



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

ISSN 0366-6964
CODEN CMHPAI

畜牧兽医学报

ACTA VETERINARIA ET ZOOTECHNICA SINICA

CHINESE JOURNAL
OF ANIMAL AND VETERINARY SCIENCES

Vol.49

No.5



2018

中国畜牧兽医学会

CHINESE ASSOCIATION OF ANIMAL
SCIENCE AND VETERINARY MEDICINE

ISSN 0366-6964



万方数据

畜牧兽医学报

XUMU SHOUYI XUEBAO

第49卷 第5期 2018年5月

目次

综 述

- 牛全基因组拷贝数变异研究进展 裴生伟,王 丽,曹学涛,李万宏,李发弟,乐祥鹏(871)
- 巨噬细胞- $\gamma\delta$ T 细胞免疫轴在猪格拉瑟氏病发病机制中的作用 程 蕾,陈洪波(879)

遗传育种

- 上海白猪(上系)基因组遗传变异检测与功能注释分析
..... 盛中华,陈国宏,潘玉春,王起山,张 哲(887)
- TLR5 基因启动子区甲基化修饰与苏太断奶仔猪 *E. coli* F18 抗性的关系
..... 戴超辉,冯海悦,宗秋芳,吴圣龙,包文斌(897)
- 山羊肌内前体脂肪细胞诱导分化过程中内参基因的表达稳定性分析
..... 许 晴,林 森,朱江江,王 永,林亚秋(907)
- 转录因子 PAX4 调控湖羊 *FSHR* 基因转录活性
..... 王德迪,李隐侠,姚一龙,潘增祥,决 肯,依 明,曹少先,李齐发(919)
- 酿酒酵母细胞壁诱导体外培养绵羊瘤胃上皮细胞表达 *SBD-1* 的研究
..... 田巧珍,金 鑫,张 曼,张召议,王云鹤,杨银凤(927)
- 北京地区中国荷斯坦牛体细胞评分差值变化规律及遗传力估计
..... 史良玉,张瑞强,李 想,Serafino Musa Abdelkarim Augustino,
Muhammad Zahoor Khan,刘 林,肖 炜,唐韶青,张 毅,王雅春,俞 英(935)

生物技术与繁殖

- 黄体期不同营养水平对湖羊卵泡发育及相关葡萄糖代谢途径的影响
..... 聂海涛,黄欣爱,刘 浩,郭艺璇,王子玉,张艳丽,
万永杰,樊懿萱,张国敏,王 锋,王 洁(942)
- LEPR* 及 *LEP* 基因表达量对 *FecB* 不同基因型小尾寒羊产羔数的影响
..... 于嘉瑞,王翔宇,郭晓飞,贺小云,孙 庆,文禹梁,狄 冉,
刘秋月,胡文萍,张效生,张金龙,孙 伟,储明星(954)

营养与饲料

- 尿肠球菌对大肠杆菌感染肉鸡生长性能、血清生化指标和盲肠菌群结构的影响
..... 曹广添,代 兵,张玲玲,曾新福,杨彩梅(962)
- 不同早期断奶日龄对舍饲肉用羔羊胃组织形态发育变化的影响
..... 郭江鹏,潘建忠,李发弟,张元兴,杨宇泽,郝正里(971)

饲料维生素 D 和钙水平对冬毛期短毛雄性黑水貂生产性能、血清生化指标和脏器指数的影响
..... 王 静,张海华,徐逸男,李仁德,张雪蕾,蔡熙姮,李光玉(986)

预防兽医

二重荧光 RT-LAMP 方法鉴别检测口蹄疫病毒和水泡性口炎病毒
..... 范 晴,谢芝勋,谢志勤,谢丽基,黄娇玲,张艳芳,
曾婷婷,王 盛,罗思思,邓显文,刘加波(996)

gga-miR-140-3p 抑制马立克病病毒转化细胞 MSB1 增殖、迁移和侵袭
..... 赵春芳,李 新,韩 博,曲鲁江,刘长军, Jiuzhou Song, 连 玲,杨 宁(1005)

基于线粒体 16S rRNA 全序列分析我国绵羊痒螨兔亚种的遗传多样性
..... 古 江,李燕芳,赵习彬,谢 跃,赖为民,杨光友,古小彬(1012)

马流产沙门菌鞭毛蛋白 FliC 对马腺疫链球菌 SeM 蛋白免疫效应分析
..... 赵亚南,杨 康,张宝江,李 斌,苏 艳(1020)

临床兽医

中药复方芩藿饮对鸭肝炎病毒实验感染雏鸭的治疗效果分析
..... 张 伟,白景英,杜红旭,熊 文,明 珂,刘家国(1027)

槲皮素通过影响 Nrf2-Keap1 信号通路减缓镉中毒大鼠的生殖机能损伤
..... 何 刘,李 慧,周厚继,佟 翠,王佳美,李美琦,杨淑华,何剑斌(1037)

钙螯合羊骨胶原多肽抑制骨质疏松发生的 RANK/RANKL/OPG 信号机制
..... 韩克光,申勇涛,原 恺,范 华,
陈 静,金淑秀,古少鹏,田文霞,张 鼎,霍乃蕊,常 泓(1047)

