
# بسم الله الرحمن الرحيم


# شبكة المعلومات الجامعية

# التوثيق الالكتروني والميكروفيلم


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%**

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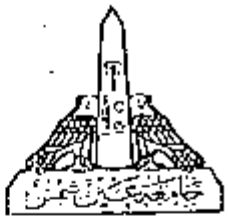
# بعض الوثائق الاصلية تالفة


# بالرسالة صفحات لم ترد بالاصل



*Faculty of Science*
*Microbiology Department*

# THE GENE EXPRESSION OF ADHESION MOLECULES AND THE GRANULOMATOUS INFLAMMATION IN TUBERCULOSIS AND SCHISTOSOMIASIS

**Thesis submitted for Master Degree in Science**
**(Microbiology)**

**By**
**Ayman Kamal Mahrous El-Essawy**
*(B.Sc. Microbiology/Chemistry 1993)*

*Under Supervision Of*

**Dr. Mohamed Ramadan Abu-Shady**
*Professor and Head of Microbiology Department*
*Faculty of Science*
*Ain Shams University*

**Dr. Nabila Anwer El-Sheikh**
*Professor of Microbiology*
*Faculty of Medicine for girls*
*Al-Azhar University*

**Dr. Soheir Said Maklad**
*Assist.Prof. of Microbiology*
*Faculty of Medicine for girls*
*Al-Azhar University*

1998

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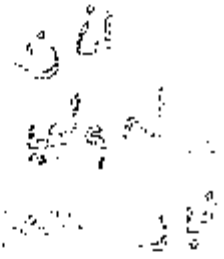

بسم الله الرحمن الرحيم

الله لا اله الا هو الحى القيوم
لا تأخذه سنة و لا نوم
له ما في السموات و ما الأرض
من ذا الذى يشفع عنده الا باذنه
يعلم ما بين أيديهم وما خلفهم
و لا يحيطون بشيء من علمه الا بما شاء

صدق الله العظيم

[redacted]

# *Approval sheet*

## *The gene expression of adhesion molecules and the granulomatous inflammation in tuberculosis and schistosomiasis*

*By*

**Ayman Kamal Mahrous El-Essawy**

(B.Sc. Microbiology/Chemistry 1993)

This thesis submitted for master degree in Microbiology (M.Sc) has been approved by:

**Supervisors:**

- **Dr. Mohamed Ramadan Abu Shady**
*Professor and head of Microbiology department, Faculty of Science, Ain Shams University.*

- **Dr. Nabila Anwar El-Sheikh**
*Professor of Microbiology, Faculty of Medicine for girls, Al-Azhar University.*

- **Dr. Soheir Said Maklad** Soheir Said
*Assist. Professor of Microbiology, Faculty of Medicine for girls, Al-Azhar University.*

Microbiology depertment
Faculty of Science
Ain Shams University
1998

Date of examination: 15 - 9 - 1998

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# ABSTRACT

**Ayman Kamal Mahrous El-Essawy. The Gene Expression Of Adhesion Molecules And The Granulomatous Inflammation In Tuberculosis And Schistosomiasis. (M.Sc.). Faculty Of Science, Ain Shams University.**

It has been shown that granulomatous hypersensitivity reaction in tuberculosis (TB) is mainly associated with TH1 cytokine expression while that in schistosomiasis is TH2 dependent. On the other hand most of the adhesion molecules which regulate leukocyte activation and migration are inducible by these cytokines.

This work investigates the granulomatous inflammation and compares the expression of intercellular adhesion molecule-1 (ICAM-1) and platelet endothelial cell adhesion molecule-1 (PECAM-1) between the TB and schistosome models. An *in vivo* granuloma formation was induced in immunized CD1 mice by intravenous injection of sepharose beads coated with either purified protein derivatives (PPD) of *M. tuberculosis* (in the TB model) or with soluble egg antigens (SEA) of *S. mansoni* (in the schistosome model). Frozen lung sections were analyzed for the expression of ICAM-1 and PECAM-1 using image analyzer. The two models demonstrated significant increase in ICAM-1 expression in immunized animals that received antigen coated beads as compared to uncoated bead controls ($p<0.001$) and to naïve controls ($p<0.001$). In contrast, PECAM-1 expression was down regulated in the schistosome model but not in the TB model. The net granuloma size formed around antigen coated beads in the vaccinated animals of the two models was significantly larger than that formed in the naïve control animals or that formed around antigen uncoated beads. It is suggested that the difference in PECAM-1 expression between the two models might be due to different cytokine regulatory mechanisms.