



Presenting.....

new

IN TINEA & PSORIASIS

TM

SORAMAX

NEOSKIN-OIL



COMPOSITION

Each 100 ml. Oil contain's aqueous extract (quath method) from coarse powder of

प्रपुनाट	Sd.	Cassia tora	1g.
विभित्तक	Frt. prp.	Terminalia belerica	1g.
हरित्तकी	Frt. prp.	Terminalia chebula	1g.
आमलकी	Frt. prp.	Emblca officinalis	1g.
गुडुची	stem	Tinospora cordifolia	1g.
किरात तिक्त	W.P.	Swertia chirata	1g.
वासा	Lf.	Adhatoda vasica	1g.
दारुहरीद्रा	Stem	Berberis aristat	1g.
यष्टी	Rt.	Glycyrrhiza glabra	1g.
हरीद्रा	Rz.	Curcuma longa	1g.
मंजिष्ठ	St.	Rubia cordifolia	1g.
बाकुची	Frt.	Psoralea corylifolia	1g.
कटकारी	W.P.	Solanum surattence	1g.
कन्यासार	Lf.	Aloe barbadensis	1g.

and oil of

तिल तैल	Sd. oil	Sesamum indicum	80 g.(qs.to make 100 ml.)
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निम्ब	Sd.	Azadirachta indica	5 ml.
करंज	Sd.	Pongamia pinnata	15 ml.

Preservative - Sodium methyl parben, Sodium propyl paraben - qs.
BHT- qs., Sugandhit dravya - qs.

In Eczema , Ringworms , Psoriasis
& Skin Abscesses

TM

SORAMAX

(ALL IN ONE SKIN OINTMENT)



COMPOSITION Each 100gm Contains

गंधक	SULPHUR	1.5GM
पुवाड़	CASSIA TORA	SD. 500MG
कपूर	CINNAMOMUM CAMPHOR	EXUD. 1GM
दारु हरिद्रा	BERBERIS ARISTATA	STEM 100MG
मुलेठी	GLYCYRRHIZA GLABRA	RT. 100MG
सतलोबान	BENZOIC ACID	5GM
निम्ब तेल	AZADIRACHTA INDICA	SD. 5ML
करंज तेल	PONGAMIA PINNATA	SD. 5ML
हार्ड पैराफिन वेक्स	HARD PARAFIN WAX	7.300GM
पेट्रोलियम जेली	PETROLIUM JELLY	74.500GM

(QS to make 100GM)

India, being a part of the global biome, is home to several remedial plants .

Journal of Applied Biology & Biotechnology Vol. 12(4), pp. 37-46, Jul-Aug, 2024
Available online at <http://www.jabonline.in>

Skin diseases are among the most common of all human health afflictions and affect almost 900 million people in the world at any time.

INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN
MULTIDISCIPLINARY FIELD

Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value : 86.87
Volume - 9, Issue - 8, August - 2023

mycosis (Fungal infection)

Globally morbidity and mortality from various fungal infections are widely occurring in immunocompromised people. Topical fungal infections (caused by Trichophyton, Microsporum and Epidermophyton) are usually confined to the outer layers of skin, hair and nails where keratin is the major structural protein, leading to a wide variety of disease states .

Journal of Ayurvedic and Herbal Medicine 2016; 2(1): 31-35

The need to expand the available pharmaceutical repertoire is underlined by several recent reports, including the 2019 Antibiotic Resistance Threat Report by the Centers for Disease Control and Prevention; this document states that in the United States alone, more than 2.8 million antibiotic resistant infections and more than 35,000 related deaths occur each year (CDC, 2019). These fatal infections are most frequently caused by the 18 species of bacteria and fungi listed as current urgent, serious, or concerning human health threats (CDCE, 2019). Additionally, on a global scale, infectious diseases cause approximately 20% of all deaths each year and are the leading cause of death of children under 5 years old (Martens and Demain, 2017). Many in the medical field agree that devastating statistics like these are a consequence of entering the “post-antibiotic era,” a time in which the efficacies of antibiotics and other antimicrobials are unreliable. (Wang et al., 2020; Streicher, 2021).

Frontiers in Pharmacology | www.frontiersin.org 3 May 2022 | Volume 13 | Article 891535

Tinea versicolor is a common superficial fungal infection of the skin, prevalent in the hot and humid environment of India. It is caused by the *Malassezia* species which is a dimorphic, lipophilic fungus most frequently affecting the seborrheic areas of the body like face, neck, upper back and chest. Normally 10- 15% of the general practitioner's encounter skin disorders in their day to day practice with overall prevalence rate of 30% or more probably occurring in tropical zones.

Journal of Drug Delivery & Therapeutics. 2020; 10(4-s):25-30

Dadru (Ringworm)

Worldwide up to 700 million people are estimated to be suffering from auto-immune disease. According to *Ayurveda* cause of auto-immune disease is due to mechanism of aberrant 'Agni' and 'Ama' production may occur at macro and micro level. *Journal of Ayurveda and Integrated Medical Sciences* | March 2023 | Vol. 8 | Issue 3

The immune system usually guards against bacteria and viruses. When it senses the foreign invaders, the immune system sends out fighter cells to attack them. Usually, the immune system knows the difference between foreign cells and own cells. In an Autoimmune disorder, the immune system mistakes to recognize, part of your body, like your joints or skin or tissues, as foreign. It releases protein called auto-antibodies that attack healthy cells and further caused variety of diseases. The disease and progression vary from person to person.

Ayurveda based on a holistic view. *Ayurvedic* principles are specific and yet broad enough to facilitate application to and analysis of even the new and emerging disease and syndrome. According to *Ayurveda* cause of auto-immune disease is due to mechanism of aberrant 'Agni' which produced *Ama* and weak *Ojas*. Also, in auto-immune disease different *Dhatvagnis* are involved. *Ayurvedic* principles are specific and it treats the root cause of disease rather than the symptoms of autoimmune disease. *Ayurveda* focuses on restoring, balancing and strengthening the immune system, threw work on *Agni* and *Ojas*.

The modulation of immune system response by using *Ayurvedic* herbal medications as a possible therapeutic measure has now become a subject of scientific investigation. It provides numerous medicinal plants which have immuno-modulator properties, like *Ashwagandha*, *Amalaki*, *Guduchi*, *Pippali*, *Punarnava*, *Yashtimadhu*, *Vidang* etc. The present paper deals with various researches done on *Ayurvedic* medicinal plants in management of Auto immune disease. *Journal of Ayurveda and Integrated Medical Sciences* | March 2023 | Vol. 8 | Issue 3

Dadru is very tenacious in nature, hence they should be treated continuously at least up to three months otherwise relapses are very common. *IJAPR* | June 2017 | Vol 5 | Issue 6

In India 5 out of 100 people suffer from skin infections. *World Journal of Pharmaceutical and Medical Research* www.wjpmr.com | Vol 8, Issue 10, 2022.

Dermatophytosis (tinea) infections are superficial fungal diseases caused by dermatophytes, a fungus genus that penetrates and grows in dead keratin leading to reddish-colored erythematous cutaneous eruptions in circular lesions presenting with itching. If neglected, fungal infections are more likely to come back and can cause the emergence of more severe conditions. Relapses and recurrences demonstrate that the pathogenic organism is not simply eradicated, demanding more research to create new therapeutic options. Numerous medications used in *Ayurveda* are thought to have the Krimighna effect, which can result in a more effective course of therapy.

Dermatophytosis can be simulated with *Dadru Kushtha* because the clinical characteristics of the disease are more closely related to those of dermatophytosis.

2022 Journal of Indian System of Medicine | Published by Wolters Kluwer - Medknow

According to World Health Organization, the global prevalence of superficial mycotic infection ranges from 20% to 50%. In India, five out of 1000 people suffer from tinea infection. Tinea infection is seen more commonly in the geographical area having higher humidity, overpopulation, and poor hygienic living conditions.

2022 Journal of Indian System of Medicine | Published by Wolters Kluwer - Medknow

Dermatophytoses have become a significant health problem affecting children, adolescents and adults world-wide. In India 5 out of 1000 people suffer from Tinea infections. *Int J Ayu Pharm Chem* 2017 Vol. 7 Issue 1

Abstract: *Dadru* (Tinea or ringworm) is one of the most common skin disorders encountered in the clinical practice. It is a group name for a highly contagious *Mycelia* fungus. It is a commonest single fungus group of infections found in an unhygienic condition especially in tropical and subtropical countries, unless properly treated they become chronic. Prevalence of superficial fungal infection was 27.6 %, Dermatophytosis was 75.6 %. Tinea corporis is commonest (78%) clinical pattern of dermatomycosis.

Res Educ Indian Medicine ISSN 01977-7700 Published online First on Dec 09, 2022

Dadru (Tinea or ringworm) is one of the most common skin disorders encountered in the clinical practice. It is a group name for a highly contagious *Mycelia* fungus. It is a commonest single fungus group of infections found in an unhygienic condition especially in tropical and subtropical countries, unless properly treated they become chronic. Prevalence of superficial fungal infection was 27.6 %, Dermatophytosis was 75.6 %.

Tinea corporis is commonest (78%) clinical pattern of dermatomycosis 1. *Dadru* is commonly occurring skin diseases which have been included under *Mahakushta* by *Acharya Sushruta* 2. *Dadru* bears greater resemblance with Tinea. There are various treatment modalities which can be applied in patients with *Dadru*, like *Shodhana*, *Shaman*, *Raktamokshan* etc. *J Res Educ Indian Medicine*

Published online First on Dec 09, 2022 DOI: 10.5455/JREIM.82-1635266753

Dermatophytosis, also called as tinea or ringworm is infection caused by a group of keratinophilic fungi called dermatophytes. The three major genera causing tinea are *Trichophyton*, *Microsporum* and *Epidermophyton*. Dermatophytes colonize the skin, nails and hair of human population. It affects the keratinous tissues of humans and other vertebrates and thus causes superficial infections. Contagiousness among animal communities, high cost of treatment, difficulty of control and the public health consequences explain their great importance. A wide variety of dermatophytes have been isolated from animals, but a few zoophilic species are responsible for the majority of the cases, viz. *Microsporum canis*, *Trichophyton mentagrophytes*, *Trichophyton equinum* and *Trichophyton verrucosum*, as also the geophilic species *Microsporum gypseum*.

Mitesh Dwivedi., et al. “In Vitro Inhibition of Tinea Corporis from Various Extracts of *Aloe vera* and *Azadirachta indica*”. *Acta Scientific Microbiology* 1.9 (2018): 16-23.

Volume 1 Issue 9 September 2018



Figure 3 Extensive erythematous, lichenified scaly plaques involving groin, scrotum, prepuce and extending upwards towards abdomen (Tinea cruris et corporis). History of having used topical and systemic steroids and salicylic acid topically.



Figure 4 Tinea cruris with scaly plaque in groin extending to the base of penile shaft and scrotum (tinea genitalis).

According to various studies from the different states of India, *T. rubrum* is the predominant species.⁹ Predominance of *T. rubrum* in India has been shown in central India and all the states below it before 1988.¹⁴ Data on the prevalence of dermatophytes before this epidemic-like situation in this area is missing. For the past 6-7 years, this terrible scenario has been continuing. One-third of the dermatology clinic attendance is due to patients with dermatophytosis.

Medical fraternity in India has been observing an increase in the prevalence of dermatophytosis and that too of the difficult to treat recalcitrant, recurrent and chronic dermatophytosis, over the last 3-4 years.¹⁵ Here, in our study, the epidemic is due to *T. interdigitale* (98%). We had one case of tinea capitis due to *T. violaceum* in the present study. During past four years, we had one case of tinea faciei due to *T. violaceum*. We have not reported any case of extensive tinea due to *T. violaceum* though epidemics/outbreaks have been reported to this dermatophyte species.¹⁶⁻¹⁷ Also, we did not find any case of tinea pedis or tinea unguis during this study period. Tinea pedis is relatively uncommon in India and is the least prevalent of all the dermatomycoses.¹⁸ Recently, there have been some reports of extensive, atypical chronic and recalcitrant dermatophytosis from West Bengal,⁷ Gujarat and Tamil Nadu,⁸ Sikkim,¹⁹ Odisha,²⁰ Chandigarh,²² and Rajasthan.



Figure 5 Tinea capitis in a nine-year old boy due to *T. violaceum*.

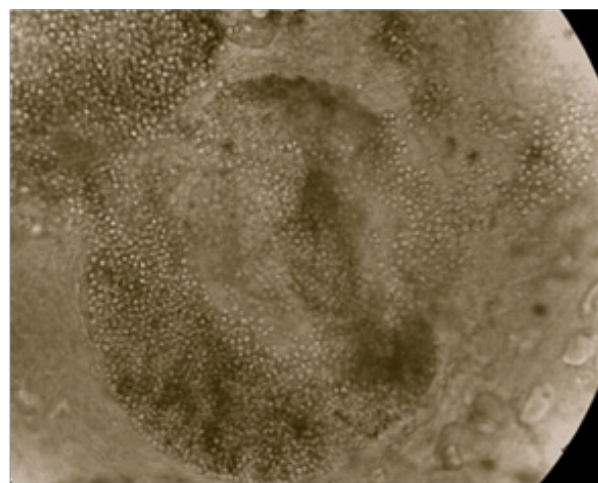


Figure 6 Endothrix pattern of hair invasion due to *T. violaceum* with appearance of 'Bag of marbles' seen in 20% KOH mount. Magnification X400.

