



ZHONGCAOYAO

Chinese Traditional and Herbal Drugs

第 54 卷 第 13 期 (总第 744 期)

2023 年 7 月 12 日出版

半月刊

1970 年 1 月创刊

主 管

天津药物研究院

主 办

天津药物研究院 (www.tjipr.com)

中国药学会 (www.cpa.org.cn)

编辑出版

《中草药》杂志编辑部

地址: 天津市滨海新区滨海科技园

惠仁道 306 号

邮编: 300462

电话: 022-27474913 23006821

网址: www.中草药杂志社.中国

www.tiprpress.com

E-mail: zcy@tiprpress.com

国际标准连续出版物号

ISSN 0253-2670

国内统一连续出版物号

CN 12-1108/R

主 编 刘昌孝 汤立达

执行主编 陈常青

目 次

· 化学成分 ·

- 4089 盘龙参化学成分研究
于 蕾, 赵目聪, 董 琳, 黄兹宝, 姬 敏, 曹明玉
刘辰鹏, 张小坡
- 4096 骨碎补内生菌 *Lecanicillium* sp. GZWMJZ-847 中 3 个新 3-氢化萜特特拉姆酸衍生物
陈旭丽, 王立平, 吴 耽, 何文文, 左明星, 王冬阳, 朱伟明
- 4104 海绵共附生链霉菌 *Streptomyces parvulus* 162432 次级代谢产物研究
陈瑞强, 罗祥超, 林厚文, 焦伟华
- 4111 黑柳树皮化学成分及其抑制脂肪生成活性研究
刘 欢, 甲次拉母, 蒲沙龙, 张吉仲, 李丽梅

· 药剂与工艺 ·

- 4118 青黛表面改性对口腔溃疡双层膜质量与药效的影响
黄胜杰, 钟婧婷, 谢 锦, 贺亚男, 郭治平, 刘雪梅, 杨 明
张定堃, 韩 丽
- 4128 延胡索药材干燥动力学及其化学成分变化规律研究
王海丽, 张姝妍, 辛洁萍, 李春帅, 程水清, 王 璇, 王旭星
文 佳, 李向日
- 4137 基于近红外光谱技术的银杏叶滴丸熔融物料混合过程监测方法的开发
田 莹, 赵 洁, 瞿海斌
- 4144 TPGS 表面修饰岩白菜素固体脂质纳米粒的制备与口服生物利用度研究
杨金枝, 崔晓鸽, 郝海军
- 4157 金丝桃苷磷脂复合物及其介孔二氧化硅纳米粒的制备和口服药动力学研究
李伟宏, 郑 伟, 王风云, 隋海娟
- 4168 散寒化湿颗粒 HPLC 特征图谱研究
于桂芳, 胡军华, 周 菲, 周恩丽, 戴翠红, 李海波, 章晨峰
王振中, 王团结, 肖 伟

· 药理与临床 ·

- 4177 四妙散改善高尿酸血症和肾损伤以及调节肾脏线粒体相关蛋白的作用研究
王 钊, 张悦怡, 刘田园, 卢美希, 戴 璇, 刘亚鸽, 张艳菲
王丽丽, 张东伟
- 4186 入山虎不同提取部位抗类风湿性关节炎活性研究
曾英港, 王柳萍, 奉建芳, 唐丹丹, 蒙泔竹
- 4202 哈巴俄苷通过抑制 TLR4/MyD88/NF- κ B 通路减轻神经炎症诱导的神经元损伤
郝任娟, 胡颖超, 于顾然, 秦秀德, 陆韵薇
- 4214 miR-20a 通过 ATG16L1 影响细胞自噬并参与调节雷公藤甲素肝毒性
张彩霞, 王伟艳, 李会芳, 杜晨晖, 刘 珊, 魏砚明
- 4224 白芍总苷中 4 个活性成分在正常和四氯化碳诱导的急性肝损伤大鼠体内药动学比较研究
陶西雨, 程晓羽, 魏真真, 周菁杨, 敖 雷, 张小平, 韩 丰
郑永霞, 詹淑玉
- 4233 银杏二萜内酯葡胺注射液及其银杏二萜内酯成分抗人脐静脉内皮细胞氧糖剥夺损伤的转录组学研究
徐小波, 武子寅, 张新庄, 曹 亮, 王振中, 肖 伟



