DETECTION OF LYSOZYMAL ACTIVITIES BY PEROXIDASE-AVIDIN BIOTIN METHOD IN DIFFERENT TYPES OF HAEMOPOIETIC MALIGNANCIES (ACUTE LEUKAEMIA-LYMPHOMA) "AN IMMUNOPEROXIDASE STUDY OF BONE MARROW ASPIRATES AND TREPHINE BIOPSIES"

By

Lama Akram Al-Safadi

(M.B.B.Ch. & M. Sc.)

Supervisors

Dr. OSSAIMA EL SAYED SELIM

Professor of Clinical Pathology
Ain Shams University

Dr. AZZA M. KAMEL

Professor of Clinical Pathology
Cancer Institute
Cairo University

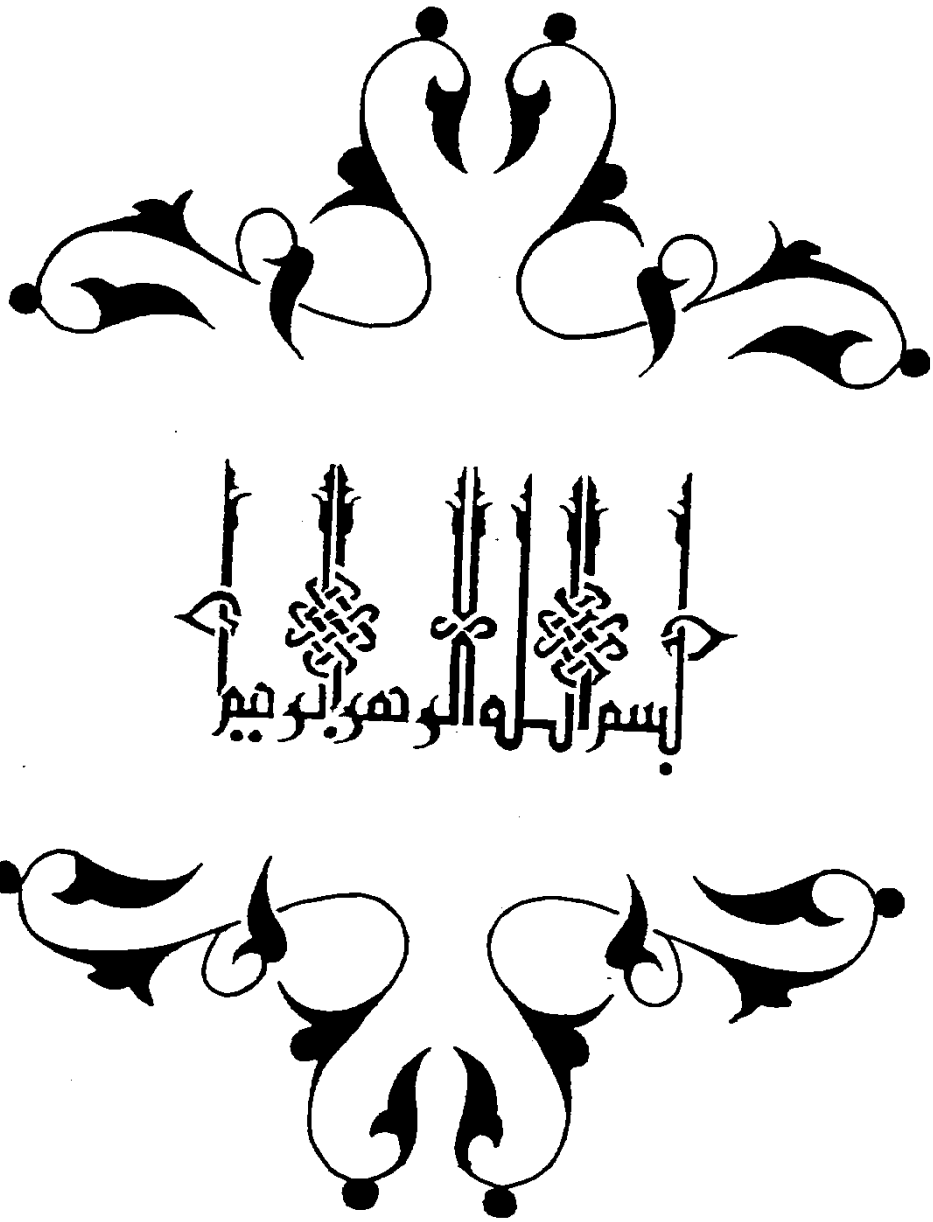
Dr. NADIA M.A. MOWAFY

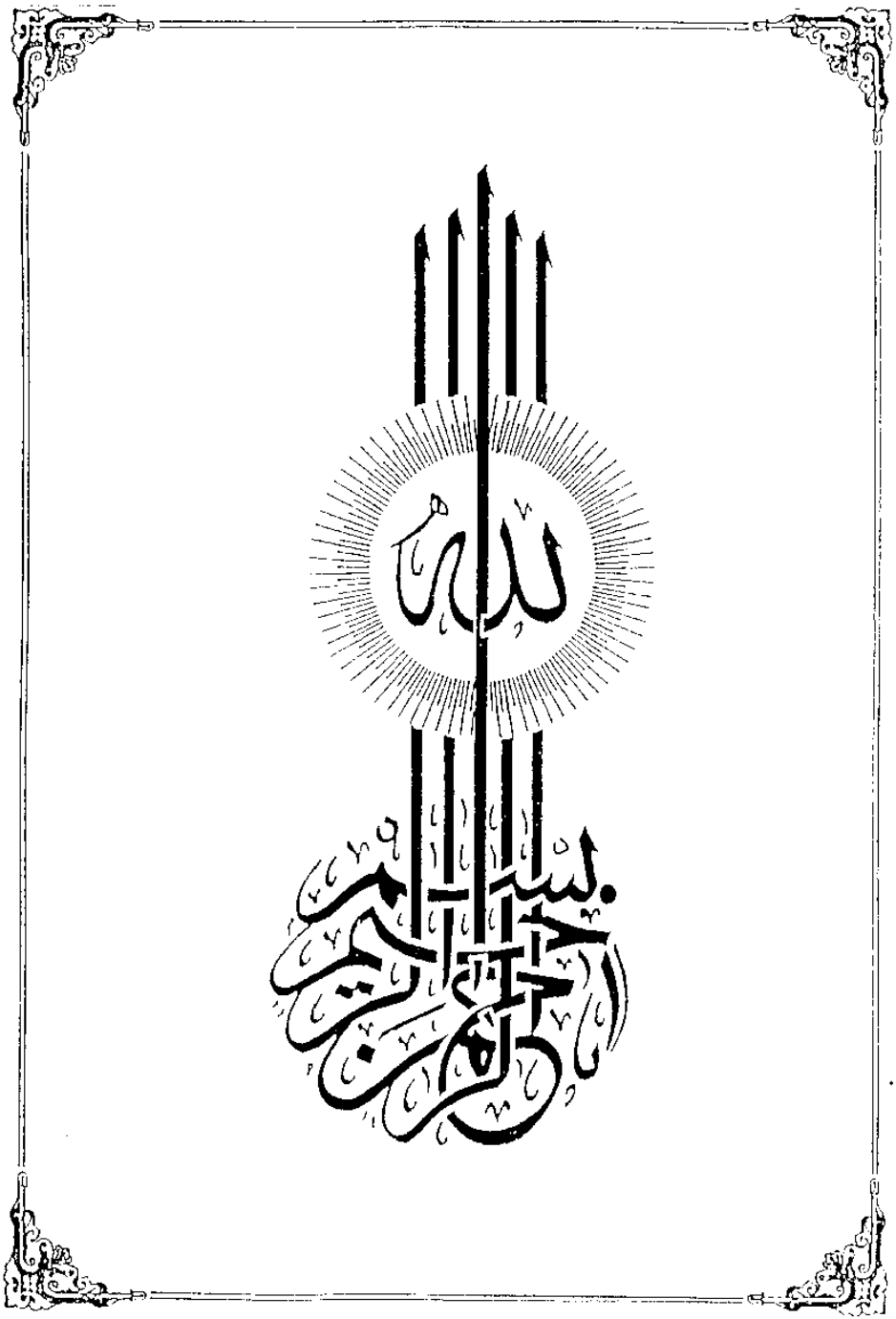
Professor of Clinical Pathology
Ain Shams University

