



全国中文核心期刊
中国科技核心期刊
中国科学引文数据库来源期刊



0366-6964
HPAI

畜牧兽医学报

ACTA VETERINARIA ET ZOOTECHNICA SINICA

CHINESE JOURNAL
OF ANIMAL AND VETERINARY SCIENCES

Vol.52

No.6

2021

中国畜牧兽医学会

CHINESE ASSOCIATION OF ANIMAL
SCIENCE AND VETERINARY MEDICINE

ISSN 0366-6964



畜牧兽医学报

XUMU SHOUYI XUEBAO

第 52 卷 第 6 期 2021 年 6 月

目 次

综 述

- 国内外肉牛遗传评估体系概况…………… 朱 波,李宏伟,周颀诺,李 倩,高 翰,王泽昭,汪聪勇,
蔡文涛,徐凌洋,陈 燕,张路培,高 雪,高会江,李俊雅(1447)
- 脊椎动物胚胎期脊椎的形成及信号通路调控机制 … 刘 倩,岳静伟,牛乃琪,王立贤,张龙超(1461)
- 异性孪生母牛的可育性鉴别和利用进展…………… 邱清华,欧阳克蕙,苏华维,曹兵海(1471)
- 兽医眼表移植学及植片材料的研究进展
…………… 胥辉豪,郑小波,杨 恒,唐 静,冯雪倩,慎晓军,龚雨豪,林珈好,金艺鹏,林德贵(1481)
- 鸭坦布苏病毒病的研究进展
…………… 张帆帆,曾艳兵,方绍培,李海琴,康昭凤,谭美芳,谭 佳,杨 群,韦启鹏(1489)
- 蜂王浆生物学功能研究进展…………… 刘一冰,吴德群,蔺哲广,吉 挺(1498)

遗传育种

- 鸡 TRAF6 和 TIFA 蛋白的序列分析与相互作用验证
…………… 赵采芹,王燕碧,朱 杰,唐 宏,董运韬,段志强(1511)
- 基于线粒体控制区的鸡不同杂交组合遗传多样性研究
…………… 唐修君,樊艳凤,贾晓旭,葛庆联,陆俊贤,马丽娜,韩 威,高玉时(1523)
- 基于 RNA-seq 结果开发猪 SSR 标记 …………… 李文霞,吴怡琦,杨 帅,张燕伟,路 畅,杨 阳,
蔡春波,高鹏飞,郭晓红,李步高,曹果清(1535)
- 我国荷斯坦青年公牛基因组选择效果分析
…………… 苏丁然,彭 朋,闫青霞,陈绍祜,张胜利,李 姣,刘丑生,孙东晓(1550)
- 中国肉用西门塔尔牛场间遗传联系分析
…………… 周颀诺,蔡文涛,陈 燕,张路培,徐凌洋,高 雪,高会江,王泽昭,朱 波,李俊雅(1563)

生物技术与繁殖

- miR-148a-3p 靶向 *PPAR γ* 基因抑制鹅颗粒细胞孕酮的合成
…………… 邓 艳,解广娟,胡深强,李 亮,王继文(1571)
- 前列腺素 D_2 与 $F_{2\alpha}$ 对绵羊黄体退化的影响及其机理研究
…………… 杨 恒,邵焱焱,赵宗胜,朱梦婷,南 颖,王明远,方晨辉,吴 培,谢梦婷,江白慧(1582)
- 供体牛外周血 AMH 浓度对荷斯坦青年奶牛体内胚胎生产效率的影响
…………… 李树静,冯春涛,胡智辉,朱化彬,余文莉,赵善江(1594)
- 牦牛与犏牛睾丸支持细胞分离培养及生物学特性比较分析
…………… 陈雪梅,易川平,罗 辉,张 鹏,王明秀,蔡 欣,钟金城(1603)

营养与饲料

- 白皮杉醇对氧化应激断奶仔猪空肠抗氧化能力、黏膜形态和屏障功能的影响
…………… 贾沛璐,张 昊,陈亚楠,季书立,王 恬(1616)

