



ISSN 1673-6273
CN 23-1544/R
CODEN SXJTA8

XIAN DAI SHENG WU YI XUE JIN ZHAN
现代生物医学进展
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

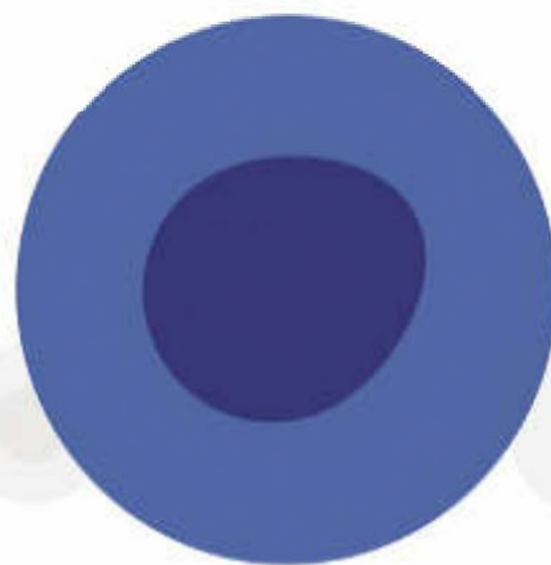
美国EBSCO数据库收录期刊

波兰哥白尼索引 (IC) 收录期刊

WHO西太区医学索引 (WPRIM) 收录期刊



Tumour cell



T cell

2019年第19卷 (第2期)

ISSN 1673-6273



9 771673 627191



现代生物医学进展

XIANDAI SHENGWUYIXUE JINZHAN

半月刊 2001年4月创刊 第19卷 第2期 2019年1月30日出版 Progress in Modern Biomedicine

主管:黑龙江省卫生厅
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
傅世英 王迺谦 刘玉清
郝希山 曾益新 张岂凡
主编: 赵长久
执行主编: 吴文忠
执行副主编: 孟庆刚
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
2019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·

Lefty1 对小鼠胚胎干细胞分化过程的影响
..... 刘洋 杜晋 吴平等 (201)

构建 ECE1 3'UTR 荧光素酶报告基因载体验证其
与 miR-199a-5p 靶向关系
..... 鲍宁 陈凤收 姜艳华等 (207)

携带小鼠白介素-4 截短型突变体基因的 5 型腺相关病毒载体
的构建及外源蛋白的体外表达
..... 田丽春 朱情情 刘艾洁等 (211)

对慢性鼻-鼻窦炎患者细菌生物膜检测方法的改良
..... 李晗 孙希才 刘全等 (217)

缺氧对大鼠脑微血管内皮细胞增殖和凋亡的影响及其机制研究
..... 李燕 田铸 徐梦林等 (222)

乙肝病毒 X 蛋白通过上调 NOX4 的表达活化肝星状细胞
..... 李海燕 贺红艳 黄凤霞等 (227)

PTPN9 的表达下调通过抑制 STAT3 活化促进结直肠癌细胞凋亡
..... 朱兴业 赵明 汪大伟等 (231)

FGFR1 通过调控 PI3K/AKT/mTOR 信号通路介导非小细胞肺癌
对吉非替尼的耐药
..... 陈坤 雷杰 张志培等 (236)

不同能量 CO₂ 点阵激光对博来霉素诱导的小鼠增生性瘢痕的作用
及 Hedgehog 信号通路的影响
..... 肖明明 张瑞芳 李灿等 (244)

TNF-α 对骨形成蛋白-2 诱导的小鼠 C2C12 细胞向成骨细胞分化
的影响及可能机制
..... 熊军 刘韦 曾凡等 (249)

·临床研究·

急诊科尿源性脓毒症的临床回顾性研究
..... 乔允 陆晓晔 徐欣晖等 (253)

