

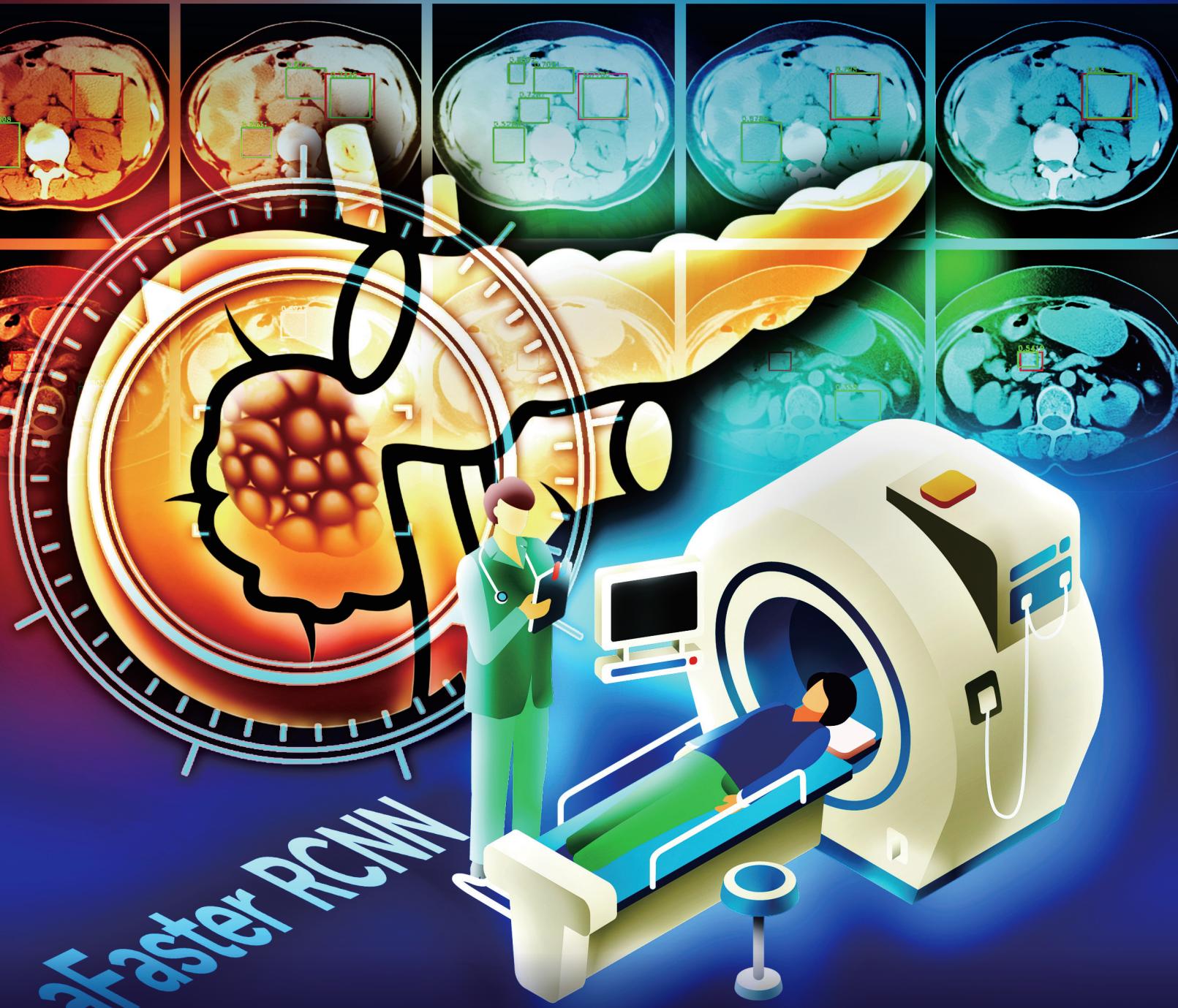
ISSN 1673-4254

CN 44-1627/R

# Journal of Southern Medical University

# 南方医科大学学报

Volume 43 Number 5 May 2023 | 第43卷 第5期 2023年5月



afaster RCNN

中国科技期刊卓越行动计划资助期刊



# 南方医科大学学报

第 43 卷 第 5 期 2023 年 5 月

## 目 次

### 基础研究

- 680** EHHADH是肝细胞癌脂肪酸代谢通路的关键基因:基于转录组分析  
谢思雨,李森生,江峰乐,易 茜,杨 魏
- 694** 左归降糖解郁方促进糖尿病并发抑郁症大鼠的海马齿状回神经干细胞的自我更新并激活Shh信号通路  
杨 蕙,王 华,李成龙,何 雄,雷诗卉,李 瓯,孟 盼,王瑾茜,刘 检,王宇红
- 702** 芦荟苷可抑制胃癌细胞的增殖和迁移:基于下调STAT3/HMGB1信号通路  
葛 菲,万梦琪,程振宇,陈雪雷,陈芊伊,戚之琳
- 710** RITA体外选择性抑制BAP1缺失的皮肤黑色素瘤细胞的生长  
石文惠,刘小莲,张贵明,叶林萱,周润华,李亦蕾,余 乐
- 718** 激活小鼠ZI区GABA能神经元可促进七氟醚和丙泊酚的麻醉诱导而对麻醉维持及觉醒无影响  
曹福羊,郭永馨,郭舒婷,周志康,曹江北,全 黎,米卫东
- 733** S100A10可促进肺腺癌细胞的增殖和侵袭:基于激活Akt-mTOR信号通路  
王会杰,孙珍贵,赵文英,耿 虍
- 755** aFaster RCNN:一种基于平扫CT的多疾病阶段胰腺病灶检测模型  
梁利渡,张浩杰,鲁 倩,周陈杰,李淑龙
- 764** 吡罗克酮乙醇胺盐通过PI3K/AKT通路破坏胶质瘤细胞的线粒体动力学  
徐文琴,叶静静,王 飞,陈天兵
- 772** 桂枝甘草汤通过多靶点、多通路治疗心力衰竭:基于网络药理学方法  
赵宇曦,赵 旭,朱清楠,朱炳睿,张震彬,陈 静