硫化氢暴露不同时长对断奶仔猪生长性能、血液指标及组织病理学的影响
..... 谢彦娇,刘真,陈磊,苗启翔,张宏福,唐湘方(1625)
冷季不同饲养模式对牦牛肉品质的影响..... 刘奕轩,熊琳,梁春年,吴晓云,包鹏甲,余群力(1640)

预防兽医

猪源组织蛋白酶 S 抑制 O 型口蹄疫病毒在 PK-15 细胞复制
..... 史喜娟,刘原子,张大俊,侯景,申超超,杨博,张婷,
袁兴国,任瑞瑞,杜晓华,张克山,郑海学,刘湘涛(1652)
GADD45 β 蛋白抑制 ALV-J 在 DF-1 细胞中的复制
..... 陈胜,廖志宏,谢姿,陈峰,谢青梅,舒薇(1662)
小熊猫源犬瘟热病毒株 H、F 基因的克隆及序列分析
..... 蒋梅,陈武,翟俊琼,卜婉迪,谢逸伦,刘灿彬,单芬,罗满林(1670)
特异性识别 K1 荚膜大肠杆菌的噬菌体 PNJ1809-36 生物学特性及全基因组分析
..... 巩倩雯,李一昊,曾颜,于沛欣,钱新杰,王瑜欣,戴建君,汤芳(1677)
猪丹毒丝菌 CbpB 蛋白对小鼠的免疫效果分析
..... 刘君雯,吴琼娟,邢刚,占松鹤,魏建忠,孙裴,刘雪兰,李郁(1689)
羊蝉蝇携带巴尔通体和斑点热群立克次体 PCR 检测及遗传关系分析
..... 向阳,袁东波,侯巍,莫茜,尹杰,阳爱国,郝力力(1700)

基础兽医

猪 m⁶A 甲基化酶 WTAP 基因与 F18 大肠杆菌感染的关系
..... 肖叶懿,郜重丞,包文斌,吴正常,吴圣龙(1709)
猪舍细颗粒物促进猪原代肺泡巨噬细胞向 M1 极化
..... 沈家鲲,唐倩,崔洋洋,金晓明,李延森,李春梅(1717)

临床兽医

羊脑包虫病 CT、MRI 影像特征
..... 邓威,姚大伟,张壮志,康强,韩涛,喻昌盛,郭庆勇,周程远,杨德吉(1727)
脂肪来源间充质干细胞条件培养基对小型猪腹腔镜肝损伤氧化应激反应的影响
..... 焦智慧,张千振,王月,刘涛,刘博洋,马亚军,刘笑凝,朴晨曦,王洪斌(1734)

研究简报

猪瘟病毒化学发光抗体检测方法的建立与应用..... 麻园,石正旺,罗俊聪,杨波,王丽娟,
万颖,宋锐,曹丽艳,周改静,田宏,郑海学,陈轶霞(1744)
1 种布鲁氏菌微滴式数字 PCR 检测方法的建立..... 梅力,王英超,程汝佳,于国际,范学政,
高晓龙,高敏,秦玉明,李筱英,李巧玲,朱良全,冯小宇(1753)
携带猪流行性腹泻病毒 S1 抗原表位的乙肝核心抗原病毒样颗粒的构建与鉴定
..... 刘如月,范京惠,刘涛,苑军辉,李清艳,翟向和,左玉柱(1760)
肺离子细胞相关蛋白 ATP6V0D2 在不同年龄牦牛肺内分布和表达
..... 魏雅婷,崔燕,张倩,何俊峰(1765)

ACTA VETERINARIA ET ZOOTECHNICA SINICA
CHINESE JOURNAL OF ANIMAL AND VETERINARY SCIENCES

Published Monthly:

Chinese Association of Animal Science and Veterinary Medicine

Beijing, China

Vol. 52 No. 6 (Jun. 2021)

CONTENTS

REVIEW

Overview of Genetic Evaluation System of Beef Cattle in China and Abroad

..... ZHU Bo, LI Hongwei, ZHOU Peinuo, LI Qian, GAO Han, WANG Zezhao, WANG Congyong,
CAI Wentao, XU Lingyang, CHEN Yan, ZHANG Lupei, GAO Xue, GAO Huijiang, LI Junya(1447)

