

CN 23-1544/R ISSN 1673-6273

CODEN SXJTA8



QK2249230



现代

XIANDAI

SHENGWU YIXUE JINZHAN

生物医学进展

PROGRESS IN MODERN
BIOMEDICINE



中国科技核心期刊
科技部中国科技论文统计源期刊
中国学术期刊网络出版总库 (CNKI) 收录期刊
美国化学文摘 (CA) 检索期刊
俄罗斯文摘杂志 (AJ) 收录期刊
英国国际农业与生物科学研究中心 (CABI) 数据库收录期刊
美国剑桥文摘 (CSA) 收录期刊
英国Global Health数据库收录期刊
Genamics Journal Seek收录期刊
美国ProQuest数据库收录期刊
美国EBSCO数据库收录期刊
波兰白尼索引 (IC) 收录期刊
WHO西太区医学索引 (WPRIM) 收录期刊



ISSN 1673-6273



24>

9 771673 627221

2022年 第22卷 (第24期)

Vol. 22 No. 24 December 2022

现代生物医学进展

XIANDAI SHENGWUYIXUE JINZHAN

半月刊 2001年4月创刊 第22卷 第24期 2022年12月30日出版 Progress in Modern Biomedicine

主 管:黑龙江省卫生健康委员会
主 办:黑龙江省森工总医院
哈尔滨医科大学附属第四医院
协 办:哈尔滨工业大学
上海交通大学附属第一人民医院
编 辑:现代生物医学进展编辑委员会
150040 哈尔滨市和兴路 32 号
电 话:0451-82583800
E-mail:biomed_54@126.com
E-mail:liudhui_21@126.com
E-mail:biomagnetism@163.com
http://biomed.cnjournals.com
http://www.shengwuyixue.com
http://swcx.periodicals.net.cn

学 术 顾 问: 杨宝峰 刘颂豪
阮长耿 曾溢滔 贺 林
张亭栋 王迺谦 刘玉清
郝希山 曾益新 张岂凡

执行主编: 吴文忠

主 编: 徐万海

副 主 编: 李 钰 张贵祥
黄文华 黄菊芳 刘 平
吕传柱 曾乐平 唐一源
曾凡一 刘 明 代文杰
张清媛

编辑部主任: 刘同奎

编辑部副主任:

刘子馨 谢建平 郑林丰

编辑部地址:150001,哈尔滨市 54 号信箱
(哈尔滨市花园街 184 号 403)

电 话:0451-82583800 0451-53658268

传 真:0451-82583966

出 版:现代生物医学进展杂志社

印 刷:哈尔滨市工大节能印刷厂

发 行:国内:哈尔滨市报刊发行局

国 外:中国国际图书贸易总公司

(北京 399 信箱,100044)

国外发行代号:Q1728

订 购:全国各地邮局

邮发代号:14-12

邮 购:现代生物医学进展编辑部

(150001 哈尔滨市 54 号信箱)

定 价:30.00 元 / 期,全年 720.00 元

中国标准刊号:ISSN 1673-6273
CN 23-1544/R

2022 年版权归现代生物医学进展杂志社所有

本刊刊出的所有文章不代表编委会的观点,
除非特别声明 本刊如有印刷质量问题,请向
现代生物医学进展杂志编辑部调换

目 次

·论 著·

·基础研究·

GPER 介导的丹参酮 II A 抗三阴性乳腺癌细胞

MDA-MB-231 迁移作用机制研究

..... 何悦双 刘 姣 石丹宁等 (4601)

糖尿病诱导 serpinE1 分泌增多对心肌细胞 NF- κ B 核易位

及凋亡的影响

..... 赵 娜 黄 璐 沈惺忆等 (4606)

SB239063 通过抑制 TNF- α 和 p38MAPK,减轻香烟烟雾暴露

变应性鼻炎大鼠 MKP-1 的表达

..... 左晶晶 陈金辉 明 伟等 (4612)

毛蕊异黄酮通过 JAK2/STAT3 信号通路抑制大鼠动脉粥样硬化

..... 王 欢 吴 燕 刘 洋等 (4618)

IGF-1 联合 BMP-2 对糖尿病合并骨质疏松股骨骨折大鼠中的

骨折愈合影响分析

..... 常 乐 赵轶男 宋 瑶等 (4627)

银杏叶提取物对 COPD 大鼠 p38MAPK/NF- κ B 信号通路的影响

..... 张鹏飞 廖丽君 何智群等 (4632)

