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ROLE OF ETHNOMEDICINE IN DRAVYAGUNA VIGYANA

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ABSTRACT

Ethnomedicine, the traditional medicinal knowledge and practices of ethnic communities, plays a crucial role in advancing Dravyaguna Vigyana (Ayurvedic pharmacology) by facilitating the discovery of new medicinal plants, understanding the pharmacological actions of these plants, and preserving knowledge about medicinal flora. This article discusses the synergy between Ayurveda and ethnomedicine, emphasizing its importance in identifying therapeutic plants, developing effective herbal formulations, and promoting sustainable conservation methods.

INTRODUCTION

This field, rooted in both Ethnobotany and Anthropology, encompasses centuries of orally transmitted knowledge, evolving through human interaction with local flora^[1]. It holds immense potential for expanding the pharmacological repertoire of Ayurveda, or Dravyaguna Vigyana, which systematically documents the medicinal properties of plants within a codified framework^[2].

METHODS

A comprehensive literature review was conducted, focusing on real-world products and scientific studies investigating the effects of millets in nutraceuticals. Databases searched included PubMed, ScienceDirect, and Google Scholar

RESULT AND DISCUSSION

AYURVEDA AND ETHNOMEDICINE

TABLE 1: AYURVEDA AND ETHNOMEDICINE

AYURVEDA	ETHNOMEDICINE
<ul style="list-style-type: none"> Widely used medicine system Cultural Belief - Hindu Culture Well Documented Well Codified Established Diagnostic Methods Certain Standardization & Regulations 	<ul style="list-style-type: none"> Slowly recognized medicine system Cultural belief- Tribal Culture Lack of Documentation Lack of Codification Divination, Dreams, Specific Rituals Less Formal Standardization

FIGURE:



[figure 1]: *Blumeopsis flava* (DC.) Gagnep.



[figure 2]: *Gynura cusimbua*



[figure 3]: *Hedyotis candens*



[figure 4]: *Mussaenda glabra*



[figure 5]: *Hedyotis sithiravariensis*

ROLE IN DRAVYAGUNA VIGYANA

Ethnomedicine plays a significant role in enhancing Dravyaguna Vigyana by contributing to the discovery of new medicinal plants and offering an improved understanding of existing medicinal plants. Through the knowledge of traditional healers, it provides insights into the pharmacological action of plants, facilitating the discovery of new drugs and inspiring the development of effective herbal formulations. Ethnomedicine also emphasizes the conservation of medicinal plants, ensuring that these resources are available for future generations through sustainable harvesting practices. Lastly, it focuses on the preservation of traditional knowledge, which is essential to maintaining cultural heritage and supporting biodiversity. Together, these contributions enable a more holistic approach to health, rooted in both scientific validation and cultural wisdom[3] .

IDENTIFICATION OF NEW MEDICINAL PLANTS

Ethnomedicine serves as a valuable resource for identifying plants with medicinal properties, drawing on the deep knowledge held by traditional healers and local communities regarding their environment. This collective understanding offers insights into plants with potential therapeutic benefits, often revealing new candidates for medicinal use. Such ethnobotanical knowledge has the potential to enrich the Ayurvedic pharmacopoeia by introducing previously unrecorded plants, thus expanding the range of available treatments. Furthermore, this traditional knowledge enhances the Ayurvedic understanding of Anukta (non-codified) and Leshokta (seldom mentioned) dravyas, enabling a more comprehensive and culturally-informed approach to medicinal plant use [4] .

NEW IDENTIFIED MEDICINAL PLANTS

1. *Blumeopsis flava* (DC.) Gagnep.[figure 1]

This plant from the Asteraceae family holds significant therapeutic value in ethnomedicine. A leaf decoction is traditionally used to relieve bronchial congestion, treat colds, address skin diseases, and alleviate backache. Documented by the North Eastern Regional Institute of Sciences and Technology (NERIST) in Arunachal Pradesh, this plant was part of an extensive ethnomedicinal survey cataloging 145 medicinal plants. Its inclusion underscores its importance in local healing practices and highlights the role of such documentation in preserving traditional medicinal knowledge for future research and conservation efforts^[5].

2. *Gynuracusimbua*[figure 2] 3. *Hedyotis scandens*[figure 3] 4. *Mussaenda glabra* [figure 4] 5. *Schima wallichii* 6. *Piper arunachalensi*

7. *Hedyotis thiravaraiensis*[figure 5]

Belonging to the Rubiaceae family, this plant is valued in ethnomedicine for its potential to extend human lifespan. Documented in a field survey by the Botany Department of Presidency College, Chennai, it grows in Pakkamalai within the Gingee Hills of the Eastern Ghats. This research highlights the plant's significance in traditional medicine and contributes to the understanding and preservation of indigenous medicinal knowledge^[6].