Difficult to Treat Recalcitrant, Recurrent & Chronic Ringworm

Besides getting patients with extensive, recurrent and recalcitrant dermatophytic infection with involvement of multiple anatomic sites, we also get patients with local side effects of having used topical corticosteroid, e.g. no central clearing, skin atrophy, striae (Figure 8A), hypertrichosis (Figure 8B), telangiectasia, double edged tinea (Figure 2), tinea pseudoimbricata, tinea recidivans (Figure 7C) and many atypical presentation. We are also getting patients with systemic side effects. One of the patients developed Cushing's syndrome with bilateral osteonecrosis of femoral head. In some cases, multiple members of the three generations of the family were having dermatophytic infection.

Western Uttar Pradesh, India. *J Dermat Cosmetol.*
2018;2(5):64–69. DOI: 10.15406/jdc.2018.02.00087

The psychodermal aspect of skin diseases is underappreciated. Increased understanding of psychodermal comorbidities associated with skin diseases and a psychodermal approach to the management would ultimately improve patient's quality of life.

The social stigma of a visible skin disease, frequent visits to doctors and the need to constantly apply messy topical remedies all add to the burden of disease. Lifestyle restrictions in more severe cases can be significant, including limitations on clothing, staying with friends, owning pets, swimming, or playing sports.

The Journal of Phytopharmacology 2014; 3(4): 286-299

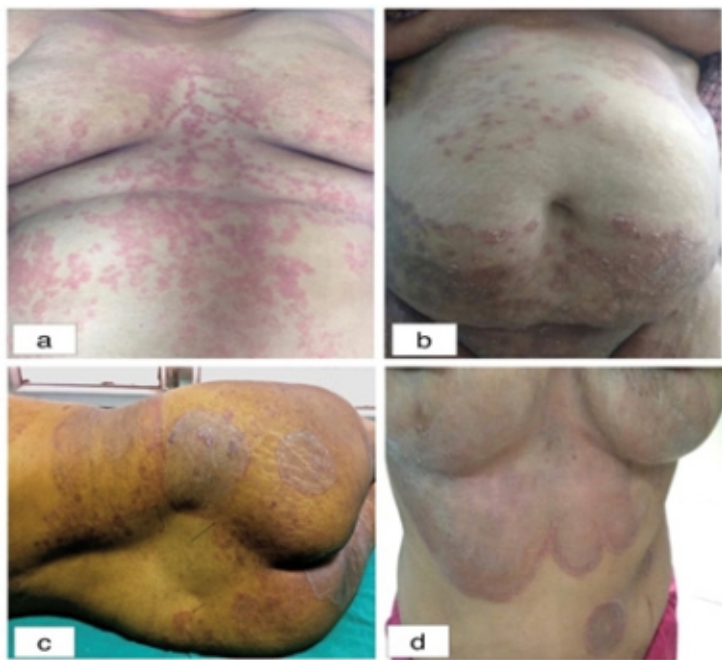


Figure 7 (A) Extensive erythematous, annular and partially annular lesions (B) Extensive tinea corporis with multiple scaly lesions. The lesions over lower abdomen have extended downwards to involve groin (Tinea corporis et cruris) mons pubis, labia majora and labia minora (Tinea genitalis), (C) Healed annular hyper-pigmented plaques with appearance of new lesions at the periphery (Tinea recidivans) (D) Extensive erythematous, hyper-pigmented lesions with hypertrichosis over the front of chest and under breasts, dumb bell shaped double-edged tinea.

new IN TINEA & PSORIASIS **SORAMAX** TM
NEOSKIN-OIL



Figure 8 Man with extensive dermatophytosis of multiple anatomic sites. Striae over abdomen and thighs. Developed iatrogenic Cushing's syndrome, bilateral osteonecrosis of femoral head, central obesity and hypertrichosis. History of having used topical and systemic steroids.

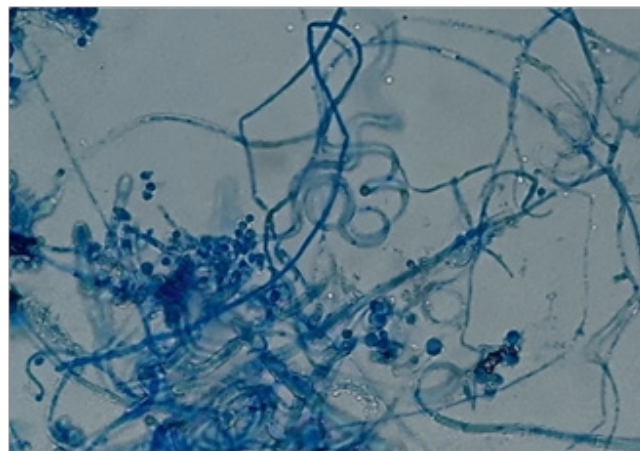


Figure 9 LPCB mount of *T. interdigitale* with spiral hyphae, microconidia in grape like clusters and club shaped macroconidia.

Citation: Thakur R, Kalsi AS, Kushwaha P, et al. Epidemiology of cortico-steroid-modified tinea: study of 100 cases in a rural tertiary care teaching hospital of Western Uttar Pradesh, India. *J Dermat Cosmetol.* 2018;2(5):64–69. DOI: 10.15406/jdc.2018.02.00087

Epidemiology of cortico-steroid-modified tinea: study of 100 cases in a rural tertiary care teaching hospital of Western Uttar Pradesh, India

Copyright:
©2018 Thakur et al. 67

ECZEMA /Atopic dermatitis (AD) / Vicharchika / NarFarsi / Chambal

Causes Of Vicharchika (ECZEMA):

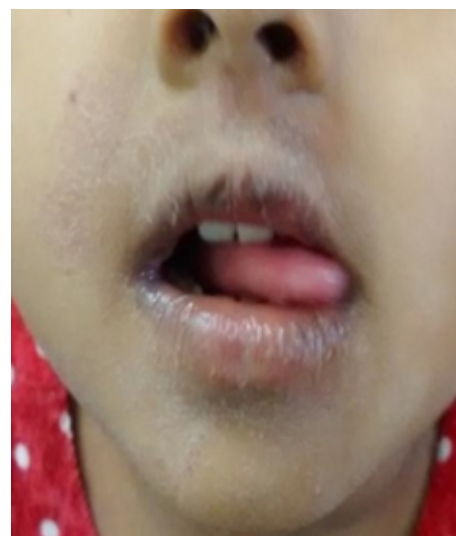
Etiological factors including antagonistic food, suppression of natural urges especially vomiting, quick change in temperature, exposure to excess heat, and sudden biological changes in fluid volume and muscle mass cause vicharchika.

The use of steroids suppresses eczema, but it incurs significant costs in terms of severe long-term toxicity, including osteoporosis, skin fragility, susceptibility to infection, and pituitary–adrenal axis suppression.[6]

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International Journal of Research and Review
(ijrrjournal.com) 24 Vol. 9; Issue: 10; October 2022



IP Indian Journal of Clinical and Experimental Dermatology,
April-June, 2019;5(2):146-153



Int. J. Adv. Res. 11(01), 1066-1071



Indian Journal of Health Sciences and Biomedical Research KLEU -
Volume 11, Issue 1, January-April 2018



Mohammed Khalid Zaki et al. Ijpr:Human,
2021; Vol. 23 (1): 11-20.



Journal of Ayurveda and Integrated Medical Sciences |
Jan - Feb 2021 | Vol. 6 | Issue 1

Ekakushtha /Kitibha- Psoriasis

KITIBHA (Psoriasis) is one the most dreadful dermatological condition affecting up to 2.5% of the world's & approximately 0.8% Indian population. It is a common, chronic and non- infectious skin disease characterized by well defined slightly raised, dry erythematous macules with silvery scales and typical extensor distribution affecting any sex & having incidence at any time throughout the life.

In people awareness program Month of August has been declared as "National Psoriasis Month" & "29th Oct has been officially declared as World Psoriasis Day."

International Ayurvedic Medical Journal, (ISSN: 2320 5091) (April, 2017) 5 (4)

Near about 125 Millions people in the world (2 to 3%) of the total population have psoriasis and suffer from an inflammatory, ugly skin disorder.

Indian Journal of Pharmacy and Pharmacology 2022;9(2):122-127

Although the exact cause of psoriasis is still unknown, there is no doubt that genetics play a role in the condition. A favorable family history is reported by 30 to 50 percent of psoriasis patients in various studies. Infiltrates of activated T cells are found in psoriatic lesions, and these cells are assumed to elaborate the cytokines that cause keratinocyte hyper-proliferation, which gives rise to the distinctive clinical symptoms. For the treatment of severe psoriasis, drugs that prevent T cell activation, clonal expansion, or the release of pro-inflammatory cytokines are intensively beneficial.

International Research Journal of Ayurveda & Yoga Vol. 6 (7),43-50, July,2023

Psoriasis is a hyper proliferative, autoimmune skin disorder. Despite the fact that many therapies are there in treating psoriasis, no single treatment gives complete and satisfactory cure.

Psoriasis is a skin disease which is distinguished by massive proliferation, thick inflammatory cell infiltrates, generation of new blood vessels, modifications in lymphatic structure and impaired differentiation of epidermis .It is an autoimmune disorder where environment and genetic components have a major function.

Psoriasis is an incurable, chronic, recurrent immune-mediated inflammatory dermatosis characterized by epidermal hyperplasia and excessive infiltration of inflammatory cells into the dermis and neovascularization. *African Journal of Pharmacy and Pharmacology Vol. 16(3), pp. 27-52, March, 2022 <http://www.academicjournals.org/AJPP>*

Pathophysiology of Psoriasis:

Very rapid multiplication of keratinocytes occur in people having psoriasis and their movement from the stratum basale (basal layer) to the upper layer of epidermis occurs in 4 days. Thick dry patches or plaques form, as the skin does not shed the cells quickly. In some people very mild psoriasis exists which cannot be even suspected as a skin disorder. Others have very severe psoriasis where almost whole body is covered with scaly, thick and red skin. Despite the fact that psoriasis occurs in population of all age groups, i.e., paediatrics to geriatrics, generally it is diagnosed in adolescence of a person. The other causative factors for psoriasis are genetics, sudden changes in genes (mutations), climate, mental or emotional strain, contagion, and wounds.

The major pathological phenomenon associated with psoriasis are

1. T cell activation
2. Activated T cells migration into the skin
3. Reactivation of T cells in dermis and epidermis

Types of psoriasis:

Plaque psoriasis:

It is also known as psoriasis vulgaris, which generally occurs (almost 80-85%). It is usually seen on elbows, knees, scalp and lower back. Symptoms include,

- Spherical lesions which ranges about 0.99 cm to several cms in width, and may further grow into patches.
- Red colored lesions which are encrusted with silvery, loose and shining skin.
- Lesions that are generally seen on the elbows, knees, and trunk.

Causes due to which this type occurs are generally infections, skin abrasion, medications, sunlight, strain, smoking and drinking.

Guttate psoriasis:

It is also known as rain drop psoriasis and is the second general form (around 10%) seen in population with psoriasis. Symptoms are

- Several minute rain drops sized lesions
- Lesions grow instantly, generally on the trunk, arms, legs, and scalp
- Eruption of lesions which may occur along with any upper respiratory infection.

Causes are streptococcal infection, viral or bacterial contagions, skin wounds and burns, insect bites etc, sunlight, medicine etc

Psoriatic arthritis:

It is a condition in which swelling occurs which shows impact on the joints. Generally appears in 6% to 40% of population having this skin disorder.

Symptoms of psoriatic arthritis include:

- Inflamed, sore, thick, and painful joints,
- Above signs may be seen earlier, along with, or following the development of symptoms of the skin.
- In the hands and feet, joint symptoms are seen.

Causes are shock or wounds on skin, medications, agents that cause irritation of skin, smoking and drinking etc

Pustular psoriasis:

It can occur as patches which are small or wide spread on areas of feet, hands or fingertips. Seen in 5% or less population having psoriasis. Symptoms are,

- Fluid-filled lesions which are seen on soles and palms. Very scaly skin.
- Alterations in nail.
- Eruptions which are seen after discontinuation of certain medications and creams.

Causes are pregnancy, overexposure to UV light, systemic steroids, contagions, mental and emotional strain, and sudden with drawal of certain medications.

Erythroderma, or exfoliative psoriasis:

It is a very uncommon type that may be damaging or lethal. In population with this type, along with skin, symptoms are seen on whole body like

- Inflation and soreness which occurs on entire body skin. The skin may slough off and is generally itchy and tender.
- Incapable to monitor temperature of the body and chills.

