

HERBAL HAIR COSMETICS: ADVANCEMENTS AND RECENT FINDINGS

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ABSTRACT

Cosmetology is defined as the science of alteration in the appearance. In India, the use of herbals for the purpose of beautification finds its occurrence in the traditional literature medicine such as Ayurveda. Herbal cosmetics is one of the most potent and effective area of cosmetic technology. It is used for beautifying and overall enhancing the human personality. Herbal products are characterized by a better tolerability compared with other synthetic products. This study aimed at reviewing the importance of herbal hair oil for the treatment of common hair problems as baldness, alopecia, hair fall, gray hair, dryness, and most common dandruff. Herbal products gains popularity over worldwide because it is lack of side effects as compared with

synthetic products. The purpose of using cosmetic preparations is to attain worship and sensual enjoyment. From the centuries the herbal extracts are used as whole or as a part for the ailments of hair, skin and overall appearance. Hair loss or baldness is not a life threatening disease but it leads to emotional stress and traumatic experience. For the treatment of such hair disorders the hair oil is prepared from herbs and herbal extracts. But, still no one herbal hair oil is sufficiently effective as 100%. The market survey shows the increase in the demand of herbal products for the hair care preparations. The current review deals with the enormous amount of scientific research, reports and patents available in different aspects of the herbal hair oil for the treatment of hair disorders.

Keywords: cosmetics, herbal products, herbal hair oil, hair problems.

1. INTRODUCTION

India herbal medicines are the principal form of medicines. In India around 6000 manufacturers for herbal medicines are available. According to WHO around 80% people of

the world uses herbal medicines. Although many synthetic drug molecules mimic the natural occurring molecule and have structure that fully or partially similar to natural molecule^[1]. Herbal treatments have growing demand in worldwide as they are lack of any adverse and effects as compare to synthetic formulations. In cosmetic industry hair oils are broadly used by the peoples. Herbal formulations gains an important role in all over the world as it is completely made up of natural sources derived from the plants. Pre-mature hair loss is one of the common types of dermatological condition. The etiology of hair loss is still not completely understood and also its complete medical treatment is not satisfactorily developed. One of the major causes of hair loss is the deficiency of iron (anemia)^[2]. As there is many more hair loss treatment available but no one of them is 100% effective^[3]. For the treatment of hair loss commonly plethora of herbs are used such as hibiscus, neem, amla, methi, tulsi, brahmi, lemon, shikakai, liquorice, nutmeg, henna, reetha, liquorice root, musk root, mahabhringraj, jantamasi, chitraka, marigold, parsley, rosemary, thyme^[4-5]. From the amongst plant amla is the major source of vitamin C and also contain phosphorus, calcium and iron which provides nutrition to normal hair growth and also use for the darkening of hair^[6]. Hibiscus contains calcium, iron, vitamin B1, phosphorus, riboflavin, niacin and vitamin C, which prevents premature graying of hairs and also provide thicker hair^[7]. Brahmi consists of alkaloids that enhance activity of protein kinase^[8]. Methi having high protein fodder that works as protein supplement to supply nutrition for hair^[9].

1.1 Cosmetics: the first archaeological evidence to the use of cosmetics was found from in Egypt during 3500 BC. The origin of the word cosmetic is from Greek^[11]. Cosmeceuticals are that cosmetic products which having biological active substances that have advantage similar to drugs or medicine^[12]. The beauty of hair and skin fundamentally depends on the individual health, diet, job routine, climatic condition and maintenance. From the 20th century the popularity of cosmetics has increased suddenly. Many manufactures separates the decorative cosmetic from care cosmetics. The word cosmetics is defined as that article which is rubbed, poured, sprinkled or applicable to any part of human body for the purpose of cleansing, beautifying or enhancing the appearance is called as cosmetics. The main aim of cosmetics is to improve and cure the skin and hair. There are three objectives of cosmetics these are as psychological, social, and clinical. The cosmetics products are classified according to their physical states in three main categories as

1. Solids: face powders, talcum powders, face packs etc.
2. Semi solids: creams, ointments, liniments, wax base creams, paste etc.

3. Liquids: lotions, moisturizers, hair oil, conditioners, shampoos, cleansing milk, mouthwashes, perfumes, nail polish, deodorants etc^[13].

