

# Medical Science Journal of Central South China

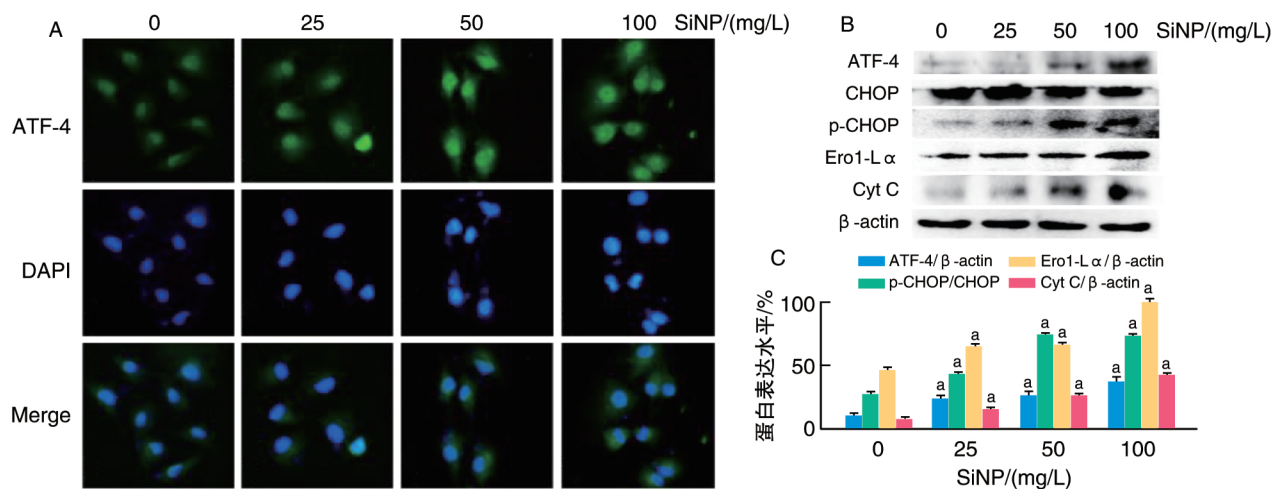
# 中南医学科学杂志

Zhongnan Yixue Kexue Zazhi

## 二氧化硅纳米颗粒致HUVEC内质网应激的机制

姜小军<sup>1</sup>, 薛盼盼<sup>1</sup>, 陈舒婷<sup>1</sup>, 高慧倩<sup>2</sup>, 封少龙<sup>2</sup>

(1.南华大学衡阳医学院公共卫生学院, 湖南省衡阳市421001; 2.桂林医学院公共卫生学院预防医学研究所, 广西壮族自治区桂林市541199)



ISSN 2095-1116



2022年9月

第5期  
第50卷

# 中南医学科学杂志

ZHONGNAN YIXUE KEXUE ZAZHI

双月刊

1973 年创刊

第 50 卷第 5 期

2022 年 9 月出版

## 主 管

湖南省教育厅

## 主 办

南华大学

## 学术支持单位

衡阳市中心医院

## 编辑出版

《中南医学科学杂志》编辑部

地址：湖南省衡阳市，南华大学内

邮政编码：421001

电话：0734-8160781

E-mail: znykxzz@vip.163.com

网址：http://nhqks.cnjournals.com/yx/

## 主 编

文格波

## 副主编

吴移谋 姜志胜

雷小勇 容益康

## 编辑部主任

李小玲

## 广告经营许可证号

4304047440022

## 印 刷

长沙市和一印刷设备有限公司

## 发 行

国内：中国邮政集团公司湖南省报刊发行局

国外：中国国际图书贸易集团有限公司

(中国北京 399 信箱,100044)

## 订 购

全国各地邮局

邮发代号：国内 42-396

国外 Q4353

## 邮 购

《中南医学科学杂志》编辑部

## 定 价

每期 10 元,全年 60 元

## 国际标准连续出版物号

ISSN 2095-1116

## 国内统一连续出版物号

CN 43-1509/R

本刊若有印刷和装订质量问题，  
请向编辑部对换。

## 目 次

### · 环境与心血管健康 ·

关注内外环境风险因素损伤心血管系统健康的机制及其预防

..... 封少龙(625)

