Cairo University
Faculty of Veterinary Medicine

Genetic Comparative Studies of Pasteurella Infection In Rabbits

A Thesis Presented by

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For the Degree of Master

In Veterinary Medical Science,

Microbiology (Bacteriology, Immunology and Mycology)

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Dedication

I would like to dedicate this work to

My Mother,

My Father,

My brothers , all my friends, my son Adam and my daughter Kenzy

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First of all, I would like to express my all embracing gratitude and praise to ***ALLAH*** *for all gifts who gave me allover my life, his guidance, care and giving me the power to terminate this work.*

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Abstract

In current study, 135 samples were collected from clinically diseased rabbits of different ages from private farms of different Governorates of Egypt. The samples were collected aseptically from rabbits suffering from various signs of respiratory disorders (nasal discharges, sneezing, coughing, conjunctivitis and other respiratory disorders). All samples were subjected to bacteriological examination, biochemical identification and molecular characterization of the isolates using Conventional PCR. 32 out of 135 samples (23.7%) were positive for *P. multocida* and 34 out of 135 samples (25.18%) were positive for *M. haemolytica* by conventional bacteriological method. PCR was confirmed that all isolates were *P. multocida,* and by molecular capsular typing found that all isolates were belonged to serpogroup A, the positive isolates by PCR subjected to antibiotic sensitivity testing, and the drug of choice was gentamicin. It was selected 3 strains for 16s rRNA gene sequencing and it showed genetic relation to different *P . multocida subspp*. with identity % = 99% . Phyloenetically, the 3 sequenced 16s rRNA gene of the Egyptian *P. multocida* in this study were separated into 2 different clades, the sequence with accession no. MH703779 locates in clade D that is related to the Chinese strain with accession no. EU918692. while, the 2 other sequences of the Egyptian *P. multocida* with accession no. MH703781 and MH703782 are related to clade C .

***Key words*:** *P. multocida*., *M. haemolytica*, isolation, Rabbits.

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