

论著

吡啶橙对草地贪夜蛾sf9细胞和AcMNPV病毒的损伤效应

邓平建 房师松 李喜梅 倪惠波 王叶元 林健荣

1.深圳市疾病预防控制中心, 深圳, 518020; 2.华南农业大学蚕丝科学系, 广州, 510642

收稿日期 2006-1-11 修回日期 2006-10-30 网络版发布日期:

摘要 背景与目的: 探索吡啶橙对昆虫细胞的遗传损伤。材料与方法: 用不同浓度的吡啶橙处理草地贪夜蛾sf9细胞、AcMNPV病毒, 观察其对细胞生长发育, 微核发生率, AcMNPV感染力的影响。结果: sf9细胞经5 μg/ml的吡啶橙处理后, 细胞分裂生长速度减慢, 细胞表面粗糙, 微核发生率为10.4% 10 μg/ml时可引起细胞膜破碎或死亡, 微核发生率为22% 出现三核, 多核甚至核裂现象。当AcMNPV经吡啶橙处理后再感染sf9细胞, AcMNPV可在细胞内增殖, 形成多角体, 并出现一些类似三角形或四角形的异常多角体。结论: 用一定剂量的吡啶橙处理草地贪夜蛾sf9细胞和AcMNPV病毒, 可对细胞产生损伤和引起AcMNPV发生异常多角体。

关键词 [吡啶橙](#); [草地贪夜蛾sf9细胞](#); [AcMNPV病毒](#); [损伤](#)

Injurious Effects of Acridine on Spodoptera Frugiperda 9 Cells and Autographa Californica Multiple Nucleopolyhedrovirus

DENG Ping-jian¹, FANG Shi-song¹, LI Xi-mei², NI Hui-bo², WANG Ye-yuan², LIN Jian-rong²,

1. Shenzhen Disease Control And Prevention Center, Shenzhen 518020; 2. Department of Silk Science, South China Agricultural University, Guangzhou 510642, China

Abstract **BACKGROUND & AIM:** To study the genetic damage of acridine on insect cells. **MATERIALS AND METHODS:** Using different concentrations of acridine to treat spodoptera frugiperda 9 cells(sf9), autographa californica multiple nucleopolyhedrovirus(AcMNPV), to study the effect of the acridine on cell growth and development, the percentage of micronucleus formation and the virulence of AcMNPV. **RESULTS:** The injurious effects of acridine on Sf9 cells in cell activity and micronucleus percentage revealed that cell division and growth became slow, the surface of the cell became rough, and the micronucleus percentage was 10.4% after treatment with 5 μg/ml acridine. Some cells had broken membranes or died when treated with 10 μg/ml, and with the micronucleus percentage of 22%, trinucleus, multi-nucleus and nuclear cleavage were also found. When acridine-treated AcMNPV infected the sf9 cells, AcMNPV could proliferate within the cell and form polyhedra, but some abnormal polyhedra like triangle or quadrangle were formed at the same time. **CONCLUSION:** Using certain dosage of acridine to treat sf9 cells and AcMNPV could cause damage to the cell and the formation of abnormal polyhedra of AcMNPV.

Keywords [acridine](#); [spodoptera frugiperda 9 cell\(sf9\)](#); [autographa californica multiple nucleopolyhedrovirus\(AcMNPV\)](#); [damage](#)

DOI

扩展功能

本文信息

▶ [Supporting info](#)

▶ [\[PDF全文\]\(259k\)](#)

▶ [\[HTML全文\]\(37k\)](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [Email Alert](#)

相关信息

▶ [本刊中包含“吡啶橙; 草地贪夜蛾sf9细胞; AcMNPV病毒; 损伤”的相关文章](#)

▶ [本文作者相关文章](#)

· [邓平建 房师松 李喜梅 倪惠波 王叶元 林健荣](#)