

特别关注:

Q K 1 8 1 7 4 1 6

ISSN 1001-5302  
CN 11-2272/R

# 基于生物活性测定开展中药质量控制的研究进展

临床疗效反映了中药的内在质量，生物活性测定是反映临床功效的基本方法之一。文章总结归纳了中药生物活性测定用于中药质量控制的特点及难点，提出建立从企业内控到行业认可的中药生物活性测定平台将是中药工业化生产的重要内容。

中  
国  
中  
药  
杂  
志

China Journal of  
Chinese Materia Medica

第43卷 第3期  
Vol. 43 No. 3

2018/3



关注杂志官方微信

中国药学会  
CHINESE PHARMACEUTICAL ASSOCIATION



## 目 次

### · 雷公藤制剂肾毒性研究专题 ·

中药肾毒性国内外研究现状

冯雪, 方赛男, 高雨鑫, 刘建平, 陈薇 ..... (417)

雷公藤制剂安全性的循证评价研究

冯雪, 方赛男, 高雨鑫, 刘建平, 陈薇 ..... (425)

根据 CONSORT HARMs 声明评价雷公藤制剂相关肾毒性 RCT 的报告质量

冯雪, 方赛男, 高雨鑫, 刘建平, 陈薇 ..... (440)

探讨快速评价法在检索雷公藤制剂肾毒性研究中的应用

冯雪, 方赛男, 高雨鑫, 刘建平, 陈薇 ..... (446)

### · 综述 ·

基于生物活性测定开展中药质量控制的研究进展

游云, 廖福龙, 黄璐琦 ..... (452)

环状 RNA: 人类疾病研究的新领域

高嘉良, 陈光, 何浩强, 王阶 ..... (457)

发酵虫草菌类产品的标准比较与评价

杨平, 赵晓霞, 张永文 ..... (463)

### · 资源与鉴定 ·

光照对药食同源植物苦荞麦种子中原花青素积累关键酶 *FtANR*, *FtLAR* 基因表达的影响

姜春丽, 苏新堯, 许亚春, 吴而已, 师玉华, 张栋, 陈庆富, 孙伟, 薛建平 ..... (469)

内生细菌 BZJN1 的鉴定及对白术根腐病的生物防治研究

游景茂, 熊坤, 穆森, 郭杰, 郭晓亮, 段媛媛, 李娟, 曹凡, 邹宗成, 谭海 ..... (478)

### · 分子生药学 ·

丹参均一化酵母双杂交文库的构建及与 SmJAZ8 互作蛋白的筛选

杨梦丹, 赵英, 麻鹏达 ..... (484)

基于 RNA-seq 数据的生姜 NAC 转录因子家族鉴定及分析

廖钦洪, 邹勇, 李洪雷, 姜玉松 ..... (493)

### · 制剂与炮制 ·

不同加工方式绞股蓝皂苷类成分比较研究

董利华, 匡艳辉, 范冬冬, 蒋彤, 陈两绵, 张东, 朱晶晶, 王智民, 王德勤, 李楚源 ..... (502)

荷叶药材中荷叶碱生物药剂学分类系统研究

赵碧睿, 任晓亮, 王萌 ..... (511)

中药炮制用辅料姜汁的冻干工艺优化及冻干粉稳定性考察

杨春雨, 郭凤倩, 藏琛, 曹晖, 张保献 ..... (520)

