Interleukin-1β (IL-1β) and Granulocyte-Macrophage Colony stimulating Factor (GM-CSF) in Febrile Neutropenic Children with Malignancy

Thesis
Submitted for the partial fulfillment of
Master Degree in Pediatrics

618.92994
G.A

By
AGIHAN ABD EL ALL HAROUN
(M.B.B.Ch.)

Under Supervision of

Prof. Dr.Mohsen Saleh El Alfy
Professor of Pediatrics
Ain Shams University

Prof. Dr.Salwa Mohamed Abu EL Hana
Professor of Clinical Pathology
Ain Shams University

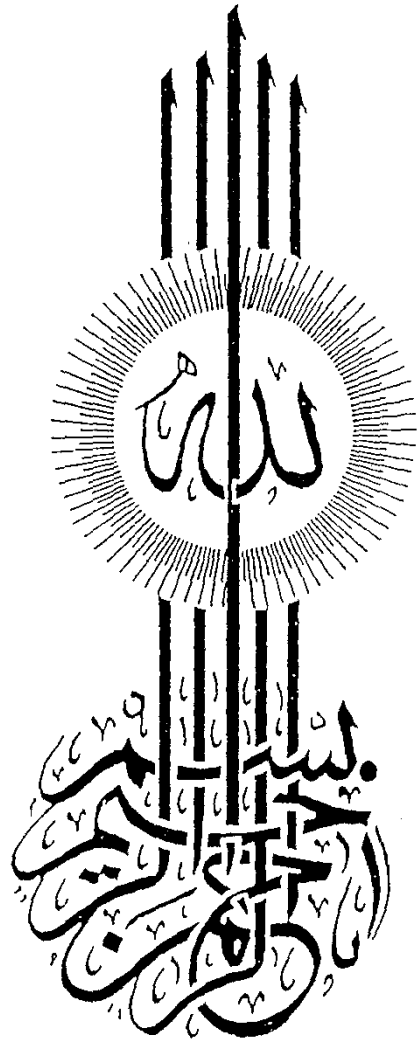
Faculty of medicine
Ain Shams University
1997

Central Library - Ain Shams University

Central Library - Ain Shams University

بسم الله الرحمن الرحيم

Central Library - Ain Shams University



Central Library - Ain Shams University

Central Library - Ain Shams University

Acknowledgment

I wish to express my deep appreciation and gratitude to Dr. Mohsen S. EL Alfy, Professor of Pediatrics, Ain Shams University, for giving me: the privilege of working under his supervision, great support, encouragement, patience, enthusiasm and helpful guidance. His advises are always stimulating and essential to complete this work.

I also express my deep thanks and gratitude to Professor Dr. Salwa Abu EL-Hana, Professor of Clinical Pathology, Ain Shams University, for her stimulating suggestions, valuable instructions and generous help.

To all the patients and their families and to every one who participated in some way or other to let this work come to such a final picture, I owe my thanks and gratitude.

Central Library - Ain Shams University

Central Library - Ain Shams University

To my Father

To my Mother

To my Husband

and to my Lovely son

Central Library - Ain Shams University

Central Library - Ain Shams University

Table of Content:

-Introduction & Aim of work.	1
-Review of Literature:	
Chapter I: Childhood Malignancies.	3
Chapter II: Febrile Neutropenia in Childhood Malignancy.	23
Chapter III: Cytokines.	47
-Subjects & Methods.	60
-Results.	65
-Discussion.	81
-Summary & Conclusion.	91
-References.	96
-Arabic Summary.	

Central Library - Ain Shams University

Central Library - Ain Shams University

List of Abbreviations

AL	:	*Acute leukemia*
ALL	:	*Acute lymphocytic leukemia*
ANC	:	*Absolute neutrophil count*
ANLL	:	*Acute non lymphocytic leukemia*
BFU-E	:	*Blood forming unit-erythroid*
cALLa	:	*Common ALL antigen*
cDNA	:	*Complementary deoxyribonucleic acid*
CMV	:	*Cytomegalovirus*
CSA	:	*Colony stimulating activity*
CSF	:	*Colony stimulating factor*
DNA	:	*Deoxyribonucleic acid*
EPO	:	*Erythropoietin*
G-CFU	:	*Granulocyte-colony forming unit*
GM-CSF	:	*Granulocyte-macrophage colony stimulating factor*
G-CSF	:	*Granulocyte-colony stimulating factor*
HD	:	*Hodgkin's disease*
GPI	:	*Gram positive infections*
HGFs	:	*Hematopoietic growth factors*
IFN-γ	:	*Interferon-γ*
IL-1β	:	*Interleukin 1-β*
IgH	:	*Immunoglobulin heavy chain*
IL-1RA	:	*Interleukin-1-receptor antagonist*
LAF	:	*Lymphocyte-activating factor*
LS	:	*Lymphosarcoma*
M-CFU	:	*Macrophage-colony forming unit*
M-CSF	:	*Monocyte-colony stimulating factor*
Meg-CSF	:	*Megakaryocyte-colony stimulating factor*
NHL	:	*Non Hodgkin lymphoma*
MRD	:	*Minimal residual disease*

Central Library - Ain Shams University

Central Library - Ain Shams University

List of Abbreviations (Cont.)

PBPC	:	*Peripheral blood progenitor cell*
PCR	:	*Polymerase chain reaction*
PG-E_2	:	*Prostaglandin E_2*
PUO	:	*Pyrexia of unknown origin*
rh-GMCSF	:	*Recombinant human GM-CSF*
RNA	:	*Ribonucleic acid*
TNF	:	*Tumor necrosis factor*
WBCs	:	*White blood cells*

Central Library - Ain Shams University

Central Library - Ain Shams University