2. Herbal Cosmetics are prepared by the association of active bioactive ingredients or pharmaceuticals. The presence of variety of phytochemicals and botanicals in the herbal products have dual importance, one is that they used as cosmetics to care body and another is the phytochemical improves the biological functions of human body naturally results in healthy skin and healthy hair^[14]. In the formulation of herbal cosmetics plants are used in three ways either it is a total extracts or a single molecule obtained from the purification of extracts (e.g. aloe vera gel, teas, plant extracts) selective extract like wheat germ, ginkgo or single natural molecule like vitamins, coenzyme Q10^[15]. As the name suggests the herbal extracts means the extracts of herbs. It is an ancient methodology because its origin was discovered from the holy Vedas and in Unani scriptures. As the realization said that the chemical medicines are not always work as magic bullets and they may have side effects. Now a day in this world there is turn towards the herbalism and use of herbal products and to live more natural way of life. Indian herbs are the source and tested for use in cosmetic industries and also in beauty parlours^[16]. Currently these herbs are used in their crude forms either in dried forms or pulverized forms by using mortar pestle. However the final product may contain inactive unnecessary substances in large amounts^[17]. Insufficient amount of active substances in the final product will leads to it ineffective therefore the concentration of active compound from herbal extracts have to be increased^[18].

2. 1 Herbal hair oil: Hair is the one of the vital part of our body and it influences the overall appearance of the person. Hair care products are defined as those formulations which are used for cleansing, modifying the texture of hair, changing of the color, giving life to the stressed hair, providing nourishment to the hair and giving the healthy appearance to the hair^[19]. There are two categories of hair care products these are hair tonics and second is hair grooming aids. Hair oil those contains herbal drugs are called as hair tonics. These are formulated by herbal extracts in an oil base. Hair oils are the hair care formulations applied for treatment of hair disorders such as baldness, aggression of hair, discoloring of hair, hair falling, and dryness of hair etc^[20]. The nature of oil is non sticky and addition of perfumes enhances the fragrance and overall improves its popularity. Proper application of hair oil gives luster to hair, softening the hair, gives flowness to hair and more important gives cooling effect to brain. The most recognized hair care preparation is herbal hair oils, they

moisturizes the scalp and also helpful in dry scalp and dry hairs. Herbal hair oil maintains normal functions of sebaceous gland as they supply normal essential elements for hair to naturally grow^[21].

2.2 Global status of herbal hair oil: According to World Health Organization (WHO) the global herbal market will grow \$5 trillion by 2050. The News National from Nigeria Natural Medicine Development Agency (NNMDA) has projected hope that herbal market currently is \$160 billion globally annually^[22]. Next to the China India is the largest producer of medicinal plants having greater than 40% global diversity. Form the study on 'Herbal Industry Biz Potential', presently, the Indian herbal market is worth Rs 7,000 crore (\$1.7 billion) and India exports herbal raw materials and medicines worth over Rs 3,600 crore (\$902 million)^[23].

2.3 Hair: A human have around more than 2 million hair follicles which have both positive as well as negative effect on skin health^[24]. It is one of the vital parts of our body which is derived from the ectoderm of the skin, it is work as a protective appendage for the body and is consider as an accessory structure of the body having integument like structure along with sebaceous gland and sweat gland^[25]. In embryonic stage development they are originated from the epidermis hence they are also known as epidermal derivatives^[26-28]. Hair follicle and hair shaft are the two basic parts of a hair. The biological activity of hair follicle is hair growth, pigmentation. Hair shaft is mainly made up of protein and is considered to be dead. For healthy and good looking manageable hair, to take care of both hair follicle and hair shaft is important. Coconut based hair oils penetrate both into the hair shaft and hair follicle and also into the medulla which is the innermost layer of the hair shaft. In different seasons hair behaves differently e.g. in summer heat removes moisture from the hair making it dry and brittle. By the application of oil, loss of moisture can be prevent and keeps hair soft and supple.

2.4 Hair growth cycle: There are three phases of hair growth cycle, these are as:

- 1. Anagen (Growth phase)** – this is a short phase as 2-8 years and about 80% of hair is in this phase.
- 2. Catagen (Involution)** – this is very short phase 10-14 days and in this phase the activity of hair growth increases and then hair moves to the next phase.
- 3. Telogen (Resting phase)** – in this stage hair is in resting stage and this stage is lasts for 90-100 days. Generally 50-100 hairs are shed randomly every day. The telogen phase is a

state at which the hairs move into resting state. More than 100 hair per day causes a state of alopecia (hair loss), albeit it could be temporary^[29-30].

