

微生物学通报

(Weishengwuxue Tongbao)

1974 年创刊

第 50 卷 第 6 期

2023 年 6 月 20 日出版

月刊

目 次



研究报告

环境微生物学

- 2305 一组高效喹啉降解复合菌群的构建及其降解特性
李宁健, 江玉玲, 安雪姣, 汪流伟, 李泽霖, 张庆华
- 2320 一株耐碱高效长链烷烃降解菌 C24MT1 的筛选及其降解特性
侯丽君, 赵雷真, 庄严, 贾舒宇, 陈立伟, 蔡天明
- 2335 一株耐盐反硝化细菌的筛选、鉴定和特性及其产物四氢嘧啶的检测
翁南海, 王焕宇, 张磊, 田凤蓉, 王开春, 王淑军

基础微生物学

- 2349 分离自母婴肠道的假小链双歧杆菌的耐药性分析
马昕玮, 沈婷婷, 路镜达, 郭圆圆, 朱梦缘, 钟智
- 2363 F-RNA 噬菌体 YM1 肠道宿主分析
赵海霞, 杨明树, 喻勇新, 王永杰

基因克隆及功能研究

- 2378 两种黄素蛋白对奴卡霉素化合物的催化
赵燕, 杨松, 莫旭华
- 2390 二氧化碳固定酶固碳效率及其对地衣芽孢杆菌代谢的影响
杨明飞, 何贺贺, 李由然, 石贵阳

农业微生物学

- 2405 三种松树内生真菌的分离鉴定及其对红脂大小蠹伴生真菌的拮抗作用
闫鹏勇, 顾颖, 马安凯, 王明, 付宁宁, 王立祥, 任利利, 卢志恒, 骆有庆
- 2422 一种厌氧真菌共培养甲烷菌株的分离及其甲烷生产特性解析
李与琦, 薛义涵, 郭子琦, 李凤鸣, 李晓斌, 朱伟云, 成艳芬
- 2436 具促生功能拟蕈状芽孢杆菌(*Bacillus paramycoides*) SH-1464 发酵条件优化及其活性
申云鑫, 赵江源, 王楠, 李铭刚, 施竹凤, 冯路遥, 李者芬, 陈齐斌, 杨佩文
- 2452 不同熏蒸剂对草莓连作土壤养分和微生物群落的影响
杨馥霞, 汤玲, 贺欢, 唐小刚, 王卫成
- 2468 黑曲霉菌剂不同处理对西瓜根际细菌群落及土壤理化性质的影响
赵娟, 刘霆, 张涛涛, 董丹, 秦文韬, 张高鹏
- 2481 麦田土壤真菌多样性对麦玉轮作长期秸秆还田和配施有机肥的响应
陈梦妮, 李永山, 王慧, 范巧兰, 郭振威, 席吉龙, 张建诚
- 2497 防治平贝母菌核病的木霉菌筛选及室内防效
王琪, 卢宝慧, 王志清, 田义新
- 2508 利迪链霉菌 M01 对番茄生长、青枯病发病率及根际细菌群落组成的影响
李志丹, 黄奇, 林判, 陈浩, 薛健, 雷鹏, 王瑞, 李莎, 徐虹, 谷益安
- 2519 林下参内生根际细菌的分离鉴定及定殖能力
刘子瑶, 张岂源, 杨平, 卢宝慧, 杨鹤, 许永华

食品微生物学

- 2532** GH42 家族保守氨基酸位点累积突变对 *Geobacillus stearothermophilus* 来源 β -半乳糖苷酶 BgaB 催化活性的影响
董艺凝, 陈卫, 张灏, 顾海洋, 刘洋, 陈海琴

