

目次

手足口病相关肠道病毒研究专题

论著

不同培养条件下CVA16病毒在KMB17细胞上的增殖特性及宿主细胞的相关转录特征分析

……………龙佳卿,李盈妍,于丽,郑惠文,廖芸,王晶晶,李恒,赵鑫,赵恒,李丹丹,张莹,刘龙丁(727)

云南省昆明市2022-2023年手足口病病原谱及常见病原基因特征分析

……………刘沅果尔,姜黎黎,寸建萍,杨溪,伏晓庆,戚艳波,田炳均(740)

人类病毒研究论著

从一例住院患儿分离人偏肺病毒及其在人呼吸道上皮与肺泡类器官中感染特性研究

……………石小丫,陆柔剑,赵扬,余琦璠,翟程程,牛培华,宋敬东,邓瑶,谭文杰,朱娜(750)

儿童重症肺炎相关人腺病毒B3与B7型临床分离株的全基因组测定及体外宿主转录重塑分析

……………李若瑞,陆柔剑,郭小娟,赵智浩,沈军,吴长城,翟德胜,谭文杰(763)

2025年北京市人副流感病毒4型全基因组分析

……………高斌,张维嘉,吴丹,徐晖,刘医萌,石伟先,卢桂兰,崔淑娟,张代涛,赵佳琛(775)

合并慢阻肺的病毒性肺炎患者预后相关危险因素及其与血清PDCD5、IFN- $\gamma$ 的关系 ……芦丹,黄莺,张薇,程方琳,杨硕(783)

一种基于荧光ELISPOT技术的高通量快速检测痘病毒中和抗体方法 ……张俊,刘颖,申秀丽,施宇涛,宋红婧,王书晖(793)

一种巨病毒单链DNA结合蛋白Crov372的功能鉴定 ……郭宴菲,孙宾莲,付艳(801)

用于小鼠模型肠道固有层免疫细胞亚群多色流式检测方法的建立 ……王倩莹,杜欣然,王硕,张俊杰,刘筱靖,甘媛,李丹(812)

宿主蛋白FTH1与纳尔逊海湾正呼肠病毒 $\sigma$ NS蛋白互作并促进病毒复制

……………路佩嘉,钟萍,曹珂铃,孙绿茵,马竹萍,李永刚,陶晓莉(823)

HPV分型、病毒载量与宫颈癌局部进展分层及淋巴结转移的相关性研究 ……王波,王明霞,陈忠光(833)

基于微流控芯片的乙型肝炎病毒快速检测:性能验证与分析 ……王瑞兴,王茜,魏平,裴保河,郭永豪(842)

学习●交流●发现论著

建国初期上海地区流行性乙型脑炎防控历程与启示 ……相强宇,张璐,吴宗震,刘欢(850)

短篇论著

海南2024年狂犬病病例的病原基因特征分析

……………张明慧,林小政,许晓诺,谢永慧,于鹏程,劳世军,刘淑清,崔蕾,刘茜,孙初阳,张玲,陶晓燕,朱武洋(859)

银川市诺如病毒基因型分布及GII.P17-GII.17流行株全基因组序列特征分析

……………张伟宏,高焯,秦红,纳玮,郭媛媛,刘晓静,李萍,樊瑞军(865)

Nrf2/HO-1信号通路在诺如病毒腹泻患儿中的表达与机制 ……于丽瑞,黄玉煊,周曼丽(872)

慢性心力衰竭患者合并流感病毒感染临床特征及影响因素分析 ……樊叶,姚耿圳,邹旭,李晋新(879)

COPD急性加重期并发呼吸道感染危险因素及其与TNF- $\beta$ 、IFN- $\gamma$ 的关系 ……陈露,罗慧文,王爱利(885)

成人呼吸道合胞病毒肺炎的免疫特征与预后相关性研究 ……孙胜珍,孙慧聪,李更森(892)

