
شبكة المعلومات الجامعية

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%**

# بعض الوثائق الاصلية تالفة

# بالرسالة صفحات لم ترد بالاصل

# HUMAN LEUCOCYTIC ANTIGEN (HLA) TYPING AND TUBERCULIN REACTIVE STATUS IN PATIENTS WITH PULMONARY TUBERCULOSIS

*Thesis*

Submitted for Partial Fulfillment for the Master Degree In

*Chest Diseases and Tuberculosis*

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بسم الله الرحمن الرحيم

﴿ قالوا سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم ﴾

صدق الله العظيم

سورة البقرة آية (٣٢)

# ABSTRACT

Mycobacterial infections in the human system lead to sensitization to the bacillary components and elicitation of cell mediated and humoral immune responses to mycobacteria. The development of various mycobacterial diseases is multi-factorial. Most factors such as the immue status and the genetic make up of the individual play a major role in the susceptibility of an individual.

Since the human leucocyte antigen (HLA) system plays on important role in the modulation of the immue response, a possible association between (HLA) antigen and tuberculosis has been examined in several population, but the results have been controversial.

Sixty one pulmonary tuberculosis patients and twenty healthy control subjects were conducted in this study in an attempt to examine the HLA. Class II genetic make up of pulmonary tuberculosis patients and their tuberculin reactive status to purified protein derivative (PPD) of mycobacterial tuberculosis to elucidate the genetic control of delayed type lypersensitivity to mycobacterial tuberculosis infection.

The following were done:

1- Thorough history and full clinical examination.

2- Chest X-ray examination.

3- Blood suger fasting and 2 hours post prandial.

4- Sputum examination by direct smear microscopy for AFB

5- Tuberculin skin test.

6- HLA typing.



Key words:

TB-HLA – MHC – tuberculin test

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*Eman El Sayed Ahmed Ali*

# LIST OF ABBREVIATION

**The major Histocompatibility complex (MHC)**

Is a locus on chromosome 6 comprised of multiple genes that encode histocompatibility antigens.

**Histocompatibility antigens:**

It encoded by genes at the (MHC) locus on chromosome 6. it present on tissue cells.

**HLA:**

Human leucocyte Antigen.

**Histocompatibiltiy:**

Mean tissue compatibility.

**Haplotypes:**

The set of alleles that an individual carries at each locus on a single chromosome form the haplotype.

**Co-Dominance of the MHC alleles:**

MHC genes are expressed codominantly, which means for example, that all six class I alleles three on each copy of chromosome (6) are expressed together on the surface of every nucleated cell.

**Tolerance to MHC antigens:**

During embrgonic differentiation, all mammales develop tolerance to the MHC specificities that they express.

**MHC phenotypes:**

The sum of all specificities coded by the genome of the individual is known as that individual phenotype.

**Linkage Diseqilibrium:**

It is expressed as the difference between the observed and expected frequencies of the alleles.

**MHC restriction:**

It means that ($CD8^+$) Tlympocytes recognize foreign antigen only in the context of class I MHC molecules and $CD4^+$ lymphcytes recognize antigen in context of MHC class II molecules.

**Antigen presentation:**

Is the expression of antigen molecules on the surface of antigen presenting cell in association with MHC molecules.

**An antigen presenting cell:**

Is a cell that can process a protein antigen breaking it into peptides and can present it in conjunction with MHC molecules on the cell surface.

**RR:** Relative risk: $RR = (P^+ \times C^-)\,(P^- \times C^+)$

**AR:** Absolute Risk. $AR = \frac{P^+}{C^+} \times P$

$P^+$ : The number of patient possessing the particular HLA antigen.

$C^-$ : The number of control lacking the particular HLA antigen.

$P^-$ : The number of patients lacking the particular HLA antigen.

$C^+$ : The number of controls possessing the particular HLA antigen.