



# “HERBAL DRUGS IN PSORIASIS: A NATURAL MIRACLE POWER”

<sup>1</sup>Shubhnagi Kadu, <sup>2</sup>Dr. Swati Deshmukh

Ph.D Student, Department of Pharmacognosy, Asst. Professor Department of Pharmacognosy.  
PES Modern college of Pharmacy, Moshi Pune, India

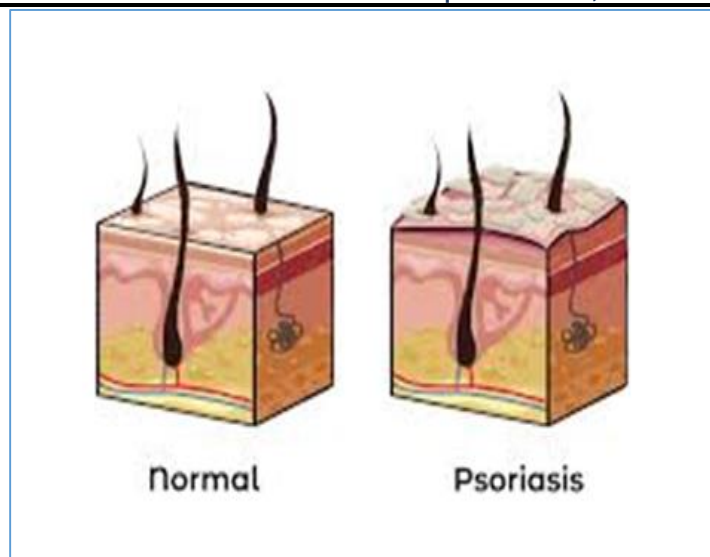
## **Abstract:**

Psoriasis is a common, chronic systemic inflammatory skin disease which affects 125 million people worldwide. It also includes psoriatic arthritis, cardio metabolic syndrome, and depression, leading to a significant reduction in patient's quality of life. By taking different literature surveys it is observed that current treatments only reduce symptoms, not cure. Common & conventional treatment is not useful in psoriasis. The demand for herbal formulations has increased nowadays worldwide. Number of skin and hair disorders due to the modern world's changing food habits and increased stress levels. The antioxidant, antifungal, anti-inflammatory properties of herbal drugs as well as conditioning properties of the plant extracts, make them effective. Present review article will help to study on the various plant extracts such as Capsicum, Azadirachta indica, Nigella sativa, Zingiber officinale, Angelica sinensis, Turmeric, Pongamia Pinnata (Karanj), Milk Thistle, Greentea, Matricaria recutita (Chamomile), Angelica sinensis, Marigold (Genda), Alpinia galangal. As the poor environmental conditions can cause cosmetic issues. Since these factors are unavoidable, therefore there is a need for a treatment that could counter all the problems in a much safer way. Despite advances in drug application, natural herbal alternative therapy has become a key factor for skin disease therapy due to the increasing demand for herbs, associated low costs, and the continuing adverse effects of synthetic medicines.

**Key Words:** Psoriasis, antioxidants, Herbal Drugs, Skin disorder, topical treatment, phytochemicals

## **Introduction:**

Psoriasis is an autoimmune skin disease, this is certainly a chronic non communicable inflammatory disease of epidermis and joints. Psoriasis is a combination of two greek words one is "Psora" which means becoming itchy and a problem is supposed by "iasis". Symptoms includes like sharply demarcated scaly, red, coin-sized skin damage usually on the elbows, knees, scalp, arms and feet in that itching, discomfort, stinging and discomfort are more common. On the basis of extent of inflammation, localization of rash and severity, psoriasis can be categorized as Vulgaris (plaque), guttate, inverse, pustular and erythrodermic. Medicines that appear to possess a powerful relationship this is certainly causal psoriasis tend to be beta-blockers, lithium, synthetic antimalarial, non-steroidal anti-inflammatory drugs (NSAIDs), and tetracycline. The anti-inflammatory, anti-proliferative and immunosuppressive action of drugs plays a significant role in psoriasis treatment. Medicinal plants like Neem, Turmeric are powerful weapon in the treatment of psoriasis.