不同时间异氟醚麻醉对幼龄大鼠海马神经元凋亡及自噬的影响
..... 邱子豪,胡学远,冯秀晶,赵 元,宋曼玉,王超然,刘 涛,范宏刚(1054)

研究简报

磷源与磷水平对蛋鸡生产性能及钙、磷、氮代谢的影响
..... 何万领,李晓丽,李 旺,丁 轲,李元晓,任振东(1061)

重庆市部分养殖场金黄色葡萄球菌耐药性分析及 ESBL 基因检测
..... 陈 瑶,丁红雷,何 英,牟 豪,王立敏,王豪举(1074)

三黄种鸡场孵化死胚中沙门菌的分离鉴定与耐药性分析
..... 徐耀辉,邓同炜,齐亚如,韩文龙,卢建洲,蒋增海(1081)

绵羊肺腺瘤病毒囊膜蛋白引起绵羊绒毛膜滋养层细胞的恶性转化
..... 赵 娟,徐斯日古楞,李慧萍,刘淑英(1089)

学界动态

中国地方猪种成肌与肌肉沉脂的遗传机制解析 任红艳,胡景杰,杜生明(1096)

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. 49 No. 5 (May 2018)

CONTENTS

REVIEW

Research Progress on Genomic Copy Number Variations in Cattle

..... PEI Sheng-wei, WANG Li, CAO Xue-tao, LI Wan-hong, LI Fa-di, YUE Xiang-peng(871)

The Role of Macrophage- $\gamma\delta$ T Cell Immune Axis in the Pathogenesis of Glässer's Disease

..... CHENG Lei, CHEN Hong-bo(879)

ANIMAL GENETICS AND BREEDING

Identification and Functional Annotation of Genome-wide Genetic Variation in Shanghai White Pigs(Shang)

..... SHENG Zhong-hua, CHEN Guo-hong, PAN Yu-chun, WANG Qi-shan, ZHANG Zhe(887)

Relationship between Methylation in Promoter Region of *TLR5* Gene and Resistance to *Escherichia coli* F18 of Suted Weaned Piglets

..... DAI Chao-hui, FENG Hai-yue, ZONG Qiu-fang, WU Sheng-long, BAO Wen-bin(897)

The Expression Stability Analysis of Reference Genes in the Process of Goat Intramuscular Preadipocytes Differentiation in Goat

..... XU Qing, LIN Sen, ZHU Jiang-jiang, WANG Yong, LIN Ya-qiu(907)

Transcription Factor PAX4 Regulates the Transcriptional Activity of *FSHR* Gene in Hu Sheep

..... WANG De-di, LI Yin-xia, YAO Yi-long, PAN Zeng-xiang,

JUE Ken, YI Ming, CAO Shao-xian, LI Qi-fa(919)

Effects of Cell Wall of *Saccharomyces cerevisiae* on the Expression of *SBD-1* in Cultured Ruminal Epithelial Cells of Sheep

..... TIAN Qiao-zhen, JIN Xin, ZHANG Man, ZHANG Zhao-yi, WANG Yun-he, YANG Yin-feng(927)

Heritability Estimation of SCS Difference and Its Variation in Chinese Holstein Cattle in Beijing

..... SHI Liang-yu, ZHANG Rui-qiang, LI Xiang, Serafino Musa Abdelkarim Augustino,

Muhammad Zahoor Khan, LIU Lin, XIAO Wei, TANG Shao-qing,

ZHANG Yi, WANG Ya-chun, YU Ying(935)

ANIMAL BIOTECHNOLOGY AND REPRODUCTION

Effect of Different Nutrient Levels on Follicle Development and Glucose Metabolic Pathway Involved in Folliculogenesis of Hu Sheep during Luteal Phase

..... NIE Hai-tao, HUANG Xin-ai, LIU Hao, GUO Yi-xuan, WANG Zi-yu, ZHANG Yan-li,

WAN Yong-jie, FAN Yi-xuan, ZHANG Guo-min, WANG Feng, WANG Jie(942)

Effects of Expression of *LEPR* and *LEP* Genes on Litter Size of Small Tail Han Sheep with Different *FecB* Genotypes

..... YU Jia-ru, WANG Xiang-yu, GUO Xiao-fei, HE Xiao-yun, SUN Qing, WEN Yu-liang, DI Ran,

LIU Qiu-yue, HU Wen-ping, ZHANG Xiao-sheng, ZHANG Jin-long, SUN Wei, CHU Ming-xing(954)

ANIMAL NUTRITION AND FEEDS

Effects of *Enterococcus faecium* on the Growth Performance, Serum Biochemical Parameters and the Structure of Cecal Microflora in the *E. coli*-challenged Broilers

..... CAO Guang-tian, DAI Bing, ZHANG Ling-ling, ZENG Xin-fu, YANG Cai-mei(962)

Effect of Different Early Weaned Day on Morphological Development of Stomach for Housed Lambs