基于 UPLC-Q-TOF/MS 分析沉香化气丸在大鼠体内的代谢产物 潘玄玄, 宋粉云, 林秀莲, 李华	(527)
<b>· 化学 ·</b>	
平滑苍耳果实中 1 个新的倍半萜内酯二聚体 王鹏飞, 邓仕东, 屈晶, 庾石山	(532)
印楝种子中柠檬苦素类化合物及其细胞毒活性研究 卢小锋, 代冬梅, 于荣敏, 宋丽艳, 朱建华, 樊晓娜, 詹佳辰	(537)
薄荷茎叶中黄酮类成分在不同采收期的含量差异性研究 胡少伟, 钟昆芮, 杨佳颖, 苏磊, 姜艳艳, 刘斌	(544)
气相色谱“一测多评”用于苍术多成分含量测定的可行性研究 陈文婷, 陈阳, 崔波, 李琪, 范燕豪, 王新宏, 安徽	(551)
不同加工方式及不同部位鹿茸中硫酸软骨素的含量分析 宫瑞泽, 王燕华, 孙印石	(557)
<b>· 药理 ·</b>	
麻黄汤体外抗甲型 H1N1 流感病毒作用及机制研究 魏文扬, 万海同, 虞立, 卢亦恩, 何昱	(563)
染料木素对 $\text{A}\beta_{25-35}$ 诱导 PC12 细胞损伤的保护作用及 CaM-CaMKIV 信号通路的影响 蔡标, 叶树, 王艳, 华如鹏, 汪婷婷, 李静, 江爱娟, 申国明	(571)
基于 microRNA-34a/SIRT1/p53 通路探讨三七皂苷 R <sub>1</sub> 对血管内皮细胞衰老的影响 赖小华, 雷燕, 杨静, 修成奎	(577)
苗药金乌健骨方对类风湿关节炎滑膜细胞 IL-17-STAT3 信号影响的研究 马武开, 李蓉, 宁乔怡, 黄颖, 唐芳, 陆道敏, 姚血明	(585)
槐耳清膏通过激活自噬抑制人肝癌细胞 SK-HEP-1 增殖 杨爱琳, 夏天吉, 赵亚楠, 宋佳殷, 沈浩然, 徐子惠, 屠鹏飞, 胡仲冬	(591)
柚皮苷对糖尿病大鼠心肌病氧化应激及内质网应激的影响 张羽飞, 孟娜娜, 李厚忠, 温以杰, 刘洁婷, 张春雷, 袁晓环, 金秀东	(596)
真武汤对 NRK-52E 细胞“AVP-V2R-AQP2”通路的调控作用研究 周小杰, 包玉婷, 陈红淑, 宣玲, 陈学明, 张洁颖, 杨元宵, 李昌煜	(603)
<b>· 药代动力学 ·</b>	
外翻肠囊法研究羊耳菊提取物在大鼠肠内的吸收 巩仔鹏, 李梅, 侯靖宇, 吴林霖, 陈亭亭, 李月婷, 陈思颖, 李勇军, 王爱民, 兰燕宇, 王永林	(609)
<b>· 临床 ·</b>	
缺血性中风病急性期中西药群组模块探索 杨薇, 黎明全, 李杨, 孙磊磊, 谢雁鸣, 郭崇慧, 庄严	(618)
<b>· 药事管理 ·</b>	
基于美国对中药组合物专利保护客体审查规则的应对 刘盼, 曹雅迪, 巩瑞娟, 刘伟	(627)
<b>· 本草考证 ·</b>	
黄精本草考证与启迪 刘京晶, 斯金平	(631)

本期责任编辑:孔晶晶



## CONTENTS IN BRIEF

### Current research situation of nephrotoxicity of Chinese herbal medicine

FENG Xue, FANG Sai-nan, GAO Yu-xin, LIU Jian-ping, CHEN Wei ..... (417)

### Evidence-based evaluation on safety of *Tripterygium wilfordii* preparations

FENG Xue, FANG Sai-nan, GAO Yu-xin, LIU Jian-ping, CHEN Wei ..... (425)

### Evaluation of reporting quality of RCT on nephrotoxicity of *Tripterygium wilfordii* preparations according to CONSORT HARMs statement

FENG Xue, FANG Sai-nan, GAO Yu-xin, LIU Jian-ping, CHEN Wei ..... (440)

### Application of evidence-based rapid review in studying nephrotoxicity of *Tripterygium wilfordii* preparation

FENG Xue, FANG Sai-nan, GAO Yu-xin, LIU Jian-ping, CHEN Wei ..... (446)

### Development of bioassay method in quality control of traditional Chinese medicine

YOU Yun, LIAO Fu-long, HUANG Lu-qi ..... (452)

### CircRNA as a new field in human disease research

GAO Jia-liang, CHEN Guang, HE Hao-qiang, WANG Jie ..... (457)

### Comparison and review on specifications of fermented *Cordyceps sinensis* products

YANG Ping, ZHAO Xiao-xia, ZHANG Yong-wen ..... (463)

### Influence of light on gene expression of key synthesis enzyme genes *FtANR* and *FtLAR* about proanthocyanidin in seeds of homologous plant of food and medicine *Fagopyrum tataricum*

