شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

بعض الوثائق الاصلية تالفة

بالرسالة صفحات
لم ترد بالاصل

AIN SHAMS UNIVERSITY
UNIVERSITY COLLEGE FOR WOMEN
(ARTS, SCIENCE AND EDUCATION)
CAIRO, A.R.E.

EVALUATION OF THE MUTAGENIC POTENTIAL OF IVERMECTIN

A Thesis
Submitted

By

Dalia Demerdash Abd EL Monem Hafez

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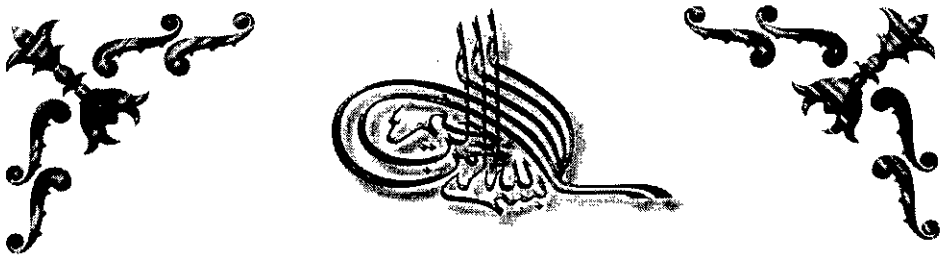
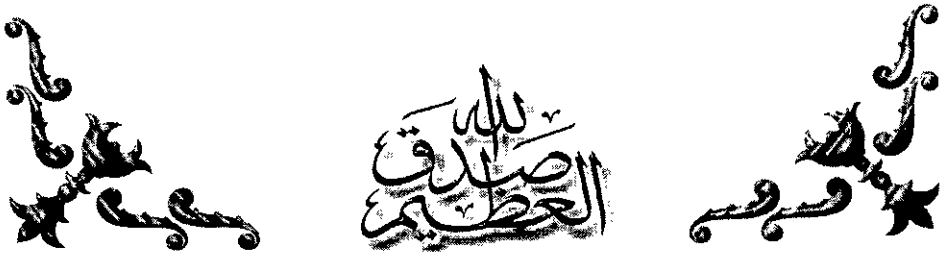
(B. Sc., 1998, M. Sc., 2003)

For The Degree of Ph. D.
In Zoology (Cytogenetics)

2005

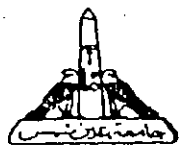


وَقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ



صدق الله العظيم

سورة التوبة آية ١٠٥



AIN SHAMS UNIVERSITY
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Evaluation of the mutagenic potential of Ivermectin

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ABSTRACT

Ivermectin (IVM) is a broad-spectrum anti-parasitic agent. It shows an excellent anthelmintic effect in veterinary and human medicine. The objective of this study was the evaluation of potential mutagenicity of IVM on *Mus musculus* in vivo. This was achieved through chromosomal aberration assay (CAA) and micronucleus test (MNT) in bone marrow cells. CAA was also studied in spermatocytes. Variation in constitution of serum proteins on the molecular level was also investigated.

For CAA & MNT, animals received single and/or double doses of 200µg/kg b.w. IVM. The sampling times were 1, 2, 3, 7 and 14 days after the last injection. While in CAA in spermatocytes, male mice treated with single injection of 200µg/kg b.w. IVM. Meiotic chromosomes were prepared after 6h, 2, 5, 10 and 12 days to cover the different phases of meiotic division.

In molecular study, animals treated in a similar manner. Blood samples were collected after 1, 7 and 14 days of the last injection. Total protein content was determined. The electrophoretic patterns of serum proteins were studied by using SDS-PAGE.

After single and double injection of IVM the damage cell percent (DC%) and the chromosome aberration percent (CA%) were significantly elevated through the first 3 days, and reduced after 7 and 14 days. The peaking time was different according to exclusion or inclusion of gaps. Single dose of IVM gave high score of MN than that obtained by double doses. In both groups MNPCEs were decreased by increasing time. The percentage of abnormal metaphases in germ cells was 33.83 versus 5.83 for the control.

IVM elevated the total protein content. Single injection induced much variation in the percentage area of the separated proteins than that produced by double treatment. In conclusion, this study revealed high clastogenic and genotoxic potential of IVM on mice.

Contents