

RECENT UPDATES IN HERBAL COSMETICS

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ABSTRACT

Herbal cosmetics make up an important component of the trend toward alternative synthetic cosmetics. Herbal cosmetics are becoming even more popular in today's world as people seek out natural remedies. To compete with the growing pharmaceutical market, there is an urgency to utilize and scientifically validate more medicinally useful herbal products. Recently herbal cosmetics have gained much recognition and became popular among people. These products claimed to have efficacy and intrinsic acceptability due to routine use in daily life and devoid of side effects commonly seen with synthetic products. This Review Focuses on Recent Trends in Herbal Cosmetics, in recent years, more people throughout the world are turning to use medicinal plant products in the healthcare system. The worldwide need for alternative medicine has resulted in the growth of natural product markets and

interest in traditional systems of medicine.

KEYWORDS: Herbal cosmetics, Cosmeceuticals, Skin cosmetics, Antioxidant, Antiaging.

INTRODUCTION

Cosmetics are used almost regularly and universally in different forms to enhance beauty. Cosmetics are developed to reduce wrinkles, fight acne and to control oil secretion. For various types of skin ailments formulations like skin protective, sunscreen, antiacne, antiwrinkle and antiaging are designed using varieties of materials, either natural or synthetic. The development process for cosmetic formulation needs maintenance of quality standard. The quality of a formulation should satisfy the consumer's need in terms of its performance.

The herbs used in cosmetic preparation have varieties of properties like antioxidant, anti-inflammatory, antiseptic and antibacterial etc. These herbal products claim to have no side effects, commonly seen with products containing synthetic agents. Attractiveness of such herbal preparations have socially as well as technologically resulted in flooding of market place in India.

The literature in Ayurveda, especially Charak Sahita, stated numerous medicinal plants in Varnyakashaya. The herbs like chandan, haldi, khas, nagkeshara, manjistha, yastimadhu are used to obtain glowing complexion and arusa, amala bavchi, guduchi, chakmard are mentioned as kustaharan.^[1,2] Herbs like amalaki, haridra, abhaya, khadira, vidyanga, jati saptaparna, karavira of various potential from Khshthagna and Mahakashiya are mentioned effective in skin disorder. Charak and other sages Sushruit stated in the literature that the Eladi Gana containing ela, tagar, kusstha, jatamani, tvak, dhmamaka, potraharenuka, shutki, stouneyaka, choraka, guggol sarjarasa, agaru, devedaru and padmakesher could be used to eliminate toxins from the body and clear the complexion that leads to grow on the skin and protect from kushtha and boils.^[3] In this review, the authors have complied the scientific data according to the cosmetic potential of herbs and hesitant cosmetic importance from traditional system to modern scientific system.

Present status

According to market survey the global market for cosmetics and toiletries reached nearly \$150 billion in 2004, increase by more than 4 per cent from 2003, which highlights major growth in key developing markets.^[4] The herbal market has been boosted by increasing demand for natural alternative medicines. World demand for herbal products has been growing at a rate of 10% - 15% per annum. The medicinal plants related trade in India alone is approximately Rs. 5.5 billion. World Health Organization (WHO) has forecasted that the global market for herbal products would be worth \$5 trillion by the year 2050. Global sales of herbal products are expected to reach \$26.2 billion dollars in 2007. Europe and the United States are the two major herbal products markets in the world, with a market share of 41 percent and 20 percent respectively.^[5] According to the World Bank, the global market for medicinal plants and their products includes the potential sectors of pharmaceuticals, nutraceuticals and cosmeceutical to be estimated of worth US\$ 62 billion, offers a plethora of opportunities for the Indian pharma and cosmetic companies.