JIANG Chun-li, SU Xin-yao, XU Ya-chun, WU Er-yi, SHI Yu-hua, ZHANG Dong, CHEN Qing-fu, SUN Wei, XUE Jian-ping ..... (469)

### Identification of endophytic bacteria BZJN1 and research on biological control of root rot of *Atractylodes macrocephala*

YOU Jing-mao, XIONG Kun, MU Sen, GUO Jie, GUO Xiao-liang, DUAN Yuan-yuan, LI Juan, CAO Fan, ZOU Zong-cheng, TAN Hai ..... (478)

### Construction of yeast two-hybrid library of *Salvia miltiorrhiza* and screening of SmJAZ8 interaction protein

YANG Meng-dan, ZHAO Ying, MA Peng-da ..... (484)

### Identification and analysis of NAC family in ginger (*Zingiber officinale*) based on RNA-seq data

LIAO Qin-hong, ZOU Youg, LI Hong-lei, JIANG Yu-song ..... (493)

### Comparison of saponins from *Gynostemma pentaphyllum* leaves prepared by different processing methods

DONG Li-hua, KUANG Yan-hui, FAN Dong-dong, JIANG Tong, CHEN Liang-mian, ZHANG Dong, ZHU Jing-jing, WANG Zhi-min, WANG De-qin, LI Chu-yuan ..... (502)

### Biopharmaceuticals classification system (BCS) of nuciferin in *Nelumbinis Folium*

ZHAO Jun-rui, REN Xiao-liang, WANG Meng ..... (511)

<b>Freeze drying process optimization of ginger juice-adjuvant for Chinese materia medica processing and stability of freeze-dried ginger juice powder</b>	
YANG Chun-yu, GUO Feng-qian, ZANG Chen, CAO Hui, ZHANG Bao-xian .....	(520)
<b>Identification of metabolites of Chenxiang Huaqi pill in rats based on UPLC-Q-TOF/MS</b>	
PAN Xuan-xuan, SONG Fen-yun, LIN Xiu-lian, LI Hua .....	(527)
<b>A new dimeric xanthanolide from fruits of <i>Xanthium chinense</i></b>	
WANG Peng-fei, DENG Shi-dong, QU Jing, YU Shi-shan .....	(532)
<b>Limonoids from seeds of <i>Azadirachta indica</i> and their cytotoxic activity</b>	
LU Xiao-feng, DAI Dong-mei, YU Rong-min, SONG Li-yan, ZHU Jian-hua, FAN Xiao-na, ZI Jia-chen .....	(537)
<b>Study on difference of flavonoids content in stems and leaves of <i>Mentha Haplocalycis Herba</i> in different harvest periods</b>	
HU Shao-wei, ZHONG Kun-rui, YANG Jia-ying, SU Lei, JIANG Yan-yan, LIU Bin .....	(544)
<b>Feasibility study of QAMS for quantitative analysis of multiple structural types of ingredients in <i>Atractylodis Rhizome</i> by GC</b>	
CHEN Wen-ting, CHEN Yang, CUI Bo, LI Xiao-qi, FAN Yan-hao, WANG Xin-hong, AN Rui .....	(551)
<b>Analysis of chondroitin sulfate content of <i>Cervi Cornu Pantotrichum</i> with different processing methods and different parts</b>	
GONG Rui-ze, WANG Yan-hua, SUN Yin-shi .....	(557)
<b>Effect and mechanism of Mahuang Tang against influenza A/H1N1 virus <i>in vitro</i></b>	
WEI Wen-yang, WAN Hai-tong, YU Li, LU Yi-yu, HE Yu .....	(563)
<b>Protective effects of genistein on <math>\text{A}\beta_{25-35}</math>-induced PC12 cell injury via regulating CaM-CaMKIV signaling pathway</b>	
CAI Biao, YE Shu, WANG Yan, HUA Ru-peng, WANG Ting-ting, LI Jing, JIANG Ai-juan, SHEN Guo-ming .....	(571)
<b>Effect of microRNA-34a/SIRT1/p53 signal pathway on notoginsenoside R<sub>1</sub> delaying vascular endothelial cell senescence</b>	
LAI Xiao-hua, LEI Yan, YANG Jing, XIU Cheng-kui .....	(577)
<b>Effects of Jinwu Jiangu recipe on IL-17/STAT3 signals in rheumatoid arthritis synoviocytes</b>	
MA Wu-kai, LI Rong, NING Qiao-yi, HUANG Ying, TANG Fang, LU Dao-min, YAO Xue-ming .....	(585)
<b>Huaier aqueous extract inhibits proliferation of human hepatoma SK-HEP-1 cells through up-regulation of autophagy</b>	
YANG Ai-lin, XIA Tian-ji, ZHAO Ya-nan, SONG Jia-yin, SHEN Hao-ran, XU Zi-hui, TU Peng-fei, HU Zhong-dong .....	(591)
<b>Effect of naringin on oxidative stress and endoplasmic reticulum stress in diabetic cardiomyopathy</b>	
ZHANG Yu-fei, MENG Na-na, LI Hou-zhong, WEN Yi-jie, LIU Jie-ting, ZHANG Chun-lei, YUAN Xiao-huan, JIN Xiu-dong .....	(596)
<b>Effect of Zhenwu Tang on regulating of "AVP-V2R-AQP2" pathway in NRK-52E cells</b>	
ZHOU Xiao-jie, BAO Yu-ting, CHEN Hong-shu, XUAN Ling, CHEN Xue-ming, ZHANG Jie-ying, YANG Yuan-xiao, LI Chang-yu .....	(603)
<b>Absorption of <i>Inula cappa</i> extract based on everted intestinal sac method</b>	
GONG Zi-peng, LI Mei, HOU Jing-yu, WU Lin-lin, CHEN Ting-ting, LI Yue-ting, CHEN Si-ying, LI Yong-jun, WANG Ai-min, LAN Yan-yu, WANG Yong-lin .....	(609)
<b>Exploring Chinese medicine and Western medicine group modules in acute phase of ischemic stroke disease</b>	
YANG Wei, LI Ming-quan, LI Yang, SUN Lei-lei, XIE Yan-ming, GUO Chong-hui, ZHUANG Yan .....	(618)
<b>Response to US review rules on patent subject matter of traditional Chinese medicine compositions</b>	
LIU Pan, CAO Ya-di, GONG Rui-juan, LIU Wei .....	(627)
<b>Herbal textual research on Chinese medicine "Huangjing"( <i>Polygonati Rhizoma</i>) and some enlightenments</b>	
LIU Jing-jing, SI Jin-ping .....	(631)

