BIOCHEMICAL AND IMMUNOLOGICAL STUDIES FOR MODULATION OF SCHISTOSOMAL GRANULOMA USING *S. MANSONI* SOLUBLE EGG ANTIGEN FRACTION (S).

Thesis
Submitted By

Faten Moustafa Nagy
(B.Sc., M. Sc. in Biochemistry)

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Supervised By

Prof. Dr.
Nadia M. Abdallah
Professor & Head of Biochemistry Dept.
Faculty of Science
Ain Shams University

Prof. Dr.
Hanaa I. Hassanein
Professor of Imunochemistry
Theodor Bilharz Research Institute

Prof. Dr. Neimat Moustafa El-Ghorab
Medical Research Specialist
Department of Basic Science
NAMRU 3

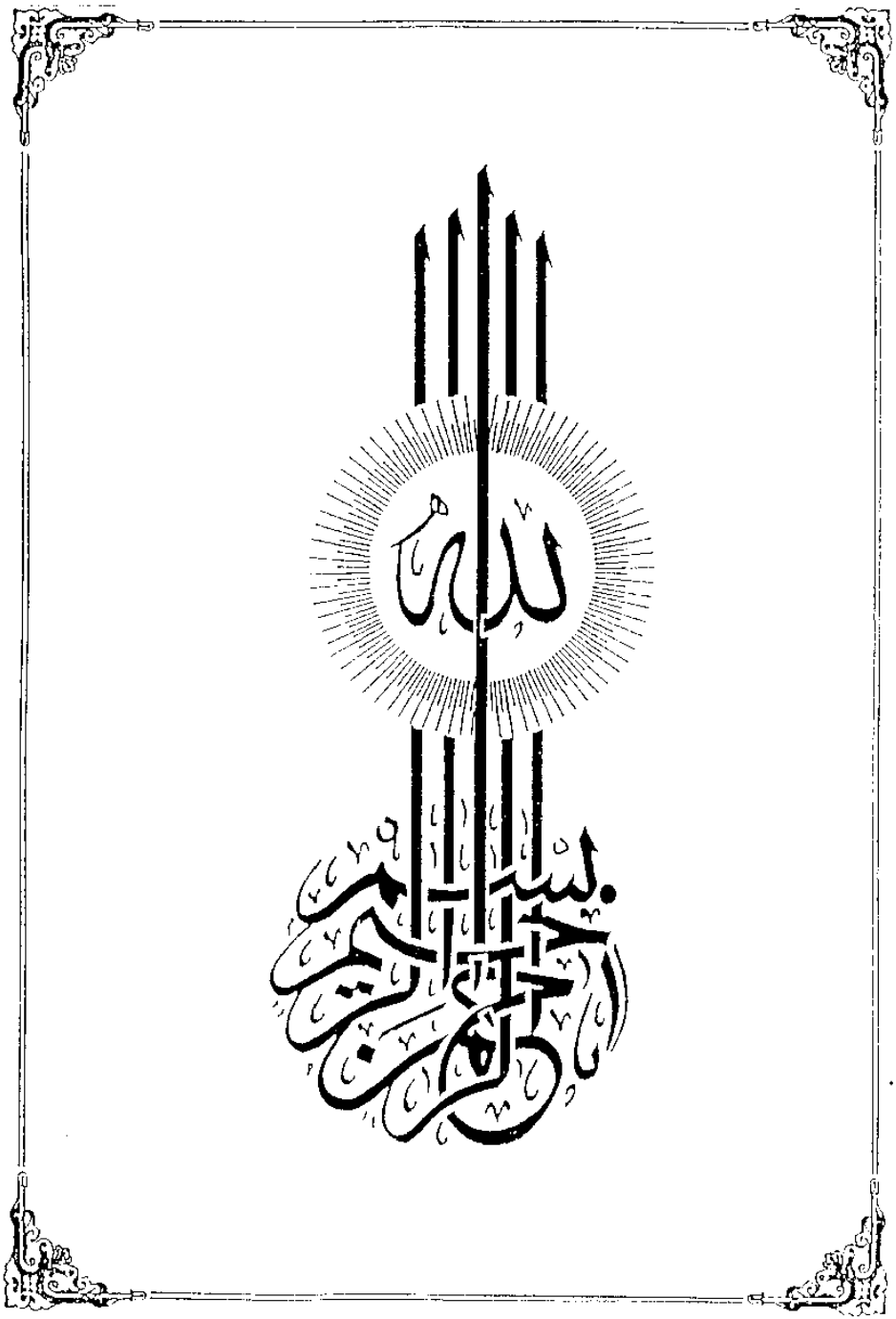
Biochemistry Department
Faculty of Science
Ain Shams University