二氧化硅纳米颗粒致 HUVEC 内质网应激的机制

..... 姜小军, 薛盼盼, 陈舒婷, 高慧倩, 封少龙(628)

大蒜素改善 PM<sub>2.5</sub> 致 HUVEC 氧化应激和凋亡

..... 薛盼盼, 刘远凤, 姜小军, 封少龙(632)

琥珀酸/GPR91 轴在动脉粥样硬化中的研究进展

..... 李璐, 危当恒(637)

### · 特约约稿 ·

梅毒螺旋体溶血素生物信息学分析

..... 吴移谋, 李思佳, 李威威, 杨鸿钰, 唐园园, 余翔, 王建业(642)

### · 基础医学 ·

基于网络药理学与分子对接技术探讨白花蛇舌草治疗鼻咽癌

作用机制 ..... 龙远雄, 徐寅, 邓桂明(647)

miR-26a 下调 TET 抑制人宫颈癌 HeLa 细胞增殖与侵袭

..... 雷林宸, 谭志琴, 杨春秀, 刘玲燕, 吴鹏(652)

白喉乌头对 RA 大鼠 B10 细胞和炎症因子的影响

..... 孟岩, 丛珊, 罗莉(657)

miR-125a-3p 靶向作用 P2RX7 抑制糖尿病肾病小鼠肾纤维化发展

..... 蒋伟, 郑东辉, 李海伦, 徐永(661)

r-hGH 联合 DHEA 对卵巢低反应小鼠 GDF-9、AGE、RAGE 表达的影响

..... 刘明颖, 金鑫, 王惠华, 孙强(666)

lncRNA C2dat2 调控小鼠大脑中动脉栓塞再灌注损伤及神经元自噬

和凋亡 ..... 贾文歆, 于振江, 王丽香, 周雪梅(670)

蜂毒肽通过线粒体凋亡途径促进皮肤鳞状细胞癌 A431 细胞株对

5-FU 的敏感性 ..... 宋晗, 田庆均(675)

### · 临床医学 ·

非小细胞肺癌患者外周血 CD8<sup>+</sup>CD39<sup>+</sup>T 细胞水平及临床意义

..... 谢军, 范翀, 刘靖, 张驰, 李侠, 胡东(680)

双歧杆菌四联活菌片联合四联疗法对 HP 阳性胃溃疡患者血清

TGF-β1、G17、PGI 的影响 ..... 彭琴, 张清(684)

早期降压治疗对不同 TOAST 分型 AIS 合并血压升高患者疗效及预后的影响 ..... 乔娜, 耿德勤(687)

长链非编码 RNA GAS5 靶向调控 miR-424 表达抑制宫颈癌 HeLa 细胞增殖 ..... 周勇, 徐志渊, 王莺(691)

ERAS 对肝外胆管结石患者术后早期炎症反应的影响 ..... 韩绍伟, 周玖桥, 李季男, 李珍发(696)

KIAA1456 靶向调控 Runx1 抑制肺癌 A549 细胞增殖和侵袭 ..... 张杨勇, 冯媛, 王二愿, 周锋, 董济民(699)

T 淋巴细胞亚群水平对 IPF 诊断及预后的评估价值 ..... 刘薇, 张新, 席素雅, 王晓静(703)

真空辅助阴道分娩牵引力与新生儿不良结局的关系 ..... 陈文芬, 徐丽群, 胡桂英, 熊文雯(707)

SAP 患儿 MIP-1 $\alpha$ 、TGF- $\beta$ 1、IL-10 水平及其临床意义 ..... 孙敬, 范亚莉, 刘润武, 张忠刚, 周生元(710)

官腹腔镜联合手术治疗 II、III 型子宫瘢痕妊娠的疗效分析 ..... 于显博, 李程程, 朱萍, 韩哲, 赵立霞(713)

