



特别关注:

Q K 2 0 2 2 1 0 4

大数据驱动的中药智能制造专题

中
国
中
药
杂
志

大数据是中药智能制造核心驱动力。本专题提出中药工业大数据架构设计原理，介绍了中药工业大数据感知和分析关键技术在中药生产过程关键质量属性客观化表征、质量传递规律建模、实时放行检验和制剂处方设计中的应用。

China Journal of Chinese Materia Medica
ZHONGGUO ZHONGYAO ZAZHI
2020年1月 第45卷 第2期

2020/2



中医药科技期刊分级目录T1级期刊

中国中文核心期刊

中国科技核心期刊

CSCD来源期刊

万方数据



中国药学会
CHINESE PHARMACEUTICAL ASSOCIATION



目 次

·大数据驱动的中药智能制造专题·

中药工业大数据关键技术与应用

徐冰, 史新元, 罗赣, 林兆洲, 孙飞, 戴胜云, 张志强, 肖伟, 乔延江 (221)

大数据驱动的热毒宁注射液金青醇沉关键工艺参数辨识研究

杜慧, 徐冰, 徐芳芳, 张欣, 王晴, 夏春燕, 包乐伟, 王振中, 乔延江, 肖伟 (233)

桂枝茯苓胶囊内容物吸湿性预测建模研究

王晴, 徐冰, 王芬, 徐芳芳, 张欣, 张永超, 杜慧, 夏春燕, 包乐伟, 王振中, 乔延江, 肖伟 (242)

天舒片素片崩解时间实时放行检验研究

夏春燕, 徐冰, 徐芳芳, 张欣, 王晴, 杜慧, 包乐伟, 王振中, 乔延江, 肖伟 (250)

基于在线浊度传感器的中药颗粒剂溶化性评价和分类研究

于佳琦, 徐冰, 黄雨妍, 张志强, 戴胜云, 付静, 乔延江 (259)

基于针刺压力传感器的人参润制“药透水尽”科学内涵研究

连传运, 徐冰, 赵亚楠, 戴胜云, 侯金才, 张燕玲, 乔延江 (267)

基于粉体压缩行为的中药半浸膏粉“药辅合一”科学内涵研究

王芬, 徐冰, 张坤峰, 杨茂蕊, 唐正馨, 陆洋, 乔延江 (274)

·专论·

药材生产过程副产物的价值发现和资源化利用是中药材产业扶贫的重要途径

段金廒, 郭盛, 严辉, 赵明, 宿树兰, 黄璐琦 (285)

·综述·

中药微生态与中药道地性

何冬梅, 王海, 陈金龙, 赖长江生, 严铸云, 黄璐琦 (290)

九香虫化学成分、药理作用及临床应用研究进展

李莎, 李磊, 彭洪兵, 马晓晶, 黄璐琦, 李娟 (303)

天麻素、对羟基苯甲醇对中枢神经系统作用机制研究进展

张志龙, 鄢玉钢, 臧埔, 顾沛沛, 赵岩, 何忠梅, 祝洪艳 (312)

·资源与鉴定·

盐胁迫下外源 NO 对颠茄氮代谢及次生代谢调控的研究

代欢欢, 杨怡, 山雨思, 何潇, 辛正琦, 吴能表 (321)

基于文本挖掘与分子对接技术的辣木叶功能定位研究

沙子珺, 唐仕欢, 李志勇, 杨滨, 杨洪军 (331)

·分子生药学·

高温胁迫诱导半夏基因组甲基化的变异分析

晁秋杰, 刘晓, 韩磊, 马晨晨, 高荣荣, 陈颖, 施江, 熊雨婕, 薛涛, 薛建平 (341)

·化学·

绿萼梅乙酸乙酯部位的化学成分研究

王灿灿, 张伟, 吴德玲, 许凤清, 刘劲松, 乔金为 (347)

市售矿物药炉甘石的质量现状研究

宋广峰, 张志杰, 李婉婉, 宋晨, 林瑞超 (352)