- 2545** 降解尿酸乳酸菌复合菌系的筛选与菌株组合提升降解效果

徐红敏, 王敬红, 刘欢, 申贵男, 张正海, 梅雪松, 孙宇峰, 董艳, 魏丹, 王伟东

- 2556** 液固工艺山西陈醋发酵微生物群落组成、互作网络及溯源分析

寇蓉, 冯国杨, 李晨, 董弘毅, 范晓军

兽医微生物学

- 2569** 一株牛源都柏林沙门氏菌的全基因组测序及毒力与耐药性分析

李偲, 郭双, 王永强, 耿超, 吕香玉, 石金川, 王梓, 刘锴

- 2582** 西黑冠长臂猿粪便微生物宏基因组来源的高比活 α -L-阿拉伯呋喃糖苷酶的重组表达及酶学性质

夏娆, 杨金茹, 梁师思, 陈红, 黄遵锡, 许波

- 2602** 鲫诺卡氏菌对大口黑鲈头肾巨噬细胞的侵染过程

刘文文, 邓玉婷, 朱雪晴, 赵飞, 谭爱萍, 王芳, 张美超, 黄志斌

- 2624** 马蜂肠道菌的分离鉴定及产消化酶功能菌株的筛选

何雨薇, 陈芳敏, 夏琬婷, 刘娴, 黄晨晨

水生微生物学

- 2635** 江苏水产养殖区拟态弧菌种群结构及遗传多样性

魏富成, 李席席, 吴颖, 张晨, 张策, 袁圣, 赵哲

医学微生物学

- 2648** 吡唑啉酮铜配合物 P-FAH-Cu-phen 对金黄色葡萄球菌的转录组影响分析

李欣奕, 塔玛莎·库尔曼江, 王小静, 胡开桂, 王昊, 张颖, 曹文芝, 李金玉

简报

- 2666** 基于荧光染料 Cy5.5 标记的引物延伸法鉴定细菌 RNA 剪切加工位点

王娜, 李革, 邱子立, 许成钢

- 2677** 果胶杆菌(*Pectobacterium aroidearum*) WNH 的筛选及其汉麻生物脱胶效果

刘嘉乐, 郭媛, 黄荣, 赵信林, 邱财生, 邱化蛟, 王伟东

专论与综述

- 2687** 土壤中微生物植酸酶的活性及其提高方法与应用

杨晓莉, 曹兴圆, 吴博贤, 徐其静, 刘雪

- 2709** 大球盖菇的生物学基础、活性成分及其应用

骆庆, 郭涛, 孙召新, 余大龙, 余知和

- 2721** 灵芝液态发酵胞内外多糖结构特征及其活性研究进展

段语嫣, 冯杰, 刘艳芳, 周帅, 唐传红, 刘利平, 张劲松

- 2738** 鞘氨醇单胞菌的研究进展

刘辉, 韦璐璐, 朱龙发, 韦豪, 白云霞, 刘小玲, 李树波

- 2753** 纤毛虫与藻类共生关系的研究现状与展望

周庆兰, 饶小珍, 邱大俊

高校教改纵横

- 2765** 基于学科知识迭代背景下医学微生物学教学内容中的若干问题探讨与对策分析

刘畅, 董珂, 何平, 郭晓奎, 赵蔚



ARTICLES

Environmental Microbiology

- 2305 Screening and biodegradation characteristics of an efficient quinoline-degrading microbial consortium
LI Ningjian, JIANG Yuling, AN Xuejiao, WANG Liuwei, LI Zelin, ZHANG Qinghua
- 2320 Isolation and degradation characterization of C24MT1, a highly effective long-chain alkane-degrading bacterium
HOU Lijun, ZHAO Leizhen, ZHUANG Yan, JIA Shuyu, CHEN Liwei, CAI Tianming
- 2335 A salt-tolerant denitrifying bacterial strain: screening, identification, characterization, and detection of its product ectoine
WENG Nanhai, WANG Huanyu, ZHANG Lei, TIAN Fengrong, WANG Kaichun, WANG Shujun

