



ZHONGCAOYAO

Chinese Traditional and Herbal Drugs

第 52 卷 第 11 期 (总第 694 期)

2021 年 6 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：天津市滨海高新区滨海科技园

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 •

- 3167 千年健萜类化学成分及其细胞毒活性研究
杨仁勇, 王云涛, 王梦然, 田 露, 刘晓菡, 杜玉庆, 姜 艳
王春华, 马 丽, 赵 峰
- 3174 三尖杉茎叶中的二萜类化合物研究
张 鑫, 王景丽, 赵春雪, 姜春宇, 景沁雪, 袁艺珍, 李达翃
李占林, 华会明, 白 皎
- 3180 亚麻叶白千层化学成分研究
张 莎, 董春茅, 徐杨蕊, 陈德坤, 周澄杰, 康峰华
徐康平, 邹振兴
- 3187 道真产淡黄香茶菜化学成分研究
刘 晓, 叶江海, 李继新, 辛来香, 韦金怀, 邹 娟, 刘亚华
- 3193 基于离线 2D-HPLC-DPPH-ESI-Q-TOF/MS 联用技术的金银花抗氧化成分系统筛选研究
张敏敏, 赵志国, 刘 倩, 刘 伟, 王 晓, 赵恒强

• 药剂与工艺 •

- 3201 炮制对草乌中乌头类生物碱经皮吸收的影响及其贴剂的设计与评价
王启隆, 刘 超, 权 鹏, 方 亮, 王延年
- 3209 Box-Behnken 响应面法优化白藜芦醇 Labrasol/P407 混合胶束处方工艺及体外评价
韩德恩, 申延利, 田 萍, 位恒超, 祝侠丽, 贾永艳
- 3216 基于不同算法对桂枝茯苓胶囊内容物吸湿性预测建模研究
陈 琪, 徐芳芳, 张 欣, 徐 冰, 吴 云, 王振中, 肖 伟
- 3224 基于指纹图谱及化学模式识别研究盐制对五子衍宗丸化学成分的影响
廖宇娇, 敖明月, 彭 颖, 胡昌江, 陈志敏, 许润春
- 3234 基于中药液、固体物料指标成分含量相关性的膜工艺评估方法创新研究——以杜仲叶水提液为例
钟文蔚, 郑东阳, 邹洪荟, 卓泽伟, 郭立玮
- 3239 经典名方竹叶石膏汤的物质基准量值传递分析
葛 威, 刘小康, 王康宇, 郭云龙, 蔡广知, 赵跃刚, 贡济宇
- 3249 一测多评法同时测定蒙药扎冲十三味丸中 8 种成分
宝鲁尔, 王 徽, 吴杰斯, 白塔那, 陈红梅, 王秀兰

• 药理与临床 •

- 3257 基于模式生物斑马鱼研究姜黄抗血管新生的作用及机制
朱宗萍, 王继森, 廖 婉, 陈 嫣, 陈 意, 杨青松, 李 锐
马云桐, 傅超美
- 3269 白芍总苷对自身免疫性甲状腺炎大鼠肠黏膜屏障及肠道菌群的影响
牧亚峰, 向 楠, 左新河, 余欣然, 赵 勇, 陈继东
- 3278 化瘀通络中药对糖尿病肾病大鼠肾脏和 AMPK/Nox4 信号通路的作用研究
李雅纯, 方 敬, 杨 帆, 郭 帅, 陈志强
- 3286 葛根素通过 circ-TLK1/miR-367-3p/TLR4 抑制 SK-N-SH 细胞氧糖剥夺损伤
齐献忠, 邢英瀛, 张小林, 贾燕燕
- 3296 基于气相色谱-质谱联用结合网络药理学探究竹叶椒挥发油抗炎镇痛的作用机制
龚普阳, 潘烨华, 郭瑜婕, 哈立洋, 李晓朋, 顾 健
- 3306 槐定碱对永久性大脑中动脉栓塞大鼠脑细胞的作用及机制研究
薛玉梅, 李献军, 孟 岩, 宋 哲, 刘惠钦, 李晓兵
- 3312 防风不同提取部位的燥性差异及其对胶原诱导性关节炎大鼠滑膜水通道蛋白的影响
梁瑞峰, 李兵杰, 葛文静, 王慧森, 刘 明, 崔伟锋, 张雪侠
王 军, 李更生



ZHONGCAOYAO

Chinese Traditional and Herbal Drugs

第 52 卷 第 11 期 (总第 694 期)

2021 年 6 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 50.00 元 全年 1200.00 元