刺槐素对大鼠心肌缺血再灌注损伤的保护作用与机制研究

..... 王洋洋 杨英来 信小兵等 (4639)

·临床研究·

COPD 合并肺间质纤维化患者临床特点及血清 TGF- β 1、

CTGF、TNF- α 检测意义分析

..... 李 宁 陈 谨 何耀红等 (4644)

13 例 SCN2A 基因突变相关儿童神经系统疾病表型分析

..... 刘 婕 王英燕 周昀菁等 (4648)

急性 Stanford A 型主动脉夹层患者术后发生急性肾损伤的影响

因素及术前尿 NGAL 联合血清 β 2-MG、Mb 的预测价值

..... 陈晴晴 曾智慧 樊小倩等 (4654)

现代生物医学进展

XIANDAI SHENGWUYIXUE JINZHAN

半月刊 2001年4月创刊 第22卷 第24期 2022年12月30日出版 Progress in Modern Biomedicine

多层螺旋 CT 联合血清淀粉酶、脂肪酶、D-二聚体、糖蛋白 2 对急性胰腺炎的

诊断价值研究 张智翔 刘高峰 谢 非等 (4659)

血清 CD5L 对肝脏疾病患者的临床意义研究 杨 澜 吴夏楠 刘 冲等 (4663)

老年心力衰竭患者营养不良的影响因素分析及早期肠内营养对营养不良患者心功能、

营养状况和肠道黏膜屏障功能的影响 金 迪 全静雯 蒋孟柳等 (4669)

阿尔茨海默病血清 miR-137、miR-138 表达与认知功能损害和外周血淋巴细胞

PI3K/Akt 信号通路的关系研究 周炜华 牛成山 邸平伟等 (4674)

外周血单核细胞 CHOP、NLRP3、S100A8/A9 mRNA 表达水平与脓毒症患者炎症反应和预后的关系分析

..... 李 楠 穆叶赛·尼加提 刘米莉等 (4679)

冠心病患者血清 Alarin 和 Chemerin 的表达水平与血管病变严重程度的相关性研究

..... 张凯歌 张燕子 陈 静等 (4686)

灯盏花素注射液联合依达拉奉注射液对未溶栓急性脑梗死患者神经功能、脑血流动力学

和血清炎症细胞因子的影响 李 辰 谭燕萍 毛振林等 (4691)

神经内镜与显微镜下经鼻蝶入路手术切除垂体腺瘤的临床疗效比较及术中出现脑脊液漏的危险因素分析

..... 陈 佳 万 勇 罗伟坚等 (4695)

口服补液盐联合米多君对小儿血管迷走性晕厥的疗效及血清电解质水平、Cor

和 BNP 表达水平的影响 梁妍琰 张国栋 苏学文等 (4700)

血清 klotho、FGF 水平与腹膜透析患者颈动脉粥样硬化的相关性 华 佳 张 悦 李瑞雪等 (4705)

慢阻肺患者运动负荷气道反应性与 T 细胞亚群的关系 张 怡 李 超 张 烈等 (4710)

慢性肺源性心脏病患者血清白细胞介素 -6、降钙素原、D-二聚体、N 端 B 型脑钠肽前体

与心功能分级和预后的关系研究 余志艳 彭 松 江 涛等 (4714)

阿戈美拉汀联合舍曲林治疗抑郁症伴失眠的疗效及对睡眠质量评分、多导睡眠监测参数

和血清神经递质的影响 陈 赛 李莎莎 熊 翔等 (4720)

醒脾养儿颗粒联合多潘立酮对功能性消化不良患儿血清胃肠激素、胃蛋白酶原和炎症因子的影响

..... 秦 艳 秦海荣 杜丽芳等 (4725)

早期综合康复联合穴位按摩对缺氧缺血性脑病患儿智力发育、生长发育和血清脑组织损伤标志物的影响

..... 吴新婷 卞伟妮 郑玲芳等 (4729)

点线面训练联合通督醒脑益肾健脾按摩对早产脑损伤患儿智力发育、运动发育和血清神经损伤标志物的影响

..... 郑艳芝 董晓斐 谭甘露等 (4734)

不同程度精索静脉曲张对不育男性精浆生化标志物及精子 DNA 完整性的影响

..... 杨 勇 王英男 全 超等 (4738)