强化 VMO 训练联合玻璃酸钠治疗 CP 的疗效观察 ..... 韩大鹏, 吕丽君, 欧阳桂林, 肖连波(716)

基于影像学回顾分析胆道恶性肿瘤淋巴结转移规律 ..... 刘斌, 周丽君, 邓坦(720)

乳酸菌联合三联疗法治疗幽门螺杆菌相关复发性口腔溃疡的疗效分析 ..... 吴学文, 吴丹, 张海燕(724)

受控衰减参数和肝脏硬度检测对肝纤维化的评估价值 ..... 江浩, 魏米琳, 石英娜(728)

低分子肝素联合卡维地络对 COPD 合并心力衰竭患者心肺功能和相关指标的影响 ..... 缪雄, 吉鹏, 钱晶, 陆洋(732)

超声弹性成像检测应变率比值、剪切波速度与颈动脉斑块稳定性及脑梗死发病的关系 ..... 王明侠, 彭玉荣(736)

喜炎平联合阿奇霉素序贯治疗小儿支原体肺炎的疗效及对微炎症状态和免疫指标的影响 ..... 王勇, 王臻頔(740)

戈舍瑞林联合妇科千金胶囊对子宫内膜异位症术后血流动力学及雌激素水平的影响 ..... 黄昌萍, 李蓓, 杨小蕾(744)

官腹腔镜-来曲唑对子宫内膜异位症患者血清炎症因子及 ENA-78、MCP-1 的影响 ..... 马翠, 自辉, 薛潇(747)

外周大动脉弹性、胰岛素抵抗、血清 Hcy 和 hs-CRP 对心血管疾病筛查的临床意义 ..... 李必昭(750)

地特胰岛素与甘精胰岛素对 2 型糖尿病合并痛风患者血尿酸、胰岛素抵抗、IL-1 $\beta$ 、TLR-4 水平的影响 ..... 林丽, 王锡携, 王爱娇(754)

丁螺环酮联合米氮平与正念认知疗法对高血压合并抑郁症患者血压、HAMD17 评分的影响 ..... 孙丽丽, 胡伟, 范秋瑾, 朱锋利(758)

血清 ANGPTL4、VE-cadherin 水平与急性脑梗死患者颈动脉易损斑块的关系 ..... 黄颖, 胡存昆(762)

血清 CYP2R1 对核苷类似物/IFN- $\alpha$  治疗 CHB 疗效的预测价值 ..... 王元英(765)

• 文献综述 •

细胞膜片在骨与软骨组织修复及再生中的研究进展 ..... 谢聪, 李里, 廖俊琳(769)

单细胞测序技术在肿瘤中的研究进展 ..... 邓南星, 白雪, 张志伟(773)

脂噬在脂代谢疾病中的调控作用 ..... 谭艳美, 谭艳飞, 蒙国照, 谭玉林(777)

---

---

# Medical Science Journal of Central South China

Bimonthly, Established in 1973

Volume 50, Number 5

September, 2022

---

## Responsible Institution

Department of Education of  
Hunan Province

## Sponsoring Institution

University of South China

## Academic Support Unit

Central Hospital of Hengyang

## Editor and Publisher

Editorial Staff of Medical  
Science Journal of Central  
South China

University of South China,  
Hengyang, Hunan 421001, China  
Tel: 0734-8160781  
E-mail: znyxkzz@vip.163.com  
http://nhqks.cnjournals.com/yx/

## Editor-in-chief

WEN Gebo

## Associate Editor-in-chief

WU Yimou JIANG Zhisheng  
LEI Xiaoyong RONG Yikang

## Managing Director

LI Xiaoling

## Printing

Changsha Heyi Printing Equipment  
Co., Ltd.

