphone and “Internet +” in**  
**Teaching of Medicinal Botany and Cultivation of Students’**  
**Vocational Skills**  
OUYANG Pu-yue, LIANG Yong-shu, MO Xiao-lu,  
ZHANG Hong-wei, TIAN En-wei, CHAO Zhi ..... ( 24 )

**Construction of Multiple Practice Teaching**  
**Platform for *Pharmaceutical Botany***  
QI Wei-chen, ZHU Ni-na, ZHANG Tian-zhu, LIN Zhe ..... ( 28 )

**Exploration and Thinking of *Pharmaceutical Botany***  
**Teaching by Film and Television Works**  
ZHU Yun, WANG Xiang-fei, LI Peng, TANG Hui ..... ( 32 )

**Application of Smartphone in Experimental Teaching of *Pharmaceutical Botany***  
FAN Rui-feng, MA Wei, SU Lian-jie ..... ( 36 )

**Cloning and Analysis of DXS Gene from *Atractylodes lancea***  
DENG Juan, WAN Qian-yun, GONG Ling, LIU He-gang, YU Kun ..... ( 39 )

**Transcriptional Analysis of Terpenoid Biosynthesis in *Aconitum carmichaelii***  
ZHANG Da-yan, WEN Huan, WANG Wei, PENG Cheng, GAO Ji-hai ..... ( 45 )

**Antibacterial Activities of Different Extracts from *Coptidis Rhizoma* Based on Biothermodynamics**  
YANG Hong-bo, SU Min, LIU Hui-lang, WANG Jing-kun, ZHAO Yan-ling ..... ( 51 )

**Chemical Components from Seeds of *Celastrus angulatus***  
ZHANG Hai-yan, WANG Zhi-yao, CHANG Xia, MA Yan-ni, WEI Yue, ZHAO Tian-zeng ..... ( 57 )

**Chemical Components from *Millettia nitita* var. *hirsutissima***  
LIAO Hui, ZHANG Ling, JIN Chen, HE Yu-qin, HUANG Bin, ZHAO Yan-hong, ZHOU Cai-hong ..... ( 62 )

**Anti-influenza Virus Activity of *Galla Chinensis* Extracts and UPLC-Q-TOF-MS Analysis on Its Effective Part**  
YANG Xian-ying, LI Jin-hua, DUAN Bao-zhong, HUANG Lin-fang ..... ( 68 )

**Chemical Constituents and Analgesic Activity of *Primula denticulata* ssp. *sinodenticulata***  
YANG Yi-ling, CHEN Ying-zhi, SHAN Hua, QIU Lin, DONG Xiang, JIANG Bei ..... ( 73 )

**Research on Isolation of Bufadienolides from Cinobufacin Injection and Its Activity Screening of Anti-cancer *in Vivo* and *in Vitro***  
GAO Bo, WEI Xiao-lu, HAN Ling-yu, BIAN Bao-lin ..... ( 78 )

**Quality Evaluation of Decoction Pieces and Water Extracts of *Genkwa Ramulus* by Infrared Spectroscopy and Chromatography Technology**  
CUI Ya-hui, YAO Jun-na, ZHANG Zhi-jie, LI Rao-rao, JIA Lu, ZHANG Hai-yan, HUA Rui, WANG Xiao-rong ..... ( 85 )

**Development of Certified Reference Material of  $\beta$ -sitosterol**  
MA Yu-cui, WU Xiao-yi, WANG Wei, ZHANG Gui-feng, DU Ning, WANG Chun, WU Cui, CHAO Zhi-mao ..... ( 90 )

**Chemical Constituents of *Dischidia chinensis***  
YU Bang-liang, LIU Shou-bai, HUANG Nei-li, YANG Liu, YANG Meng-cheng, FAN Hao-fei, DAI Hao-fu ..... ( 96 )

**Analysis on Antidiabetic Effect of *Acanthopanax senticosus* Total Glycosides Extract by GC-MS Metabonomics**  
CHANG Jin-xia, LIU Wen-hu, WANG Shi-bao, ZHANG Jian-wu ..... (101)

**Effect of Combined Prescription of Linggui Zhugan Tang and Yinchenhao Tang on Nrf2/ARE Signaling Pathway in Rats with Non-alcoholic Steatohepatitis**  
GUO Yi, LI Jun-xiang, MAO Tang-you, CHEN Chen, XIE Tian-hong, HAN Ya-fei, SHI Lei, TAN Xiang, HAN Hai-xiao ..... (108)

**miRNA Expression Analysis in AMI Rat BMSCs Intervened by Active Principle Region of Yangxin Tongmai Formula**  
ZHU Zi-ming, ZHENG Jing-hui, HUANG Jin-long, CHEN Jian-jun, MO Yun-qiu, HUANG Xiu-jie, MA Xiao-cong, ZHANG Jian, LUO Wei, WU Yan-hong ..... (114)