ZHONGCAOYAO

Chinese Traditional and Herbal Drugs

第 54 卷 第 13 期 (总第 744 期)

2023 年 7 月 12 日出版

广告合作

中草药杂志社媒体运营部

电话: 022-23006868 23006895

印 刷

天津市恒远印刷有限公司

国内发行

天津市邮政局

订 阅

全国各地邮政局

国外发行

中国国际图书贸易集团有限公司

(100044 北京 399 信箱)

国内邮发代号

6-77

国外邮发代号

M221

定价

每期 60.00 元 全年 1440.00 元

广告发布登记号

BH 2020-01

英文责任编辑

齐静雯

本期责任编辑

时圣明

- 4245 补肺活血胶囊联合化疗治疗利福平敏感复治肺结核 (阴阳两虚型) 的临床研究及预后影响因素分析
胡 旭, 王 珂, 梁瑞霞, 曹 莹, 周晓蕾, 赵 悦, 乔 博
邢宝春, 王 伟

• 数据挖掘与循证医学 •

- 4253 靶向铜死亡相关基因治疗类风湿关节炎生物信息学分析及干预中药的预测
杨会军, 郭 响, 李伟青, 苏小军, 田雪梅, 王海东, 金芳梅
4266 补肾活血类中成药治疗膝骨性关节炎的有效性和安全性网状 Meta 分析
尹润宇, 杨东元, 王世坤, 李远栋
4278 基于 Group-Lasso 天麻品质形成关键因子的分析
王红洁, 王 科, 余水祥, 马云桐

• 药材与资源 •

- 4286 人参 *PgWRKY22* 基因的克隆及在磷胁迫下的表达分析
梁 浩, 孙 海, 邵 财, 钱佳奇, 张亚玉
4295 鱼腥草 *bZIP* 基因的鉴定与分析
蔡 伟, 肖敬忠, 余小丽, 姚彩凤, 陈 蔓, 曾安杰, 李芙蓉
陈 辽, 刘 雷, 付鸿博
4306 不同产区艾叶 ISSR 遗传多样性分析
余孟娟, 赵博宇, 董诚明, 李 询, 邢 冰, 李 曼
4312 不同产地蒙古黄芪茎叶 UPLC 指纹图谱建立及化学模式识别研究
王强雄, 郭 盛, 李会伟, 谢逸俊, 尚尔鑫, 段金威
4321 基于 UPLC-MS 技术分析铁皮石斛炮制前后糖类成分差异
陈志琳, 赵 颖, 李 玮, 杨立新
4329 老鹳草及其不同溶剂萃取物的红外光谱分析与鉴定
孙仁爽, 赵敏婧, 顾地周

• 综 述 •

- 4334 党参免疫调节活性及其机制的研究进展
夏召弟, 马若昕, 王凤云, 文金凤, 王煜棋, 孙 宝
贾 璞, 郑晓晖
4346 中药多糖对肿瘤微环境中免疫细胞调节作用研究进展
王 迪, 李 钧, 侯兵乔, 牛俊博, 汲晨锋
4359 基于细胞亲和的抗瘢痕纳米经皮给药制剂研究进展
庄泽彬, 刘冬榕, 姚碧金, 覃楚悦, 时 军
4367 中药材辐射诱变育种的研究进展
朋冬琴, 刘录祥, 郭会君, 李玉婷, 栗孟飞, 郭欣慰, 魏建和
4377 实时直接分析质谱法在中药质量研究中的应用进展
胡双飞, 张 奥, 王永刚, 苏薇薇
4385 基于膜科技创新中药制药分离工程原理的“低碳流程再造”
郭立玮, 王永香, 钟文蔚, 李 鹏, 曾浩然
4395 钩藤及其配伍制剂治疗高血压的研究进展
田昕彤, 周 巍, 杨 继, 马 腾, 赵英强

• 药事管理 •

- 4404 基于专利、地理标志和非物质文化遗产保护视角的中药饮片法律保护现状与对策研究
康 琪, 杨 男, 宋民宪, 瞿礼萍, 邹文俊

本刊投稿须知见《中草药》2023, 54(1): 346-348.

