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A Comparative Microscopic Study Of Prishniparni (*Uraria picta)* Desv. Grown By Vrikshayurveda Method Ankola (*Alangium salvifolium*)-Wang.Taila And Prishniparni (*Uraria picta)* Desv. Grown In Willd Condition.

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Abstract:

Prishniparni is an important medicinal plant described in Ayurveda. It is one of the significant herb included in the classical Ayurvedic group known as *Dashamoola,* which is widely used for treating inflammatory conditions, fever, respiratory disorders, and weakness. *Prishniparni* is botanically identified as *Uraria picta* Desv. and belongs to the Fabaceae (Leguminosae) family. It is a perennial herb or small shrub commonly found in tropical and subtropical regions of India. The name Prishniparni is derived from two Sanskrit words: "*Prishni*", meaning spotted or variegated, and "Parni", meaning *leaf*. The plant is so named because its leaves often show spotted or variegated patterns. Ankola *Alangium salvifolium* (Wang)is potential herb with wide spectrum of alkaloids .The use of Ankola Taila for seed treatment represents a traditional biotechnology concept described in *Vrikshayurveda*. By studying the germination techniques described in *Vrikshayurveda* with reference to *Prishniparni*, valuable insights can be gained for the conservation and propagation of other endangered plant species."

Keywords –*Vrikshayurveda*, *Prishniparni*, seed germination

INTRODUCTION

Prishniparni Uraria picta Desv holds a position of considerable authority within the Ayurvedic pharmacopoeia. Its importance is enshrined through its inclusion across the *Brihattrayi*—the three great classical compendia of Charaka Samhita, Sushruta Samhita, and Ashtanga Hriday . It is one among the *Parnidwaya* and is an ingredient of the group of Dashamoola.[1] In Charaka Samhita *Agrya Samgriha* it is defined as *sangrahika, vatahara, deepaneeya* and *vrishya*[2]. Acharya Susrutha has enumerated it in the *rodradhi bast*i use in treating

Hridayroga. *Acharya Vagbhata* explained it in *Vidarigandhadi gana* which is also indicated for *Hridroga* . Plant is also included in 50% subsidy list of NMPB National medicinal plant Board various methods of germination and conservation should be developed to ensure the sustainable preservation of plant species. Botanically identified as *Uraria picta* Desv. (Family: Fabaceae), the plant is a perennial undershrub found in tropical and subtropical regions of India. Its authenticity is marked by the synonym *Chitraparni*. Plant is subjected to controversy. In Some region *Desmodium gagnetium* is referred as *Prishniparni Uraria picta Desv.* to the distinctive variegated appearance of its leaves. In present study Prishniparni Uraria picta Desv,grown by Vrikshayurveda method and Prishniparni grown in wild condition comparative Microscopic Phytochemical study of roots done to for quantitative and qualitative property of drug.

Material and methods

Collection of sample

Wild habitat – Area around Sam global University Raisen .Madhya Pradesh Methodology of study divided into further subpart. Collection and Authentication- Procurement of crude drug – *Ankola (Alangiun salvifolium*) Linn. Fruits were collected from wild area Raisen Dist. Collection of *Prishniparini (Uraria Picta) Desv*. Plant roots from Sam Global University Dist. Raisen Seeds of Healthy mother plant collected during October month. Authentication of both drug was done in Vedanta phytochemical Laboratory Bhopal with references 012023 and 012032 respectively**.**

Preparation of plant extract (cold maceration process)

25 g Air dried plant root powder of *Uraria picta Desv.* was transferred in air tight container and kept in refrigerator for further use. For the percolation process, the macerated plant powder is soaked in different solvents such as methanol, acetone, aqueous individually. Extraction was done by soaking one part of plant powder to three parts of liquid solvent (1:3) and kept for percolation process for 3-5 days. Occasionally shaking was done for at least 6 hours. Then the crude extracts were filtered using filter paper, evaporated and concentrated into solid extracts under room temperature.[4]

PHARMACOGNOSTICAL STUDY

Morphology of roots - The macroscopic features of the dried powdered root of both samples Prishniparni grown by *Vrikshayurveda* method denoted as sample A and other grown in wild condition denoted as sample B.

A. Materials

Magnifying lens and simple camera were used for this study.

B. Procedure

The fresh root of Prishniparni – *Uraria picta* Prishniparni was collected and washed thoroughly under running water, dried and then subjected to identification with naked eyes and other sensory perceptions. Macroscopic features of the root of collected fresh plants were studied. The photographs of the drug were also taken using digital camera.

