IMMUNOLOGICAL STUDIES IN SCHISTOSOMIASIS WITH SPECIAL REFERENCE TO CIRCULATING ANTIGENS, ANTIBODIES AND IMMUNE COMPLEXES.

THESIS

Submitted in The Partial Fulfilment

of Medical Degree of Clinical and Chemical Pathology.

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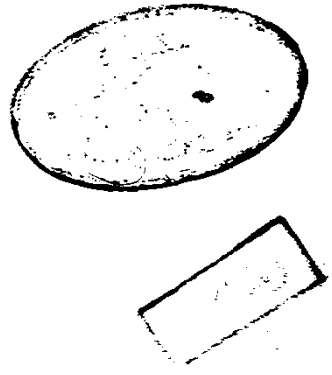

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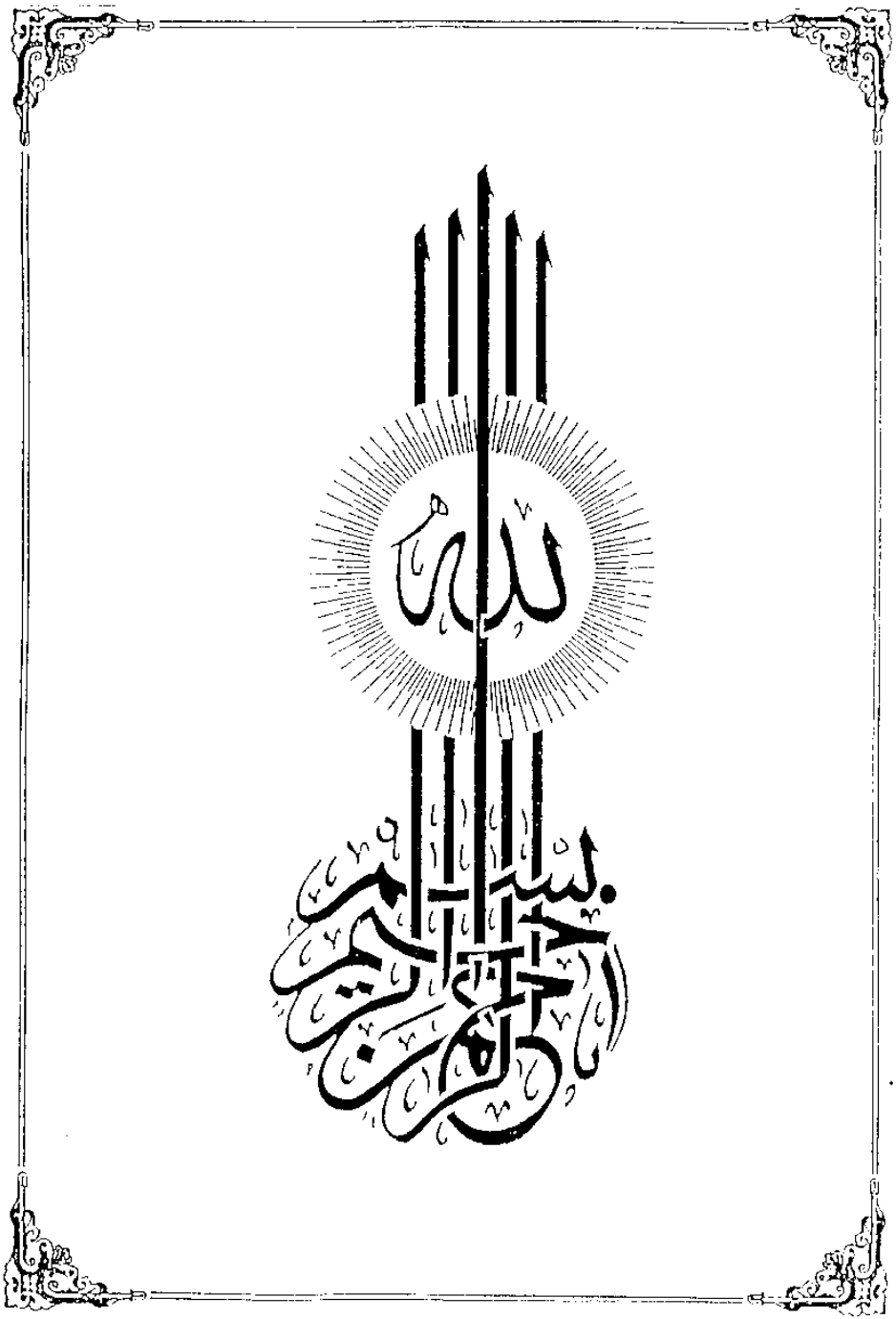

