

微生物学通报

(Weishengwuxue Tongbao)

1974 年创刊

第 50 卷 第 9 期

2023 年 9 月 20 日出版

月 刊

目 次



研究报告

工业微生物学

- 3731 产肌醇毕赤酵母细胞工厂的优化

朱宏宇, 王晓璐, 刘亚君, 涂涛, 柏映国, 张杰

海洋微生物学

- 3747 微泡菌属菌株 YPW1 和 YPW16 多糖降解特性分析

田春苗, 龙思琪, 王健鑫, 汪江琦, 王定全, 周圣凯, 朱尚宁, 曲武

环境微生物学

- 3771 磁性纳米颗粒介导分离技术筛选土壤中多氯联苯降解菌及其降解特性

朋婷婷, 项兴佳, 冯有智, 何世颖, 吴宇澄, 张锋, 曾军, 林先贵

- 3784 功能作图(functional mapping)分析大肠杆菌和金黄色葡萄球菌之间的竞争互作

尹丽新, 李彩凤, 何晓青, 邬荣领, 金一

- 3800 一株污水源多重耐药大肠杆菌的耐药性检测及全基因组测序分析

崔红, 王继华, 车琦, 黄涵, 朱剑琴

基因克隆及功能研究

- 3818 末端氧化酶 CyxA 增强肺炎克雷伯菌对外界环境的抵抗力及致病性

卢慧改, 宋国源, 张福升, 田玉姣, 谢继臣, 肖潇, 李蓓, 李默然

- 3833 嗜糖黄杆菌 β -葡萄糖苷酶的功能及在稀有人参皂苷制备中的应用

董博妍, 闫学翠, 周凤恩, 王一冰, 周义发, 原野

农业微生物学

- 3848 非洲哈茨木霉 LMNS-M9 的鉴定、生物学特性及其对藜麦的促生作用

田森, 彭玉飞, 吕红, 秦楠, 任璐, 殷辉, 赵晓军

- 3866 噬菌体鸡尾酒对猕猴桃溃疡病的田间防治效果及叶际细菌群落结构的影响

胡冉, 刘梦娇, 许小含, 何晓青, 金一

- 3881 沙棘通过自主选择塑造根瘤内生微生物组

翟柯尧, 刘娟, 董玥, 李亚涛, 贺义才, 孙海红, 马玉超

- 3899 干旱沙地白刺根际 *Bacillus halotolerans* DGL6 对“青麦 7 号”的促生及防病效果

陈兰, 谢永丽, 杨雪, 高英, 武玲玲, 王添, 许梦茹

- 3912 miRNA 响应印度梨形孢子菌调控大麦生长发育的作用机制

章延泽, 袁志, 韦陆百合, 李亮

- 3928 丁香内生死亡谷芽孢杆菌 DX78 的分离鉴定及其抑菌成分

冯宇航, 侯凯丽, 杨从军

- 3939 低温降解玉米秸秆的木霉菌株筛选

曾叶, 庄文颖, 余知和, 曾昭清

- 3952 天山大峡谷原始森林黏细菌的分离鉴定及其抗菌活性

窦新玉, 潘雯, 董志铭, 罗明, 韩剑

- 3970 耐高温亚硝酸盐降解菌的分离、鉴定及降低雪茄烟叶亚硝胺的应用

王光路, 卢玉松, 刘兰茜, 贾玉红, 李鹏, 胡希, 杨雪鹏

- 3983 白术中一株植物促生细菌的分离鉴定及培养条件优化

何勇, 许淑雅, 胡贤君, 卢云亮, 刘幸, 梁倩文, 齐永霞, 陈方新

- 3997** ‘海螺’望春花内生真菌 EF-WCH-51 鉴定及其抑制葫芦科刺盘孢活性成分分析
张义军, 王捷, 裴宁宁, 秦丽, 王士娟, 彭凡

- 4010** 五种矿质元素对草菇菌丝生长和活性氧清除能力的影响
王静, 张凡红, 孙万合, 谭强飞, 负建民, 张素玮, 赵风云

食品微生物学

- 4021** 贺兰山东麓优良本土酿酒酵母筛选及发酵特性分析
巩丽莉, 周迪, 卢玲, 张众, 张军翔, 王岚

- 4045** 兰茂牛肝菌子实体发育的关联物质及其主要通路分析
