

**OTOACOUSTIC EMISSIONS  
FOR EVALUATION OF HEARING  
IN SOME AUTOIMMUNE  
DISORDERS**

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H.A  
THESIS,

Presented by

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بسم الله الرحمن الرحيم

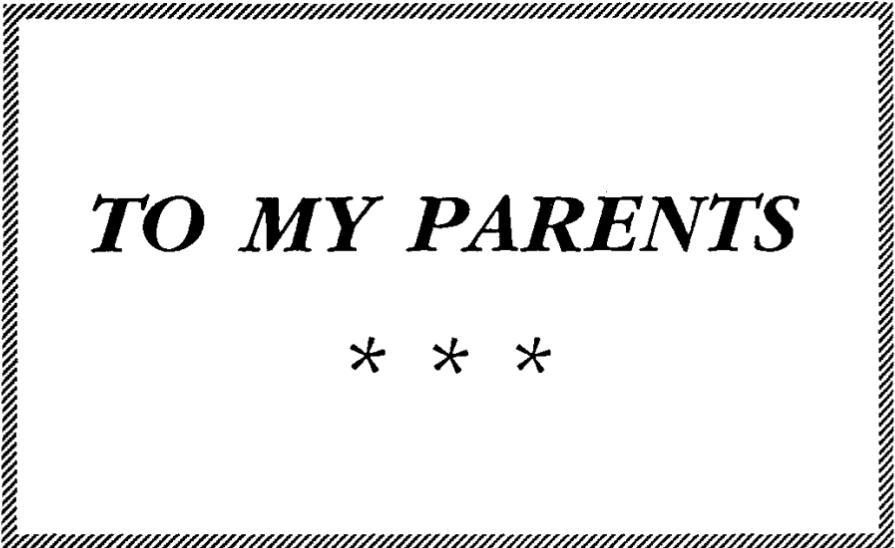
« ومن يتق الله يجعل له مخرجا \* ويرزقه  
من حيث لا يحتسب \* ومن يتوكل على الله  
فهو حسبه إن الله بالغ أمره قد جعل الله لكل  
شئ قدراً » .

( صدق الله العظيم )

( قرآن كريم )

سورة الطلاق من الآية ٢ - ٣





***TO MY PARENTS***

\* \* \*



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## ABBREVIATIONS

OAE	Otoacoustic emissions.
SNHL	Sensorineural hearing loss.
SLE	Systemic lupus erythematosus.
R. A.	Rheumatoid arthritis.
J. R. A.	Juvenile rheumatoid arthritis.
MC TD	Mixed connective tissue disease.
ANA A	Anti nuclear antibodies.
R. F	Rheumatoid factor.
HLA	Human leucocyte antigen.
ESR	Erythrocyte sedimentation rate.
CRP	C. reactive protein.
Ig	Immunoglobulin.
C <sub>3</sub>	Complement 3.
ELISA	Enzyme - linked immunosorbent assay.
NSAID <sub>s</sub>	Nonsteroidal anti inflammatory drugs.
Sm	Smooth muscle.
ECG	Echo cardiography.
CNS	Central nervous system.
RNP	Ribonucleoprotein.
OHC	Outer hair cell.
ATP	Adenosine triphosphate
SOAE <sub>s</sub>	Spontaneous oto acoustic emissions.
EOAE <sub>s</sub>	Evoked oto acoustic emissions.
DPOAE <sub>s</sub>	Distortion product oto acoustic emissions.
TEOAE <sub>s</sub>	Transient evoked oto acoustic emissions.
KHz	Kilo Hertz.
NICU	Neonatal intensive care unit.
ABR	Auditory brainstem response.
WDS	Word discrimination scores.
PB	Phonetically balanced.
RIHAP	Rhode Island hearing assessment project.
F. H.	Family history.
P. H.	Past history.
Hb	Haemoglobin.
ENT	Ear, Nose and Throat
dBHL	Decibel hearing level

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