3. Hair disorder treatment

The changes in hair follicle density, size and/or changes to the hair growth cycle are the fundamentally causes of hair disorders. Androgen also a one of major cause of hair loss^[31]. Another cause of hair loss is use of chemotherapeutic agents^[32]. The treatment of any hair disorder involves altering or modulating one or more of these causes of disorders. The treatment is depending on the nature of hair disorder. If the causes of the changes to hair growth density, size and growth cycle is known then the most effective approach of treatment is to target the initial disease mechanism. The treatment enables the damaged hair follicles to recover through their inherent regenerative capacity, they do not affecting directly on the damaged hair follicles. Mostly hair disorders involve changes to hair follicle distribution, size and growth cycle. By modulating one or more of these parameters the disorder can be treated potentially^[33]. Patents are available that claim the effects are due to the stimulation of hair follicle and scalp metabolism by improving blood circulation, activation of dermal papilla, antitestosterone action and increased nutrition to the hair follicle through accelerated blood flow but the mechanism are still not clear^[34-35]. Some of the patents are enlisted below in

Table: 1. Some Patents granted in this field

| S.No . | Patent No. | Application No. | Inventors | Year of grant | Subject area |
|--------|-----------------|-----------------|--|---------------|---|
| 1. | EP 1 825 845 A1 | 07250755.1 | Marini, Jan L._ San José,_ California 95119 (US) | 29.08.2007 | Cosmetic Herbal Compositions |
| 2. | EP 2 417 961 A1 | 10761640.1 | NAGANO Tanemasa Yokohama-shi Kanagawa 224-8558 (JP) | 15.02.2012 | Hair Cosmetic |
| 3. | 4511555 | 424279 | Valerie F. Faurt 4009. Glenwood Rd., Brooklyn, NY 11210 | 16.04.1985 | Herbal Hair Treatment Composition |
| 4. | US 6,475,476 B1 | 09/718,330 | Annette Fluker, 30 Summit St., East Orange, NJ (US) 07018 | 5.05.2002 | Herbal Hair Treatment And Method Of Making The Same |
| 5 | US 6,740,317 B1 | 09/753,906 | Suk H. Cho, Idaho Falls, ID (US); Becky Zehntner, Blackfoot, | 25.05.2004 | Hair Care Composition And Improved |

| | | | ID (US) | | Hair Quality |
|-----|--------------------|------------|--|------------|---|
| 6. | US 7,488,499 B2 | 10/246,466 | Etsuji Wakisaka, Haga-gun (JP); Takashi kitahara, Haga-gun (JP); Naoko Tsuji, Haga-gun (JP); Hiroshi kusuoku, Haga-gun (JP); | 10.02.2009 | Herbal Hair Growth Inhibitor And Depilation Accelerator |
| 7. | US 8,101,214 B2 | 12/745,064 | Jun Seong Park, Jin Young Lee, Eu Joo Kim, Hye Yoon Park, Sung II Park, Youn Joon Kim, Duck Hee Kim, Ih Seop Chang | 24.01.2012 | Composition For Skin External Application Containing Complex Of Herbal Extracts |
| 8. | US 2007/0196318A 1 | 11/361,060 | Jan L. Marini | 23.08.2007 | Cosmetic Herbal Composition |
| 9. | PCT/KR04/0056 | 10/592,946 | Seong-Lok Hwang, Min-Ho Lee, In-byeong Yoon, In-Ho Lee, Su-Jin Park, Seok-Seon Roh | 6.09.2007 | Hair Growth Agent Composition |
| 10. | PCT/AU04/0089 5 | 11/631,218 | Karina Anna Hilterman | 12.06.2008 | Herbal Composition |
| 11. | US 2010/0092582A 1 | 12/578,410 | Lavonda D. Anderson | 15.04.2010 | Topical Hair Care Formulation And Method Of Making |
| 12. | PCT/KR08/0669 8 | 12/745,064 | Jun Seong Park, Jin Young Lee, Eu Joo Kim, Hye Yoon Park, Sung II Park, Youn Joon Kim, Duck Hee Kim, Ih Seop Chang | 20.01.2011 | Composition For Skin External Application Containing Complex Of Herbal Extracts |
| 13 | US2011/030568 1A | 13/216,089 | Lavonda D. Anderson | 15.12.2011 | Topical Hair Care Formulation And Method Of Making |
| 14 | PCT/TR2010/00 0244 | 13/579,146 | Miinevver Yolcin | 07.03.2013 | Herbal Oil Which Is Used In Hair Care And In Massage And Which Is Used In Treatment Of Hair Loss, Hairlessness And Burns. |