HIF-1 $\alpha$ 、 $\beta$ 2GPI和Th17及其相关因子在乙型肝炎病毒感染相关性肝癌中的预测价值 ……王琪,王晶(898)

靶向2型人博卡病毒DR2多肽的单克隆抗体制备及表征分析……德日,张可祥,傅涵浩钰,孙宇,朱汝南,贾立平,赵林清(905)

### 动物病毒研究论著

高致病性H5N1禽流感病毒HA抗原谱演化特征和基因型更替分析……蒲思宇,崔思敏,罗军皓,何佩青,朱海军,高荣保(912)

一株牛疱疹病毒4型流行株的分离鉴定及其分子演化特征分析

……赵妍,张财祯,王辉,陆长斌,李平花,杨行,马雪青,李冬,朱新荣,杜晓华,卢曾军,刘霞,孙普(923)

犬细小病毒主要亚型VP2与NS1密码子使用模式及演化动态分析……阿依达娜·哈尔恒,粟硕,董瑞华(938)

猪急性腹泻综合征冠状病毒亚基因组RNA SYBR Green实时荧光定量PCR检测方法的建立及评价

……陈凝雪,黄超,张柳露,李程,邱帅,孙媛(949)

微管依赖的自噬体在猪流行性腹泻病毒早期感染中的作用……姚飞,李燕,马永豪,安达,裴义,冯永智,单衍可,刘斐(958)

宿主蛋白SPCS1与牛病毒性腹泻病毒p7蛋白的相互作用研究

……高冯思月,张成远,马思琪,陈俊贞,李亚,关团,丁剑,史慧君,付强(967)

表达小反刍兽疫田间毒株HN糖蛋白重组山羊痘毒株的构建及其增殖特性分析

……陈韵,任善会,杜新潮,朱开宇,王会宝,仝丽娜,高小龙(976)

草鱼呼肠孤病毒感染早期非裂解性释放的初步研究……樊炎昌,吕利群(987)

多株猪流行性腹泻病毒G2c毒株的分离与免疫原性比较

……杨孟迪,郭容利,莫嘉文,赵永祥,宋旭,刘诗雨,王祎,孙敏,杨珊珊,王先炜,李彬,范宝超(996)

### 述评

登革病毒NS1抗原检测试剂监管现状及注册审评要点探讨……李鹏飞(1007)

### 人类病毒综述

登革病毒NS2B-NS3pro抑制剂的研究进展……朱浩嘉,邱丰,曹鹏,龚勇,徐柯,周玉柏(1012)

慢性活动性EB病毒感染发生机制研究进展……赵琳,马晶,曹玉玺,韦俊宏,张晓光(1022)

EB病毒感染预防与治疗性疫苗的研究进展……李瑞彤,董星辰,郭诗雨,慎慧,安毛毛(1034)

EV-D68感染所致急性呼吸道传染病的研究进展……曲艺璇,樊欢,邓斐,鲍倡俊,许可,朱立国(1043)

甲型流感病毒的流行病学特征及防控策略研究进展……杨丽,代林翔,张俭(1057)

流感抗病毒药物及其在大流行防范中的作用……马雷蕾,黄冬梅,张健(1064)

### 动物病毒综述

猫主要病毒核酸恒温扩增检测技术研究进展……伊淑帅,吴晶,赵涵,于家欣,黄馨盈,牛江婷(1072)

## 信息

- 《病毒学报》获得中国精品科技期刊顶尖学术论文(F5000)项目来源期刊证书(2017-2020年)(封二)
- 《病毒学报》获得中国精品科技期刊证书(2008年)(封三)
- 《病毒学报》入编北大核心《中文核心期刊要目总览》2023年版(第10版)之基础医学类核心期刊(插页)
- 《病毒学报》获得中国科技核心期刊收录证书(2025年)(插页)
- 《病毒学报》获得 RCCSE 中国核心学术期刊(A)证书(2023年)(插页)
- 《病毒学报》获得中国科学引文数据(CSCD)核心来源期刊证书(2025-2026年)(插页)
- 《病毒学报》入选《中国学术期刊影响因子年报》统计刊源证书(2025版)(插页)
- 《病毒学报》中国学术期刊影响因子年报(自然科学与工程技术 2025版)(插页)
- 2026年中国微生物学会及各专业委员会学术活动计划表(插页)
- 《病毒学报》征稿简则(2018年12月25日修订)(插页)
- 《病毒学报》第七届编辑委员会成员名单(插页)