Microscopic evaluation A. Materials Razor or safety razor blade, dissecting needles, watch glasses, petri dishes, glass slides, cover slips ¾ circles (No. 2 thickness), camel hair brush (medium size), dropper, Safranine stain, Methylene blue Glycerin, compound microscope, digital camera. B. Procedure Fine handmade transverse section of fresh root [6] of Prishniparni –*Uraria picta* (Desv.) was made with the help of razor blade. The cut sections were then suspended in wate in a petri dish. After that a few drops of safranine stain was added to the watch glass containing water and the staining solution was prepared. Very thin section was taken from the petri dish and added to the watch glass containing the prepared staining solution to make it properly stained. When the section was sufficiently stained, it was transferred on a clean slide with help of a hair brush. The section was then mounted at the centre of the slide and a drop of glycerin water was added to the section. Then it was covered with a cover slip without getting air bubble between the slide and cover. The prepared slide was place on the stage of the compound microscope and fixed with the clips. The light was focused to mounted slide by using the mirror. After this the lens was adjusted at a power of 10X for visualizing the histological parameters of the section. Then the power was adjusted to 40X for getting finer details of the histological parameters. Photographs of the sections were taken using a mobile camera at 10X and 40X power. Procedure was repeated for both the sample.

B. Microscopic evaluation of fresh root. The transverse section of the root is found to be circular and regular in outline. The cork tissue is visible as a thin light yellowish-brown strip consisting of 4-8 or more rows of rectangular cells nearly twice as long as broad with fairly thick brown walls. The phellogen is evident as a narrow layer. The cortex is composed of several thin-walled oblong cells, radiating in between are the medullary rays. The region between the rays is composed of cells of *sclerenchymatous* groups of various shapes and sizes. A distinct cambium is present. The xylem is shown to consist of thick-walled parenchyma that formed the bulk tissue. The patches of sclerenchyma are mostly associated with the vessels and medullary rays. The medullary rays are not plenty in number. Their cells especially in the xylem region is composed of starch grains, there is no pith in the center. The structures seen were similar to the description given in Pharmacognosy of Ayurvedic drugs of Travancore Cochin [5]Ayurvedic pharmacopoeia of India [6] Figure no 1 is Macroscopic picture of both the root grown by *Vrikshayurveda* Technique and Cultivated in wild condition Figure No 2: T.S of fresh root of *Uraria picta* (*Desv*) DC. Stained with *Safferine* solution Figure No 3: T.S of fresh root of *Uraria picta* (Desv.) T.S of cortex and pith of fresh root of *Uraria picta* (*Desv* .) . C. Powder macroscopy of dried root. The powder macroscopic features including the colour, texture, odour and taste of the powder of the dried root are identified. The structures seen were similar to the description given in Ayurvedic pharmacopoeia of India and research articles.

OBSERVATIONS

Cortex of Sample A was found well developed and larger parenchymatous cell, Increased storage material starch and secondary metabolites Sample B cortex was

found less developed cortex shows comparatively less storage. Sample A contains well organized vascular bundles .Sample B shows less organized vascular arrangement. Sample A contains Oil glands which shows metabolite growth in the sample **A**

DISCUSSION

The findings of the present study suggest that cultivation of *Prishniparni* using *Vrikshayurveda* principles leads to significant improvements in root anatomy and overall plant quality. Enhanced cortical development, well-organized vascular tissues, increased secondary growth, and higher accumulation of active constituents collectively contribute to superior medicinal properties compared to wild-grown plants.

Although various methods of seed germination are described in Ayurveda, the present study focused on the *Ankola* (*Alangium salvifolium*) Wang. Oil application method; however, other traditional techniques may also be explored in future research. Furthermore, the application of *Ankola* (*Alangium salvifolium)* Wang. tail based germination and cultivation techniques may serve as an effective strategy for improving the quality and yield of other endangered plant species.

In conclusion, integrating classical knowledge with modern scientific evaluation can play a crucial role in strengthening herbal drug standardization and biodiversity conservation.

Table no 1.

Organoleptic characteristics *of Prishniparni Uraria picta (Desv.)* Sample A and Sample B

Sr no	Characteristics	Sample A	Sample B
1	Size	10 cm in length	7cm in length
2	Colour	Cylindrical with dense slender root hairs	Cylindrical with slender root hairs
3	Shape	Light yellow or yellowish white	Light yellow or yellowish white
4	External surface	Nearly smooth, lenticels present, leathery texture	Nearly smooth, lenticels present, leathery texture
5	Cut surface	Cut section measuring 0.7 cm in diameter. Thick central strand of wood, surrounded by comparatively thin but tough bark, slight yellowish tint.	Comparatively thin 0.5 cm in diameter. central strand of wood, surrounded by thin but tough bark, slight yellowish tint
6	Fracture	Hard and short	Hard and short
7	Odor	Not characteristic	Not characteristic
8	Taste	Mucilaginous sweetish taste	Comparatively less Mucilaginous sweetish taste

Reference:

1.Murthy K.R Vagbhata. Ashtanga Hridayam Vol I. Trans.9th Ed. Annasvarupavijnaneeya Varanasi: Sutrasthana, Adhyaya, Chaukhambha Academy;2012.Pp.107. Chapter Sloka 6. 167-168 Krishnadas