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|-----|---------------------|-----------------------|--|------------|---|
| 15 | WO 02/092109 A1 | PCT/CN 01/00739 | Chen, Shaohong | 21.11.2002 | Herbal Composition And Its Use |
| 16. | WO 2005/002608A1 | PCT/AU2004/0 00895 | Hilterman, Karina, Anna | 13.01.2005 | Herbal Composition |
| 17. | WO2007/046636 A1 | PCT/KR2006/0 04246 | Hwang, Sung Yeoun | 26.04.2007 | Herbal Composition For Preventingand Improving Baldness |
| 18 | WO2009/041739 A2 | PCT/JP2008/06 8008 | Breakspear, Steven ITO, Takashi, Koike, kenzo, Cavaco-paulo Artur | 2.04.2009 | Hair Cosmetic Composition |






3.1 Common Hair Disorders: In Ayurveda, hair diseases are described in three types as Khalitya (loss of hairs), Palitya (Prematured hair graying), Indralupta (alopecia areata , totalis, universalis)^[37-38]. They can be further manifested clinically as:

- 1. Congenital disorders of hair growth:** this type of hair disorder is genetically not environmentally. It is also called hypertrichosis because it results in defects in normal growth of hair follicle in embryonic stage. It is one kind of alopecia.
- 2. Acquired disorders of hair growth:** this type of disorder is more complex in nature and is caused by biological factors of hair^[33].
- 3. Dandruff:** dandruff is the scaly particle which is cling to the root of the hair. It is caused by a poor diet, infection, and slow rate of metabolism also by stress. Dandruff occurs at puberty and it is most common in men than women^[39].
- 4. Split Ends:** it is commonly faced women. When the hair is dry and brittle then results in split ends.
- 5. Frizzy Hair:** this is caused by the decreasing in normal hair moisture level. High brushing condition leads to frizzy hair.
- 6. Flaky Scalp:** it is white flakes of dead skin that prevents growth of hair and causes to hair loss. This problem is most common in women.
- 7. Dull, Gummy Hair:** it occurs due to the use of hard water for washing hair.
- 8. Hair Loss:** it is common in women and men also. This caused by stress, menopause, birth control, medication, changing hormones, and the plethora of hair styling products^[40]. Alopecia is a common hair problem in cosmetics and also in Primary Health Care Practice, has been recognized for more than 2000 years. Approximately 0.2%-2% of the world population has been affected from alopecia^[41].

Various herbs and herbal treatment are available in the market for the purpose of treatment. Enlisted below are some of the herbal drugs as well as some marketed preparations commonly employed for hair loss treatment.

Table 2. Some important plants used for preparation of herbal hair oil ^[14]

| S.No. | Common Name & Biological Source | Distribution | Part used | Uses | Figure |
|-------|---|------------------------------|-------------|--|--|
| 1. | <i>Phyllanthus emblica</i> , Euphorbiaceae (Amla) | Throughout India | Fruit | Hair growth |  1 |
| 2. | <i>Arnica Montana</i> , Asteraceae (Arnica) | Cultivate sparingly in India | Flowers | Hair tonic and stimulates hair follicles |  2 |
| 3. | <i>Ficus racemosa</i> , Moraceae (Bargad) | Throughout India | Root | Massage to reduce hair fall |  3 |
| 4. | <i>Eclipta alba</i> , Asteraceae (Bhangra/Bringraj) | Himalaya region | Whole plant | Hair nourishment |  4 |