Causes are use of steroid, extreme sun burn, strain, drinking alcohol, contagions, sensitivity etc.

Nail psoriasis:

Along with building up of skin cells under epidermis, in half of the psoriasis population they even develop under nails, which becomes impenetrable. They mostly split and in extreme cases, they fall down or collapse. Yellow or brownish red spots are seen below the nail.

Causes of this type is not known exactly, but generally it is considered having a genetic factor.

Genetic factors Human genome scans show almost nine various loci which are susceptible to psoriasis (PSORS1-9). PSORS-1, is the main genetic factor of this disorder, which results up to 50% of genetic sensitivity to psoriasis. The risk of psoriasis may be increased due to certain variations and changes, which are related with four autoimmune diseases: type 1 diabetes, Celiac disease, Grave's disease and rheumatoid arthritis describing that all above disorders have the same genetic factors.

Trigger Factors Climate, strain, wounds, medicines are indirect causes and infections like HIV, one of the uncommon forms of Human Papilloma viruses (HPV) like EV-HPV, Streptococcal infections in upper respiratory tract like sinusitis, tonsillitis are mostly important in triggering the disease process that commences and intensifies psoriasis.

Indo American Journal of Pharmaceutical Research, 2017

Vol 7, Issue 01, 2017. Padmini Iriventi et al.



Fig 1: Plaque psoriasis



Fig 3: Psoriatic arthritis



Fig 5: Erythroderma



Fig 2: Guttate psoriasis



Fig 4: Pustular psoriasis



Fig 6: Nail psoriasis



scaly, silvery-white lesions seen on his face, chest, trunk, gluteal regions, appendages. There was intense itching experienced by him on the skin lesions.

Dr Sarita Pradip Gaikwad JMSCR Volume 10 Issue 02 February 2022



IAMJ August - September 2021



1. Dryness in the whole body.
2. Itching with red patches especially in the scalp, elbow, and chest region.
3. Scaling mainly from the scalp region.



CellMed 2021 / Volume 11 / Issue 2/ e11



Before treatment (Figure. 1, A, B, C, D.)



Chronic palmoplantar psoriasis

severe, itching, cracks, scaly lesion, with redness and thickening of the skin on both dorsal and ventral side, on bilateral hands, in scalp, and medial malleolus of left lower limb (Psoriasis Area Severity Index [PASI] score of 9.1)

Journal of Indian System of Medicine | Volume 8 | Issue 1 | January-March 2020



1. Reddish patch all over body including scalp.
2. Scaling of skin.
3. Severe itching all over the body. Patient had above complaints, since

MedPulse – International Journal of Ayurveda, Print ISSN: 2550-7656, Online ISSN: 2636-4611, Volume 14, Issue 3, June 2020 pp 01-04

with soles of feet partially covered with thickened, red skin having sharp and noticeable borders demarking the psoriasis patches from unaffected skin.

painful cracks with intermittent bleeding over the soles of feet. Less scaly patches and other skin changes found over the palms of hands. The patient also had thickened erythematous plaques on the right elbow presenting the characteristics of plaque psoriasis.



Journal of Ayurveda Case Reports - Volume 3, Issue 2, April-June 2020



IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS)
Volume 11, Issue 3 Ver. III (May - Jun.2016), PP 116-119



Plaque Psoriasis

Journal of Ayurveda and Integrated Medical Sciences | November 2022 | Vol. 7 | Issue 10



Psoriasis Vulgaris (Jeerna Vicharchika)

Int. J. of AYUSH Case Reports, January-March 2021; 5(1) Special issue



Herbs orchestrate resurgence and vegetal awakening is supervened everywhere in the world.

A Promising Herb

the multifarious pharmacological paradigms of a most promising medicinal ayurvedic herb

Innumerable natural products with inherent potential biological activity procured from plants have played a significant role in improving the human health since the dawn of civilisation.

According to WHO (World health organization), there are about 6000 higher plant species found in India out of which 40% of the species are used in the traditional healthcare system. Most of the plants possess medicinal properties and are used to cure various ailments. There are about 258,650 species of higher plants reported worldwide out of which 10% of the plants are used by different cultures and communities to treat a variety of diseases.

Shailja Choudhary et al / Int. J. Res. Ayurveda Pharm. 12 (3), 2021

Sulphur

Gandhak Rasayan is a great antibacterial, antiviral and antimicrobial ayurvedic medicine that is primarily used for the treatment of Eczema, Scabies, Skin Disorders.

Gandhak Rasayana mainly consists of Sulphur along with other herbal ingredients. Gandhaka is mentioned as **Kandughna** and **Krimighna** in ancient Ayurvedic texts. In Gandhak Rasayana, **Sulphur has been detoxified with ancient shodhana process mentioned in the text of Rasashastra, so that the toxic effect of Sulphur is reduced.**

Sulphur is also known to have an antimicrobial property and have been proved to act by inhibiting Folic acid metabolism in the susceptible bacteria and preventing their growth. Sulphur is also widely used topically as a scabicide and pediculocide, because one of the metabolites of Sulphur i.e., Pentathionic acid, which was supposed to cause lysis of cuticle. Thus, Sulphur is effective both systemically and topically as a microbicidal agent. Sulphur is also known to have an antimicrobial property and have been proved to act by inhibiting Folic acid metabolism in the susceptible bacteria and preventing their growth.

J Res Educ Indian Medicine ISSN 01977-7700

Published online First on Dec 09, 2022

Gandhak

In addition to keratolytic activity, sulfur has mild antifungal and antibacterial activity. However, its precise mechanism of action is unknown. When applied to skin, sulfur is thought to **interact with cysteine, present in the stratum corneum, to form hydrogen sulfide.** Hydrogen sulfide can break down keratin, thus demonstrating sulfur's keratolytic activity. Pentathionic acid, which is toxic to fungi, is also formed by cutaneous bacteria as well as keratinocytes from topically applied sulfur. In addition, the keratolytic effects may promote fungal shedding from the stratum corneum.

Journal of Drug Delivery & Therapeutics. 2020; 10(4-s):25-30

Gandhak Rasayana is used orally as

Dose – 1 gm BD with warm water, Aushadha Sewana Kala:

Before meal, Anupana: Ushna Jala, Duration: 6 months,

Contents: Haritaki, Suddha Gandhaka, Guduchi, Amalaki and

Vibhitaki. *Niharika Shukla et al / Int. J. Res. Ayurveda Pharm. 11 (4), 2020*

Gandhak Rasayana is used in skin diseases and as a blood purifier hence selected for the study. It is Raktshodhak, Vranaropaka, Twachya.

www.wjpr.net Vol 6, Issue 16, 2017.

Reddy et al. World Journal of Pharmaceutical Research

Gandhaka has *rasayana*, *dipana*, *pachana vatakaphahar*, *kusthahar*, and *krimihar* properties.[9] It also has anti-fungal, anti-bacterial, and keratolytic properties. *gandhak* (125mg) twice a day.

World Journal of Pharmaceutical and Medical Research

www.wjpmr.com | Vol 10, Issue 2, 2024.

Gandhakamalalahar has shown 80% change in **Kandu** and also other symptoms like Utsanna mandala, Raga, Pidaka without any complications.

Kulkarni, S. S., Misar, S., & Ade, V. N. (2022). A Systematic review of management of Dadru (Tinea) as per Ayurveda.

International Journal of Health Sciences, 6(S3), 1142-1151.

<https://doi.org/10.53730/ijhs.v6nS2.5109>

Cassia tora

In Hindi chakavat, chakunda, panevar, in Marathi Takla, tankli, tarota;

In **Charak Samhita** seeds of **C. tora** have been used as a constituent of various formulations for the treatment of skin diseases (CS.Su.3.3,12,13,15; CS.Ci.7.93,113,160).

In Sushrut Samhita, *C. tora* (*Chakramarda*)

Its seed have been indicated for local application as paste in

wound (SS.Ci.1.98), skin diseases (*Kushtha*), *Dadru* (Ring worm) (SS.Ci.9.10,12,13)

In *Ashtanga Hridaya*, *Chakramarda* has been mentioned only for external use mainly to treat *kushtha Roga*.

shown the significant antifungal activity to inhibit the growth of Trichophyton mentagrophytes.

World Journal of Pharmaceutical Research www.wjpr.net | Vol 12, Issue 15, 2023.

Skin disorders/ Antifungal activity

The ethanolic extract of *Cassia tora* leaves at dose of 400 mg per kg body weight showed significant antipsoriatic activity in male Wistar rats in Ultraviolet B ray photo dermatitis model by reduction in relative epidermal thickness and microscopically the absence of Munro's microabscess, elongation of rete ridges and capillary loop dilation .

The dealcoholised methanol extract of *Cassia tora* leaves at concentrations of 100,200 and 300 micrograms showed significant antifungal activity against *Candida albicans*, *Aspergillus niger* and *Saccharomyces cerevisiae* through turbidity method and spore germination method in vitro. The methanolic extract of *Cassia tora* leaves was evaluated for antifungal activity against *Candida albicans* in vitro by cup plate and the test drug significantly inhibited the growth of the fungus at concentration of 10mg/ml.

The minimum inhibitory concentration of extract that can inhibit the growth as observed by development of turbidity in broth dilution technique was found to be 2mg/ml (15).

Alcoholic extract of Seeds of *Cassia tora* was evaluated for antifungal activity by culture and sensitivity test and the extract at concentration of 1.25, 2.5, 5 10 and 20 microlitre showed dose dependant inhibition of dermatophytes collected from skin samples of patients. *International Journal of Current Science Research and Review* Volume 05 Issue 05 May 2022

Chakramarda (*Cassia tora*. Linn) is well-known traditional medicinal plant, also called as **ring worm plant** which possesses kushtaghna, kandughna and dadruggha properties.

Anoma Geethani Samarawickrama et al / Int. J. Res. Ayurveda Pharm. 8 (Suppl 3), 2017

Chakramarda means destroyer of Ringworm www.wjpr.net | Vol 9, Issue 15, 2020.

Antioxidant, Anti-inflammatory, Antimicrobial, Antifungal

World Journal of Pharmaceutical Research www.wjpr.net | Vol 9, Issue 15, 2020.

2022 JETIR February 2022, Volume 9, Issue 2

plant has antifungal activity. The chief antifungal component identified were (was)

Chrysophanic acid-9- anthrone. The compound has prevented the growth of Trichophyton rubrum, T. mentagrophytes, Microsporum canis, M. gypseum, and Geotrichum candidum in broth culture in presence of an antioxidant L-Ascorbic acid at 95.5 µg/ml (Rejiya CS, et al., 2009, 23 (6), 1034-1038).

International Journal of Pharmaceutical Research and Applications

Volume 6, Issue 4 July-Aug 2021, pp: 631-634 www.ijprajournal.com

Alcoholic extract of *Chakramarda* seeds possess anti-fungal (*Krimighna*) action against Dermatophytes (Tinea). Hence *Chakramarda* is effective against *Dadru kushta* (dermatophytes).

Int J Ayu Pharm Chem 2017 Vol. 7 Issue 1

Tinospora cordifolia Miers. (Menispermaceae) - Improves the phagocyte function without affecting cell-mediated and humoral immune systems and also causes inhibition of C3 convertase of the classical complement pathway, hence acts as immunomodulator. The aqueous extract of *T. cordifolia* is reported to influence the cytokine production, mitogenicity, stimulation and activation of immune effector cells. In vitro evidence also supports it by showing upregulating effect on the IL-6 cytokines facilitating the acute response to injuries, inflammation, activation of cytotoxic T cells and B cell diffraction.

Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

Chakramarda

Chakramarda seeds have phytochemical constituents like anthraquinone glycosides, naphtho-pyrone glycosides, cassia-side etc. which showed significant hepatoprotective activity. Thracchryson, isolated from seeds, showed stronger antioxidant activity than tocopherol and BHA.

Chrysophanic acid-9-anthrone, extracted from the seed, was found to be active against ringworm fungi¹⁰ & is been found to have Hypolipidemic action¹¹ (showed marked reduction in serum concentration of total cholesterol and triglyceride level). It possesses strong antifungal action against *Candida albicans*, *Aspergillus niger*, *Sachharomyces cerevisiae* and *Trichophyton mentagrophyte*¹² along with Anti-inflammatory activity against histamine, serotonin and dextran induced oedema. *Journal of Drug Delivery & Therapeutics*. 2020; 10(4-s):25-30 *Journal of Drug Delivery & Therapeutics*. 2020; 10(4-s):25-30

6. Cassia tora Linn:

Cassia tora leaf is rich by anthraquinone glycosides. Traditionally it is profess that used in the cure of **skin diseases and psoriasis**. Luteolin-7-O-β-glucopyranoside, formononetin-7-O-β-D-glucoside and quercetin-3-O-β-D-glucuronide was isolated from the *tora* leaf. The ethanolic extract of *Cassia tora* leaf was evaluated for antipsoriatic activity. Ethanol extract and isolated compound exhibit a momentous fraction decrease of epidermal thickness. Luteolin, quercetin and formononetin was isolated and used as marker. Oil in water cream was prepared with methanolic extract and tested using ultraviolet-B-induced psoriasis in the rat. Acute dermal toxicity, sensitivity, and grittiness were tested. According to the study, acute dermal toxicity was observed, and the creams were appropriate and safe at a dose of 2000 mg/kg .

known as Charota, Chakunda and Sickle senna locally, has been traditionally used for the treatment of psoriasis and other skin diseases [4, 5]. *Cassia tora* leaves enrich in glycosides and also contain aloemodin, which may be beneficial for the skin diseases [49, 50, 51, 52] *Chandrasekar R. et al, Int. J. Res. Dev. Pharm. L. Sci. June - July, 2016, 5(4), 2188-2197*

Application of *Chakramarda Taila* alone on lesion is an effective modality in management of *Dadru Kushta*.

