IMMUNOTHERAPY

CURRENT STRATEGIES AND FUTURE APPLICATIONS

Essay
Submitted for partial fulfillment
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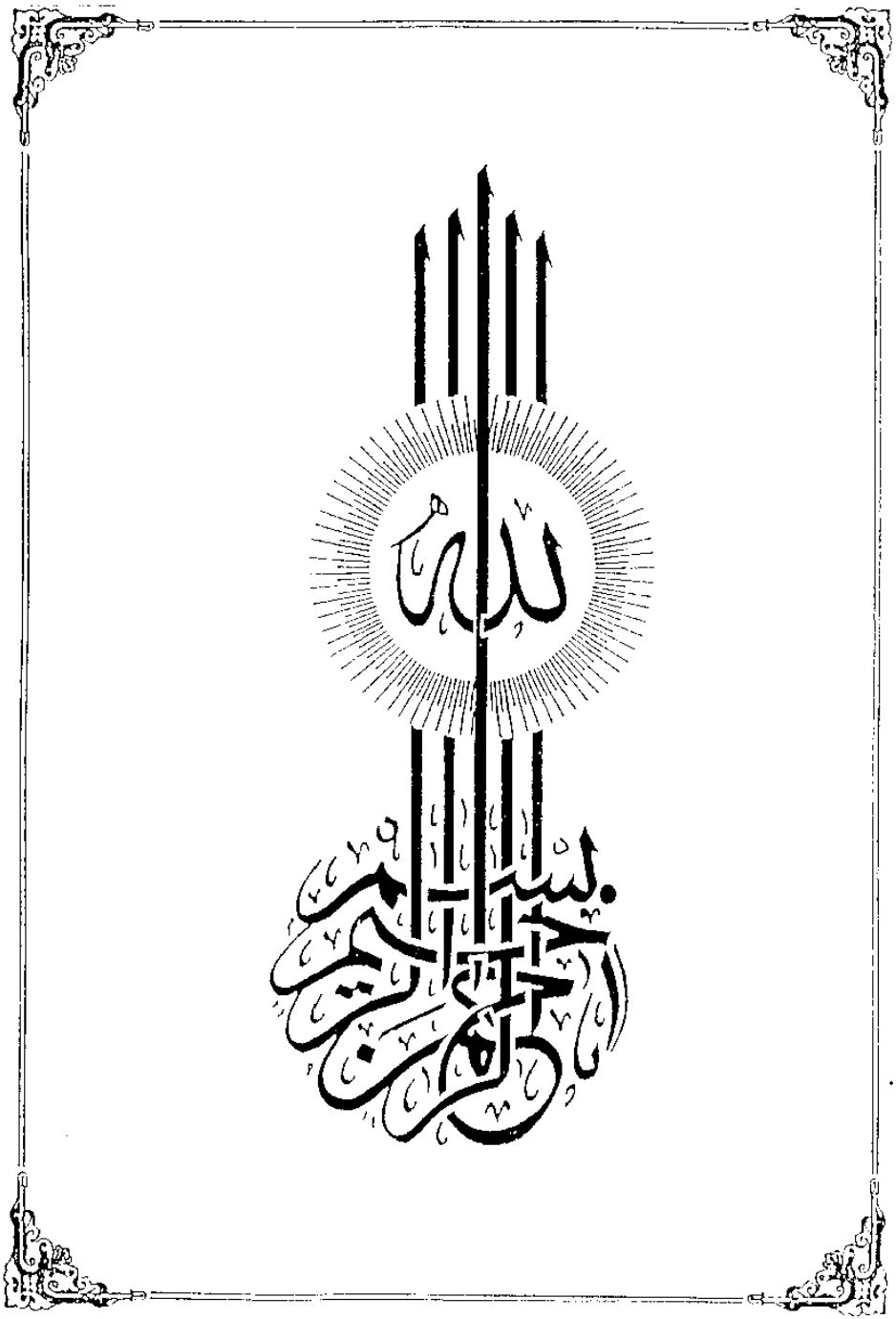