Cosmeceuticals

In ancient Greece and Rome, countless ointments and tonics were recommended for the beautification of the hair, skin as well as remedies for the treatment of scalp and skin diseases. Henry de Mondeville was the first to make a distinction between medicinal therapies intended to treat diseases and cosmetic agents for the purpose of beautification.^[6] But today's delineation of cosmetics from pharmaceuticals has become more complex through the development of cosmetics with physiologically active ingredients, i.e. cosmeceuticals. Cosmeceuticals are topical cosmetic – pharmaceutical hybrids intended to enhance the beauty and provide additional health related function or benefits. They are applied topically as cosmetics, but contain ingredients that influence the skin's biological function.^[7] These cosmeceuticals serve as a bridge between personal care products, Pharmaceutical and phyto-material. Cosmeceutically active ingredients are now being used by large and small manufacturers engaged in cosmetics, pharmaceuticals, biotechnology and natural extracts in cosmetic formulations. The advancement in the field of cosmetics and knowledge of skin biology and pharmacology have facilitated the formulation of cosmetics.^[8] The developed novel active and natural compounds are being rapidly used as cosmeceuticals. The desirable features of cosmeceuticals are their efficacy, safety, formulation stability.

Treatment of cancer

Medicinal plant products exhibiting anticancer activity continue to be the subject of extensive research aimed at the development of drugs for the treatment of different human tumors. The medicinal plants used for the treatment of skin cancer.^[9] *Acalypha fruticosa*, *Alangium lamarki*, *Catharanthus roseus*, *Celastru spaniculatus*, *Embelia ribes*, *Ficus glomerata*, *Ficus racemosa*, *Nocimum basilicum*, *Plumbago zeylanica*, *Terminalia chebula*, *Tylophora indica*, *Wrightia tinctoria*. The extracts used for the treatment of breast cancer is *Buthus martensi*, *Colla cornu*, *Herba epimedii*, *Fructus lycii*, *Radix angelicae*, *Radix bupleuri*, *Rhizoma corydalis*, *Rhizoma curculiginis*, *Radix paeoniae*, *Radix glycyrrhizae*, *Scolopendra subspinipes*, *Squama manitis*, *Tuber curcumae*. The herbal medicines are used for treatment of pancreatic cancer is *Emblica officinalis*, *Nigella sativa*, *Terminalia bellerica*.

Treatment of depression

Among the various treatment options, herbal treatment is preferable due to its non toxic and inherent healing property. A number of nutritional and herbal supplements have shown promise as alternative treatments for depression.^[10] A large number of plants have potential

functions to treat depression which are described as, *Bacopa monniera*, *Panax quinquefolius*, *Piper methysticum*, *Rhodiolarosea*, *Valeriana officinalis*. St. John's wort is today most widely known as an herbal treatment for depression. St. John's Wort is the plant species *Hypericum perforatum*.

Treatment of psoriasis

Various natural proprietary formula and preparations containing botanical agents have been used to provide symptomatic relief in psoriasis.^[11] The various herbal remedies for psoriasis are, turmeric, curcumin, shark cartilage extract, oregano oil, milk thistle. Various antimicrobial agents *Azadirachta indica*, *Calendula officinalis*, *Cassia tora*, *Wrightia tinctoria* have been used in the management of psoriasis.

Treatment of dental diseases

The plants having the dental care properties.^[12] *Acacia catechu*, *Acacia arabica*, *Althea officinalis*, *Anacyclus pyrethrum*, *Azadirachta indica*, *Barleria prionitis*, *Cinnamomum camphora*, *Cuminum cyminum*, *Eucalyptus globules*, *Gardenia gummifera*, *Holarrhena anti-dysenterica*, *Jasminum grandiflorum*, *Juglans regia*, *Mimusops elengi*, *Myrica aspidioides*, *Myroxylon balsamum*, *Ochrocarpus longifolius*, *Ocimum sanctum*, *Origanum vulgare*, *Piper longum*, *Piper nigrum*, *Pistacia lentiscus*, *Pterocarpus marsupium*, *Punica granatum*, *Salvadora persica*, *Salvia officinalis*, *Solanum xanthocarpum*, *Symplocos racemosa*, *Syzygium aromaticum*, *Thalictrum foliolosum*, *Zanthoxylum armatum*. All these regimens play a significant role in suppressing the dental problems.^[13]

