Preparation and Characterization of Monoclonal Antibodies against *Neisseria meningitidis* type A and C

A Thesis

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By

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AMANIE ELBARBARY

CONTENTS

LIST OF ABBREVIATIONS

ABTS	2,2 azino-bis [3-ethyl benz thiazoline-6-sulphonic acid].
Ag	Antigen
BSA	Bovine serum albumin
CFA	Freund's Complete Adjuvant
CSF	Cerebro spinal fluid
CT scan	Computed tomography scan
D.W.	Distilled water
DMSO	Dimethyl sulphoxide
DNA	Deoxyribonucleic acid
ELISA	Enzyme linked Immunosorbent Assay
F_{ab}	Antibody fragment
FACS	Fluorescence activated cell sorting
F_c	Constant fragment
FDA	Food and Drug Administration
GAPDHs	Glyceraldehyde 3-phosphate dehydrogenases
HAT media	Hypothanthine Aminopterine Thymidine media
hrs	Hours
HT media	Hypothanthine Thymidine media.
I/P	Intraperitoneally
IFA	Incomplete Freund's adjuvant
Ig	Immunoglobulin
in vitro	Means that the experiment is carried out in an artificial environment
In vivo	Means that the experiment is carried out in living organisms
MAbs	Monoclonal Antibodies
MLST	Multilocus sequence typing
N. meningitides	*Neisseria meningitidis*
nm	Nanometer
OD	Optical Density
$PBST_{20}$	Phosphate buffered saline-$Tween_{20}$
PCR	Polymerase chain reaction
PEG	Polyethylene glycol
R.C.P	Royal College of Physicians
rpm	Round per minute
Rs media	PRMI media supplemented with serum
Rss media	PRMI media supplemented with serum including HT
SF	serum free
SHS	Second hand smoke
ST	Sequence type
µl.	Micro liter
µg	Micro gram
VACSERA	Egyptian Organisation for Biological Products & Vaccines- DOkki, Cairo.
WHO	World Health Organization

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AIM OF WORK

In spite of the prospective uses of polyclonal antisera in wide medical application dealings, monoclonal antibodies technologies are nowadays favored in terms of their target-specific applications. Monoclonal antibodies technologies are good standardized inventions developed for creating definite serologic reagents that can detect a wide variety of antigens in indefinite quantities.

The aim of the present work was to produce monoclonal antibodies against the meningococcal meningitis antigens serogroup A and C and to characterize them for possible future use as diagnostic kits to detect these two antigens in recently infected Egyptian patients.