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List of Abbreviation

CPD	:	<i>Contagious pustular dermatitis.</i>
ECEs	:	<i>Embryonated chicken eggs.</i>
AGPT	:	<i>Agar Gel Precipitation Test.</i>
IFAT	:	<i>Indirect fluorescent antibody technique.</i>
PCR	:	<i>Polymerase chain reaction.</i>
NZ2 strain	:	<i>New Zealand type 2 strain.</i>
DNA	:	<i>Deoxyribonucleic Acid.</i>
FMD	:	<i>Foot and mouth disease.</i>
VEGF	:	<i>Vascular endothelial growth factor.</i>
ITR	:	<i>Inverted terminal repeats.</i>
dsDNA	:	<i>Double stranded deoxyribonucleic Acid.</i>
RNA	:	<i>Ribonucleic Acid.</i>
UV light	:	<i>Ultra violet light.</i>
CAM	:	<i>Coriallantoic membrane.</i>
pfu	:	<i>Pock forming units.</i>
CPE	:	<i>Cytopathic Effect.</i>
MDOK	:	<i>Marbin-Darby ovine kidney.</i>
FAT	:	<i>Fluorescent antibody technique.</i>
AGID	:	<i>Agar gel immunodifusion.</i>
E.M.	:	<i>Electron microscope.</i>
ELIZA	:	<i>Enzyme-linked immunosorbant assay</i>
TCID ₅₀	:	<i>Tissue culture infective dose 50</i>
OVIL-10	:	<i>Ovine virus interleukin-10</i>
CFT	:	<i>Complement fixation test.</i>
MHC	:	<i>Major Histocompatibility Complex.</i>

GM-CSF	:	<i>Granulocyte-macrophage colony-stimulating factor.</i>
CTL	:	<i>Cytotoxic T cells.</i>
IL-10	:	<i>Interleukin- 10.</i>
INF- γ	:	<i>Interferon-γ.</i>
SPF	:	<i>Specific pathogen free.</i>
PBS	:	<i>Phosphate buffer saline.</i>
EID ₅₀	:	<i>Embryo lethal dose 50.</i>
HA	:	<i>Haemagglutination.</i>
HI	:	<i>Haemagglutination inhibition.</i>
RBCs	:	<i>Red blood corpuscles.</i>
nm	:	<i>nanometer.</i>
G+C	:	<i>Guanine + cytosine.</i>
Kbp	:	<i>kilo base pair.</i>
NZ7	:	<i>New Zealand type 7 strain.</i>
RNA	:	<i>Ribonucleic Acid.</i>
mRNA	:	<i>messenger ribonucleic Acid.</i>
INF	:	<i>interferon.</i>
SPF	:	<i>specific pathogen free.</i>
Mg	:	<i>milligram.</i>
Iu	:	<i>international unite.</i>
UK	:	<i>united kingdom.</i>
TE	:	<i>tris EDTA buffer.</i>
EDTA	:	<i>ethylene diamine tetra acetic acid.</i>
Mg cl ₂	:	<i>magnesium chloride.</i>
SDS	:	<i>sodium dedocyle sulphate.</i>
DMAE	:	<i>Dimethyl amino ethanol.</i>
NSA	:	<i>Nonenyl Succinic anhydride Madified.</i>
DER-736	:	<i>epoxy resin.</i>
ERL-420	:	<i>vinyl cyclohexene dioxide.</i>

7. SUMMARY.

This research aimed to isolate and recognize CPD virus in sheep and goat herds and the research investigate the following:

1- The affected sheep and goats show clinical signs like nodules, pustules, scars and crusts which are obviously appeared on lips, gums, mouth commisures and eyelids.

2- Samples from these affected animals were collected in order to isolate and recognize the CPD virus with normal serological and non serological means.

3- Preliminary identification of the CPD virus antigen using electron microscopic examination for skin samples which give characteristic appearance of the virus (ovoid in shape, with rounded ends and characteristic ball of wool appearance).

4- Trials for isolation of CPD virus:

The prepared samples from skin lesions were inoculated in emberyonated chicken eggs by the CAM route which showed thickening, oedema and hemorrhage of CAMs tissue.

5- Titration of CPD virus isolates revealed that the titer of collected sheep isolates was $5 \log_{10} \text{EID}_{50} / \text{ml}$ while the titer of collected goat's isolates was $4 \log_{10} \text{EID}_{50} / \text{ml}$.

6- The inoculated CAMs were harvested and AGPT and IFAT tests were done which gave positive results for viral antigen.

7- PCR test was done using known primer on harvested samples from CAM and tissue samples. Amplification and running of characteristic fragments of CPD viral DNA on Ethidium Bromide stained Agarose Gel then staining of DNA gave

typical results in many segments on DNA fragment which indicate that the given sample contain CPD viral antigen.

8- Characterization and identification of CPD virus revealed that:

- The isolated virus has no haemagglutinating property to avian RBCs of (chicken, duck, goose, turkey and pigeon RBCs).
- The isolated virus has no haemagglutinating property to mammalian RBCs of (sheep, goat, donkey, horse, cattle and buffalo RBCs).
- The isolated virus has haemagglutinating property to rabbit RBCs
- The haemagglutination inhibition was applied and gave positive results in form of button shape pattern.

From the previous we can conclude that the isolated virus from affected animals (sheep and goats) assumed to be CPD virus as confirmed by AGPT, IFAT and PCR.