## Overseas Distributor

China International Book  
Trading Corporation  
P. O. box 399, Beijing, China  
Code No. Q4353

## Domestic Subscription

Post Office, China  
Code No. 42-396

## Mail-Order

Editorial Staff of Medical  
Science Journal of Central  
South China

## CSSN

ISSN 2095-1116  
CN 43-1509/R

## Price

¥ 10.00

---

This issue was edited by  
ZHU Wenxia

## CONTENTS

### · ENVIRONMENT AND CARDIOVASCULAR HEALTH ·

Focus on the mechanisms underlying the damages of internal and external environmental risk factors

on cardiovascular health and their prevention ..... FENG Shaolong(625)

Molecular mechanisms of endoplasmic reticulum stress induced by silica nanoparticles in human

umbilical vein endothelial cell

..... JIANG Xiaojun, XUE Panpan, CHEN Shuting, GAO Huiqian, FENG Shaolong(628)

Mechanism of Allicin in improving oxidative stress and apoptosis of HUVEC induced by PM<sub>2.5</sub>

..... XUE Panpan, LIU Yuanfeng, JIANG Xiaojun, FENG Shaolong(632)

Research advances of the succinate/GPR91 axis in atherosclerosis

..... LI Lu, WEI Dangheng(637)

### · SPECIAL CONTRIBUTION ·

Bioinformatics analysis of hemolysin family proteins of *Treponema pallidum* ..... WU Yimou,

LI Sijia, LI Weiwei, YANG Hongyu, TANG Yuanyuan, YU Xiang, WANG Jianye(642)

### · BASIC MEDICINE ·

Mechanism of Hedyotis diffusa in the treatment of nasopharyngeal carcinoma based on network

pharmacology and molecular docking technology

..... LONG Yuanxiang, XU Yin, DENG Guiming(647)

miR-26a inhibits the growth and invasion of human cervical cancer HeLa cells by down-regulating TET

..... LEI Linchen, TAN Zhiqin, YANG Chunxiu, LIU Lingyan, WU Peng(652)

Effects of aconitum diphtheria on B10 cells and inflammatory cytokines in RA rats

..... MENG Yan, CONG Shan, LUO Li(657)

miR-125a-3p targeting P2RX7 inhibits the development of renal fibrosis in micewith diabetic nephropathy

..... JIANG Wei, ZHENG Donghui, LI Hailun, XU Yong(661)

Effects of r-hGH combined with DHEA on the expression of GDF-9, AGE and RAGE in ovarian

hyporesponsiveness mice ..... LIU Mingying, JIN Xin, WANG Huihua, SUN Qiang(666)

The lncRNA C2dat2 regulates reperfusion injury and neuronal autophagy and apoptosis in middle

cerebral artery embolized mice

..... JIA Wenxin, YU Zhenjiang, WANG Lixiang, ZHOU Xuemei(670)

Melittin promoting 5-FU sensitivity of skin squamous cell carcinoma A431 cell line through

mitochondrial apoptosis pathway ..... SONG Han, TIAN Qingjun(675)

### · CLINICAL MEDICINE ·

Expression and clinical significance of peripheral blood CD8<sup>+</sup>CD39<sup>+</sup>T cells in patients with non-small

cell lung cancer ..... XIE Jun, FAN Chong, LIU Jing, ZHANG Chi, LI Xia, HU Dong(680)

Effect of Bifidobacterium tetralogy combined with quadruple therapy on serum TGF-1, G17, and PGI

in patients with HP-positive gastric ulcer ..... PENG Qin, ZHANG Qing(684)



