

# 中文目次

## 综述

### 591 菇类合成酶定向进化的新思路

胡智慧, 翁彦如, 谈柄旭, 于爱群, 肖冬光

### 601 黄病毒NS2B-NS3pro蛋白酶的结构研究进展

武晨, 杨海涛, 王泽方

### 612 禽沙门菌诱导宿主免疫应答的特性

尹超, 徐黎娟, 李求春, 潘志明, 耿士忠, 焦新安

### 621 副溶血性弧菌分泌系统在致病力中作用的研究进展

穆丽丽, 牛犇, 赵勇

## 研究报告

### 632 *sInN*基因在盐霉素生物合成中的调控功能分析

朱振洪, 李函, 李永泉

### 642 河南黄河湿地放线菌多样性及植物病害生防放线菌的筛选

习慧君, 臧睿, 刘闯, 赵莹, 文才艺

### 657 两种象甲幼虫肠道微生物组成及对高单宁食物的适应

郭淑华, 易现峰

### 668 圣路易斯脑炎病毒NS2B-NS3蛋白酶的原核表达及其抑制剂的筛选

周婷婷, 高梦茹, 杜梦繁, 于凡, 冯磊

### 678 退化高寒草地土壤真菌群落与土壤环境因子间相互关系

李海云, 姚拓, 高亚敏, 张建贵, 马亚春, 路晓雯, 杨晓蕾, 张慧荣, 夏东慧

### 689 新型耐热β-1,4-木糖苷酶的重组表达及酶学性质

黄颖, 姚雪妍, 刘腾飞, 米硕甫, 孙丽超, 辛凤姣

### 700 日粮添加褐藻糖胶对断奶仔猪抗炎能力和肠道微生物多样性的影响

刘萍, 赵金标, 耿正颖, 王军军, 刘岭, 王春林, 郭娉婷, 吴怡, 张刚, 黄冰冰

### 711 三种大肠杆菌表达的口蹄疫病毒A型多表位蛋白对猪的免疫原性比较

曹轶梅, 王兴凯, 王省, 李坤, 付元芳, 李冬, 卢曾军, 刘在新

### 719 嗜盐菌群对酸性金黄G的脱色特性和机理

谢静, 郭光, 田芳, 周思懿, 丁克强, 杨凤, 周旺, 刘翀

### 730 多靶向沉默里氏木霉碳代谢阻遏物对纤维素酶活性和表达的调控研究

邓嘉雯, 高云雨, 刘旭坤, 张珂珂, 钟路遥, 田生礼

### 752 一株从红藻中分离出的产芳基硫酸酯酶的海单胞菌FW-1的全基因组测序及结果分析(英文)

王嫱, 付晓婷, 毛相朝, 许加超, 高昕

### 753 艾纳香内生真菌*Diaporthe* sp.次生代谢产物

元超, 李刚, 张影波, 庞玉新

### 762 两端融合表达几丁质结合结构域提高几丁质酶抗真菌活性

谷天燕, 刘晓楠, 李玲聪, 刘妍池, 胡少锋, 吕晨茵, 刘华, 赵国刚

## 学科先贤

### 771 噬菌体诊断技术的创新者——何晓青

张彤阳, 青宁生

## 其他

封二 欢迎订阅《微生物学报》

文后 《微生物学报》征稿简则

文后 2019年中国微生物学会学术活动计划表

文后 《微生物学报》编委会名单

封三 2018年度《微生物学报》优秀论文名单

## 广告

文前(I/II) 镇江东方生物工程设备有限公司

# CONTENTS

## REVIEWS

- 600 Innovations for directed evolution of terpenoid synthases

Zhihui Hu, Yanru Weng, Bingxu Chen, Aiqun Yu, Dongguang Xiao

- 611 Research progress on structure of Flavivirus NS2B-NS3 protease

Chen Wu, Haitao Yang, Zefang Wang

- 620 Characteristics of immune response induced by avian *Salmonella*

Chao Yin, Lijuan Xu, Qiuchun Li, Zhiming Pan, Shizhong Geng, Xin'an Jiao

- 631 Role of *Vibrio parahaemolyticus* secretion system in pathogenicity

Lili Mu, Ben Niu, Yong Zhao

## RESEARCH ARTICLES

- 641 Regulation of *slnN* gene in salinomycin biosynthesis

Zhenhong Zhu, Han Li, Yongquan Li

- 656 Diversity of actinobacteria in Henan Yellow River wetland and screening of cultivable actinobacteria with biological control on plant disease

Huijun Xi, Rui Zang, Chuang Liu, Ying Zhao, Caiyi Wen

- 667 Gut bacterial composition of two *Curculio* species and their adaptation to high-tannin food

Shuhua Guo, Xianfeng Yi

- 677 Expression and inhibitors screening of St. Louis encephalitis virus NS2B-NS3 protease

Tingting Zhou, Mengru Gao, Mengfan Du, Fan Yu, Lei Feng

- 688 Relationship between soil fungal community and soil environmental factors in degraded alpine grassland

Haiyun Li, Tuo Yao, Yamin Gao, Jiangui Zhang, Yachun Ma, Xiaowen Lu, Xiaolei Yang, Huirong Zhang, Donghui Xia

- 699 Biochemical characterization of a novel thermostable  $\beta$ -1,4-xylosidase from *Caldicellulosiruptor owensesis* OL

Ying Huang, Xueyan Yao, Tengfei Liu, Shuofu Mi, Lichao Sun, Fengjiao Xin

- 710 Influence of dietary fucoidan on inflammatory response and intestinal microbial diversity in weaned pigs

Ping Liu, Jinbiao Zhao, Zhengying Geng, Junjun Wang, Ling Liu, Chunlin Wang, Pingting Guo, Yi Wu, Gang Zhang, Bingbing Huang

- 718 Immunogenicity comparison of three multi-epitope proteins expressed in *Escherichia coli* against swine foot-and-mouth disease virus serotype A

Yimei Cao, Xingkai Wang, Sheng Wang, Kun Li, Yuanfang Fu, Dong Li, Zengjun Lu, Zaixin Liu

- 729 Decolorization of methanil yellow G by a halophilic bacterial consortium

Jing Xie, Guang Guo, Fang Tian, Siyi Zhou, Keqiang Ding, Feng Yang, Wang Zhou, Chong Liu

- 743 Cellulase activities and expression regulation by multiple targeted silencing carbon catabolic repressors in *Trichoderma reesei*

Jiawen Deng, Yunyu Gao, Xukun Liu, Keke Zhang, Luyao Zhong, Shengli Tian

- 744 Complete genome sequence of *Marinomonas* sp. FW-1, an arylsulfatase-producing bacterium isolated from red seaweed

Qiang Wang, Xiaoting Fu, Xiangzhao Mao, Jiachao Xu, Xin Gao

- 761 Secondary metabolites of an endophytic fungus *Diaporthe* sp. derived from *Blumea balsamifera* (L.) DC.

Chao Yuan, Gang Li, Yingbo Zhang, Yuxin Pang

- 770 Enhancing antifungal activity of chitinase by fusion of chitin binding domain at both termini

Tianyan Gu, Xiaonan Liu, Lingcong Li, Yanchi Liu, Shaofeng Hu, Chenyin Lv, Hua Liu, Guogang Zhao

(本期责编：张晓丽)