Treatment of vitiligo

Antivitiligo oil is a herbal remedy manufactured with potent herbs and is produced with traditional methods and is also a complete traditional herbal formulation. The plants which can be used in the treatment of vitiligo are *Acorus calamus*, *Adiantum capillus*, *Boswellia serrata*, *Cassia angustifolia*, *Cassia tora*, *Cinnamomum cassia*, *Fumaria officinalis*, *Glycyrrhiza glabra*, *Lavandula stoechas*, *Psoralea corydolia*, *Pterocarpus santalinus*, *Rosa damascena*, *Sphaeranthus indicus*, *Tephrosia purpuria*, *Vitis vinifera*, *Zingiber officinale*, *Zizyphus sativa*.^[14]

Herbal transdermal patches

Transdermal drug delivery systems are self-contained discrete dosage form topically administered in the form of patches that deliver drugs for systemic effects at a predetermined

and controlled rate. Transdermal drug delivery systems (TDDSs) facilitate the passage of therapeutic quantities of drug substances through the skin and into the general circulation for their systemic effects.^[15] It has been found that drugs from herbal origin can be utilized with enhanced efficacy by incorporating in transdermal drug patches. Even herbal penetration enhancers like terpenes are found to be potential enough to replace the conventionally available penetration enhancers like DMSO (Dimethyl Sulfoxide) which has several disadvantages.^[16] Herbal Transdermal patches are medicated adhesive pad designed to release active ingredients at a constant rate over a period of several hours or days after application to skin. Skin uses a special membrane to control the rate at which the drug contained within the patch can pass through the skin and into blood stream.^[17] The first commercially available prescription patch was approved by the U.S. Food and Drug Administration in December 1979, which administered scopolamine for motion sickness. The most common available transdermal drug delivery patches are the over-the-counter nicotine patches that help people quit smoking.

Anti-inflammatory activity

The extracts of *Achillea millefolium*, *Artemisia vulgaris*, *Bauhinia tarapotensis*, *Curcuma longa*, *Forsythia suspense*, *Houttuynia cordata*, *Glycyrrhiza uralensis*, *Lonicera japonica*, *Ruta graveolens*, *Securidaca longipedunculata* and *Valeriana wallichii* have shown anti-inflammatory activity.^[18]

Antidiabetic activity

From earliest period, people are using herbal plants as home remedies for the treatment of diabetes.^[19] A variety of herbal plants with antidiabetic activity are *Abroma augusta*, *Acacia melanoxylon*, *Acacia modesta*, *Acacia nilotica*, *Aconitum ferox*, *Adhatoda vasika*, *Adiantum capillus*, *Adiantum incisum*, *Agrimonia eupatoria*, *Allium sativum*, *Aloe barbadensis*, *Althaea officinalis*, *Apium graveolens*, *Arctium lappa*, *Commiphora abyssinica*, *Embilica officinalis*, *Eucalyptus globules*, *Ginseng panax*, *Gymnema sylvestre*, *Inula helenium*, *Juniperus communis*, *Medicago sativa*, *Nigella sativa*, *Orthosiphon stamineus*, *Panax quinquefolius*, *Polygala senega*, *Plantago ovata*, *Punica granatum*, *Salvia officinalis*, *Scoparia dulcis*, *Tanacetum vulgare*, *Taraxacum officinale*, *Tecoma stans*, *Trifolium alexandrinum*, *Trigonella foenum*, *Turnera diffusa*, *Urtica dioica*, *Xanthium strumarium*, *Zea mays* and *Zingiber officinale*.^[20-23]

Analgesic activity

The extracts of *Bougainvillea spectabilis*, *Chelidonium majus*, *Ficus glomerata*, *Dalbergia lanceolaria*, *Glaucium grandiflorum*, *Glaucium paucilobum*, *Nepeta italica*, *Polyalthia longifolia*, *Sida acuta*, *Stylosanthes fruticosa*, *Toona ciliata*, *Zataria multiflora* and *Zingiber zerumbet* are used as analgesic agents.^[24]

