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Ministry of Ayush, Govt. of India, New Delhi

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## INSIDE THIS ISSUE

### Editorial Message

Ayurveda for People and Planet: A Holistic Path for Human and Planetary Well-being **1**

### Clinical Research

Study Confirms Safety of *Vyosadi Guggulu*: A Promising Ayurvedic Remedy Shows No Toxicity in Acute and Subchronic Toxicity Evaluation **2**

Hope for Rare Spinal Condition: Ayurveda treatment Brings Remarkable Recovery in a Case of Congenital Fused Cervical Vertebrae **2**

Ayurvedic Formulation AYUSH-SL Shows Promising Effect in Managing Chronic Filarial Lymphedema **3**

Healing with Heat: Instant Migraine Relief Using Ayurvedic Agnikarma **4**

In Silico Study Identifies Picoside I from AYUSH-64 Medicinal Plants as a Potential Inhibitor of SARS-CoV-2 RNA-dependent RNA polymerase **5**

Babul Tree Leaves Show Hope in Gout Relief **6**

Pilot Study Shows Promising Effect of Ayurvedic Oil-Based Therapies (*Ksheera Bala oil Snehapana* and *Matra Basti*) in Managing Knee Osteoarthritis **6**

### ANALYTICAL RESEARCH

Ayurvedic Researchers Decode the Phytochemical Secrets of *Prunus cerasoides* Heartwood **7**

### DRUG RESEARCH AND MEDICINE PLANT SURVEY

AYUSH-SS Granules: A Safe and Effective Ayurvedic Innovation to Support Lactation **8**

Scientific Profiling of *Guggulu* Resin Confirms Presence of Key Bioactive Compound Guggulsterone-Z **9**

### LITERARY RESEARCH

Honoring the Architects of Ayurveda: Documenting a Legacy of Excellence - New Initiative Illuminates the Lives of Ayurveda's Visionaries **10**

## EDITORIAL MESSAGE

### Ayurveda for people and planet: a holistic path for human and planetary well-being



Prof. (Vaidya) Rabinarayan Acharya  
Chief Editor, CCRAS Bulletin  
Director General,  
CCRAS, Ministry of Ayush, Govt. of India, New Delhi

Ayurveda, the ancient Indian science of life, begins with the fundamental principle “*Swasthasya Swasthya Rakshanam, Aturasya Vikar Prashamanam Cha*” - “preserve health in the healthy and cure disease in the unwell.” Aimed at the well-being of individuals, society, and the environment, this experience-based classical wisdom places prime emphasis on nurturing and harmonizing body and mind using natural methods and resources. It is a science with unique principles and therapeutic modalities that not only focus on symptoms but also consider the whole individual, along with involved pathological factors, season, and geographical location. Ayurveda therapeutic approaches focus on complete and sustained relief – a key to healthy and long life.

Contemporary healthcare services, especially in industrialized nations, tend to focus on diagnosing and treating diseases in a biomedical manner, often without fully considering one or more of the broader social, emotional, psychological, and environmental factors that contribute to health and illness. On the other hand, Ayurveda teaches that individual well-being cannot be detached from community and planetary health. Concepts such as *Dhatu Samya* (tissue equilibrium) and *Prana* (vital life force) extend beyond personal physiology to encompass the Earth’s ecosystems. By promoting

the use of locally sourced herbs, regenerative farming techniques, and eco-friendly methods of plant cultivation and medicine preparation, Ayurveda encourages sustainable practices that not only minimize environmental degradation but also strengthen local economies. The Ayurveda approach supports biodiversity, reduces dependence on industrial agriculture, and empowers rural growers by valuing their traditional knowledge and creating livelihood opportunities.

As mentioned before, disease prevention and cure are the two main objectives of Ayurveda. However, preventive medicine lies at the heart of Ayurvedic practice. Such aspects include dietary regimen, personalized daily regimens (*Dinacharya*), and seasonal guidelines (*Ritucharya*). Regularly following these guidelines can help avoid etiological factors and build strong resilience against both chronic diseases and emerging public health threats. If integrated into community clinics and primary-care networks, these guidelines can help relieve the burden of lifestyle diseases such as diabetes, hypertension, stress disorders, and cardiovascular diseases, along with lowering the healthcare costs and resource demands, which will reduce the utilization of natural resources and thereby contribute as a step towards saving the planet.

