Chapter-3

Objective of Study
Aims and Objectives

3.0 Aims and objectives

Alopecia or hair loss is a widespread dermatological disorder. It can be psychologically distressing to not only the affected person but also their family. For the past 50 years, the only two approved drugs that have been able to alleviate the symptoms of alopecia are topical minoxidil and oral finasteride. Though these medicines have been approved by regulatory bodies, the alarming side effects that these medicines have on the human body are well documented. Side effects of finasteride include impotence (1.1% to 18.5%), abnormal ejaculation (7.2%), decreased ejaculatory volume (0.9% to 2.8%), abnormal sexual function (2.5%), gynecomastia (2.2%), erectile dysfunction (1.3%), ejaculation disorder (1.2%) and testicular pain [34-40]. The FDA has added warning to finasteride about an increased risk of high grade prostate cancer. In December 2008, the Swedish Medical Products agency concluded a safety investigation of finasteride and subsequently advised that the use of finasteride may result in irreversible sexual dysfunction [40]. Side effects of minoxidil include severe allergic reactions; chest pain; dizziness; fainting; tachycardia; sudden, unexplained weight gain. Pseudo acromegaly due to minoxidil has also been reported [41].

The aim of this research was to provide a safe, effective and easily available form of hair growth promoter sans the adverse side effects that come packaged with modern medicine. It is the intention of this research to bring objectivity to traditional systems of medicine by way of moving in parallel lines with modern methods of analysis.

The research aims of this study are specified as below:

1) To investigate existing literature of medicinal plants and animal extracts with hair growth promoting effect for further investigation.
2) To develop standardized methods of extraction of selected indigenous medicine.
3) To develop standardized and validated analytical methods for analysis of hair growth promoters.
4) To investigate the hair growth promoting effect of selected indigenous medicine for treatment of alopecia in animal models e.g., C57BL/6 mice and Swiss albino mice.
5) To formulate a semi solid dosage form with equable efficacy for topical application.
6) To study acute dermal and systemic toxicity of the prepared formulations on mice skin.
7) To analyse accelerated stability and predict the shelf life of the optimized formulations.