Cairo University
Faculty of Veterinary Medicine
Department of Microbiology

# Trials for Preparation of Diagnostic Kits for Avian Mycoplasmosis

A Thesis presented by

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(B. V. Sc., Beni seuf University, 2004)

For the degree of M. V. Sc
(Bacteriology, Immunology, Mycology)

Under the Supervision of

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# Supervision sheet

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## ABSTRACT

The present study was designed for preparation of diagnostic kits for avian mycoplasmosis. A total of 628 samples (190 tracheal swabs, 200 trachea , 168 lung tissues, 20 eggs, 4 joints and 46 yolk sac) were collected from different species of diseased and apparently healthy poultry and different Governorates of Egypt. the samples were subjected to cultural isolation using pleuropneumonia like organism (PPLO) medium, where 205 samples (32.6%) were positive for fried egg colony. Identification of genus *Mycoplasm*a and differentiation from *Acholeplasma* was carried out using digitonin test, where of 160 isolates were identified as genus *Mycoplasma* in an incidence of 78%. Using *Mycoplasma gallisepticum* (MG) species specific *mgc2* and PCR assay , out of 160: 86 (53.70%) isolates were confirmed as (MG),while 39 (24.30% ) isolates were identified as *Mycoplasma synoviae* (MS) using specific 16srRNA and PCR assay. Further confirmation has been done using sequencing of PCR

product, which revealed some mutations. Agreement of results of inhouse and commercial ELISA kits was obtained. lateral flow assay (LFA) is rapid, sensitive and accurate method for diagnosis of MG from suspected cases. Assays performance indicates a low sensitivity (77.5%) but maintains a high specificity (92%) compared to PCR.

**Keywords*:*** *Mycoplasma gallisepticum* , *Mycoplasma synoviae* , digitonin , antigen, lateral flow technique, ELISA.

# *Dedication*
# *To*

*My Father, My Mother, And*
*My husband*

*And*
*My sons*
*Omar And Mohamed*

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