·药理·

白头翁汤正丁醇提取物对外阴阴道念珠菌病小鼠阴道黏膜中性粒细胞趋化的影响

姜晶晶, 云云, 张梦翔, 杨玉, 段强军, 汪天明, 邵菁, 汪长中 (361)

基于网络药理学筛选的黄芪香草酸对心肌重构的保护作用研究

王伯阳, 刘天龙, 刘晶, 张铭杰, 孙建军, 刘小雷, 马瑞莲 (367)

木鳖子淫羊藿合用配比筛选及机制研究

阙月一, 王娅杰, 李军, 庞道然, 杨庆, 李琦, 李玉洁, 翁小刚, 陈颖, 蔡维艳, 朱晓新 (374)

·药代动力学·

中医病证相符的大鼠心肾不交失眠模型的建立及其血清代谢组学研究

杨钰涵, 孙雨, 王珺, 蒋海强, 崔宁, 苏本正, 于宗渊 (383)

基于 LC-MS 分析 4,5-二咖啡酰奎宁酸在大鼠血浆和尿液中的代谢产物

詹美榕, 贾益群, 陈龙, 王夏雷, 王雨 (391)

人参干预脾气虚体质的非靶向代谢组学研究

王妮, 张娜, 李铁, 王梅, 黄鑫, 刘淑莹 (398)

离体外翻肠囊法研究红禾麻提取物在正常与类风湿性关节炎模型大鼠中的肠吸收特性差异

李莹, 陈思颖, 巩仔鹏, 康宁芳, 吴耽, 唐娟, 李月婷, 潘洁, 黄勇, 郑林, 兰燕宇, 李勇军, 王永林 (405)

基于Ⅱ相代谢酶探讨大黄中大黄酸潜在肝毒性

汪祺, 王亚丹, 杨建波, 刘越, 文海若, 马双成 (412)

基于 HPLC-QqQ-MS 研究肠道菌群对藏族药小檗皮 5 种入血成分的影响

杜欢, 徐鑫梅, 徐僮, 李琪, 赵程成, 易欢, 范刚 (418)

·临床·

中药注射剂辅助治疗儿童支原体肺炎的网状 Meta 分析

潘桂贊, 马融, 张喜莲, 孙欢, 闫海虹, 戎萍 (425)

参松养心胶囊治疗缓慢性心律失常合并早搏的疗效和安全性系统评价及 Meta 分析

杨昊昕, 戴雁彦, 宫僖浩, 赵国桢, 苟金, 张秀文, 辛玉, 李博 (436)

基于数据挖掘的中药治疗肿瘤用药分析及监护探讨

王晓霞, 韩媛媛, 师桂英, 胡立政, 路平, 柳芳 (444)

黄芩清热除痹胶囊激活 PPAR γ 介导 AMPK/FOXO3a 信号通路改善强直性脊柱炎患者氧化应激

黄旦, 刘健, 纵瑞凯, 万磊 (451)

本期责任编辑:马超一



CONTENTS IN BRIEF

Key technologies and applications of industrial big data in manufacturing of Chinese medicine

- XU Bing, SHI Xin-yuan, LUO Gan, LIN Zhao-zhou, SUN Fei, DAI Sheng-yun, ZHANG Zhi-qiang, XIAO Wei, QIAO Yan-jiang (221)

Identification of critical process parameters of Jinqing alcohol precipitation of Reduning Injection by big data

- DU Hui, XU Bing, XU Fang-fang, ZHANG Xin, WANG Qing, XIA Chun-yan, BAO Le-wei, WANG Zhen-zhong, QIAO Yan-jiang, XIAO Wei (233)

Predictive model for hygroscopicity of contents in Guizhi Fuling Capsules

- WANG Qing, XU Bing, WANG Fen, XU Fang-fang, ZHANG Xin, ZHANG Yong-chao, DU Hui, XIA Chun-yan, BAO Le-wei, WANG Zhen-zhong, QIAO Yan-jiang, XIAO Wei (242)