期刊基本参数:CN-11-1865/R\*1985\*b\*A4\*358\*zh\*P\*128\*38\*2026-03

责任编辑:蒋涛 胡大伟 编辑:魏岚 郭建强 助理执行编辑:张良一

专业英文审校:张智清 出版英文审校:魏岚

手足口病相关肠道病毒专题特邀策划人:张勇

专题处理编辑:蒋涛

CONTENTS

Research on Enteroviruses Associated with Hand, Foot, and Mouth Disease

Article

Proliferation Characteristics of CVA16 in KMB17 Cells under Different Culture Conditions and Analysis of Relevant Host Cell Transcriptional Features

·····LONG Jiaqing, LI Yingyan, YU Li, ZHENG Huiwen, LIAO Yun, WANG Jingjing, LI Heng, ZHAO Xing, ZHAO Heng, LI Dandan, ZHANG Ying, LIU Longding (739)

Pathogenic Spectrum and Genetic Characteristics of Hand, Foot and Mouth Disease in Kunming, Yunnan Province, China, 2022-2023

·····LIU Xuanguoer, JIANG Lili, CUN Jianping, YANG Xi, FU Xiaoqing, QI Yanbo, TIAN Bingjun (749)

Human Virus Article

Isolation of Human Metapneumovirus from a Hospitalized Child and Characteristics of its Infection in Human Respiratory Epithelial and Alveolar Organoids

···SHI Xiaoya, LU Roujian, ZHAO Yang, YU Yufan, ZHAI Chengcheng, NIU Peihua, SONG Jingdong, DENG Yao, TAN Wenjie, ZHU Na (762)

Whole Genome Sequencing and In Vitro Host Transcriptome Remodeling Analysis of Clinical Isolates of Human Adenovirus B3 and B7 Associated with Severe Pneumonia in Children

·····LI Ruorui, LU Roujian, GUO Xiaojuan, ZHAO Zhihao, SHEN Jun, WU Changcheng, ZHAI Desheng, TAN Wenjie (774)

Whole Genome Analysis of Human Parainfluenza Virus Type 4 in Beijing, China, 2025

···GAO Bin, ZHANG Weijia, WU Dan, XU Hui, LIU Yimeng, SHI Weixian, LU Guilan, CUI Shujuan, ZHANG Daitao, ZHAO Jia-chen (782)

Prognostic Risk Factors in Patients with Viral Pneumonia Complicated with Chronic Obstructive Pulmonary Disease and Their Relationship with Serum PDCD5 and IFN- $\gamma$

·····LU Dan, HUANG Ying, ZHANG Wei, CHENG Fanglin, YANG Shuo (792)

A High-Throughput Rapid Detection Method for Poxvirus Neutralizing Antibodies Based on Fluorescent ELISPOT Technology

·····ZHANG Jun, LIU Ying, SHEN Xiuli, SHI Yutao, SONG Hongjing, WANG Shuhui (800)

Functional Characterization of Crov372, a Single-Stranded DNA-Binding Protein of a Giant Virus

·····GUO Yanfei, SUN Binlian, FU Yan (811)

Establishment of a Multicolor Flow Cytometry Method for Detecting Intestinal Lamina Propria Immune Cell Subsets in Mouse Model

·····WANG Qianying, DU Xinran, ZHANG Junjie, LIU Xiaojing, LI Dan (822)

Host Protein FTH1 Interacts with the  $\sigma$ NS Protein to Promote Nelson Bay Orthoreovirus Replication