Effect of early antihypertensive therapy times on the efficacy and prognosis of patients with different TOAST type AIS complicated with elevated blood pressure .....	QIAO Na, GENG Deqin(687)
Long non-coding RNA GAS5 targets the expression of miR-424 and inhibits the proliferation of cervical cancer HeLa cells .....	ZHOU Yong, XU Zhiyuan, WANG Qian(691)
Effect of ERAS on early postoperative inflammatory response in patients with extrahepatic cholangiolithiasis .....	HAN Shaowei, ZHOU Jiuqiao, LI Jinan, LI Zhenfa(696)
KIAA1456 inhibit proliferation and invasion of non-small cell lung cancer A549 cells by targeting Runx1 .....	ZHANG Yangyong, FENG Yuan, WANG Eryuan, ZHOU Feng, DONG Jimin(699)
Value of T lymphocyte subsets in the diagnosis and prognosis with IPF .....	LIU Wei, ZHANG Xin, XI Suyu, WANG Xiaojing(703)
The relationship between vacuum assisted vaginal delivery traction and neonatal adverse outcomes .....	CHEN Wenfen, XU Liqun, HU Guiying, XIONG Wenwen(707)
Serum levels of MIP-1 $\alpha$ , TGF- $\beta$ 1 and IL-10 in children with SAP and clinical significance .....	SUN Jing, FAN Yali, LIU Runwu, ZHANG Zhonggang, ZHOU Shengyuan(710)
Clinical efficacy analysis of hysteroscopy combined with laparoscopy in the treatment of type II and III uterine scar pregnancy .....	YU Xianbo, LI Chengcheng, ZHU Ping, HAN Zhe, ZHAO Lixia(713)
Efficacy observation of intensive VMO training combined with sodium hyaluronate in the treatment of CP .....	HAN Dapeng, LYU Lijun, OUYANG Guilin, XIAO Lianbo(716)
A retrospective analysis of lymph node metastasis in biliary tract cancer based on imaging .....	LIU Bin, ZHOU Lijun, DENG Tan(720)
Effecacy of lactobacillus combined with triple therapy on Helicobacter pylori-related recurrent oral ulcer .....	WU Xuewen, WU dan, ZHANG Haiyan(724)
Evaluation value of controlled attenuation parameter and liver stiffness measurement for liver fibrosis .....	JIANG Hao, WEI Milin, SHI Yingna(728)
Effects of low molecular weight heparin combined with carvedilol on cardiopulmonary function and related indexes in patients with COPD complicated with heart failure .....	MIAO Xiong, JI Peng, QIAN Jing, LU Yang(732)
Relationship between strain rate ratio, shear wave velocity and carotid plaque stability and cerebral infarction detected by ultrasonic elastography .....	WANG Mingxia, PENG Yurong(736)
Efficacy of Xiyanping combined with azithromycin sequential therapy in the treatment of mycoplasma pneumoniae pneumonia in children and its effects on microinflammatory status and immune indexes .....	WANG Yong, WANG Zhenjie(740)
Effect of goserelin combined with Fukeqianjin capsule on hemodynamics and estrogen level in patients with endometriosis .....	HUANG Changping, LI Bei, YANG Xiaolei(744)
Effects of uterine laparoscopy-letrozole on serum inflammatory factors, ENA-78 and MCP-1 in patients with endometriosis .....	MA Cui, ZI Hui, XUE Xiao(747)
The clinical significance of peripheral aortic elasticity, insulin resistance, serum Hcy and hs-CRP in screening of cardiovascular disease .....	LI Bizhao(750)
Effects of insulin detemir and insulin glargine on serum uric acid, insulin resistance and IL-1 $\beta$ /TLR-4 expression in the treatment of type 2 diabetes mellitus with gout .....	LIN Li, WANG Xixie, WANG Aijiao(754)
Effects of buspirone combined with mirtazapine and mindfulness cognitive therapy on blood pressure and HAMD17 score in patients with hypertension complicated with depression .....	SUN Lili, HU Wei, FAN Qiuqin, ZHU Fengli(758)
Relationship between the levels of serum ANGPTL4, VE-cadherin and carotid plaque in patients with acute cerebral infarction .....	HUANG Ying, HU Cunkun(762)
Serum CYP2R1 pair nucleoside analogues/IFN- $\alpha$ predictive value of efficacy in the treatment of CHB .....	WANG Yuanying(765)

· LITERATURE REVIEW ·

Progress of cell sheet in repair and regeneration of bone and cartilage tissue .....	XIE Cong, LI Li, LIAO Junlin(769)
Research progress of single cell sequencing technology in tumor .....	DENG Nanxing, BAI Xue, ZHANG Zhiwei(773)
The regulatory role of lipophagy in lipid metabolism diseases .....	TAN Yanmei, TAN Yanfei, MENG Guozhao, TAN Yulin(777)