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MEDICINAL HERBS EFFECTIVE ON THE SKIN

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ABSTRACT. Background: Because the skin is one of the most sensitive body parts and maintenance it is effective in human beauty as well as vegetable products to chemicals have fewer side effects and many plants have pharmacological effects affecting the skin, and are used in the preparation of cosmetic products, the purpose of this article, consider plants that have significantly positive effects on the skin. Methods: books, articles and Internet sites to search pub med, ISI web of science, Magi ran, Iranmedex and.... was used to identify plants with positive effects on the skin, regardless of adverse effects and their interactions, or plants that have negative effects on the skin. Results: A number of plants involved in the treatment of skin diseases and their effects had been proved, and were chosen. Including plants, avocado, thyme, Aloe era, chamomile, almond, licorice, calendula, olive, Yarrow and …. Conclusions: There are many herbs that have a role in the prevention and treatment of skin diseases, and are used either traditional or in the preparation of medicinal products cosmetics is used. Following several studies on various plants demonstrating the effects of a number of them scientifically and can be used since this information for the production of cosmetics and pharmaceutical products.

Keywords: medicinal plants, skin, cosmetics, health care, herbal

INTRODUCTION

Humans have always been looking for the best ways and possible treatments for own face and skin beauty and also for treatment of skin disorders. They have used initially of natural materials (soil, mud, plants) and then of chemicals and synthetic compounds, hormones and hundreds of different ways to skin.

For example different methods are used to treat an ulcer which is the oldest method of them using of the Gum trees and honey by the ancient Egyptian specific Pharaoh's wives and tea leaf extract by the Chinese while today is used of disinfectants solution and all of these methods are to speed up the healing of damaged tissue (Riahy et al., 2009;).Studies show has been using of the bath sour milk and some fruit juice for soft skin. Been recognized that there is in sour milk and some fruits organic acids called alpha hydroxy acid which can solve the keratinocyte layer of the skin and increase of skin cells and make the skin soft and refreshed (Sormaghi, 2009). Because of injuries and skin wounds are effective on the beautiful appearance are considered drugs and substances that can increase the speed and quality of recovery (Ashrafi, 2010). In the past hundred years herbs have played a decisive role in the treatment of diseases including skin diseases, but with the advent of chemical drugs and synthetic became fade their role and was used chemical drugs and antibiotics widely, but subsequently in recent years, due to the renewed attitude to use of herbal medicines and their side effects fewer, the balance is towards the usage herbal remedies (Cowan, 1992). Many plants are effective on the skin and have a high potential of antioxidant activity which these antioxidants have role anti-free radicals (Free radicals are the main cause negative skin changes) (Kinkel et al., 1984). On the other hand, synthetic and chemical cosmetics have a lot of harmful and adverse effects, although due to the highly sensitive skin, have had a awareness of side effects cosmetics, what chemical and what herbal (Reuter et al., 2010).

In this article we were reviews researches about the impact of medicinal plants on the skin and provided the latest studies done in this field, as an article. Meanwhile, it has been no suggestion in the field of the use or non-use of these plants and only stated research results.

METHODS

In this study, we used of books, articles, Internet searches in the sites pub med, ISI web of science, Magi ran, Iran Medex and ... ,to determine medicinal plants with positive effects on the skin, regardless, adverse effects and their interactions, or plants that have negative effects on the skin.

RESULTS

The number of plants that have a significant role in the treatment of skin diseases were selected and reviewed. Plants such as avocado, thyme, aloe vera, chamomile, almond, olive, evergreen, eucalyptus, sagebrush, wheat, Hamamelis and....

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In addition to positive effects many of the fruits on skin and their use in the preparation cosmetics and pharmaceutical products, there are many medicinal plants that cause treatment and prevention of skin diseases or are effective in maintenance of the skin, that some of them are presented in this paper.

Aloe vera: Aloe vera has been used for 2,000 years and has been consumed traditionally 300 years before the birth of Christ (Mohammadi, 1995) and is used for hundreds of years in the beauty (Klein et al., 1998).

In 1930 in the United States used of this plant for treat wounds resulting from burns and skin problems such as ulcers, acne, herpes simplex, scabies, psoriasis and other skin tumors (Thomas et al., 1998). Aloe vera gel is stimulator to skin and helps the growth of new cells. On the other hand that is healing, anti-fungal, antibacterial, cooling and refreshing (Korać et al., 2011) and also unique moisturizer (Radava et al., 2011). Aloe vera, provides protection of skin against the effects of sunshine (Dweck, 2002) and UV (Bhatia et al., 2010) and is effective in the treatment of skin cracking and dry skin, especially helps to improve skin eczema around the eyes or skin which is very sensitive and can restored, the skin tissue with get more oxygen to skin cells. Indeed, the effect of this plant is to the extent being helpful, even in prevention of skin diseases (Viehmann, 1978). Aloe Vera for centuries is which used as a local remedy for skin diseases (Thomas et al., 1998) and Aloe Vera Gel, more efficiently and economical than current treatments for chronic wounds (medical problem today), moreover can accelerate the rate of recovery (Avijgan, 2004). Aloe vera not only helps to improve the fibroblast cell line, but rather speed gives production of collagen process (Barcroft, 2003). Also been determined, prescribed topically, aloe gel that accelerates the process of incisional wound healing in rats, and this restoration is associated with gel concentration (Jarahi et al., 2009).

