شبكة المعلومات الجامعية

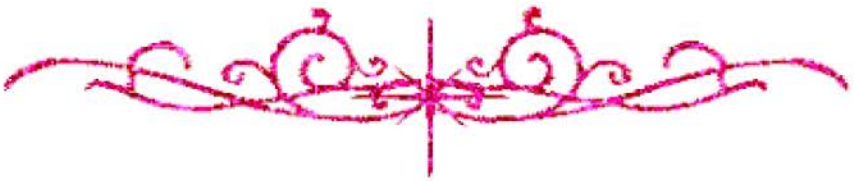
بسم الله الرحمن الرحيم

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم



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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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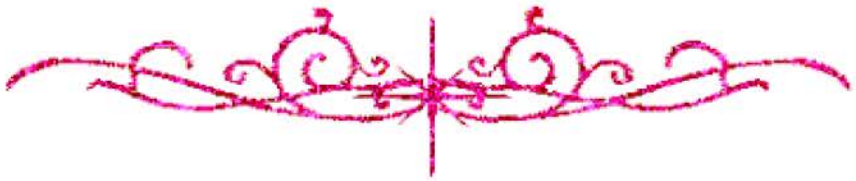
بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل

HOSSAM MAGHRABY

بسم الله الرحمن الرحيم

The Prognostic Value of Morphological and Immunological Lymphocyte Subtypes in Chronic Lymphocytic Leukaemia

Thesis

Submitted to the Medical Research Institute
University of Alexandria
In Partial Fulfilment of The Requirements for
The Degree of Doctor in
Benign and Malignant Haematology

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Acknowledgment

I would like to express my most sincere gratitude and appreciation to all my supervisors.

I would like to express my thanks to **Prof. Dr. Laila El-Said Zyada**, *Head Haematology Dep., M.R.I. Alexandria University for her guide, valuable suggestions, close supervision and faithful support to accomplish this work.*

Also I would like to thank **Prof. Dr. Mohamed Ragab Hussin**, *Prof. of Haematology, M.R.I. for his advice, and continuous encouragement through the whole work.*

It is my great pleasure to acknowledge **Prof. Dr. Hossam Kamel Mahmoud**, *Prof. of Medical Oncology, N.C.I., Cairo University for his guide, kind supervision and his great assistance for facilitating this work.*

I would like acknowledge **Dr. Hanaa Abd El-Megid El-Agan**, *Assistant Professor of Haematology, M.R.I., for her useful advice, valuable help and revising the work.*

I would like to express my thanks to **Dr. Homam Mohamed Sharshira**, *Lecturer of haematology, M.R.I., for his guide, unlimited help, constant advice, teaching me the techniques of immunocytochemistry and the lot of efforts he gave me to accomplish this work.*

LIST OF ABBREVIATIONS

Ags	Antigen
AIHA	Autoimmunhaemolytic anaemia
ANAE	α-naphthylacetate esterase
ATLL	Adult T-cell leukaemia/lymphoma
β_2-M	β_2-microglobulin
BCGF	B-cell growth factor
CLL	Chronic lymphocytic leukaemia
CD	Cluster of differentiation
CALLA	Common acute lymphoblastic leukaemia antigen
CNS	Central nervous system
CTcLs	Cutaneous T-cell lymphoma
2-cdA	2-Chlorodeoxyadenosine
dcF	Deoxycoformycin
EBV	Epstein-Barr virus
FDC	Follicular dendritic cell
GM-CSF	Granulocyte, macrophages-colni stimulating factor
HCL	Hairy cell leukaemia
HTLV	Human T-lymphotrophic virus
INF-γ	Interferon-γ
IWCLL	International working group on CLL
LPL	Lymphoplasmacytic lymphoma
L.Ns	Lymph nodes
LGL	Large granular lymphocytes
MHC	Major histocompatibility complex
MoAbs	Monoclonal antibodies
MR BC-R	Mice red blood cell-rosette
NHL	Non-hodgkin's lymphoma
NK	Natural killer
PLL	Prolymphocytic leukaemia

PRCA	Pure red cell aplasia
PHA	Phytohaemoagglutinum
SCID	Severe combined immunodeficiency disease
sIg	Surface immunoglobulin
SLVL	Splenic lymphoma with villous lymphocytes
TCR	T-cell receptor
TNF-α	Tumour necrosis factor-α
WBC	White blood cells

Contents

INTRODUCTION

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LYMPHOCYTES

Lymphocytes are the milestone of immunity. They are derived from the multipotential haemopoietic precursor cells. Lymphocytes are engaged in two broad immunologic tasks :

I. Humoral immunity; which involves synthesis and secretion of specific antibodies by B. lymphocytes. They are designated as B cells referring to their birthplace, which is Bursa of Fabricius in birds and the bone marrow in mammals.

II. Cell mediated immunity which involves activation of T lymphocytes to express a variety of effectors functions. T cells are the subpopulation of lymphocytes that regulate and participate in cell mediated immune response. T cells can recognize and react to foreign or tumor antigens (Ags) on host cells and kill host cells infected by antigenic viruses. They are termed T cells because they are derived from the thymus.[1]

The thymus and bone marrow comprise the primary lymphoid organs while the secondary lymphoid organs are the spleen, lymph nodes, and mucosa associated lymphoid tissue of the gut and pharynx.[2]

Natural killer cells (NK) are a subset of lymphocytes that arise from a precursor cell in the bone marrow. Studies in rodents indicate that precursors of NK cells originate in the bone marrow and after maturation,

migrate to the spleen via the blood stream.[3] Most human NK functions are mediated by large granular lymphocytes (LGL).[4] The terms LGL and NK cells are used interchangeably. The NK designation is a functional one. However, NK activity can be mediated by other cells, whereas LGL is a morphological term, therefore not all LGL are NK cells.[4]

Thus we have three distinct lineage of lymphocytes : B cells, T cells, and NK cells. They differ greatly from each other in terms of origin, life span, and functions. The most important methods used for the classification of each lymphocyte lineage are based on the identification of certain glycoproteins displayed on the membrane of lymphocytes and collectively referred to as markers. Monoclonal antibodies are used to detect these markers. These monoclonal typing reagents led to the discovery of previously unrecognized lymphoid subsets, each expressing a unique surface differentiation antigen. Many international workshops have led to exchange monoclonal antibodies and to test for cross reactivity. Monoclonal antibodies showing similar reactivity have been given a common [CD] designation [CD cluster of differentiation].[5]