Real time release testing of disintegration time of uncoated Tianshu Tablets

- XIA Chun-yan, XU Bing, XU Fang-fang, ZHANG Xin, WANG Qing, DU Hui, BAO Le-wei, WANG Zhen-zhong, QIAO Yan-jiang, XIAO Wei (250)

Evaluation and classification of dissolution behavior and capability of Chinese medicine granules based on an inline turbidity sensor

- YU Jiān-qí, XU Bing, HUANG Yu-yan, ZHANG Zhi-qiang, DAI Sheng-yun, FU Jing, QIAO Yan-jiang (259)

Mechanism of "herb soaking with exact amount of water" during moistening process of ginseng based on needle pressure sensor

- LIAN Chuan-yun, XU Bing, ZHAO Ya-nan, DAI Sheng-yun, HOU Jin-cai, ZHANG Yan-ling, QIAO Yan-jiang (267)

Mechanism of "unification of drugs and excipients" for Chinese medicine semi-extract based on powder compression behavior analysis

- WANG Fen, XU Bing, ZHANG Kun-feng, YANG Mao-rui, TANG Zheng-xin, LU Yang, QIAO Yan-jiang (274)

Value discovery and resource utilization of by-products in production process of medicinal materials are important ways for poverty alleviation with Chinese herbal medicine industry

- DUAN Jin-ao, GUO Sheng, YAN Hui, ZHAO Ming, SU Shu-lan, HUANG Lu-qi (285)

Microecology and geoherbalism of traditional Chinese medicine

- HE Dong-mei, WANG Hai, CHEN Jin-long, LAI Chang-jiang-sheng, YAN Zhu-yun, HUANG Lu-qi (290)

Advances in studies on chemical constituents, pharmacological effects and clinical application of *Aspongopus chinensis*

- LI Sha, LI Lei, PENG Hong-bing, MA Xiao-jing, HUANG Lu-qi, LI Juan (303)

Research progress on mechanism of gastrodin and p-hydroxybenzyl alcohol on central nervous system

- ZHANG Zhi-long, GAO Yu-gang, ZANG Pu, GU Pei-pei, ZHAO Yan, HE Zhong-mei, ZHU Hong-yan (312)

Nitrogen metabolism and secondary metabolism regulation of *Atropa belladonna* by exogenous NO under NaCl stress

- DAI Huan-huan, YANG Yi, SHAN Yu-si, HE Xiao, XIN Zheng-qi, WU Neng-biao (321)

Functional orientation of *Moringa* leaves based on text mining and molecular docking technology

- SHA Zi-jun, TANG Shi-huan, LI Zhi-yong, YANG Bin, YANG Hong-jun (331)

