



بسم الله الرحمن الرحيم

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مسئولية عن محتوى هذه الرسالة.

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A comparative study between *in vivo* and *in vitro* methods for potency evaluation of Rabies vaccine preparations

A Thesis

Submitted in Partial Fulfillment of the Requirements for the

Master degree

In Pharmaceutical Sciences
(Microbiology and Immunology)

By

Walaa Mohamed Mohamed Khalil Rashed

Bachelor of Pharmaceutical sciences, 2010
Faculty of Pharmacy, Helwan University
Pharmacist, Egyptian Drug Authority (EDA), Egypt

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List of Abbreviations

Abbreviation	Definition
ANOVA	Analysis of variance
ATCC	American type culture collection
BBB	Brain blood barrier
BHK	Baby hamster kidney
BPL	Bioproducts laboratory
CCT	Chaperonin-containing tailless
CD	Cluster of differentiation
CDC	Center of Disease control and prevention
CNS	Central nervous system
CO₂	Carbon dioxide
CV	Coefficient of variance
CVS	Challenge virus strain
D₀	Day zero
D₁₄	Day 14
D₅	Day 5
D₇	Day 7

Abbreviation	Definition
DEAE	Dimethylaminoethanol
DNA	Deoxyribonucleic acid
ED	Effective dose
EDA	Egyptian drug authority
ELISA	Enzyme-linked immunosorbent assay
EMEM	Eagle's minimal essential medium
EP	European pharmacopoeia
FAT	Fluorescent antibody technique
FBS	Foetal bovine serum
FDA	Food and drug agency
FITC	Fluorescein isothiocyanate
Hcl	Hydrochloric acid
HDCV	Human diploid cell vaccine
HRIG	Human rabies immunoglobulin
HSC	Hemopoietic stem cell
IC	Intracerebral
IACUC	Institutional animal care and use committee
ICH	International conference on harmonization
IFN	Interferon

Abbreviation	Definition
IPT	Immunoperoxidase technique
IRIT	Indirect rapid immunohistochemistry test
ISH	In situ hybridization
IU	International unit
IVC	Individual ventilated cage
LD	Lethal dose
MIT	Mouse inoculation test
NIBSC	National institute for biological standards and controls
NIH	National institute of health
NIL	Virus strain
NK	Natural killer
NLRP	Nucleotide binding domain leucine rich repeating protein
NRBV	Neutralized rabies virus
NS	Nervous system
NTR	Neurotensin receptor
NTV	Nerve tissue vaccine
OIE	World organization for animal health
PAP	Peroxidase antiperoxidase
PBS	Phosphate buffered saline
PCEC	Purified chick embryo cell culture

Abbreviation	Definition
PCR	Polymerase chain reaction
PEP	Post-exposure prophylaxis
PHA	Passive hemagglutination
PVRV	Purified vero cellular rabies vaccines
RABV	Rabies virus
RFFIT	Rapid focus fluorescent inhibition test
RNA	Ribonucleic acid
RNP	Ribonucleoprotein
RP	Relative potency
RRV	Rabies-related viruses
RVG	Rabies virus glycoprotein
RVNA	Rabies virus neutralizing antibodies
RVM	Rabies virus matrix protein
RVP	P protein of rabies virus
RVS	S protein of rabies virus
SAD	Street-Alabama-Dufferin
SAG	Sad avirulent gif
SD	Standard deviation
SEIA	Sandwich enzyme immunoassay
SN	Serial number

Abbreviation	Definition
SPF	Specific pathogen-free
SRIG	Standard rabies immune globulin
TV	Tested vaccine
UK	United Kingdom
USA	United states of America
VACSERA	Holding company for biological products and vaccines
WHO	World health organization
WR	Working reference.

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