



Molecular genetic studies of galectins expression profiling in leukemia

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

{ رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ نِعْمَتَكَ
الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَى وَالِدَيَّ وَأَنْ
أَعْمَلَ صَالِحاً تَرْضَاهُ وَأَدْخِلْنِي
بِرَحْمَتِكَ فِي عِبَادِكَ الصَّالِحِينَ }

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Dedication

I dedicate this work with all my love

To my **Mother** and to **the spirit of my Father**

To my sisters **Walla** and **Aya**

To my brother **Mohammed**

To my niece **Hana** and to my nephew **Youssef**

And to all people I love

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Abbreviations

ALL	Acute lymphoblastic leukemia
AMMoL	Acute myelomonocytic leukemia or AML-M4
AML	Acute myeloid leukemia
AMoL	Acute monocytic leukemia or AML-M5
ANLL	Acute nonlymphocytic leukemia
APL	Acute promyelocytic leukemia
BCL2	B-cell lymphoma 2
BM	Bone marrow
BMSC	Bone marrow stromal cells
BUN	Blood urea nitrogen
CCL3	Chemokine (C-C motif) ligand 3
CD	Clusters of differentiation
CLC	Charcot-leiden crystal
CLL	Chronic lymphoid leukemia
CML	Chronic myelogenous leukemia
CR	Complete remission
CRD	Carbohydrate-recognition domains
CU	Cairo University
DFS	Disease free survival
DNA	Deoxyribonucleic acid
ECM	Extracellular matrix
ERK	Extracellular signal-regulated kinase
FAB	French-American-British
FAK	Focal adhesion kinase
Flk-2	Fetal liver kinase 2
FISH	Fluorescence in situ hybridization
FL	FLT ligand
FLT3	Fetal liver tyrosin kinase 3
GalNAc	<i>N</i> -Acetylgalactosamine
GlcNAc	<i>N</i> -Acetylglucosamine or <i>N</i> -acetyl-D-glucosamine
GRIFIN	Galectin-related inter-fiber protein
<i>HSPC159</i>	One of galectin-related protein synonyms
IFN-g	Interferon gamma
JM	Juxta-membrane
KI	Kinase insert
LDH	Lactate dehydrogenase
LGALS	Lecithin galactoside-binding soluble
LNCaP cells	A prostate cancer cell line