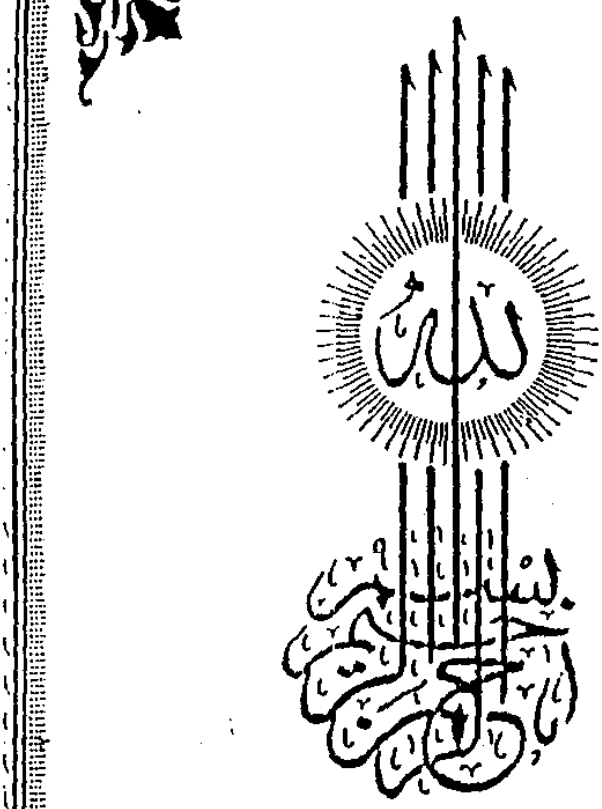

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علمتنا إنك أنت العليم الحكيم.

صدق الله العظيم
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List of Abbreviations

ADCC	Antibody dependent cellular cytotoxicity
APC	Antigen presenting cell
BCG	Bacillus calmette Guerin
BCR	B-cell antigen receptor
CD	Cluster of differentiation
CR	Complement receptor
CTL	Cytolytic T-lymphocyte
HLA	Human leucocytic antigen
ICAM	Intracellular adhesion molecule
IFN	Interferon
Ig	Immunoglobulin
IL	Inter Leukin
IT	Immunotherapy
ITAM	Immunoreceptor tyrosine - based activation motif
IVIG	Intravenous Immunoglobulin
LAK	Lymphokine activated killer
LFA	Leukocyte Functional antigen
MHC	Major histocompatibility complex
NK	Natural killer cell
Tc	T-cytotoxic
TCR	T-cell receptor
TH	T-helper
TIL	Tumor in filterating lymphocyte
TNF	Tumor necrosis factor
Ts	T-suppressor

Introduction

INTRODUCTION :

Classical therapeutic modalities such as surgery, radiation and chemotherapy not only fail to cure the majority of neoplatic diseases, but also leads to sever and debilitating side effects. The sever cancer related morbidity is often associated with the use of radiation and chemotherapy making them less ideal forms of therapy ***(Bodey et al, 1996).***

Entirely new approaches to cancer therapy that are tumor cell directed, and specifically lethal to malignant cell and less toxic to normal tissues are being observed and developed adhering to the old prayer "destroy the diseased tissue, preserve the normal".

Immunotherapy as a forth modality of cancer therapy has already been developed and could be quite effective ***(Bodey et al, 1996).***

By immunotherapy it is possible to manipulate and amplify the immune system to promote tumor eradication. The recent technologic advances that permit isolation of lymphocyte subpopulations, identification and purification of tumour antigens, growth of selected antigen specific T-cells, amplification of immune response with cytokines, gene cloning and introduction of functional counter parts into mamalian cells and targeting of anibody toxin conjugates to tumor have created a new potential and enthusiasm for immunotherapy of tumor ***(Greenberg, 1994).***

Over the years two approaches have been utilized for immunotherapy.

In active immunotherapy attempts have been made to stimulate endogenous immunity within the host through administration of bacterial products, chemically defined immunomodulators, cytokines and vaccines.

In passive immunotherapy antibodies or lymphoreticular cells (adoptive immunotherapy) have been given to the host providing exogenous immunity *(Greenberg, 1994).*

Aim of the work :

This work aim to discuss strategies of immunotherapy and its applications in cancer and other diseases.