Chakramarda Taila is an anubhoota yoga used in management of *Dadru*. *Chakramarda* possess Laghu, Ruksha, Teekshnaguna, Katu, Tikta rasa, Ushnaveerya and Katuvipaka. It has *Kandughna*, *Kushtaghna*, *Krimighna*, *Dadruggha* and *Kaphavatahar* properties. *Tila Taila* which is used as base is *tridoshashamaka*. Hence its local application alleviates the kapha and pitta dosha and acts as *Dadruggha*. *Durvadi Lepa* which has ingredients *Durva*, *Chakramarda*, *Tulasi*, *Haritaki* and *Saindhavilavana*. It reduces *Kandu* due to its *Kandughna*, *Kushtaghna* properties. Whereas *Dahaprashamana*, *Twachya* and *Varnya* properties help to reduce *Raaga* and *Pidika* which are cardinal manifestations of *Dadru*.

Kulkarni, S. S., Misar, S., & Ade, V. N. (2022). A Systematic review of management of *Dadru* (Tinea) as per Ayurveda. *International Journal of Health Sciences*, 6(S3), 1142-1151.

<https://doi.org/10.53730/ijhs.v6nS2.5109>

Haritaki

(*Terminalia chebula* Retz) Harad the "King of Medicines"

Acharya Vagbhatta classified it in Vachadi Gana. In Ashtanga Hridaya, a new synonym is mentioned as Pranada. Acharya indicated it in Raktagulma (tumor arising from the blood), Kshata (injury), Timira (eye disease), Visha (poisoning), Vrana (wound), Ajirna (indigestion), Kushtha (leprosy), Twakdosha (skin diseases) and Udararoga (gastro-intestinal disorder) etc.

Haritaki is described in Nighantus as Rasayana (rejuvenating), Vrinaropana (wound healing).

In Ayurveda, *Hartaki* is considered the best *Pathya Dravya* (substances that clean the channels) and a good *Rasayan* (immunomodulator).

Skin Diseases

In *Ayurvedic* text, *Haritaki* is stated as *Kushthagghna* i.e. to alleviate the skin diseases including leprosy, various modern researches have proved its activities against a number of dermatophytes and yeasts and it is found that aqueous extract of *T. chebula* exhibited antifungal activity.

Anti-ulcerogenic & wound healing activity

Sharma *et al.* has examined on the animals pretreated at 200 and 500 mg/kg body weight with hydro alcoholic extract of *Terminalia chebula* showed reduction in lesion index, total affected area and percentage of lesion in comparison with control groups in the aspirin, ethanol and cold restraint stress induced ulcer models.

Journal of Ayurveda and Integrated Medical Sciences | July - Aug 2019 | Vol. 4 | Issue 4

Antimicrobial activity: It has been investigated that *T. chebula* has promising antimicrobial activity and can act as a substitute to artificial antimicrobials (Dhiman *et al.*, 2019). **Wound healing activity:** Due to the powerful anti-bacterial & angiogenic activity, dried unripe fruits of *T. chebula* are responsible for cutaneous injury mending (Li *et al.*, 2011). **Antiviral activity:** Extract of different parts of *Terminalia chebula* has antiviral effects (Oyuntsetseg *et al.* 2014). It has been found that the plant extract of *T. chebula* can cure enterovirus (Joshi *et al.*, 2020).

ASIAN JOURNAL OF PHARMACOGNOSY Review

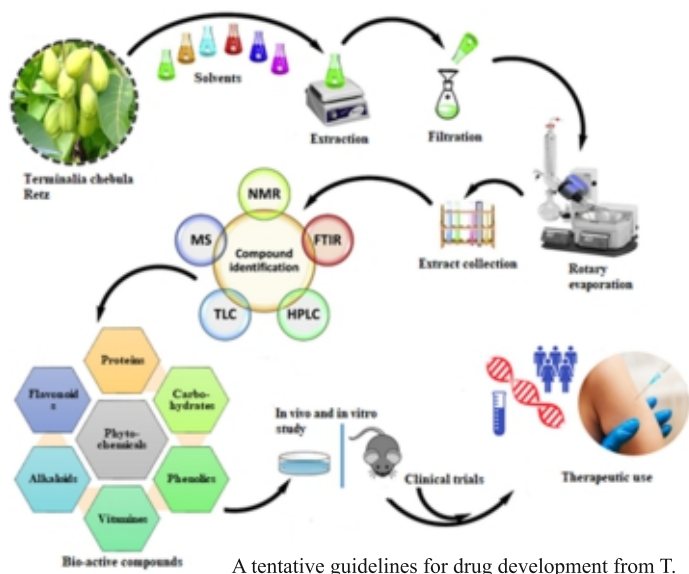
Asian J. Pharmacogn 4(3): 5-13 © 2020,

The wound healing property of *T. chebula* was reported in granulation tissues. *T. chebula* extracts markedly elevated total protein, matrix molecules such as hexosamine and uronic acid, intact DNA and collagen (90%) in the epithelialisation period and increased tensile strength. Nasiri *et al.* reported the wound healing property of *T. chebula* herbal preparations as it hastened the recovery from burn injury. *Heliyon* 8 (2022) e10220

Antifungal activity

Galls of *T. chebula* inhibited all the three Trichophyton spp. (Trichophyton mentagrophytes, *T. rubrum*, *T. soudanense*) And three Candida spp. (Candida albicans, Torulopsis glabrata, and *C. krusei*) At the same time, *T. chebula* seed extract exhibited an inhibitory effect only on *T. glabrata* Seed of *T. chebula* also showed fungicidal potency and adverse effect on spore germination against plant fungi named Fusarium oxysporum, Fusarium solani, Phytophthora capsici and Botrytis cinerea in a concentration and time-dependent kinetics. Apigenin, a natural flavone from the stem of *T. chebula* found to be anti-fungal against *T. mentagrophytes* induced dermatophytosis in mice.

Md.R. Hassan Bulbul et al. Heliyon 8 (2022) e10220



***Terminalia chebula* Retz. (Haritaki)** - The aqueous extract of dried fruits of *T. chebula* was reported to increase humoral antibody titre and DTH in mice. Another study also reported enhanced expression of Th1 cytokine, INF- γ ; decreased IL 4; increased percentage of CD4+ cells; lymphocyte proliferation; macrophage phagocyte response; and DTH response in mice. *Journal of Ayurveda and Integrated Medical Sciences* | March 2023 | Vol. 8 | Issue 3

Terminalia bellirica

Baheda and Bibhitaki are other names for *T. belerica*

Leucoderma and skin diseases: The oil extract from the seeds of the plant is typically used for the cure of leucoderma and skin diseases (Singh *et al.*, 2018).

Anti-microbial activity: Leaf and Steam extract of *Terminalia bellirica* have shown antibacterial activity against Gram-positive and negative bacteria (Saraphanchotiwiththaya *et al.*, 2008).

Antioxidant activity: Crude aqueous concentrate of the fruits of *Terminalia bellirica* have antioxidant properties since this contains enzymatic and non-enzymatic antioxidants, these can be powerful against organisms causing different maladies (Deb *et al.*, 2016).

leucoderma, skin diseases, leprosy,

ASIAN JOURNAL OF PHARMACOGNOSY Review

Asian J. Pharmacogn 4(3): 5-13 © 2020,

Antifungal Activity of Terminalia sp. Filamentous fungi such as *Aspergillus flavus*, *A. niger*, and *Trichophyton rubrum* are some of the important human pathogens. Besides, opportunistic yeast fungi are an important cause of morbidity and mortality in immunocompromised patients.

Frontiers in Pharmacology | www.frontiersin.org 22 October 2020 | Volume 11 | Article 561248

Embolica officinalis

E. officinalis enhances the fibroblast proliferation in a concentration-dependent manner and also exhibits a highly significant photoprotective effect against UVB-induced cytotoxicity, thereby suggestive of strong skin protective ability. *E. officinalis* pretreatment significantly protects against this loss in cell viability in a concentration-dependent manner. *E. officinalis* possess the potential inhibitory effect on intracellular oxidative damage induced by UVB irradiation.

<https://www.researchgate.net/publication/302044792>

Role of *Embolica officinalis* in Prevention of Skin Disease Chapter · October 2013

DOI: 10.1007/978-1-62703-167-7_40

Traditionally amla was believed that amrit/ambrosia packed with all rasas thereby, it becomes an unavoidable part in ayurveda. In that sense, amalaki and hareetaki stand next to amrit since they exhibit five rasas. The fruit amla is deliberated as a rasayana for pitta. Charaka samhita mentioned amalaki is viewed one of the most potent and nutritious and also it says "Amalaki is the best rejuvenative herb"

International Journal of Pharmacy and Pharmaceutical Sciences ISSN- 0975-1491 Vol 5, Suppl 1, 2013

Amalaki is rich in vitamin C and has antioxidant properties. It helps to boost the immune system and improves the production of melanin.

Journal of Ayurveda and Integrated Medical Sciences | September 2023 | Vol. 8 | Issue 9

research imply that *E. officinalis* has substantial antibacterial action, which might be a valuable lead for the creation of cost-effective and safe treatments

The Pharma Innovation Journal 2022; 11(6): 06-16

Fruit of *Embolica officinalis*, Euphorbiaceae commonly known as Indian gooseberry chief dietary source of vitamin C, tannins, alkaloids, amino acid like glutamic acid, proline, aspartic acid, alanine, cystine and lysine used in ayurveda as a powerful rasayana and customary medicine for treatment of diarrhea, jaundice, inflammation. Anti-fungal activity against dermatophytes which include *Microsporum canis*, *Microsporum audouinii*, *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Trichophyton violaceum* and *epidermophyton floccosum*.

Journal of Ayurvedic and Herbal Medicine 2016; 2(1): 31-35

Swertia chirayita

kirata Tikta / Charaita

In India, 40 species of *Swertia chirata* are recorded

Cure skin ailments: The extract of the herb is useful for the effective treatment of skin ailments. You can treat all kinds of rashes, skin diseases, and inflammations of the skin with the paste of *Swertia chirata*. It helps heal wounds and oozing cuts in the skin fast. Mix with water and apply on the wound.

International Journal of Unani and Integrative Medicine 2018; 2(2): 47-51

It is useful in many skin diseases, wet and dry pruritus, leprosy.

Tantia University Journal of Homoeopathy & Medical Science, Volume 3|Issue 3 |July–Sept. 2020|

Antifungal Activity

Wound Healing Activity

Journal of Drug Delivery & Therapeutics. 2018; 8(5-s):73-78

GILOY

(TINOSPORA CORDIFOLIA)

guduchi's role as an adoptogen, a potent herb that increases the body's resistance to stress, anxiety, and illness.

It showed good result on *lakshana* of psoriasis/ *kitibha* i.e. *daha*, *kandu* and on haematological criteria also.

International Ayurvedic Medical Journal, (ISSN: 2320 5091) (April, 2017) 5 (4)

Anti-Leprotic activity - *T. cordifolia* is used for its *Kushthahara* (antileprotic properties, along with wide use in *Kandu* and *Visarpa* (types of skin disorders).]

Journal of Ayurveda and Integrated Medical Sciences | May 2022 | Vol. 7 | Issue 4

ROLE OF GILOY (GUDUCHI) IN KITABH KUSHATH (PSORIASIS)

wjpmr; 2022;8(2), 110 – 112.

Tinospora cordifolia (Willd.) Hook.f. & Thomson (Family. Menispermaceae) is one of the widely used drugs in Ayurveda (ancient Indian system of medicine) for various ailments such as inflammatory conditions, autoimmune disorders, and cancer as well as for promoting general health.

In vitro and in vivo studies on immune cells comprising dendritic cells, macrophages, and B cells suggest its immune-modulating abilities.

Th17 cells play an important role in providing immunity against predominantly extracellular bacterial and fungal pathogens. They also maintain a barrier function at mucosal sites (Zúñiga et al., 2013). Th17 cells and Th17 cytokines are important for the pathogenesis of several autoimmune and inflammatory diseases, including psoriasis, psoriatic arthritis, multiple sclerosis, rheumatoid arthritis, Crohn's disease, systemic lupus erythematosus, etc. Therefore, inhibiting the IL-17/IL-17R pathway is suggested as a useful method for treating autoimmune inflammatory disorders (Yamagata et al., 2015; Yasuda et al., 2019).