期刊基本参数: CN 12-1108 R * 1970 * sm * A4 * 240 * zh * P * ¥ 60.00 * 3000 * 34 * 2023 - 13

CHINESE TRADITIONAL AND HERBAL DRUGS

Vol. 54 No. 13 July 2023

Chinese Traditional and Herbal Drugs

(Semimonthly)

Founded in January, 1970

Supervised by

Tianjin Institute of Pharmaceutical Research

Sponsored by

Tianjin Institute of Pharmaceutical Research

(www.tjipr.com)

Chinese Pharmaceutical Association

(www.cpa.org.cn)

Edited and Published by

Editorial Office of Chinese Traditional

and Herbal Drugs

Address: 306# Huirendao, Binhai District,
Tianjin, China

Post Code: 300462

Tel: +86-22-27474913

Fax: +86-22-23006821

http: // www.中草药杂志社.中国

www.tiprpress.com

E-mail: zcy@tiprpress.com

Standard Number

ISSN 0253-2670

CN 12-1108/R

CODEN CTYAD8

Editor-in-chief

LIU Chang-xiao TANG Li-da

Executive Editor-in-chief

CHEN Chang-qing

Contents

• Chemical Constituents •

- 4089** Chemical constituents from *Spiranthes sinensis*
YU Lei, ZHAO Mu-cong, DONG Lin, HUANG Zi-bao, JI Min, CAO Ming-yu,
LIU Chen-peng, ZHANG Xiao-po
- 4096** Three new 3-decalinoyltetramic acids produced by endophyte *Lecanicillium* sp.
GZWMJZ-847 from *Drynariae Rhizoma*
CHEN Xu-li, WANG Li-ping, WU Dan, HE Wen-wen, ZUO Ming-xing, WANG
Dong-yang, ZHU Wei-ming
- 4104** Secondary metabolites of a marine sponge associated *Streptomyces parvulus* 162432
CHEN Rui-qiang, LUO Xiang-chao, LIN Hou-wen, JIAO Wei-hua
- 4111** Chemical constituents from barks of *Salix nigra* and its anti-adipogenic activity
LIU Huan, JIACI Lamu, PU Sha-long, ZHANG Ji-zhong, LI Li-mei

• Pharmaceutics and Technology •

- 4118** Effects of surface modification of *Indigo Naturalis* on quality and drug efficacy of
oral ulcer bilayer film
HUANG Sheng-jie, ZHONG Jing-ping, XIE Jin, HE Ya-nan, GUO Zhi-ping,
LIU Xue-mei, YANG Ming, ZHANG Ding-kun, HAN Li
- 4128** Drying kinetics and chemical composition changes of *Corydalis yanhusuo*
WANG Hai-li, ZHANG Shu-yan, XIN Jie-ping, LI Chun-shuai, CHENG
Shui-qing, WANG Xuan, WANG Xu-xing, WEN Jia, LI Xiang-ri
- 4137** Development of monitoring method for *Ginkgo Folium* Dripping Pills molten
material blending process based on near-infrared spectroscopy
TIAN Ying, ZHAO Jie, QU Hai-bin
- 4144** Formulation optimization of TPGS surface-modified bergenin solid lipid
nanoparticles and oral bioavailability study
YANG Jin-zhi, CUI Xiao-ge, HAO Hai-jun
- 4157** Preparation of hyperoside phospholipids complex and its mesoporous silica
nanoparticles and oral pharmacokinetics study
LI Wei-hong, ZHENG Wei, WANG Feng-yun, SUI Hai-juan
- 4168** HPLC characteristic chromatogram of Sanhan Huashi Granules
YU Gui-fang, HU Jun-hua, ZHOU Mao, ZHOU En-li, DAI Cui-hong, LI
Hai-bo, ZHANG Chen-feng, WANG Zhen-zhong, WANG Tuan-jie, XIAO Wei