Avocado: Avocado is rich in vitamin E, beta-carotene (Mufti, 2003), vitamin D, protein, lecithin and fatty acids (Loughran, 2002) and avocado oil, due to, having vitamin "A", has many uses in cosmetics (Burgess, 2009). As, separately or mixed with sesame oil is used for preparing various creams especially for dry skin (Walch SG, 2011). Also avocado oil can be used to prevent of wrinkles (Otuki et al., 2011). Avocado is used to reduce damage due to skin inflammation and UV radiation (Rosenblat et al., 2011), also plays a role in protecting the skin against the sunlight (Mufti, 2011).

Eucalyptus (*Eucalyptus globulus* L): Eucalyptus has a variety of Florvglokynnul and tannins (Akram et al., 2010). Some of these compounds have biological activities including antioxidant (Amakura et al., 2002), antibacterial, antimicrobial and antifungal (Takahashi et al., 2004). *Eucalyptus* essential oil is a combination anti-inflammatory, antifungal, antibacterial poor, anti-virus and when applied locally has the effect of hyperemic (Kraft et al., 2004)

Lilium (lily): Lilium bulbs are used to prevent wrinkles (Shoohani et al., 2010).

Sagebrush (Artemisia) is effective as a lotion for the soft and prevents skin aging hands, the use of this plant caused to be soft and gentle to the skin and prevent premature aging and increases the resistance against various factors (Rezaii, 2008).

Artemisia aucheri: Artemisia aucheri (Ara) is a plant with evident anti-inflammatory and anti-microbial properties. (Dianati et al., 2001). Hydro-alcoholic extract of Artemisia aucheri accelerates skin wound healing process and decreases the duration of complete wound healing.

Thyme: as an amplifier and disinfectants, in the proper products for oily skin, are used (Radava et al., 2011). According to in the sources in medicine and pharmacology studies, a number of plants, including thyme, henna, and garlic and yarrow herbal products are effective seeker (Al Gindan et al., 1998; Junid, 1986). Also, thyme and yarrow extract are effective in the healing cutaneous leishmaniasis (Hejazi, 2009).

Considering in the sources in medicine and pharmacology different studies, some of plants, including multiflora, henna, and garlic and *Achillea millefolium* herbal products are effective leishmaniasis (Al Gindan et al., 1998; Junid, 1986). Also, thyme and yarrow extract are effective in the healing cutaneous leishmaniasis (Hejazi, 2009)

Flax: Flax oil (prepared by cold) has effective compounds such as linoleic acid which is effective to protect and strengthen skin, prevent wrinkles and dispel many of the rash. It also is used to produce many products for dry skin and dark (Ottariano, 1999). For burns and skin scaling can also be used flax oil (Nakhaee Moghaddam et al., 2009).

Wheat: buds and flower wheat is contain vitamin A-E and is an antioxidant, emollient and moisturizer (Guillou et al., 2011) and due to having precursors vitamin A (carotene) is an anti-aging (Kapoor et al., 2010).

Hamamelis (*Hamamelis virginiana*): has a variety of pharmaceutical and cosmetic products (Evans WC. 1996). They are used to prevent wrinkles and strengthen the skin (Viehmann, 1978). On the other hand, is used as an antiperspirant (Leung Ay et al., 1996).

Tea: In traditional medicine used tea tree oil as a medication of wound healing and repair (Trovato et al., 2001) which is an anti-fungal and antiseptic (Yaghmayei et al., 2009). This plant for massage dry and normal skin is suitable (Yaghmayei et al., 2010) and is used in cosmetic preparations for skin care (Rudbäck et al., 2012). On the other hand, green tea extracts possess antioxidant effects (Singh et al., 2012) moisturizing, softening and anti-aging (Silverberg et al., 2011). Green tea protects the skin against the UV rays and is Anti-Age Skin (Hong et al., 2012). Also, green tea and white tea are protective role and effective skin against the sun (Camouse, 2009).

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Horsetail (*Equisetum arvense*): In traditional medicine due to having free silica as an effective drug used in the treatment of wounds and ulcers (Rojhan, 2002). Boiled it clean skin, eliminates fatigue and prevents the premature aging and loosening skin (Zargari, 1992). Also this plant has an important role in enhancing skin elasticity and resistance and can be effective in restoration of tissue after cell death (Rojhan, 2002). Now, in the America are used for external consumption for wound healing (Chevallier, 2006). In fact, the horse tails by reduce inflammation (due to, surgical wounds, and a variety effective chemical mediators in the inflammation) and by strengthened cellular immune system, enzyme inhibition and cellular mediators and bacteria causes the faster healing of open skin lesions (Ashrafi, 2010). So, *Equistum arvense* could be a new promising therapeutic approach to improve skin wound healing because of its potential anti- inflammatory and wound healing stimulatory effects (Ashrafi, 2010).