后外侧与后内侧入路内固定术治疗旋后外旋型 IV 度踝关节骨折的回顾性对照研究

..... 孙舒雅 尹 宏 孙 欣等 (4742)

现代生物医学进展

XIANDAI SHENGWUYIXUE JINZHAN

半月刊 2001 年 4 月创刊 第 22 卷 第 24 期 2022 年 12 月 30 日出版 Progress in Modern Biomedicine

氧化锆强化硅酸锂玻璃陶瓷与 Lava Ultimate 优韧瓷嵌体修复根管治疗后大面积缺损牙的咀嚼能力和外观的比较研究 柴 雪 王小勤 赵广宁等 (4747)

多层螺旋 CT 联合彩色多普勒超声对小儿先天性胆总管囊肿的诊断价值分析 胡玲玲 刘 芬 田袁静等 (4752)

不同危险分层急性肺栓塞患者 D- 二聚体与纤维蛋白原比值、中性粒细胞与淋巴细胞比值、白蛋白的变化及其与预后的关系研究 王少飞 郑洪飞 李金玲等 (4758)

消肿散敷脐联合腹水超滤浓缩回输治疗肝硬化顽固性腹水的疗效及对肝肾功能、电解质和生活质量的影响 吴筱萍 张 弦 陶军秀等 (4763)

多囊卵巢综合征患者中血清维生素 D 和 Vaspin 水平的表达及其临床意义 贾姣姣 唐慧珍 范 焱等 (4768)

颅内压、颅温及血清 D- 二聚体、白蛋白预测重型颅脑损伤患者术后短期预后的临床价值研究 周 杰 芦 戡 李 波等 (4772)

槐耳颗粒联合 GP 方案治疗晚期非小细胞肺癌的疗效及对 Th1/Th2 免疫平衡和血清肿瘤标志物的影响 周柏村 季 欧 孙 巍等 (4777)

槐杞黄颗粒联合吸入糖皮质激素对支气管哮喘患儿肺功能、细胞免疫因子及 CCL3、CCL5 水平的影响 刘 琳 武 怡 孟令建等 (4781)

2 型糖尿病合并脑出血患者微创术后颅内感染与血液流变学的关系探究 毛文毅 赵呈进 赵振国等 (4786)

血清瘦素、鸢尾素、SHBG、AQP8 与 PCOS 不孕症接受 IVF-ET 患者激素水平和妊娠结局的关系研究 陈霞慧 赵莹莹 黄金娃等 (4790)

血清 25(OH)D、AMH 和 INHB 联合检测在卵巢储备功能低下患者体外受精 - 胚胎移植妊娠结局中的应用价值 陈莉莎 赵莹莹 黄金娃等 (4795)

·重要信息·

2022 年第 22 卷中文总目录 (1-24)

2022 年第 22 卷英文总目录 (25-72)

责任编辑:王念、武海艳、郭晓东、李寿朋、王国华、陈文、田向荣、曾垂凯、陶维东、王沛坚、崔玉宝
英文编辑:田林杰、王娟、杨尚琴、李媛媛、吕志刚、马军、符波、朱杰、许愿忠、靳大川、岳颖、陈芸芸
执行编辑:谢建平、曾乐平、刘子馨、郑林丰、韩康、周利红、周颖、张玉环、董佩锋、朱英杰、万民熙
封面设计:曾乐平、彭安安

Progress in Modern Biomedicine

Established in April 2001

Volume 22 Number 24

December 30 2022

Responsible: Health Commission of Heilongjiang province

Sponsor: Heilongjiang Province Forestry General Hospital
The Fourth Hospital of Harbin Medical
University

Cosponsor: Harbin Institute of Technology
Shanghai Jiao Tong University
Affiliated First People's Hospital

Editing: Editorial Board of Progress in Modern
Biomedicine

No.32, Hexing Road, Harbin 150040

Tel:(0451) 82583800

<http://biomed.cnjournals.com>

<http://www.shengwuyixue.com>

<http://swcx.periodicals.net.cn>

E-mail: biomed_54@126.com

E-mail: liudhui_21@126.com

E-mail: biomagnetism@163.com

Academic Adviser: YANG Bao-feng

LIU Song-hao RUAN Chang-geng

ZENG Yi-tao HE Lin

ZHANG Ting-dong WANG Nai-qian

LIU Yu-qing HAO Xi-shan

ZENG Yi-xin ZHANG Qi-fan

Executive-Editor-in-chief:

