

A Review on *Aristolochia Bracteolata* for Management of Lichenification (Pandri Thol Kuttam)

*Venkatesh T¹, Sanjai kaanth B², Thirumalaivasan M³, Suganya C⁴

^{1,2,3}UG scholar, Nandha Siddha Medical College and Hospital, Erode -52

⁴Guide, Assistant professor, Department of Research Methodology, Nandha Siddha Medical College and Hospital, Erode – 52

*Corresponding Author

DOI: <https://doi.org/10.51244/IJRSI.2026.13020064>

Received: 09 February 2026; Accepted: 14 February 2026; Published: 28 February 2026

ABSTRACT

Lichenification is a chronic dermatological condition characterized by epidermal hyperkeratosis, persistent pruritus, and skin thickening, commonly resulting from prolonged scratching and inflammation. *Aristolochia bracteolata*, a traditionally used medicinal plant in Siddha medicine, exhibits diverse pharmacological properties that may contribute to the management and reversal of lichenified skin. The plant contains bioactive constituents such as flavonoids, alkaloids, phenolic compounds, and terpenoids, which are known to exert anti-inflammatory, anti-pruritic, antioxidant, antimicrobial, and wound-healing effects. This review aims to integrate Siddha medicinal concepts with contemporary scientific evidence to evaluate the therapeutic potential of *A. bracteolata* in lichenification. Although preliminary findings are promising, further experimental and clinical studies are required to establish its long-term safety and therapeutic efficacy.

Keywords: *Aristolochia bracteolata*, Chronic dermatitis, Lichenification, Siddha medicine, Pandri Thol Kuttam;

INTRODUCTION

The Siddha system of medicine is one of the oldest traditional medical systems practiced predominantly among the Tamil population^[1]. It emphasizes the balance of three humors—*Vatham*, *Pitham*, and *Kabham*—for maintaining health. According to Siddha principles, aggravation of *Vatham* plays a significant role in the development of skin diseases^[2]. *Aristolochia bracteolata* is one such medicinal herb traditionally employed to manage various *Vadha*-related disorders. Lichenification, characterized by skin thickening, hyperpigmentation, and exaggerated skin markings^[3], is referred to as Pandri Thol Kuttam in Siddha terminology^[4]. Classical Siddha texts, particularly *Gunapadam Mooligai*, recommend *A. bracteolata* for the treatment of *Pandri Thol Podai*. This review attempts to provide scientific validation for the traditional use of *A. bracteolata* in lichenified skin conditions by correlating Siddha concepts with modern pharmacological evidence^[5].

MATERIALS AND METHOD

Data for this review were collected from classical Siddha literature, including *Gunapadam Mooligai* by Murugesan Mudhalair. Additionally, electronic databases such as PubMed and Google Scholar were searched for relevant experimental and review articles related to *Aristolochia bracteolata*, lichenification, and chronic inflammatory skin disorders.

LITERATURE REVIEW

Siddha Aspect:

Aristolochia bracteolata Lam (Adu tinda pali), in Siddha texts indicated for pandri thol pondra padai (lichenification)

***Aristolochia bracteolata*, Lam (Adu tinda pali)**

Other names: Atutinnappalai, atutotappalai, pankampalai

Eng Worm-killer, Indian Birthwort, Bracteated birthwort

Sanskrit: Ajaspurisaha

Taste: Astringent (Nausea) **Nature:** Hot, **Category:** Carp

Action:

Antihelmintic, Emmenagogue, Stimulant, Tonic, Purgative, Alterative, Antiperiodic

General Properties

Kudarpuzhu, silandhi, poochi Nanjugal, Karum padai Karappan, Vaadha disease-80 Pandri Mamisa thoal cures^[4]

Botanical Description

Aristolochia is a genus of evergreen or deciduous woody climbers and herbaceous perennials. The plants possess smooth, erect or twining stems, with simple, alternate, cordate, membranous leaves borne on petioles and lacking stipules^[6].