8. Tirumala hills of Seshachalam range of Eastern Ghats .

9. *Pimpinella tirupatiensis* (Apiceae) seeds are used for treatment of Bronchitis; fruits as diuretics for curing ulcers of stomach, throat and genital organs, management of scorpion sting, rheumatic ailments and as abortifacient agent. Treatment of Diabetes. ^[7]

10. Roots of *Terminalia pallida* in combination with its fruit kernel is used to treat venereal diseases and peptic ulcer; fruit to cure diarrhea, cough, cold, swellings, piles, fever, ulcers and as antipyretic, purgative; while the bark is used as anti-inflammatory agent.

11. Plant extracts and leaf juice of *Shorea thumbugaia* are administered for ear ailments.

12. *Syzygium alternifolium* fruit is used for curing stomach ache, ulcers and management of rheumatic pains; seeds as anti-diabetic agents; leaves to treat dry cough and dysentery; and stem bark as antiseptic.

13. *Boswellia ovalifoliolata* stem bark is a mosquito repellent

Development Of New Drugs

Traditional healers have relied on their extensive knowledge of plants to address a diverse array of ailments for centuries. This invaluable wisdom not only contributes to local healing practices but also has the potential to identify new drugs that remain undiscovered by modern science. One effective method for discovering these drugs is Reverse Pharmacology, which involves isolating the active ingredients from ethnomedicinal plants. Notable examples include digoxin, a cardiac glycoside utilized by African healers, and quinine, derived from the bark of the cinchona tree in South America, which has been employed to treat malaria. By integrating traditional knowledge with contemporary scientific methods, we can uncover novel therapeutic agents that may enhance modern medicine^[8] .

IMPROVED UNDERSTANDING OF EXISTING MEDICINAL PLANTS

Traditional healers often have a deep understanding of the relationship between plants and their medicinal properties. This understanding can be used to develop new ways to use existing drugs. For example, traditional healers in India have used neem leaves to treat a variety of skin conditions. Recent research has shown that neem leaves have anti-inflammatory and antibacterial properties. This research could lead to the development of new neem-based drugs for the treatment of skin conditions^[9]

UNDERSTANDING OF PHARMACOLOGICAL ACTION OF PLANTS

Traditional healers often have a deep understanding of how plants and animals work to produce their medicinal effects. This understanding can be used to develop new drugs that are more effective and have fewer side effects. For example, traditional Chinese healers have used the herb ginseng for centuries to treat a variety of ailments. Recent research has shown that ginseng has adaptogenic properties, which means that it helps the body to adapt to stress. This research could lead to the development of new ginseng-based drugs for the treatment of stress-related conditions.^[10]

DEVELOPMENT OF EFFECTIVE HERBAL FORMULATIONS

Traditional practices often involve the use of multiple herbs in combination. Ethnomedicine offers insights into how different plants can be combined to enhance their efficacy or mitigate side effects, providing a basis for developing complex herbal formulations. Ethnomedicine provides information on how to prepare and administer herbal remedies effectively. This includes techniques such as decoction, infusion, and the preparation of ointments and tinctures, which can significantly influence the effectiveness of the final product.^[11]

CONSERVATION OF MEDICINAL PLANTS

Ethnomedicine plays a crucial role in conserving knowledge about medicinal plant species, their uses, and habitats, exemplified by practices such as *Hodopathy*^[12]. Indigenous and local communities often adopt sustainable harvesting techniques that prevent overexploitation, ensuring the long-term survival of these vital plant species. Plants with cultural and medicinal significance are protected through local customs and taboos, as seen with *Ashwatha*, which helps regulate their use and promotes conservation. Many traditional societies manage natural resources communally, safeguarding areas rich in medicinal plants, like the Root Bridge in Meghalaya. Furthermore, ethnomedicinal practices foster a deep connection with nature, encouraging stewardship behaviors that enhance ecosystem health and biodiversity. Spiritual beliefs associated with certain plants lead to the establishment of protected areas or sacred groves, such as the *Mawphlong* Sacred Forest, where these plants can thrive undisturbed, ensuring the preservation of both cultural heritage and biodiversity for future generations^[13].

SUSTAINABLE HARVESTING PRACTICES

Sustainable harvesting practices are vital for preserving medicinal plants. Harvesting should occur at the right developmental stage, particularly during flowering, to enhance pollen dispersal and consider favorable weather conditions. Sites at higher altitudes often yield better quality materials and help maintain ecological integrity. It's essential to extract only the useful parts of plants, use sharp tools to minimize damage, and avoid collecting from rare or endangered species to ensure their continued survival^[14].