- 783** 嵌入式3D打印多孔硅胶义眼台及其表面修饰  
赵 宏,王艺霖,汪艳芳,宫海环,殷俊飞扬,崔晓军,张剑凯,黄文华
- 807** LINC00926通过募集ELAVL1促进低氧诱导的人脐静脉血管内皮细胞焦亡  
姜 勇,葛文婷,赵 莹,吴煜格,霍一鸣,潘岚婷,曹 爽
- 825** 决明子总蒽醌提取物抗氟尿嘧啶致小鼠肝损伤的谱效关系  
王 恒,李梦奇,李燊星,史精干,黄 莉,程索婷,邹纯才,鄢海燕
- 832** TPGS修饰的载胰岛素脂质体眼用制剂的制备及其在兔眼的离体角膜渗透与药代动力学  
张 丹,杜之渝
- 852** 严重型脊髓性肌萎缩症小鼠肝脏代谢紊乱的分子病理机制  
刘力赫,朱明芮,王一凡,万 波,姜 智
- 859** 奇异变形杆菌*modABC*基因缺失株的构建及其生物学特性  
黄 伊,丁 信,黄 楠,陈灿雄,邓小燕

### 临床研究

- 667** FARSB对泛肿瘤的预后和冷肿瘤微环境的分层作用:基于整合单细胞和大块组织的DNA测序  
张自然,谭家乐,于子航,刘承栋,王 剑,吴德华,白 雪





- 727 健康人群和慢性阻塞性肺疾病患者的血清维生素D与血嗜酸性粒细胞计数的关系  
王 敏,张 茜,徐桂铃,黄淑榆,赵文驱,梁健鹏,黄俊文,蔡绍曦,赵海金
- 741 AF4/FMR2、IL-10基因多态性与强直性脊柱炎的遗传易感性和免疫浸润相关  
穆 杰,徐永申,朱 辉
- 749 环状RNA hsa\_circ\_0087893可能通过ceRNA机制参与早产儿脑室内出血的发生和发展  
陈茹娟,武 伟,邱银萍
- 793 听神经瘤伴耳鸣患者的脑电微状态  
张 驰,王晓光,丁志伟,周函汶,刘 鹏,薛鑫森,曹 伟,朱玉华,陈继跃,申卫东,杨仕明,王方园
- 800 透明细胞癌可能性评分v1.0和v2.0的应用价值对比  
郝雨薇,高 升,张潇月,崔梦秋,丁效蕙,王 鹤,杨大为,叶慧义,王海屹
- 868 超声引导下无水乙醇硬化结合微波消融治疗功能性甲状腺囊肿1例  
王 丹,吴凤林,薛耀明,林晓纯,张 倩