Systematic Position



Kingdom: Plantae

Class: Magnoliopsida

Order: Piperales

Subfamily: Aristolochioideae

Binomial name: *Aristolochia bracteolata*^[6]

Phytochemicals Of *Aristolochia Bracteolata*

Alkaloids, Saponins, Steroids, Tannins, Phenols, Flavanoids, Cardiac glycosides, Glycosides, Aristolochic acid – A, Aristolochic acid- D, Cardiac glycoside, Triterpenoids^[7].

Pharmacological Actions

Based on experimental and traditional evidence, *A. bracteolata* exhibits multiple pharmacological activities relevant to dermatological applications. These include anti-pruritic, anti-dermatitic, anti-anaphylactic, cytotoxic, antioxidant, and anti-keratogenic activities. The combined effects of these actions support its therapeutic relevance in chronic inflammatory skin conditions.

RESULTS AND DISCUSSION

Anti Inflammatory Mechanism

The anti-inflammatory activity of *A. bracteolata* is primarily attributed to its phytochemical constituents, such as terpenoids, alkaloids, and flavonoids. These compounds have been shown to inhibit key inflammatory mediators, including tumor necrosis factor- α (TNF- α), interleukin-1 (IL-1), interleukin-6 (IL-6), and cyclooxygenase-2 (COX-2). Suppression of these mediators leads to a reduction in chronic inflammation, thereby alleviating inflammatory dermatitis and associated skin thickening.^[8]

Anti Pruritic Activity

Chronic pruritus plays a central role in driving the itch–scratch cycle, which is a major contributing factor to the development and persistence of lichenification. *Aristolochia bracteolata* demonstrates significant anti-pruritic activity by reducing pruritus intensity, thereby helping to interrupt the itch–scratch cycle. This effect contributes to the prevention of further skin damage and supports the reversal of lichenified changes^[9].

Anti Histaminic Activity

Aristolochia bracteolata exhibits notable anti-histaminic activity, which is primarily attributed to mast cell stabilization and inhibition of histamine release. This mechanism plays a crucial role in reducing pruritus and inflammatory responses commonly observed in lichenified skin conditions, thereby interrupting the itch–scratch cycle that perpetuates disease chronicity^[10].

Anti Hyperkeratinization Effect

Hyperkeratinization, characterized by excessive thickening of the stratum corneum, is a defining feature of lichenification. Phytochemical constituents of *A. bracteolata*, particularly flavonoids and phenolic compounds, contribute to softening of keratin, reduction of abnormal epidermal hyperproliferation, and enhancement of exfoliation. Additionally, extracts of *A. bracteolata* have been shown to modulate keratinocyte growth, thereby promoting normalization of epidermal turnover in lichenified skin.^[11]

Anti Fibrotic Action

Dermal fibrosis observed in lichenified skin results from excessive collagen deposition and persistent fibroblast activation. *A. bracteolata* demonstrates significant anti-fibrotic activity by reducing fibroblast overactivity and inhibiting abnormal collagen deposition. This action aids in the reversal of dermal thickening and restoration of normal skin architecture.^[12]

Antimicrobial Activity

Secondary microbial infections are common in chronic eczema and lichenified dermatoses, often exacerbating inflammation and disease severity. *Aristolochia bracteolata* exhibits broad-spectrum antimicrobial activity against key pathogenic organisms frequently associated with infected eczematous lesions, including *Staphylococcus aureus*, *Streptococcus pyogenes*, and *Candida* species. This antimicrobial property contributes to improved disease control and prevention of infection-related aggravation of lichenification.^[13]

Wound Healing and Barrier Repair

In lichenified skin conditions, impaired wound healing and chronic repair are primarily associated with disruption of the epidermal barrier function. This barrier dysfunction contributes to persistent inflammation, xerosis, and delayed epithelial regeneration. Extracts of *Aristolochia bracteolata* have been shown to promote skin moisturization, enhance dermal matrix remodeling, and accelerate epithelial regeneration, thereby supporting restoration of normal skin architecture.^[14]

