Immunologic Studies on GroEL Heat Shock Protein of *Salmonella typhi*.

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A dissertation submitted to
The Institute of Postgraduate Studies and Research,
University of Malaya, Kuala Lumpur
for the degree of Master of Philosophy.
ACKNOWLEDGEMENT

This thesis is dedicated to my parents and brothers, my two supervisors, my labmates, close friends (including S.T.D. et al.), all those who helped and generation after generation of scientists, for the continued guidance, patience, inspiration and love.
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LIST OF ABBREVIATIONS

Standard scientific abbreviations were used. However the reader’s attention is drawn to the following:

%  percentage
μl  microlitre
(v/v)  volume per volume
(w/v)  weight per volume
ABTS  2,2’-azino-di(3-ethyl-benzthiazoline sulfonate)
DAB  3’,3-diaminobenzidine tetrahydrochloride
DCC  dicyclohexyl carbodiimide
DMF  N,N-dimethylformamide
DNA  deoxyribonucleic acid
ELISA  enzyme linked immunosorbent assay
F-moc  9-fluorenlymethoxy carbonyl
HOBt  1-hydroxy-benztriaole
IFA  indirect immunofloresence
Ig  Immunoglobulin
kDa  kilodalton
LPS  lipopolysaccharide
PBS  phosphate buffered saline
PCR  polymerase chain reaction
PIP  piperidine
RNA  ribonucleic acid
Trt  trityl
Abstract

The Multipin Peptide Method was used to synthesize a series of 122, 9-mer peptides based on the published sequence of the *Salmonella typhi* GroEL on the surface of polyethylene pins. These peptides were then screened with a monoclonal antibody to GroEL, with human sera from patients with typhoid fever and with sera from normal healthy blood donors. Screening of the human sera identified three immunogenic epitopes, corresponding to peptides EGQDRGYSY, YSYNKETGE and GKGTEEEK. Screening of the peptides with the monoclonal antibody to GroEL identified another peptide, KGGKGTEEKE, which contains a common overlapping peptide GKGTEEEKEK. Identification and characterization of these epitopes would prove useful in delineating the biological and immunological functions of this protein and would aid in the development of better diagnostic tests and vaccines.