**主 编** 张伯礼  
**主 管** 中国科学技术协会  
**主 办** 中国药学会  
**编 辑 出 版** 中国中药杂志编辑部  
**地 址** 北京市东直门内南小街16号  
**邮 编** 100700  
**电 话** (010) 64087589  
**网 址** <http://www.cjcm.com.cn>  
**邮 箱** [cjcm2006@188.com](mailto:cjcm2006@188.com)  
**图 文 制 作** 同方知网(北京)技术有限公司  
**封 面 设 计** 北京午未创意文化传媒有限公司  
**印 刷** 山西同方知网印刷有限公司  
**国 内 外 发 行** 同方知网(北京)技术有限公司  
**订 阅** 同方知网(北京)技术有限公司  
**出 版 日 期** 2018年2月1日  
**标 准 刊 号** ISSN 1001-5302 CN 11-2272/R  
**国 内 定 价** 每期50元，全年1200元

**Editor-in-Chief**

ZHANG Bo-li

**Responsible Institution**

China Association for Science and Technology

**Sponsored by**

Chinese Pharmaceutical Association

Address: 16 Nanxiaojie, Inner Dongzhimen Beijing 100700, China

Tel: (010) 64087589

E-mail: [cjcm2006@188.com](mailto:cjcm2006@188.com)

<http://www.cjcm.com.cn>

**Graphics produced by**

Tongfang Kownlodge Network Technology Co., Ltd (Beijing)

**Printed by**

Shanxi Tongfang Knowledge Network Printing Co., Ltd.

**Overseas Distributor**

Tongfang Knowledge Network Technology Co., Ltd. (Beijing)

**Publication Date**

February 1, 2018

ISSN 1001-5302 CN 11-2272/R

ISSN 1001-5302



9 771001530186

0 3 >

国内定价：50.00元