Dr. AISHA ALI OSMAN FAKEIR

Assist. Professor of Clinical Pathology
Ain Shams University

FACULTY OF MEDICINE
AIN SHAMS UNIVERSITY
1994





TO MY PARENTS

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List of Errata

Word in error	Correction	Page	Line
18 lysozyme	18 lysozymes	6	14
Motoi et al. 1984	Motoi et al., 1980	26	11
(ie	ie	30	9
Kurec and co-workers (1990) and Davey and his associates (1990)	Davey and his associates (1990) and Kurec and co-workers (1990)	34	5, 6
Kurec et al. 1990 and Davey et al., 1990)	Davey et al., 1990 and Kurec et al., 1990)	34	14
and are mainly directed against:	are mainly directed against:	35	8
Cramps	Kramps	38	4
Aralidite	Araldite	64	6
it supported	is supported	12	2
1 nucleus	The nucleus	95	10
5. Enzyme-linked immunosorbent	5. Enzyme-linked immunosorbent assay	107	T. 4 no. 5
Cr. gran. golgi	Cr. dif. gran.	168	13
	Cr. gr. golgi = coarse granular golgi	168	16
3/20	3/24	169	T 18 L. 4
4/20	4/24	169	T 19 L 7
(e.g. cytokeratin) Otano, 1991 and Petruch, et al., 1992)	e.g. cytokeratin (Otano, 1991 and Petruch et al., 1992)	210	14, 15
e.g CD14, monocytic Fc Rs (MFC-1)	e.g. monocytic FC receptor (MFC-1)	213	11
Similarly, in 1977, the two studies performed by Pinkus and Said and Greenberger and his associates	Similarly, in 1977, the two studies performed by Greenberger and his associates and Pinkus and Said	213	1
Low-grade malignant subtype	High-grade malignant subtype	221	3
Bennett et al., (1981)	Bennett et al., (1976)	225	16
glycal	glycol	251	13
Bloch	Block	251	15
Knochen mark	Knochenmark	252	21

LIST OF ABBREVIATIONS

-AL:	Acute leukaemia.
-ALL:	Acute lymphoblastic leukaemia.
-Alpha-1-ACT:	Alpha-1-antichymotrypsin.
-Alpha-1-AT:	Alpha-1-antitrypsin.
-AML:	Acute myeloid leukaemia.
-AMMoL:	Acute myelomonocytic leukaemia.
-AMoL:	Acute monocytic leukaemia.
-ANC:	All nucleated cells.
-APAAP:	Alkaline phosphatase-anti-alkaline phosphatase.
-APL:	Acute promyelocytic leukaemia.
-Asp:	Aspartate.
-BCR:	B-cell receptor.
-BL:	Burkitt lymphoma.
-bp:	Base pairs.
-CL:	Centroblastic lymphoma.
-CML:	Chronic myeloid leukaemia.
-CMMoL:	Chronic myelomonocytic leukaemia.
-FCS:	Fetal calf serum.
-FITC:	Fluorescein isothiocyanate conjugate.
-Glu:	Glutamate.
-GMA:	Glycol-methacrylate.
-HCL:	Hairy cell leukaemia.