Cocoa: Cocoa has antioxidant activity and inflammation (Lee et al., 2006). It is the raw material for many of the creams and is used as a cleanser. Eating chocolate can protect the skin in the UV (Neukam et al., 2007; Williams et al., 2009). Also cocoa has a large effect on wound healing (Davis et al., 2009).

***Achillea millefolium*:** This plant has anti-inflammatory effects (Mirzaei et al., 2010) and is used to treat skin inflammations wounds and burns (Benedek, 2008). *Achillea millefolium* is used for creams or lotions sunshine protective (Final report on the safety assessment of Yarrow (*Achillea millefolium*) 2001) and in combination lotion for fight with dandruff (Falk et al., 1975). Also this plant is used in the wound healing leishmaniasis (Hejazi, 2009).

***Cydonia obolonga*:** diluted alcoholic lotions, bark of this plant is useful for the prevention and removal wrinkles face, neck and around the eyes (Shoohani et al., 2010). Seeds of this plant have anti-edema effect, cooling and softening on skin (Shinomiya et al., 2009).

Also reported that topical ointments contain mucilage (*Cydonia obolonga*), the rate of wound healing in humans increases (Mousavi et al., 2006).

Camomile: Chamomile with variety of species which is used in the production of creams, lotions, shampoos, soaps and products for special bath (Rügge et al., 2010). Chamomile oil can be applied for softening and moisturizing creams (Lee et al., 2010). To protect the skin (Akihisa, 1996), remove acne and inflammation skin, fat and dandruff (Wickline, 2004). Chamomile is used in wound healing (Jarrahi et al., 2010; Jarrahi et al., 2008). Most applications of chamomile for the skin eliminate itching, inflammation and skin lesions (Rügge et al., 2010; Charousaei et al., 2011).

Marigold (*Calendula officinalis*): anti-inflammation (Graf, 2000) has a great impact to heal wounds and skin (Kartikeyan et al., 1990) particularly burns (Chandran, 2008). Also it has role in strengthening the skin (Akhtar et al., 2011) and skin that protects against sun and UV (Fonseca et al., 2010). Moisture is (Gharavi et al., 2002) and is used in cosmetic preparations (Final report on the safety assessment of *Calendula officinalis* extract and *Calendula officinalis*. 2001).

Hypericum perforatum L.: red juice that comes of this herb in the preparation of special cosmetic products for oily skin (Ottariano, 1999) and to treat various skin problems (González et al., 2010), such as skin lesions, herpes zoster (shingles) (Clewell et al., 2012) and reinforcement tired skin is used (Ottariano, 1999). This herb is effective for the prevention of premature skin aging and causes, elegance and freshness and clarity of the skin (Reuter et al., 2010). The Hypericum used to clean oily skin (Casetti et al., 2011). This plant has been wound repair (Amin, 2005) and have antibacterial effects (Derbentseva et al., 1968) and is used to treat burns and sunburn (Naghdi Badi et al., 2005), as found in a study by Flower Extract Hypericum ointment has antiseptic effects and treatment burn faster (Saljic, 1975). In addition, it is used in healing dermatitis (Länger, 2010), skin cancer (Alecu, 1998; Kacerovská et al., 2008).

Olive: Contains vitamins AE, antioxidants (Cevik, 2012), anti-inflammatory, healing, moisturizing (Khazaeli et al., 2011) Anti-Itch (Panahi, 2011) and has a great effect on skin burns (Cevik, 2012) will protect the skin against sunlight and UV radiation (Sumiyoshi, 2010).

Artichoke (*Cynara scolymus* L): plant extract is an antioxidant source (Ziaei et al., 2005). It is used in the production of lotions, creams and masks to strengthen the skin (Asgary et al., 2009) prevent wrinkles and maintain skin beauty (Shoohani et al., 2010). In Turkish folk medicine used the dried seeds of the plant for the treatment of Vitiligo and the stem to inflammation (Sarper et al., 2009). Of course, it is proven analgesic and anti-inflammatory effects of this plant (Shahrbanoo et al., 2011), also has been observed in mice, the inhibitory effects of artichoke, to form skin tumors caused by plant phytosterols (Yasukawa, 1995).

Coco (coconut): Contains Myristic acid and is used in cosmetic preparations as a softener (Verallo-Rowell et al., 2008), moisturizing (Agero et al, 2004), and cleanser (Burnett, 2011). Helps protect the skin against the sun, and UV radiation (Korać et al., 2011), and is used in wound healing (Nevin et al., 2010).