(1995)

To my dearest Mother,

To whom I owe all love and support,

& To the memory of my dear father.



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the beneficent and merciful"

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ABSTRACT

Schistosoma mansoni soluble egg antigen (SEA) was fractionated using lectin affinity chromatography and preparative isoelectric focusing. The SEA fractions and pI subfractions were assessed for their ability to elicit blastogenic response from spleen cells of *S. mansoni* chronically infected mice and their ability to inhibit the *in vivo* pulmonary granuloma formation in naive mice. It was found that supernatants from chronically infected mice stimulated with the acidic SEA glycoprotein FIV (pI 4.5-5.5) induced maximum inhibition of the *in vitro* granuloma formation. Furthermore, the intravenous administration of low doses of this fraction can induce a state of hyporesponsiveness in murine schistosomiasis.

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LIST OF ABBREVIATIONS

ABBREVIATION	DEFINITION
A-IEF	analytical isoelectric focusing
APCs	antigen presenting cells
%C	cross-linking monomer concentration
CD4	T helper cells
CD8	T cytotoxic/suppressor cells
Con A	Concanavalin A
Con A^+	Con A bound fraction
Con A^-	Con A unbound fraction
CNBr	cyanogen bromide
c/p	carbohydrate/protein ratio
cpm	counts per minute
DEAE	diethyl aminoethyl cellulose
DTH	delayed-type hypersensitivity
EDTA	ethylenediamine tetra-acetic acid
Fuc	***L***-fucose
g	gravity force
Gal	***D***-galactose
Gal NAc	***N***-acetyl-***D***-galactosamine
GD	granuloma diameter
GI	granuloma index
Glc A	***D***-glucuronic acid
Glc NAc	***N***-acetyl-***D***-glucosamine
Ido A	***L***-iduronic acid
IEF	isoelectric focusing
IFN-δ	interferon gamma
IL-2	interleukin-2
IL-4	interleukin-4
IL-5	interleukin-5
IL-10	interleukin-10
kDa	kilodalton
mA	milliampere

ABBREVIATION	DEFINITION
MEG	major egg glycoprotein
MHC	major histocompatibility complex
MSA	major serological antigen
MW Co:	molecular coefficient
Neu 5Ac	*N*-acetylneuraminic acid, sialic acid
p	probability value
PAS	periodic acid-Schiff
PBS	phosphate buffered saline
pH	hydrogen ion concentration
pI	isoelectric point
P-IEF	preparative isoelectric focusing
PNA	peanut agglutinin
PNA^+	peanut bound fraction
PNA^-	peanut unbound fraction
Rf	rate of flow
RPMI 1640	Rosewell Park Memorial Institute medium 1640
SDS-PAGE	sodium dodecyl sulphate polyacrylamide gel electrophoresis
SEA	soluble egg antigen
SEM	standard error of the mean
SI	stimulation index
%T	total monomer concentration
TCR	T cell receptor
TGF-ß	transforming growth factor beta
Th	T helper cells
Ts	T suppressor cells
TseF	T suppressor effector factor(s)
µCi	microcurie
V	volt
v/v	volume per volume
W	watt
w/v	weight per volume
X	mean

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