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BACTERIOLOGICAL AND MOLECULAR STUDIES ON GALLIBACTERIUM ANATIS ISOLATED FROM CHICKEN

Presented

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List of Abbreviations

ABBREVIATION	Word
AFLP	Amplified fragment length polymorphism
AHL	Animal Health Laboratory
BHI	Brain heart infusion broth
bp	base pair
CFU	Colony –forming unit
dpi	Day post infection
DSA	Dextrose starch agar
***fif*A**	Fimbrial protein gene
G. genomospecies	*Gallibacterium genomospecies*
G.melopsittaci	*Gallibacterium melopsittaci,*
G. salpingitidis	*Gallibacterium salpingitidis,*
G. trehalosi-fermentans	*Gallibacterium trehalosi-fermentans*
***gtx*A**	*Gallibacterium* Toxin gene
***gyr*B**	*DNA gyrase gene*
HIB	Heart infusion broth
IBV	infectious bronchitis virus
ITSPCR	Internally transcribed spacer PCR
IN	Intranasal
IV	Intravenous
MIC	Minimum Inhibitory concentration
OMVs	outer membrane vesicles
PCR	Polymerase chain reaction
PFGE	pulsed-field gel electrophoresis
P.M	Postmortem
qPCR	quantitative PCR
RTX (*gtx*)	Repeat In Toxin gene
SPF	specific pathogen free
***tet*H**	Tetracycline Resistance Determinant H gene

٧. Summary

G.anatis is one of the most important pathogens that affects the poultry industry leading to economic losses and decrease egg production.

In the present study *G.anatis* isolated from El-Gharbia Governorate and the results were summarized as the follows:

4- *G.anatis* were recovered in 8 samples with an incidence rate 16 % (8 out of 50) from laying hens after bacteriological isolation .

2- G.anatis were recovered in 11 samples with an incidence rate 9.16% (11 out of 120) from broilers chickens after bacteriological isolation.

3-The rate of recovery of *G.anatis* from the different internal organs showed that high recovery rate was from 62.5% from oviducts, 25% from ovaries and 12.5% from trachea in layer chickens.

4-The rate of recovery of *G.anatis* from the different internal organs showed that high recovery rate was 63.63 % from trachea, 27.27% from lungs and 9.09% from liver in broilers chickens.

5- The isolates were subjected to PCR for confirmation, where only 4 (8%) of isolates from laying hens and 3 (2.5%) of isolates from broilers chickens were positive for *16S rRNA23S rRNA*

6- *G.anatis* isolates were highly sensitive to gentamicine, cefotaxime, ciprofloxacin and sulpha. trimethoprim, while moderate sensitive to enrofloxacin and amoxicillin with calivulinic acid.

7- On the other hand all isolates were complete resistant to oxytetracyclin and doxycycline.

8- Molecular characterization of resistance genes revealed (100%) detection of *tet*H in all tested laying and broilers strains

9- Molecular characterization of virulence genes revealed (100%) detection of *gtx*A *and gyr*B genes, while none detection of *fif*A gene in all tested strains from laying hens.

10- Molecular characterization of virulence genes revealed (100%) detection of *gyr*B genes, while no detection of *fif*A *and gtx*A gene in all tested strains isolated from broilers.