

3.1 INTRODUCTION

Leucoderma, or vitiligo, commonly known as Sweta Kustha, Kodh or Phuleri and is an idiopathic acquired disorder of the skin that results from the selective destruction of melanocyte cells (Agrawal et al. 2004; Koranne et al. 1986). Patients with leucoderma develop white spots on the skin of various sizes and in different locations. It is considered as a big social stigma in India, as people confuse it with leprosy. The affected individuals suffer from constant depression and social ostracization. It is considered a medical disqualification for recruitment in the military and paramilitary. The etiological factors for leucoderma are not specific but considered, mainly due to the disturbed melanin synthesis owing to an inactivation of tyrosinase enzymes; a deficiency of copper, zinc and iron; the absence of certain aromatic amino acids like tyrosine, phenylalanine, di-hydroxy phenylalanine; and a lack of vitamins like folic acid, pantothenic acid and vitamin B₁₂ in the diet (Antonioni et al. 1992; Behl et al. 1972). The disturbed function of nerve cells; destruction of melanocyte cells; external injuries; worm infestation; abnormal thyroid function (Bolognia et al. 1988; Nordlund et al. 1993); constant disturbed digestion; emotional and psychological stress; neurotoxins; and constant exposure to chemicals, paints and dyes are some additional causes responsible for its occurrence.

There are many existing remedies of this disorder viz. allopathic, surgical and adjunctive therapy, none of which has a satisfactory cure for this disorder. These are either costly or single component-based, with very low level of efficacy. Patients will often develop blisters, edema and skin irritation, and as a result, most of the patients discontinue the treatment.

The quest to find an effective cure leucoderma has finally ended with the development of a new herbal product by extensive laboratory studies and clinical trials by scientists of the Defence Institute of Bio-energy Research, (DIBER), Haldwani, a laboratory of Defence Research & Development Organization, Ministry of Defence, Govt. of India. These scientists have discovered the unique properties of a number of herbs from the high attitudes of Himalayan ranges and came out with a formulation to cure leucoderma patients without any side effects. Although, leucoderma may not be considered to be a disease, the patients affected by leucoderma may have a severe inferiority complex resulting in depression, thereby adversely affecting their work performance, personality and aesthetics. Clinically the product is quite effective and helps not only in restoring the normal complexion in the affected areas, but also relieves the affected ones from mental stress, emotional and psychological trauma and thereby, enhancing their confidence and efficiency.

The formulation is available in the form of liquid oral dose for internal medication to remedy the nutritional deficiency and to restore the immune system, and an ointment for topical application on leucoderma lesions. The AIMIL Pharmaceuticals (India) Ltd., New Delhi, has been granted the transfer of technology to manufacture and market this research product of DIBER (DRDO) under the brand name 'Lukoskin' (Figure 3.1) based on their respective technological and marketing credentials.