In addition to fruits and herbs mentioned above there are many herbs which are used in cosmetic preparations and here is described briefly about some of them. For example, the antioxidant activity of bitter almonds (Yiğit et al., 2009) and sweet almond and hazelnut oil are used as softening, hydrating (Masson et al., 1990) and cleaners, particularly in products for dry skin (Mozafarian, 1999). Tomato juice for the preparation of creams, lotions and cosmetic products for elegance, beauty, cleansing and strengthening the skin to be used and can prevents of early wrinkle (Shoohani et al., 2010).

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Plant locally (*Falcaria vulgaris*) is an antibacterial herb, (Shafaghat, 2010) and is effective in healing skin (Shakibaie et al., 2006). Echinacea extract has anti-inflammatory effects (Viehmann, 1978) and regenerative healing of skin wounds (Kinkel et al., 1984, Rezaii, 2008) and in traditional medicine is used to treat minor wounds, skin infections and to improve insect bites and snakes by American tribes (Ottariano, 1999). Rattles plant (*Prosopis farcta*) is an herb in the direction of healing among the public, especially in Sistan and Baluchistan, are used (Nakhaee Moghaddam et al., 2009).

Scrophularia striata with the local name was thirsty plant that grow in Ilam province and territory of Khuzestan (Mozafarian, 1999) and effective components of this plant can stimulate the production of collagen and shrinks faster wound healing, angiogenesis, vasodilatation and reduces inflammation, reduces bleeding and edema (Shoohani et al., 2010). Henna extract on coetaneous wound is effective (Ali Fatahybafqy et al., 2009). Salvia (*Salvia officinalis*) is used in the treatment of minor skin inflammation (Walch et al., 2011). A study has also demonstrated that the hydro gel (*Ginkgo biloba* L) leaf and rosemary herb for the treatment of skin diseases has positive effects (Piechota-Urbańska, 2011).

CONCLUSIONS

The effects of fruits and vegetables and plant species are undeniable on skin and their use is common both traditional or cosmetic preparations and chemical composition to skin care and prevention and treatment of skin diseases. Following several studies on various plants have demonstrated the effects of some the scientific that can be used of these data for preparation in cosmetic and pharmaceutical products. Hopefully, the findings of this paper can provide the information required in line with the target. However, the need for greater research in this area.

REFERENCES

Agero AL, Verallo-Rowell VM. A randomized double-blind controlled trial comparing extra virgin coconut oil with mineral oil as a moisturizer for mild to moderate xerosis. Dermatitis;15, 3, 109-116, 2004.

Akhtar N, Zaman SU, Khan BA, Amir MN, Ebrahimzadeh MA. Calendula extract: effects on mechanical parameters of human skin. Acta Pol Pharm.; 68, 5, 693-701, 2011.

Akihisa T, Triterpene alcohols from the flowers of compositae and their anti-inflammatory effects. Phytochemistry.,43, 1255-1260, 1996.

Akram E, Maryam E, Mohammad H, Givian R, Nasim A, Hypoglycemic effect of alcoholic extract of eucalyptus (Eucalyptus globulus L.) leaves in healthy and diabetic rats. Medical Science Journal of Islamic Azad University,tehran Medical Unite. 20, 1, 11-5. [persian], 2010.

Al Gindan, Kubba R. Cryosurgery in old world Cutaneous Leishmaniasis. Br J Dermatol. 118, 851-854, 1998.

Alecu M, Photodynamic treatment of basal cell carcinoma and squamous cell carcinoma with hypericin. Anticancer Res., 18, 4651-4., 1998.

Ali Fatahybafqy FH, Mohammad Mossadegh. Efficacy of henna on leishmaniasis lesions in mice BALB / c mice. Journal of Kerman University of Medical Sciences.15, 4, 329-35, 2009.

Amakura Y UY, Tsuji S, Ito H, Hatsno T, Yoshida T, etal. Constituents and their antioxidative effects in eucalyptus leaf extract used as a natural food additive. Food Chemistry., 77, 56-47, 2002.

Amin Gh. The most common traditional medicinal plants in Iran. Tehran: Tehran University of Medical Sciences; p198, 2005.

Asgary S, Movahedian A, Badiei A, Naderi GA, Amini F, Hmidzadeh Z. Effect of Gundelia tournefortii on some cardiovascular risk factors in animal model. J Med Plants.7, 28, 112-9. [persian], 2009.

Ashrafi A, Histometric and histophatologic evaluation of the effects of Equistum in comparison with zinc oxide ointment on the healing of experimental ulcers in rabbit skin. Veterinary Medicine (Tabriz)., 4, 2, , 14, 843-53.[persian], 2010.

Avijgan M. Aloe Vera gel as an effective and cheap option for treatment in chronic bed sores. Journal of Medical Faculty Guilan University of Medical Sciences, 15, 30, 45-51. [Persian], 2004.

Azadbakht M AJ, Pasandi S,. Formulation of herbal antiperspirant from Parotia Persica (DC.) C.A.Mey. (Hamamelis Persica) and preliminary clinical study Journal of Medicinal Plants, 3, 9, 35-42. [persian], 2004.