## 技术方法

- 815 肾小球超微结构分割算法:基于区域级对比学习的深度模型  
林国钰,张桢泰,路艳蒙,耿 舰,周志涛,路利军,曹 蕾
- 839 深度注意力机制结合临床特征预测肝细胞癌微血管浸润  
巩 高,曹 石,肖 慧,方威扬,阙与清,刘子蔚,陈超敏

**封面图片:**胰腺癌,是一种高度恶性的肿瘤,素有“癌王”之称,具有诊断难、预后差和病死率高等特点。平扫CT由于费用低,普及广,在发展高危无症状人群的胰腺癌筛查技术上具有巨大潜力。aFaster RCNN通过构建综合考虑病灶形状和解剖结构的检测模型,可以有效提取平扫CT中的胰腺病灶特征,精确定位病灶区域(梁利渡,南方医科大学生物医学工程学院,正文见本期755~763页)。

主 编:黎孟枫

编 辑 部 主任:陈望忠

本期责任编辑:余诗诗

英文责任编辑:宋建武

本期技术编辑:林立华

本期责任校对:孙昌朋 吴锦雅 经 媛 林 萍

本期责任编务:刘红艳

期刊基本参数:CN 44-1627/R\*1981\*m\*A4\*120\*zh+en\*P\*¥10:00\*1500\*24\*2023-05

出 版 日 期:2023-5-20



**NANFANG YIKE DAXUE XUEBAO**  
**Journal of Southern Medical University**

Volume 43 Number 5 May 2023

**Contents**

**Basic Research**

- 680 EHHADH is a key gene in fatty acid metabolism pathways in hepatocellular carcinoma: a transcriptomic analysis  
XIE Siyu, LI Miao sheng, JIANG Fengle, YI Qian, YANG Wei
- 694 Zuogui Jiangtang Jieyu Decoction promotes neural stem cell self-renewal and activates Shh signaling in the hippocampal dentate gyrus of diabetic rats with depression  
YANG Hui, WANG Hua, LI Chenglong, HE Xiong, LEI Shihui, LI Wei, MENG Pan, WANG Jinxi, LIU Jian, WANG Yuhong
- 702 Aloin inhibits gastric cancer cell proliferation and migration by suppressing the STAT3/HMGB1 signaling pathway  
GE Fei, WAN Mengqi, CHENG Zhenyu, CHEN Xuelei, CHEN Qianyi, QI Zhilin
- 710 RITA selectively inhibits proliferation of BAP1-deficient cutaneous melanoma cells *in vitro*  
SHI Wenhui, LIU Xiaolian, ZHANG Guiming, YE Linxuan, ZHOU Runhua, LI Yilei, YU Le
- 718 Activation of GABAergic neurons in the zona incerta accelerates anesthesia induction with sevoflurane and propofol without affecting anesthesia maintenance or awakening in mice  
CAO Fuyang, GUO Yongxin, GUO Shuting, ZHOU Zhikang, CAO Jiangbei, TONG Li, MI Weidong
- 733 S100A10 promotes proliferation and invasion of lung adenocarcinoma cells by activating the Akt-mTOR signaling pathway  
WANG Huijie, SUN Zhengui, ZHAO Wenying, GENG Biao
- 755 Advanced Faster RCNN: a non-contrast CT-based algorithm for detecting pancreatic lesions in multiple disease stages  
LIANG Lidu, ZHANG Haojie, LU Qian, ZHOU Chenjie, LI Shulong
- 764 Piroctone olamine disrupts mitochondrial dynamics in glioma cells through the PI3K/AKT pathway  
XU Wenqin, YE Jingjing, WANG Fei, CHEN Tianbing
- 772 Therapeutic mechanism of *Guizhi Gancao* Decoction for heart failure: a network pharmacology-based analysis  
ZHAO Yuxi, ZHAO Xu, ZHU Qingnan, ZHU Bingrui, ZHANG Zhenbin, CHEN Jing
- 783 Embedded 3D printing of porous silicon orbital implants and its surface modification  
ZHAO Hong, WANG Yilin, WANG Yanfang, GONG Haihuan, YINJUN Feiyang, CUI Xiaojun, ZHANG Jiankai, HUANG Wenhua
- 807 LINC00926 promotes pyroptosis of hypoxia-induced human umbilical vein vascular endothelial cells by recruiting ELAVL1  
JIANG Yong, GE Wenting, ZHAO Ying, WU Yuge, HUO Yiming, PAN Lanting, CAO Shuang
- 825 Spectrum-effect relationship of total anthraquinone extract of *Cassia seeds* against fluorouracil-induced liver injury in mice  
WANG Heng, LI Mengqi, LI Shenxing, SHI Jinggan, HUANG Li, CHENG Suotong, ZOU Chuncui, YAN Haiyan
- 832 Preparation of an ophthalmic formulation of TPGS-modified insulin-loaded liposomes and its *in vitro* corneal permeation and pharmacokinetics in rabbit eyes  
ZHANG Dan, DU Zhiyu
- 852 Molecular pathological mechanism of liver metabolic disorder in mice with severe spinal muscular atrophy  
LIU Lihe, ZHU Mingrui, WANG Yifan, WAN Bo, JIANG Zhi
- 859 Construction and biological characterization of a *Proteus mirabilis* strain with *modABC* gene deletion  
HUANG Yi, DING Xin, HUANG Nan, CHEN Canxiong, DENG Xiaoyan

