Cairo University
Faculty of Veterinary Medicine
Department of Microbiology

Comparative Bacteriological and Molecular Studies on *Klebsiella* Species Isolated From Chicken and Human

A Thesis Presented By

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B. V. Sc., Cairo, University (2009)

For M.V. Sc. Degree in Microbiology
(Bacteriology, Mycology and Immunology)

Under supervision of

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الآيه (٥)

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This is to approve that the dissertation entitled **{Comparative bacteriological and molecular studies on *Klebsiella* species isolated from poultry and human} presented by{Ahmed Mohammed Emam}** BVSc., Cairo, University (2009) to cairo university for the **M .V. Sc. Degree** of Veterinary Medical Science, Microbiology (Bacteriology, Mycology and Immunology)has been approved by the examination committee members.

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DEDICATION

I would like to dedicate

this thesis

And everlasting gratitude to:-

My Mother,

My wife,

And

My family

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My thanks are submitted first and for most to *Allah* who gave me the strength and ability to complete this work.

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ABSTRACT

In the present study, 1000 samples (liver, spleen, lung and trachea) from apparently healthy and diseased broiler, layer and baby chicks and 200 human samples bronchoalveolar lavage BAL, blood stream infection BSI, urine UR, wound W tissue T were collected to investigate the prevalence of *Klebsiella* spp. The isolation of *Klebsiella* from broilers revealed 4 isolates (5.8%), 8 isolates(5.3%) from layers, 3isolates from baby chicks (9.6%) and 16 human isolates (7.5%).Antimicrobial sensitivity testing against16 antibiotic agents revealed that all of isolates (100%) were sensitive to amikacin, Cefepime and imipenem followed by (97.3%) gentamicin, (94.6%) aztreonam and (86.5%) ciprofloxacin. While, (97.3%) of isolates were resistant to nalidixic acid followed by (94.6%) resistant to ampicillin, (83.8%) to tetracycline and (70.3%) to sulphamethoxazole/trimethoprim. Serological survey using; Molecular characterization of some ESBLs genes (bla_{TEM}, bla_{CTX} and bla_{SHV}) using PCR showed that 6 isolates were positive for bla_{TEM} gene and 5were positive for bla_{CTX} gene. All isolates were negative for bla_{SHV} gene.
Key Words: Bacteriological, Molecular, *Klebsiella*, Poultry, Human.

LIST OF CONTENTS