• Pharmacological Studies and Clinical Observations •

- 4177** Effects of Simiao San on alleviation of hyperuricemia and renal injury and
regulation of renal mitochondria related proteins
WANG Shan, ZHANG Yue-yi, LIU Tian-yuan, LU Mei-xi, DAI Xuan, LIU
Ya-ge, ZHANG Yan-fei, WANG Li-li, ZHANG Dong-wei
- 4186** Anti-rheumatoid arthritis activity of different extracts from *Zanthoxylum nitidum*
var. *tomentosum*
ZENG Ying-gang, WANG Liu-ping, FENG Jian-fang, TANG Dan-dan, MENG
Gan-zhu
- 4202** Harpagoside alleviates neuronal damage caused by neuroinflammation via
suppressing TLR4/MyD88/NF- κ B pathway
HAO Ren-juan, HU Ying-chao, YU Gu-ran, QIN Xiu-de, LU Yun-wei
- 4214** miR-20a regulates autophagy by targeting ATG16L1 and involved in
triptolide-induced hepatotoxicity
ZHANG Cai-xia, WANG Wei-yan, LI Hui-fang, DU Chen-hui, LIU Shan, WEI
Yan-ming
- 4224** A comparative pharmacokinetics study of four active ingredients of total
glucosides of paeony in normal rats and carbon tetrachloride-induced acute
hepatic injury rats
TAO Xi-yu, CHENG Xiao-yu, WEI Zhen-zhen, ZHOU Jing-yang, AO Lei,
ZHANG Xiao-ping, HAN Feng, ZHENG Yong-xia, ZHAN Shu-yu
- 4233** Transcriptome study of Diterpene Ginkgolides Meglumine Injection and its
components against oxygen-glucose deprivation damage in HUVEC-T1 cells
XU Xiao-bo, WU Zi-yin, ZHANG Xin-zhuang, CAO Liang, WANG
Zhen-zhong, XIAO Wei
- 4245** Clinical observation of Bufe Huoxue Capsule combined with chemotherapy in
treatment of rifampicin-susceptible retreated pulmonary tuberculosis (*yin* and
yang deficiency type) and analysis of prognostic factors
HU Xu, WANG Ke, LIANG Rui-xia, CAO Ying, ZHOU Xiao-lei, ZHAO Yue,
QIAO Bo, XING Bao-chun, WANG Wei

Chinese Traditional and Herbal Drugs

(Semimonthly)

Founded in January, 1970

Advertising cooperation

Department of Media Operations, Tianjin

Press of Chinese Herbal Medicines

Tel: (022)23006868 23006895

Printed by

Tianjin Hengyuan Printing Co., Ltd.

Distribution

Tianjin Post Office

Subscription Domestic

Local Post Office

Subscription Overseas

China International Book Trading Corporation,

PO Box 399, Beijing 100044, China

Advertising Registration Number

BH 2020-01

Publication Date

July 12, 2023

Editor in Charge of English

QI Jing-wen

Editor in Charge of This Issue

SHI Sheng-ming

• Data Mining and Evidence-Based Medicine •

- 4253** Bioinformatics analysis of targeting cuproptosis-related genes therapy for rheumatoid arthritis and prediction of intervention traditional Chinese medicine
YANG Hui-jun, GUO Xiang, LI Wei-qing, SU Xiao-jun, TIAN Xue-mei, WANG Hai-dong, JIN Fang-mei
- 4266** Effectiveness and safety of Chinese patent medicines for reinforcing kidney and activating blood circulation in treatment of knee osteoarthritis: A network Meta-analysis
YIN Run-yu, YANG Dong-yuan, WANG Shi-kun, LI Yuan-dong
- 4278** Analysis of key factors in *Gastrodia elata* quality formation based on Group-Lasso
WANG Hong-jie, WANG Ke, YU Shui-xiang, MA Yun-tong