| | | | | | |
|----|---|---------------------------------|----------------|---|--|
| 5. | <i>Betula pendula</i> , Betulaceae (Birch) | North west India | Leaves | As antidandruff |  5 |
| 6. | <i>Bacopa monnieri</i> , Scrophulariaceae (Brahmi) | Throughout India | Entire herb | Hair growth, Good for sleep |  6 |
| 7. | <i>Arctium lappa</i> , Asteraceae (Burdock root) | Temperate region of India | Roots | Promotes hair growth. |  7 |
| 8. | <i>Centella asiatica</i> , Umbelliferae (Gotu kola) | Wet areas of India | Plant | Hair care, Darkening of hair, Hair oil |  8 |
| 9. | <i>Lawsonia inermis</i> , Lythraceae (Henna) | Throughout India | Leaves | For hair dye |  9 |




| | | | | | |
|-----|--|--------------------------------|---------|---|---|
| 10. | <i>Nardotachys jatamansi</i> , Valerianaceae (Jatamansi) | Alpine India | Rhizome | As hair tonic and hair growth |  10 |
| 11. | <i>Barssica spp.</i> Brassicaceae (Mustard) | Throughout India | Seed | As hair oil and hair nourishment |  11 |
| 12 | <i>Coccus nucifera</i> , Arecaceae (Nariyal) | Costal parts of India | Kernel | raw material for hair oil and hair tonic |  12 |
| 13. | <i>Acacia concinna</i> , Mimosaceae (Shikakai) | Tropical forest of India | Pods | Dandruff control |  13 |

Table 3 Herbal components of some marketed herbal hair formulations^[36]

| Sr. No. | Product name | Manufacture | Content |
|---------|----------------|-------------|------------------------------------|
| 1. | Chirayu Herbal | Chirayu | Amla, Bhringgraj, Brahmi |
| 2. | Hairich | Capro | H. roseus, E. alba, Osantum |
| 3. | Hairvit | Millennium | Brahmi, Bhringgraj, L.innerrmis |
| 4. | Hibril | Vital Care | S.indicum, Bhringgraj, Brahmi |
| 5. | K-7 Taila | Ajmera | Amla, Jatamansi |
| 6. | Kesh Rakshe | JRK | Amla, Bhringgraj |
| 7. | Keshamrit | Ajmera | Amla, Bhringgraj |
| 8. | Medhavi | Ajmera | Amla, Bhringgraj, Brahmi |

4. Recent studies on herbal oil preparations

In a study carried out by Singh et al in 2013, reported about the hair loss minimizing activity of endangered medicinal herb *Nardostachys jatamansi*. They described that the jatamansi extract has effective hair care property, as it is used in protection from hair fall. This study reported that the jatamansi has potency to reduced the initiation growth period of hair^[42]. In a study by Hazra J 2013, had reported that some medicinal plants such as Sikakai, Aritha, Bringraj has therapeutically greater importance for the hair care preparations for beautifying the beauty^[43]. Similarly, Mathews AM et al. in 2012 had reported in their work that the marketed product Hirbil oil (manufactured from Vital care Pvt Ltd) contains 1% *Tephrosia purpurea* extract in hair oil formulation that helps to relieves stress and provides cooling effect and also it induces sleep^[44]. Hindu et.al in 2012, had described the general information of shankhapushpi and reported that the root of shankhapushpi having property to stimulates the growth of hairs^[45]. Gautam S, et al. in 2012 had reported that herbal hair oil moisturizes scalp and also reverses dry scalp and dry hair condition. Hence, from their present investigation it was found that the herbal hair oil has optimum standards and biological screening establishes the efficacy of formulated herbal hair oil^[5]. In a study by Shrivastava et.al in 2012 had evaluated safety and efficacy parameter of SESA oil with Coconut oil in different kind of Hair & Scalp Ailments. The evaluation was resulted that patients using SESA oil showed a marked improvement (87.5 %) in hair & scalp related ailments as compare to coconut oil users (17.4%). It also improves patients psychological condition. The conclusion of this study was that SESA oil is five times more effective than Coconut oil^[46]. Similarly, Gediya et al. in 2011 had identified by their study many plants used by the people to cure skin disorders and as cosmetics. Many plants have dual functions as both curative and as cosmetic purpose^[47]. In Mahale et al. 2011 evaluated five different brands of herbal hair oil for their physicochemical properties, i.e. color, odor, density, viscosity refractive index, pH, saponification value, acid value and peroxide value. They reported that the leading brands of hair oil in the market Himani Navratna oil, Shanti maha thanda oil, Dabur super thanda oil, Ayurvedic Amla oil , himgold oil^[48]. In a similar study by Dey et.al in 2011 had described that *Achyranthes aspera* L. (Amaranthaceae) as a high potential medicinal plant and is used as antidandruff and can also be used for the treatment of dermatological disorders^[49]. Throat et al. in 2010 reviewed that herbs and herbal drugs have created interest among the people because of its clinically proven effect like hair loss. The study reported that the hair oil which is made up of many herbs having significant decrease in the time for initiation of hair growth and also have effective hair activity as compared to

