

中文目次

特邀专稿

- 2931 往事的回忆——怀念周培瑾先生
刘双江

学科先贤

- 2933 中国极端微生物学的奠基人——周培瑾

综述

- 2935 艰难拟梭菌毒素致病机制及毒素基因调控的研究进展
赵敏, 欧阳紫柔, 赵建宏
- 2948 结核分枝杆菌抗原蛋白的研究及其应用新进展
陈莹, 徐平, 戴二黑, 张瑶
- 2967 细菌抵抗消毒剂及其对抗生素共耐药
王秀娟, 谷宇锋, 王文惠, 李洁, 郝海红
- 2980 病原菌效应因子调控宿主泛素化修饰的研究进展
左伟, 王欣宇, 胡剑刚, 王少辉
- 2994 胞内致病菌入侵宿主细胞分子机理研究进展
陈杨慧, 黎源, 王蓓
- 3009 功能代谢组学技术在微生物研究中的应用
赵燕妮, 余瑞, 刘欢, 王永波

研究报告

- 3026 海水养殖生境中柠檬酸杆菌降解半胱氨酸产生硫化物的机制研究
马冬雪, 赵栩宁, 赵阳国
- 3041 新型氟喹诺酮衍生物对水产致病菌及其生物被膜的抑制作用研究
周青青, 杨清麟, 李月, 李艳红, 杨大成, 吴正理
- 3054 持续低氧条件下大鼠肠道微生物变化及其与心肌损伤的关联研究
王珍, 周亚洲, 王立坤, 黄自然, 常宇晓, 侯凤仪, 张欢, 凌慧, 孙一凡, 谭亚芳, 杨瑞馥, 毕玉晶, 潘志远
- 3068 凡纳滨对虾繁育系统菌群结构及优势菌遗传多样性分析
唐苗苗, 王印庚, 王春元, 张正, 廖梅杰, 李彬, 荣小军, 葛建龙, 于永翔
- 3083 鸭疫里氏杆菌*hemH*基因功能初步鉴定及其缺失株的转录组学分析
王梦莹, 刘马峰, 程安春
- 3096 微嗜酸寡养单胞菌中磷酸吡哆胺氧化酶基因*pnpox*生物学功能研究
陶宇, 叶婷, 费晴如, 付晓杰, 周育

- 3110 五株克雷伯氏菌噬菌体的生物学特性及比较基因组学研究
王猛, 王雪, 赵佳男, 曾君, 左君豪, 郭志良, 季芳, 邵建立, 张立敏, 王承民, 秦建华

- 3129 浸麻类芽孢杆菌葡甘露聚糖降解酶的异源表达及功能研究
孟嘉仪, 张国晶, 周凤恩, 王楠, 周义发, 原野

- 3144 人肠道梭菌和甲烷马赛球菌协同代谢甜菜碱和胆碱产甲烷研究
田栩萍, 李凌燕, 李洁, 高健, 邓锴, 东秀珠

- 3157 酸性旱地红壤无机氮同化菌株筛选及其全基因组分析
刘冉, 姜允斌, 邓欢, 张银萍, 韩成, 钟文辉

- 3173 不同地区人初乳中细菌多样性研究
张蕾, 赵志鑫, 赵飞燕, 孙志宏

- 3187 氧化葡萄糖酸杆菌中一种潜在的双组分系统蛋白的功能研究
刘思羽, 马昱澍, 魏东芝

- 3203 大肠杆菌O157:H7噬菌体鸡尾酒喷雾干燥微囊粉剂的制备及其应用
李瑾, 王瑜欣, 王许航, 李静, 付开来, 戴建君, 汤芳, 席静

- 3219 基于比较转录组学分析NaCl胁迫影响德尔夫沙门氏菌的耐渗机制
翟立公, 李港回, 黄菊, 蔡秋慧, 魏照辉, 何晓东, 曹睿, 王俊颖

- 3235 青藏高原极端生境细菌多样性差异及影响因素
向信, 殷恒霞, 朱肇宇, 邱庆辉, 柳宇睿, 樊嘉凯, 邓佳文, 张得钧, 张本印

- 3252 嗜冷嗜酸 β -1,4-木聚糖酶及其钙离子依赖型碳水化合物结合模块
葛慧华, 刘婷, 杨纯, 张光亚

- 3264 醋酸钙不动杆菌对盐碱胁迫下达乌里胡枝子促生效应研究
黄臣, 蒋霖, 梁银萍, 韩玲娟, 杨凯元, 秦云梦, 高鹏, 赵祥

- 3279 东方蜜蜂微孢子虫N6-腺苷特异性甲基化转移酶基因的克隆、分子特性及表达模式
孙明会, 张佳欣, 张艺琼, 赵浩东, 荆欣, 高旭泽, 郭思佳, 冯佩林, 刘小玉, 陈大福, 付中民, 郭睿

- 3292 内生真菌印度梨形孢诱导小麦抗根腐病作用研究
郝瑞颖, 李亮, 杨秀荣, 马皓轩, 史硕, 冯宇

CONTENTS

REVIEWS

- 2935** Advances in pathogenesis of *Clostridioides difficile* and regulation of toxin gene expression
ZHAO Min, OUYANG Zirou, ZHAO Jianhong
- 2948** Effective antigens of *Mycobacterium tuberculosis*
CHEN Ying, XU Ping, DAI Erhei, ZHANG Yao
- 2967** Resistance of bacteria to disinfectants and co-resistance of disinfectant-resistant bacteria to antibiotics
WANG Xiujian, GU Yufeng, WANG Wenhui, LI Jie, HAO Haihong
- 2980** Modulation of host ubiquitination pathways by bacterial effectors
ZUO Wei, WANG Xinyu, HU Jiangang, WANG Shaohui
- 2994** Molecular mechanism of intracellular pathogenic bacteria invading host cells
CHEN Yanghui, LI Yuan, WANG Bei
- 3009** Application of functional metabolomics in microbiological studies
ZHAO Yanni, YU Rui, LIU Huan, WANG Yongbo

