شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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بالرسالة صفحات لم ترد بالاصل

TOPOGRAPHIC LOCALIZATION OF FIBRONECTIN IN BONE MARROW OF NORMAL HUMANS AND SOME GROUPS OF ANEMIAS AND ITS RELATION TO HEMATOPOIESIS

Submitted for partial fulfillment of the M.D. Degree
in Internal Medicine

By

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Acknowledgment

Long time ago, Stem Cell Transplantation was just a dream then a trial in frustration, a necessity and finally a standard care for many diseases that were incurable in the past. Because it has become clear that it should be an option to a significant number of patients like other simpler modalities, the Department of Clinical Hematology headed by Professor Dr Omar Fat'hy, with the sincere efforts of our colleagues, started to work for achieving such a goal.

Nine years ago there was no specialty called Clinical Hematology or Transplantation at Ain Shams University Hospitals. In February of 1992, the Department of Internal Medicine in its monthly meeting agreed to just initiate the foundation of "a unit" to serve patients with hematological disorders. It was only one line on a piece of paper with no further comments; no place, no budget, and no format to any. Over days, months and years, things looked like a growing child until it has reached to a high technology department with a bone marrow transplant service branching out of it.
May Allah help Dr. Omar Fat'hy in his great responsibilities and purify his deeds and make them all sincere for the sake of Allah.

To Professor Dr. Tareef Hamza I always feel great humbleness for his great humbleness and seriousness in his work. He spent *a great deal of his precious time to train me how to perform bone marrow biopsy and aspirate. He used to come up to the Resident's Room for the first early part of training and teach me how to do marrow biopsies and gave me the chance to share his time in his "very busy" laboratory.*

I should not forget the efforts and the sincere trials of Professor Dr. Nahed Sami to overcome all the obstacles of such a difficult area in the field of research in a country where facilities are very limited to do many great things, and thanks for her patience.

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SAID YOUSUF AHMED
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List of Contents

		Page
I.	**Introduction and Aim of the work**	1
II.	**Review of literature**	5
III.	Hematopoiesis	5
	Hematopoietic stem cells	8
	Engrafment	18
	Homing:	19
	Bone marrow Microenvironment	20
	Fibronectin (FN) :	26
	Cytoadhesion receptor/molecules	29
	Cytoadhesion molecules on the CD34+ progenitors	35
	The integrin, CD49d	35
	Role of CD49d and other integrins in Homing, Proliferation and Mobilization of hematopoietic cells	40
	Role of fibronectin receptor, CD49d in abnormal hematopoiesis	48
	Role of abnormal cytoadhesion and CD49d in Acute Myelogenous Leukemia	49
	Role of abnormal cytoadhesion and CD49d in Chronic Myelogenous Leukemia	58
	Role of abnormal cytoadhesion and CD49d in Acute Lymphoblastic Leukemia	67
	Role of abnormal cytoadhesion and CD49d in Chronic Lymphocytic Leukemia and other lymphoproliferative disorders	75
	CD49d and other adhesive abnormalities in Multiple Myeloma	82
	NOD/SCID mouse model used in homing studies	87
V.	**Materials and Methods**	95
V.	**Results**	118
VI.	**Discussion**	177
VII.	**Summary**	199
VIII.	**Conclusion and Recommendations**	202
X.	**References**	204

Abbre ations

AA: aplastic anemia.
AGM: aorto-gonadal-mesonephros area or organ.
ALL: acute lymphoblastic leukemia.
AML: acute myelogenous leukemia.
ANC: absolute neutrophil count

B-/-: homozygous negative for expression of β1-integrin receptors.
BM: bone marrow.
BM-ME: bone marrow microenvironment.
BMT: bone marrow transplantation.
BMC: bone marrow culture.
BMSC: bone marrow stromal cell (s)
BFU: burst-forming unit.
Bo: basophilic.
BFU-E: Burst Forming Unit-Erythroid.