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"LIST OF ABBREVIATIONS"

- Alanine transaminase :- ALT
- Alpha$_1$ egg antigen :- α_1
- Aspartate transaminase :- AST
- Antibody to Hepatitis B core antigen "IgG":- Anti-HBc IgG
- Antibody to Hepatitis B e antigen :- Anti-HBe
- Antibody to Hepatitis B surface antigen :- Anti-HBs
- Anti-double stranded DNA :- Anti-ds DNA
- Antinuclear antibodies : ANA
- Cell-mediated immunity :- CMI
- Cationic egg antigen fraction 6 : CEF6
- Circulating anodic antigen :- CAA
- Circulating cathodic antigen :- CCA
- Circulating immune complexes : - CIC
- Circulating schistosomal antigen :- C.S.Ag.
- Circulating schistosomal antibody :- C.S.Ab.
- Circumoval precipitin test : COPT.
- Classic complement pathway :- CCP
- Complement : C
- Complement component C_3 : C_3
- Complement component C_5 : C_5
- Competitive radioimmunoassay :- CRIA
- Enzyme linked immunoelectrotransfer blot :- EITB

- Enzyme linked immunosorbent assay :- ELISA
- Extractable nuclear antigen : - ENA .
- Gut-associated proteoglycan :- GASP.
- Indirect fluorescent antibody tests : IFAT.
- Hepatitis B core antigen :- HBcAg
- Hepatitis B e antigen :- HBeAg.
- Hepatitis B surface antigen :- HBsAg.
- Hepatitis B virus :- HBV.
- Kinetic dependent enzyme-linked immunosorbent assay:- K-ELISA.
- Omega 1 egg antigen :- ω_1 .
- Phenol sulfuric test active peak:-PSAP
- Radioallergosorbent test :- RAST .
- Ribonucleoprotein :- RNP.

  Schistosoma haematobium :- S. h.
- Schistosoma mansoni :- S.m.
- Schistosoma japonicum :- S.japonicum.
- Schistosoma mansoni adult microsomal antigens :- MAMA.
- Schistosoma japonicum adult microsomal antigens : JAMA .
- Smooth muscle : Sm.
- Sodium - dodecyl-sulphate polyacrylamide gel electrophoresis :- SDS-PAGE.
- Soluble egg antigens :- SEA .

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INTRODUCTION AND AIM OF WORK

Schistosomiasis is one of the most prevalent diseases in Egypt. In the last few years, it has been considered to be one of the immune complex diseases. Several circulating antigens in blood and also in urine were found to be the consequences of parasitic infection by schistosomes . These antigens stimulate the formation of antibodies with which they form antigen-antibody complexes. The site of formation of these complexes is not yet determined . In addition, the involvement of antigen-antibody complexes in the renal injury associated with schistosomiasis, particularly the hepatosplenic form of the disease , has long been suspected. Granular deposits on the glomerular basement membrane have been demonstrated by a number of workers, as well as deposits of IgG, IgM and the third component of complement . All these findings suggest that circulating immune complexes is a feature of schistosomiasis and may well contribute to the associated pathology.

On the other hand, it is well known that serological methods often fail to detect antigen in patients with schistosomiasis even in some cases with active infection. It has been suggested that antibody binding of antigens into complexes may be at least partially responsible for this. The difficulty encountered in detecting a serological response in some patients is a limiting factor in sero-epidemiological