现代生物医学进展

XIANDAI SHENGWUYIXUE JINZHAN

半月刊 2001年4月创刊 第19卷 第2期 2019年1月30日出版 Progress in Modern Biomedicine

不同浓度右美托咪定对低血红蛋白全麻患者脑氧饱和度的影响	黄 昕	杨延超	滕秀飞等	(258)
不同量表用于机械通气新生儿急性疼痛评估的价值分析	庞 玮	张海林	张小宝等	(262)
替格瑞洛与氯吡格雷对急性心肌梗死患者介入治疗后的心功能和炎症反应的影响	于海荣	王国宏	董丹丹等	(266)
丹参酮 II A 磺酸钠联合辛伐他汀治疗冠心病心绞痛的疗效及对血液流变学 和血清 TNF- α 、CRP、ET-1、NO 水平的影响	张洁函	庄少伟	鲁 成等	(270)
自体干细胞移植治疗胆汁性肝硬化的临床疗效及对患者肝脏弹力硬度、 血清 TGF- β 1、SIL-2R 水平的影响	朱疆依	朱玉侠	梅 琳等	(275)
半导体激光联合 CPP-ACP 对乳牙早期釉质龋再矿化的作用研究	黄鹏飞	刘 洋	朱颐馨等	(279)
综合性医院肿瘤相关感染病原菌分布及耐药性分析	刘 屹	朱亚宁	丰 航等	(284)
循环肿瘤细胞水平与卵巢癌患者临床病理特征及生存率的关系研究	赵 营	赵光日	吴蕴瑜等	(290)
膝骨关节炎患者磁共振成像骨髓病变的检出率及其影响因素分析	陈 丽	刘书林	杨 茹等	(295)
三维适形放疗与调强放疗对晚期非小细胞肺癌患者血清肿瘤标志物及 剂量学参数比较研究	王 峰	周琼芳	张红梅等	(300)
老年急性冠脉综合征患者血尿酸与血脂、HCY 及 hs-CRP 水平的关系研究	崔吉宏	徐 海	张金蓉等	(304)
信必可都保对慢性阻塞性肺疾病患者树突细胞的调节	朱咪咪	赵丽丽	别福鑫等	(308)
海南部分地区与省外非转移性浸润性乳腺癌患者临床病理参数的对比分析	薛天慧	崔美琦	游俊浩等	(312)
黑龙江省辖区内“120”急救中心调度员工作量及职业压力现状研究	赵承乾	崔延泽	李 妍等	(317)
低频电刺激联合间歇导尿及 Motomed 运动训练对脊髓损伤致神经源性膀胱患者膀胱内压力 及膀胱容量的影响	叶义清	纪 婕	吴玉霞等	(321)
川崎病患儿血浆中可溶性内皮细胞蛋白 C 受体、一氧化氮的表达及与 炎症反应和冠状动脉病变的关系	刘晓华	刘 霞	金 路等	(326)
老年骨关节置换术围术期发生脑梗死的危险因素分析及预防对策研究	孙 博	王静悦	蒋雨宸等	(330)
不同可行走式分娩镇痛方法对分娩结局及胎儿血氧饱和度的影响	刘少星	代月娥	曹德均等	(334)
骨康胶囊联合玻璃酸钠注射液治疗骨性关节炎的疗效及对炎症反应的影响	刘立民	周京源	郭 强等	(338)