CA: cobblestone area
CAFC: cobblestone area-forming cell(s)
CAMs: cytoadhesion molecules (like integrin or selectin receptors
Or their ligand on the cells or in the bone marrow matrix).
CAR: cytoadhesion receptor
CB: cord blood
CBT: cord blood transplantation
CD: cluster of differentiation, cluster of differentiation antigen.
CFC: colony-forming cells.
CFU: colony-forming units.
CFU-C: colony-forming units-cells/Colony-forming unit in culture
CFU-E: Erythroid Colony-forming unit.
CFU-G: Granulocyte Colony-forming unit.
CFC-GM: granulocyte-macrophage Colony-forming unit.
CFC-M: macrophage Colony-forming unit.
CFC-Meg: Megakaryocyte Colony-forming unit.
CFU-S: spleen colony-forming unit(s).
CLL: chronic lymphocytic leukemia
CML: chronic myeloid leukemia.
CO: collagen
CP-CML: chronic phase-chronic myeloid leukemia.
CR: complete remission.
-CSF: -colony stimulating factor.

DLCL: diffuse large cell lymphoma.
FAB: French American British classification of acute leukemias.
FACS: Fluorescent-activated cell sorter
FCS: fetal calf serum
FITC: fluoroscine isothiocyanate
FN: fibronectin.
G-CSF: granulocyte colony stimulating factor.
GM-CSF: granulocyte monocyte-colony stimulating factor.

HHV-8: human herpes virus-8
HPC: hematopoietic cell.
HPP: hematopoietic progenitors.
HSC: hematopoietic stem cells
HSCT: hematopoietic stem cell transplantation.
Hu: human.

ICAM: intercellular cytoadhesion molecules.

IFN-α: interferon-alpha.
IgSF: immunoglobulin Superfamily
IL-: interleukin-.
IL-3: interleukin-3.
LDA: limiting dilution assay/analysis.
LFA-1: leukocyte function associated antigen.
Lin-: lineage marker (CD4, CD8, Gr-1, Mac-1, and TER-199) negative
LM: laminin; one of the ECMs
LTBMC: long term bone marrow culture
LTC-IC: long term culture-initiating cells.
Ly: lymphocytes

mAb : monoclonal antibody (also see MoAb)
MACS: magnetic activated cell sorter
MCL: mantle cell lymphoma.
ME: microenvironment.
MHC: major histocompatibility complex.
MM: multiple myeloma.
MNC: mononuclear cells.
MoAb: monoclonal antibody.
MoPB: mobilized peripheral blood.
MPC: myeloma plasma cell(s)
MPD: myeloproliferative disorders.

NCAM: neural cell adhesion molecule
NK cells: natural killer cells
NHL: non-Hodgkin's lymphoma.
NOD: none-obese diabetic.
NOD/SCID: None-Obese Diabetic/Severe Combined Immune Deficiency Hybrid.

PBS: phosphate-buffered saline
PCL: plasma cell leukemia
PCR: Polymerase chain reaction
PE: Phycoerythrin (an immunofluorescent dye)
PECAM: platelet –endothelial cytoadhesion molecules.
Ph+-CML: Philadelphia chromosome positive chronic myeloid leukemia
Plt: platelets
PMN: Polymorphonuclear leukocyte(s).

RBC: red blood cell(s)
Rh123: rhodamine-123
SAA: severe aplastic anemia.
SCF: stem cell factor, steel factor, mast cell factor, *c-kit* ligand
SCID: severe combined immunodefeciency.
SCT: stem cell transplantation.
SD: standard deviation.
SDF-1: stroma derived factor-1.
SPF: specific pathogen free.
SRC: SCID-repopulating cells.

TBI: total body irradiation.
TCR: T-cell receptor
TPO: Thrombopoietin: a megakaryocte growth factor.

VCAM-1: vascular cytoadhesion Molecule-1.
VLA-4: very late antigen number 4 (sometimes called 4β1 or CD49d)
VLA-5: very late antigen-5/Vascular Late Antigen-5
(Sometimes called α5β1 or CD49e)
VN: vitronectin
WBC: white blood cell(s)

X: mean (a statistical letter)
XRT: x-ray therapy or radiotherapy.