..... GUO Jiang-peng, PAN Jian-zhong, LI Fa-di, ZHANG Yuan-xing, YANG Yu-ze, HAO Zheng-li(971)

Effects of Dietary Vitamin D and Calcium Levels on Production Performance, Serum Biochemical Parameters and Organ Indexes of Male Standard Mink during Winter Fur-growing Period

..... WANG Jing, ZHANG Hai-hua, XU Yi-nan, LI Ren-de, ZHANG Xue-lei, CAI Xi-heng, LI Guang-yu(986)

PREVENTIVE VETERINARY MEDICINE

Development of a Duplex Fluorescence-based Reverse Transcript Loop-mediated Isothermal Amplification Assay for Detection of Foot-and-mouth Disease Virus and Vesicular Stomatitis Virus

..... FAN Qing, XIE Zhi-xun, XIE Zhi-qin, XIE Li-ji, HUANG Jiao-ling, ZHANG Yan-fang,
ZENG Ting-ting, WANG Sheng, LUO Si-si, DENG Xian-wen, LIU Jia-bo(996)

gga-miR-140-3p Inhibit Proliferation, Migration and Invasion in MDV-transformed MSB1 Cells

..... ZHAO Chun-fang, LI Xin, HAN Bo, QU Lu-jiang,
LIU Chang-jun, SONG Jiu-zhou, LIAN Ling, YANG Ning(1005)

Genetic Diversity of *Psoroptes ovis* var. *cuniculi* in China, Basing on the Complete Sequence of Mitochondrial 16S rRNA

..... GU Jiang, LI Yan-fang, ZHAO Xi-bin, XIE Yue,
LAI Wei-min, YANG Guang-you, GU Xiao-bin(1012)

Immune Efficacy Analysis of Flagellin Protein FliC of *Salmonella abortus equi* on SeM of *Streptococcus equi* subsp. *equi*

..... ZHAO Ya-nan, YANG Kang, ZHANG Bao-jiang, LI Bin, SU Yan(1020)

CLINICAL VETERINARY MEDICINE

Analysis of the Therapeutic Effect of Traditional Chinese Herbal Compound of Qinhuo Oral Liquid in Ducklings Infected with Duck Hepatitis Virus

..... ZHANG Wei, BAI Jing-ying, DU Hong-xu, XIONG Wen, MING Ke, LIU Jia-guo(1027)

Protective Effects of Quercetin on the Reproductive Injury Induced by Cadmium through the Nrf2-Keap1 Signaling Pathway in Rats

..... HE Liu, LI Hui, ZHOU Hou-ji,
TONG Cui, WANG Jia-mei, LI Mei-qi, YANG Shu-hua, HE Jian-bin(1037)

Regulation of RANK/RANKL/OPG Signal Pathway by Calcium Chelated Sheep Bone Collagen Peptide in Inhibiting the Occurrence of Osteoporosis

..... HAN Ke-guang, SHEN Yong-tao, YUAN Kai, FAN Hua, CHEN Jing,
JIN Shu-xiu, GU Shao-peng, TIAN Wen-xia, ZHANG Ding, HUO Nai-rui, CHANG Hong(1047)

Effects of Different Isoflurane Anesthesia Time on Neural Apoptosis and Autophagy in the Developing Rat Hippocampus

..... QIU Zi-hao, HU Xue-yuan, FENG Xiu-jiang, ZHAO Yuan,
SONG Man-yu, WANG Chao-ran, LIU Tao, FAN Hong-gang(1054)

RESEARCH NOTES

Effects of Phosphorus Forms and Levels on the Production Performance and Metabolism of Calcium, Phosphorus and Nitrogen in Laying Hens

..... HE Wan-ling, LI Xiao-li, LI Wang, DING Ke, LI Yuan-xiao, REN Zhen-dong(1061)

Antimicrobial Susceptibility Analysis and ESBL Gene Detection of *Staphylococcus aureus* Isolated at Animal Farms in Chongqing

..... CHEN Yao, DING Hong-lei, HE Ying, MU Hao, WANG Li-min, WANG Hao-ju(1074)

Isolation, Identification and Antimicrobial Resistance of *Salmonella* from Dead Chicken Embryos in Sanhuang Breeder Farms

..... XU Yao-hui, DENG Tong-wei, QI Ya-ru, HAN Wen-long, LU Jian-zhou, JIANG Zeng-hai(1081)

Malignant Transformation of Sheep Trophoblast Cells Induced by Envelope Protein of Jaagsiekte Sheep Retrovirus

..... ZHAO Juan, XU Si-ri-gu-leng, LI Hui-ping, LIU Shu-ying(1089)

ACADEMIC TREND

Genetic Mechanisms of Myogenesis and Intramuscular Adipogenesis in Chinese Indigenous Pigs

..... REN Hong-yan, HU Jing-jie, DU Sheng-ming(1096)

《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 闫于明 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 李宁 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 郭云雁

畜牧兽医学报

(月刊,1956年创刊)

2018年 第49卷 第5期

2018年5月出版

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. 49 No. 5 May 2018

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