Frontiers in Pharmacology 01 frontiersin.org TYPE Original Research

PUBLISHED 09 January 2023

GiLOY, familiar as Amrita in Sanskrit, which literally translates to the 'herb of immortality', because of its abundant beneficial properties. It has a popular and an important place in the therapeutic armamentarium of traditional ayurvedic medicine, both for preventive and promotive health as well as curative medicine.

Guduchi alleviates all types of skin diseases

the Technical Dossier on Guduchi File No. L-11011/9/2021-DCC-Part(1) dated

21.02.2022) www.ayush.gov.in

showed good antifungal and antibacterial activity

<https://doi.org/10.1016/j.heliyon.2019.e02437> Heliyon 5 (2019) e02437

In the Charak Samhita, Guduchi is mentioned for the healing of the wound.

In the scientific research methanolic extract of arial parts of Guduchi have shown the wound healing properties (Barua et al., 2010)

Asian Pacific Journal of Health Sciences | Vol. 8 | Issue 4 (Special) | 2021

rubia cordifolia The roots contain quinones like glycosides include rubiadin, 1-hydroxy, 2-methoxy anthraquinone shows wound healing activity, antibacterial and anti-inflammatory effect. Powdered dried roots and fruits are taken internally for the treatment of skin diseases and disorders of spleen.

Indian Journal of Pharmacy and Pharmacology 2022;9(2):122–127

Tinospora cordifolia Miers. (Menispermaceae) - Improves the phagocyte function without affecting cell-mediated and humoral immune systems and also causes inhibition of C3 convertase of the classical complement pathway, hence acts as immunomodulator. The aqueous extract of *T. cordifolia* is reported to influence the cytokine production, mitogenicity, stimulation and activation of immune effector cells. In vitro evidence also supports it by showing upregulating effect on the IL-6 cytokines facilitating the acute response to injuries, inflammation, activation of cytotoxic T cells and B cell diffraction.

Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

Adhatoda vasica

Adhatoda vasica Nees (Acanthaceae) - The alcoholic extract of *A. vasica* is reported to reduce the count of neutrophils, thus diminishing the phagocytosis activity. The extract was found responsible to decrease in delayed-type hypersensitivity reactions and inhibitory effect on T lymphocytes and also reported to possess human immunodeficiency virus (HIV) protease inhibitory activity.

Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

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Anti-allergic Activity

Reported studies revealed that the vasicinone constituent of *J. adhatoda* plant possesses anti allergic property when tested in mice, rats and guinea pig.

Anti-inflammatory Activity

The main alkaloid component Vasicine of *J. adhatoda* plant possesses anti-inflammatory properties.

Anti-microbial Activity

Reported studies have revealed the anti-microbial activity of the alcoholic and water extracts of leaves and roots of *J. adhatoda* plant when tested against *Staphylococcus aureus* and *E. coli*91.

Anti-bacterial Activity

The in vitro studies against *Pseudomonas aeruginosa* showed the strong anti-bacterial activity of the alkaloid content extracted from leaf extract of *J. adhatoda* plant using a paper disc and dilution method. Various reported studies also revealed the antibacterial activity of the plant against gram-positive bacteria strains *Streptococcus faecalis*, *Staphylococcus aureus*, *Staph. epidermidis* and gram-negative *E. coli*.

Wound healing Activity

From various reported studies it was found that the alcoholic and chloroform extracts isolated from leaves of *J. adhatoda* plant showed healing effect and act as an ointment. It was also reported that the healing rate is higher in buffaloes as compare to pancreatic tissue extracts. Shailja Choudhary et al / Int. J. Res. Ayurveda Pharm. 12 (3), 2021

Leaves: The various preparations of leaves has been used for curing bleeding, hemorrhage, skin diseases, wounds, headache and leprosy (chronic infection).

Volume 8, Issue III, March/2018 <http://ijamtes.org/>

'Daruhaldi'.

Berberis aristata, also known as tree turmeric or Indian barberry

The roots, its bark, and fruit are utilized in Ayurvedic formulations. Almost all the plant parts possess anti-inflammatory, anti-bacterial, anti-fungal, and anti-oxidant properties

Journal of Applied Biology & Biotechnology Vol. 12(4), pp. 37-46, Jul-Aug, 2024

Available online at <http://www.jabonline.in>

Histopathological report showed that, in psoriasis-induced animal treated with topical application of extract loaded transferosomal gel showed a marked reduction in thickness of epidermis, length of rete ridges as compared to conventional gel formulation. It can be inferred that *B. aristata* extract loaded transferosomal gel can function as potential anti-inflammatory and antipsoriatic formulation.

2017 Pharmacognosy Magazine | Published by Wolters Kluwer - Medknow

Aqueous extract was also effective in the initial phase of acute inflammation and alcoholic extract in the advanced phase of acute inflammation. This alcoholic extract may be act by blocking the mediators released in the later phase (i.e., prostaglandin), while the aqueous extract may be acting by blocking the mediators released in the early phase (i.e., bradykinin, histamine, and serotonin), as well as by blocking the mediators released in the later phase (i.e., prostaglandin).

Anti-microbial activity: Ethanol extract of *Berberis aristata* is having antifungal activity [26]. Aqueous extract, alcoholic extract and powdered root in distilled water extract shows activity against various fungus species like *Candida* and *Aspergillus*. Wound healing activity Aqueous and alcoholic extract of *Berberis aristata* was studied in the experimental animal (male adult goat). Alcoholic extract of this plant has anti-PAF (platelet-activating factor) activity; this experiment is performed in rabbits. This extract inhibits the PAF-encouraged collection of platelets in a dose-dependent manner in the microgram range . It shows that *Berberis aristata* plant can be used in the treatment of allergic disorders. Int J Curr Pharm Res, Vol 14, Issue 6, 10-16

Berberine-containing plants have been traditionally used in different parts of the world for the treatment of inflammatory disorders, skin diseases, wound healing,

Frontiers in Pharmacology | www.frontiersin.org 4 August 2018 | Volume 9 | Article 557

Daruharidra

The most active ingredient of the plant is berberine, a quaternary isoquinoline alkaloid and the content of berberine-typically found in the roots, rhizomes and stem bark. It has immune-stimulating, anti-inflammatory, antimicrobial, antifungal, antiprotozoal activities. The MIC value of the *B. aristata* root extract against *M. furfur* was found to be 100µg/ml. which indicates that it could be a good source for the anti-fungal medicine. The efficacy of such herbal agents in acne treatment is not only based on anti-microbial activity but also on their antioxidant and anti-inflammatory properties as well by which they inhibit neutrophil migration and generation of reactive oxygen species. *B. aristata* is used in skin diseases due to its skin detoxification property.

Journal of Drug Delivery & Therapeutics. 2020; 10(4-s):25-30

Licorice

Glycyrrhiza glabra L. (Yastimadhu) - Glycyrrhizin, the main active constituent of the plant, is reported to interfere with immune responses by targeting dendritic cells. It also upregulate the expression of CD40, CD86 and MHC-II maturation markers on dendritic cells as well as enhances the production of IL-12 by these cells. It also increases the IFN-γ and IL-10 and further reduces IL-4 production. The root extract of *G. glabra* in association with zinc has also shown immunomodulatory activity.

Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

roots contain 5–15% of sugars (glucose and sucrose). The licorice extracts contain corticosteroid like and anti-inflammatory activities. Licorice extract plays an important role in converting prostaglandins and glucocorticoids into inactive metabolites and inhibiting enzymes important for raising prostaglandin levels prostaglandins such as PGE2 and PGF2.4

Indian Journal of Pharmacy and Pharmacology 2022;9(2):122–127

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Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

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Tamboli et al. / *Indian Journal of Pharmacy and Pharmacology* 2022;9(2):122–127

Skin lightening and skin tightening activity The extract of liquorice is reported to be an effective pigmentlightening agent. It is the safest pigment-lightening agent known with least side effects. Glabridin in the hydrophobic fraction of liquorice extract inhibits tyrosinase activity in cultured B16 murine melanoma cells.

Anticoagulant

Glycyrrhizin is the first plant based inhibitor of thrombin. It is found to prolong the thrombin and fibrinogen clotting time. It also increases plasma recalcification duration.

International Journal of Herbal Medicine 2014; 2(2): 132-136

Amelioration of skin inflammation by inhibiting ICAM-1 (intracellular adhesion molecule 1) expression via interference with TNF- α -induced activation of NF- κ B and phosphorylation of ERK/p38 MAPK to activate protein kinase cascade in keratinocytes.

African Journal of Pharmacy and Pharmacology Vol. 16(3), pp. 27-52, March, 2022



Curcuma longa L. (Haridra) - Curcumin, one of the main active principle of *C. longa* is reported to inhibit NF- κ B activation post exposure of various inflammatory stimuli in 117 randomized control trials. There was a significant reduction in TNF- α , IL-6, TGF- β and MCP-1 following curcumin supplementation.

Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

the plant known as *Curcuma longa*, belonging to the family Zingiberaceae. India accounts for as much as 90% of the total output of the world. *Curcuma* is a genus of about 70 species of rhizomatous herbs distributed in southeast Asia and especially in India, China, and Thailand. It contains 5% of volatile oil, resin, and yellow coloring substances known as curcuminoids. The chief component of curcuminoids is known as curcumin (50 to 60%). Curcumin has been proved as an anti-inflammatory drug. *Indian Journal of Pharmacy and Pharmacology* 2022;9(2):122–127

Curcuma longa L. (Haridra) - Curcumin, one of the main active principle of *C. longa* is reported to inhibit NF- κ B activation post exposure of various inflammatory stimuli in 117 randomized control trials. There was a significant reduction in TNF- α , IL-6, TGF- β and MCP-1 following curcumin supplementation.

Journal of Ayurveda and Integrated Medical Sciences | March 2023 | Vol. 8 | Issue 3

Haridra As per the research, Haridra contains Curcumin which showed significant anti-inflammatory activity¹⁷. Water- and fat-soluble extracts of turmeric and its curcumin component exhibit strong antioxidant activity, comparable to vitamins C and E¹⁸. Wuthiudomert et al. (2000) who reported the antifungal activity of turmeric oil against 29 clinical strains of dermatophytes found that diameter of inhibition zone on screening of turmeric oil was found to vary from 26.1 mm to 46 mm against 29 clinical strains of dermatophytes¹⁹. The study conducted by Sharma et al displayed the strong antifungal activity against *M. furfur*. On screening, it was observed that the turmeric rhizome showed the diameter of inhibition zone by disc diffusion method (55 mm) against *M. furfur* at 100% concentration of pure oil²⁰.

Journal of Drug Delivery & Therapeutics. 2020; 10(4-s):25-30

Antioxidant activity

High content of phenolic component in ethanolic extract of Liquorice (*Glycyrrhiza glabra* L) is responsible for its powerful antioxidant activity by means of significant free radical scavenging, hydrogen-donating, metal ion chelating, anti-lipid peroxidative and reducing abilities.

Skin lightening and skin tightening activity

The extract of liquorice is reported to be an effective pigmentlightening agent. It is the safest pigment-lightening agent known with least side effects. Glabridin in the hydrophobic fraction of liquorice extract inhibits tyrosinase activity in cultured B16 murine melanoma cells. It does not affect DNA synthesis. Some other active compounds in liquorice extract like glabrene, Licochalcone A, Isoliquiritin are also responsible for inhibition of tyrosinase activity. Liquiritin present in liquorice extract disperse melanin, thereby inducing skin lightening. Also the antioxidants present in extract may contribute to decrease in skin melanin content [29]. In vitro tyrosinase enzyme inhibition studies has showed that 21.2 μ g/ml of methanolic extract of liquorice caused 50% tyrosinase enzyme inhibition. The inhibition of tyrosinase enzyme and reduction in enzyme activity is caused due to modification of action site of the enzyme. Due to good tyrosinase inhibition activity, liquorice extract can be used to formulate cosmetic formulations with depigmenting activity.³⁰ Ethanolic extract of *Glycyrrhiza glabra* is reported to show improvement in the viscoelastic and hydration properties of the skin. Synergistic effect of UV protective, antioxidant and anti-inflammatory properties of liquorice extract might be responsible for giving beneficial effects on skin.

Anti-fungal activity

Methanolic extract of liquorice was reported to have fungicidal activity against *Arthrinium sacchari* M001 and *Chaetomium funicola* M002. Glabridin was found to be the active compound giving anti-fungal activity . Isoflavonoids such as glabridin, glabrol and their derivatives are responsible for in vivo inhibition of *Mycobacterium smegmatis* and *Candida albicans*. Thus, liquorice extract has a great potential in formulating cosmetic products with antiseptic activities.exhibits potent antibacterial activity.

It is reported that glycyrrhetic acid in liquorice extract gives anti-inflammatory effect similar to glucocorticoids and mineralocorticoids.

