

Detection of Red Blood Cell Bound
Immunoglobulin by the Use of Gel Test
and Flow Cytometry and Its Application
in the Diagnosis of Coombs' Negative
Autoimmune Hemolytic Anemia

Thesis

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By

Noha Mohammad Mahmoud Bakr

M.B, B.Ch.

Ain Shams University

Supervised By

Professor / Manal Hashem Ahmad Fayek

Professor of Clinical and Chemical Pathology

Faculty of Medicine - Ain Shams University

Doctor / Abeer Atia Saad

Lecturer of Clinical and Chemical Pathology

Faculty of Medicine - Ain Shams University

Faculty of Medicine

Ain Shams University

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الإنحلالى المناعى**

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مقدمة من

الطبيبة/ نهى محمد محمود بكر
بكالوريوس الطب والجراحة
كلية الطب - جامعة عين شمس

تحت اشراف

الأستاذ الدكتور/ منال هاشم أحمد فايق
أستاذ الباثولوجيا الإكلينيكية و الكيميائية
كلية الطب - جامعة عين شمس

الدكتور/عبير عطيه سعد الدين
مدرس الباثولوجيا الإكلينيكية و الكيميائية
كلية الطب - جامعة عين شمس

كلية الطب
جامعة عين شمس
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَتَّبِعُوا هَذِهِ السُّبُلَ
الَّتِي كَفَرُوا بِهَا لَعَلَّكُمْ تُفْلِحُونَ

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List of Abbreviations

Ab	Antibody
ADCC	Antibody-dependent cell-mediated cytotoxicity
Ag	Antigen
AHG	Antihuman globulin
AHTRs	Acute Hemolytic Transfusion Reactions
AIHA	Autoimmune hemolytic anemia
AL	Acute leukemia
AML	Acute myelocytic leukemia
Anti-C3	Anti-complement
AHG	Anti-human globulin
AUC	Area under the curve
BM	Bone marrow
BFU-E	Burst-forming unit-erythroid
CFU-E	Colony-forming unit-erythroid
CFU_{GEMM}	Colony forming unit granulocyte, erythroid, monocyte and megakaryocyte
CMV	Cytomegalovirus
CLL	Chronic lymphocytic leukemia
CAD	Cold agglutinin disease
CAHA	Cold-Reactive Autoimmune Hemolytic Anemia
CAS	Cold agglutinin syndrome
CAT	Column Agglutination Technique
CBC	Complete blood count
CLD	Chronic liver disease
CR	Complement receptor
CT	Computerized tomography
CTT	Conventional tube technique
DAT	Direct Antiglobulin Test
DHTRs	Delayed Hemolytic Transfusion Reactions
DIHA	Drug-Induced hemolytic anemia
DIIHA	Drug-Induced Immune HA
D-L Ab	Donath-Landsteiner antibody
DPT	Diphtheria-pertussis-tetanus
EBV	Epstein-Barr virus

ELAT	Enzyme-linked antiglobulin test
ELISA	Enzyme-linked immunosorbent assay
EPO	Erythropoietin hormone
FcyR	Fcy receptor
FITC	Fluorescein isothiocyanate
FACS	Fluorescent-activated Cell Sorter
FC	Flow cytometry
FS	Forward angle scatter
G	Grades of agglutination reactions
GT	Gel Test
Hb	Haemoglobin
HA	Hemolytic Anemia
HDN	Hemolytic disease of Newborn
HBV	Hepatitis B virus
HCC	Hepatocellular carcinoma
HCT	Hematocrit
HCV	Hepatitis C virus
HLA	Human leukocyte antigen
HIV	Human immunodeficiency virus
HP	Haptoglobin
HTR	Hemolytic Transfusion Reaction
IAT	Indirect Antiglobulin Test
IDBil	Indirect bilirubin
Ig	Immunoglobulin
IMHA	Immune-Mediated Hemolytic Anemia
IMN	Infectious mononucleosis
IL-2	Interleukin-2
IL-10	Interleukin-10
IRMA	Immunoradiometric assay
IVIG	Intravenous immune globulin
K2-EDTA	Dipotassium ethylenediamine tetra-acetic acid
LDH	Lactate dehydrogenase enzyme
LISS	low ionic strength saline
LS	Light scatter
LPD	Lymphoproliferative disease
MCH	Mean corpuscular Hb

MCV.....	Mean corpuscular volume
MAC.....	Membrane attack complex
MDS.....	Myelodysplastic syndrome
MFI.....	Mean Fluorescence Intensity
MHC.....	Major histocompatibility complex
MnI X.....	Mean intensity of reactive RBCs
MM.....	Multiple myeloma
MMA.....	Monocyte monolayer assay
MoAbs.....	Monoclonal Antibodies
MRI.....	Magnetic resonance image
MS-DAT.....	Mitogen-stimulated-DAT
NHL.....	Non Hodgkin's lymphoma
NIPA.....	Non-immune protein adsorption
OC.....	ovarian cyst
PB.....	Peripheral blood
PBS.....	Phosphate buffered saline
PCH.....	Paroxysmal cold hemoglobinuria
PE.....	Phytoerythrin
PEG.....	Polyethylene glycol
PNH.....	Paroxysmal nocturnal haemoglobinuria
PVP.....	Polyvinylpyrrolidone
RA	Rheumatoid arthritis
RBCs.....	Red blood cells
RES.....	Reticuloendothelial system
Rh D.....	Rh Disease
ROC curve...	Receiver-operator characteristic curve
RPI.....	Reticulocyte production index
SS.....	Side scatter
Tr cells.....	Regulatory T cells
SCT.....	Stem cell transplantation
SLE.....	Systemic lupus erythematosus
TGF-β.....	transforming growth factor-β
US.....	Ultrasound
WL.....	wavelength

Introduction and Aim of the Work

