

Damanhour University  
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# **Virological and Molecular Studies on Lumpy Skin Disease Virus**

A Thesis Presented  
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# List of contents

1. Introduction .....	1
2. Review of literatures .....	4
2.1. Definition of LSD .....	4
2.2. Historical review of LSD .....	6
2.2.a. History of LSD in the world .....	6
2.2.b. History of LSD in Egypt .....	9
2.3. Etiological agent & its characteristics .....	11
2.3.a. Morphology and physicochemical properties .....	11
2.3.b. Antigenic and genetic relationship .....	13
2.4. Host susceptibility to LSDV .....	15
2.5. Route of transmission of LSDV .....	17
2.6. Clinical signs of LSD .....	20
2.7. Laboratory diagnosis of LSDV .....	25
2.7.1. Propagation of LSDV in fertile chicken eggs .....	25
2.7.2. Propagation of LSDV in tissue culture and its biological effect .....	27
2.7.5. Serodiagnosis of LSDV .....	32
2.7.6. Detection of LSDV by PCR and molecular techniques .....	34
2.8. Control of LSDV .....	38
3. Materials and Methods .....	38
I. Materials .....	38
II. Methods .....	43
4. Results .....	49
5. Discussion .....	62

6. Conclusion .....	66
7. Summary .....	67
8. References .....	68
9. Arabic summary .....	84

# List of tables

1. Number of collected samples from different locations from April 2017 to September 2018 .....	38
2. Oligonucleotide primers sequences .....	40
3. Components of PCR MasterMix .....	46
4. Cycling conditions during conventional PCR .....	47
5. Components of MasterMix for sequencing .....	56
6. Number of positive samples by real-time PCR from different governorates .....	49
7. DNA concentrations in different positive samples .....	50
8. Number of positive samples by conventional PCR from different governorates .....	58
9. Summary of number of different positive samples by different tests .....	60

# List of figures

1. Standard curve (from $10^1$ to $10^6$ ) .....	56
2. Results of real-time PCR (Absolute Quantification mode) .....	57
3. Results of real-time PCR (Qualitative Detection mode) .....	57
4. Different pathological changes in CAM .....	59
5. a- agarose gel electrophoresis (1.5%) of the amplified P32 gene .....	60
b- agarose gel electrophoresis (1.5%) of the amplified ORF 103 gene .....	60
6. Phylogenetic analysis of LSD virus ORF 103 gene .....	61

## **7- SUMMARY**

Lumpy skin disease is a highly infectious, eruptive and sometimes fatal disease of cattle caused by LSDV and represents now an important threat to beef and dairy industries. Studying of virological and molecular characters of LSDV can greatly assist in developing control policies for the disease caused by this virus to ensure economic stability and access to international export markets for animal and animal products.

During this study, a total number of 295 different samples were collected from clinically diseased cattle from different Egyptian localities (Beheira, Gharbia, Giza, Sharquia, Kafrelshiekh, Kalubia and Fayoum) from April 2017 to September 2018.

A total number of 295 samples including skin biopsies (243), whole blood samples (50) and ticks groups (2) were rapidly tested by real time PCR. Results showed that (222), (38) and (2) of skin biopsies, whole blood and tick samples were positive; respectively.

Viral isolation was performed for 30 positive representative samples on CAM of embryonated chicken eggs and 24 samples showed characteristic pin-point pock lesions. Results were confirmed by conventional PCR and all the 24 samples were confirmed LSDV.

Two samples were picked for sequencing and phylogenetic analysis and revealed a close relation with other sheep and goat poxviruses obtained by BLAST of nucleotide sequence in Genbank, and this was confirmed by phylogenetic analysis.