

LIST OF ABBREVIATION

ALL	=	Acute lymphoblastic leukemia
AML	=	Acute myeloid leukemia.
MRD	=	Minimal residual disease.
AL	=	Acute leukemia
BM	=	Bone marrow.
PB	=	Peripheral blood.
MTHFR	=	Methylene tetra hydrofolate reductase.
MLL	=	Myeloid lymphoid leukemia
TNF	=	Tumor necrosis factor.
CNS	=	Central nervous system
FAB	=	French – American – British
MIC-M	=	The morphologic immunophenotypic and molecular genetic
SBB	=	Sudan black B
PAS	=	Periodic acid shift
MPO	=	Myeloperoxidase
EM	=	Electron microscopy
IP	=	Immunophenotyping
BCSW	=	British committee for standards in haematology.
APAAP	=	Alkaline phosphatase anti-alkaline phosphatase.

TCR	=	T cell antigen receptor.
FISH	=	Fluorescence insitu hybridization.
RT-PCR	=	Reverse transcriptase polymerase chain reaction.
BMT	=	Bone marrow transplantation.
CR	=	Complete remission.
WT ₁	=	Wilms tumor.
Rb	=	Retinoblastoma gene.
CD	=	Cyclin D ₁ gene.
PgP	=	P-Glycoprotein.
LRP	=	Lungresistance Related Protein.
Ig	=	Immunglobulin.
VDJ	=	Variable diversity joining region.
RAG	=	Recombination activation gene.
RAEB	=	Refractory anaemia with excess blast.
MDS	=	Myelodysplatic syndrome.
RQ-PCR	=	Realtime quantitative polymerase chain Reaction.
LAPs	=	Leukemia associated phenotypes.
PBSC	=	Peripheral blood stem cell.
TCRD	=	T-cell receptor delta gene.
NHL	=	Non Hodgkin lymphoma.

**FLOW CYTOMETRIC IMMUNOPHENOTYPING OF
PRECURSOR B-ALL WITH STANDARDIZED TRIPLE-
STAININGS: IMPLICATIONS FOR RESIDUAL
DISEASE DETECTION**

Thesis

*Submitted for the partial fulfillment of
M.D. Degree in Clinical Pathology*

By

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2009

**التصنيف الخلوى المناعى لخلايا السرطان الليمفاوى "ب"
البدائية بواسطة الصبغة الثلاثية القياسية ومردوها كوسيلة
لاكتشاف المرض الأدى المتبقى**

رسالة

مقدمة توطئة للحصول على

درجة الدكتوراه فى الباثولوجيا الإكلينيكية

مقدمة من

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