• Medicinal Materials •

- 4286** Molecular cloning of *PgWRKY22* from *Panax ginseng* and its expression in response to external phosphorus supply
LIANG Hao, SUN Hai, SHAO Cai, QIAN Jia-qi, ZHANG Ya-yu
- 4295** Identification and analysis of *bZIP* gene of *Houttuynia cordata*
CAI Wei, XIAO Jing-zhong, YU Xiao-li, YAO Cai-feng, CHEN Man, ZENG An-jie, LI Fu-rong, CHEN Liao, LIU Lei, FU Hong-bo
- 4306** ISSR analysis on genetic diversity of *Artemisiae Argyi Folium* from different habitats
YU Meng-juan, ZHAO Bo-yu, DONG Cheng-ming, LI Xun, XING Bing, LI Man
- 4312** Study on establishment of UPLC fingerprints and chemical pattern recognition of the stems and leaves of *Astragalus membranaceus* var. *mongholicus* (Bge.) Hsiao from different regions
WANG Qiang-xiong, GUO Sheng, LI Hui-wei, XIE Yi-jun, SHANG Er-xin, DUAN Jin-ao
- 4321** UPLC-MS metabonomics technology revealing difference of carbohydrate in *Dendrobium officinale* under different processing methods
CHEN Zhi-lin, ZHAO Ying, LI wei, YANG Li-xin
- 4329** Analysis and identification of *Geranium wilfordii* and its extracts with different solvents by infrared spectroscopy
SUN Ren-Shuang, ZHAO Min-jing, GU Di-Zhou

• Reviews •

- 4334** Research progress on immunomodulatory activity and mechanism of *Codonopsis Radix*
XIA Zhao-di, MA Ruo-xin, WANG Feng-yun, WEN jin-feng, WANG Yu-qi, SUN Bao, JIA Pu, ZHENG Xiao-hui
- 4346** Research progress on regulation of traditional Chinese medicine polysaccharides on immune cells in tumor microenvironment
WANG Di, LI Jun, HOU Bing-qiao, NIU Jun-bo, JI Chen-feng
- 4359** Research progress on anti-scar nano-transdermal drug delivery based on cell affinity
ZHUANG Ze-bin, LIU Dong-rong, YAO Bi-jin, QIN Chu-yue, SHI Jun
- 4367** Research progress on radiation breeding of Chinese medicinal materials
PENG Dong-qin, LIU Lu-xiang, GUO Hui-jun, LI Yu-ting, LI Meng-fei, GUO Xin-wei, WEI Jian-he
- 4377** Application progress on direct analysis in real time-mass spectrometry in quality study of traditional Chinese medicine
HU Shuang-fei, ZHANG Ao, WANG Yong-gang, SU Wei-wei
- 4385** Engineering principle of traditional Chinese medicine membrane separation technology and “low carbon process reengineering”
GUO Li-wei, WANG Yong-xiang, ZHONG Wen-wei, LI Peng, ZENG Hao-ran
- 4395** Research progress of *Uncariae Ramulus Cum Uncis* and its compatible preparations in treatment of hypertension
TIAN Xin-tong, ZHOU Wei, YANG Ji, MA Teng, ZHAO Ying-qiang

• Pharmaceutical Administration •

- 4404** Current situation and countermeasures of legal protection of traditional Chinese medicine decoction pieces from perspective of patent, geographical indication and intangible cultural heritage protection
KANG Qi, YANG Nan, SONG Min-xian, QU Li-ping, ZOU Wen-jun