شبكة المعلومات الجامعية

# بسم الله الرحمن الرحيم



# شبكة المعلومات الجامعية

# التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

# قسم

## نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
## علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

# يجب أن

## تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

شبكة المعلومات الجامعية


# بعض الوثائق الأصلية تالفة


# بالرسالة صفحات لم ترد بالأصل

# P53 AND KI-67 EXPRESSION IN SOME PROLIFERATIVE BENIGN AND MALIGNANT SKIN LESIONS

A clinical and Immunohistochemical Study

*Thesis*

Submitted for Partial Fulfillment of M.D. Degree
In Dermatology and Andrology

*By*

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| A- Mulv | : Abelson Murine leukemia virus |
| APC | : Adenomatous polyposis coligene. |
| BCC | : Basal cell carcinoma. |
| C | : Cytosine |
| CDK | : Cycline dependant kinase |
| CTCL | : Cutaneous T cell lymphoma. |
| DCC | : Deleted colon carcinoma gene. |
| HPV | : Human papillomavirus. |
| hsp70 | : Heat shock protein 70. |
| KD | : Kilo Dalton. |
| MDM2 | : Oncogene murine double minute 2. |
| MED | : Minimal erythema dose. |
| MoAb | : Monoclonal antibody. |
| PASI | : Psoriasis Area and Severity Index. |
| PCNA | : Proliferating cell nuclear antigen. |
| PoAb | : Polyclonal antibody. |
| RB gene | : Retinoblastoma gene. |
| SCC | : Squamous cell carcinoma. |
| SV40 | : Simian Virus 40. |
| T | : Thymidine. |
| UVR | : Ultraviolet radiation. |

# Introduction

# INTRODUCTION

As a continously dividing tissue, epidermal homeostasis depends on two opposing forces; epidermal cell proliferation against programmed cell death (apoptosis). Disturbance of the balance between these two forces may lead to uncontrolled or indefinite hyperproliferation which may mount up to tumour formation ***(Haake and Polakowska, 1993)***.

P53 is a tumour-suppressor gene encoding a phosphoprotein, which inhibits cell proliferation ***(Soini et al., 1994).***

The P53 protein exerts important biologic activities on various normal and pathological human tissues, moreover, mutations of the P53 gene have been detected in a wide variety of neoplasms. These mutations are the single most common genetic alteration observed in human cancer ***(Porter, et al., 1992).***

P53 mutations are present in more than 90% of squamous cell carcinomas ***(Leffel, 2000),*** and from 42 to 92% of basal cell carcinomas ***(McNutt et al., 1994).*** Because of these frequent mutations in skin tumours, P53 mutations could also be involved in psoriatic keratinocytes hyperproliferation ***(Moles et al., 1993).***

There is controversy about the expression of P53 in psoriatic skin. ***Tadini et al. (1989)*** reported expression of P53 in psoriatic skin, while ***Moles et al. (1989)*** reported that mutation of the P53 gene was not detected in psoratic skin.

Accurate mesuremenent of the proliferation kinetics of epidermal keratinocytes is important in understanding the mechanisms of cell turnover of normal skin, as well as the changes that occur during epidermal dysplastic and hyperproliferative disorders ***(Smith et al., 1995).***

Ki-67 which is a nuclear antigen, is a valuable biomarker for the detection of proliferating cells in tissue samples ***(Yu et al., 1992).***

# Aim of The Work

# AIM OF THE WORK

The aim of this study is to identify the expression of P53 protein and Ki-67 antigen in hyperproliferative epidermal disorders as psoriasis and malignant epidermal tumours as squamous cell carcinoma and basal cell carcinoma.

Also try to mesure the cellular DNA content to detect DNA ploidy of psoriatic and malignant skin.

# Review Of Literature

# THE CELL CYCLE

Somatic cell division is a cyclic process divided into two phases : mitosis and interphase. Interphase is subdivided into three phases, $G_1$;S; and $G_2$ phases ***(Walter and Talbot, 1996).*** The cell cycle can be divided into two categories :chromosomal cycle and cytoplasmic cycle (cytokinesis). The landmarks of the chromosomal cycle are DNA replication and mitosis. In the cytoplasmic cycle cell growth occurs with doubling the cell constituents and ends by division of the cell into two daughter cells ***(Darzynkiencz,1993).***

**Interphase:** $G_1$-phase:This is the phase between the end of mitosis and the start of DNA synthesis and replication in the subsequent phase. The duration of $G_1$ phase is greatly different from one cell generation to the other and the majority of cell life is spent in this phase. Some cells stay in it for days or even years. So, the principles of difference between cells that divide slowly and those dividing rapidly is the length of $G_1$ phase ***(Gordon et al.,1995).***

During the $G_1$ phase (G for gap), RNA and protein synthesis take place, and the cell volume, previously reduced to one- half by mitosis, is restored to its normal size ***(Junqueira et al., 1998).***

S- phase: it means synthesis phase(S= synthesis) that defined as the period during which DNA synthesis and replication occurs. Befor S-phase, each chromosome consists of two single chromatids connected together at the centromere but after S-phase, each chromosome formed of two pairs of chromatids. So the S-phase begins when DNA synthesis start