-HGMNHL:	High-grade malignant non-Hodgkin lymphoma.
-His:	Histidine.
-IbL:	Immunoblastic lymphoma.
-ILe:	Isoleucine.
-Kb:	Kilo-base.
-KD:	Kilo-dalton.
-LCI:	Lymphoma cell infiltrate.
-LGMNHL:	Low-grade malignant non-Hodgkin lymphoma.
-LL/CLL:	Lymphocytic lymphoma/chronic lymphocytic leukaemia.
-LPL:	Lymphoplasmacytic lymphoma.
-Lys:	Lysozyme.
-M0:	Myeloblastic leukaemia without differentiation.
-M1:	Acute myeloblastic leukaemia without maturation.
-M2:	Acute myeloblastic leukaemia with maturation.
-M3:	Acute promyelocytic leukaemia.
-M4:	Acute myelomonocytic leukaemia.
-M4 Eos:	Acute myelomonocytic leukaemia with bone marrow eosinophilia.
-M5:	Acute monocytic leukaemia.
-M6:	Acute erythroblastic leukaemia (erythroleukaemia).
-M7:	Acute megakaryoblastic leukaemia.
-MDP:	Moderately differentiated plasmacytoma.
-MEM:	Minimal essential medium.

-MMA:	Methyl-methacrylate.
-MPS:	Mononuclear phagocytic system.
-Moab:	Monoclonal antibody.
-MPo:	Myeloperoxidase.
-mRNA:	Messenger ribonucleic acid.
-NACE:	Naphthol AS-D chloroacetate esterase.
-NEC:	Non-erythroid cells.
-NHL:	Non-Hodgkin lymphoma.
-PBS:	Phosphate buffered saline.
-PCI:	Plasma cell infiltrate.
-PDP:	Poorly differentiated plasmacytoma.
-PMN:	Polymorphonuclear leucocyte.
-RER:	Rough endoplasmic reticulum.
-RES:	Reticuloendothelial system.
-SBB:	Sudan black B.
-TCR:	T-cell receptor.
-Thr:	Threonine.

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INTRODUCTION

INTRODUCTION

The application of specific immunohistochemical and enzymohistochemical techniques has greatly enhanced the accurate diagnosis of acute leukaemia. In this regard, lysozyme a hitherto more or less specific myelomonocytic marker, is of importance. Lysozyme is a small molecular weight cationic protein (M.W 14,000-15,000; isoelectric point pI 10-11) (Greenberger et al., 1977) first discovered by Fleming in 1922. It is known for its bacteriolytic activity which acts on mucopolysaccharides of the bacterial cell wall by splitting the link between n-acetyl-muramic acid and n-acetyl glucosamine (Jolles and Jolles, 1984) Lysozyme has been detected within normal human tissues e.g. von kupffer cells of the liver, proximal tubular epithelia of the kidney, salivary and bronchial glands, mamma lactans (Mason and Taylor, 1975 and Pinkus and Said, 1977).

Lysozyme structure, physiology, pathophysiology and elimination were points of interest of many investigators (Hansen, 1975) similarly several techniques e.g. flow cytometry (Leculier et al., 1992), ultrastructural studies (Cramer and Breton-Gorius, 1987), immunoperoxidase staining (Mason et al., 1975; Greenberger et al., 1977; Pinkus and Said, 1977 and Krugliak et al., 1986) and cytobacterial

method (Briggs et al., 1966 and Kageoka et al., 1977) have been applied for the detection of lysozyme within normal and leukaemic blood cells.

In normal blood cells lysozyme has been found in polymorphonuclear leucocytes, monocytes and their precursors (Pinkus and Said, 1977 and Krugliak et al., 1986). Lymphoid cells as lymphocytes, natural killer cells and plasma cells were found to react negative for lysozyme (Briggs et al., 1966 and Krugliak et al., 1986). However, in leukaemic blood cells there was some degree of disagreement concerning the positivity and negativity of lysozyme in leukaemic myeloblasts (Mason et al., 1975; Greenberger et al., 1977; Kageoka et al., 1977; Krugliak et al., 1986 and Leculier et al., 1922). A fact which represents a scientific gap in this regard.

Various types of lymphomas have not been extensively researched for the exact nature of their lysozymal activity.

AIM OF THE WORK