The Regulation Mechanism and Signal Pathway for Spine Formation in Vertebrate Embryo

..... LIU Qian, YUE Jingwei, NIU Naiqi, WANG Lixian, ZHANG Longchao(1461)

Research Progress on the Fertility Diagnosis of Freemartin and Its Application

..... QIU Qinghua, OUYANG Kehui, SU Huawei, CAO Binghai(1471)

Research Progress of Ocular Surface Transplantation and Implant Materials in Veterinary Medicine

..... XU Huihao, ZHENG Xiaobo, YANG Heng, TANG Jing, FENG Xueqian, SHEN Xiaojun,
GONG Yuhao, LIN Jiahao, JIN Yipeng, LIN Degui (1481)

Research Progress in Duck Tembusu Virus Disease

..... ZHANG Fanfan, ZENG Yanbing, FANG Shaopei, LI Haiqin,
KANG Zhaofeng, TAN Meifang, TAN Jia, YANG Qun, WEI Qipeng (1489)

Review on Biological Function of Royal Jelly LIU Yibing, WU Dequn, LIN Zheguang, JI Ting (1498)

ANIMAL GENETICS AND BREEDING

Sequence Analysis and Interaction Verification of Chicken TRAF6 and TIFA Proteins

..... ZHAO Caiqin, WANG Yanbi, ZHU Jie, TANG Hong, DONG Yuntao, DUAN Zhiqiang(1511)

Study on Genetic Diversity in Different Hybrid Combinations of Chickens Based on Mitochondrial Control Region ...

TANG Xiujun, FAN Yanfeng, JIA Xiaoxu, GE Qinglian, LU Junxian, MA Lina, HAN Wei, GAO Yushi(1523)

Development of SSR Markers Based on RNA-seq Result of Pig

..... LI Wenxia, WU Yiqi, YANG Shuai, ZHANG Yanwei, LU Chang, YANG Yang,
CAI Chunbo, GAO Pengfei, GUO Xiaohong, LI Bugao, CAO Guoqing(1535)

Analysis of the Effects for Genomic Selection in Holstein Young Bulls in China

..... SU Dingran, PENG Peng, YAN Qingxia, CHEN Shaohu, ZHANG Shengli, LI Jiao,
LIU Chousheng, SUN Dongxiao(1550)

The Genetic Connectedness Analysis among Different Chinese Simmental Beef Cattle Farms

..... ZHOU Peinuo, CAI Wentao, CHEN Yan, ZHANG Lupei, XU Lingyang,
GAO Xue, GAO Huijiang, WANG Zezhao, ZHU Bo, LI Junya(1563)

ANIMAL BIOTECHNOLOGY AND REPRODUCTION

miR-148a-3p Inhibits the Production of Progesterone by Targeting *PPAR γ* in Granulosa Cells of Goose

..... DENG Yan, XIE Guangjuan, HU Shenqiang, LI Liang, WANG Jiwen(1571)

Study on the Effect and Mechanism of Prostaglandin D₂ and F_{2 α} on the Corpus Luteum Regression in Sheep

..... YANG Heng, SHAO Yanyan, ZHAO Zongsheng, ZHU Mengting, NAN Ying,
WANG Mingyuan, FANG Chenhui, WU Pei, XIE Mengting, JIANG Baihui(1582)

The Effect of Peripheral Blood AMH Concentration on Superovulation and Embryo Production Performance of Holstein Young Dairy Cattle LI Shujing, FENG Chuntao, HU Zhihui, ZHU Huabin, YU Wenli, ZHAO Shanjiang(1594)

Isolation, Culture and Comparison of Biological Characteristics of Sertoli Cells from Yak and Cattle-yak

..... CHEN Xuemei, YI Chuanping, LUO Hui, ZHANG Peng,
WANG Mingxiu, CAI Xin, ZHONG Jincheng(1603)

