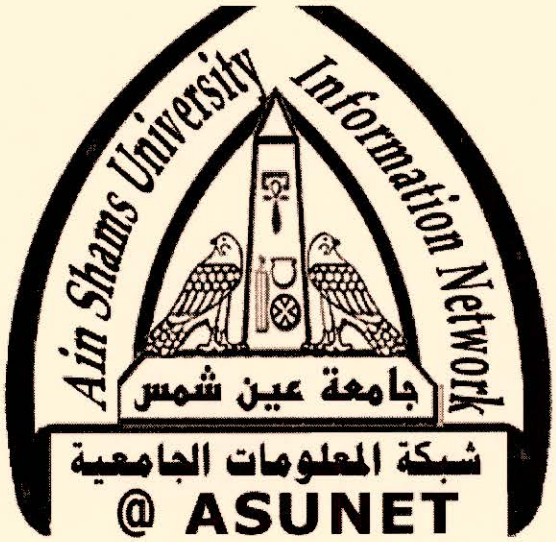
بسم الله الرحمن الرحيم



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

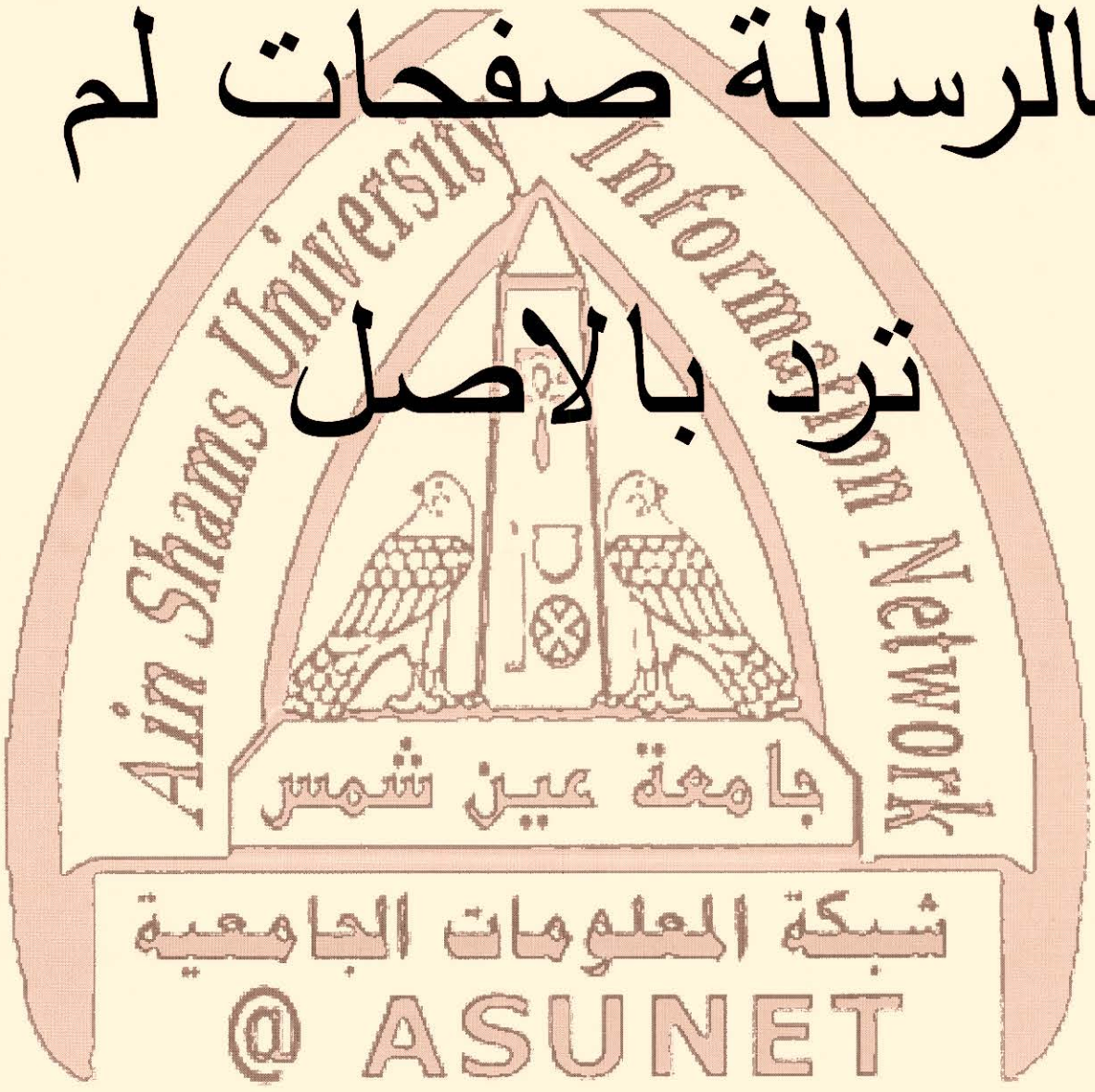
تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائق الاصلية تالفة

بالرسالة صفحات لم ترد بالاصل



SIL-2R (CD25) in childhood asthma

Thesis
Submitted for the partial fulfillment
of Master degree in **pediatrics**
By