WU Wen-zhong

Editor-in-chief:

XU Wan-hai

Associate Editor-in-chief: LI Yu

ZHANG Gui-xiang HUANG Wen-hua

HUANG Ju-fang LIU Ping

LV huan-zhu ZENG Le-ping

TANG Yi-yuan ZENG Fan-yi

LIU Ming DAI Wen-jie

ZHANG Qing-yuan

Managing Director:

LIU Tong-kui

Managing Associate Director:

LIU Zi-xin XIE Jian-ping

ZHENG Lin-feng

Address of Editorial Department:

150001, Harbin No.54 Post-office box

(Room 403, No.184 at Huayuan Street, Harbin)

Tel: 0451-82583800 0451-53658268

Publishing: House, Journal of Progress in Modern
Biomedicine

Printing: Harbin city Gongda save energy
printing House

Overseas Distributor: China International
Book Trading corporation.

P.O Box 399, Beijing, code No.Q1728

Mail-Order: Editorial Department of publishing

House, Progress in Modern Biomedicine

Harbin 54 Post-office box, Harbin 150001

Tel: 0451-53658268 0451-82583800

ISSN 1673-6273

CSSN: CN 23-1544/R

Copyright 2022 by the publishing

House of Progress in Modern Biomedicine

All articles published represent the opinions of
the authors, do not reflect the official policy of
the Editorial Board of Progress in Modern Biomedicine
unless this is clearly specified.

Contents in Brief

ORIGINAL ARTICLES

·BASIC RESEARCH·

Investigation of Anti-migration Effect of Tanshinone II A Mediated by GPER on Triple-negative Breast Cancer Cells MDA-MB-231

HE Yue-shuang, LIU Jiao, SHI Dan-ning, et al

..... (4601)

Effects of Diabetes-induced Increase in SerpinE1 Secretion on Nuclear Translocation of NF- κ B and Apoptosis in Cardiomyocytes

ZHAO Na, HUANG Lu, SHEN Xing-yi, et al

..... (4606)

SB239063 Attenuates the Expression Level of MKP-1 Via Suppressing TNF- α and p38MAPK in Rats with Allergic Rhinitis Exposed to Cigarette Smoke

ZUO Jing-jing, CHEN Jin-hui, MING Wei, et al

..... (4612)

Calycoin Inhibits Rat Atherosclerosis through JAK2/STAT3 Signaling Pathway

WANG Huan, WU Yan, LIU Yang, et al

..... (4618)

Effect of IGF-1 Combined with BMP-2 on Fracture Healing in Diabetic Rats with Osteoporotic Femoral Fractures

CHANG Le, ZHAO Yi-nan, SONG Yao, et al

..... (4627)

Effects of Ginkgo Biloba Extract on p38MAPK/NF- κ B Signaling Pathway in Chronic Obstructive Pulmonary Disease Rats

ZHANG Peng-fei, LIAO Li-jun, HE Zhi-qun, et al

..... (4632)

Progress in Modern Biomedicine

Established in April 2001

Volume 22 Number 24

December 30 2022

Protective Effect and Mechanism of Acacetin

on Myocardial Ischemia Reperfusion Injury in Rats

WANG Yang-yang, YANG Ying-lai, XIN Xiao-bing, et al (4639)

·CLINICAL RESEARCH·

Clinical Characteristics of Patients with COPD and Pulmonary

Fibrosis and Detection Significance of Serum TGF-β1, CTGF and TNF-α

LI Ning, CHEN Jin, HE Yao-hong, et al (4644)

Phenotype of SCN2A Gene Mutation-related Neurological Diseases in Children of 13 Cases

LIU Jie, WANG Ying-yan, ZHOU Yun-qing, et al (4648)

Influencing Factors of Postoperative Acute Kidney Injury

in Patients with Acute Stanford Type A Aortic Dissection and the Predictive Value of

Preoperative Urine NGAL Combined with Serum β2-MG and Mb

CHEN Qing-qing, ZENG Zhi-hui, FAN Xiao-qian, et al (4654)

Diagnostic Value Study of Multi-Slice Spiral CT Combined with Serum Amylase,

Lipase, D-Dimer and Glycoprotein 2 in Acute Pancreatitis

ZHANG Zhi-xiang, LIU Gao-feng, XIE Fei, et al (4659)

