

农业生物技术科学

黄曲霉毒素B1胁迫相关小鼠肝脏线粒体蛋白的初步研究

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摘要:

摘要: 为了加强经黄曲霉毒素B1感染后肝脏线粒体差异表达蛋白的检测, 以助于预防中毒的爆发和扩散。本文以黄曲霉毒素感染小白鼠, 10周后提取小白鼠的线粒体蛋白, 通过蛋白质双向电泳技术研究黄曲霉毒素对小鼠线粒体蛋白组差异表达的影响。双向电泳结果发现有31个蛋白质点发生显著变化, 其中有新出现或明显上调的7个蛋白质点以及缺失的或明显下调的6个蛋白质点。这些点大多处于5.2-9.0pH值范围内, 分子量处于8-165 kDa之间。我们据此推测, 毒素可能通过改变这些蛋白表达量, 从而影响线粒体的功能, 进而对小鼠产生毒性作用。

关键词: 双向电泳

The elementary study on the effect of Aflatoxin B1 on the mouse liver mitochondrial proteome

Abstract:

Abstract: In order to strengthen the detection on the liver mitochondrial proteins which differentially expressed when infected by aflatoxin B1, to prevent the outbreak and spread of poisoning. the toxin production by Aspergillus flavus were optimized and were extraced to infect mice. After 10 weeks, we extraced the mitochondrial protein of the mice and reseached the effect of the Aflatoxin on the mitochondrial proteome of the mice by two-dimensional electrophoresis. The results of analysis of two-dimensional electrophoresis revealed that there were obviously 31 differential protein spots, among which 7 protein spots were new or upregulated and 6 protein spots were disappeared or downregulated. These spots were mostly in the range of 5.2-9.0pH and 8-165 kDa. We speculated that aflatoxin may effect mitochondrial function by the influence on these proteins, which induce the toxicity on mice.

Keywords: Two-dimensional Electrophoresis

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