Barcroft A MA. Aloe Vera: Nature's Silent Healer. London: BAAM Publishing Ltd; 2003.

Benedek B. Yarrow (Achillea millefolium L. s.l.): pharmaceutical quality of commercial samples. Pharmazie., 63, 1, 23-6, 2008.

Bhatia S SK, Namdeo AG, Chaugule BB, Kavale M, Nanda S. Broad-spectrum sun-protective action of Porphyra-334 derived from Porphyra vietnamensis. Phcog Res.2, 45-9, 2010.

Bos JD, M M H M Meinardi. The 500 Dalton rule for the skin penetration of chemical compounds and drugs. Exp Dermatol., 9, 165-9, 2000..

Burgess CM. Cosmetic products. In: Kelly AP TS, editor. Dermatology for Skin of Color. New York: McGraw-Hill Medical;. p. Chapter 70, 2009.

Burnett CL, etc. Final report on the safety assessment of Cocos nucifera (coconut) oil and related ingredients. Int J Toxicol. 30, 3, 5s-16s, 2011.

Camouse MM, etc. Topical application of green and white tea extracts provides protection from

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solar-simulated ultraviolet light in human skin. Exp Dermatol., 18 6, 522-6, 2009.

Casetti F, Wölfle U, Gehring W, Schempp CM. Dermocosmetics for dry skin: a new role for botanical extracts. Skin Pharmacol Physiol., 24, 6, 289-93, 2011.

Cevik O, etc. Lycopene inhibits caspase-3 activity and reduces oxidative organ damage in a rat model of thermal injury. Burns. 2012.

Chandran PK KR. Effect of Calendula officinalis Flower Extract on Acute Phase Proteins, Antioxidant Defense Mechanism and Granuloma Formation During Thermal Burns. J Clin Biochem Nutr. , 43, 2, 58-64, 2008.

Charousaei F, Dabirian A, Mojab F. Using chamomile solution or a 1% topical hydrocortisone ointment in the management of peristomal skin lesions in colostomy patients: results of a controlled clinical study. Ostomy Wound Manage. 57, 5, 28-36, 2011.

Chevallier Andrew. translated Mazarezadeh A.Encyclopaedia of Medicinal Plants. 3 ed. Tehran: Vesal Publications; 2006.

Clewell A, Barnes M, Endres JR, Ahmed M, Ghambeer DK. Efficacy and Tolerability Assessment of a Topical Formulation Containing Copper Sulfate and Hypericum perforatum on Patients With Herpes Skin Lesions: A Comparative, Randomized Controlled Trial. J Drugs Dermatol. 11, 2, 209-15, 2012.

Cowan M. Plant Products as Antimicrobial Agents. Clinical Microbiol Rev. 12, 564-82, 1992.

Davis SC, Perez R. Cosmeceuticals and natural products: wound healing. Clin Dermatol, 27, 5, 502-6, 2009.

Derbentseva NA, Rabinovich AS. Isolation,purification and study of some physicochemical properties of novoimanin In: Novoimanin Ego Lech. Solov'eva AI, Naukova Dumka, editors. Kiev: USSR; 1968.

Dianati M, Asadi MA. A case report on the treatment of Paronychia with Artemisia. Feyz, Kashan University of Medical Sciences & Health Services, 5, 19, 104-8. [persian], 2001.

Dweck AC, Herbal medicine for the skin – their chemistry and effects on skin and mucous membranes. Pers Care Mag., 3,19-21, 2002.

Evans WC, Trease and Eranse pharmacognosy. WB sounders. London, 1996.

Falk AJ, Smolenki SJ, Baver Li, Isolation and identication of three new flavones from Achillea millefolium. pharm sci, 64, 11, 1838-42, 1975.

Final report on the safety assessment of Calendula officinalis extract and Calendula officinalis. Int J Toxicol. 20, 2, 13-20, 2001.

Final report on the safety assessment of Yarrow (Achillea millefolium) Extract. Int J Toxicol. 2, 79-84, 2001.

Fonseca YM CC, Vicentini FT, Nomizo A, Gerlach RF, Fonseca MJ. Protective effect of Calendula officinalis extract against UVB-induced oxidative stress in skin: evaluation of reduced glutathione levels and matrix metalloproteinase secretion. J Ethnopharmacol 17, 127, 596-601, 2010

Gharavi SM GN, Khooei M. Herbal cream containing extracts of Matricaria Chamomilla L, Calendula Officinalis L, Malva Silvestris L and Centaurea Cyanus L for treatment of skin disorders Pharmaceutical Sciences (journal of Faculty of Pharmacy).;1:79-86. [persian], 2002.

González JA, García-Barriuso M, Amich F. Ethnobotanical study of medicinal plants traditionally used in the Arribes del Duero, western Spain. J Ethnopharmacol. 15, 131, (2), 343-55, 2010.

Graf J. Herbal anti-inflammatory agents for skin disease. Skin Therapy Lett. 4 (5), 3-5, 2000.