Variation analysis of genomic methylation induced by high temperature stress in <i>Pinellia ternata</i>	
CHAO Qiu-jie, LIU Xiao, HAN Lei, MA Chen-chen, GAO Rong-rong, CHEN Ying, SHI Jiang, XIONG Yu-jie, XUE Tao, XUE Jian-ping	(341)
Chemical constituents from ethyl acetate extraction of <i>Prunus mume</i>	
WANG Can-can, ZHANG Wei, WU De-ling, XU Feng-qing, LIU Jin-song, QIAO Jin-wei	(347)
Study on quality status of mineral medicine Calamina	
SONG Guang-feng, ZHANG Zhi-jie, LI Rao-ao, SONG Chen, LIN Rui-chao	(352)
Effect of butyl alcohol extract of Baitouweng Decoction on vaginal mucosal neutrophil chemotaxis in vulvovaginal candidiasis mice	
JIANG Jing-jing, YUN Yun, ZHANG Meng-xiang, YANG Yu, DUAN Qiang-jun, WANG Tian-ming, SHAO Jing, WANG Chang-zhong	(361)
Study on protective effect of vanillic acid from <i>Astragalus membranaceus</i> on hypertensive cardiac remodeling based on network pharmacology screen	
WANG Bo-yang, LIU Tian-long, LIU Jing, ZHANG Ming-jie, SUN Jian-jun, LIU Xiao-lei, MA Rui-lian	(367)
Screening combination ratio and exploring mechanism of Momordicae Semen and Epimedii Folium	
KAN Yue-yi, WANG Ya-jie, LI Jun, PANG Dao-ran, YANG Qing, LI Qi, LI Yu-jie, WENG Xiao-gang, CHEN Ying, CAI Wei-yan, ZHU Xiao-xin	(374)
Establishment of rat heart-kidney insomnia model consistent with traditional Chinese medicine syndrome and its serum metabolomics	
YANG Yu-han, SUN Yu, WANG Jun, JIANG Hai-qiang, CUI Ning, SU Ben-zheng, YU Zong-yuan	(383)
Analysis of metabolites of 4,5-dicaffeoylquinic acid in rat plasma and urine based on LC-MS	
ZHAN Mei-rong, JIA Yi-qun, CHEN Long, WANG Xia-lei, WANG Yu	(391)
Untargeted metabolomics study of ginseng in treatment of spleen-Qi deficiency	
WANG Ni, ZHANG Na, LI Tie, WANG Mei, HUANG Xin, LIU Shu-ying	(398)
Differences in intestinal absorption characteristics of <i>Laportea bulbifera</i> extract in normal and rheumatoid arthritis model rats by isolated everted intestine model	
LI Ying, CHEN Si-ying, GONG Zi-peng, KANG Ning-fang, WU Dan, TANG Juan, LI Yue-ting, PAN Jie, HUANG Yong, ZHENG Lin, LAN Yan-yu, LI Yong-jun, WANG Yong-lin	(405)
Study on potential hepatotoxicity of rhein in Rhei Radix et Rhizoma based on liver metabolism	
WANG Qi, WANG Ya-dan, YANG Jian-bo, LIU Yue, WEN Hai-ruo, MA Shuang-cheng	(412)
Effects of gut microbiota on five absorbed components of <i>Berberis kansuensis</i> in rat serum by HPLC-QqQ-MS	
DU Huan, XU Xin-mei, XU Tong, LI Qi, ZHAO Cheng-cheng, YI Huan, FAN Gang	(418)
Network Meta-analysis of effect of traditional Chinese medicine injections in adjuvant treatment of mycoplasma pneumonia in children	
PAN Gui-yun, MA Rong, ZHANG Xi-lian, SUN Huan, YAN Hai-hong, RONG Ping	(425)
Efficacy of Shensong Yangxin Capsules in treating bradycardia combined with premature beat: a systematic review and Meta-analysis of randomized clinical trials	
YANG Hao-xin, DAI Yan-yan, GONG Xi-hao, ZHAO Guo-zhen, GOU Jin, ZHANG Xiu-wen, XIN Yu, LI Bo	(436)
Analysis and monitoring of traditional Chinese medicines for tumor based on data mining	
WANG Xiao-xia, HAN Yuan-yuan, SHI Gui-ying, HU Li-mei, LU Ping, LIU Fang	(444)
Huangqin Qingre Chubi Capsules in improving oxidative stress of patients with ankylosing spondylitis via activating PPARγ mediated AMPK/FOXO3a pathway	
HUANG Dan, LIU Jian, ZONG Rui-kai, WAN Lei	(451)

ZHONGGUO ZHONGYAO ZAZHI

第45卷 第2期

Vol. 45 No. 2

2020/2

中国中药杂志

CHINA JOURNAL OF CHINESE MATERIA MEDICA

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
图 文 制 作 同方知网(北京)技术有限公司
印 刷 山西同方知网印刷有限公司
订 阅 发 行 同方知网(北京)技术有限公司
出 版 日 期 2020年1月15日
国际标准连续出版物号 ISSN 1001-5302
国内统一连续出版物号 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

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

Graphics produced by

Tongfang Kownledge 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

January 15, 2020

ISSN 1001-5302 CN 11-2272/R

ISSN 1001-5302



国内定价: 50.00元