Proopiomelanocortin is a precursor peptide that gives rise to several neuroptides including adrenocorticotropic hormone (ACTH) and β-endorphin. POMC-derived peptides have been shown to be synthesized in human epidermis where they modulate numerous skin functions. Because we previously observed that melanocortin receptor-2 and μ-opioid receptor 1, the respective receptors for ACTH and β-endorphin decreased with ageing in human epidermis, we have selected an active ingredient (INCI name: Achillea millefolium extract) able to upregulate receptor expressions. The aim of the present work was first to evaluate the effect of A. millefolium extract on the expression pattern of various epidermal differentiation markers ex vivo in normal human skin biopsies using quantitative image analysis and second to evaluate its capacity to rejuvenate the appearance of skin surface in vivo. Results show an improved expression profile of cytokeratin 10, transglutaminase-1 and filaggrin in cultured skin biopsies as well as an increased epidermal thickness. In vivo, a 2-month treatment with A. millefolium extract at 2% significantly improved the appearance of wrinkles and pores compared with placebo. Results were also directionally better than those of glycolic acid that was chosen as reference resurfacing molecule [S. Pain*, C. Altobelli, A. Boher, L. Cittadini, M. Favre-Mercuret, C. Gaillard, B. Sohm, B. Vogelgesang, V. André-Frei (Sabine Pain, BASF Beauty Care Solutions France S.A.S, 32 rue Saint-Jean-de-Dieu, F-69366, Lyon Cedex 07, France), International Journal of Cosmetic Science, 2011, 33(6), 535-542].

The present research work deals with Development and evaluation of Topical formulations containing solid lipid micro particles loaded with Grapes (Vitis vinifera) seed and Marigold (Calendula officinalis) flower extract, and essential oils of Sea buckthorn (Hippophae rhamnoides) seeds for treatment of acne vulgaris. Compritol (5.0% wt/wt) SLM dispersions were prepared by oil in water emulsification method, using different surfactant concentrations and Extract concentration.

The Microparticle were characterized, in terms of surface morphology, particle size and stability. Solid lipid micro particle technology represents a promising new approach to lipophile drug delivery. Herbal extract and oils were screened phyto chemically and TLC, HPLC were performed for Qualitative and Quantitative analysis of active constituents present. The formulation have been developed and evaluated, In vitro antibacterial activity was performed against Propionibacterium acne (P. acnes), a causative organism for Acne vulgaris for the developed formulations using agar well diffusion method. The measured zones of inhibitions of the formulations were compared with standard marketed topical herbal preparation for acne. Formulation had shown significant activity on comparison with the standard marketed preparation [Mishra P*, Agrawal S, Gupta D (Department of Pharmaceutics, Swami Vivekananda College of Pharmacy, Near Toll Naka, Khandwa Road, Indore, M.P. PIN-452020, India), Journal of Pharmacy Research, 2012, 5(1),104-107].

NPARR 3(2), 2012-0128, Screening of selected Herbal plants for Anti Acne Properties

Acne vulgaris, a chronic inflammatory disorder in adolescent consist of the pilosebaceous follicles, characterized by comedones, papules, cyst, nodules and often scars, chiefly on face, neck etc. The microorganism involved include
Propionibacterium acnes (P. acne) and Staphylococcus epidermidis. The inflamed glands caused by stress, hereditary factors, hormones, drugs and bacteria. Cause of acne includes the action of sebum synthesized and secreted by the androgen-sensitive sebaceous glands, Increase in hormones called androgens in both girl and boy during puberty, Hormonal change related to pregnancy or starting or stopping birth control pills, stress, skin irritation and heredity. The objective of this study was to evaluate the in vitro and in-vivo anti-acne effects of ethanolic and aqueous extract of rhizomes of selected Curcuma species (Curcuma aromatica, Curcuma amada, Curcuma zedoaria) and bark of Adina cordifolia against Propionibacterium acnes. Minimum inhibitory concentration to inhibit the growth of P. acne of ethanolic extract of Curcuma spp. and Adina cordifolia were found to be 125 μg/ml and aqueous extract of Curcuma spp and Adina cordifolia. were found to inhibit the growth of P. acne at concentration 250 μg/ml. 140 μg of heat killed P. acnes injected in the ears of rats by subcutaneous route. Ear thickness was measured as an index of inflammatory strength using vernier caliper upto 35 days but there was no significant change after 10th day [Pandey Chetana*, Karadi R.V, Bhardwaj K Lokesh and Sahu K Amit (Department of Pharmacognosy, KLE University’s College of Pharmacy, Belgaum, Karnataka), International Journal of Drug Development & Research, 2012, 4(2), 216-222].