Fundamentals of Microbiology

- 2349 Analysis of antibiotic resistance of *Bifidobacterium pseudocatenulatum* isolated from the guts of mothers and infants
MA Xinwei, SHEN Tingting, LU Jingda, GUO Yuanyuan, ZHU Mengyuan, ZHONG Zhi
- 2363 Intestinal host analysis of F-specific RNA bacteriophage YM1
ZHAO Haixia, YANG Mingshu, YU Yongxin, WANG Yongjie

Microbial Genetics

- 2378 *In vitro* biochemical characterization of catalytic reaction of two flavoproteins toward nocamycin derivatives
ZHAO Yan, YANG Song, MO Xuhua
- 2390 Carbon fixation efficiency of carbon dioxide fixation enzymes and its effect on the metabolism of *Bacillus licheniformis*
YANG Mingfei, HE Hehe, LI Youran, SHI Guiyang

Agricultural Microbiology

- 2405 Isolation and identification of endophytic fungi of three pine species and their antagonistic effect on the associated fungi of *Dendroctonus valens*
YAN Pengyong, GU Ying, MA Ankai, WANG Ming, FU Ningning, WANG Lixiang, REN Lili, LU Zhiheng, LUO Youqing
- 2422 Isolation and biomethane production characterization of a novel co-culture of anaerobic fungus and methanogen
LI Yuqi, XUE Yihan, GUO Ziqi, LI Fengming, LI Xiaobin, ZHU Weiyun, CHENG Yanfen
- 2436 Optimization of fermentation conditions of *Bacillus paramyoides* SH-1464 with growth-promoting activity
SHEN Yunxin, ZHAO Jiangyuan, WANG Nan, LI Minggang, SHI Zhufeng, FENG Luyao, LI Zhefen, CHEN Qibin, YANG Peiwen
- 2452 Effects of different fumigants on soil nutrients and microbial communities of strawberry continuous cropping
YANG Fuxia, TANG Ling, HE Huan, TANG Xiaogang, WANG Weicheng
- 2468 Effect of different treatments of *Aspergillus niger* agent on the rhizosphere bacterial community and soil physicochemical properties of watermelon
ZHAO Juan, LIU Ting, ZHANG Taotao, DONG Dan, QIN Wentao, ZHANG Gaopeng
- 2481 Responses of soil fungal diversity to long-term straw incorporation and manure application in the field with winter wheat-summer maize rotation
CHEN Mengni, LI Yongshan, WANG Hui, FAN Qiaolan, GUO Zhenwei, XI Jilong, ZHANG Jiancheng
- 2497 Screening of *Trichoderma* spp. to control *Sclerotinia sclerotiorum*-induced sclerotiniase in *Fritilla ussuriensis* Maxim. and the laboratory control effect
WANG Qi, LU Baohui, WANG Zhiqing, TIAN Yixin
- 2508 Effects of *Streptomyces lydicus* M01 on growth, bacterial wilt incidence, and rhizosphere bacterial community composition of tomatoes
LI Zhidan, HUANG Qi, LIN Gui, CHEN Hao, XUE Jian, LEI Peng, WANG Rui, LI Sha, XU Hong, GU Yian
- 2519 Isolation and identification of endophytic biocontrol bacteria from understory *Panax ginseng* and study on colonization ability
LIU Ziyao, ZHANG Qiyuan, YANG Ping, LU Baohui, YANG He, XU Yonghua

Microbiology China

Food Microbiology

- 2532 Cumulative effect of mutations at conserved sites of GH42 family on the catalytic activity of β -galactosidase BgaB from *Geobacillus stearothermophilus*
DONG Yining, CHEN Wei, ZHANG Hao, GU Haiyang, LIU Yang, CHEN Haiqin
- 2545 Screening of uric acid-degrading lactic acid bacteria consortium and strain combination for enhancing degradation
XU Hongmin, WANG Jinghong, LIU Huan, SHEN Guinan, ZHANG Zhenghai, MEI Xuesong, SUN Yufeng, DONG Yan, WEI Dan, WANG Weidong
- 2556 The composition, interaction network, and source of microbial community in Shanxi mature vinegar produced by liquid-solid fermentation
KOU Rong, FENG Guoyang, LI Chen, DONG Hongyi, FAN Xiaojun

