

Roots of Healing: Medicinal Flora in Early South Indian Texts

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The search for novel therapeutic agents often looks forward, toward synthetic libraries, artificial intelligence assisted drug discovery and molecular engineering. Yet some of humanity's most profound medical insights lie embedded in the intellectual heritage of ancient civilizations. While the *Ebers Papyrus* of ancient Egypt and *De Materia Medica* of Dioscorides are routinely cited in Western medical historiography, the Sangam literature of South India (c. 300 BCE-300 CE) remains comparatively underexplored as a source of early pharmacological consciousness.

Composed during what is often termed the "Golden Age" of Tamil civilization, Sangam poetry is not a medical treatise in the formal sense. Yet it preserves ecological precision, botanical specificity, and embodied awareness of injury and healing that warrant closer attention from contemporary biomedical scholarship.

While Sangam poems do not prescribe formulations or dosages, several plants named in the corpus have become central to Siddha and Ayurvedic medicine later. The poems reveal how health, disease, and healing were embedded in social, emotional, and environmental contexts. Modern medicine increasingly emphasizes holistic and patient centered care and these texts remind us that the interaction between culture, behavior, and healing has been studied and reflected upon for millennia.

Pharmacological research has validated many of the traditional uses of flora described in the Sangam poems. Some selected correlations between Sangam references and modern pharmacology are presented in table 1. While early Tamil literature contains numerous references to plants, only a select group has been included in this table. The purpose of this article is not to present a comprehensive catalogue of all botanical references in Sangam texts, but rather to highlight representative examples intended to illustrate the broader intellectual and cultural context in which early South Indian societies engaged with medicinal plants.

The presented correlations imply that long-term community familiarity with specific plants preceded the codification of formal medical systems. It is also worth noting that the categorization of these plants into the five *Thinais* (eco-zones) throughout the Sangam poetry shows that the ancient Tamils understood habitat specific medicinal distribution.

Scientific Name	Sangam Tamil Name	Reference to Sangam Text	Literary Context	Pharmacological Evidence
<i>Terminalia arjuna</i>	Marutham	Akananuru 222	Describes the cool shade and sturdy bark of the Marutham tree near water bodies	Cardioprotective, antioxidant, anti-inflammatory, anti-hypertensive (Bharani et al, 2002), anti-diabetic (Anjaneyulu 1982), wound healing (Ahmed et al. 1982)
<i>Azadirachta indica</i>	Vembu	Purananuru 281	Mentions wearing neem leaves to ward off infection and spirits in wounded warriors	Anti-malarial, anticancer, antifertility, antioxidant, antidiabetic, anti-inflammatory, hepatoprotective, neuroprotective, anti-microbial and wound healing properties (Mehnaz et al. 2024)
<i>Phyllanthus emblica</i>	Nelli	Purananuru 91	By labeling Nelli/Amla as "immortality-giving nectar," the Sangam text identifies it as a premier rejuvenative	Antioxidant, anti-aging, anti-cholesterol, anti-diabetic, immunomodulatory, antipyretic, analgesic, anti-inflammatory, chemoprotective, hepatoprotective, cardioprotective, antimutagenic, and antimicrobial properties (Prananda et al. 2023)(Ahmed et al. 2021)
<i>Strobilanthes kunthiana</i>	Kurinji	Kuruntokai 3	The mention of "black-stemmed Kurinji" defines the mountain landscape. Medically, this verse highlights the origin of Kurinji-honey, which was utilized for its potent anti-inflammatory and respiratory benefits, illustrating an early understanding of how specific nectar sources change the medicinal quality of honey.	Anti-inflammatory, anti-osteoarthritic, analgesic, antioxidant (Pavithra et al. 2025)
<i>Cassia fistula</i>	Kondrai	Kuruntokai 21	References to the golden Kondrai flowers could be found in a lot of Sangam poems as a seasonal marker, landscape description, visual and cultural and ritual associations	Anti-oxidant, anti-inflammatory, antifungal, antibacterial, antiviral, antitumor, wound healing, hepatoprotective, anti-diabetic, antipyretic, purgative, hypolipidemic, anti-leishmaniac, larvicidal and ovicidal (Ruth et al. 2021)
<i>Vitex negundo</i>	Nochi	Purananuru 272	Consistent inclusion of the flowers of <i>Vitex negundo</i> in these texts highlights its ubiquity in the ancient Tamil landscape and suggests that these flowers were highly valued for its aromatic and protective properties	Anti-inflammatory, antioxidant, antidiabetic, hepatoprotective, nephroprotective, neuroprotective, antimicrobial, and antiviral activities (Phate et al. 2026)
<i>Borassus flabellifer</i>	Panai	Purananuru 100 Kuruntokai 177	Describes the utility of the palm tree and its presence in coastal (Neythal) regions. The warrior wearing a sprout of the Palmyra, signifies its importance	Anticancer, anti-inflammatory, antioxidant (Mohaideen et al. 2024)

