



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.47

No.3

2016

中国畜牧兽医学会

CHINESE ASSOCIATION OF ANIMAL
SCIENCE AND VETERINARY MEDICINE

ISSN 0366-6964



9 770366 696162

畜牧兽医学报

XUMU SHOUYI XUEBAO

第 47 卷 第 3 期 2016 年 3 月

目 次

综 述

- 喙畸形研究进展..... 白 皓,孙研研,陈继兰(417)
- 宿主细胞 F-actin 聚集在顶复门原虫入侵过程中的作用研究.....
..... 吴彩艳,王 祯,李 娟,林栩慧,廖申权,戚南山,吕敏娜,孙铭飞(423)

遗传繁育

- 利用关联组估计中国大白、长白及杜洛克猪繁殖性状的遗传参数.....
..... 张锁宇,邱小田,丁向东,张 勤,王志刚,王长存,屈云龙(429)
- 巴马小型猪 *OCA2* 基因序列、组织表达分析及载体构建研究
..... 洪潜龙,张 颖,曹春伟,王宪龙,赵建国(439)
- 绵羊线粒体基因变异与产羔数性状的关联分析
..... 陈晓勇,孙洪新,袁 明,康振江,敦伟涛,赵兴波(449)
- 山羊 *STAT3* 基因克隆、生物信息学分析及甲基化修饰研究
..... 贾文超,刘亮亮,吴贤锋,赵钊艳,王 珂,王 毛,高 静,王立强,陈 宏,潘传英,蓝贤勇(457)
- 山羊 *DLK1* 基因分子克隆、生物信息学分析及表达研究
..... 廖红海,林亚秋,邬杨楠,朱武政,李 倩,王 永,陈 娟(467)
- 家兔不同发育阶段和组织中内参基因的稳定性分析 陈 瑞,杨晓农,曾婉秋,文 娟(477)
- 绵羊卵母细胞体外成熟过程中 VEGF 对 DNMT3a 表达的影响
..... 曹 忻,邹云龙,蔡 勇,周 平,李 明,石国庆,康相涛(484)
- 不同生长时期梅花鹿鹿茸差异蛋白质组学分析
..... 张然然,刘华森,邵元臣,周盼伊,苏 莹,王 磊,邢秀梅(493)
- GnRH 主动免疫雌性大鼠调控机制研究
..... 曹晓涵,韩兴发,杜小刚,陈志渝,孟风艳,储明星,曾宪垠(502)
- EphA2* 及 *EphrinA2* 在敖汉细毛羊皮肤中的表达及分布规律研究
..... 贺建宁,王春亮,赵金山,程 明,刘开东,刘积凤,柳 楠(509)
- 外源性 dsRNA 对蛋鸡卵泡 *CART* 基因表达及雌激素和孕酮分泌的影响
..... 李鹏飞,孟金柱,于雪静,庞钰莹,杜海燕,李晓明,姚晓磊,赵妙妙,吕丽华(515)

动物营养

- 不同模式偏热环境对肉鸡氮代谢与生产性能的影响
..... 王雪敏,彭骞骞,冯京海,甄 龙,张少帅,常 玉,周 莹,张敏红(521)
- 阴外动脉灌注氨基酸对泌乳奶牛乳中主要脂肪酸组成的影响
..... 张福全,敖长金,哈斯额尔敦,刘帅旺,白 晨,王晁珏,高 鹏,张 莹(529)

预防兽医

- 牛病毒性腹泻病毒感染对牛外周血来源树突状细胞表型及其分泌 Th1/Th2 细胞因子的影响
..... 刘金玲,魏 澍,赵玉军,何剑斌(536)
- 古典 H1N1 亚型猪流感病毒 PB2 K627E 突变对病毒复制能力的影响
..... 汪秀会,宫晓倩,阮宝阳,刘晓敏,汪 琪,张 鹏,李泽君,周艳君,
童 武,郑 浩,童光志,于 海(543)
- 兔肝细胞中与 RHDV VP60 P2 亚区相互作用蛋白质的筛选和初步鉴定
..... 李 腾,姜 平,王 芳,宋艳华,胡 波,范志宇,魏后军,仇汝龙,刘 星(549)
- 鸡传染性支气管炎病毒 S1 蛋白 MHC I 分子限制性 T 细胞表位的鉴定
..... 朱凤珠,鲁 梅,黄庆华,杨少华,黄艳艳,吴家强,谭刘刚,张秀美,崔言顺,许传田(559)
- 面筋蛋白外啡肽 B5 对传染性支气管炎灭活疫苗免疫效果的影响 周业飞,周梅仙(566)
- CYP1A1 与 PPAR- γ 在猪肺炎支原体感染炎症反应调控中的作用关系
..... 徐 杰,赵为民,任守文,赵 芳,周艳红,李惠侠,方晓敏(574)