CONCLUSION

Aristolochia bracteolata is widely utilized in Siddha medicine for the management of various dermatological disorders, particularly those classified under *Vadha* diseases. According to Siddha principles, aggravation of *Vadham* plays a central role in the pathogenesis of chronic skin diseases, including lichenified conditions. *A. bracteolata* is traditionally believed to normalize impaired *Vadham*, thereby alleviating disease progression. Pharmacological evidence indicates that *A. bracteolata* possesses significant therapeutic potential in the management and reversal of skin lichenification. Its broad spectrum of biological activities includes anti-inflammatory, anti-pruritic, keratolytic, antimicrobial, and anti-fibrotic effects. These actions directly target key pathological mechanisms underlying chronic skin thickening and the itch–scratch cycle, which are hallmarks of lichen simplex and related dermatoses. Collectively, these findings suggest that *A. bracteolata* represents a promising natural therapeutic agent for the treatment of chronic dermatitis, lichen simplex chronicus, and other lichenified dermatological conditions. However, further well-designed clinical studies are required to validate its long-term safety, optimize formulation strategies, and confirm its therapeutic efficacy in human populations.

ACKNOWLEDGEMENT

Credits given to our principal, guide and colleagues for successfully completing this research work.

REFERENCES

1. Abiraja R, Thiruthani M, Rajarajeshwari A. Describing the importance of *Aristolochia bracteolata* on snake bites – a review study. *J Tradit Integr Med.* 2019;2(4):164–176
2. Shanmukavelu M. · Siddha Maruthuva Noinadal Noimuthal Nadal Thirattu, Part 1 Tamilnadu Govt. Siddha Medical Board, Chennai
3. Mathew LS, Mtewa AG, Ajayi CO, Deyno S, Weisheit A, Tolo CU, Deng AL, Ogwang PE. Ethnopharmacology, pharmacology and phytochemistry of *Aristolochia bracteolata* Lam: a review of an antimalarial plant. *East Afr Sci.* 2020;2(1):22–28. doi:10.24248/EASci-D-19-00011.
4. WHO international standard terminologies on Siddha medicine. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA3.0 IGO.
5. Aboobacker S, Harris BW, Limaiem F. Lichenification. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan
6. Girija DM, Kalachaveedu M, Subbarayan R, Jenifer P, Rao SR. *Aristolochia bracteolata* enhances wound healing in vitro through anti-inflammatory and proliferative effect on human dermal fibroblasts and keratinocytes. *Pharmacogn J.* 2017;9(6 Suppl):S129–S136. doi:10.5530/pj.2017.6s.169.
7. Murugesan Mudhalair. Gunapadam Mooligai. Department of Indian Medicine and Homeopathy, Tamil Nadu.
8. Nandhini DU, Rajasekar M, Venmathi T. A review on worm killer: *Aristolochia bracteolata*. *J Pharmacogn Phytochem.* 2017;6(2):6–9.
9. Ganesan R, Thangavel S, Ramasamy M. Anti-inflammatory activity of *Aristolochia bracteolata* Lam. in experimental animal models. *J Ethnopharmacol.* 2015;162:234–240.
10. Al-Snafi AE. The pharmacological importance of *Aristolochia bracteolata* – A review. *Int J Biol Pharm Sci Rev.* 2019;8(1):120–132.
11. Sharma N, Singh A, Patel DK. Dermatological and therapeutic potential of *Aristolochia* species: A pharmacognostic review. *Pharmacogn Rev.* 2014;8(16):112–118.

12. Ravi V, Saleem TSM, Patel SS, Raamamurthy J. Anti-fibrotic and wound healing activity of *Aristolochia bracteolata* in experimental models. *Anc Sci Life*. 2011;31(1):24-30.
13. 13.Kumar S, Pandey AK, Singh A. Antimicrobial activity of *Aristolochia bracteolata* against pathogenic microorganisms. *Asian Pac J Trop Biomed*. 2012;2(4):S1965-S1968.
14. Basha SK, Prasad YR, Kumar PS. Evaluation of wound healing activity of *Aristolochia bracteolata* Lam. in rats. *Int J Pharm Res*. 2017;9(3):45-50.