RESEARCH ARTICLES

- 3026** Mechanism of sulfide production from cysteine degradation by *Citrobacter* in mariculture habitats
MA Dongxue, ZHAO Xuning, ZHAO Yangguo
- 3041** Novel fluoroquinolone derivatives inhibit growth and biofilm formation of pathogenic bacteria in aquatic animals
ZHOU Qingqing, YANG Qinglin, LI Yue, LI Yanhong, YANG Dacheng, WU Zhengli
- 3054** Alterations in gut microbiota and their associations with cardiac injury in rats after exposure to continuous normobaric hypoxia
WANG Zhen, ZHOU Yazhou, WANG Likun, HUANG Ziran, CHANG Yuxiao, HOU Fengyi, ZHANG Huan, LING Hui, SUN Yifan, TAN Yafang, YANG Ruifu, BI Yujing, PAN Zhiyuan
- 3068** Microbial community structure and genetic diversity of dominant bacteria in *Litopenaeus vannamei* breeding system
TANG Miaomiao, WANG Yingeng, WANG Chunyuan, ZHANG Zheng, LIAO Meijie, LI Bin, RONG Xiaojun, GE Jianlong, YU Yongxiang
- 3083** Functional identification of *hemH* and transcriptomic analysis of *hemH* mutant of *Riemerella anatipestifer*
WANG Mengying, LIU Mafeng, CHENG Anchun
- 3096** Role of phosphopyridoxamine oxidase gene *pnpox* in *Stenotrophomonas acidaminiphila*
TAO Yu, YE Ting, FEI Qingru, FU Xiaojie, ZHOU Yu

- 3110** Biological characteristics and comparative genomics of five *Klebsiella* phage isolates
WANG Meng, WANG Xue, ZHAO Jia'nan, ZENG Jun, ZUO Junhao, GUO Zhiliang, JI Fang, SHAO Jianli, ZHANG Limin, WANG Chengmin, QIN Jianhua
- 3129** Heterologous expression and characterization of novel glucomannan-degrading enzymes from *Paenibacillus macerans*
MENG Jiayi, ZHANG Guojing, ZHOU Feng'en, WANG Nan, ZHOU Yifa, YUAN Ye
- 3144** *Clostridium* and *Methanomassiliicoccus* isolated from human intestine synergistically convert betaine and choline to methane
TIAN Xuping, LI Lingyan, LI Jie, GAO Jian, DENG Kai, DONG Xiuzhu
- 3157** Isolation and whole genome analysis of bacterial strains assimilating inorganic nitrogen in acidic dryland red soils
LIU Ran, JIANG Yunbin, DENG Huan, ZHANG Yinping, HAN Cheng, ZHONG Wenhui
- 3173** Bacterial diversity in human colostrum samples from different regions
ZHANG Lei, ZHAO Zhixin, ZHAO Feiyan, SUN Zhihong
- 3187** Function of a potential two-component system protein in *Gluconobacter oxydans*
LIU Siyu, MA Yushu, WEI Dongzhi
- 3203** Preparation and application of *Escherichia coli* O157:H7 phage cocktail spray drying microcapsule
LI Jin, WANG Yuxin, WANG Xuhang, LI Jing, FU Kailai, DAI Jianjun, TANG Fang, XI Jing
- 3219** NaCl stress affects the permeability of *Salmonella enterica* subsp. *enterica* Derby: a study based on comparative transcriptomics
ZHAI Ligong, LI Ganghui, HUANG Ju, CAI Qiuhui, WEI Zhaoxue, HE Xiaodong, CAO Rui, WANG Junying
- 3235** Differences and influencing factors of bacterial composition and diversity in seven typical extreme habitats on the Qinghai-Tibetan Plateau
XIANG Xin, YIN Hengxia, ZHU Zhaoyu, QIU Qinghui, LIU Yurui, FAN Jiakai, DENG Jiawen, ZHANG Dejun, ZHANG Benyin
- 3252** Psychrophilic and acidophilic β -1,4-xylanase and its Ca^{2+} -dependent carbohydrate-binding module
GE Huihua, LIU Ting, YANG Chun, ZHANG Guangya
- 3264** *Acinetobacter calcoaceticus* promotes the seedling growth of *Lespedeza daurica* under saline-alkaline stress
HUANG Chen, JIANG Lin, LIANG Yinping, HAN Lingjuan, YANG Kaiyuan, QIN Yunmeng, GAO Peng, ZHAO Xiang
- 3279** Cloning, molecular characterization, and expression pattern of N6-adenine-specific DNA methyltransferase gene in *Nosema ceranae*
SUN Minghui, ZHANG Jiaxin, ZHANG Yiqiong, ZHAO Haodong, JING Xin, GAO Xuze, GUO Sijia, FENG Peilin, LIU Xiaoyu, CHEN Dafu, FU Zhongmin, GUO Rui
- 3292** Endophytic fungus *Piriformospora indica* induces wheats against root rot
HAO Ruiying, LI Liang, YANG Xiurong, MA Haoxuan, SHI Shuo, FENG Yu