



Cairo University  
Faculty of Veterinary Medicine  
Department of Microbiology

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

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**(Bacteriology, Mycology and Immunology)**

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# DEDICATION

*I would like to dedicate  
this thesis*

*And everlasting gratitude to:-*

*My Mother,*

*My wife,*

*And*

*My family*



## Acknowledgement

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, 3 isolates from baby chicks (9.6%) and 16 human isolates (7.5%). Antimicrobial sensitivity testing against 16 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*<sub>TEM</sub>, *bla*<sub>CTX</sub> and *bla*<sub>SHV</sub>) using PCR showed that 6 isolates were positive for *bla*<sub>TEM</sub> gene and 5 were positive for *bla*<sub>CTX</sub> gene. All isolates were negative for *bla*<sub>SHV</sub> gene.

**Key Words:** Bacteriological, Molecular, *Klebsiella*, Poultry, Human.



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