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## LIST OF ABBREVIATIONS

Antibody	Ab
Antigen	Ag
Bovine serum albumin	BSA
<i>Clostridium perfringens</i>	<i>C. perfringens</i>
Cell extract	CE
Cell filtrate	CF
Dalton	Da
Double distilled water	DDW
Distilled water	DW
<i>Escherichia coli</i>	<i>E. coli</i>
EnzymeLinked immunosorbant assay	ELISA
Epizootic Rabbit Enteropathy	ERE
gram	g
Haemolytic inhibition assay	HA
Heavy – Light chain	H-L chain
Horseradish Peroxidase	HRPO
Intradermal	I/D
Intravenous	I/V
Immunoglobulin G.	IgG
International unit	IU
Mucoid Enteropathy	ME
Minimum Lethal dose	MLD
Nominal molecular weight	NML

## List of abbreviations

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Degrees Celsius	° C
Optical Density	OD
Ortho Phenylene diamine	OPD
Phosphate Buffer Saline	PBS
Perfringolysin O	PFO
Hydrogen ion concentration	pH
phospholipase C	PLC
Subcutaneous	S/C
Serum Neutralization test	SNT
L-1- Tosylamide -2- phenyl ethyl chloromethyl	TPCK
Veterinary Serum and Vaccine Research Institute	VSVR

## **6-Summary**

In the present work, experiments were carried out for production of high potent enterotoxaemia and bloat rabbit vaccine (*C. perfringens* type A) and detection of the maternal immunity in vaccinated Dam's and offspring for reaching the highest level of immunity and to detect the best time of vaccination and revaccination. Also, the method carried out by vaccination rabbits farm at breeding and following up the maternal immunity at different periods in Dam's (at breeding, during pregnancy and after parturition) and at different ages at offspring.

1-Preparation of "The rabbit *Clostridial* enterotoxaemia bloat vaccine" has been produced for the first time at Egypt in VSVRI. It was found that this vaccine induced efficient immunity when it was injected in two doses (2-3 weeks interval) as 2 ml for adult rabbits and 1 ml for offspring.

2-Vaccination of twenty bosket rabbit of 2-5 Kg at first period of breeding by 2ml S/C in two doses within 2 weeks interval and boosterd by one dose during pregnancy then collection of blood samples after 2 week from 2<sup>nd</sup> dose then sera were separated and stored at -20°C till used. Then following the antitoxin titer by serum neutralization test, haemlytic inhibition assay and ELISA.

3- Collection of blood and serum samples after parturition (48 hours, 2 weeks and 1 month) and in offspring (4 days, 2 weeks and 1 month) and following up the antitoxin titer by serum neutralization test, haemolytic inhibition assay and ELISA.

4- Mapping and detection of the immunity at different breeding periods showed that the antitoxin titer at breeding (1 IU/ml) which provide a good immunity against enterotoxaemia. Also, revaccination by booster dose in pregnancy showed very high antitoxin titer (3 IU/ml) which taken by the offspring gave them good protection against enterotoxaemia and after parturition 48 hours (2 IU/ml), 2 week (1.5 IU/ml) and 1 month (0.5 IU/ml) give good protection as it with range of protective level, vaccine produce titer of 0.5- 2 IU/ml of antitoxin of *C. perfringens* type A. Then Dam's immunity decrease within 3 to 4 month so we must revaccinate the Dam's in the second pregnancy to increase the antitoxin titer which transport to offspring to provide them good protection.

5- Mapping the maternal immunity at offspring at different ages at 4 days (2 IU/ml), 2 week (1.5 IU/ml) and 1 month (0.5 IU/ml) which showed that the maternal immunity transport to offspring as the antitoxin titer approximately equal that in dam's and provide a good protection till weaning (4-6 week) then vaccinated for the first time after weaning.

6- Finally, it could concluded that enterotoxaemia and bloat vaccine in rabbit give antitoxin titer which give good protection against the disease at adult rabbit for 5 month, so rabbit could be vaccinated after five month from primary

vaccination , also revaccinate the Dam's at every pregnancy period to achieve high antitoxin titer to transport to newborn via colostrums and offspring could be vaccinated at first time after weaning (4-6 week) as a result of decrease in maternal immunity and increase mortalities in the weaned rabbit due to enteritis.