基础兽医

- 仔猪回肠绒毛 M 细胞的形态、分布及其与猪流行性腹泻病毒感染的关系
..... 李任峰,田香勤,乔松林,郭军庆,周恩民,张改平(581)
- PCV2 人工感染对猪肺泡巨噬细胞干扰素信号通路的调控研究
..... 赵其岭,张新晨,陈萌萌,孙嘉瑞,鲍恩东,张书霞,吕英军(587)
- 鼠伤寒沙门菌 *cpxR* 和 *acrB* 双基因缺失菌株的构建及其对抗菌药物敏感性分析
..... 黄 慧,刘保光,孙亚伟,马彩琿,陈丽鹏,苑 丽,潘玉善,胡功政(595)
- 棕榈酸和硬脂酸对 HepG2 细胞血红素加氧酶-1 和核转录因子 Nrf2 表达的影响
..... 郝丽红,张秀英,张金铭,崔晓旭,孙晓琦,关舒函(603)

临床兽医

- 金英黄归汤对 LPS 介导乳腺上皮细胞 TLR4 信号通路中相关因子的影响
..... 李 欣,李中改,张小艺,周送桂,王玉坤,冯 将,易 琼,王 鲁(609)

研究简报

- 埃博拉病毒抗体间接 ELISA 检测方法的建立及应用
..... 曹增国,王化磊,盖微微,郑学星,金宏丽,李 岭,王丽娜,冯 娜,赵永坤,
王铁成,高玉伟,毕玉海,杨松涛,夏咸柱(615)
- 寒区奶牛舍环境温湿度、粉尘和气载细菌的季节性变化及其相关性研究
..... 高玉红,郭建军,李宏双,邱殿锐,李晓滨,吴广军,李建国(620)
- 不同海拔条件下牦牛颈动脉体组织微细结构的比较研究
..... 张 寿,常 兰,雷乃虎,马艳芳,沈明华(630)

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. 47 No. 3 (Mar. 2016)

CONTENTS

REVIEW

The Research Progress of Beak Deformity

..... BAI Hao, SUN Yan-yan, CHEN Ji-lan (417)

A Role for Host Cell F-actin Polymerization during the Protozoan Parasite Infection

..... WU Cai-yan, WANG Zhen, LI Juan, LIN Xu-hui, LIAO Shen-quan,
QI Nan-shan, LÜ Min-na, SUN Ming-fei (423)

ANIMAL GENETICS & REPRODUCTION

Estimation of Genetic Parameters by Connecting Groups for Reproductive Traits of Yorkshire, Landrace and Duroc Pigs in China

..... ZHANG Suo-yu, QIU Xiao-tian, DING Xiang-dong, ZHANG Qin, WANG Zhi-gang,
WANG Chang-cun, QU Yun-long (429)

Analysis of Sequence, Tissue Expression and Vector Construction of OCA2 Gene in Bama Miniature Pigs

..... HONG Qian-long, ZHANG Ying, CAO Chun-wei, WANG Xian-long, ZHAO Jian-guo (439)

Association Analyses between Mitochondrial Coding Gene Variations and Sheep Litter Size

..... CHEN Xiao-yong, SUN Hong-xin, YUAN Ming, KANG Zhen-jiang, DUN Wei-tao, ZHAO Xing-bo (449)

Molecular Cloning, Bioinformatics Analysis and Methylation Modification of Goat STAT3 Gene

..... JIA Wen-chao, LIU Liang-liang, WU Xian-feng, ZHAO Zhao-yan, WANG Ke, WANG Mao,
GAO Jing, WANG Li-qiang, CHEN Hong, PAN Chuan-ying, LAN Xian-yong (457)