## Medicinal plants used in the treatment of psoriasis

### 1. Aloe Vera



Liliaceae Family drug Aloe Vera contains the active ingredients are salicylic acid and anthraquinone derivatives. Its constituents used as analgesic, antipruritic, wound healing and anti-inflammatory encourages its usage of the same quality agent that is certainly anti-psoriatic. In double-blind, placebo-controlled research, 0.5% of local forms of Aloe vera extract had been subjected to treat psoriasis with diagnostic scores between 4.8 and 16.7 (mean 9.3). The information determined that 0.5% associated with the herb features greater efficiency without any risks and could be used as successful therapy that is herbal psoriasis. However, in another study a commercial Aloe vera gel type therapy this is certainly effective in psoriasis.

## 2. Capsicum



Solanaceae family drug Capsicum contains Capsaicin as an active constituent present in cayenne pepper (*Capsicum frutescens*) has shown a possible technique towards psoriasis, through activation of cellular factors that is apoptotic. Zero point zero two five percent of the formula had been applied as local ointment to boost the standing this is certainly psoriatic with differing disease intensity. The information obtained showed a clear decline in illness seriousness within a short period of the time, nonetheless the absolute minimum risk effect like regional site burning was reported, so the formula was encouraged and requested just 2 days that is successive.

## 3. Nigella sativa



Nigella is known as black cumin. It belongs to the family-Ranunculaceae. Active constituents are linoleic acid, oleic, thymol acid and palmitic acid. The *Nigella sativa* seeds contain ingredients, including nutritional components such as minerals, carbohydrates, fats, vitamins, and proteins, including eight or nine Essential amino acids. Pharmacological investigations of the seed extract reveal a wide spectrum of activities including anthelmintics, anti-inflammatory, antifungal and antibacterial.

#### 4. Turmeric



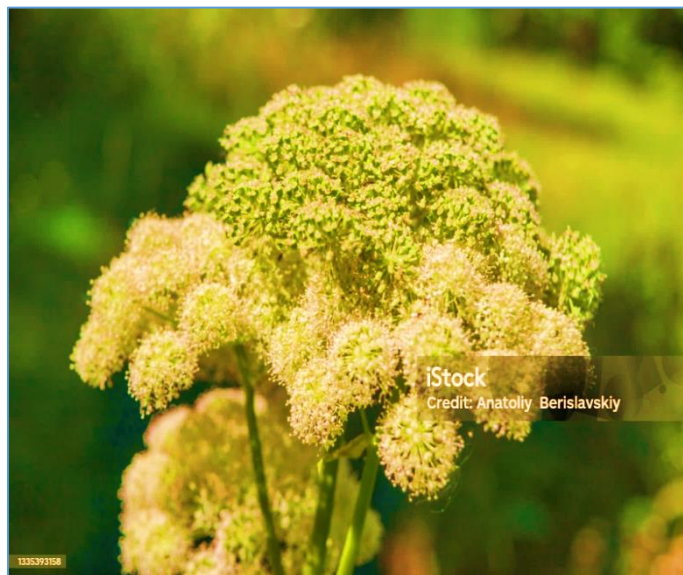
Turmeric Indian saffron, whose botanical name is *curcuma longa* belongs to the zingiberaceae family. The active constituents are curcuminoids zingiberine and Sesquiterpenes. The herb is well known for its anti-inflammatory, anti-oxidant, antitumor activity. The microbial action against tumors is through the regulation role of some cellular and immunological variables during cell cycle and apoptosis. From the ancient period it had been reported that Turmeric being applied to injuries which heal reduce scar formation & also used as an antiseptics.