ANIMAL NUTRITION AND FEEDS

- Effect of Piceatannol on the Antioxidant Capacity, Mucosal Morphology and Barrier Function of the Jejunum of Weaned Piglets under Oxidative Stress JIA Peilu, ZHANG Hao, CHEN Ya'nan, JI Shuli, WANG Tian(1616)
- Effects of Hydrogen Sulfide Exposure for Different Duration on Growth Performance, Blood Indexes and Histopathology in Weaned Piglets
..... XIE Yanjiao, LIU Zhen, CHEN Lei, MIAO Qixiang, ZHANG Hongfu, TANG Xiangfang(1625)
- Effects of Different Feeding Systems on Meat Quality of Yak in Cold Season
..... LIU Yixuan, XIONG Lin, LIANG Chunnian, WU Xiaoyun, BAO Pengjia, YU Qunli(1640)

PREVENTIVE VETERINARY MEDICINE

- Porcine Cathepsin S Inhibits the Replication of Foot-and-Mouth Disease Virus Serotype O in PK-15 Cells
..... SHI Xijuan, LIU Yuanzi, ZHANG Dajun, HOU Jing, SHEN Chaochao, YANG Bo, ZHANG Ting, YUAN Xingguo, REN Ruirui, DU Xiaohua, ZHANG Keshan, ZHENG Haixue, LIU Xiangtao (1652)
- GADD45 β Suppresses the Replication of Avian Leukosis Virus Subgroup J in DF-1 Cells
..... CHEN Sheng, LIAO Zhihong, XIE Zi, CHEN Feng, XIE Qingmei, SHU Wei (1662)
- Cloning and Sequence Analysis of *H* and *F* Genes of Canine Distemper Virus Strain from Red Panda
..... JIANG Mei, CHEN Wu, ZHAI Junqiong, BU Wandi, XIE Yilun, LIU Canbin, SHAN Fen, LUO Manlin (1670)
- Biological Characteristics and Whole Genome Analysis of Phage PNJ1809-36 Target *Escherichia coli* K1
..... GONG Qianwen, LI Yihao, ZENG Hang, YU Peixin, QIAN Xinjie, WANG Yuxin, DAI Jianjun, TANG Fang (1677)
- Immunogenicity Analysis and Protective Effects of CbpB Protein of *Erysipelothrix rhusiopathiae* in Mice
..... LIU Junwen, WU Qiongjuan, XING Gang, ZHAN Songhe, WEI Jianzhong, SUN Pei, LIU Xuelan, LI Yu (1689)
- PCR Detection and Genetic Relationship Analysis of *Bartonella* and Spotted Fever Group Rickettsiae in *Melophagus ovinus* XIANG Yang, YUAN Dongbo, HOU Wei, MO Xi, YIN Jie, YANG Aiguo, HAO Lili (1700)

BASIC VETERINARY MEDICINE

- Relationship between Porcine m⁶A Methylase WTAP Gene and F18 *Escherichia coli* Infection
..... XIAO Yeyi, GAO Zhongcheng, BAO Wenbin, WU Zhengchang, WU Shenglong (1709)
- Fine Particulate Matter from Pig House Promote M1 Polarization in Porcine Primary Alveolar Macrophage
..... SHEN Jiakun, TANG Qian, CUI Yangyang, JIN Xiaoming, LI Yansen, LI Chunmei(1717)

CLINICAL VETERINARY MEDICINE

- CT and MRI Imaging Features of Sheep Cerebral Coenurosis
..... DENG Wei, YAO Dawei, ZHANG Zhuangzhi, KANG Qiang, HAN Tao, YU Changsheng, GUO Qingyong, ZHOU Chengyuan, YANG Deji (1727)
- Effect of Adipose-derived Stem Cells-conditioned Medium on Oxidative Stress in Miniature Pigs with Laparoscopic Hepatic Injury JIAO Zhihui, ZHANG Qianzhen, WANG Yue, LIU Tao, LIU Boyang, MA Yajun, LIU Xiaoning, PIAO Chenxi, WANG Hongbin (1734)

