

附件 1

第八届大学生蚕桑生物技术创新大赛入围决赛作品

1. 本科生组

(1) EGCG 靶向宿主脂质代谢弱点的家蚕 BmNPV 绿色防控制剂创制与应用

(2) 桑树根际促生菌的筛选鉴定及促生作用研究

(3) 基于家蚕质膜破裂现象的能量代谢与质膜稳态抗 BmNPV 的机制研究

(4) GST pull-down 联合质谱筛选 BmNPV 靶向家蚕 ATG8 的互作蛋白及 BmP35 的鉴定

(5) 工程改造葡聚糖酶协同木聚糖酶水解桑枝制备可发酵糖

(6) 茶黄液与芽孢杆菌协同防治桑树菌核病的抑菌效应及作用机理

(7) 柞蚕保幼激素降解酶基因克隆及功能分析

(8) AI-Assisted Design of an Antimicrobial Peptide–Silver Nanoparticle–Organosilica Nanocarrier and Its Antibacterial Evaluation

(9) Construction and Evaluation of a Silkworm Pupa Burn Infection Model

(10) 家蚕泛转座子图谱及驯化和重要经济性状相关转座子

(11) 基于千蚕基因组鉴定家蚕茧丝产量相关基因组结构变异

- (12) OSER1 基因调节寿命的功能及分子机制研究
- (13) 家蚕 Treh 基因在糖代谢调节中的功能研究
- (14) 利用多组学技术解析 ApoD2 调控家蚕翅膀发育的机制
- (15) 甲氧虫酰肼对家蚕解毒酶的活性影响
- (16) METTL3 调控家蚕中肠 Toll 与 Imd 通路参与先天免疫应答的机制研究

(17) Divergent toxicity of Nanopolystyrene and polylactic acid in *Bombyx mori* ovarian cells: An integrated transcriptomic and metabolic analysis at environmentally relevant concentrations

2. 硕士生组

- (1) BmADARa 通过 Bmo-miR-210/BmIRAK4/NF-KB 信号通路调控丝蛋白表达
- (2) 家蚕 BmCHST4 响应 BmNPV 侵染的功能研究
- (3) Functional study of the *Bombyx mori* CHSI gene in response to pyriproxyfen
- (4) Isolation and identification of metarhizium strains from *Spodoptera litura* in Mulberry fields
- (5) The BmATF2-BmSCPX axis contributes to ROS-associated antiviral defense against *Bombyx mori* nucleopolyhedrovirus
- (6) 栎树叶斑病病原菌的分离鉴定及其拮抗菌的筛选
- (7) 葡萄糖氧化酶 AeGOXL 的智能改造及抗青枯菌应用研究
- (8) 黑水虻 defensin-like 基因可以明显提高家蚕对细菌病的抗性

(9) Synergistic mechanism of ricinine in enhancing the biocontrol efficacy of nucleopolyhedrovirus against lepidoptera pests

(10) 桑蠋聚瘤姬蜂性别决定基因 Doublesex 的功能分析

(11) 敌百虫通过铁死亡通路诱导家蚕生长发育损伤

(12) 家蚕对 Chuviridae 来源糖蛋白的功能驯化及其在保幼激素通路中的组织特异性调控作用

(13) 微量氟酰胺暴露对家蚕中肠组织结构及相关基因表达的影响

(14) 黏附素基因过表达促进大肠杆菌生物被膜高效转化桑树黄酮苷

(15) 桑树 GST 基因家族的全基因组鉴定及 MnGSTU4 响应青枯菌功能解析

(16) 棘孢木霉 TR35 的分离鉴定及其对桑树青枯病的生物防治潜力和家蚕安全性评价

(17) 对两种还原酶 MaLAR 和 MaANR 的特性分析揭示了它们在桑树原花青素生物合成中的作用

(18) 化木为柔：基于桑枝高值化利用的高性能纳米纤维素人工皮肤

(19) Screening and Identification of *Enterobacter hormaechei* K54 and Its Role in Enhancing Salt Tolerance and Growth Promotion in Mulberry Trees

(20) MiR171b-3p targets MnCSLH1 to regulate the resistance of mulberry to *Botrytis cinerea*

(21) Mitochondrial genome of *Antheraea knyvetti* (Lepidoptera: Saturniidae) and phylogenetic implications