Clinical Significance of Serum CD5L in Patients with Liver Disease

YANG Lan, WU Xia-nan, LIU Chong, et al (4663)

Analysis of Influencing Factors of Malnutrition in Elderly Patients with Heart Failure

and the Effect of Early Enteral Nutrition on Cardiac Function, Nutritional Status

and Intestinal Mucosal Barrier Function in Patients with Malnutrition

JIN Di, QUAN Jing-wen, JIANG Meng-liu, et al (4669)

Relationship Study between Serum miR-137, miR-138 Expression and Cognitive Impairment

and PI3K/Akt Signaling Pathway in Peripheral Blood Lymphocytes in Alzheimer's Disease

ZHOU Wei-hua, NIU Cheng-shan, DI Ping-wei, et al (4674)

Analysis of Relationship between CHOP, NLRP3 and S100A8/A9 mRNA Expression Levels

in Peripheral Blood Mononuclear Cells and Inflammatory Response

and Prognosis in Patients with Sepsis

LI Nan, Muyesai·Nijiati, LIU Mi-li, et al (4679)

Progress in Modern Biomedicine

Established in April 2001

Volume 22 Number 24

December 30 2022

Association of Serum Levels of Alarin and Chemerin with the Severity of	
Coronary Artery Disease Patients	
ZHANG Kai-ge, ZHANG Yan-zi, CHEN Jing, et al	(4686)
Effects of Breviscapine Injection Combined with Edaravone Injection on Neurological Function,	
Cerebral Hemodynamics and Serum Inflammatory Cytokines	
in Patients with Non Thrombolytic Acute Cerebral Infarction	
LI Chen, TAN Yan-ping, MAO Zhen-lin, et al	(4691)
Comparison of Clinical Efficacy between Neuroendoscope and Microscope Transsphenoidal	
Approach Surgery for Pituitary Adenomas and Analysis of Risk Factors of	
Cerebrospinal Fluid Leakage during Operation	
CHEN Jia, WAN Yong, LUO Wei-jian, et al	(4695)
Effect of Oral Rehydration Salts Combined with Midodrine on Serum Electrolyte,	
Expression Levels of Cor and BNP in the Treatment of Vasovagal Syncope	
LIANG Yan-yan, ZHANG Guo-dong, SU Xue-wen, et al	(4700)
Correlation between Serum Klotho, FGF Levels and Carotid Atherosclerosis	
in Patients with Peritoneal Dialysis	
HUA Jia, ZHANG Yue, LI Rui-xue, et al	(4705)
The Relationship between Exercise Load Airway Responsiveness and T Cell Subsets	
in Patients with Chronic Obstructive Pulmonary Disease	
ZHANG Yi, LI Chao, ZHANG Lie, et al	(4710)
Association Study of Serum Interleukin-6, Procalcitonin, D-Dimer	
and N-Terminal Pro-B-Type Brain Natriuretic Peptide and Cardiac Function Classification	
and Prognosis in Patients with Chronic Cor Pulmonale	
YU Zhi-yan, PENG Song, JIANG Tao, et al	(4714)
Efficacy of Agomelatine Combined with Sertraline in the Treatment of Depression with Insomnia	
and its Effects on Sleep Quality Score, Polysomnography Monitoring Parameters	
and Serum Neurotransmitters	
CHEN Sai, LI Sha-sha, XIONG Xiang, et al	(4720)

Progress in Modern Biomedicine

Established in April 2001

Volume 22 Number 24

December 30 2022

Effects of Xingpi Yanger Granule Combined with Domperidone on Serum

Gastrointestinal Hormones, Pepsinogen and Inflammatory Factors

in Children with Functional Dyspepsia

QIN Yan, QIN Hai-rong, DU Li-fang, et al (4725)

Effects of Early Comprehensive Rehabilitation Combined with Acupoint Massage

on Intellectual Development, Growth and Development and Serum Brain Tissue

Damage Markers in Children with Hypoxic-ischemic Encephalopathy

WU Xin-ting, BIAN Wei-ni, ZHENG Ling-fang, et al (4729)

Effects of Point, Line and Surface Training Combined with Tongdu Xingnao Yishen Jianpi Massage

on Intellectual Development, Motor Development and Serum Markers of Nerve Injury

in Premature Children with Brain Injury

ZHENG Yan-zhi, DONG Xiao-fei, TAN Gan-lu, et al (4734)