**Clinical Research**

- 667 FARSB stratifies prognosis and cold tumor microenvironment across different cancer types: an integrated single cell and bulk RNA sequencing analysis  
ZHANG Ziran, TAN Jiale, YU Zihang, LIU Chengdong, WANG Jian, WU Dehua, BAI Xue



- 727 Association between vitamin D level and blood eosinophil count in healthy population and patients with chronic obstructive pulmonary disease  
[WANG Min](#), [ZHANG Qian](#), [XU Guiling](#), [HUANG Shuyu](#), [ZHAO Wenqu](#), [LIANG Jianpeng](#), [HUANG Junwen](#), [CAI Shaoxi](#), [ZHAO Haijin](#)
- 741 AF4/FMR2 and IL-10 gene single nucleotide polymorphisms are correlated with disease susceptibility and immune infiltration in ankylosing spondylitis  
[MU Jie](#), [XU Yongshen](#), [ZHU Hui](#)
- 749 Circular RNA hsa\_circ\_0087893 participates in intraventricular hemorrhage occurrence and progression possibly as a competitive endogenous RNA in preterm infants  
[CHEN Ruijuan](#), [WU Wei](#), [QIU Yiping](#)
- 793 Electroencephalographic microstates in vestibular schwannoma patients with tinnitus  
[ZHANG Chi](#), [WANG Xiaoguang](#), [DING Zhiwei](#), [ZHOU Hanwen](#), [LIU Peng](#), [XUE Xinmiao](#), [CAO Wei](#), [ZHU Yuhua](#), [CHEN Jiyue](#), [SHEN Weidong](#), [YANG Shiming](#), [WANG Fangyuan](#)
- 800 Comparison of diagnostic performance of Clear Cell Likelihood Score v1.0 and v2.0 for clear renal cell carcinoma  
[HAO Yuwei](#), [GAO Sheng](#), [ZHANG Xiaoyue](#), [CUI Mengqiu](#), [DING Xiaohui](#), [WANG He](#), [YANG Dawei](#), [YE Huiyi](#), [WANG Haiyi](#)
- 868 Ultrasound-guided anhydrous ethanol and microwave ablation for functional parathyroid cyst: a case report  
[WANG Dan](#), [WU Fenglin](#), [XUE Yaoming](#), [LIN Xiaochun](#), [ZHANG Qian](#)