(22) Molecular basis for microsporidia hijacking host stage-specific carbohydrate metabolism to drive proliferation via ApTreh2

(23) CDA3 mediates temperature-dependent remodeling of the chitinous cuticle in *Antheraea pernyi*

(24) 多斑柞跳象气味结合蛋白的时空表达及其与柞叶挥发物的分子结合特性研究

(25) QwLDOX Enhances Cold Stress in *Quercus wutaishanica* by Promoting Flavonoid Metabolism and Antioxidant Defense

(26) 丝素蛋白基水凝胶粘合剂用于感染性糖尿病创面治疗

(27) Autonomous replication and bidirectional transcription of circular DNA vcDNA-S7 derived from BmCPV generate functional proteins to inhibit viral replication

(28) CRISPR/Cas12a-mediated site-directed replacement of the silkworm fibroin heavy chain gene with a full-length spider silk gene for breeding high-performance chimeric silk strains

(29) Integrated mapping and gene editing identify BmCCP as a regulator of cocoon shape and spinning behaviour in *Bombyx mori*

(30) Mechanism of reduced resistance to viruses caused by damage of silkworm fat body caused by trace acetamiprid exposure

(31) BmTWK7 在家蚕心率与运动行为调控中的功能研究

(32) Habitual dietary change reduces the antibacterial status of *Bombyx mori* by inducing an intestinal stress response

(33) Mechanisms of midgut injury induced by chronic trace concentrations of chlorantraniliprole in silkworm (*Bombyx mori*)

(34) Ca^{2+} 诱导的丝蛋白快速止血用水凝胶

(35) 抗菌功能柞蚕丝医用缝合线的关键技术

(36) AI 驱动家蚕广谱抗病原药物的筛选

(37) Bio-Spun Silk Membranes with Synergistic Photothermal-Immunomodulatory Functions for Advanced Healing of Infected Wounds

(38) Draper-ATG3 互作正向调控自噬介导家蚕丝腺降解

(39) 功能因子负载的丝素蛋白/烷基化壳聚糖复合水凝胶构建及其皮肤创伤修复研究

(40) 微沟槽导电丝素蛋白水凝胶神经导管构建及其促进周围神经再生机制研究

(41) 家蚕 5 龄期丝腺中 BmSPI39 靶蛋白酶的鉴定、表达和活性分析

(42) 桑椹花青素双网络水凝胶稳态化技术及在酸奶中的应用

(43) 桑树 PLA 家族在干旱和盐胁迫下的全基因组鉴定和表达

3. 博士生组

(1) Diapause termination alters the m6A methylation profiles and regulates gene expression associated with early embryonic development in the silkworm (*Bombyx mori*)

(2) Dual Physiological Barriers Bypassed by a Silk-Based

Supramolecular Protein Delivery Platform for Neuroinflammation Mitigation in Alzheimer's Disease

(3) 茉莉酸结构类似物对桑叶营养品质的代谢调控及分子结合研究

(4) 外援施加茉莉酸介导的桑树耐锰机制研究

(5) 桑螟响应唑虫酰胺胁迫时的解毒酶基因的鉴定与功能分析

(6) Enhancing Aptamer Function via in Vitro Selection and Structure-guided Optimization for *Nosema Bombycis* Detection

(7) DNA barcoding assisted classification of the genus *Actias* (Lepidoptera:Saturniidae)

(8) 丝素蛋白自适应水凝胶实现牙本质小管 660 μm 深度封堵以治疗牙本质过敏症

(9) Cytoplasmic biogenesis, m6A-dependent translation, and energy-metabolic antiviral remodeling mediated by BmCPV-derived vcircRNA_000048

(10) 用于临界尺寸骨缺损再生的骨免疫调节生物纺丝 3D 蚕丝支架

(11) 一种制备兼具易成型与闭环回收能力的生物质基基质策略

(12) 基于镓纳米棒的多功能丝素蛋白微球用于肿瘤栓塞治疗的研究

(13) 鳞翅目昆虫 *Tret1* 基因扩张耦合肠道能量代谢与生长发育

(14) 一块会“吸油净水”的废丝海绵

(15) 蚕丝蛋白诱导定向聚集机制及其在一维晶体材料构筑中的应用