刘佳艳, 杨晓敏, 陈幽幽, 陈鹏至, 吕为, 王成凤, 刘夏, 张实润, 董杰, 李宗菊

兽医微生物学

- 4063** 圈养大熊猫肠道乳酸菌分离及益生特性
李倜, 胡昕, 张潇月, 杨晨曦, 李静, 曹雪笛, 石雪雪, 邹立扣, 赵珂

- 4078** 水貂源高产蛋白酶枯草芽孢杆菌的分离筛选及酶学性质
于德涛, 李纪元, 刘烁, 任建炜, 徐航, 温建新

- 4090** 林麝源蜡样芽孢杆菌 SCBCM001 株的分离鉴定及全基因组序列分析
刘洁, 伍茜, 丁慧, 李依濛, 付文龙, 周磊, 程建国, 吴杰, 杨凯惟, 罗燕

- 4109** 多方法组合调查新疆阿勒泰地区 6 种常见鼠传致病菌流行状况
李瑞晓, 陈燕芳, 穆龙, 徐爱玲, 刘蓬勃, 王君, 马伟, 栗冬梅

- 4125** 朱鹮肠道微生物多样性与产酶活性
王华健, 兰阿峰, 郭素芬, 段文斌, 王琦, 牛克胜

- 4141** 基于响应面分析的高抗原活性猪水肿病大肠杆菌疫苗培养基的研制及效果评价
张阳阳, 万强, 牛得权, 苗森, 蒋富凤, 刘翔, 曲晓莹, 张菊梅, 蔡芷荷, 陈博, 吴清平

微生物模式菌株研究

- 4154** 植物乳植杆菌 P-8 连续传代过程中遗传稳定性分析
王可欣, 刘晓晔, 李伟程, 刘凯龙, 黄天, 孙志宏, 张和平

药物微生物学

- 4168** 广州地区 GII.17 型诺如病毒 GZ-L343 毒株病毒样颗粒的构建与免疫特征的鉴定
孟洛冰, 薛亮, 高珺珊, 王林平, 缪水娣, 任少雷, 张菊梅, 王涓, 古其会, 吴清平

经验交流

- 4180** 嗜热毁丝霉高通量培养技术及其应用
李世新, 涂然, 张永利, 田朝光, 王猛

专论与综述

- 4190** 基于脑-肠-微生物轴的肠易激综合征机制与治疗研究进展
戎新倩, 舒青龙

- 4206** 肠道菌群来源细胞外囊泡在肝脏疾病中的作用研究进展
贾文馨, 王丽蕊

- 4220** 酿酒酵母合成木栓酮及其衍生物的研究现状及展望
张凯月, 邹旭, 张晨烁, 王洋, 余源

- 4237** 粘细菌生物活性产物及其应用研究进展
翟辰欣, 吕莹, 汪绍杰, 樊博, 王泽建, 吴杰群, 梁剑光

- 4260** 乳酸菌对真菌毒素的脱毒作用研究进展
黄若琪, 李瑜玲, 杨恩

前瞻与评论

- 4275** 放线菌代谢产物的研究进展: 基于 Web of Science (WOS) 和中国知网 (CNKI)
孔璐琦, 王敬敬, 胡琳珍, 黄志勇



ARTICLES

Industrial Microbiology

- 3731 Optimization of a *Komagataella phaffii* cell factory for producing inositol
ZHU Hongyu, WANG Xiaolu, LIU Yajun, TU Tao, BAI Yingguo, ZHANG Jie

Marine Microbiology

- 3747 Characterization of genes involved in polysaccharide degradation by *Microbulbifer* sp. YPW1 and YPW16
TIAN Chunmiao, LONG Siqi, WANG Jianxin, WANG Jiangqi, WANG Dingquan, ZHOU Shengkai,
ZHU Shangning, QU Wu

