



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



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بعض الوثائق الأصلية تالفة



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بالرسالة صفحات
لم ترد بالأصل

Some studies on the effects of Ochratoxin-A on cultured Oreochromis niloticus and Carp species

Thesis

Presented By:

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(B. V. Sc. Alex. Univ. 1998)

For the Degree of

M. V. Sc.

(Fish Diseases and Hygiene)

To

**Department of Avian and Aquatic Animal
Medicine**

Faculty of Veterinary Medicine

Alexandria University

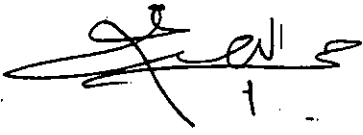
(2002)

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قرار لجنة الحكم والمناقشة

قررت اللجنة الحكم والمناقشة بجلستها المنعقدة يوم الثلاثاء الموافق ٢٠٠٢/١/٨ بترشيح السيد ط. ب. طلعت طلعت سعد عرفه للحصول على درجة الماجستير فى العلوم الطبية البيطرية تخصص (صحة وامراض الاسماك)

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ورئيس قسم امراض الاسماك ورعايتها
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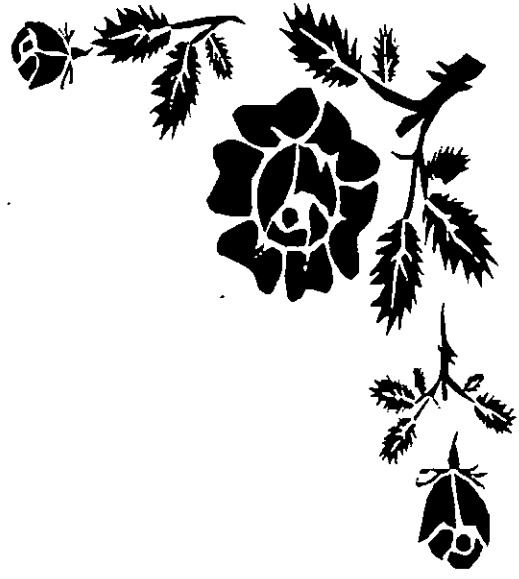
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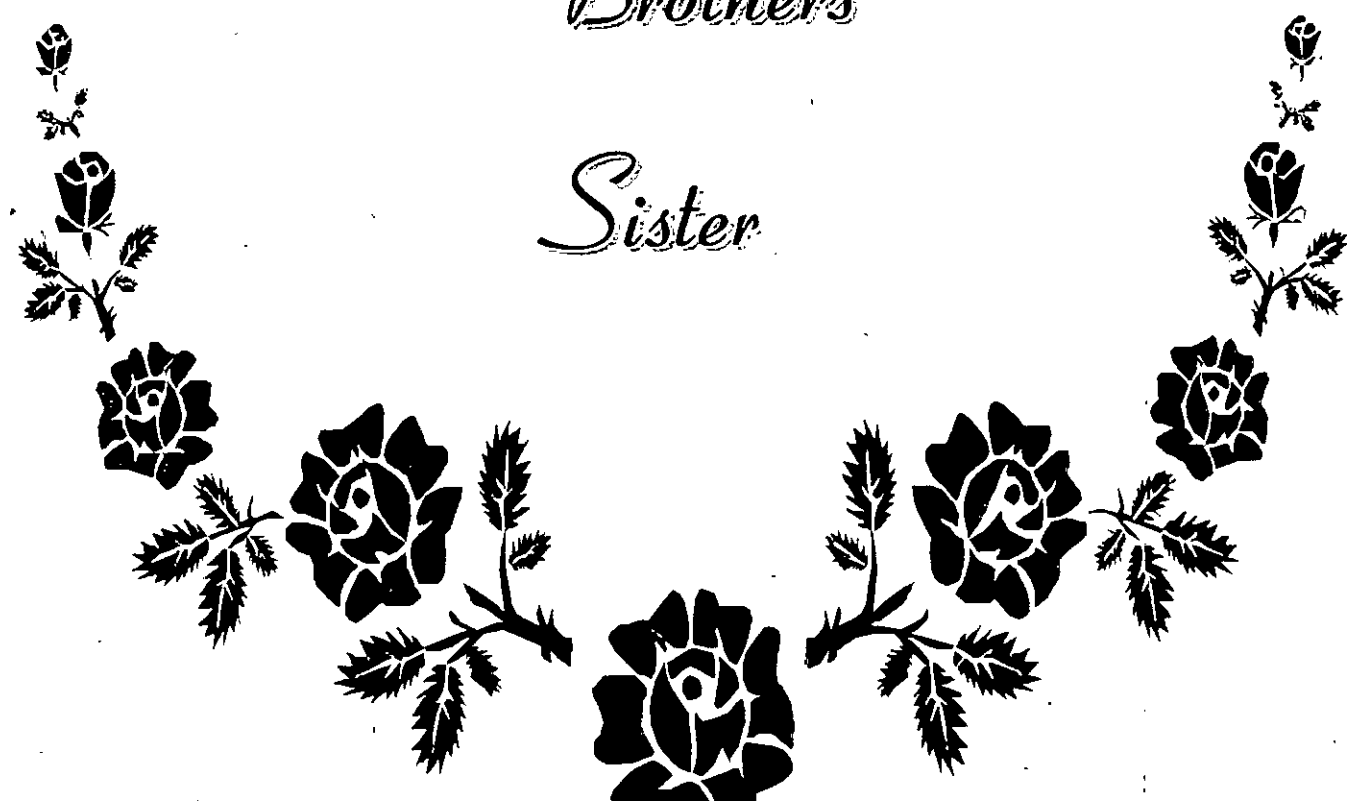
Dedication