#### 5. Green tea



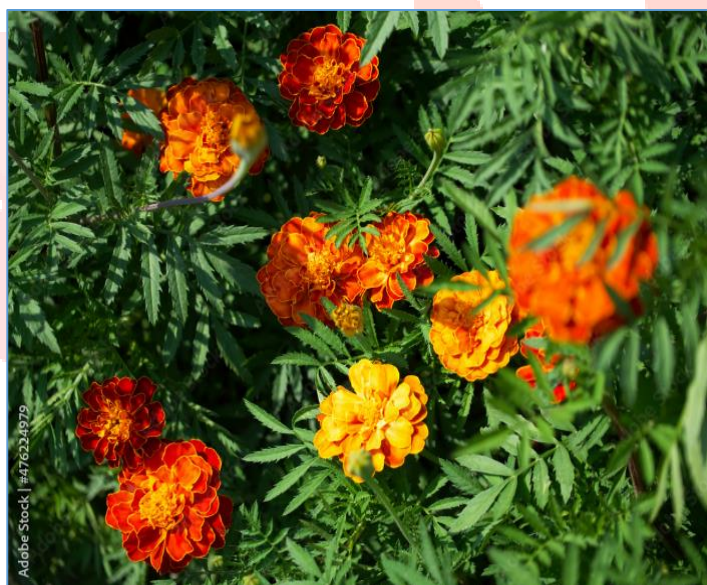
Green tea whose botanical name is *Melaleuca alternifolia* belongs to the myrtaceae family. Tea is considered around the world as the second most popular beverage and habit forming drug. It is absorbed as green, black colored.. Active constituents of green tea are terpinen-4-ol, alpha-terpineol, and alpha-pinene. It was found that the most popular green tea extract is reported in targeting health. This may be associated with its higher content of polyphenolic compounds, like flavonoids and catechins, whereas dried tea that is green produces significantly more than 30% among these active constituents. Most studies show that green tea constituents have a wide range of medical uses as antioxidant, antimicrobial, anti-tumor, anti-inflammatory.

## 6. Angelica sinensis



Angelica belongs to the apiaceae family. Main constituents present are coumarins and Psoralens. It is commonly known as Dong quai. Psoralens are photosensitizers that are potent for the existence of UVA. Publicity to UVA, following ingestion this is certainly psoralen causes epidermal DNA cross connecting and thus a decrease in the rate of epidermal DNA synthesis. Patients tend to be self-administering a form of psoralen– UVA (PUVA) treatment learned patients with psoriasis, two thirds 'patients get relief this is certainly their disease after dental treatment with this plant extract.

## 7. Marigold (Genda)



Marigold belongs to the compositae family. Calendula officinalis are a few of the very Indian herbs that are certainly typical medicinal properties for the treatment of various varieties of infection, viz. antifungal, wound healing and representatives that are anti diabetic. It contains esters of faradiol. This natural herb has actually been reported because of their effectiveness in the shape of decoctions, infusions and tinctures in conventional methods of medicines for the treatment of skin circumstances like psoriasis, leprosy etc.

## 8. Pongamia Pinnata (Karanj)



*Pongamia pinnata* (family: Leguminosae) is helpful for the treatment of skin diseases. Powdered seeds are used for treatment of leucoderma. *Pongamia* Seed oil is also used as insecticidal, democidal and bactericidal. Within the old-fashioned medicines that are systems of such as for instance Ayurveda and Unani, *P. pinnata* is employed for anti-inflammatory, anti-nociceptive, antihyperglycaemic, antilipoxidative, anti-diarrheal, antiulcer & anti-oxidant. Literature survey revealed that *Pongamia Pinnata* was used for the treatment of psoriasis by traditional therapists. The anti-psoriatic activity of the Hydroalcoholic Extract of *Pongamia pinnata* leaves is reported by Wadher et al. in 2021.

## 9. Milk Thistle



Milk Thistle belongs to the asteraceae family. Mainly it contains flavonoids. Milk thistle has been shown to restrict T cells activation which happens in psoriasis. This plant is quite well-known for its hepatoprotective activity. Many changes have been recognized in the liver of clients with psoriasis, including steatosis, periportal infection, fibrosis, necrosis and cirrhosis. The significance of silymarin in the treatment of psoriasis might be due to its ability to improve endotoxin reduction by the liver, restrict camp phosphodiesterase and avoid leukotriene deduction.

## 10. *Matricaria recutita* (Chamomile)



*M. chamomile* belongs to the asteraceae family. It is commonly known as a Chamomile. MCEO, a plant oil, possesses a natural advantage in terms of skin barrier repair, which treatment inhibits inflammation in HaCaT keratinocytes, the potential mechanisms correlated with the activation and crosstalk of PI3K/Akt/mTOR and p38MAPK pathways. In addition, MCEO ameliorates the skin lesions in IMQ-induced psoriasis-like skin inflammation mice, downregulating the levels of inflammatory cytokines. Finding novel, safe, and potential agents from natural plants for treating inflammatory skin disorders. Azulene is one of these compounds whose anti-inflammatory potential has been shown by the previous studies.