Environmental Microbiology

- 3771 Magnetic nanoparticle-mediated isolation and degradation characterization of a PCB-degrading strain
PENG Tingting, XIANG Xingjia, FENG Youzhi, HE Shiying, WU Yucheng, ZHANG Feng, ZENG Jun,
LIN Xiangui
- 3784 Functional mapping for competitive interactions between *Escherichia coli* and *Staphylococcus aureus*
YIN Lixin, LI Caifeng, HE Xiaoqing, WU Rongling, JIN Yi
- 3800 Drug resistance detection and whole genome sequencing of a multi-drug resistant *Escherichia coli* strain
from sewage
CUI Hong, WANG Jihua, CHE Qi, HUANG Han, ZHU Jianqin

Microbial Genetics

- 3818 Terminal oxidase CyxA enhances the resistance to external environment and pathogenicity of *Klebsiella pneumoniae*
LU Huigai, SONG Guoyuan, ZHANG Fusheng, TIAN Yujiao, XIE Jichen, XIAO Xiao, LI Bei, LI Moran
- 3833 Glucosidases from *Flavobacterium saccharophilum*: characterization and application in the preparation of minor ginsenosides
DONG Boyan, YAN Xuecui, ZHOU Feng'en, WANG Yibing, ZHOU Yifa, YUAN Ye

Agricultural Microbiology

- 3848 *Trichoderma afroharzianum* LMNS-M9: identification, biological characteristics, and growth-promoting effect on quinoa
TIAN Miao, PENG Yufei, LÜ Hong, QIN Nan, REN Lu, YIN Hui, ZHAO Xiaojun
- 3866 Phage cocktail inhibits bacterial canker of kiwifruit in the field and affects the phyllospheric bacterial community
HU Ran, LIU Mengjiao, XU Xiaohan, HE Xiaoqing, JIN Yi
- 3881 *Hippophae rhamnoides* shapes endophytic microbiome in root nodule by self-selection
ZHAI Keyao, LIU Juan, DONG Yue, LI Yatao, HE Yicai, SUN Haihong, MA Yuchao
- 3899 *Bacillus halotolerans* DGL6 from the rhizosphere of *Nitraria tangutorum* in arid sandy land promotes growth and controls diseases of *Triticum aestivum* 'Qingmai 7'
CHEN Lan, XIE Yongli, YANG Xue, GAO Ying, WU Lingling, WANG Tian, XU Mengru
- 3912 Role of miRNA in the promotion of barley growth by *Piriformospora indica*
ZHANG Yanze, YUAN Zhi, WEI Lubaihe, LI Liang
- 3928 Clove endophyte *Bacillus vallismortis* DX78: isolation, identification, and preliminary study of antimicrobial components
FENG Yuhang, HOU Kaili, YANG Congjun
- 3939 Screening of *Trichoderma* strains for maize straw degradation at low temperature
ZENG Ye, ZHUANG Wenying, YU Zhihe, ZENG Zhaoqing
- 3952 Isolation, identification, and antimicrobial activities of myxobacteria in primitive forest of Tianshan Grand Canyon
DOU Xinyu, PAN Wen, DONG Zhiming, LUO Ming, HAN Jian
- 3970 Heat-tolerant nitrite-degrading bacterial strains: isolation, identification, and applications in reducing nitrosamines in cigar tobacco leaves
WANG Guanglu, LU Yusong, LIU Lanxi, JIA Yuhong, LI Peng, HU Xi, YANG Xuepeng
- 3983 A plant growth-promoting bacterium in *Atractylodes macrocephala* Koidz: isolation, identification, and optimization of culture conditions
HE Yong, XU Shuya, HU Xianjun, LU Yunliang, LIU Xing, LIANG Qianwen, QI Yongxia, CHEN Fangxin

Microbiology China

3997 Endophytic fungus EF-WCH-51 from *Yulania denudata* 'Hailuo': strain identification and determination of active component against *Colletotrichum orbiculare*
ZHANG Yijun, WANG Jie, PEI Ningning, QIN Li, WANG Shijuan, PENG Fan

4010 Effects of five mineral elements on mycelial growth and active oxygen scavenging ability of *Volvariella volvacea*
WANG Jing, ZHANG Fanhong, SUN Wanhe, TAN Qiangfei, YUN Jianmin, ZHANG Wenwei, ZHAO Fengyun