It is reported that liquorice extract inhibits the growth of viruses, including herpes simplex, Varicella zoster, and of Japanese encephalitis, influenza virus, vesicular stomatitis virus, type A influenza virus.

International Journal of Herbal Medicine 2014; 2(2): 132-136

Curcuma longa contains three main curcuminoids such as curcumin, demethoxycurcumin and bisdemethoxycurcumin.

Curcuma longa contain volatile oil like tumerone, atlantone and zingiberone. It is a potential plant for treating anti-inflammatory, anti-allergic, antioxidant, antihyperglycemic, and anticancer properties. Molecular study of turmeric includes fingerprinting by RAPD, SCAR, ISSR, and AFLP plays a principal role in developing a molecular marker for the authenticity and diversity of plants. Various products containing *Curcuma longa* frequently used to treat ringworm, obstinate itching, eczema, and other parasitic skin diseases.

The antipsoriatic activity of *Curcuma longa* is due to the existence of antioxidants components in the plant. Curcuminoids of *Curcuma* (curcumin) has poor water solubility and permeability that limits transdermal absorption.

Saponin acts as a surfactant that promotes transdermal absorption. Isolated saponins and curcumin used in different concentration for the formulation of gel. Curcumin and curcumin-saponin incorporated gel show potent antipsoriatic activity. Caffeine synergizes the action of curcumin. Methylxanthine moiety caffeine is proficient to inhibit the phosphodiesterase enzyme. Phosphodiesterase enzyme helps to hydrolysis of cyclic nucleotide elevates the concentration of intracellular cAMP. In psoriasis intracellular, cAMP levels reduced from cutaneous leukocytes. Phosphodiesterase inhibitor caffeine increases intracellular cAMP levels. Nanosponge based gel of curcumin and caffeine so act as a potential treatment of psoriasis. A crosslinker dimethyl carbonate and polymer beta-cyclodextrin used to prepare nanosponge; this incorporated in topical gel. O/W cream prepare by ethyl alcohol extract of *Curcuma* shows significant antipsoriatic activity. Curcumin microemulsion gel is used in dermatocosmetics. SmartPearls tools, which loads medicine into spongy material to get steady amorphous contemporary relief. Penetration and efficacy enhanced by smartPearl tools with the addition of glycyrrhizic acid.

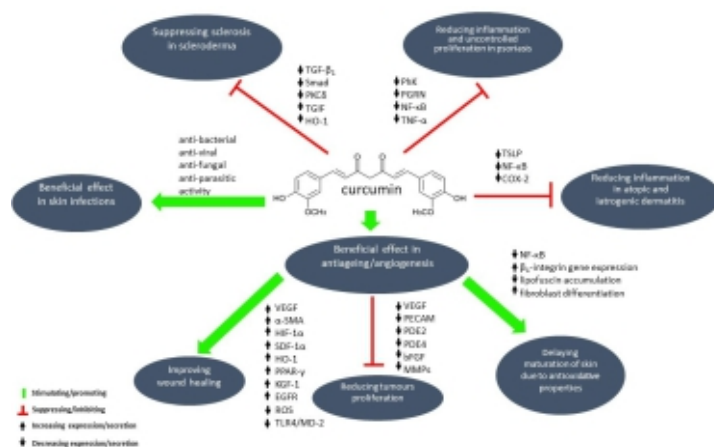
Research J. Pharm. and Tech. 15(3): March 2022 www.rjptonline.org

It is also reported decreased PhK activity in the curcumin and calcipotriol treated groups corresponded to severity of parakeratosis, decreases in keratinocyte transferrin receptor expression and density of epidermal CD8 + T cells.

Chandrasekar R. et al., *Int. J. Res. Dev. Pharm. L. Sci.* June - July, 2016, 5(4), 2188-2197

Curcumin is a polyphenolic molecule derived from the rhizoma of *Curcuma longa* L. This compound has been used for centuries due to its anti-inflammatory, antioxidant, and antimicrobial properties. These make it ideal for preventing and treating skin inflammation, premature skin ageing, psoriasis, and acne. Additionally, it exhibits antiviral, antimutagenic, and antifungal effects.

Curcumin provides protection against skin damage caused by prolonged exposure to UVB radiation. It reduces wound healing times and improves collagen deposition. Moreover, it increases fibroblast and vascular density in wounds.



Int. J. Mol. Sci. 2024, 25, 3617. <https://doi.org/10.3390/ijms25073617>
<https://www.mdpi.com/journal/ijms>

It has been demonstrated that CUR is a potent, selective Phosphorylase kinase (PhK) inhibitor. PhK activity is related to activation of the nuclear factor kappa-light-chain-enhancer of activated B cells (NF- κ B), which leads to the massive, uncontrolled proliferation of keratinocytes and the development of psoriatic plaque significant reduction in the expression of thymic stromal lymphopoietin, a key factor in atopic dermatitis, when treated with CUR. Sharma et al.

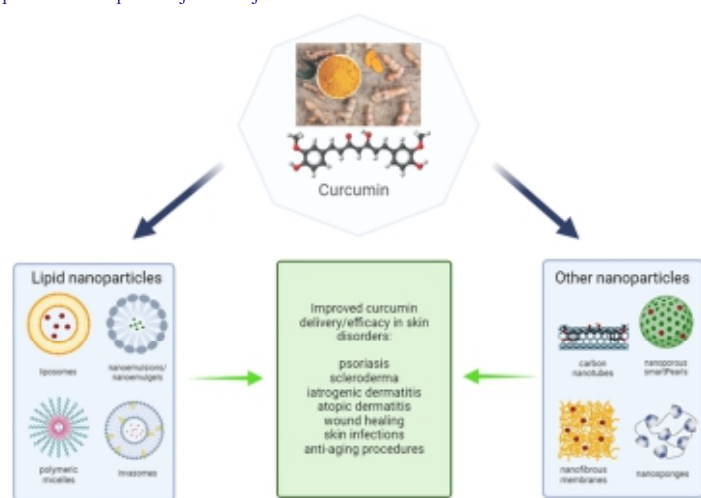
Topical application of curcumin in the form of various preparations such as hydrogels, nanoemulsions, collagen films, polymer bandages, or nanofibrous membranes have proven to be very useful for the local treatment of damaged skin. The anti-inflammatory effect of CUR is demonstrated by regulating inflammatory signaling pathways and inhibiting the production of inflammatory mediators. Reactive oxygen species (ROS) are used as protection against microorganisms present in wounds. However, long-term exposure to high concentrations of ROS causes oxidative stress, which damages cells and is often the cause of wound inflammation. Antioxidant compounds can improve wound healing and scavenge free radicals when they are applied topically.

CUR also has antioxidant properties, which is confirmed by a number of clinical studies. The curcumin-incorporated collagen matrix (CICM) was tested for antioxidant activity using the lipid peroxidation method, and the results obtained confirmed its free radical scavenging activity.

As a result of long-term inflammation and increased oxidative stress, wound healing in diabetic patients may be difficult. Therefore, studies have also been conducted on the antioxidant activity of **CUR** in wound healing in diabetic rats. The study results may be an important strategy to improve healing in diabetic patients.

The use of **CUR** increased wound contraction and reduced the expression of inflammatory cytokines/enzymes such as tumor necrosis factor alpha, interleukin (IL)-1beta, and matrix metalloproteinase-9.

Int. J. Mol. Sci. 2024, 25, 3617. <https://doi.org/10.3390/ijms25073617>
<https://www.mdpi.com/journal/ijms>



Potential of Curcumin in the Management of Skin Diseases. Int. J. Mol. Sci. 2024, 25, 3617. <https://doi.org/10.3390/ijms25073617>

Curcuma longa perform powerful antifungal activity. The antifungal effect included fungal cell membrane disruption and inhibition of ergosterol synthesis, respiration, succinate dehydrogenase (SDH) and NADH oxidase.

Pharmaceutical Resonance 2022 Vol. 4 - Issue 2

Manjistha

Madder (*Rubia cordifolia* L.

rubia The extracts of plant are used for treating different skin infections, it may be a useful plant in the treatment and management of psoriasis.

Chandrasekar R. et al., Int. J. Res. Dev. Pharm. L. Sci. June - July, 2016, 5(4), 2188-2197 these plants is used to treat psoriasis and is useful plant for the treatment and management of psoriasis. IJBAS, September, 2020, 9(9): 2435-2463

Anti-acne property: The anti-acne activity of anthraquinone rich fraction of *R. cordifolia* in a gel formulation against *Propionibacterium acne*, *Staphylococcus epidermidis*, *Malassezia furfur* when compared with standard Clindamycin gel.

Rubia cordifolia root extract has been used as antiinflammatory agent because of the presence of rubimallin.

Wound healing activity The root extract of *R. cordifolia* was reported as an effective wound healing principle in experimental models as wound healer.

Anti-oxidant activity *Rubia cordifolia* contains a wide variety of antioxidants like alizarin, hydroxyl anthraquinones 133 and rubiadin 134 which have been using in various medicaments.

Int. J. Pharm. Sci. Rev. Res., 25(1), Mar – Apr 2014; Article No. 27, Pages: 154-164

Anti-acne property *Propionibacterium acnes*, an anaerobic pathogen, plays an important role in the pathogenesis of acne by inducing certain inflammatory mediators. These mediators include reactive oxygen species (ROS) and pro-inflammatory cytokines. In the study, interleukin-8 (IL-8) and tumor necrosis factor-Y (TNF-Y) were used as the major criteria for the evaluation of anti-inflammatory activity. The polymorphonuclear leukocytes (PMNL) and monocytes were treated with culture supernatant of *P. acnes* in the presence or absence of herb. It was found that *R. cordifolia* caused a statistically significant suppression of ROS from PMNL. Thus, *R. cordifolia*

showed anti-inflammatory activity by suppressing the capacity of *P. acnes*-induced ROS and proinflammatory cytokines, the two important inflammatory mediators in acne pathogenesis (Jain and Basal, 2003).

Wound healing activity Several drugs of plant, mineral and animal origin are described in the Ayurveda for their wound healing properties under the term 'vranaropaka'. *R. cordifolia* was also found to be effective in experimental models (Biswas and Mukherjee, 2003).

Eczema During recent studies in patients with eczema, the topical application of the plant showed a 50% reduction in the severity score within 4 days, the oedema, exudation and itching being significantly relieved (Antarkar et al., 1978).

2009 Oriental Pharmacy and Experimental Medicine 9(1), 1-13

According to Ibn Sina, *Majith* along with Vinegar is an effective remedy for *Daad/Quba* (Ring worm), *Bahaq* (Pityriasis) or any other skin discoloration.

2024 IJNRD | Volume 9, Issue 5 May 2024|

International Journal of Novel Research and Development (www.ijnrd.org)

Int. J. Pharm. Sci. Rev. Res., 25(1), Mar – Apr 2014; Article No. 27, Pages: 154-164

Babchi (*Psoralea corylifolia*)

"Kushtanashini"

Traditionally in India and China, *Psoralea corylifolia* has been used for the treatment of stomacnic, deobstruent, anthelmintic, diuretic, vitiligo and also certain skin diseases, such as leucoderma, psoriasis and leprosy. *Psoralea corylifolia* contains psoralens which are capable of absorbing radiant energy. In ultraviolet range Photoactivation by Psoralens with (200–320nm) is known to ameliorate various skin disorders such as psoriasis, vitiligo and mycosis fungicides in humans. *Psoralea corylifolia* has been traditionally used as an antipsoriatic agent. Used for treatment of skin diseases like leucoderma etc. A compound ointment of the powdered seeds of *Psoralea corylifolia* and *Cassia tora* with lime juice was tried in cases of ringworm with marked beneficial results. Chandrasekar R. et al., Int. J. Res. Dev. Pharm. L. Sci. June - July, 2016, 5(4), 2188-2197 It has been used for the treatment of anthelmintic, diuretic and various skin diseases like leprosy, psoriasis. *Psoralea corylifolia* contains psoralens which are capable of absorbing radiant energy. In ultraviolet range Photoactivation by Psoralens with (200–320nm) is known to ameliorate various skin disorders such as psoriasis, vitiligo and mycosis fungicides in humans. *Psoralea corylifolia* has been used traditionally as an anti-psoriatic agent. A compound ointment of the powdered seeds of *Psoralea corylifolia* and *Cassia tora* with lime juice was tried in cases of ringworm with marked beneficial results. IJBAS, September, 2020, 9(9): 2435-2463

Bakuchi is a renowned herb that has been used in Ayurveda for centuries to treat skin conditions. It has been extensively used in hypopigmentation with great success. It contains psoralens, which on exposure to the sun rays brings out melanin in the depigmented lesions.

Journal of Ayurveda and Integrated Medical Sciences | September 2023 | Vol. 8 | Issue 9

Ancient Unani physicians have reported use of *Babchi* seeds in the treatment of different diseases especially skin diseases e.g. Bars (Leucoderma), Da-us-sadaf (Psoriasis), Bahaq (Pityriasis),

The seed extracts showed significant effect on psoriasis which was concluded by measuring mean thickness of epidermis and histopathological reports and anti-bacterial studies by zones of inhibition and MIC.