现代生物医学进展

XIANDAI SHENGWUYIXUE JINZHAN

半月刊 2001年4月创刊 第19卷 第2期 2019年1月30日出版 Progress in Modern Biomedicine

肌肉效贴镇痛联合康复训练对脑卒中偏瘫患者下肢运动功能、步行参数和生活质量的影响	邵慧兴 马 力 刘湘敏等 (342)
围手术期应用 ω -3 多不饱和脂肪酸对胃癌根治术患者术后恢复及生活质量的影响	秦 龙 李 婷 任明扬等 (346)
血清 MMP-9 水平与急性脑梗死溶栓后出血转化的相关性及其预测意义	孙 凡 刘 恒 徐倩倩等 (350)
经皮椎间孔镜与椎板开窗椎间盘切除术治疗单节段单侧腰椎间盘突出症的对比研究	宋京涛 刘利民 黄 鹤等 (354)
卡前列素氨丁三醇注射液联合缩宫素对剖宫产出血患者 FIB 与 D-二聚体的影响	张丽武 黄春燕 李 凯等 (358)
青海地区献血者 HBV 感染隐匿风险与基因型分析	索晓东 赵 远 王青玲等 (362)
·技术与方法·	
适用于磁压榨吻合的平移钳的设计	田波彦 付 珊 赵广宾等 (366)
·文献计量学·	
生物医药科技前沿领域的识别研究	张 婷 陈 娟 欧阳昭连 (370)
·生物医学教学·	
以教学问题为基础的学习结合以授课为基础的学习教学法在呼吸系统教学中的应用	阳 甜 李 宏 李 丹等 (379)
·专论与综述·	
促进老年退行性关节炎软骨内源性修复的化合物研究进展	安琪儿 张 帅 江文字等 (383)
痛风的相关研究	王婷婷 徐衍华 郭玉倩等 (389)
急性胰腺炎伴脾脏密度减低的研究现状	周 阳 刘 丰 姜佳琪等 (393)
腹膜透析病人的预后影响因素	孟恬恬 唐 雯 周思佳等 (397)
·重要信息·	
《现代生物医学进展》杂志简介及投稿指南	(I ~ IV)

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 19 Number 2

January 30 2019

Responsible: The public Health Bureau 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
FU Shi-ying WANG Nai-qian
LIU Yu-qing HAO Xi-shan
ZENG Yi-xin ZHANG Qi-fan
Editor-in-chief:
ZHAO Chang-jiu
Executive-Editor-in-chief:
WU Wen-zhong
Associate-Executive-Editor-in-chief:
MENG Qing-gang
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
CSSN: ISSN 1673-6273
CN 23-1544/R
Copyright 2019 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·

The Role of *Lefty1* in the Process of Mouse Embryonic Stem

Cell Differentiation

LIU Yang, DU Jin, WU Ping, et al

..... (201)

Construction of ECE1 3'UTR Dual Luciferase Reporter

Vector and Verification of the Targeted Relationship

with miR-199a-5p

BAO Ning, CHEN Feng-shou, JIANG Yan-hua, et al

..... (207)

Construction of Recombinant Adeno-associated Virus Encoding

Interleukin-4 Antagonistic Mutant and Exogenous

Protein Expression *in vitro*

TIAN Li-chun, ZHU Qing-qing, LIU Ai-jie, et al

..... (211)

Improvement of BacLight/CSLM Criteria for Detection of

Bacterial Biofilm in Chronic Rhinosinusitis

LI Han, SUN Xi-cai, LIU Quan, et al

..... (217)

Effect and Mechanism of Hypoxic Micro-environment

on the Proliferation and Apoptosis of Rat Brain Vascular

Endothelial Cells

LI Yan, TIAN Zhu, XU Meng-lin, et al

..... (222)

Progress in Modern Biomedicine

Established in April 2001

Volume 19 Number 2

January 30 2019

HBx Protein Activated Hepatic Stellate Cells Through Up-regulation of NOX4 Expression

LI Hai-yan, HE Hong-yan, HUANG Feng-xia, et al (227)

PTPN9 induces Apoptosis of Colorectal cancer Cell via Mitigating the Activation of STAT3

ZHU Xing-ye, ZHAO Ming, WANG Da-wei, et al (231)

FGFR1 Mediates the Resistance of Non-small Cell Lung Cancer to Gefitinib by Activating

PI3K/AKT/mTOR Signaling Pathway

CHEN Kun, LEI Jie, ZHANG Zhi-pei, et al (236)

Effect of Fractional CO₂ Laser on Mice Hypertrophic Scar and Hedgehog Pathway

induced by Bleomycin

XIAO Ming-ming, ZHANG Rui-fang, LI Can, et al (244)