·····LU Peijia, ZHONG Ping, CAO Kequan, SUN Luyin, MA Zhuping, LI Yonggang, TAO Xiaoli (832)

Association of HPV Genotype and Viral Load with Locally Advanced Stage Stratification and Lymph Node Metastasis in Cervical Cancer

·····WANG Bo, WANG Mingxia, CHEN Zhongguang (841)

Rapid Detection of Hepatitis B Virus Using Microfluidic Chips: Performance Validation and Analysis

·····WANG Ruixing, WANG Xi, WEI Ping, PEI Baohe, GUO Yonghao (849)

Learning Communication Discovery Research papers

Prevention and Control of Japanese Encephalitis in Shanghai During the Early Years of the People's Republic of China

.....XIANG Qiangyu, ZHANG Lu, WU Zongzhen, LIU Huan (858)

Brief Article

Genetic Characterization of a Rabies Virus Isolate from a Human Case in Hainan, China, 2024

···ZHANG Minghui, LIN Xiaozheng, XU Xiaonuo, XIE Yonghui, YU Pengcheng, LAO Shijun, LIU Shuqing, CUI Lei, LIU Qian,  
SUN Chuyang, ZHANG Ling, TAO Xiaoyan, ZHU Wuyang (864)

The Distribution of Norovirus Genotypes in Yinchuan and the Analysis of Whole Genome Sequence Characteristics of GII.P17-GII.17  
Epidemic Strains.....ZHANG Weihong, GAO Ye, QIN Hong, NA Wei, GUO Yuanyuan, LIU Xiaojing, LI Ping, FAN Ruijun (871)

Expression of the Nrf2/HO-1 Signaling Pathway and Its Mechanistic Implications in Children with Norovirus Diarrhea

.....YU Lirui, HUANG Yuhuan, ZHOU Manli (878)

Clinical Characteristics and Risk Factors of Influenza Virus Infection in Patients with Chronic Heart Failure

.....FAN Ye, YAO Gengzhen, ZOU Xu, LI Jinxin (884)

Risk Factors for Respiratory Viral Infections During Acute Exacerbations of Chronic Obstructive Pulmonary Disease (COPD) and  
Their Association with TNF- $\beta$  and IFN- $\gamma$  .....CHEN Lu, LUO Huiwen, WANG Aili (891)

Immune Characteristics and Prognostic Relevance in Adults with Respiratory Syncytial Virus Pneumonia

.....SUN Shengzhen, SUN Huicong, LI Gengsen (897)

Predictive Value of HIF-1 $\alpha$ ,  $\beta$ 2GPI and Th17 and Their Related Factors in Hepatitis B Virus Infection-Associated Hepatocellular Car-  
cinoma .....WANG Qi, WANG Jing (904)

Preparation and Characterization of a Monoclonal Antibody Targeting the DR2 Region of Human Bocavirus Type 2 VP3

.....DE Ri, ZHANG Kexiang, FU Hanhaoyu, SUN Yu, ZHU Runan, JIA Liping, ZHAO Linqing (911)

Animal Virus Article

Genotype Replacement and Antigenic Evolution of Hemagglutinin in Highly Pathogenic H5N1 Avian Influenza Viruses

.....PU Siyu, CUI Simin, LUO Junhao, HE Peiqing, ZHU Haijun, GAO Rongbao (922)

Isolation, Identification and Molecular Evolutionary Characterization of Bovine Herpesvirus 4 from Holstein Friesian in China's main-  
land

···ZHAO Yan, ZHANG Caizhen, WANG Hui, LU Changbin, LI Pinghua, YANG Hang, MA Xueqing, LI Dong, ZHU Xinrong, DU  
Xiaohua, LU Zengjun, LIU Xia, SUN Pu (937)

Analysis of Codon Usage Patterns and Evolutionary Dynamics of the VP2 and NS1 Genes among Major Subtypes of Canine Parvovirus