### Techniques and Methods

- 815 A region-level contrastive learning-based deep model for glomerular ultrastructure segmentation on electron microscope images  
[LIN Guoyu](#), [ZHANG Zhentai](#), [LU Yanmeng](#), [GENG Jian](#), [ZHOU Zhitao](#), [LU Lijun](#), [CAO Lei](#)
- 839 Prediction of microvascular invasion in hepatocellular carcinoma with magnetic resonance imaging using models combining deep attention mechanism with clinical features  
[GONG Gao](#), [CAO Shi](#), [XIAO Hui](#), [FANG Weiyang](#), [QUE Yuqing](#), [LIU Ziwei](#), [CHEN Chaomin](#)

**Cover image:** Pancreatic cancer is a highly malignant tumor with difficult diagnosis, poor prognosis and high mortality. As a low-cost and easily accessible imaging modality, non-contrast CT has shown great potential in screening pancreatic cancer in high-risk asymptomatic populations. aFaster RCNN can effectively extract pancreatic lesion features from non-contrast CT scans and accurately locate the lesion area by constructing a detection model that comprehensively considers the shape and anatomical structure of the lesion. Provided by LIANG Lidu (College of Biomedical Engineering, Southern Medical University). See full-text article on page 755-763 in this issue.

**Editor-in-Chief:** [LI Mengfeng](#)

**Editorial Director:** [CHEN Wangzhong](#)

**Executive Editor:** [YU Shishi](#)

**English Editor:** [SONG Jianwu](#)

**Executive Technical Editor:** [LIN Lihua](#)

**Executive Proofreaders:** [SUN Changpeng](#)    [WU Jinya](#)    [JING Yuan](#)    [LIN Ping](#)

**Photo Editor:** [LIU Hongyan](#)

**Publication Date:** 2023-5-20



## 中国科技期刊卓越行动计划资助期刊

## 百种中国杰出学术期刊

- ★ 美国 PMC (PubMed Central) 源期刊
- ★ 美国《医学索引》(PubMed) 源期刊
- ★ 美国《化学文摘》(CA) 源期刊
- ★ 荷兰《医学文摘》(EMBASE) 收录期刊
- ★ 荷兰 Scopus 收录期刊
- ★ 《中文核心期刊要目总览(2020年版)》收录期刊
- ★ 中国科学引文数据库(CSCD)源期刊
- ★ 中国核心期刊(遴选)数据库源期刊
- ★ RCCSE 中国权威学术期刊
- ★ 中国高校杰出科技期刊
- ★ 《国家科学技术期刊开放平台》收录期刊

南方医科大学学报

2023 年 5 月 20 日 第 43 卷第 5 期

月刊 1981 年创刊

主 管 单 位 广东省教育厅

主 办 单 位 南方医科大学

编 辑 出 版 南方医科大学学报编辑部

510515 广州市广州大道北 1838 号

电话: 020-61648176, 61647352 传真: 020-61648778

网址: [www.j-smu.com](http://www.j-smu.com) 电子邮箱: [jsmu@smu.edu.cn](mailto:jsmu@smu.edu.cn)

主 编 黎孟枫

印 刷 单 位 佛山市金华彩印刷有限公司

国 内 发 行 广东省报刊发行局

发 行 范 围 国内外

国 内 定 购 全国各地邮局

国 外 定 购 中国出版对外贸易总公司(北京 782 信箱)

ISSN 1673-4254  
CN 44-1627/R

国内邮发代号: 46-10

**Journal of Southern Medical University**

**Vol.43 No.5 May 2023**

**Monthly, Founded in 1981**

**Responsible Institution** Department of Education of  
Guangdong Province

**Sponsored by** Southern Medical University

**Edited and Published by** Editorial Department of Journal  
of Southern Medical University, Guangzhou 510515, China

Tel: 86-20-61648176, 61647352 Fax: 86-20-61648778

[Http://www.j-smu.com](http://www.j-smu.com), E-mail: [jsmu@smu.edu.cn](mailto:jsmu@smu.edu.cn)

**Editor-in-Chief:** LI Mengfeng

**Printed by** Foshan Jinhuacai Printing Co., Ltd

**Subscription**

Domestic: Local Post Offices

Foreign: China National Publications Trading

Export Corporation (P.O.Box. 782, Beijing, China)