Molecular Cloning, Bioinformatics Analysis and Expression of DLK1 Gene in Goat

..... LIAO Hong-hai, LIN Ya-qiu, WU Yang-nan, ZHU Wu-zheng, LI Qian, WANG Yong, CHEN Juan (467)

Expression Stability Analysis of Reference Genes in Different Development Periods and Tissues in *Oryctolagus Cuniculus*

..... CHEN Rui, YANG Xiao-nong, ZENG Wan-qiu, WEN Juan (477)

The Effects of VEGF on DNMT3a Expression in Oocytes Maturation of Ovine *in vitro*

..... CAO Xin, ZOU Yun-long, CAI Yong, ZHOU Ping, LI Ming, SHI Guo-qing, KANG Xiang-tao (484)

Comparative Proteomic Analysis in Different Growth Stages of Sika Deer Velvet Antler

..... ZHANG Ran-ran, LIU Hua-miao, SHAO Yuan-chen, ZHOU Pan-yi, SU Ying,
WANG Lei, XING Xiu-mei (493)

Regulatory Mechanisms of Active Immunization against GnRH in Female Rats and Its Mechanism

..... CAO Xiao-han, HAN Xing-fa, DU Xiao-gang, CHEN Zhi-yu, MENG Feng-yan,
CHU Ming-xing, ZENG Xian-yin (502)

Expression and Distribution of EphA2 and EphrinA2 in Skin of Aohan Fine Wool Sheep

..... HE Jian-ning, WANG Chun-liang, ZHAO Jin-shan, CHENG Ming, LIU Kai-dong, LIU Ji-feng, LIU Nan (509)

Effects of Exogenous dsRNA on CART Gene Expression and Secretion of Estrodiol and Progesterin in Layer Follicles

..... LI Peng-fei, MENG Jin-zhu, YU Xue-jing, PANG Yu-ying, DU Hai-yan, LI Xiao-ming,
YAO Xiao-lei, ZHAO Miao-miao, LÜ Li-hua (515)

ANIMAL NUTRITION

Effects of Constant and Diurnal Cyclic Moderate Temperatures on Performance and Nitrogen Metabolism in Broilers

..... WANG Xue-min, PENG Qian-qian, FENG Jing-hai, ZHEN Long, ZHANG Shao-shuai,
CHANG Yu, ZHOU Ying, ZHANG Min-hong (521)

Effects of Intra-arterial Infusion of Amino Acids on Milk Fatty Acids Composition in Lactating Dairy Cows

..... ZHANG Fu-quan, AO Chang-jin, KHAS-Erdene, LIU Shuai-wang, BAI Chen,
WANG Xian-jue, GAO Peng, ZHANG Ying(529)

PREVENTIVE VETERINARY MEDICINE

The Influence of BVDV on Immunophenotype and Th1/Th2 Cytokine Secretion of Bovine Peripheral Blood-derived Dendritic Cells

..... LIU Jin-ling, WEI Shu, ZHAO Yu-jun, HE Jian-bin(536)

The Effect of PB2 K627E Mutation on the Replication Competence of Classical H1N1 Subtype Swine Influenza Virus

..... WANG Xiu-hui, GONG Xiao-qian, RUAN Bao-yang, LIU Xiao-min, WANG Qi, ZHANG Peng, LI Ze-jun,
ZHOU Yan-jun, TONG Wu, ZHENG Hao, TONG Guang-zhi, YU Hai(543)

Screening and Identification of RHDV VP60 P2 Domain Interacting Proteins in Rabbit Liver Cells

..... LI Teng, JIANG Ping, WANG Fang, SONG Yan-hua, HU Bo, FAN Zhi-yu, WEI Hou-jun,
QIU Ru-long, LIU Xing(549)

Identification of the MHC Class I-restricted Cytotoxic T Cell Epitope in Avian Infectious Bronchitis Virus S1 Protein

..... ZHU Feng-zhu, LU Mei, HUANG Qing-hua, YANG Shao-hua, HUANG Yan-yan, WU Jia-qi,
TAN Liu-gang, ZHANG Xiu-mei, CUI Yan-shun, XU Chuan-tian(559)