Guillou S, Ghabri S, Jannot C, Gaillard E, Lamour I, S. B. The moisturizing effect of a wheat extract food supplement on women's skin: a randomized, double-blind placebo-controlled trial. Int J Cosmet Sci 33, (2), 138-43, 2011.

Hejazi SH, etc. Comparision Effectivness of Extracts of Thyme, Yarrow, Henna and Garlic on Cutaneous Leishmaniasis Caused by L. major in Animal Model (Balb/c). Journal of Medicinal Plants. 8 (30), 129-36. [persian], 2009.

Hong YH, Jung EY, Shin KS, Kim TY, Yu KW, Chang UJ, et al. Photoprotective effects of a formulation containing tannase-converted green tea extract against UVB-induced oxidative stress in hairless mice. Appl Biochem Biotechnol. 166, (1), 165-75, 2012.

Jarahi M, Zahedi M, Agorlo M, Taherian AA. Local effect of Aloe barbadensis Miller gel on skin incisional wound healing in rats. Journal of Gorgan University of Medical Sciences. 11 (1(14)), 13-7. [persian], 2009.

Jarrahi M, EmamiAbarghuee M. Effect of Hydro-Alcoholic extract of Matricaria chamomilla L on burned wound healing in rat. J Gorgan Uni Med Sci., 10(26), 22-6. [persian], 2008.

Jarrahi M, Vafaei AA, Taherian AA, Miladi H, Rashidi Pour A. Evaluation of topical Matricaria chamomilla extract activity on linear incisional wound healing in albino rats. Nat Prod Res; 24(8):697-702. [persian], 2010.

Junid AJ. Treatment of cutaneous leishmaniasis with infrared heat. Int J Dermatol., 25, 470-2, 1986.

Kacerovská D, Pizinger K, Majer F, Smíd F. Photodynamic therapy of nonmelanoma skin cancer with topical hypericum perforatum extract--a pilot study. Photochem Photobiol, 84(3):779-85, 2008.

Kapoor S, Saraf S. Assessment of viscoelasticity and hydration effect of herbal moisturizers using bioengineering techniques. Phcog Mag.,6, 298-304, 2010.

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Kartikeyan S, Chaturvedi RM, Narkar SV. Effect of calendula on trophic ulcers. Lepr Rev. , 61(4), 399, 1990.

Khazaeli P, Sharififar F, Amiri F, Heravi G, Heravi G. Evaluation of moisturizing effect of methanolic extract of five medicinal plants incorporated into cream bases using impedance and extensiometry methods. J Drugs Dermatol. 10(10), 1116-21. [persian], 2011.

Kinkel H, Plate M, Tullner H. Effect of Echinacin™ ointment in healing of skin lesions. Med Klinik 79, 580-3, 1984.

Klein AD, Penneys NS. Aloe vera. J Am Acad Dermatol (1Pt1):82, 1998.

Korać RR, Khambholja KM. Potential of herbs in skin protection from ultraviolet radiation. Pharmacogn Rev. 5(10), 164-73, 2011.

Kraft K, Hobbs C. Pocket guide to herbal medicine. New york: Thieme Stuttgart, pp: 61-62, 2004.

Länger R. The HMPC monograph on Hypericum: Background, development, contents. Wien Med Wochenschr. 160 (21-22), 557-63, 2010.

Lee KW, Kundu JK, Kim SO, Chun KS, Lee HJ, Surh YJ. Cocoa polyphenols inhibit phorbol ester-induced superoxide anion formation in cultured HL-60 cells and expression of cyclooxygenase-2 and activation of NF-kappaB and MAPKs in mouse skin in vivo. J Nutr. 136(5), 1150-5, 2006.

Lee SH, Heo Y, Kim YC. Effect of German chamomile oil application on alleviating atopic dermatitis-like immune alterations in mice. J Vet Sci.;11(1):35-41, 2010.

Leung Ay, Foster S. Encyclopedia of common natural ingredients.A willey intetrscience publication. New York. 1996.

Loughran J. Natural Skin Care: Alternative and traditional techniques. New Delhi: B. Jain Publishers; 2002.

Masson P, Merot F, Bardot J. Influence of hazelnut oil phospholipids on the skin moisturizing effect of a cosmetic emulsion. Int J Cosmet Sci. 12(6), 243-51, 1990.

Mirzaei A, Akbartabar M, Sadeghi H, Sharifi B. The Antioxidant Activities and Total Phenolic of Artemisia Martima, Achillea Millefolium and Matricaria Recutica Armaghane-danesh, Journal of Yasuj University of Medical Sciences.;15(3), 243-52. [persian], 2010.

Mohammadi Gh. Aloe vera. Tehran Research Institute of Forests and Rangelands;.[Persian], 1995.

Mousavi ZB, Meshki M, Hemmati A, VeisiMS, R R. Evaluation of the efficacy of Quince mucilage on wound healing. Iranian J Dermatology. 9(37), 260-3. [persian], 2006.