The scope and opportunities in Ayurveda are broad; however, to fully employ Ayurveda worldwide, its mainstreaming at the global platform is essential. The primary challenge in globalizing Ayurveda in the twenty-first century is to evaluate, establish, and integrate Ayurveda’s experience-based principles with rigorous research and ethical regulation. Measures such as clinical trials on Ayurveda herbs and herbal formulations, digitized pulse analysis, and tele-Ayurvedic consultations can expand access to Ayurveda therapeutics without compromising authenticity. Restoration of degraded lands through *Panchagavya* composting, community herbal gardens, and water-harvesting aligns medical practice with ecological stewardship. When healthcare institutions adopt zero-waste dispensaries and bio-friendly packaging, they embody an Ayurvedic ethos that honors every facet of life. Additionally, collaborative frameworks among traditional healers, biomedical researchers, and policymakers are crucial to ensure safety, standardization, and respect for indigenous knowledge.

One of the fundamental concepts of Ayurveda, *Pancha Mahabhuta*, refers to the five great elements that are the fundamental building blocks of the universe and the human body. These elements include *Prithvi* (Earth), *Apas/Jala* (Water), *Tejas/Agni* (Fire), *Vayu* (Air), and *Akasha* (Ether/Space). It reflects the core idea that humans are a microcosm of the macrocosm—that is, our bodies are composed of the same elements as the Earth and the universe. In other words, environmental health affects living beings; thus, for healthy and long lives, the environment and health of living beings matter equally.

Ayurveda envisions health as a dynamic balance between individuals and the environment, as its principles promote not just personal healing but also planetary well-being. Practices such as using local herbs and regenerative farming can protect ecosystems and fulfill community needs. Preventive care through *Dinacharya* and *Ritucharya* can help prevent disease and reduce the need for medication, thereby conserving natural resources. In summary, Ayurveda offers sustainable solutions to modern health crises and environmental degradation. Integrating Ayurveda wisdom into global health can be a significant milestone towards the health of both people and planet.

## CLINICAL RESEARCH

**Study Confirms Safety of Vyosadi Guggulu:** A Promising Ayurvedic Remedy Shows No Toxicity in Acute and Subchronic Toxicity Evaluation *Vyosadi Guggulu* is a classical Ayurvedic formulation that contains different ingredients, including one part each of *Shunthi* (*Zingiber officinale*), *Marica* (*Piper nigrum*), *Pippali* (*Piper longum*), *Citraka* (*Plumbago zeylanica*), *Musta* (*Cyperus rotundus*), *Haritaki* (*Terminalia chebula*), *Bibhitaki* (*Terminalia bellirica*), *Amalaki* (*Embllica officinalis*), *Vidanga* (*Embelia ribes*) and nine parts of *Shuddha Guggulu* (*Commiphora wightii* gum resin). Traditionally, this formulation is used in the management of arthritis, inflammation, obesity, bone fractures, gout, rheumatism, and dyslipidaemia, among other conditions.

A recent study by researchers from the Central Council for Research in Ayurvedic Sciences (New Delhi) studied the safety of *Vyosadi Guggulu*. This herbal formulation was tested on lab rats to check for any harmful effects. In the first part of the study, a high single dose was given to see if it caused any immediate problems. The results showed that the formulation does not cause any harmful effect at high dose. In the second phase of the research, a multiple-dose toxicity study was conducted in which rats received oral doses of 250, 500, and 1,000 mg per kilogram of body weight daily for 90 consecutive days. Throughout the study, the rats remained in good health showing no adverse effects on body weight, eating habits, blood parameters, or organ function.

## Vyoshadi Guggulu

Book Reference: AFI (Ayurvedic Formulary of India)  
Sonth (*Zingiber officinale*) Rz., Kalli Marich (*Piper nigrum*) Fr., Pippali (*Piper longum*) Fr., Chitrak (*Plumbago zeylanica*) Rt., Nagarmotha (*Cyperus scariosus*) Rt., Harad (*Terminalia chebula*) Fr., Baheda (*Terminalia chebula*) Fr., Amla (*Embllica officinalis*) Fr., Vidang (*Embelia ribes*) Fr., each-27.5mg, Shudh Guggulu (*Commiphora wightii*)-250mg  
Excipients: q.s.

The study's findings offer strong evidence that *Vyosadi Guggulu* is safe and non-toxic, even at higher doses. Across both toxicity assessments, the formulation showed no adverse effects when compared with the control group with no cases of mortality or signs of health deterioration among the test subjects. Researchers confirmed that *Vyosadi Guggulu* can be safely administered orally at a dose of 1,000 mg/kg per day for 90 consecutive days.

These results can help support and establish the safety profile of *Vyosadi Guggulu*, reinforcing its

potential as a reliable and clinically safe Ayurveda formulation. The research identifies 1,000 mg/kg/day as the No Observed Adverse Effect Level (NOAEL), providing a valid foundation for future research into its therapeutic benefits and clinical applications.

**Reference source:** Bora M, Lalrinpuia K, Dixit AK, Alam Q, Pawar SD, Kumar YRS, Gaidhani SN, Sinha BM, Jamadagni SB, Babu G. Safety Evaluation of Vyosadi Guggulu, an Ayurvedic Formulation through Acute and Subchronic Toxicity Studies in Wistar Rats. *Toxicology International*. 2025;32(1):81-89.

