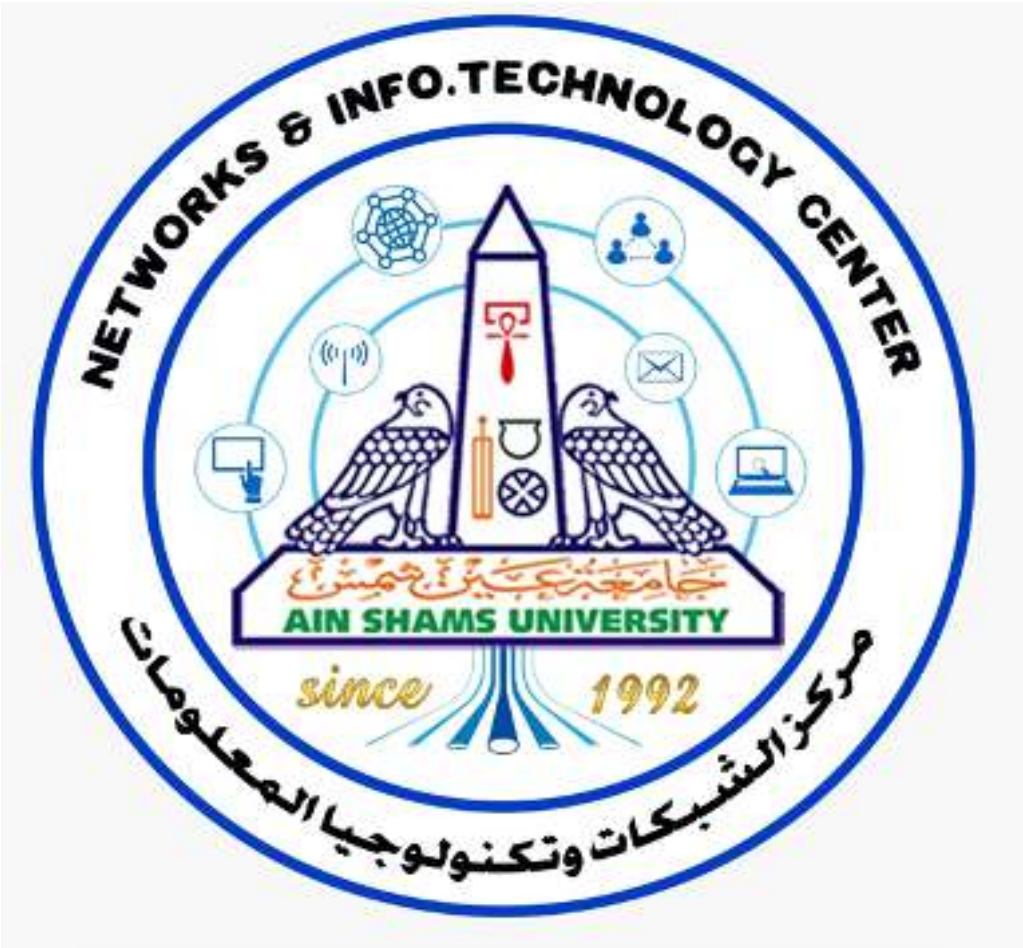
Mona Maghraby

بسم اللّه الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني



Mona Maghraby

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم باللّه العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

Cairo University
Faculty of Veterinary Medicine
Department of Poultry Diseases

Application of Egg Yolk Delivered Antibodies Against Some Avian Bacterial Enteric Diseases

Thesis

Submitted by

Ali Zaher Baker Qandoos
(B.V.Sc., Cairo University, 2015)
(M.v.sc., Cairo University, 2018)

For
PhD degree
(Poultry Diseases)

Under supervision of

Prof. Dr. Wafaa Abd El-Ghany Abd El-Ghany
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Dr. Nayera Mahmoud Alatfeehy
Senior Researcher of Bacteriology,
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Animal Health Research Institute, Dokki, Giza

2022

Cairo University
Faculty of Veterinary Medicine
Department of Poultry Diseases

Approval Sheet

This is to approve that the dissertation entitled **"Application of egg yolk delivered antibodies against some avian bacterial enteric diseases"** presented by **"Ali Zaher Baker Qandoos"** to Cairo University for the degree of Ph.D. in Veterinary Medical Sciences "Poultry Diseases', has been approved by the examining committee members.

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SUPERVISION SHEET

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Abstract

The present study aimed to investigate the effect of oral administration of egg yolk antibody (IgY) against enteric infection in broiler chickens. Escherichia coli (*E. coli*), *Salmonella* and *Clostridia perfringens* (*C.perfringens*) were isolated and identified from diseased broiler chickens. Laying chickens were immunized with *E. coli* O78, *S. enteritidis* and *C.perfringens* type C. IgY antibodies were extracted from egg yolk by ammonium sulfate precipitation method. The molecular weight of the produced IgY antibody was confirmed by SDS-PAGE. Titers of antibodies in serum of immunized chicken and egg yolk were determined by ELISA. The efficacy of oral passive immunization with specific IgY against the previous pathogens was evaluated in broilers. 1 day old chicks were divided into 10 groups, each containing 20 birds, group 1 (negative control), group 2, 3, 4 (preventive, control positive and treatment group, respectively) of *E. coli*, group 5, 6, 7 (preventive, control positive and treatment group, respectively) for *Salmonella*, and 8, 9, 10 (preventive, control positive and treatment group, respectively) for Clostridia. Blood samples were collected from birds of all groups to measure the antibody titer in serum. Clinical parameters (signs, mortalities and post-mortem examination), performance parameters (body weight and feed intake and feed conversion rate (FCR)), and re-isolation rate were evaluated. Histopathological examination of organs from all groups was recorded. In conclusion; ELISA test, pathogenicity test, performance parameters, re-isolation rates, pathology and histopahological results revealed that oral administration of purified specific IgY protected broiler chickens from homologous challenge, and able to reduce the effect of microorganism after treatment with IgY when compare with challenged group.
Key words: Immune bodies, *E. coli, salmonella, clostridia,* fowl, chicken.

Dedication

I dedicate this study

To All My Family

Acknowledgement

I am extremely grateful to Allah who made me able to accomplish this work.

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Finally, I owe special thanks and gratitude to my ***Family*** *who gave me a lot of their time, great help and support.*

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