Mozafarian VA. Khuzastan flora:Agriculture natural resources research. Khuzestan: Publication Center of Khuzestan Province; 353. [persian], 1999.

Mufti J. UV Protection. Household and Personal Products Industry. [updated 2011], 2003.

Mufti J. UV Protection. Household and Personal Products Industry. 2003 Jun, [Last accessed on 2011 Mar], 2003.

Naghdi Badi HA, Amin Gh.R, Makki Zadeh M, Ziaei SA. St.John's wort (Hypericum Perforatum L.): A review. Journal of Medicinal Plants.; 4(16), 1-14. [persian], 2005.

Nakhaee Moghaddam M, MahdaviShahri N, Khayatzadeh J, Shahi Z. Evaluate the efficacy of the ointment mixed animal butter (Ghee) and powdered fruit pod rattles (Prosopis farcta) on epithelialization of skin wounds in rats. Biological Sciences (Zanjan Branch).; 2(4(7)):7-15. [persian], 2009.

Neukam K, Stahl W, Tronnier H, Sies H, Heinrich U. Consumption of flavanol-rich cocoa acutely increases microcirculation in human skin. Eur J Nutr. 46(1), 53-6, 2007.

Nevin KG, Rajamohan T. Effect of topical application of virgin coconut oil on skin components and antioxidant status during dermal wound healing in young rats. Skin Pharmacol Physiol. 23(6), 290-7, 2010.

Ottariano SG. Medicinal herbal therapy: a pharmacist's view. Portsmouth: Nicoln Fields Pub; 1999.

Otuki MF SO, Silveira Prudente A, etc,. Attenuation of experimental TPA-induced dermatitis by acetylenic acetogenins is associated with inhibition of PLA_2 activity. Eur J Pharmacol. 15:672(1-3), 175-9, 2011.

Panahi Y, etc. Efficacy of Aloe vera/olive oil cream versus betamethasone cream for chronic skin lesions following sulfur mustard exposure: a randomized double-blind clinical trial. Cutan Ocul Toxicol. 12. [persian], 2011.

Piechota-Urbańska M B-SA. Glycol plant extracts in the prescription of topical skin-whitening hydrogels. Polim Med.;41(4), 17-25, 2011.

Radava R, Korać and Kapil M. Potential of herbs in skin protection from ultraviolet radiation. Pharmacogn Rev. 5(10), 164-73, 2011.

Reuter J, Merfort I, Schempp CM. Botanicals in dermatology: an evidence-based review. Am J Clin Dermatol.;11(4), 247-67, 2010.

Reuter J, Wölfle U, Weckesser S, Schempp C. Which plant for which skin disease? Part 1: Atopic dermatitis, psoriasis, acne, condyloma and herpes simplex. J Dtsch Dermatol Ges.8(10), 788-96, 2010.

Rezaii A, etc. Effects of Echinacea purpurea herbal extract versus Zinc oxide in rat skin wound healing model, histometric and histopathologic study Tehran University Medical Journal; 66(9),625-32. [persian], 2008.

Riahy S, Imany H, Khoshbaten A. Effect of topical application of phenytoin and honey in closure of open wound in male rats Journal of Army University of Medical Sciences of The Iriran.;7(2):73-9.[persian], 2009.

Rojhan MS. Treatment by the plants. edition t, editor. Tehran: a cultural center, Abba; 2002.

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Rosenblat G MS, Segal J, Tarshis M, Schroeder A, Zanin-Zhorov A, Lion G, Ingber A, Hochberg M,. Polyhydroxylated fatty alcohols derived from avocado suppress inflammatory response and provide non-sunscreen protection against UV-induced damage in skin cells. Arch Dermatol Res;303(4):246-39, 2011.

Rudbäck J, Bergström MA, Börje A, Nilsson U, Karlberg AT. α-Terpinene, an Antioxidant in Tea Tree Oil, Autoxidizes Rapidly to Skin Allergens on Air Exposure. Chem Res Toxicol. 2012.

Rügge SD, Nielsen M, Jacobsen AS, Vang O, Jemec GB. Evidence of dermatological effects of chamomile. Ugeskr Laeger. 13;172(50), 3492-6., 2010.

Saljic J. Ointment for the treatment of burns. Ger Offen.;2:406,52, 1975.

Sarper F, Akadin G, Simsek I, Yesildad E. An ethnobotanical field survey in the haymana district of Ankara Province in Turkey. Turk J Biol.;33:79-88, 2009.

Shafaghat A. Free radical scavenging and antibacterial activities, and GC/MS analysis of essential oils from different parts of Falcaria vulgaris from two regions. Nat Prod Commun.;5(6):981-4. [persian], 2010.

Shahrbanoo Oryan, Sema Nasri, Gholamreza Amin kazemi-Mohammady, Mohsen Kazemi-Mohammady. Anti nociceptive and anti-inflammatory effects of aerial parts of Gundelia tournefortii L. on NMRI male mice. Shahrekord University of Medical Sciences Journal; 12:8-15. [persian], 2011

Shakibaie D, Pasharavesh L, Khoshboo S, Kaboodi B. The Effect of the "Falcaria Vulgaris" on Deep Skin Wound Remodeling Time and Skin Tension Power in Rats Behbood, The Scientific Quarterly;10(3):187-94. [persian], 2006.