Anti-Leucodermic activity A clinical trial was carried out on the patients having vitiligo by the local application of an Ayurvedic preparation containing *P. corylifolia* as the main ingredient, along with oral administration of *Gandhaka rasayana*. Early cases of vitiligo showed maximum improvement within 1–10 months,

International Journal of Unani and Integrative Medicine 2020; 4(1): 32-36

Anti-leucoderma activity *P. corylifolia* proved a promising anti-leucoderma agent. One of the bioactive isolated compound "soralen" found to have the ability to stimulate the development of melanin, and therefore it is employed for Leucoderma treatment.

Anti-acne activity It is reliable anti-acne agent. It is used in antiacne formulations due to the presence of phenolic compounds Bakuchiol. It proved to be safe and nonirritant and can be used for longer periods of the day because it showed no irritation and is nonsensitized.

Anti-psoriatic activity The plant is also used against the skin disease known as psoriasis.

Anti-eczema activity In one experiment, seeds of *P. corylifolia* was extracted with hexane and oil in water, cream was prepared with stearic acid as a base. In the next step, an open clinical trial was conducted on 30 patients suffering from eczema for a period of 30 days. This study concluded that this plant could be effectively used for the treatment of eczema.

Antifungal A phenolic compound bakuchiol extracted from *P. corylifolia* (seeds) exhibited antifungal activity against many strains of pathogenic fungi, including *Microsporium gypseum*, *Epidermophyton floccosum*, *Trichophyton rubrum*, and *Trichophyton mentagrophytes* in a dose range of about 250 µg/ml.








International Journal of Unani and Integrative Medicine 2022; 6(1): 17-21

Psoralea corylifolia proved to be safe and nonirritant and can be used for longer periods of the day because it showed no irritation and is nonsensitizer. One of the bioactive isolated compound "psoralen" found to have the ability to stimulate the development of melanin and therefore it is employed for leucoderma treatment.

Int. J. Pharm. Sci. Rev. Res., 67(2), March - April 2021; Article No. 11, Pages: 65-69

P. corylifolia proved a promising agent in antiacne formulations due to the presence of phenolic compounds Bakuchiol. A phenolic compound **bakuchiol** extracted from *P. corylifolia* (seeds) exhibited antifungal activity against many strains of pathogenic fungi, including *Microsporum gypseum*, *Epidermophyton floccosum*, *Trichophyton rubrum*, and *Trichophyton mentagrophytes* in a dose range of about 250 µg/ml

Phytotherapy Research. 2017;1–19. wileyonlinelibrary.com/journal/ptr
Babchi seeds are specially suggested in the treatment of Bars (Leucoderma), Daussadaf (Psoriasis), Juzam (Leprosy), Bahaq (Pityriasis), Jarab (Scabies), Hekah (Pruritis), Quba (Ring worm) and Fasad-e-Khoon (Impurities of Blood)
 Mohd. Shamim Khan et al / Int. J. Pharm. Phytopharmacol. Res. 2015; 5 (1): 41-45

Use of Bakuchi in various Skin Disorders		
1. Leprosy	The bakuchiol extracts from the seeds is effective against bacterial infections or disorders. It acts an anti-bacterial agent and has been used in the treatment of leprosy	
2. Leukoderma	Anti-leukodermic activity is also observed. Psoralen extract is used for leukoderma .	
3. Psoriasis	The bakuchi seed extract mainly in powder form or other form is effectively used as anti-psoriatic agent.	
4. Scabies	Bakuchi plant extracts are useful in treatment of skin infection like scabies.	
5. Vitiligo	Psoralen extract from whole plant bakuchi is used in the treatment of vitiligo. Bakuchi is the most preferred treatment in almost all medication system like Ayurveda, conventional , modern system for vitiligo.	
6. Eczema	The antifungal activity of Bakuchi is very helpful in eczema. Seed extract of bakuchi methanolic extract mainly is used in the treatment of such skin disorders.	
7. Ringworm	The anti-fungal constituents from the fruit and seed of the Bakuchi plant are helpful in ringworm infection which is also known as dermatophytosis.	

GSJ© 2020 www.globalscientificjournal.com GSJ: Volume 8, Issue 11, November 2020

Bakuchi controls vitiligo spot because it helps in shrinking the white patches, the darker area slowly covers all white skin area, which leads to visible skin changes due to its anti-psoriatic properties. Bakuchi helps to treat various skin disorder like itching, red papules, itching eruptions, eczema, ringworm, rough and dis coloured dermatosis, dermatosis with fissures due to its Blood Purifier properties.

Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org
 © 2022 JETIR August 2022, Volume 9, Issue 8
P. corylifolia Linn. commonly known as “Bakuchi” is conventionally used in Ayurvedic system of medicine for the treatment of various pathological conditions but especially for treatment of skin disorders such as psoriasis, leukoderma and leprosy in the form of internal medications as well as external applications . *P. corylifolia* Linn.seed has been reported to contain several phytoconstituents including coumarins and flavone components.

International Journal of Pharmaceutical Research and Applications
 Volume 7, Issue 3 May-June 2022, pp: 296-299 www.ijprajournal.com
Psoralea corylifolia has been traditionally used as an Antipsoriatic agent because its chief constituent is psoralen which is a photoactive furocoumarin that binds to DNA, and forms photoproducts with pyrimidine base when exposed to UV light. This action inhibits DNA synthesis and decreases the keratinocyte hyper proliferation.

International Journal of Pharmaceutical Research and Applications
 Volume 7, Issue 3 May-June 2022, pp: 2366-2373 www.ijprajournal.com



(*Solanum surrattense* Burm f.)
 Intensive investigation on phytochemical constituents resulted in isolation of alkaloid and steroidal compounds solasonoine, solamargine, campesterol, and diosgenin. Evaluation of therapeutic activity of isolated compounds proved as potent ones with reference to the standard.
 Plants have been used as a potential source of medicine, due to an enormous diversity of bioactive compounds.

Solanum surattense extract are evaluated for antifungal effectiveness and a wide range of zone of inhibition has been evidenced against many of the fungal stains such as *Trichoderma viride*, *Aspergillus niger*, *A. flavus*, and *A. Fumigatas*. Singh et al. (2007) reported antifungal efficiency of isolated steroidal glycosides (carpestroal) on *T. viride* and *A. niger*. *Trichoderma viride* exhibited the highest susceptibility and showed the highest growth inhibition antifungal effect of plant extracts were similar to that of standard drug amphotericin-B. In comparison with the fruit extracts, it is less than the effect of standard drug because of the low dose of antifungal components.

The choice of non-steroidal and steroidal drugs has side effects. This necessitates searching safe anti-inflammatory agents from the natural source. Fruits of *S. Surattense* are used as anti-inflammatory agents used in the traditional medicine. revealed that the plant extract exhibited remarkable antioxidant activity at all test doses in a dose-dependent manner. reported a significant antibacterial effect of ethanol extracts of *S. surattense* leaf against eight bacterial strains, Wound healing restores the disturbed anatomical continuity and normalizes the epithelial integrity of the skin.

Solanum surattense leaf extracts have the potential capability to use as an analgesic. Studies in experimental animals with plant extract showed an elevated response in the dose-dependent manner.

Journal of Applied Pharmaceutical Science Vol. 9(03), pp 126-136, March, 2019
 Available online at <http://www.japsonline.com>

Wound Healing Activity When applied topically, the methanolic extract of *S. xanthocarpum* fruit successfully improved wound contraction (30%), tensile strength (37.5%) after 12 days, and wound healing process considerably (P0.01) compared to the control (Aloe vera Cream and Ketamine HCl). The outcomes supported its usage in traditional medicine to heal wounds.

Journal of Ayurveda and Integrated Medical Sciences | April 2023 | Vol. 8 | Issue 4

shown that it possesses excellent activities against malarial, fungal, bacterial infections. *Saudi Journal of Biological Sciences* 29 (2022) 103386



Aloe vera-called “Pharmacy of Nature”
Antiseptic effect: Lupeol, salicylic acid, urea nitrogen, Cinnamomum acid, phenols, and sulphur are all anise. comp. found in aloe Vera. Fungi, bacteria, and viruses are all inh by them.
Wound healing: Aloe Vera promotes the proliferation and migration of fibroblasts and keratinocytes, which speeds up wound healing
International Journal of Herbal Medicine 2022; 10(3): 50-55
 redness and peeling associated with psoriasis. Aloe vera contains anthraquinones, mucopolysaccharides, steroids, saponins, and salicylic acid. Active ingredients of Aloe vera is anthraquinone and acemannan which have antibacterial activity and are therapeutic for psoriasis disease. Salicylic acid as a component in this plant has a keratolytic effect that removes psoriatic plaques.

Aloe vera: in psoriasis It belongs to the family Asphodelaceae. The gel and the rind of the aloe vera leaf contains pharmacologically active components like anthraquinone and acemannan which have properties like analgesic , anti inflammatory, anti pruritic, wound healing etc. and hence can be used in treating psoriasis.

Aloe vera moisturizes skin by forming a protective layer which prevents bacterial growth. Salicylic acid is a proven antiseptic agent used in psoriasis treatment which is present in Aloe vera. Work done on **aloe vera** states that 0.5% Aloe vera extract in a hydrophilic cream was well tolerated and found to be very effective.
Indo American Journal of Pharmaceutical Research, 2017
 Vol 7, Issue 01, 2017. *Padmini Iriventi et al.*

It harbors powerful properties to get your Candida under control and stimulate your immune system. It acts as an antifungal, antiviral, and anti-inflammatory. Antifungal and anti-inflammatory properties.

Pharmaceutical Resonance 2022 Vol. 4 - Issue 2
 © Published by DYPIPSR, Pimpri, Pune - 411 018 (MH) INDIA

it is a great remedy to get rid of skin infections as well. Aloe Vera is an all natural remedy for ringworm and numerous other skin problems.

Reena et al. / *Pharma Science Monitor* 8(4), Oct-Dec 2017, 197-203

Aloe vera extract showed more potent antifungal activity as compared to the extract of *Azadirachta indica*. These results further confirm the therapeutic potency of these plants which are being used as traditional medicine.

Mitesh Dwivedi., et al. “In Vitro Inhibition of Tinea Corporis from Various Extracts of *Aloe vera* and *Azadirachta indica*”. *Acta Scientific Microbiology* 1.9 (2018): 16-23.

Volume 1 Issue 9 September 2018 C. G. Bhakta Institute of Biotechnology, Faculty of Science, Uka Tarsadia University, Surat, Gujarat, India.

Aloe vera contains alloins and barbadoins as main chemical constituents. *Aloe verahas* inhibitory effects on *Trichophyton rubrum* which cause tinea pedisbecause of the presence of anthra quinine as antifungal. (Zeenath Ambareen, 2015)

COMPARATIVE STUDY OF THE ANTIFUNGAL ACTIVITY OF Aloe veraAND Zingiberofficinale EXTRACTS ON Trichophyton rubrum. BY WALUBE BLAIR, BU/UP/2017/1439 SUPERVISOR Dr. BARUGAHARE BANSON 2021

Aloe vera has shown very good results in skin diseases and it is often taken as health drink. It is also found effective in treating wrinkles, stretch marks and pigmentations. It also seems to be able to speed wound healing by improving blood circulation through the area and preventing cell death around a wound. One of the studies conducted on mice to investigate the effects of *Scutellariae radix* and *Aloe vera* gel (AV), in spontaneous atopic dermatitis (AD)-like skin lesions revealed that the group receiving only AV in a dose of 0.8 mg/kg p.o provided relief in AD due to reduction of interleukin (IL)-5 and IL-10 levels. The gel has properties that are harmful to certain types of bacteria and fungi. A cream containing 0.5% aloe for 4 weeks reduced the skin "plaques" associated with psoriasis. Application of gel helped in the improvement of partial thickness burns. When applied to the skin, the gel seems to help skin survive frostbite injury. It might delay the appearance of skin damage during and after radiation treatment.

Pharmacognosy Reviews | January-June 2014 | Vol 8 | Issue 15

Nimba

Its fruits and seeds are the main source of neem oil. Azadirachtin is an insect anti-feedant, growth disrupter, and insecticide. It contains quercetin and beta-sitosterol, polyphenolic flavonoids. Neem leaves have antibacterial and antifungal activity. Neem oil has been used to treat chronic skin conditions such as psoriasis, eczema, and ringworm.

Indian Journal of Pharmacy and Pharmacology 2022;9(2):122-127

Leaf extract of **Neem** were found to have potent anti-dermatophytic activity against *Trichophyton rubrum*, *Candida albicans* and *Epidermophyton* 11.

