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Use of Some Molecular Techniques for Detection of Foot and Mouth Disease Virus in Sheep and Goats

Thesis

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ABSTRACT

A total of 471 samples of Sheep and Goats samples were collected from the governorates of El-Beheira, Sharqia, Kafr El-Sheikh and Minya. The ELISA solid phase test was used to detect antibodies to FMD and the FMD ELISA was used to detect antibodies to FMD Against non-structural protein.

A total of 87 field samples were collected from sheep and goat cases showing symptoms of foot and mouth disease from Alexandria, Dakahlia, El-Gharbia, Menoufia, Qalubia, Cairo, Suez, Ismailia, Fayoum, and El Menia governorates.

The virus was isolated by three consecutive times on the total cells of the BHK, where 16 samples showed a cytopathic effect in the cells within 24-48 hours after injection. The results of the identification of 87 samples using the Indo Sandwich Elisa test showed that there were 33 samples Positive The real-time polymerase reaction was used to isolate 16 isolates and gave positive results.

The virus was diagnosed in 12 samples using serial polymerase reaction, preceded by reverse transcription to polymerase the protein gene of 2B using general primers. It was introduced with special triggers for type O and type A. The genetic sequence of 3 positive samples of type O and 3 species samples (A) and put it with the known genetic species to create a causative tree.

Key words: Molecular - Techniques - Detection - Foot- Disease – Virus - Sheep and Goats.

Dedication

To all who supported me to carry out this work

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*In the name of **Allah** the most Merciful the most compassionate*

Without the generous aid of many people this work would never see the light

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LIST OF CONTENTS

Title	Page No.
Chapter (1): Introduction	1
Chapter (2): Review of literature	5
Chapter (3): Published Papers	69
3.1. Sero Survey on current status of Foot and Mouth Disease in sheep and Goats in some Egyptian Governorates	69
3.2. Molecular Characterization of Foot-and-Mouth Disease Virus In Sheep and Goats in some Egyptian Governorates	92
Chapter (4): Discussion	101
Chapter (5): Conclusion and Recommendations	112
Chapter (6): Summary	113
Chapter (7): References	116
Chapter (9): Arabic summary	١

LIST OF TABLES

Table No.	Title	Page No.
3.1. Molecular Characterization of Foot-and-Mouth Disease Virus in Sheep and Goats in some Egyptian Governorates		
1	Number & types of Samples collected from Egyptian governorates for FMD virus Detection and Isolation	71
2	Detection of FMDV antigen in samples of sheep and goat by using: FMD virus antigens detection ELISA serotyping (A, O, C, ASIA, SAT 1,2)	75
3	Virus isolation and adapted on BHK21 cell culture from +ve samples with FMDV antigen detection ELISA	76
4	identification of 16 FMDV isolates by antigens detection ELISA and serotyping (A, O, C, ASIA, SAT 1, 2)	77
3.2. Sero Survey on current status of Foot and Mouth Disease in sheep and Goats in some Egyptian Governorates		
1	Number of seram collected from sheep and goat for Serological examination	93
2	Detection of FMD virus – non – structural protein antibodies in sheep using FMD NSP competitive ELISA	96
3	Detection of FMD virus – non – structural protein antibodies in goats using FMD NSP competativ ELISA	96
4	Detection of FMD virus – non – structural protein antibodies in goats using FMD NSP competitive ELISA	96
5	Detection of antibodies against FMD virus type A ;O and sat2 in sheep sera samples from different Egyptian governorates by (SPCE)	97
6	Detection of antibodies against FMD virus type A ;O and sat2 in Goats sera samples from different Egyptian governorates by (SPCE)	97