**Reference link:** <https://doi.org/10.18311/ti/2025/v32i1/43653>

## Hope for Rare Spinal Condition: Ayurveda treatment Brings Remarkable Recovery in a Case of Congenital Fused Cervical Vertebrae

In an inspiring example of how traditional medicine continues to find relevance in modern healthcare, researchers at the Central Ayurveda Research Institute (CARI), Kolkata have documented a remarkable case demonstrating the potential of Ayurveda in managing a rare congenital spinal condition known as block vertebrae. This case not only showcases symptom relief but also points to improved quality of life through non-surgical, holistic care.

Block vertebrae, or fused cervical vertebrae, occur when two or more neck bones are joined together—either from birth (congenital) or due to disease or trauma later in life. While the condition may remain silent for years, many patients begin to experience pain, neck stiffness, vertigo, and difficulty in movement or swallowing as they reach their 30s or 40s. Traditional medical approaches often focus on symptomatic management using painkillers, physiotherapy, or traction, and surgery is usually reserved for severe cases. However, the risks and limitations of these treatments make patients seek safer and more sustainable options.



**Fused cervical vertebrae**

(Image source: <https://www.nevadabrainandspine.com/cervical-fusion/>)

That search led a 42-year-old male patient to the CARI Outpatient Department in Kolkata in 2020, marking the beginning of a transformative healing journey. The patient, who had been suffering from severe neck pain, vertigo, difficulty swallowing, and problems maintaining an upright posture for two months, had already undergone a thorough allopathic evaluation. Despite advanced tests including MDCT brain scans, audiological evaluations, and hematological studies, no abnormalities were found, and standard medications offered little relief. On clinical evaluation by Ayurvedic physicians, an X-ray of the cervical spine (AP & L view) revealed congenital block vertebrae at the C3–C4 level with a hypoplastic intervening disc space. The diagnosis provided clarity—and the patient decided to try Ayurvedic management under expert supervision.

The patient was prescribed a customized treatment regimen combining classical Ayurvedic formulations and external therapies. The medicines included *Ekanveer Rasa* (250 mg twice daily before food with honey), *Trayodashang Guggulu* (1 gm twice daily after food), *Vishatinduka Vati* (250 mg twice daily after food), and *Ashwagandha Churna* (3 gm twice daily with milk). Complementing this internal therapy, light neck massage and mild hot fomentation using *Mahavishagarbha Taila* were advised twice daily to enhance circulation and relieve stiffness.

Within three months, the patient reported remarkable improvement in pain, posture, and mobility. Objective assessments supported this progress. The Neck Disability Index (NDI) score dropped dramatically from 72% at baseline to 14% after three months of treatment. Even after a temporary discontinuation of therapy, when symptoms mildly recurred, the condition improved again with resumed treatment, reducing the NDI score to just 10%. The WHOQOL-BREF assessment also showed impressive improvements across all domains of health and well-being. Physical Health scores increased from 31% to 69%, Psychological Health from 44% to 63%, Social Relationships from 56% to 75%, and Environmental factors from 56% to 69%. Vertigo and swallowing difficulties completely subsided, and the patient reported restored comfort in daily activities.

To ensure safety, the patient underwent Liver Function Tests (LFT), Renal Function Tests (RFT), and heavy metal analysis after six months of therapy. All results remained within normal limits, confirming that the prescribed Ayurvedic formulations were safe and non-toxic even during prolonged use.

Researchers emphasize that this case underscores the clinical potential of Ayurveda in treating

complex congenital disorders once thought to be untreatable without surgery. In a field where surgical risks and long-term complications often deter patients, this case brings hope. It shows how a thoughtfully designed Ayurvedic regimen can not only alleviate symptoms but also improve overall quality of life—without invasive procedures.

As congenital spinal anomalies continue to challenge modern medicine, the success seen at CARI, Kolkata stands as a testament to the enduring value of traditional healing systems. By combining Ayurvedic wisdom with contemporary research standards, Ayurveda continues to offer new pathways to health—proving once again that holistic care can bridge the gap between tradition and innovation.

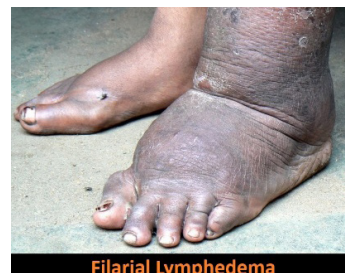
**Reference source:** Ekka R, Bhushan S, Ekta E, Nair PG, Dixit AK, Prasad PV. Management of congenitally fused cervical vertebrae with Ayurveda intervention-A case report. *Journal of Ayurveda and Integrative Medicine*. 2024;15(5):100964.