Anticancer activity

Medicinal plant products exhibiting anticancer activity continue to be the subject of extensive research aimed at the development of drugs for the treatment of different human tumors. The medicinal plants used for the treatment of cancer are *Acalypha fruticosa*, *Alangium lamarki*, *Catharanthus roseus*, *Celastrus paniculatus*, *Embelia ribes*, *Ficus glomerata*, *Ficus racemosa*, *Ocimum basilicum*, *Plumbago zeylanica*, *Terminalia chebula*, *Tylophora indica*, *Wrightia tinctoria*. The extracts used for the treatment of breast cancer is *Buthus martensi*, *Collacornu*, *Herba epimedii*, *Fructus lycii*, *Radix angelicae*, *Radix bupleuri*, *Rhizoma corydalis*, *Rhizoma curculiginis*, *Radix paeoniae*, *Radix glycyrrhizae*, *Scolopendra subspinipes*, *Squama manitis*, *Tuber curcumae*. The herbal drugs used for treatment of pancreatic cancer are *Embelia officinalis*, *Nigella sativa* and *Terminalia bellerica*.^[25-27]

Antiageing activity

Cell membranes are particularly susceptible to the hostility of free radicals. When the nucleus is injured, the cell loses its ability to replicate itself. The impaired cell replication results in the destabilized immune system, skin ageing and many age related disorders. Various antioxidants neutralize the free radicals and prevent oxidation on a cellular level. The most effectual antioxidants include pine bark extract, grape seed extract, and blueberries were effectual against the hostility of free radicals. Some commonly used herbs as antiageing agents are *Allium sativum*, *Arnica montana*, *Cucumis sativum*, *Curcuma longa*, *Ficus bengalensis*, *Lycium barbarum*, *Ocimum sanctum*, *Panax ginseng*, *Prunus amygdalus*, *Santalum album*, *Rosa damascena* and *Withania somnifera*.^[28,29]

Antifertility activity

Plant drugs have involved in the concentration of many scientists as a primary source of naturally occurring fertility regulating agents because of their little or no side effects. The plants that have been reported to have antifertility activity are *Amaranthus retroflexus*, *Artabotrys odoratissimus*, *Barberis vulgaris*, *Carica papaya*, *Dieffenbachia seguine*, *Evodia rutacarpa*, *Fatsia horrida*, *Ferula assafoetida*, *Hibiscus rosasinensis*, *Lonicera ciliosa*,

Magnolia virginiana, Mardenia cundurango, Pisum sativum, Podophyllum peltatum, Punica granatum, Raphanus sativus, Rehmannia glutinosa, Semecarpusana cardium, Sesbania sesban, Stemona japonica, Thuja occidentalis, Taxus baccata and Verbena officinalis.^[30]

Antipsoriasis activity

A variety of natural proprietary formulas and preparations containing plant materials have been used to provide symptomatic relief in psoriasis. The different herbal remedies for psoriasis are, turmeric, curcumin, shark cartilage extract, oregano oil, milk thistle. Various antimicrobial agents *Azadirachta indica, Calendula officinalis, Cassia tora, Wrightia tinctoria* have been used in the management of psoriasis.^[31,32]

Antidepressive activity

A number of nutritional and herbal supplements have shown promise as alternative treatments for depression. A large number of plants have potential functions to treat depression which are described as, *Bacopa monniera, Panax quinquefolius, Piper methysticum, Rhodiola rosea, Valeriana officinalis* and *Hypericum perforatum.*^[33]

Antivitaligo activity

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CONCLUSION

Medicinal herbs as a potential source of therapeutics aids have attained a significant role in health care system all over the world for human beings not only in the diseased condition but also as a potential material for maintaining proper health. It is clear that the herbal industry can make great strides in the world. With the increased use of herbal products, the future worldwide labeling practice should adequately address quality aspects. Standardization of methods and quality control data on safety and efficacy are required for an understanding of the use of herbal drugs. A major factor impeding the development of the medicinal plant based industries in developing countries has been the lack of information on the social and

economic benefits that could be derived from the industrial utilization of medicinal plants. Further research is required to exploit the compounds responsible for the observed biological activity.

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