

论著

Ames试验与MLA试验检测两味含马兜铃酸中药的致突变性

陆 华¹ /马康目² /孙 皎¹ /陈 灵²

1.上海交通大学医学院附属第九人民医院,上海生物材料研究测试中心;2.上海交通大学生命技术学院

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摘要 背景与目的: 检测单味马兜铃及复方龙胆泻肝丸的遗传毒性。材料与方法: 鼠伤寒沙门氏菌回复突变试验 (Ames test)检测含马兜铃酸的两味单、复方中药的细菌回复突变率; 采用96孔微孔板接种法进行小鼠淋巴瘤细胞tk基因突变试验(mouse lymphoma assay, MLA), 经单、复方含马兜铃酸浓度5 μg/ml对L5178Y/tk(+/-)-3.7.2c细胞进行染毒, 分别测定其接种效率(PE), 相对总增长率(RTG)和突变频率(MF)。结果: Ames试验结果为阴性,而小鼠淋巴瘤试验显示单味马兜铃具有一定细胞毒性并诱导tk基因突变, 产生突变集落; 而复方龙胆泻肝丸未诱发tk基因突变。结论: 受试的单味马兜铃具有一定的遗传毒而复方龙胆泻肝丸具有对马兜铃的减毒效应。

关键词 [马兜铃酸](#); [Ames试验](#) [小鼠淋巴瘤细胞试验](#) [tk基因突变](#); [遗传毒理](#)

Detection of Mutagenicity of Two Chinese Medicines Containing Fructus Aristolochiae by Ames Test and Mouse Lymphoma Assay

LU Hua¹, MA Kang-mu², SUN Jiao¹, CHEN Ling²

1. Ninth People's Hospital, Shanghai Jiaotong University, 2. School of Life Science and Technology, Shanghai Jiaotong University

Abstract **BACKGROUND & AIM:**To study the mutagenicity of Fructus Aristolochiae (FA) alone and compounded with Long Dan Xie Gan Wan (LDXGW) using Ames test and mouse lymphoma assay. **MATERIALS AND METHODS:** Ames test was conducted to determine whether FA and LDXGW, which contained AA at the concentration of 20 μg/ml, would cause mutagenic changes in the average number of revertants for TA97,TA98,TA100 and TA102. L5178Y/tk(+/-)-3.7.2C₂ cells were treated with FA and LDXGE at a concentration of 5 μg/ml by the 96_well microwell method. The plating efficiency (PE), relative total growth (RTG) and the mutant frequency (MF) were determined by the microtiter procedure. **RESULTS:** FA and LDXGE were considered to be nonmutagenic to Salmonella typhimurium tester strains TA97, TA98, TA100 and TA102 in Ames test. FA was characterized by marked cytotoxicity and mutagenic activity. However LDXGW showed that cytotoxicity and mutagenic activity were largely reduced when made into a compound. **CONCLUSION:** FA had certain cytotoxicity and mutagenicity while LDXGE could reduce the mutation of tk gene.

Keywords [Fructus Aristolochiae](#); [Ames test](#) [mouse lymphoma assay](#); [tk gene mutation](#) [mutagenicity](#)

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