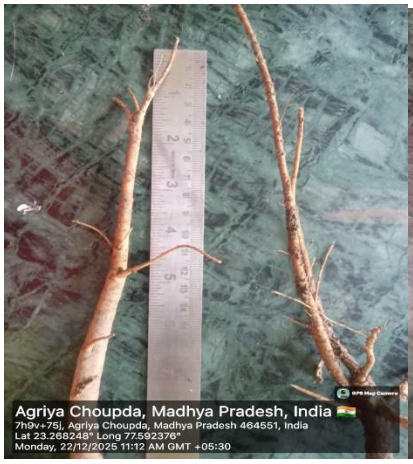
2.Murthy K.R, Susrutha. Illustrated Susruta Samhita Vol I. Trans. Reprint Ed. Sutrasthana, Chapter 38. Dravya Sangrahaneeya Adyaya, Sloka 71 Varanasi: Chaukhambha Orientalia;2012.Pp.274.

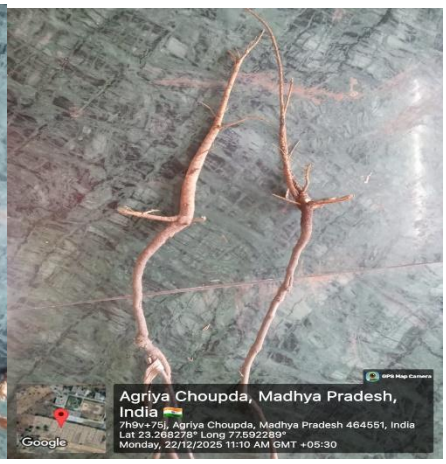
3.Murthy K.R Vagbhata. Ashtanga Hridayam Vol I. Trans.9th Ed. Annasvarupavijnaneeya Varanasi: Sutrasthana, Adhyaya, Chaukhambha Academy;2012.Pp.107. Chapter Sloka 6. 167-168 Krishnadas.

5.Kolammal M, Aiyer Narayanan K. Pharmacognosy Of Ayurvedic Drugs Of Travancore-Cochin. Series 1, Number 2. Thiruvananthapuram: Department Of Pharmacognosy, University Of Travancore; 1992. P.73-77

6-.Dr Divya Khare Handbook on Dravyaguna Vigyan Choukhamba Prakashan ,Chapter 5 Page no 55

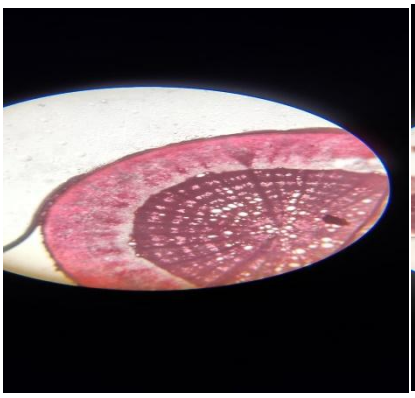
7- Ministry Of Health And Family Welfare. Ayurveda Pharmacopoeia Of India.1st

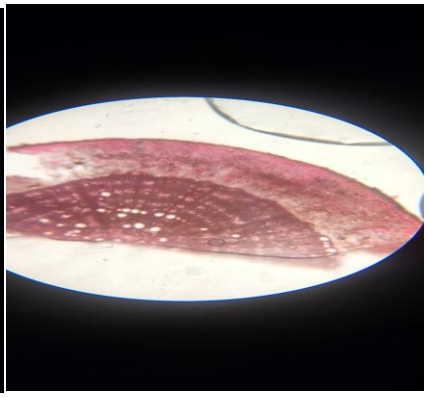




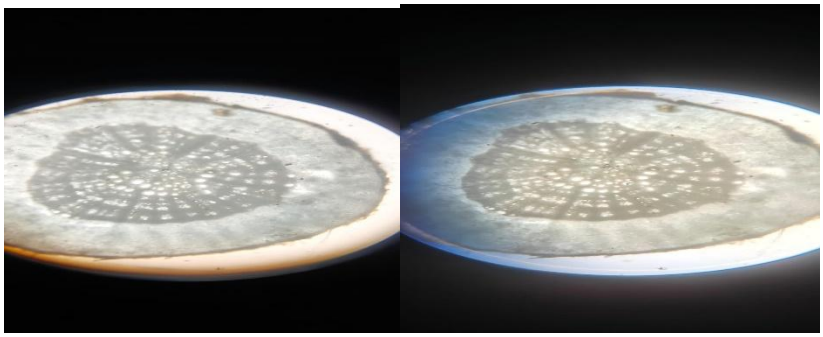
SAMPLE A SAMPLE B

Fresh roots of Pr8shniparni sample





SAMPLE A SAMPLE B



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