Azadirachta indica: *Azadirachta indica* is plant from *Meliaceae* family. The active constituent of *Azadirachta indica* is nimbidin, nimbolides, salanin, azadirachtin, meliacin, gedunin, nimbin, valassinn, meliacin. The seed contains tignic acid, limnoids. *Azadirachta indica* kernels were used in making soap, pesticide and pharmaceutical industries. Neem shows analgesic, abortifacient, antibacterial, anti-yeast, anthelmintic, anti-inflammatory and antiviral. *Azadirachta indica* also shows diuretic, antineoplastic, antipyretic, antispasmodic, immunomodulators and antineoplastic activity 58. Topical cream consists of the nanostructured lipid carriers of *Azadirachta leaves extract*; *Lawsonia inermis* leaves extract, and fruit extract of *Mallotus philippensis*, which show anti-psoriatic activity 59. O/W cream of extract of *Azadirachta indica* leaf extract, *Berberis aristata* root extract, *Psoralea corylifolia* seed extract and *Hemidesmus indicus* root show excellent antipsoriatic activity. *Research J. Pharm. and Tech.* 15(3): March 2022 www.rjptonline.org

Neem oil, nimbin and nimbidine are active against fungi. It has strong antifungal properties, Neem leaves can kill fungal pathogens including *Aspergillus*, *Candida albicans*. It is also used as antiseptic agent, insecticidal.

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Another study, conducted on an anti-acne moisturizer formulated from herbal crude extracts and investigated for the physico-chemical parameters as well as antibacterial activity of the formulation, revealed that ethanol extract of *Andrographis paniculata*, *Glycyrrhiza glabra*, *Ocimum sanctum*, *A. indica* and Green tea possessed the potential for inhibiting acne. It was observed that the optimal formula of anti-acne moisturizer was satisfactorily effective to control acne inducing bacteria i.e., *Staphylococcus epidermidis* and *Propionibacterium*.

Pharmacognosy Reviews | January-June 2014 | Vol 8 | Issue 15

Anti-Fungal Activities Nimba Kid was harvested from the trees and tested for phenolic acids by the HPLC for the white milk-based liquid secretion (high performance liquid chromatography). Coffee, vanillic, o-coumaric, cinnamic acid, and salicylic acids were the phenolic acids detected. Ethyl acetate was further broken down and several fungi for anti-fungal action were checked against it. It was determined to be strongly *in vitro* anti-fungal.

The oil derived from seeds is known to be antiseptic and is used in eczema and leprosy.

International Journal of Botany Studies

www.botanyjournals.com Volume 6; Issue 2; 2021; Page No. 122-124

Khan and Wassilew (1987) documented the antibacterial activity of the extracts of the leaves, seeds, and bark of neem.

Govindachari *et al.* (1998) first reported about the polyphenolic flavonoids - Quercetin and β -sitosterol, which were purified and isolated from fresh neem leaf extract and known to have antifungal and antibacterial properties.

reported and proved by various workers. Several reports documented the effective use of neem extract preparations in controlling the growth of fungi causing athlete's foot, ringworm, and those occurring in the bronchi, lungs, mucous membrane in the case of mouth cavity thrush, intestinal cavity, etc.

Neem seed and leaf extracts were administered to dermatophytes such as *Trichophyton rubrum*, *Trichophyton mentagrophytes* and *Microsporum nanum*. At 15 μ g/mL concentration, the seed extract was found to be efficient in disrupting the growth pattern of the fungi tested. This was reported by Natarajan, Venugopal and Menon (2003).

Modern Approaches in Chemical and Biological Sciences Vol-2

<https://doi.org/10.31674/book.2022macbs.011>

Journal of Pharmacognosy and Phytochemistry 2023; 12(6): 59-65

International Journal of Economic Plants 2022, 9(1):059-063

study determines the antifungal activity of neem oil against various species of fungi such as *Aspergillus niger*, *Aspergillus flavus*, *Trichoderma viride*. The essential oil caused a significant decrease in the activity of the above mentioned fungi and it causes suppression in their growth at concentrations. *Int. J. Pharm. Sci. Rev. Res.*, 39(1), July – August 2016; Article No. 38, Pages: 200-202 *Journal of Scientific Research*, Volume 64, Issue 1, 2020

Vrana shodhan-ropan (Wound cleansing and healing activity) *Krimighna* (Anti-microbicidal activity)- *Raktashodhaka* (Blood purifier activity)- *Kusth* (Skin disease pacifying activity)- *Shothaghna* (Anti-inflammatory activity)-

International Journal of Ayurveda and Pharma Research IJAPR | September 2022 | Vol 10 | Issue 9

Sanskrit- *sarva roga nivarini*, meaning the curer of all ailments.

Antifungal Activity of leaf extract of Neem.

Int.J.Curr.Microbiol.App.Sci (2014) 3(5): 305-308

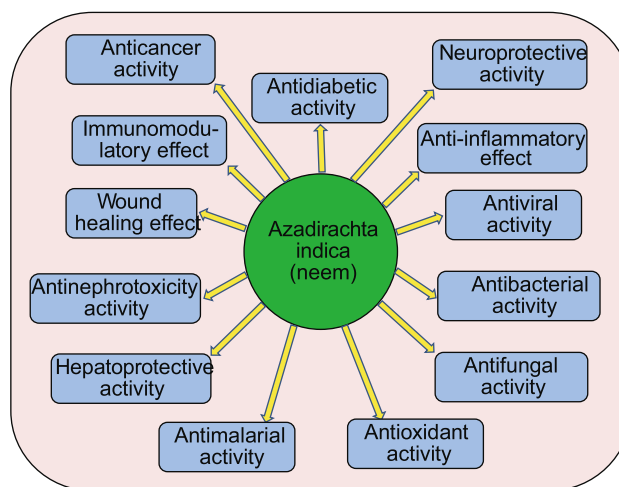
study, it can be concluded that the antifungal effects of neem seed extract was highest against *Curvularia* sp. (37.76% inhibition) followed by that of *Aspergillus* sp. (20.22% inhibition) and *Fusarium* sp. (7.56% inhibition). The extract had no significant inhibitory effect on *Rhizopus* sp. *G.J.B.A.H.S.*, Vol.3(1):106-109 (January – March, 2014)

The importance of this medicinal plant is more evident from the report of US National Academy of science publication in 1992 with a title called "Neem-a tree for solving global problem". It is established in many scientific studies that neem seeds contain chemical compounds to control more than 100 species of insects and microorganism.

IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS) e-ISSN: 2278-3008, p-ISSN:2319-7676. Volume 9, Issue 2 Ver. III (Mar-Apr. 2014), PP 01-06 www.iosrjournals.org

The previous investigations about *Azadirachta indica* have been not only restricted to its known antifeedant activity on insects, but also as potent antifungal drug.

Biomedical & Pharmacology Journal, June 2020. Vol. 13(2), p. 921-925



Hindawi Publishing Corporation Evidence-Based Complementary and Alternative Medicine Volume 2016, Article ID 7382506, 11 pages <http://dx.doi.org/10.1155/2016/7382506>



The Antimicrobial Potential of the Neem Tree *Azadirachta indica*

the potential of neem as a previously untapped source of novel therapeutics are summarized as they relate to the aforementioned research topics. Additionally, the capacity of neem extracts and compounds to act against drug-resistant and biofilm-forming organisms, both of which represent large groups of pathogens for which there are limited treatment options, are highlighted.

Frontiers in Pharmacology | www.frontiersin.org 3 May 2022 | Volume 13 | Article 891535

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classically categorized in Charaka Samhita as a "Kandughna" that means a group of herbs that relieve itching, Katuka Skandha is a pungent tasting group of herbs. Charaka has mentioned it as a major source of oil. Rasa Panchak of Karanj as per Ayurveda

Asian J Pharm Clin Res, Vol 14, Issue 6, 2021, 14-21

Pongamia pinnata Therapeutic properties

Karanja has anthelmintic, insecticidal, anti-bacterial, anti-fungal, nematocidal, and wound-healing properties.

Indications and uses Karanja is indicated for skin diseases such as ringworm, scabies, eczema, urticaria, erysipelas, leucoderma, leprosy, gonorrhoea, herpes (shingles or herpes zoster and also against herpes genitalis), impetigo and pityriasis versicolor

WHO Library Cataloguing-in-Publication data © World Health Organization 2010

Pongamia pinnata Linn: The family of *Pongamia pinnata* is *Fabaceae* and generally known as 'Karanj'. It contains flavonoid and fixed oil. It is a versatile plant due to its chemical constituents, *Pongamia pinnata* sprouts and fruits used in folk remedies for abdominal cancer; the seeds for keloid tumors and powder of plant for tumors. The oil used in the preparation of liniments and skin preparations. The juice of leaves used in dyspepsia, cold, diarrhea, cough, flatulence, leprosy and gonorrhea. Karanj root meant for clean-up gums, teeth, and ulcers. It is used in anti-plasmodial, anti-inflammatory, anti-nociceptive, anti-lipid oxidative, anti-hyperammonic, anti-diarrheal, and antioxidant. Oil of karanj is a source of biodiesel. Karanj oil shows antipsoriatic activity. QRT-PCR is used to confirm cytokines attentiveness in the blood serum. Gel has been prepared by means of methylsulphonylmethane crush and seed oil of *Pongamia pinnata* Linn. The prepared gel shows good antipsoriatic activity. The activity of the gel was evaluated by using the HaCaT cell line and mouse tail model. Aqueous bark extract of plant *Pongamia pinnata* was incorporated in commercial preparation SUEX gel, used for psoriasis treatment. This new formulation successfully reduces retention of stratum granulosum and epidermal thickness. This gel shows that the attendance of the water extract of the bark shows an enhancement in the effectiveness of the ointment (SUEX GEL) used in the management of psoriasis. Karanj and pongapin furanoflavone was isolated from the air-dried root bark, both isolated compounds show antipsoriatic activity.

Research J. Pharm. and Tech. 15(3): March 2022 www.rjptonline.org

ponga miya Useful for the treatment of skin diseases. Powered seeds are used for treatment of leucoderma Pongamia Seed oil is also used as insecticidal, bactericidal and nemacidal. In the traditional systems of medicines, such as Ayurveda and Unani, *P. pinnata* is used for antiinflammatory, antiplasmodial, anti-nociceptive, antihyperglycaemics, antilipidoxidative, anti-diarrhoeal, antiulcer, antihyperammonic and antioxidant. Its oil is a source of biodiesel. It has also alternative source of energy, which is renewable, safe and non-pollutant.

Chandrasekar R. et al., Int. J. Res. Dev. Pharm. L. Sci. June - July, 2016, 5(4), 2188-2197

It is also a source of energy which is safe and non-pollutant. Pongamia oil is very useful for the treatment of psoriasis. IJBPA, September, 2020, 9(9): 2435-2463

Pongamia pinnata, a versatile resource of essential oil can be obtained through soxhlet extraction method. It has antifungal, antimicrobial properties which restrict the growth of microorganisms as discussed in literature.

The Pharma Innovation Journal 2023; 12(3): 1486-1488

The imiquimod-induced psoriatic mouse model, showed a prominent anti-psoriatic activity of the extract as evident through index grading. Treatment with extract confirmed a noteworthy reduction in psoriasis in the treated groups as there was a considerable diminution in the thickness and scaling of skin.

Wadher et al. Clinical Phytoscience (2021) 7:20

<https://doi.org/10.1186/s40816-021-00256-6>

Evaluate the Effectiveness of Pongamia pinnata Seed Powder on Pityriasis

Versicolor (thema) A single blind comparative clinical study was done in order to evaluate the effectiveness of an external application of ointment which was prepared from seed powder of *Pongamia pinnata*.

Immune modulatory: Reported studies revealed that the aqueous extract of the leaves possesses immunomodulating activity

Asian J Pharm Clin Res, Vol 14, Issue 6, 2021, 14-21

P. pinnata oil is used in many topical creams and ointments for treating skin ailments. It is used to reduce skin irritation, itchiness, and inflammation. The oil has also been shown to reduce the appearance of scars and improve skin texture by increasing collagen and elastin production. Its antibacterial and antifungal properties help in reducing skin infections. *P. pinnata* extracts have been shown to exhibit antimicrobial activity against the bacteria that cause acne, such as *Propionibacterium acnes*.

The Open Medicinal Chemistry Journal, 2023, Volume 17

Wound healing, Antimicrobial, Antioxidant Activity: In wistar rats, the authors assessed the wound healing, antioxidant ability and anti-microbial of *Pongamia Pinnata*. Increased wound contraction and tensile strength, increased hydroxyproline and hexosamine content, antioxidant action and moderate antimicrobial activity are shown in methanol extracts of *P. pinnata* leaf to promote early wound healing demonstrated by *P. pinnata*. Journal of Drug Delivery & Therapeutics. 2021; 11(1-s):207-211

Journal of Ayurveda and Integrated Medical Sciences | Mar - Apr 2020 | Vol. 5 | Issue 2

The seeds of *Pongamia pinnata* contain recognised flavonols, have been demonstrated to have antifungal activities. Journal of Survey in Fisheries Sciences 2023 10(2S) 4063-4067



Effectiveness of Pongamia pinnata Seed Powder on Pityriasis Versicolor (thema).

J Clin & Commun Med 2(3)- 2020. JCCM.MS.ID.000139.

DOI: 10.32474/JCCM.2020.02.000139.



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