Food Microbiology

4021 Screening and fermentation of excellent indigenous *Saccharomyces cerevisiae* strains from eastern foothills of Helan Mountains
GONG Lili, ZHOU Di, LU Ling, ZHANG Zhong, ZHANG Junxiang, WANG Lan

4045 Active components and main pathways involved in fruiting body development of *Lanmaoa asiatica*
LIU Jiayan, YANG Xiaomin, CHEN Youyou, CHEN Pengzhi, LÜ Wei, WANG Chengfeng, LIU Xia, ZHANG Shirun, DONG Jie, LI Zongju

Veterinary Microbiology

4063 Isolation and probiotic characteristics of lactic acid bacteria from intestinal tract of giant panda in captivity
LI Ti, HU Xin, ZHANG Xiaoyue, YANG Chenxi, LI Jing, CAO Xuedi, SHI Xuexue, ZOU Likou, ZHAO Ke

4078 Isolation, identification, and enzymatic characterization of *Bacillus subtilis* from mink
YU Detao, LI Jiyuan, LIU Shuo, REN Jianwei, XU Hang, WEN Jianxin

4090 Isolation, identification, and whole genome sequencing of *Bacillus cereus* SCBCM001 from forest musk deer (*Moschus berezovskii*)
LIU Jie, WU Xi, DING Hui, LI Yimeng, FU Wenlong, ZHOU Lei, CHENG Jianguo, WU Jie, YANG Kaiwei, LUO Yan

4109 Prevalence of 6 common rodent-borne pathogens identified using multiple methods in Xinjiang Altay prefecture, China
LI Ruixiao, CHEN Yanfang, MU Long, XU Ailing, LIU Pengbo, WANG Jun, MA Wei, LI Dongmei

4125 Intestinal microbial diversity and enzyme activities of crested ibis
WANG Huajian, LAN Afeng, GUO Sufen, DUAN Wenbin, WANG Qi, NIU Kesheng

4141 Development and effect evaluation of a vaccine culture medium with high antigenic activity for the prevention of porcine edema disease caused by *Escherichia coli* based on response surface methodology
ZHANG Yangyang, WAN Qiang, NIU Dequan, MIAO Sen, JIANG Fufeng, LIU Xiang, QU Xiaoying, ZHANG Jumei, CAI Zhihe, CHEN Bo, WU Qingping

Microbial Model Strain

4154 Genetic stability of *Lactiplantibacillus plantarum* P-8 during continuous subculturing
WANG Kexin, LIU Xiaoye, LI Weicheng, LIU Kailong, HUANG Tian, SUN Zhihong, ZHANG Heping

Pharmaceutical Microbiology

4168 Construction and immune characterization of virus-like particles of GII.17 norovirus strain GZ-L343 in Guangzhou
MENG Luobing, XUE Liang, GAO Junshan, WANG Linping, MIAO Shuidi, REN Shaolei, ZHANG Jumei, WANG Juan, GU Qihui, WU Qingping

PROTOCOLS

4180 A high-throughput cultivation technology and its application for *Myceliophthora thermophila*
LI Shixin, TU Ran, ZHANG Yongli, TIAN Chaoguang, WANG Meng

REVIEWS

4190 Progress in the pathogenesis and treatment of irritable bowel syndrome based on the brain-gut-microbiota axis
RONG Xinqian, SHU Qinglong

4206 Research progress in the relationship between gut microbiota-derived extracellular vesicles and liver diseases
JIA Wenxin, WANG Lirui

4220 Research status and prospect of the synthesis of friedelin and its derivatives by *Saccharomyces cerevisiae*
ZHANG Kaiyue, ZOU Xu, ZHANG Chenshuo, WANG Yang, YU Yuan

4237 Research progress in bioactive products of myxobacteria and their applications
Zhai Chenxin, LÜ Ying, WANG Shaojie, FAN Bo, WANG Zejian, WU Jiequn, LIANG Jianguang

4260 Detoxification of lactic acid bacteria to mycotoxin: a review
HUANG Ruqi, LI Yuling, YANG En

PERSPECTIVES AND COMMENTS

4275 Advances in metabolites of actinobacteria: a study based on Web of Science (WOS) and China National Knowledge Infrastructure (CNKI)
KONG Luqi, WANG Jingjing, HU Linzhen, HUANG Zhiyong