**Effect of Hongzhongxiao Tincture “Hoop Circumference” Method on Gene Expression of IL-10 and IL-1 $\beta$  in Tissues Around Wound of Rats with Skin Abscess Under Guidance of Theory of “Defended Field”**  
XU Qiang, ZHU Chao-jun, ZHANG Yang, GUO Yue, ZHAO Li-kun, WANG Wan-ying, LIU Ting-ting, JI Xiao-na, ZHANG Zhao-hui ..... (121)

**Protective Effect of Erzhiwan by Two Different Administrations for Rats with Liver Cytothesis Obstacle After Injury**  
ZHAO Hai-mei, ZHOU Bu-gao, WANG Xin, ZOU Yong, XU Rong, YUE Hai-yang, ZUO Zheng-yun, LIU Duan-yong ..... (128)

**Anti-liver Fibrosis Effect of Ganlong Capsule Combined with Compound Glycyrrhizin Glucoside**  
SHAO Ming-yuan, JIAO Su-yue, YANG Qiang-li, ZHOU Xuan, CAO Chang-e, LAI Yong ..... (133)

**Effect of Baicalein on UVB-induced HaCaT Cell Light Aging and p38 Signaling Pathway**  
YANG Liu, WANG Ye-qiu, ZHANG Ning, LI Jian-min ..... (139)

**Effect of Qutan Huoxue Granules on Expression of AQP7 and p38MAPK in Adipose Tissues of NAFLD Model Rats**  
YANG Xiang-xiang, ZHU Xiao-ning, PENG Meng-yun, WANG Jing ..... (145)

**Effect of Compound Shenlu Granule on Apoptosis of CD34<sup>+</sup> Cells in Lower-risk MDS Bone Marrow Based on p38MAPK Pathway**  
ZHANG Xu-feng, ZHAO Lin, XU Pei ..... (152)

**Effect of Shashen Maidong Tang Combined with Chemotherapy on Immune Function and Inflammatory Reaction of Patients with Lung Cancer of Qi and Yin Deficiency**  
YANG Zhong-guang, LIANG Xin, ZHAO Yuan-qiao ..... (158)

**Efficacy of Ziyin Zhuyang Kangshuai Decoction Combined with Western Medicine for Yang Insufficiency and Water Overflowing Type Chronic Heart Failure and Effect on Patients' Oxidative Stress and Quality of Life**  
ZHANG Zhi-gang, RUI Su-fang, ZHAO Xin-fang, BIAN Wen-gui ..... (164)

**Clinical Observation of Fangji Huangqi Tang Combined with Zhenwutang for Chronic Heart Failure with Qi Deficiency and Blood Stasis Type**  
GUO Ji-fang, GAO Jing ..... (171)

**Effect of Oral and Enema Treatment with Modified Taohe Chengqitang on Nerve-inflammation Mechanism of Early Intestinal Obstruction After Abdominal Surgery**  
GAO Cong, HAN Yong, LIN Da-yong, ZHANG Yu, CHEN Yun-fei ..... (176)

**Effect of Huashi Jiedu Decoction on Disease Outcome of Patients Infected with High-grade CIN and High-risk HPV with Shire Xiazhu Symptom After LEEP Operation**  
SUN Gui-xia, LI Yan-yun, YANG Shao-qin ..... (182)

**Effect of Qihuang Tongluo Decoction on Uremia Peripheral Neuropathy Based on Sympathetic Skin Reaction**  
LIU Wen-jun, LIN Yun, CHEN Hai-xia ..... (188)

**Mechanism of Si Junzitang Based on Network Pharmacology**  
LIU Xin-kui, WU Jia-rui, LIN Meng-juan, ZHANG Xiao-meng ..... (194)

**Study on Mechanism of Wuzhuyu Tang Based on Network Pharmacology**  
LIU Xin-kui, WU Jia-rui, LIN Meng-juan, ZHANG Xiao-meng ..... (203)

**Mechanism of Shenfutang Based on Network Pharmacology**  
LIU Xin-kui, WU Jia-rui, ZHANG Dan, ZHANG Xiao-meng ..... (211)

**Mechanism of Shengmaisan Based on Network Pharmacology**  
LIU Xin-kui, WU Jia-rui, ZHANG Dan, ZHANG Xiao-meng ..... (219)

**Research Progress in Mechanism of Anti-tumor Effects of Chinese Medicinal Formula**  
ZHU Yuan-zhang, ZHANG Gui-biao, ZHU Guo-fu ..... (227)

Responsible editor: LIU De-wen

国内发行：邮发代号 2-417  
国外发行：订阅代号 SM4655

ISSN 1005-9903  
CN 11-3495/R

ISSN 1005-9903



定价：35.00元