

شبكة المعلومات الجامعية







شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

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BIEI

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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Supervisors

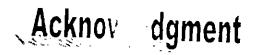
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Long time ago, Stem Cell Transplantation was just a dream then a trial in frustration, a necessity and finally a standard care for many diseases that were incurable in the past. Because it has become clear that it should be an option to a significant 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.

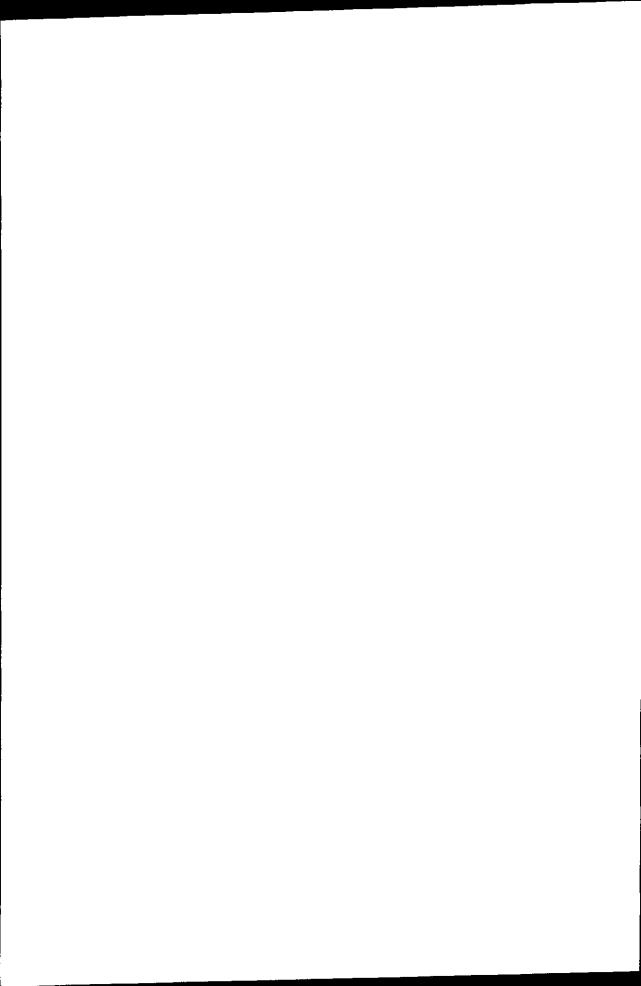
My overseas' thanks to Dr. Catherine Verfaillie, my mentor at the University of Minnesota, USA for training me in her very busy "Stem Cell Biology Laboratory" with very wonderful colleagues from many countries of the world.

Thanks for Dr. Harry Jacob, the Former President of the American Society of Hematology who encouraged me to "get to the business of molecular biology and translational research". He used to say during our clinics and rounds: "to be a good researcher, you have to have your own thinking and your own mind and this is the job of good teachers and good institutions although it sometimes needs sincere people working for it". He also added, "a patient is not a client but a weak and a sick human fellow who needs your support and the best support is that which stems from good knowledge and expertise".

My thanks to my "NOD/SCID" mice for their sacrifice for the welfare of the humanity!

Before and after all, my sincere thanks to Allah for helping me all the way down the road and I pray to Him to help us all in our war against diseases.

SAID YOUSUF AHMED 21/6/01 CAIRO, EGYPT



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	References

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

1L-: 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 a5\beta1 or CD49e)

VN: vitronectin

WBC: white blood cell(s)

X: mean (a statistical letter)

XRT: x-ray therapy or radiotherapy.