ECO FRIENDLY COLLECTION METHODS

Harvesters should primarily use environmentally friendly materials, such as paper, cotton bags, and straw baskets, for collecting medicinal plants. These materials not only help preserve the quality of the harvested items for extended periods but also support sustainable practices. Using straw baskets, in particular, facilitates plant pollination, as the freshly harvested flowers can easily disperse their pollen while being transported. This process increases the chances of fertilizing other plants and promotes the natural regeneration of plant populations, thereby enhancing biodiversity and ensuring the long-term availability of these vital medicinal resources^[15].

PRESERVATION OF TRADITIONAL KNOWLEDGE

Ethnomedicine is a key component of cultural heritage for many communities around the world. It embodies generations of knowledge about the healing properties of plants, passed down through oral traditions, rituals, and practices. This traditional knowledge forms part of the identity and continuity of a culture, linking past generations with the present^[16].

CONCLUSION

Ethnomedicine holds an invaluable role in expanding the understanding and application of Dravyaguna Vigyana. By identifying new medicinal plants, facilitating drug discovery, and preserving traditional knowledge, it enriches the Ayurvedic pharmacopoeia. The collaboration between traditional healers, ethnobotanists, and Ayurvedic practitioners could enhance the efficacy of herbal medicine while ensuring the conservation of medicinal plants for future generations.

REFERENCES

- [1.https://openstax.org/books/introduction-anthropology/pages/17-2-ethnomedicine#:~:text=Ethnomedicine%20is%20a%20society's%20cultural,that%20raise%20a%20health%20concern](https://openstax.org/books/introduction-anthropology/pages/17-2-ethnomedicine#:~:text=Ethnomedicine%20is%20a%20society's%20cultural,that%20raise%20a%20health%20concern)
- [2.https://en.m.wikipedia.org/wiki/Ethnomedicine](https://en.m.wikipedia.org/wiki/Ethnomedicine)

3. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9268545/>
4. <https://www.jaims.in/jaims/article/view/2181/2799>
5. [https://en.m.wikipedia.org/wiki/Blumeopsis#:~:text=Blumeopsis%20is%20a%20genus%20of,\(9.8%E2%80%93339.4%20inches\).&text=Gagnep.&text=\(DC.\),Indian%20Subcontinent%2C%20and%20Southeast%20Asia](https://en.m.wikipedia.org/wiki/Blumeopsis#:~:text=Blumeopsis%20is%20a%20genus%20of,(9.8%E2%80%93339.4%20inches).&text=Gagnep.&text=(DC.),Indian%20Subcontinent%2C%20and%20Southeast%20Asia)
6. <https://www.researchgate.net/publication/343630699> Hedyotis sithiravaraiensis Rubiaceae A new species from southern India
7. <https://www.researchgate.net/publication/233790324> A Review of recent Research of Medicinal Properties of Pimpinella tirupatiensis Bal Subr An endemic to Tirumala Hills of Eastern Ghats India
8. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9268545/>
9. <https://pmc.ncbi.nlm.nih.gov/articles/PMC1615867/>
10. [https://www.ncbi.nlm.nih.gov/books/NBK92776/#:~:text=The%20pharmacological%20effects%20of%20ginseng%20have%20been,its%20antioxidant%20activities%20\(Jung%20and%20Jin%201996\)](https://www.ncbi.nlm.nih.gov/books/NBK92776/#:~:text=The%20pharmacological%20effects%20of%20ginseng%20have%20been,its%20antioxidant%20activities%20(Jung%20and%20Jin%201996))
11. <https://pmc.ncbi.nlm.nih.gov/articles/PMC6273146/>
12. [https://graam.org.in/blog/the-tale-of-traditional-healing-practices-across-tribes-of-india#:~:text=In%20Jharkhand%2C%20Hodopathy%20is%20a,modernity%20\(Mishra%2C%202021\)](https://graam.org.in/blog/the-tale-of-traditional-healing-practices-across-tribes-of-india#:~:text=In%20Jharkhand%2C%20Hodopathy%20is%20a,modernity%20(Mishra%2C%202021))
13. <https://www.who.int/news-room/fact-sheets/detail/biodiversity-and-health#:~:text=Importance%20of%20biodiversity%20for%20health,understand%20and%20treat%20human%20diseases>
14. <https://www.fao.org/4/y4360e/y4360e0c.htm#:~:text=Pollination%20time,the%20opening%20of%20the%20flowers>
15. <https://www.copbela.org/downloads/2020/SELF%20LEARNING%20MATERIAL%20BPHARMA/semester%204/BP405T/MODULE%2002.pdf>
16. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7149776/>