Gluten Exorphin B5 Enhances Immunogenicity and Protective Efficacy of Infectious Bronchitis Virus Vaccine in Broilers

..... ZHOU Ye-fei, ZHOU Mei-xian(566)

Interaction Effect of CYP1A1 and PPAR- γ in the Regulation of Inflammation of Mycoplasma Pneumonia in Swine

..... XU Jie, ZHAO Wei-min, REN Shou-wen, ZHAO Fang, ZHOU Yan-hong,
LI Hui-xia, FANG Xiao-min(574)

BASIC VETERINARY MEDICINE

Morphological and Distribution Characteristics of Villous M Cells in the Ileum of Newborn Piglets and the Association with PEDV Infection

..... LI Ren-feng, TIAN Xiang-qin, QIAO Song-lin, GUO Jun-qing, ZHOU En-min, ZHANG Gai-ping(581)

Regulation of Interferon Signaling Pathway in Alveolar Macrophages of Piglets Infected with Porcine Circovirus Type 2

..... ZHAO Qi-ling, ZHANG Xin-chen, CHEN Meng-meng, SUN Jia-rui, BAO En-dong,
ZHANG Shu-xia, LÜ Ying-jun(587)

Construction of *cpxR* and *acrB* Double Gene Deletion Strain of *Salmonella enterica* Serovar Typhimurium and Analysis of Its Susceptibility to Antibacterial Agents

..... HUANG Hui, LIU Bao-guang, SUN Ya-wei, MA Cai-hui, CHEN Li-peng, YUAN Li,
PAN Yu-shan, HU Gong-zheng(595)

Effects of Palmitic Acid and Stearic Acid on Genes and Protein Expressions of Heme Oxygenase 1 and Nuclear Transcription Factor Nrf2 in HepG2 Cell

..... HAO Li-hong, ZHANG Xiu-ying, ZHANG Jin-ming, CUI Xiao-xu, SUN Xiao-qi, GUAN Shu-han(603)

CLINICAL VETERINARY MEDICINE

Effects of Jin-Ying-Tang on Correlated Molecules of Toll-like Receptor 4 Signaling of LPS-Induced Mouse Mammary Epithelial Cells *in vitro*

..... LI Xin, LI Zhong-gai, ZHANG Xiao-yi, ZHOU Song-gui, WANG Yu-kun, FENG Jiang,
YI Qiong, WANG Lu(609)

RESEARCH NOTES

Development of an Indirect ELISA for Detecting Ebola Virus Antibody and Its Application

..... CAO Zeng-guo, WANG Hua-lei, GAI Wei-wei, ZHENG Xue-xing, JIN Hong-li, LI Ling,
WANG Li-na, FENG Na, ZHAO Yong-kun, WANG Tie-cheng, GAO Yu-wei,
BI Yu-hai, YANG Song-tao, XIA Xian-zhu(615)

Seasonal Variation of Ambient Temperature, Relative Humidity, Dust and Airborne Bacteria in Dairy Cowshed and Their Correlation in Chill Region

..... GAO Yu-hong, GUO Jian-jun, LI Hong-shuang, QIU Dian-rui, LI Xiao-bin, WU Guang-jun, LI Jian-guo(620)

Morphological Observation and Stereologic Study on Carotid Body of Yaks at Different Altitudes

..... ZHANG Shou, CHANG Lan, LEI Nai-hu, MA Yan-fang, SHEN Ming-hua(630)

《畜牧兽医学报》第六届编辑委员会成员

顾 问 张子仪 熊远著 刘守仁 吴常信 夏咸柱 旭日干 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

辛朝安 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 白永平

畜牧兽医学报

(月刊,1956年创刊)

2016年 第47卷 第3期

2016年3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 北京报刊发行局
国外总发行 中国国际图书贸易总公司
(中国国际书店)北京399信箱
订 购 全国各地邮局
刊 号 ISSN 0366-6964
CN 11-1985/S

ACTA VETERINARIA ET ZOOTECHNICA SINICA

(Monthly, Started in 1956)

Vol. 47 No. 3 Mar. 2016

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
Overseas China International Book Trading
Corporation, P.O. Box 399