Veterinary Microbiology

- 2569 Whole-genome sequencing, virulence, and drug resistance of a bovine-derived strain of *Salmonella enterica* subsp. *enterica* serovar Dublin
LI Cai, GUO Shuang, WANG Yongqiang, GENG Chao, LÜ Xiangyu, SHI Jinchuan, WANG Zi, LIU Kai
- 2582 Recombinant expression and characterization of high-specific activity α -L-arabinofuranosidase from *Nomascus concolor* fecal microbial metagenome
XIA Rao, YANG Jinru, LIANG Shisi, CHEN Hong, HUANG Zunxi, XU Bo
- 2602 Infection process of primary macrophages derived from kidney of *Micropoterus salmoides* by *Nocardia seriola*e
LIU Wenwen, DENG Yuting, ZHU Xueqing, ZHAO Fei, TAN Aiping, WANG Fang, ZHANG Meichao, HUANG Zhibin
- 2624 Isolation and identification of gut bacteria from *Vespa mandarinia* Smith and screening of digestive enzyme-producing strains
HE Yuwei, CHEN Fangmin, XIA Wanting, LIU Xian, HUANG Chenchen

Aquatic Microbiology

- 2635 Population structure and genetic diversity of *Vibrio mimicus* isolated from aquaculture area in Jiangsu, China
WEI Fucheng, LI Xixi, WU Ying, ZHANG Chen, ZHANG Ce, YUAN Sheng, ZHAO Zhe

Medical Microbiology

- 2648 Pyrazolone-copper complex P-FAH-Cu-phen affects transcriptome of *Staphylococcus aureus*
LI Xinyi, Tamasha Kurmanjiang, WANG Xiaojing, HU Kaigui, WANG Hao, ZHANG Ying, CAO Wenzhi, LI Jinyu

COMMUNICATIONS

- 2666 Fluorescence dye Cy5.5-based primer extension technique determines RNA cleavage sites of bacteria
WANG Na, LI Ping, QIU Zili, XU Chenggang
- 2677 Screening of *Pectobacterium aroidearum* WNH with degumming effect on hemp
LIU Jiale, GUO Yuan, HUANG Rong, ZHAO Xinlin, QIU Caisheng, QIU Huajiao, WANG Weidong

REVIEWS

- 2687 Microbial phytase activity in soils and methods to improve the activity and application: a review
YANG Xiaoli, CAO Xingyuan, WU Boxian, XU Qijing, LIU Xue
- 2709 Biological basis and bioactive components of *Stropharia rugosoannulata* and its application
LUO Qing, GUO Tao, SUN Zhaoxin, YU Dalong, YU Zhihe
- 2721 Structural characteristics and biological activity of polysaccharides produced by liquid fermentation of *Ganoderma*: a review
DUAN Yuyan, FENG Jie, LIU Yanfang, ZHOU Shuai, TANG Chuanhong, LIU Liping, ZHANG Jingsong
- 2738 Research progress of *Sphingomonas*
LIU Hui, WEI Lulu, ZHU Longfa, WEI Hao, BAI Yunxia, LIU Xiaoling, LI Shubo
- 2753 The study of symbiosis and interactions between ciliates and algae: current status and future directions
ZHOU Qinglan, RAO Xiaozhen, QIU Dajun

EDUCATION

- 2765 Discussion and countermeasure analysis of problems in the teaching content of Medical Microbiology under the background of discipline knowledge development
LIU Chang, DONG Ke, HE Ping, GUO Xiaokui, ZHAO Wei