

医用生物力学

YIYONG SHENGWU LIXUE

双月刊 1986年6月创刊 第32卷 第3期 2017年6月出版



[期刊基本参数] CN 31-1624/R * 1986 * b * A4 * 96 * zh + en * P * ¥15.00 * 2000 * 15 * 2017-06

主管
中华人民共和国教育部

主办
上海交通大学

承办
上海交通大学医学院附属
第九人民医院

出版
《医用生物力学》编辑部

编辑部
地址 上海市制造局路639号
邮编 200011
电话 (021)53315397
传真 (021)63137020
电子邮件 shengwulixue@163.com

网址
<http://www.medbiomechanics.com>
<http://www.mechanobiology.cn>

微博
<http://weibo.com/u/2040064195>

广告部 水 汶

主编
戴尅戎

常务副主编
姜宗来

副主编
陈维毅 樊瑜波 龙 勉
秦 岭 郑诚功

编辑部主任
于志锋
E-mail: zfyu@outlook.com

责任编辑
徐 绮
E-mail: 1534340082@qq.com

英文编辑
吴晓芸

编辑
《医用生物力学》编辑委员会

印刷
上海新开宝商务印刷有限公司

国内发行
上海市报刊发行局

国外总发行
中国国际图书贸易总公司

订购
全国各地邮局
邮发代号 4-633

定价
每期:15.00元 全年90.00元

国内统一连续出版物号
CN 31-1624/R

国际标准连续出版物号
ISSN 1004-7220
CODEN YSLIBU

广告经营许可证号
3100120050036

©2017年版权归《医用生物力学》编辑部所有

目次

论 著

- ROCK1 及其相关信号分子参与张应变调控的血管平滑肌细胞增殖
..... 王立意,郭东铭,庞景之,杨煜晨,沈宝荣,齐颖新(205)
- 生长板材料属性对6岁儿童乘员膝关节损伤影响分析
..... 李海岩,潘云凤,阮世捷,崔世海,贺丽娟,王春祥(213)
- 椎间融合器高度对颈椎生物力学影响
..... 朱媛君,莫中军,都承斐,赵衍斌,王丽珍,樊瑜波(220)
- 前路椎体次全切除减压融合术治疗下颈椎的有限元分析
..... 赵改平,陈楠心,宋艳美,陈二云,马童,涂意辉(227)
- 脊柱侧凸腰骶椎结构的有限元分析及其变形趋势
..... 贾少薇,张顺心,范顺成,李晔,武晓丹,谢俊德,韩立(235)
- 锁骨骨折复位拉伸力优化加载方案的模拟分析
..... 赵永信,李欣欣,李鼎斌,毛汉领,陈邑,易忠安(242)
- 通过骨支架的数字化建模分析其力学性能与内部流场分布
..... 林柳兰,张凌峰(248)
- 3D 打印多孔钛支架微观孔隙结构和力学性能
..... 冯辰栋,夏宇,李祥,王成焘(256)
- 3种可转换型腔静脉滤器过滤血栓效果的对比分析
..... 国芳,冯海全,韩青松,李治国(261)
- 颈椎旋转手法对兔粥样斑块期颈动脉拉伸力学性能的影响
..... 张少群,祁冀,张磊,景亚军,陈奕力,李义凯(267)
- 循环加载下关节软骨的棘轮应变及理论预测
..... 刘东东,高丽兰,张春秋,魏朝磊,秦晓怡(274)
- 一种适用于研究切应力对蓝藻细胞活性影响的实验装置
..... 任强,蒋文涛,黄学进,陈宇(280)
- 拇指腕掌关节韧带的解剖力学分析及临床意义
..... 李建峰,肖焕波,李海雷,刘井达,赵亮,李大村(284)
- 压电式步态分析系统在足底压力监测中的应用
..... 李宏恩,鲍申杰,高晓航(288)

综 述

- 有限元分析在腰椎手法治疗中的生物力学研究进展
..... 王志鹏,张晓刚,赵文韬,赵希云,全尊(293)

《医用生物力学》杂志稿约

..... (I)

信 息

致读者(241),《医用生物力学》杂志征稿、征订启事(255)

JOURNAL OF MEDICAL BIOMECHANICS

Published Bimonthly

Founded in June, 1986

Volume 32 Number 2, Jun. 2017

[Journal Basic Information] CN 31-1624/R * 1986 * b * A4 * 96 * zh + en * P * ¥15.00 * 2000 * 15 * 2017-06

Supervised by

Ministry of Education of
People's Republic of China

Sponsored by

Shanghai Jiao Tong University

Organized by

Shanghai Ninth People's Hospital,
Shanghai Jiao Tong University
School of Medicine

