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**Detection of plasmid mediated antimicrobial
resistance genes in *Pasteurella multocida* isolated from
chicken.**

A thesis presented by

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**A thesis Submitted to Kafrelsheikh University for obtaining
the Master degree of Veterinary Medical Sciences in
Bacteriology, Mycology and Immunology**

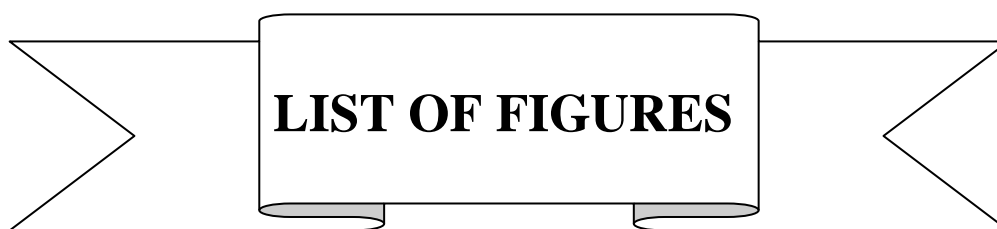
(2020)

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Summary

Pasteurella multocida is the etiologic agent of fowl cholera, a highly contagious and fatal disease of chickens. In this study, a total of 300 chickens (200 diseased and 100 apparently healthy birds) were examined for determining the prevalence of *P. multocida* among involved chickens. Isolation of *P. multocida* was attempted from the spleen, lung, trachea and bone marrow collected from diseased and healthy chickens. The identity of *P. multocida* was confirmed by mouse pathogenicity test and PCR. Based on cultural and morphological, biochemical and molecular characteristics, a total of 11 isolates of *P. multocida* were recovered with an incidence of 3.6%. Capsular typing using multiplex PCR demonstrated that all isolates belong to capsular type A. All isolates were analyzed for their susceptibility to 18 antibiotics and the presence of 4 antimicrobial resistance genes (*tetH*, *aphA-1*, *bla_{ROB-1}* and *ermX*). The susceptibility profiles revealed that all isolates were completely resistant to gentamicin, ampicillin, erythromycin and trimethoprim /sulphamethoxazole, tobramycin, colistin, penicillin, cefotaxime, chloramphenicol, and doxycycline. PCR results of antimicrobial resistance genes revealed that *tetH* gene was the predominant one in all isolates (100%), followed by *aphA-1* gene (90.7%) and *bla_{ROB-1}* (18.18%), while all isolates were negative for *ermX* gene. Therefore, the present study indicates that PM-PCR and capsular PCR are efficient tools for rapid diagnosis and serogrouping of *P. multocida* especially in epidemiological studies. Continuous monitoring of antimicrobial resistance is required to apply effective control measures.