

**THE ROLE OF THE MAGIC FRUIT PLANT IN
CONTROLLING THE SPREADS OF CANCER CELLS
EX- VIVO**

BY

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**B. SC Faculty of science , Aim shams university
1981**

**Diploma in environmental sciences (department of
Medical science Aim shams university 1994**

**A thesis submitted to in partial fulfillment
of**

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Science**

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Abbreviations

1- Tils	Tumor – Infiltrating lymphocytes
2- Il2	Interleukin- 2
3- RNA	Ribonucleic acid
4- DNA	Deoxy ribonucleic acid
5- ILC	Invasive lobular carcinoma
6- TDC	type invasive ductal carcinoma
7- MF.....	Magic fruit
8- SV 40	simian virus
9- BRCA1	Breast cancer antigens
10- MTI.....	Magnetic Resonance imaging
11- AJCC.....	American joint Committee on cancer
12- ER+	Estrogen Receptor positive
13- HER-2	Human Epidermal Receptor 2
14- EGFR.....	Epidermal growth factor Receptor
15- IHC	Immunohistochemistry
16-CTLs-----	Cytolytic T cell
17- UPA-----	Urokinase plasminogen activator
18-PAI-1-----	Plasminogen activator inhibitor-1
19- CTLs.....	Cytolytic T cell
20- APC8	Antigen- presenting cells
21-IFN-8.....	interferons gamma
22- LAK.....	Lymphokine – activated killer
23-FC8.....	Fetal calf serum
24- Alp.....	Alkaline phosphatase
25-L.N.....	Lymph nodes

INTRODUCTION

The jujube is a member of Rhamnaceae family. its botanical name is *Ziziphus jujube* or Chinese date. It is distributed throughout much of the Mediterranean region at least 3000 years ago (Farums medicine [http:// www.Suudi_medicine_2005.net](http://www.Suudi_medicine_2005.net)) it helps in many of vital activities and functions such as weight gain , antiallergenic, improving stamina and strength, mildly sedating, improving of liver function , stimulating the immune system , and helping to efficiently get the energy form food and giving energy. It could be used as Mill Lam. In Sudan , it is fermented and prepared into a confection but in India, dry fruit powder is also used. It is 250 times sweeter than refined sugar and without calories (Clevallier, A.1996) .

The major breakthrough is the treatment of terminals cancer with new approach of cell treatment. The idea is to exploit a subset of T-cells called tumor – infiltrating lymphocytes (TILs) found deep inside cancerous tissue. These killer T-cells attack dividing cells and provide a natural protection against cancer (Ro senberg, 2001). The T-cell therapy might be more effective than other types of carcenogenic therapy .

Tumor – infiltrating lymphocytes (TILs) can be grown in vitro in a medium containing interleukin -2 in clinical trials (Bethesda 2005). patients with metastatic malignant melanomas were treated with intrleukin-2 plus the adoptive transfer of autologous (TILs) (Prevost- Blonde et al., 1998)

It can be used in the future in clinical trials post surgery in the Natural Cacer Institute. Lysis of autologous tumor cells by TILs was significantly higher for responding than for non-responding patients.

AIM OF THE WORK

The aim of the present work is to study the possible effect (s) of the magic fruit extract on the viability , and count of TILs as well as on the level of interferon – gamma in the medium containing the cell culture. Tumor excision may not be a totally curative treatment of cancer , but the activation of TILs by using a natural product (plant) (Magic Fruit) may possibly inhibit the tumor cells propagated ex-vivo.