Effects of TNF- α on BMP-2-induced Osteoblast Differentiation and Its Mechanisms

XIONG Jun, LIU Wei, ZENG Fan, et al (249)

·CLINICAL RESEARCH·

A Retrospective Study on the Urosepsis in the Emergency Department

QIAO Yun, LU Xiao-ye, XU Xin-hui, et al (253)

Effect of Different Concentrations of Dexmedetomidine on the Cerebral Oxygen Saturation

of Low Hemoglobin Patients under General Anesthesia

HUANG Xin, YANG Yan-chao, TENG Xiu-fei, et al (258)

Analysis of the Values of Different Scales for Acute Pain Assessment in Mechanically

Ventilated Neonates

PANG Wei, ZHANG Hai-lin, ZHANG Xiao-bao, et al (262)

Effects of the Treatment of Cardiac Function and Inflammatory Response in Patients with

Acute Myocardial Infarction after Interventional Therapy with the Combination

of Ticagrelor and Clopidogrel

YU Hai-rong, WANG Guo-hong, DONG Dan-dan, et al (266)

Clinical Effect of Sodium Tanshinone II A Sulfonate Combined with Simvastatin on Coronary

Heart Disease with Angina Pectoris and Effects on the Hemorheology, Serum TNF- α ,

CRP, ET-1 and NO Levels

ZHANG Jie-han, ZHUANG Shao-wei, LU Cheng, et al (270)

Progress in Modern Biomedicine

Established in April 2001

Volume 19 Number 2

January 30 2019

Curative Efficacy of Autologous Stem Cell Transplantation in the Treatment of Biliary

Cirrhosis and its Effects on the Serum TGF- β 1 and SIL-2R Levels

ZHU Jiang-yi, ZHU Yu-xia, MEI Lin, et al (275)

Remineralization Effect of CPP-ACP and Diode Laser Stabilized by Case on the Initial

Enamel caries of Primary Teeth

HUANG Peng-fei, LIU Yang, ZHU Yi-xin, et al (279)

Distribution of Pathogenic Bacteria and Drug Resistance of Tumor related Infections

in General Hospitals

LIU Yi, ZHU Ya-ning, FENG Hang, et al (284)

The Relationship Research between the Level of Circulating Tumor Cells and the Clinicopathological

Features and Survival Rate of Ovarian Cancer Patients

ZHAO Ying, ZHAO Guang-ri, WU Yun-yu, et al (290)

Analysis of Detection Rate of Bone Marrow Lesions with MRI and Its Influence Factors

in Patients with Knee Osteoarthritis

CHEN Li, LIU Shu-lin, YANG Ru, et al (295)

Comparison of Serum Tumor Markers and Dosimetric Parameters between Three

Dimensional-conformal Radiotherapy and Intensity Modulated Radiation Therapy

in Patients with Advanced Non-small Cell Lung Cancer

WANG Zheng, ZHOU Qiong-fang, ZHANG Hong-mei, et al (300)

Relationship Research between Blood Uric Acid and Blood Lipid, HCY and hs-CRP Levels

in Elderly Patients with Acute Coronary Syndrome

CUI Ji-hong, XU Hai, ZHANG Jin-rong, et al (304)

Effect of Symbicort Turbuhaler on Patients with Chronic Obstructive Pulmonary Disease

of Peripheral Blood Dendritic Cells

ZHU Mi-mi, ZHAO Li-li, BIE Fu-xin, et al (308)

Comparison of the Clinicopathological Parameters of Non-metastatic Invasive Breast Cancer

Patients in and out of Hainan Province

XUE Tian-hui, CUI Mei-qi, YOU Jun-hao, et al (312)

Progress in Modern Biomedicine

Established in April 2001

Volume 19 Number 2

January 30 2019

Research on the Status of Dispatchers Workload and Job Stress in "120" Emergency Command

Centers in Heilongjiang Province

ZHAO Cheng-qian, CUI Yan-ze, LI Yan, et al (317)