Published by

Editorial Office of
Journal of Medical Biomechanics

Editorial Office

No. 639 Zhizaoju Rd.,
Shanghai 200011, China

Tel: + 86 21 53315397

Fax: + 86 21 63137020

E-mail: shengwulixue@163.com

Website:

<http://www.medbiomechanics.com>

<http://www.mechanobiology.cn>

Microblog:

<http://weibo.com/u/2040064195>

Advertising division: SHUI Wen

Editor-in-Chief

DAI Ke-rong

Executive Vice Editor-in-Chief

JIANG Zong-lai

Associate Editors-in-Chief

CHEN Wei-yi CHENG Cheng-kung

FAN Yu-bo LONG Mian

QIN Ling

Editorial Director

YU Zhi-feng

E-mail: zfyu@outlook.com

Executive Editor

XU Qi

E-mail: 1534340082@qq.com

English Editor

WU Xiao-yun

Edited by

Editorial Board of
Journal of Medical Biomechanics

Printed by

Shanghai Newcabo Printing Co., Ltd

Overseas Distributor

China International Book
Trading Cooperation

China Standard Serial Numbering

ISSN 1004-7220

CN 31-1624/R

CODEN YSLIBJ

Subscription

Yearly Subscription Rates: 90.00 RMB

Single Issue: 15.00 RMB

Advertising Management License Number

3100120050036

Copyright © 2017 by the Editorial

Board of Journal of Medical Biomechanics

Contents

Original Articles

ROCK1 and the relative signal molecules participate in proliferation of vascular smooth muscle cells induced by cyclic strain

..... WANG Li-yi, GUO Dong-ming,

PANG Jing-zhi, YANG Yu-chen, SHEN Bao-rong, QI Ying-xin(205)

Analysis of growth plate material property effect on knee injury of six-year-old child occupant

..... LI Hai-yan, PAN Yun-feng,

RUAN Shi-jie, CUI Shi-hai, HE Li-juan, WANG Chun-xiang(213)

Biomechanical effects of interbody cage height on cervical spine

..... ZHU Yuan-jun, MO Zhong-jun,

DU Cheng-fei, ZHAO Yan-bin, WANG Li-zhen, FAN Yu-bo(220)

Finite element analysis on lower cervical spine by anterior cervical corpectomy and fusion surgery

..... ZHAO Gai-ping, CHEN Nan-xin,

SONG Yan-mei, CHEN Er-yun, MA Tong, TU Yi-hui(227)

Finite element analysis on scoliosis lumbosacral vertebral structure and its deformation trend

..... JIA Shao-wei, ZHANG Shun-xin,

FAN Shun-cheng, LI Ye, WU Xiao-dan, XIE Jun-de, HAN Li(235)

Simulation analysis on optimal loading scheme of resetting tensile stress for clavicular fracture

..... ZHAO Yong-xin,

LI Xin-xin, LI Ding-bin, MAO Han-ling, CHEN Yi, YI Zhong-an(242)

Analysis on mechanical properties and internal flow field distributions of bone scaffold by digital modeling

..... LIN Liu-lan, ZHANG Ling-feng(248)

Micro-pore structure and mechanical properties of porous titanium scaffold using 3D print technology

..... FENG Chen-dong, XIA Yu, LI Xiang, WANG Cheng-tao(256)

Comparative analysis on thrombus filtration efficiency for three kinds of convertible vena cava filters

..... GUO Fang, FENG Hai-quan, HAN Qing-song, LI Zhi-guo(261)

Effects of cervical rotatory manipulation on tensile mechanical properties of rabbit carotid artery with atherosclerotic plaque

..... ZHANG Shao-qun,

QI Ji, ZHANG Lei, JING Ya-jun, CHEN Yi-li, LI Yi-kai(267)

Ratcheting strain and theoretical prediction of articular cartilage under cyclic loading

..... LIU Dong-dong,

GAO Li-lan, ZHANG Chun-qiu, WEI Chao-lei, QIN Xiao-yi(274)

An experimental device for studying the effects of shear stress on cell activity of blue-green algae

..... REN Qiang, JIANG Wen-tao, HUANG Xue-jing, CHEN Yu(280)

Analysis on anatomy and biomechanics of ligaments in carpometacarpal joints of the thumb and its clinical significance

..... LI Jian-feng,

XIAO Huan-bo, LI Hai-lei, LIU Jing-da, ZHAO Liang, LI Da-cun(284)

The application of piezoelectric gait analysis system in plantar pressure monitoring

..... LI Hong-en, BAO Shen-jie, GAO Xiao-hang(288)

Review Article

Biomechanical research progress on finite element analysis in the treatment of spinal manipulation

..... WANG Zhi-peng,

ZHANG Xiao-gang, ZHAO Wen-tao, ZHAO Xi-yun, TONG Zun(293)

Instructions for Authors by Journal of Medical Biomechanics

..... (I)

News and Announcement

..... (241)(255)