Omar Farouk Abdel-Motaleb
M.B.,B.Ch.
Faculty of Medicine
Ain Shams University

Supervised by

Dr. Tarek Ahmed Abdel-Gawad
Assistant professor of pediatrics
Faculty of Medicine
Ain Shams University

Dr. Mahmoud Tarek Abdel-Monim
Assistant professor of pediatrics
Faculty of Medicine
Ain Shams University

Dr. Hala Talkhan
Assistant professor of clinical pathology
Faculty of Medicine
Ain Shams University

Faculty of Medicine
Ain Shams University
2001

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Omar Farouk

Contents

List of Abbreviations

Ag	:	Antigen.
AFGF	:	Acidic fibroblast growth factor.
BAL	:	Bronchoalveolar lavage.
BSA	:	Bovine serum albumen.
cAMP	:	Cyclic adenosine monophosphate.
CDK	:	Cyclin dependent kinase.
CD25	:	Soluble fraction of interleukin two receptor.
CNS	:	Central nervous system.
CTDGF	:	Connective tissue derived growth factor.
EGF	:	Epidermal growth factor.
EPO	:	Erythropoietin.
ERV	:	Expiratory reserve volume.
ET-1	:	Endothelin-1.
FcεRI	:	Fraction crtstalizable epsilon RI (a receptor for IGE).
FEF	:	Forced expiratory flow.
FEV1	:	Forced expiratory volume in one second.
FRC	:	Functional residual capacity.
FVC	:	Forced residual capacity.
GMCSF	:	Granuolocyte macrophage colony stimulating factor.
GTP	:	Guanosine triphosphate.
IC	:	Inspiratory capacity.
IGF-1	:	Insulin like growth factor-1.
IFNγ	:	Interferon gamma.
IL	:	Interleukin.
INF	:	Interferons.
IRV	:	Inspiratory reserve volume.
KGF	:	Keratin growth factor.
LSM	:	Lymphocyte separation medium.
MAPK	:	Mitogen activated protein kinase.

MIL-2R : Membrane interleukin-2 receptor.

NGF : Neurite growth factor.

PAF : Platelet activation factor.

PBS : Phosphate buffer saline.

PDGF : Platelet derived growth factor.

PGF2 : Prostaglandin F2.

POE : Phosphodiestrase.

PTK : Protein tyrosine kinase.

RANTS : Normal T cell express and secrete chemokine.

RV : Residual volume.

SIL-2R : Soluble interleukin-2 receptor.

TH : T helper lymphocyte.

TGα : Transforming growth factor α.

TGF β_1/β_2 : Transforming growth factor β_1/β_2.

TLC : Total lung capacity.

TNF : Tumor necrosis factor.

VC : Vital capacity.

2DI : Varient of IL-2.

Introduction and Aim of the Work

INTRODUCTION

Bronchial asthma is characterized by episodic reversible narrowing of the airways, which is associated with bronchial hyperactivity **(ATX, 1987).** Asthma is of two types, allergic which usually starts during childhood, allergen - dependent and often associated with elevated IgE serum levels. Non-allergic asthma usually begins during adulthood with no elevation of serum IgE and often associated with sinusitis **(Newhouse, 1989).**

Serial measurement of respiratory function tests are widely used in clinical management of asthma Large diurnal changes of respiratory function tests are associated with increased mortality **(Bateman and Clarke, 1979).**

T lymphocytes play a key role in coordination of immune responses. Expression of particular surface markers is used to document the activation of T cells. These markers include CD_{25}, HLA-DR and VLA-$_1$. CD_{25} represents the chain of interleukin-2 receptor **(Corrigan, et al, 1993).**

During the attack $CD4^+$ T lymphocytes are sequestered in the lung **(Corrigan et al, 1990).** Recent immunological studies of bronchial biopsies from asthmatics have shown that activated T cells can be detected in bronchial mucosa. Activated CD4 T lymphocytes are also detected in peripheral blood of acute asthmatics (Corrigan et al, 1990). CD8 and CD4 T lymphocytes expressing CD45RA and CD45RO are also elevated during the

attacks. (Satoru et al, 1996). $CD25^{+}$ CD4 T lymphocytes secret interleukin-5 which regulates eosinophilia (Enokihara et al, 1990). Serum concentration of IL-5, $CD4^{+}$ T lymphocytes and eosinophils in the peripheral blood are reduced in asthmatics after glucorticoids therapy, this in turn suggests that $CD4^{+}$ T lymphocytes might be the primary target for antiasthmatic action exerted by glucorticoids **(Corrigan et al, 1991).**

The relationship among pulmonary functions variation and other asthma parameters are of great importance. Investigators have related the number of circulating activated T helper cells with airflow obstruction in the larger airways as measured by PEF **(Corrigan et al, 1990).** Treatment of asthma also results in reduced levels of cationic proteins associated with improvement of airflow obstruction **(Frigas et al, 1981).**

AIM OF WORK

The aim of work is to study and analyze the activation markers of T lymphocytes in asthma and to demonstrate the interrelation between changes in T cells activation, number of eosinophils, respiratory function tests and the degree of airway obstruction.