Effects of Low Frequency Electrical Stimulation Combined with Intermittent Catheterization and Motomed Exercise Training on the Intravesical Pressure and Bladder Volume of Patients with Neurogenic Bladder Caused by Spinal Cord Injury

YE Yi-qing, JI Jie, WU Yu-xia, et al (321)

Expression of Plasma Soluble Endothelial Protein C Receptor and Nitric Oxide in Children with Kawasaki Disease and its Relationship with Inflammatory Reaction and Coronary Artery Disease

LIU Xiao-hua, LIU Xia, JIN Lu, et al (326)

Risk Factors of Perioperative Cerebral Infarction in Elderly Patients with Bone and Joint Replacement and Preventive Measures

SUN Bo, WANG Jing-yue, JIANG Yu-chen, et al (330)

Effect of Different Methods of Ambulatory Labor Analgesia on Delivery Outcome and Fetal Oxygen Saturation

LIU Shao-xing, DAI Yue-e, CAO De-jun, et al (334)

Effect of Gukang Capsule combined with Sodium Hyaluronate Injection in the Treatment of Osteoarthritis and Its Effect on Inflammatory Reaction

LIU Li-min, ZHOU Jing-yuan, GUO Qiang, et al (338)

Effect of Intramuscular Acombined with Rehabilitation Training on Lower Limb Motor Function, Walking Parameters and Quality of Life in Stroke Patients with Hemiplegia

SHAO Hui-xing, MA Li, LIU Xiang-min, et al (342)

Effect of ω -3 Polyunsaturated Fatty Acids on Postoperative Recovery and Quality of Life in Patients with Radical Gastrectomy during the Perioperative Period

QIN Long, LI Ting, REN Ming-yang, et al (346)

Correlation Between Serum MMP-9 Level and Hemorrhage Transformation after Thrombolysis in Acute Cerebral Infarction and its Predictive Significance

SUN Fan, LIU Heng, XU Qian-qian, et al (350)

Progress in Modern Biomedicine

Established in April 2001

Volume 19 Number 2

January 30 2019

Comparative Study on Percutaneous Transforaminal and Fenestration Discectomy in Treatment of Single Segmental Unilateral Lumbar Disc Herniation

SONG Jing-tao, LIU Li-min, HUANG He, et al (354)

Effect of Carboprost Tromethamine Injection Combined with Oxytocin on FIB and D-dimer of Patients with Postpartum Hemorrhage after Cesarean Section

ZHANG Li-wu, HUANG Chun-yan, LI Kai, et al (358)

Risk Factors and Genotype Analysis of HBV Occult Infection in the Blood Donors in Qinghai

SUO Xiao-dong, ZHAO Yuan, WANG Qing-ling, et al (362)

•TECHNIQUES AND METHODS•

The Design of Parallel Moving Clamp for Magnetic Compression Anastomosis

TIAN Bo-yan, FU Shan, ZHAO Guang-bin, et al (366)

•BIBLIOMETRICS•

Research on the Identification of the Biomedical Frontiers

ZHANG Ting, CHEN Juan, OUYANG Zhao-lian (370)

•BIOMEDICAL TEACHING•

Application of PBL Combined with LBL Teaching Method in Respiratory System Teaching

YANG Tian, LI Hong, LI Dan, et al (379)

•MONOGRAPHS AND REVIEWS•

Progress of Compounds Promoting Endogenous Repair of Cartilage in Osteoarthritis

AN Qi-er, ZHANG Shuai, JIANG Wen-yu, et al (383)

Gout Related Research

WANG Ting-ting, XU Yan-hua, GUO Yu-qian, et al (389)

A Preliminary Study on the Transient Reduction of Spleen Density in Acute Pancreatitis

ZHOU Yang, LIU Feng, JIANG Jia-qi, et al (393)

Prognostic Factors of Peritoneal Dialysis Patients

MENG Tian-tian, TANG Wen, ZHOU Si-jia, et al (397)



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

2018年11月

证书编号：2017-F250-1814
有效期至：2019年12月