<i>Madhuca longifolia</i>	Iluppai	Perumpanarruppadai 96	Mentions the extracts from sweet flowers of the Iluppai being gathered and used.	Flower extracts have potential for the treatment of various disease conditions (hepatoprotective, antihelmenthic, antibacterial, analgesic, and also boost immunity. (Yasmin et al., 2026)
<i>Calophyllum inophyllum</i>	Punnai	Pathitruvalu 30:11.	Describes the twisted trunks of this tree	Anti-inflammatory, anticancer, antioxidant, wound healing, osteogenic, antimicrobial, lipid-lowering and antidiabetic (Oo, 2018)
<i>Calotropis gigantea</i>	Erukkam	Puranaanuru 106	Describes the plant with its pale leaves	Analgesic, antipyretic, pregnancy interceptive, central nervous system (CNS), anti-inflammatory, procoagulant, anti-diarrheal, free radical scavenging, antimicrobial, anti-tumor, antifungal, antitussive, and antifeedant (Dwivedi et al. 2024)
<i>Leucas aspera</i>	Thumbai	Puranaanuru 2, 96,97	References to the white color of the flower and connecting it with purity and a potential cleansing benefits	Antioxidant, antimicrobial, antifungal, anti-inflammatory, analgesic, antipyretic, antidiabetic, hepatoprotective, immunomodulatory, anthelmintic, wound-healing, antipsoriatic, cytotoxic, anticancer, central nervous system depressant, anticoagulant, larvicidal, and antivenom activities (Mohamed et al. 2026)
<i>Artocarpus heterophyllus</i>	Pala	Akananuru 352	Describes the big fruit the jackfruit as a hallmark of the <i>Kurinji</i> (mountain) and <i>Marutham</i> (riverine) landscapes. Its presence in these verses suggests its nutritional richness	Antimicrobial, antioxidant, anti-melanin, antidiabetic, anti-inflammatory, immunomodulatory, antiviral, anthelmintic, wound-healing, and antineoplastic activities (Gupta et al. 2022)
<i>Pterocarpus marsupium</i>	Vengai	Akananuru 349	Reference made to the vibrant yellow flowers and comparing these to fire hints at the "energy" or "heat" the plant was thought to possess in traditional medicine	Antidiabetic, anti-inflammatory, neuroprotective, cardioprotective, and anticancer properties (Sushil et al. 2026)
<i>Cinnamomum verum</i>	Kurunthu	Akananuru 304	Noted for its thick, evergreen foliage, making it the perfect "natural roof."	Antioxidant, antimicrobial, anti-inflammatory, anticancer, antidiabetic, wound healing, anti-HIV, anti-anxiety and antidepressant (Singh et al. 2021)
<i>Grewia tiliifolia</i>	Unnam	Puranaanuru	In the context of describing the desert landscape and mentioning it as an omen tree with mythical significance	Skin diseases, wounds, ulcers, diarrhea, cancer, inflammation, heart diseases, expectorant etc. Plant is also used as antidote in snake bite, opium poisoning, sprains, burning sensation, hyperdipsia, rhinopathy, ulcers, skin diseases, haematemesis, and general debility (Malhotra et al. 2020)

<i>Ixora coccinea</i>	Vetchi	Purananuru 100	In Sangam tradition, these flowers were worn by wounded soldiers, its bright red color mirrors the blood on the warrior's throat, signifying the wound healing properties of these flowers	Antimicrobial, hepatoprotective, gastro protective, anti-nociceptive, anti-mutagenic, anti-diarrheal, antioxidant, and chemo-preventive properties (Fasna et al. 2024)
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Table 1: Correlations between Sangam references and modern pharmacology.

Medicinal plants, including the ones listed above and many more were embedded in daily life centuries before laboratory characterization of their bioactive compounds. The poems reflect what might be described as a slow accumulation of empirical familiarity transmitted orally and textually. This form of knowledge generation differs from randomized controlled trials but represents an early epistemological stage in therapeutic reasoning.

A 2,000 year old poetic corpus becomes relevant to the modern international medical community because modern drug discovery increasingly employs reverse pharmacology, beginning with traditional usage and moving toward molecular validation. The ethnobotanical memory embedded in Sangam literature aligns with this approach. Studying these texts allows the international medical community to explore novel bioactive compounds or to understand how traditional knowledge systems can inform sustainable and culturally sensitive healthcare.

Sangam literature stands at the intersection of ecology, culture, and embodied human experience. Its verses memorialize landscapes rich in biodiversity and communities intimately connected to their environment. In doing so, they preserve fragments of ethnobotanical insight that modern science is only now beginning to validate.

For the global medical community, these ancient Tamil poems invite a reframing of innovation. Progress does not always require moving forward; sometimes it requires listening backward. The Sangam corpus is in many respects, a living pharmacopeia, one that bridges poetry and phytochemistry. It could hold the keys to addressing antibiotic resistance or chronic inflammatory diseases.

Above all, loss of ecological diversity threatens not only environmental stability but also pharmacological possibility. Ancient texts like Sangam literature function as archives of biodiversity knowledge. Protecting indigenous knowledge systems is therefore not merely a cultural endeavor, it is a matter of global health resilience.

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