Effects of Varying Levels of Varicocele on Seminal Plasma Biochemical Markers

and Sperm DNA Integrity in Infertile Men

YANG Yong, WANG Ying-nan, QUAN Chao, et al (4738)

Retrospective Controlled Study of Posterolateral and Posteromedial Approaches Internal Fixation

in the Treatment of Supination and External Rotation Type IV Degree Ankle Fracture

SUN Shu-ya, YIN Hong, SUN Xin, et al (4742)

Comparative Study on Chewing Capacity and Appearance of Large Defect Teeth

after Root Canal Treatment with Zirconia Reinforced Lithium Silicate Glass Ceramic

and Lava Ultimate Ceramic Ingot

CHAI Xue, WANG Xiao-qin, ZHAO Guang-ning, et al (4747)

Diagnostic Value of Multi-Slice Spiral CT Combined with Color Doppler Ultrasound

in Children with Congenital Choledochal Cyst

HU Ling-ling, LIU Fen, TIAN Yuan-jing, et al (4752)

Changes of D-dimer to Fibrinogen Ratio, Neutrophil to Lymphocyte Ratio and Albumin

in Patients with Acute Pulmonary Embolism in Different Risk Stratification

and Their Relationship Study with Prognosis

WANG Shao-fei, ZHENG Hong-fei, LI Jin-ling, et al (4758)

Progress in Modern Biomedicine

Established in April 2001

Volume 22 Number 24

December 30 2022

Effect of Xiaozhangsan Applying Umbilicus Combined with Ultrafiltration Concentration and Reinfusion of Ascites in the Treatment of Refractory Ascites Due to Liver Cirrhosis and its Effect on Liver and Kidney Function, Electrolyte and Quality of Life WU Xiao-ping, ZHANG Xian, TAO Jun-xiu, et al	(4763)
Expression and Clinical Significance of Serum Vitamin D and Vaspin Levels in Patients with Polycystic Ovary Syndrome JIA Jiao-jiao, TANG Hui-zhen, FAN Lang, et al	(4768)
Clinical Value Study of Intracranial Pressure, Cranial Temperature, Serum D-Dimer and Albumin in Predicting the Postoperative Short-Term Prognosis of Patients with Severe Traumatic Brain Injury ZHOU Jie, LU Jian, LI Bo, et al	(4772)
Efficacy of Huaier Granule Combined with GP Regimen in the Treatment of Advanced Non-Small Cell Lung Cancer and its Effect on Th1/Th2 Immune Balance and Serum Tumor Markers ZHOU Bai-cun, JI Ou, SUN Wei, et al	(4777)
Effects of Huaiqihuang Granule Combined with Inhaled Glucocorticoid on Pulmonary Function, Cellular Immune Factors and CCL3 and CCL5 Levels in Children with Bronchial Asthma LIU Lin, WU Yi, MENG Ling-jian, et al	(4781)
Relationship between Intracranial Infection and Hemorheology in Patients with Type 2 Diabetes Mellitus and Cerebral Hemorrhage after Minimally Invasive Surgery MAO Wen-yi, ZHAO Cheng-jin, ZHAO Zhen-guo, et al	(4786)
Relationship Study between Serum Leptin, Irisin, SHBG and AQP8 and Hormone Levels and Pregnancy Outcome in Patients with PCOS Infertility Undergoing in IVF-ET CHEN Xia-hui, ZHAO Ying-ying, HUANG Jin-wa, et al	(4790)
Application Value of Combined Detection of Serum 25(OH)D, AMH and INHB in Pregnancy Outcome of In Vitro Fertilization-Embryo Transfer in Patients with Diminished Ovarian Reserve CHEN Li-sha, ZHAO Ying-ying, HUAGN Jin-wa, et al	(4795)



中国科技核心期刊

(中国科技论文统计源期刊)

收录证书

CERTIFICATE OF SOURCE JOURNAL

FOR CHINESE SCIENTIFIC AND TECHNICAL PAPERS AND CITATIONS

现代生物医学进展

经过多项学术指标综合评定及同行专家
评议推荐，贵刊被收录为“中国科技核心期
刊”（中国科技论文统计源期刊）。

特颁发此证书。

中国科学技术信息研究所

Institute of Scientific and Technical Information of China

北京复兴路 15 号 100038

www.istic.ac.cn

2021年12月

证书编号：2020-F250-1706
有效期至：2022年12月

万方数据