standard [2% minoxidil ethanolic solution]^[50]. Suresh kumar P, et al. in 2010 had described that in polyherbal hair oil of the methanolic leaf extract of *Achyranthes aspera* shows the anti-dandruff activity which further potentiate the Dev et. al study on the same plant.^[51]

S.Justin Raj, et al. in 2010 had worked on the pharmacognostic and phytochemical properties of Aloe vera. In their study, they reported that hair oil containing Aloe vera (Ghrit Kumari) having property to prevent premature graying of hairs and makes them strong and dandruff free^[52]. Gautam et.al in 2010 reviewed that the field of the herbal drugs and formulations is very vast and there is still lot to explore on the subject of standardization of these^[53-55]. Gopala Krishna, et al., in 2010 had described the chemistry of coconut oil and its production and application. Coconut oil has long life and it has antiviral and antibacterial activity. The coconut oil is used in baking industries, pharmaceuticals and as cosmetics as hair oil. They also reported that the coconut oil easily absorbed in the body and have function similar to breast milk fat of human and therefore it is also used in infant food^[56].

In a scientific study by Nema Rk, et al., in 2009 states that, they tested each drug for their hair growth activity in a concentration range for 1-10% separately in herbal hair oil containing amla, hibiscus, brahmi and methi. The formulation containing 7.5% of each drug used for the study and showed excellent hair growth activity with standard (2% minoxidil ethanolic solution) by an enlargement of follicular size and prolongation of the anagen phase. The conclusion of this study was that the herbal hair oil has stimulating activity for hair growth. Thorat et al., in 2009 reported that hair formulation of *Eclipta alba* Hassk [Asteraceae] 10% w/v, *Hibiscus rosa sinensis* Linn [Malvaceae] 10% w/v, *Nardostachys jatamansi* [Valerianaceae] 5% w/v concentration in the form of herbal oil were studied and showed excellent hair growth activity with standard [2% minoxidil ethanolic solution] in wistar albino rats. Hair growth initiation time was significantly reduced to half on treatment with the oil, as compared to control animals. The result of treatment with oil were better than the positive control minoxidil 2% treatment. It holds the promise of potent herbal alternative for minoxidil^[57]. Again Throat et al., in 2009 had worked on the evaluation of herbal hair oil in reducing hair fall on human volunteers. They formulated herbal hair oil and compare it with coconut oil. The result was found that there is significant reduction of hair fall in formulated herbal hair oil as compared to coconut oil. The study concluded that herbs are used in the formulation has effective hair care properties^[58]. In a similar study by Roy RK et al., 2007 studied the development and evaluation of polyherbal formulation for hair growth—

promoting activity and revealed that hair growth initiation time was markedly reduced to one third on treatment with the prepared formulation compared with control animals^[59]. Nagappa et al, in 2005 had worked on cosmetic potential of herbal extracts. They further described that the herbal extract have cosmetic use as the more important feature of herbal extract is their antioxidant property. They reported that azelaic acid contained in wheat, barley and rye has been used for protection from hair loss. This azelaic acid has property to normalize the keratinization of cells in skin and hair^[60].

5. CONCLUSION

India has the well recognized and well knowledge on traditional herbs and their formulations. This review was an attempt to describe that many plants of medicinally importance can be used for the treatment of various kinds of common hair problems. Herbal products are of greatest popularity because they are purely made up of herbs and shrubs. Today's generation both men and women, suffers normal hair problems as there is more polluted environment which leads to hair disorders such as pigmentation problems (Fading), dandruff and falling of hair (Shedding). The use of bioactive ingredients from the herbal formulation stimulates the biology of skin and hair for natural growth that provides healthy hair and skin. Generally herbal formulation provides many vitamins, antioxidants, various oils, proteins, terpenoids and many essential oils. This article is an endeavor to describe the advantage and application of herbs as natural cosmetics for the purpose of natural hair growth.

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7. Conflict of Interest: None

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