.....AYIDANA Haerheng, SU Shuo, DONG Ruihua (948)

Development and Evaluation of a SYBR Green Real-Time RT-qPCR Assay for Detection of Subgenomic RNAs of Swine Acute Diarrhea  
Syndrome Coronavirus .....CHEN Ningxue, HUANG Chao, ZHANG Liulu, LI Cheng, QIU Shuai, SUN Yuan (957)

The Role of Microtubule-Dependent Autophagosomes in Early Porcine Epidemic Diarrhea Virus Infection

.....YAO Fei, LI Yan, MA Yonghao, AN Da, PEI Yi, FENG Yongzhi, SHAN Yanke, LIU Fei (966)

Interaction between the Host Protein SPCS1 and the p7 Protein of Bovine Viral Diarrhea Virus

···GAO Fengsiyue, ZHANG Chengyuan, MA Siqu, CHEN Junzhen, LI Ya, GUAN Tuan, DING Jian, SHI Huijun, FU Qiang (975)

Construction of a Recombinant Goatpox Virus Expressing the Hemagglutinin Glycoprotein of a Field Strain of Peste des Petits Ruminants Virus and Analysis of Its Replication Characteristics

·····CHEN Yun, REN Shanhui, DU Xinchao, ZHU Kaiyu, Wang Huibao, TONG Lina, GAO Xiaolong (986)

A Preliminary Investigation of Non-lytic Release of Grass Carp Reovirus during Early Infection ·····FAN Yanchang, LYU Liqun (995)

Isolation and Comparative Immunogenicity of Multiple Porcine Epidemic Diarrhea Virus G2c Strains

·····YANG Mengdi, GUO Rongli, MO Jiawen, ZHAO Yongxiang, SONG Xu, LIU Shiyu, WANG Yi, SUN Min, YANG Shanshan, WANG Xianwei, LI Bin, FAN Baochao (1006)

### Perspective

Current Regulatory Status and Key Considerations for the Registration Review of Dengue Virus NS1 Antigen Detection Reagents

·····LI Pengfei (1011)

### Human Virus Review

Research Progress on Inhibitors Targeting Dengue Virus NS2B-NS3 Protease

·····ZHU Haojia, QIU Feng, CAO Peng, GONG Yong, XU Ke, ZHOU Yubai (1021)

Research Progress on the Pathogenesis of Chronic Active EB Virus Disease

·····ZHAO Lin, MA Jing, CAO Yuxi, Wei Junhong, ZHANG Xiaoguang (1033)

Research Progress on Preventive and Therapeutic Vaccines Against EBV Infection

·····LI Ruitong, DONG Xingchen, GUO Shiyu, SHEN Hui, AN Maomao (1042)

Research Progress on Acute Respiratory Infections Associated with EV-D68

·····QU Yixuan, FAN Huan, DENG Fei, BAO Changjun, XU Ke, ZHU Liguo (1056)

Research Progress on the Epidemiological Characteristics and Prevention and Control Strategies of Influenza A Virus

·····YANG Li, DAI Linxiang, ZHANG Jian (1063)

Antiviral Drugs for Influenza and Their Role in Pandemic Preparedness ·····MA Leilei, HUANG Dongmei, ZHANG Jian (1071)

### Animal Virus Review

Advances in Isothermal Nucleic Acid Amplification Technologies for the Detection of Major Feline Viruses

·····YI Shushuai, WU Jing, ZHAO Han, YU Jiaxin, HUANG Xinying, NIU Jiangting (1084)

**Managing Editor:** JIANG Tao, HU Dawei, WEI Lan, GUO Jianqiang, ZHANG Liangyi

**Professional English Reviewer:** ZHANG Zhiqing      **Publishing English Reviewer:** WEI Lan

**Guest Editor of "Research on Enteroviruses Associated with Hand, Foot, and Mouth Disease":** ZHANG Yong

**Managing Editor:** JIANG Tao