广告发布登记号

BH 2020-01

英文责任编辑

王祎然

本期责任编辑

郑礼胜

- 3321 基于网络药理学和分子对接的文殊兰抗肿瘤作用机制研究
于 茜, 李佳鑫, 辛国松, 梁 峰, 薛沁冰, 王 娟, 王楠楠

• 循证医学与临床用药 •

- 3331 甘松中医药用药规律的数据挖掘
饶 瑶, 李 冉, 王晓雯, 薛变霞, 李世伟, 赵 悅, 张丽花
徐砚通, 吴红华

- 3344 抗抑郁中药复方的组方特点及作用机制研究
于冰清, 邵欣欣, 付晓凡, 周梦婕, 陈 聪

- 3353 中药注射剂治疗呼吸机相关性肺炎疗效的网络 Meta 分析
江珍玉, 吕 林, 游 可, 程林垚, 于志君, 邓海英

• 药材与资源 •

- 3362 红花 PAL 家族全基因组分析及其在悬浮细胞中的表达
郭英男, 刘月扬, 马静雨, 张 敬, 马鑫彤, 张馨月, 刘建雨
姚 娜, 刘秀明, 李海燕

- 3373 利用转录组数据挖掘东紫苏单萜生物合成相关基因
耿秀文, 张爱丽, 唐仁华, 普春霞

- 3383 青天葵中 SKP1 同源基因的克隆及原核表达
黎斯敏, 左紫梅, 詹若挺, 何 瑞

- 3391 人参属植物高温蒸制前后人参皂苷含量的变化和细胞毒活性研究
顾承真, 曾碧雪, 张钰佳, 王 东, 张颖君

- 3398 基于顶空-固相微萃取-气相色谱-三重四极杆质谱联用的诃子挥发性成分分析
谭 鹏, 周永峰, 黄浩洲, 朱 薇, 包晓明, 林俊芝
张定堃, 赵军宁

• 综 述 •

- 3408 芳香中药在抗新型冠状病毒肺炎 (COVID-19) 中的应用
张 训, 万 娜, 黄小英, 罗 晶, 李 怡, 张雨恬, 邱 婷
伍振峰, 杨 明

- 3418 NLRP3 炎症小体在抑郁症中的作用及中药干预研究进展
曾九僧, 纪雅菲, 方 洋, 胡婧文, 刘 蓉, 曾 南

- 3429 青蒿素类化合物抗肿瘤作用激活机制的研究进展
廖 暖, 王钰婷, 罗贤强, 罗开丽, 万少翔, 卿 晨

- 3436 植物五环三萜类化合物生物合成途径研究进展
李传旺, 张 贺, 饶 攀, 郑东然, 王 宇, 李玉花
3453 梅花化学成分与药理活性研究进展
严 辉, 蓝锦珊, 潘宗进, 郭 盛, 李思蒙, 周桂生, 陈佩东
詹志来, 段金廒

• 药事管理 •

- 3462 含贝母药材的中药制剂质量控制研究的思考
王玲玲, 王 曙, 曲建博, 阳长明

- 3467 道地药材地理标志产品保护的实证分析与发展对策研究
陈 杨, 康 琪, 瞿礼萍, 黄倩倩, 何俊玲, 吴 锐, 邹文俊

本刊投稿须知见《中草药》2021, 52(1): 310-312.

期刊基本参数: CN 12-1108 R * 1970 * sm * A4 * 160 * zh * P * ¥ 50.00 * 3000 * 35 * 2021 - 11

CHINESE TRADITIONAL AND HERBAL DRUGS

Vol. 52 No. 11 June 2021

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

Main Contents

• Chemical Constituents •

- 3167 Terpenoids from rhizomes of *Homalomena occulta* and their cytotoxic activities
YANG Ren-yong, WANG Yun-tao, WANG Meng-ran, TIAN Lu, LIU Xiao-han,
DU Yu-qing, JIANG Yan, WANG Chun-hua, MA Li, ZHAO Feng

- 3174 Diterpenoids from stems and leaves of *Cephalotaxus fortunei*
ZHANG Xin, WANG Jing-li, ZHAO Chun-xue, JIANG Chun-yu, JING Qin-xue,
YUAN Yi-zhen, LI Da-hong, LI Zhan-lin, HUA Hui-ming, BAI Jiao

- 3180 Chemical constituents of *Melaleuca linariifolia*
ZHANG Sha, DONG Chun-mao, XU Yang-rui, CHEN De-kun, ZHOU Cheng-
jie, KANG Feng-hua, XU Kang-ping, ZOU Zhen-xing