To

My Parents,

Brothers

Sister



Acknowledgment

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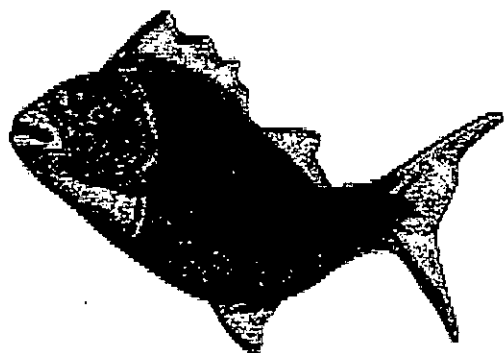
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Contents

Subject	Page
I-Introduction	1
II-Review of literature	4
1-Introduction about mycotoxins.	4
2-Ochratoxin	7
a-Historical aspect	7
b-Nature and types	9
c-Structure and formula	13
d-Factors affecting toxicity	14
e-Source of intoxication	21
f-Dose of toxicity	23
g-Metabolism and excretion	25
h-Mode of toxicity	29
i-Interactions between Ochratoxins and other toxins	32
j-Forms of toxicity	34
k-Symptoms of toxicity	36
l-Immune system	46
m-Genotoxic effect	48
n-Food additives	50
n-Inhibition and prevention of Ochratoxins.	52
III-Materials and methods	54
IV-Results	75
V-Table and Figures	85
VI-Discussion	148
VII-Conclusion	160
VIII-English summary	161
IX-References	163
X-Arabic summary	



INTRODUCTION



I- Introduction

Fish and fish products play an important and increasing role in solving the human nutritional problems in Egypt. The Egyptian population suffering from deficiency of animal protein, as the daily consumption of animal protein in Egypt per capita about 16 g (AOAD, 1995) and the per capita consumption of fish meat is about, 7.2 kg/year (FAO, 1994). Meanwhile, the consumption of fish in the developed countries is about 22.2 kg/year and in developing countries is about 10.1 kg/year (FAO, 1994).

Fish supplies represent about 30 percent of the total animal protein in diet of Asian populations, 20% in Africa and 10% in Latin America (FAO, 1996).

Mycotoxins are toxic metabolites produced by a large number of fungi under a wide range of environmental condition. Many of these fungi are commonly invade cereals, nuts and grains which are used in the manufacture of animal feeds (Ottinger and Doerr, 1982). These toxins cause fish diseases that may affect fish production and efficiency.

An important group of mycotoxins are *Ochratoxins*, especially *Ochratoxin A (OTA)*, which produced by fungi of the *Aspergillus ochraceus* and some *Penicillium* species that commonly contaminate the human, animal and fish feed (Wood, 1992; Braunberg et al., 1994; El-Shaboury, 1998; Belmadani et al., 1999; McMasters and Vedani, 1999 and Palli et al., 1999).

The *Ochratoxin* causes severe economic losses to poultry industry (Hamilton et al., 1982; Susan et al., 1984 and Gibson et al., 1990), rats (Mayura et al., 1983 and Galtier, 1991) and ruminants (Skang, 1999).

In human the *Ochratoxins* constitute a major hazards on newly weaned children (Micco et al., 1995; Jonsyn et al. 1995 and Oyelami et al., 1996). Also there is a common relationship with Balkan Endemic Nephropathy and *OTA* (Niklov et al., 1996; Creppy et al., 1998 and Tatu et al., 1998), also between *OTA* and Procine Nephropathy (Krogh, 1983 and Radic et al., 1997). Nowadays there is a report called the *Ochratoxins* is a *mycotoxins* commonly found (endemic) Egypt (Chu et al., 1972; El-Kaddy et al., 1995; Creppy et al., 1998; El-Shaboury 1998 and Wafa et al., 1998).

The *Ochratoxins* causes severe economic losses to fish industry (Bauer, 1988 and Jonsyn and Lahai, 1992), through decreasing fish weight, increasing feed conversion ratio and increasing mortality among fish (Fuchs et al., 1986; El-Shaboury, 1998 and Samira-Rezeaka, 1991).

The *Ochratoxins* causes severe losses among different fish species, especially *Oreochromis nilotica* and *Common carp* . These two species of fish considered as one of the most famous fish species among Egyptian fish farms and lakes (El-Zarka et al., 1993 and El-Shaboury , 1998) . Also, this two species accepted by Egyptian consumers and play an important economic role in fish industry in Egypt.

The effect of *Ochratoxin A* on some world fish has been reported, yet its effects on Egyptian species like Tilapia, grey mullet and *Common carp* are still lacking and questionable.