RESEARCH NOTES

- Establishment and Application of Chemiluminescence Detection Method for Antibody against Classical Swine Fever Virus MA Yuan, SHI Zhengwang, LUO Juncong, YANG Bo, WANG Lijuan, WAN Ying, SONG Rui, CAO Liyan, ZHOU Gaijing, TIAN Hong, ZHENG Haixue, CHEN Yixia (1744)
- A Droplet Digital PCR Method for Detection of *Brucella*
..... MEI Li, WANG Yingchao, CHENG Rujia, YU Guoji, FAN Xuezheng, GAO Xiaolong, GAO Min, QIN Yuming, LI Xiaoying, LI Qiaoling, ZHU Liangquan, FENG Xiaoyu (1753)
- Construction and Identification of Hepatitis B Core Antigen Virus-like Particles Carrying PEDV S1 Epitope
..... LIU Ruyue, FAN Jinghui, LIU Tao, YUAN Junhui, LI Qingyan, ZHAI Xianghe, ZUO Yuzhu (1760)
- Distribution and Expression of Pulmonary Ionocyte-related Factor ATP6V0D2 in the Lungs of Yaks at Different Ages
..... WEI Yating, CUI Yan, ZHANG Qian, HE Junfeng(1765)

《畜牧兽医学报》第六届编辑委员会成员

顾问 张子仪 刘守仁 吴常信 夏咸柱 刘秀梵

主任委员 陈焕春

副主任委员 阎汉平 汪明 苏振环 时建忠

编委成员 (按姓名英文字母/汉字笔画排序)

Chris Anderson David Lindsay Graham Gardner W. Bruce Currie

马月辉 王加启 方维焕 宁宜宝 卢德勋 朱士恩 朱兴全 刘湘涛 余锐萍

杜立新 芮于明 陆承平 陈溥言 陈瑶生 李奎 李庆章 李学伟 李德发

沙玉圣 张涌 张仲秋 张家骅 沈建忠 杨宁 罗绪刚 孟庆翔 郑友民

周继勇 姜平 赵兴绪 赵茹茜 夏国良 涂长春 郭万柱 黄维义 崔治中

童光志 蒋小松 舒鼎铭

名誉主编 陈幼春 蒋金书

主编 文杰

副主编 张沅 时建忠 汪明 杨汉春 于康震 王立贤 任鹏

编辑部主任 任鹏

主编 文杰

广告部主任 程金华 本期责任编辑 范子娟

畜牧兽医学报

(月刊,1956年创刊)

2021年 第52卷 第6期

2021年6月23日出版

主管 中国科学技术协会
主办 中国畜牧兽医学会
编辑 《畜牧兽医学报》编委会
中国农业部北京畜牧兽医研究所
地址 北京海淀区圆明园西路2号
邮编 100193
电话 010-62815987 62816996 62893836
网址 <http://www.xmsyxb.com>
电子邮箱 xmsyxb@263.net
出版单位 《中国畜牧兽医杂志》有限公司
印刷 北京科信印刷有限公司
国内总发行 中国邮政集团公司北京市报刊发行局
国外总发行 中国国际图书贸易集团有限公司
(中国国际书店)北京399信箱
订购 全国各地邮局
中国标准连续出版物号 ISSN 0366-6964
CN 11-1985/S

ACTA VETERINARIA ET ZOOTECHNICA SINICA

(Monthly, Started in 1956)

Vol. 52 No. 6 2021

Published on Jun. 23, 2021

Supervised by China Association for Science and Technology
Sponsored by Chinese Association of Animal Science and
Veterinary Medicine
Edited by Editorial Board of the ACTA VETERINARIA
ET ZOOTECHNICA SINICA
Institute of Animal Science, Chinese Academy of
Agricultural Sciences
Address No.2 West Road Yuanmingyuan, Haidian Beijing,
China. Post Code 100193
Telephone 010-62815987 62816996 62893836
Website <http://www.xmsyxb.com>
E-mail xmsyxb@263.net
Published by Chinese Journal of Animal Science and
Veterinary Medicine Co., Ltd
Printed by Beijing Kexin Printing Co., Ltd
Distributed by Domestic Beijing Post Office, China Post Group Corporation
Overseas China International Book Trading
Corporation, P.O. Box 399

国内定价:50.00元(全年600元)

邮发代号:82-453 国外代号:M446

广告发布登记证号:京海工商广登字20170255号