- 3187 Chemical constituents of *Isodon flavidus* produced in Daozhen
LIU Xiao, YE Jiang-hai, LI Ji-xin, XIN Lai-xiang, WEI Jin-huai, ZOU Juan, LIU
Ya-hua

- 3193 Rapid discovery of trace antioxidants in *Lonicerae Japonicae Flos* by 2D-HPLC-
DPPH-ESI-TOF/MS
ZHANG Min-min, ZHAO Zhi-guo, LIU Qian, LIU Wei, WANG Xiao, ZHAO
Heng-qiang

• Pharmaceutics and Technology •

- 3201 Effect of processing on transdermal absorption of alkaloids from *Aconiti Kusnezoffii Radix* and development and evaluation of their patches
WANG Qi-long, LIU Chao, QUAN Peng, FANG Liang, WANG Yan-nian

- 3209 Optimization of resveratrol Labrasol/P407 mixed micelles formulation by Box-
Behnken response surface method and its *in vitro* evaluation
HAN De-en, SHEN Yan-li, TIAN Ping, WEI Heng-chao, ZHU Xia-li, JIA Yong-yan

- 3216 Research on predictive model for hygroscopicity of contents in *Guizhi Fulig Capsules* based on different algorithms
CHEN Qi, XU Fang-fang, ZHANG Xin, XU Bing, WU Yun, WANG Zhen-zhong,
XIAO Wei

- 3224 Based on fingerprint and chemical pattern recognition to study the effect of salt-
water processing on the chemical components of *Wuzi Yanzong Pills*
LIAO Yu-jiao, AO Ming-yue, PENG Ying, HU Chang-jiang, CHEN Zhi-min,
XU Run-chun

- 3234 A novel approach for evaluating the concentrations of indicative components in
liquid and solid in the pharmaceutical process of TCM manufacturing using
membrane based clarification—example given in the water extracts of
Eucommiae Folium
ZHONG Wen-wei, ZHENG Dong-yang, ZOU Hong-hui, ZHUO Ze-wei, GUO
Li-wei

- 3239 Transfer analysis of substance benchmark of famous classical formulas of *Zhuye Shigao Decoction*
GE Wei, LIU Xiao-kang, WANG Kang-yu, GUO Yun-long, CAI Guang-zhi,
ZHAO Yue-gang, GONG Ji-yu

- 3249 Simultaneous determination of eight components in *Zhachong Shisanwei Pills* by
QAMS
BAO Lu-er, WANG Hui, WU Jie-si, BAI Ta-na, CHEN Hong-mei, WANG Xiu-lan

• Pharmacological Studies and Clinical Observations •

- 3257 Effect and mechanism of *Curcuma longa* anti-angiogenesis based on model
biology zebrafish
ZHU Zong-ping, WANG Ji-sen, LIAO Wan, CHEN Jiao, CHEN Yi, YANG
Qing-song, LI Rui, MA Yun-tong, FU Chao-mei

- 3269 Effects of total glucosides of *Paeonia lactiflora* on intestinal mucosal barrier and
intestinal flora in rats with autoimmunity thyroiditis
MU Ya-feng, XIANG Nan, ZUO Xin-he, YU Xin-ran, ZHAO Yong, CHEN Ji-dong

- 3278 Effect of Huayu Tongluo Chinese medicines on kidney and AMPK/Nox4 signaling
pathway of rats with diabetic nephropathy
LI Ya-chun, FANG Jing, YANG Fan, GUO Shuai, CHEN Zhi-qiang

- 3286 Puerarin inhibits oxygen-glucose deprivation injury of SK-N-SH cells through
circ-TLK1/miR-367-3p/TLR4
QI Xian-zhong, XING Ying-ying, ZHANG Xiao-lin, JIA Yan-yan

- 3296 Mechanism of volatile oil of *Zanthoxylum armatum* for anti-inflammation and
analgesic based on gas chromatography-mass spectrometry integrated network
pharmacology
GONG Pu-yang, PAN Ye-hua, GUO Yu-jie, HA Li-yang, LI Xiao-peng, GU Jian

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

June 12, 2021

Editor in Charge of English

WANG Yi-ran

Editor in Charge of This Issue

ZHENG Li-sheng

- 3306** Mechanism of sophoridine on cerebral cell in rats with permanent middle cerebral artery occlusion
XUE Yu-mei, LI Xian-jun, MENG Yan, SONG Zhe, LIU Hui-qin, LI Xiao-bing

