METHODOLOGY

The methodology to be adopted for the present research programme shall be as follows,

1. **Collection and review of literature** - The literary information pertaining to skin care practices of the past will be collected date back to 1900. Literature collection will be done from ancient ayurvedic textbooks like Charak Samhita, Sushruta Samhita, Ashtanga Hridayam, Bhavaprakasa Nighantu, Database on Medicinal Plants used in Ayurveda, Central Council for Research in Ayurveda & Siddha, The Ayurvedic Formulary of India and review of literature from various journals about the local inhabitants knowledge on various plants used in various skin care practices. By doing a complete literature search will be bring out linkages between local/ancient knowledge with the formal Science (In this case skin biology and chemistry).

2. **Documentation of various skin care practices.**

3. **Revalidation of some select practices by laboratory and cell culture based studies**
   - Efficacy of some selected ingredients/formulation

   **Skin Lightening**
   - Inhibition of melanogenesis via tyrosinase inhibition assay.

   **UV Protection**
   - Sunscreen characterisation using SPF Analyser “ and MimSkin® substrate.
   - Sun burn cell test.

   **Anti-Inflammatory**
   - Inhibition of production of proinflammatory cytokines.
   - Cox-1 and Cox-2 Inhibitor Assay.

   **Anti Oxidant**
   - Free radical scavenging assay
• Superoxide dismutase assay.

Mildness

• Zein Assay.

Anti Aging

• Inhibition of matrix metallo protease activity.
• In Vitro investigation of human fibroblast

WORK PLAN

First Year:

First term (six months) will be collection of literature from Peer reviewed journals, Ayurvedic text books and also local community knowledge.

Second term identification of various skin care ingredients/practices and documenting the same.

Second Year:

Third term - Revalidation of ingredients and formulation thru laboratory and cell culture studies. Interpretation of the experimental data.

Fourth Term - Publication of two research articles and Preparation/Submission of Thesis.

UTILITY

Unearthing of the details of the ancient system will provide a best way to develop various skin beauty care products keeping the health needs of the skin at the centre stage. Enlisting of all the details would help the industries to tap the ancient treasure readily and easily for commercial and people advantage. The finding of the study is expected to revolutionize the development of various skin beauty care products by the personal care industries all over the world. The study will not only serve the needs of the industry but also will serve the humanity at large where the legacy of ancient knowledge would lead to the development of safe skin beauty products.