#### **Faculty of Veterinary Medicine**

**Department of Microbiology** 



# Screening for tuberculosis in Egypt using recent techniques

#### A thesis presented by:

Nourhan Youssef Mahmoud Youssef

B.V.Sc, Faculty of Veterinary Medicine, Cairo University (2007)

#### In the partial fulfilment of:

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Microbiology

(Bacteriology, Immunology and Mycology)

#### **Under the Supervision of:**

#### Prof.Dr./ Khaled Farouk El-Amry Prof.Dr./ Rafik Tawfik Mohamed Soliman

Head of Egyptian Veterinarians

Syndicate

Professor of Microbiology Professor of Microbiology

Department of Microbiology Department of Microbiology

Faculty of Veterinary Medicine Faculty of Veterinary Medicine

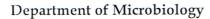
Cairo University Cairo University

#### Prof. Dr. Essam Amin Nasr

Deputy Director for research and studies and head of Tuberculosis Department at Veterinary Serum and Vaccine Research Institute – Abbasia

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#### Faculty of Veterinary Medicine





### Approval Sheet

This is to certify that the dissertation submitted by Vet./ Nourhan Youssef Mahmoud Youssef to Cairo University, for the master degree of Veterinary Medical Sciences, Microbiology (Bacteriology, Immunology and Mycology) has been approved by the examining committee:

• Prof. Dr./ Fawzy Reyad El-Saedy

Professor of Microbiology

Faculty of Veterinary Medicine

Beni Suef University

• Prof. Dr./ Mona Ibrahim Hassan El-Enbaawy

Professor of Microbiology

Faculty of Veterinary Medicine

Cairo University

• Prof. Dr./ Khaled Farouk Mohamed Abdel Hamid El-Amry (Supervisor)

Professor of Microbiology

Faculty of Veterinary Medicine

Cairo University

• Prof. Dr./ Rafik Tawfik Mohamed Soliman (Supervisor)

Professor of Microbiology

Faculty of Veterinary Medicine

Cairo University

• Prof. Dr./ Essam Amin Nasr (Supervisor)

Deputy Director for Research and Studies, and Head of Tuberculosis Department

Veterinary Serum and Vaccine Research Institute

Abbasia

bar One

Mona El-Enhaawy

Dated:28/7/2016

#### **Faculty of Veterinary Medicine**

#### **Department of Microbiology**



## **Supervision Sheet**

#### **Prof.Dr./Khaled Faruok El-Amry**

Head of Egyptian Veterinarians syndicate

Professor of Microbiology

Department of Microbiology

Faculty of Veterinary Medicine

**Cario University** 

#### **Prof.Dr./Khaled Faruok El-Amry**

**Professor of Microbiology** 

Department of Microbiology

Faculty of Veterinary Medicine

Cario University

#### Prof. Dr. Essam Amin Nasr

Deputy Director for research and studies and head of Tuberculosis Department at Veterinary Serum and Vaccine Research Institute – Abbasia

#### **Faculty of Veterinary Medicine**

**Department: Microbiology** 

Name : Nourhan Youssef Mahmoud Youssef

**Title** : Screening for tuberculosis in Egypt using recent techniques.

**Supervisors**: Prof.Dr./ Khaled Farouk El-Amry

Head of Egyptian Veterinarians Syndicate Professor of Microbiology - Cairo University : **Prof.Dr./ Rafik Tawfik Mohamed Soliman** Professor of Microbiology - Cairo University

: Prof. Dr. Essam Amin Nasr

Deputy director for Research and studies at Veterinary Serum

and Vaccine Research Institute - Abbasia.

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bovis - tuberculin skin test; BoviGam®; γ-IFN- ELISA-QuantiFERON®).

#### **Abstract:**

In this study, a total of 5700 cattle, represented different 15 dairy farms, were examined by single intradermal comparative tuberculin skin test (SICTT). Both positive and suspected animals were tested by interferon gamma ( $\gamma$ -IFN) assay. Our finding revealed very high correlation between SICTT and  $\gamma$ -IFN testing results where  $\gamma$ -IFN showed 98.3% positive out of total 121 animals were positive for SICTT. Moreover, 35 animals that were suspected by SICTT, demonstrated positive results in 33 animals (94%) when their sera tested for  $\gamma$ -IFN. Interestingly, these suspected animals when retested by skin test after 60 days; they showed 30 positive reactor cattle.

The suspected patients showed that 29 out of 96 cases (30%) were positive by skin test. While 25 (26%) and 21 (22%) and 26 (27%) were positive when the suspected patients were examined by  $\gamma$ -interferon test in their blood and direct microscopic examination for *Mycobacterium* in their sputum samples, and bacteriological examination respectively. thereby, it was concluded that the interferon gamma (IFN- $\gamma$ ) test is an additional tool for diagnosis of tuberculosis (TB) in cattle and human. It may help to minimize dissemination of infection, which could be resulted when keeping many suspected animals for months until testing after two months later. When used in combination with the tuberculin test, the increased sensitivity of the IFN- $\gamma$  test may enable the number of repeat tests to be reduced.



## To the soul of My Mother

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## Acknowledgement

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