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# **Studies on The Recent Isolate of Lumpy Skin Disease virus**

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## Summary

This study aimed to isolate, identify, molecular characterize of LSDV and trial for clarification of the reasons for appearance of LSD in vaccinated cattle in Egypt through:

- Collection of intracutaneous skin nodules from clinically diseased, previously vaccinated cattle suspected to be LSD.
- Isolation of suspected sample on CAM of ECE for three successive passages which gave characteristic pock lesion after the first passage and become clear after the third passage.
- Titration of the isolated virus on ECE. The titer was calculated and found to be 7.6 Virus titer  $\log_{10} \text{EID}_{50}$ .
- Propagation of the isolated virus on MDBK cells for four successive passages with appearance of clear cytopathic effect.
- IFAT was done confirming that the isolated samples are LSDV.
- Histopathological examination for lesions on CAM revealed presence of intracytoplasmic inclusion bodies.
- PCR is done using a newly designed specific primer set for GPCR gene of LSDV. A 554 bp band appear confirming presence of LSDV.
- Gene sequenc, sequence analysis and multiple sequence alignment was done and revealed two new isolates of LSDV (LSDV Egypt/BSU-1/12 and LSDV Egypt/BSU-2/12).
- The two new isolates have recorded in gene bank with accession numbers kj561442 and kj561443 respectively.
- The two new isolates share a high degree of similarity with LSDV Egypt/89 Ismalia strain and other field isolates while this similarity decreased with The Roumanian vaccinal strain.