- 3312** Dryness difference of different extracts of *Saposhnikovia divaricata* and their effects on synovial aquaporin in collagen-induced arthritis rats
LIANG Rui-feng, LI Bing-jie, GE Wen-jing, WANG Hui-sen, LIU Ming, CUI Wei-feng, ZHANG Xue-xia, WANG Jun, LI Geng-sheng

- 3321** Antitumor mechanism of *Crinum asiaticum* based on network pharmacology and molecular docking
YU Miao, LI Jia-xin, XIN Guo-song, QI Zheng, XUE Qin-bing, WANG Juan, WANG Nan-nan

• Evidence-Based Medicine and Clinical Medication •

- 3331** Data mining of compatibility characteristics for Chinese medicinal prescriptions containing *Nardostachyos Radix et Rhizoma*
RAO Yao, LI Ran, WANG Xiao-wen, XUE Bian-xia, LI Shi-wei, ZHAO Yue, ZHANG Li-hua, XU Yan-tong, WU Hong-hua

- 3344** Study on composition characteristics and mechanism of anti-depression traditional Chinese medicine compound based on literature mining and correlation analysis
YU Bing-qing, SHAO Xin-xin, FU Xiao-fan, ZHOU Meng-jie, CHEN Cong

- 3353** A network Meta-analysis on efficacy of traditional Chinese medicine injections in treatment of ventilator-associated pneumonia
JIANG Zhen-yu, LV Lin, YOU Ke, CHENG Lin-yao, YU Zhi-jun, DENG Hai-ying

• Medicinal Materials •

- 3362** Genome analysis of PAL gene family from *Carthami Flos* and its expression in suspension cells
GUO Ying-nan, LIU Yue-yang, MA Jing-yu, ZHANG Jing, MA Xin-tong, ZHANG Xin-yue, LIU Jian-yu, YAO Na, LIU Xiu-ming, LI Hai-yan

- 3373** High-throughput transcriptome sequencing of *Elsholtzia bodinieri* and excavation of genes related to monoterpene biosynthesis
GENG Xiu-wen, ZHANG Ai-li, TANG Ren-hua, PU Chun-xia

- 3383** Cloning and prokaryotic expression of SKP1 homologous genes from *Nervilia fordii*
LI Si-min, ZUO Zi-mei, ZHAN Ruo-ting, HE Rui

- 3391** Variation of ginsenosides in raw and processed ginsengs (*Panax* sp.) and their cytotoxicities
GU Cheng-zhen, ZENG Bi-xue, ZHANG Yu-jia, WANG Dong, ZHANG Ying-jun

- 3398** Analysis of volatile compounds in *Chebulae Fructus* based on head space-solid phase microextraction-gas chromatography-triple quadrupole mass spectrometry
TAN Peng, ZHOU Yong-feng, HUANG Hao-zhou, ZHU Wei, BAO Xiao-ming, LIN Jun-zhi, ZHANG Ding-kun, ZHAO Jun-ning

• Reviews •

- 3408** Application of aromatic Chinese materia medica in corona virus disease 2019 (COVID-19)
ZHANG Xun, WAN Na, HUANG Xiao-ying, LUO Jing, LI Yi, ZHANG Yu-tian, QIU Ting, WU Zhen-feng, YANG Ming

- 3418** Role of NLRP3 inflammasome in depression and research progress on intervention of traditional Chinese medicine
ZENG Jiu-seng, JI Ya-fei, FANG Yang, HU Jing-wen, LIU Rong, ZENG Nan

- 3429** Research progress on activation mechanism of artemisinin compounds in antitumor effects
LIAO Yuan, WANG Yu-ting, LUO Xian-qiang, LUO Kai-li, WAN Shao-xiang, QING Chen

- 3436** Research progress on biosynthesis pathway of pentacyclic triterpenoids in plants
LI Chuan-wang, ZHANG He, RAO Pan, ZHENG Dong-ran, WANG Yu, LI Yu-hua

- 3453** Advances in studies on chemical compositions and pharmacological activities of *Mume Flos*
YAN Hui, LAN Jin-shan, PU Zong-jin, GUO Sheng, LI Si-meng, ZHOU Gui-sheng, CHEN Pei-dong, ZHAN Zhi-lai, DUAN Jin-ao

• Pharmaceutical Affairs Management •

- 3462** Consideration of quality control of traditional Chinese medicine preparations containing fritillaria
WANG Ling-ling, WANG Shu, QU Jan-bo, YANG Chang-ming

- 3467** Empirical analysis and research on development countermeasures on protection of geographical indication products of genuine Chinese medicinal materials
CHEN Yang, KANG Qi, QU Li-ping, HUANG Qian-qian, HE Jun-ling, WU Rui, ZOU Wen-jun