Effect of Breast Milk Interleukin-7 on Thymic Development in Young Infants

Thesis

Submitted for Partial Fulfillment of MD Degree in Pediatrics

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2017

سورة البقرة الآية: ٣٢

Dedication

To:

My mum,

My Husband & My kids

for their endless love, support,
and continuous care

Soul of my father

&

My whole Family

Acknowledgments

First and foremost, I feel always indebted to Allah *the Most Beneficent and Merciful.*

I wish to express my deepest thanks, gratitude and appreciation to **Prof. Elham Mohammad Hossny**, *Professor of Pediatrics, Faculty of Medicine, Ain Shams University, for her meticulous supervision, valuable instructions and generous help.*

Special thanks are due to **Dr. Dalia Helmy El-Ghoneimy**, *Assistant Professor of Pediatrics, Faculty of Medicine, Ain Shams University, for her sincere efforts and fruitful encouragement all through this work.*

I am deeply thankful to **Dr. Rasha Hassan El-Owaidy**, *Lecturer of Pediatrics, Faculty of Medicine, Ain Shams University, for her great help, outstanding support, active supervision and guidance.*

I can hardly find the words to express my gratitude to **Dr. Mohammad Gamal El-Deen Abd-Elmottaleb**, *Assistant Professor of Radiology, Faculty of Medicine, Ain Shams University, for his supervision and continuous help throughout the radiological part of this work.*

I would like also to express my sincere appreciation and gratitude to **Dr. Mohammad Tareef Hamza**, *Assistant Professor of Clinical Pathology, Faculty of Medicine, Ain Shams University, for his continuous directions and support throughout the laboratory part of this work.*

I would like to thank **the mothers of the enrolled infants** *for giving the consent, trust and support that led to accomplishment of this work.*

Amira Fouad Ahmed

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List of Abbreviations

Abbreviation	Full term
AAP	*American Academy of Pediatric*
Akt/PKB	*(Akt/PKB) Serine/Threonine Protein Kinase B*
ALC	*Absolute Lymphocyte Count*
BAK	*Bcl-2 Homolgous Atagonist Killer*
BAX	*Bcl-2 Associated X Protein*
BC	*B cells*
BCL-2	*B cell Lymphoma 2*
CBC	*Complete Blood Count*
CDC	*Centers for Disease Control and Prevention*
CEC	*Cortical Epithelial Cell*
CICD	*Cytokine Induced Cell Death*
CMJ	*Cortico-Medullary Junction*
CT	*Computed Tomography*
CTECs	*Cortical Thymic Epithelial Cells*
DCs	*Dendrite Cells*
DN	*Double Negative*
DP	*Double Positive*
EBF	*Exclusivelyly Breast Fed*
EGF	*Epidermal Growth Factor*
ETP	*Early Thymic Progenitor*
F	*One Way ANOVA*
FF	*Formula-Fed*
GAS	*Gamma-Activated Sequence*
gc Chain	*Common Gamma Chain*
G-CSF	*Granulocyte Colony Stimulating Factor*
HIV	*Human Immune Deficiency Virus*
HPE	*Homeostatic Peripheral Expansion*
Ig	*Immunoglobulin*
IgG	*Immunoglobulin G*
IgM	*Immunoglobulin M*
IL	*Interleukin*

List of Abbreviations Continued

Abbreviation	Full term
IL-7Rα	*Interluekin 7 Receptor Alpha*
INFγ	*Interferon Gamma*
IRESs	*Internal Ribosome Entry Sites*
ISP	*Immature Single Positive*
JaK	*Janus Kinase*
KDa	*Kilodalton*
MCl1	*Myeloid Leukemia Cell Differentiation Protein*
MEC	*Medullary Epithelial Cells*
MIF	*Macrophage Migratroy Inhibitory Factor*
MRI	*Magnetic resonant Imaging*
mTECs	*Medulley Thymic Epithelial Cells*
MUC-1	*Mucin 1*
NFATc1	*Nuclear Factor of Activated T Cells*
NK	*Natural Killer*
PI3K	*Phosphatidyl inositol 3-Kinase*
PI3K-AKT	*SerineThreonine Protein kinase B and Phophatidyle inositol 3 Kinase*
RTEs	*Recent Thymic Emigrants*
S IgA	*Secretory Immunoglobulin A*
SCID	*Severe Combined Immunedeficiency*
SD	*Standard Deviation*
SP	*Single Positive*
STAT	*Signal Transducers and Activator of Transcription*
TCRs	*T cell Receptors*
TEC	*Thymic Epithelial Cells*
TGF	*Tumor Growth Factor*
TGFβ	*Tumor Growth Factor Beta*
Th	*T helper*
TLC	*Total Leucocytic Count*
TNF	*Tumor Necrosis Factor*
TRECs	*T cell Receptor Excision Circles*

List of Abbreviations Continued

Abbreviation	Full term
Tyr 371	*Tyrosine 371*
US	*Ultrasonography*
WHO	*World Health Organization*
γδ lymphocyte	*Gamma Delta Lymphocytes*

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