## 12. *Oregon grape*



Oregon grape is used for scaly, itchy skin (psoriasis), eczema (atopic dermatitis), stomach problems, It belongs to the berberidaceae family. It is deemed an extremely well understood plant utilized as a part of skin problems, particularly in psoriatic plaques. The effect of bark focuses on *Mahonia aquifolium* and its particular primary constituents (berberine, berbamine, oxyacanthine). He furthermore unveiled the focus of bark of *Mahonia aquifolium* is definitely a substance of keratinocytes improvement. The benzyloquinoline berbamine that is alkaloid oxyacanthine were more powerful inhibitors.

### 13. Neem



The neem tree (*Azadirachta indica*) or the Indian lilac belongs to the family Meliaceae and genus *Azadirachta*. Nimbidin is the primary active constituent. Decoction of leaves is employed to bath to treat human anatomy infection. Its decoction is also used orally to treat the same. The seed oil is used outwardly to kill lice and to treat dandruff. Quercetin, a flavonoid phenolic compound, had the highest inhibitory effect on the TNF- $\alpha$  induced activation of NF- $\kappa$ B pathway. Neem was reported to be useful in psoriasis in a study on 50 patients.

### 14. *Alpinia galangal*

Its common name is thai zinger and belongs to zingiberaceae. Main constituents are 1,8-cineole, alpha-fenchyl acetate. The leaves are thin unripe fruits made into paste and applied externally. Chanachai et al; reported that the plant *alpinia galanga*, *curcuma longa* and *annoa squamosa* were useful for their anti-psoriatic effect. *Alpinia galanga* (AG) of Zingiberaceae family have demonstrated antipsoriatic activity on HaCaT cell line.

### Conclusion:

Finding novel, safe, and potential agents from natural plants for treating inflammatory skin disorders is a novel strategy for future research. Anti-inflammatory plant drugs with different targets with combined applications were a potential therapeutic strategy in psoriasis.

### References:

1. Nowak-Perlak M, Krzysztof Szpadel, Izabella Jabłońska, Monika Pizon and Marta Woźniak, 2022, Promising Strategies in Plant-Derived Treatments of Psoriasis-Update of In Vitro, In Vivo, and Clinical Trials Studies, *Molecules*,
2. Babu et al. 2022, FORMULATION AND EVALUATION OF POLYHERBAL CREAM, *World Journal of Pharmaceutical Research*, Vol 11, Issue 8, 7, 591.
3. Ashish Kumar & Gurdeep Singh, 2021, Medicinal utility of some herbs for the treatment of psoriasis: An updated approach, *International Journal of Botany Studies*, Volume 6, Issue 3, 308-312.
4. Shelton RM. Aloe vera. 1919, Its chemical and therapeutic properties. *Int Dermatol*, 30:679-683. [PMID: 1823544 DOI: 10.1111/j.1365-4362.1991.tb02607.x]
5. Paulsen E, Korsholm L, Brandrup F. 2005, A double-blind, placebo-controlled study of a commercial Aloe vera gel in the treatment of slight to moderate psoriasis vulgaris. *J Eur Acad Dermatol Venereol*, 19:326-331. [PMID: 15857459 DOI: 10.1111/j.1468-3083.2004.01186.x]
6. Lassus A, Forsström S. A double-blind study comparing oleum horwathiensis with placebo in the treatment of psoriasis. *J Int Med Res*, 1991;19:137-146. [PMID: 1864450].



7. Ravichandiran V, Malarkodi Velraj, Nirmala S, Anusha Male, Jayakumari S, Masilamani. K, 2013, AntiPsoriaticActivity of Smilax china Linn. Rhizome Ind J Pharm Edu Res,47(1)
8. Wadher et al. 2021, Evaluation of antipsoriatic activity of gel containing Pongamia pinnata extract on Imiquimod-induced psoriasis,Clinical Phytoscience,7:20.
9. Chen et al, Essential Oil of Matricaria chamomilla Alleviate Psoriatic-Like Skin Inflammation by Inhibiting PI3K/Akt/mTOR and p38MAPK Signaling Pathway,Clinical, Cosmetic and Investigational Dermatology,2024:17 59–77.
10. Hima Gopinath and Kaliaperumal Karthikeyan, 2021, Neem in Dermatology: Shedding Light on the Traditional Panacea,Indian J Dermatol.Nov-Dec,66(6): 706.
11. Ramanunny et al.Topical non-aqueous nanoemulsion of Alpinia galanga extract for effective treatment in psoriasis: In vitro and in vivo evaluation, International Journal of Pharmaceutics, Volume 624, 25 August 2022, 121.