Shinomiya F, Hamauzu Y, T. K. Anti-allergic effect of a hot-water extract of quince (Cydonia oblonga). Biosci Biotechnol Biochem.;73(8), 1773-8, 2009.

Shoohani B, Hemati AA, Taheri Moghadam M. Effects of Scrophularia striata Extract on Wound Healing in Rabbit. Scientific Journal of Ilam University of Medical Sciences.;17(4) 9-15, 2010.

Silverberg JI, Jagdeo J, Patel M, Siegel D, Brody N. Green tea extract protects human skin fibroblasts from reactive oxygen species induced necrosis. J Drugs Dermatol; 10(10):1096-101, 2011.

Singh BN, Shankar S, RK. S. Green tea catechin, epigallocatechin-3-gallate (EGCG): mechanisms, perspectives and clinical applications. Biochem Pharmacol.;15;82(12) 1807-21, 2012.

Sormaghi S. Medicinal plants and herbal therapy Tehran: Feeding the world; 2009.

Sumiyoshi M KY. Effects of olive leaf extract and its main component oleuroepin on acute ultraviolet B irradiation-induced skin changes in C57BL/6J mice. Phytother Res.,24(7), 995-1003, 2010.

Takahashi T KR, Sakaino M,. Antimicrobial activities of eucalyptus leaf extracts and flavonoids from Eucalyptus maculata. Lett Appl Microbiol.39(1):60-4, 2004.

Tavakoli MA, Effect of Hydro-Alcoholic Extract of Artemisia Aucheri on Healing of Skin Wound in Rat. Journal of Mazandaran University of Medical Sciences.20(77):70-6. [persian], 2010.

Thomas DR GP, LaMaster K, Tennyson T,. Acemannan Hydrogel Dressing Versus Saline Dressing for Pressure Ulcers. A Randomized,Controlled Trial. Adv Wound Care.;11(6):273-6, 1998.

Trovato A, Raneri E, Kouladis M, Tzakou O, Taviano MF, EM G. Anti-inflammatory and analgesic activity of Hypericum empetrifolium willd.(Guttiferae). Il Farmaco;56:455-7, 2001.

Verallo-Rowell VM, Dillague KM, Syah-Tjundawan BS. Novel antibacterial and emollient effects of coconut and virgin olive oils in adult atopic dermatitis. Dermatitis.;19(6), 308-15, 2008.

Viehmann P. Results of treatment with an echinacea-based ointment. Erfahrungsheilkunde. 27, 353-8, 1978.

Walch SG, Tinzoh LN, Zimmermann BF, Stühlinger W, Lachenmeier DW. Antioxidant Capacity and Polyphenolic Composition as Quality Indicators for Aqueous Infusions of Salvia officinalis L. (sage tea). Front Pharmacol.,2(79), 2011.

Wickline MM. Prevention and treatment of acute radiation dermatitis: a literature review. Oncol Nurs Forum.31(2), 237-47, 2004.

Williams S, Tamburic S, Lally C. Eating chocolate can significantly protect the skin from UV light. J Cosmet Dermatol.8(3),169-73, 2009.

Yaghmayei P, Moshrefjavadi F, Nilforooshzade AM, Mardani H, Kadanejadian P. The effect of 2% Alcohol Green Tea Extract on Healing Process of Open Wound in Male Mices Journal of Isfahan Medical School;27(96), 324-35. [persian], 2009.

Yaghmayei P, Moshrefjavadi F, Nilforooshzade MA, Mardani H, Kakanejadian P. Effects of watery and alcoholic extract of green tea on the process of open skin wounds healing in male rat (NMRI) Medical Science Journal of Islamic Azad University,tehran Medical Unite, 20(2):69-75. [persian], 2010.

Yang XW GQ, Studies on chemical constituents in fruits of Eucalyptus globulus. Zhongguo Zhong Yao Za Zhi;32(6):496-500, 2007.

Yasukawa K. Anexperimental study of the effect of an artichoke preparation on the activity of the sympathetic – adrenal system in carbon disulfide exposure. Probl Khig.20,162-71, 1995.

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Yiğit D, Yiğit N, Mavi A. Antioxidant and antimicrobial activities of bitter and sweet apricot (Prunus armeniaca L.) kernels. Braz J Med Biol Res 42(4), 346-52, 2009.

Zargari A. medicinal plants in Iran. Sixth Edition ed. Tehran: Tehran University 1992. [persian]

Ziaei SA, Dastpak A, Naghdi Badi HA, Poor Hosseini L, Hemati AR, Gharavi Naeini M. Review on Cynara Scolymus L. . Journal of Medicinal Plants.4(13), 1-10. [persian], 2005.

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