



**Ain Shams University**

**College for women**

Department of Botany

**SOME METABOLIC ACTIVITIES OF CERTAIN  
HALOPHILIC ASPERGILLI INCLUDING  
MYCOTOXINS PRODUCTION**

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## **ABSTRACT**

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Two halophilic fungi namely *Aspergillus ochraceus* Wilhelm and *A.parasiticus* NRRL 2999 were employed in cultural studies to reveal the most favourable conditions conducive to the maximum biosynthesis of either proteins or mycotoxins in reasonable amounts . These conditions were found to be concerned with sodium chloride concentrations , nature of carbon source , nature of nitrogen source , pH value , temperature during incubation period and aging of cultures . Addition of low molecular weight alcohol or some chemical substances to fermentation medium of *Aspergillus ochraceus* or *A.parasiticus* improved the proteins accumulation and mycotoxins production . Also the addition of some natural products to the medium of both organisms raised their biosynthesis of proteins and mycotoxins . But the addition of some natural oils which employed as food preservatives to the fermentation media inhibited the accumulation of proteins and production of mycotoxins of the two fungi .

Accumulation of either protein or carbohydrates within mycelia of halophilic fungi may be considered as osmoregulatory agents for both fungi under investigation .

The present study revealed that the applied treatments of either aflatoxin or ochratoxin inhibit the chlorophyll content of bean , Lupine and maize plants . Also aflatoxin or ochratoxin has an inhibitory effect on growth of some microorganisms .

**Key words:** Metabolic activities , Mycotoxins , Aflatoxin , Ochratoxin . Protein , Salinity , Fermentation media , Amino acids .

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