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شبكة المعلومات الجامعية

# بسم الله الرحمن الرحيم



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# شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





سامية محمد مصطفى



شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



## يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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# بعض الوثائق الأصلية تالفة





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# بالرسالة صفحات لم ترد بالأصل



**CYTOGENETIC ABNORMALITIES, BCL-2 EXPRESSION AND  
PROGNOSTIC VALUE OF LACTATE DEHYDROGENASE AND  
B<sub>2</sub>-MICROGLOBULIN IN CHRONIC LYMPHOCYTIC LEUKEMIA**

**Thesis**

Submitted in Partial Fulfillment of the  
Requirements  
of the MD Degree in

**" CLINICAL PATHOLOGY "**

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**TANTA UNIVERSITY**

**2003**

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بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما علمتنا

انك أنت العليم الحكيم

صدق الله العظيم

سورة البقرة

آية ٣٢

To my parents and my little family





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## *List of Abbreviations*

ALC	-----	Absolute lymphocyte count .
ALL	-----	Acute lymphoblastic leukemia .
B.M	-----	Bone marrow.
B <sub>2</sub> M	-----	B <sub>2</sub> microglobulin .
Bcl-2	-----	B-cell lymphoma /leukemia-2 .
CDKs	-----	Cyclin dependent kinases .
cDNA	-----	Complementary deoxy ribonucleic acid .
CEP	-----	Chromosome enumeration probe .
CD	-----	Cluster of differentiation .
CLL	-----	Chronic lymphocytic leukemia .
DNA	-----	Deoxy ribonucleic acid .
FISH	-----	Fluorescent in situ hybridization .
HLA	-----	Human leucocyte antigen .
IFN	-----	Interferon .
Ig	-----	Immunoglobulin .
IL	-----	Interleukin .
KD	-----	-Kilo Dalton.
LCL	-----	-Large cell lymphoma .
LDH	-----	Lactate dehydrogenase .
MCL	-----	Mantle cell lymphoma .
MM	-----	Multiple myeloma .
mRNA	-----	Messenger ribonucleic acid .
NHL	-----	Non Hodgkin lymphoma .
PB	-----	Peripheral blood .
PBS	-----	Phosphate buffered saline .
PCD	-----	Programmed cell death .
PHA	-----	Phytohemagglutinin .
PLL	-----	-Prolymphocytic leukemia .
Rb	-----	Retinoblastoma .
RNA	-----	Ribonucleic acid .
RS	-----	Richter's syndrome .
TLC	-----	Total leucocyte count .
TNF	-----	Tumor necrosis factor .
TSGs	-----	Tumor suppressor genes .
WBCs	-----	White blood cells .

## ACKNOWLEDGEMENT

*First of all ,thanks to **ALLAH** , whose magnificent help is the main factor in completing this work .*

*It is a pleasure to express my deepest gratitude to **Prof. Dr. Aisha abd El- Latif**, Prof. of Clinical Pathology Department , Faculty of Medicine, Tanta University, who very kindly, and generously gave much of her time and experience in helping, guiding and advising me.*

*Sincere thanks are due to **Dr. Mohamoud Mohamed El-Sheikh**, Assis. Prof. of Clinical Pathology Department, Faculty of Medicine, Tanta University, for his continuous interest, generous guidance and critical review. For his kind help, I will remain always remembering.*

*I'm also deeply indebted and grateful to **Prof. Dr. Ahmed Mohamoud Hablas**, Consultant of surgical oncology , Tanta Cancer Institute, for his enthusiastic help, kind supervision and encouragement throughout this work.*

*It is a pleasure to express my great gratitude to **Dr. Said Hammad Abdou**, Lecturer of Clinical Pathology, Faculty of Medicine, Tanta University, for his continuous guidance, inspiring supervision and generous help.*

*I owe special feeling of gratitude to **Dr. Nahla Mohammed Farahat**, Assis. Prof. of Clinical Pathology, Faculty of Medicine, Alexandria University, for her great help and experienced guidance.*

*I have to express my great thanks and special feeling of gratitude to **Dr. Ahmed M. Amin**, Lecturer of Microbiology, Faculty of Medicine, Tanta University, for his continuous help and great support.*





# Introduction & Aim of the Work

Introduction & Aim of the Work

## **Introduction and Aim of the work**

Chronic lymphocytic leukemia (CLL) is a malignancy characterized by the accumulation of long-lived B-CD5<sup>+</sup> lymphocytes in which cytokines may play an important role in the prolonged survival and the expansion of the leukemic cells ( Dmosznka et al ; 1999 ). A variety of cytokines such as IFN- $\alpha$  , IFN- $\gamma$  , TNF- $\alpha$  , IL -1 , IL-2 , IL-4 IL-6 , IL-8 , IL-10 and IL -13 have been to be involved in vitro with the process of apoptosis in leukemic cells and some of the cytokines may exert their effect by the way of bcl-2 expression (Mainou – Fowler and Prentic , 1996 ) , but , there is a lack of information about this process in vivo ( Dmosznka et al .; 1999 ) .

CLL represents a quiet essential example of human cancer caused by defect in the pathways of programmed cell death ( Reed , 1997 ) . Among the proteins that serve as a key regulator of programmed cell death are the bcl-2 family of proteins ( Reed et al .; 1997 ) .

Bcl-2 is a member of that family which is a blocker of cell death ( Reed , 1997 ) , so altered expression of bcl-2 may account to the pathogenesis of lymphoproliferative disorders .

On the other hand , cytogenetic studies have revealed trisomy 12 ( Juliusson et al .; 1990 ) and translocation or deletion effect in 13q14 (Kalachikov et al .; 1997 ) as the most frequent karyotypic abnormalities

in CLL , however , the significance of these two chromosomal abnormalities in the progression of the disease is poorly understood .

**The aim of the present work** was to study bcl-2 expression (This gene inhibits apoptosis ) and chromosomal aberration in CLL , evaluating their prognostic significance and comparing it to that of LDH and B<sub>2</sub> – microglobulin in chronic lymphocytic leukemia .





# Review of Literature

*Review of Literature*

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