## INTRODUCTION AND AIM OF THE WORK

## <u>INTRODUCTION</u>

Interferons are a large family of proteins and glycoproteins, naturally occurring or artificially produced by recombinant biotechnology. Their antiviral, antiproliferative, antitumoral, and immunomodulatory activities are induced by alterations in cell metabolism after binding to specific membrane receptors (Stadler et al., 1989).

Interferons (IFN) have become important in the practice of dermatology. The discovery and naming of interferon was first in 1957 by Doctor Alick Isaacs and Jean Lindenmann (Landow, 1988, Greenway and Cornell, 1990 and Robinson, 1991).

IFN is a prototype of a family of similar substance now called Cytokines that all appear to function as regulatory molecules (Gresser, 1990).

There are three types of interferons recognized at present: interferon alpha (formerly, known as leukocyte interferon), interferon beta (called fibroblast interferon), and interferon gamma (originally named immune interferon). Interferon alpha and beta are most closely related, but all three types have distinct structures and functions (Edwards, 1987).

In dermatology, a wide variety of diseases have been treated with systemic or intralesional interferon (Cornell et al., 1990), condylomata acuminata and genital warts (Vance and Davis, 1990), bowenoid papulosis (Gross et al., 1986), mycosis fungoides (Vonderheid et al., 1987), lupus erythematosus (Nicolas et al., 1990), malignant melanoma (Legha, 1986 and Kirkwood et al., 1985), AIDS- related kaposi's sarcoma (Miles et al., 1989, Meigel et al., 1989)

and Davis, 1991), virus-induced papillomas (Niimura, 1990) and advanced cutaneous T-cell lymphomas (Bunn and Norris, 1990) have responded to treatment. Interferon has also shown to be highly effective in the treatment of actinic Keratoses (Edwards et al., 1986).

Basal cell carcinoma is the most common malignancy in humans (Miller, 1991 I). It primarily afflicts persons in the older age groups (Wallberg and Skog, 1991). Three treatment modalities are routinely-used: excision, curettage with cauterization or X-ray irradiation (Reymann, 1985). Others, as cryosurgery (Cornell et al., 1990), and lasers (Geronemus and Ashinoff, 1991) are also used.

Recently, interferon  $\alpha$  2b (Introna) has shown a beneficial effect following intralesional injections into basal cell skin tumour (Greenway et al., 1986).

The aim of this work is to review the literature in the last 10 years about interferon and its use in dermatology and also to evaluate the effect of IFN  $-\alpha 2b$  in the treatment of basal cell epithelioma .