**Reference link:** <https://doi.org/10.1016/j.jaim.2024.100964>

### Ayurvedic Formulation AYUSH-SL Shows Promising Effect in Managing Chronic Filarial Lymphedema

In a significant effort toward integrative care for lymphatic filariasis (LF), a 2.5-year double-blind, placebo-controlled, multicentric study has demonstrated the safety and efficacy of AYUSH-SL, a poly-herbal Ayurvedic formulation, in managing chronic filarial lymphedema. Conducted across multiple endemic regions of India, the trial offers hope for peoples affected by chronic filarial lymphedema.

Lymphatic filariasis, commonly known as elephantiasis, is caused by parasitic nematodes -*Wuchereria bancrofti*, *Brugia malayi*, and *B. timori*—transmitted through mosquito bites. The disease primarily affects the lymphatic system, causing swelling in the lower limbs, recurrent infections, and significant disability. In Ayurveda, Lymphatic filariasis is described under the classical term *Shlipada*, with detailed therapeutic approaches documented for centuries, emphasizing holistic management.



**Image source:** <https://dolfproject.wustl.edu/diseases-studied/lymphatic-filariasis/>

The multicentre trial was carried out at the Calcutta School of Tropical Medicine (Kolkata) in collaboration with the Central Ayurveda Research Institute (CARI), Kolkata and Bhubaneswar, and the Regional Ayurveda Research Institute (RARI), Vijayawada. Over 180 participants diagnosed with Grade I and II filarial lymphedema of the lower extremities were enrolled in the study using competitive selection. Participants were randomly assigned to receive mass drug administration (MDA) in combination with either AYUSH-SL or a matching placebo, following rigorous double-blind protocols.

The study's primary outcome focused on the reduction of edema, measured through the water displacement method, which quantified percentage changes from baseline at the 4<sup>th</sup>, 12<sup>th</sup>, and 24<sup>th</sup> weeks. Secondary outcomes included improvements in quality of life, assessed using the Lymphatic Filariasis-Specific QoL Questionnaire, and prevention of recurrence of acute episodes, monitored through the severity and frequency of episodes over the previous four weeks.

Results were compelling. Patients receiving AYUSH-SL alongside MDA showed significant reduction in limb swelling, with improvements consistently observed at each follow-up interval. Quality of life scores in both groups improved over time, but patients in the AYUSH-SL group reported more robust gains, highlighting the formulation's role in enhancing physical, social, and psychological well-being. The comprehensive action of AYUSH-SL—combining anti-inflammatory, antimicrobial, and anti-allergic properties is believed to contribute to both symptomatic relief and reduction of recurrent inflammatory episodes.

The safety assessments including hematologic and biochemical parameters revealed no clinically significant changes throughout the study, confirming that AYUSH-SL is safe for prolonged use. No adverse events were reported, strengthening confidence in the formulation as a complementary therapy in LF-endemic areas. The study underscores the potential of integrative Ayurvedic interventions in complementing standard MDA programs, offering a holistic approach to managing lymphedema. By targeting not only the underlying inflammation but also recurrent episodes that significantly affect quality of life, AYUSH-SL represents a promising addition to existing public health strategies for filariasis control.

While the trial results are encouraging, the researchers emphasize the need for larger community-based studies to further validate

the safety and efficacy of AYUSH-SL in diverse populations across endemic regions. Such studies could pave the way for scaling up Ayurvedic interventions alongside conventional treatments, potentially reducing disease burden and improving daily functioning for millions affected by LF. This research highlights the value of traditional medicine informed by modern clinical research. AYUSH-SL can emerge as a safe, effective, and holistic option for the management of chronic filarial lymphedema.

Reference source: Mitra A, Bhuyan G, Muralikrishna C, Naser SM, Ratha KK, Babu G, et al. Clinical evaluation of AYUSH-SL in patients receiving mass drug administration for treatment of chronic inflammatory lymphedema: A double blind placebo-controlled multicentric study. *Journal of Vector Borne Diseases*. 2025;62(2):202-10.

Reference link: <https://pubmed.ncbi.nlm.nih.gov/39636260/>

## Healing with Heat: Instant Migraine Relief Using Ayurvedic Agnikarma

Migraines, characterized by intense, throbbing headaches often affecting one side of the head, are among the most disabling neurological conditions globally. Accompanied by nausea and heightened sensitivity to light and sound, these episodes can severely affect daily functioning. Women are disproportionately affected, and despite modern medicine's advances, many continue to suffer without lasting relief.



(AI generated image)

In a noteworthy case documented at the Regional Ayurveda Research Institute (RARI) in Thiruvananthapuram, instant and complete relief from chronic migraine was observed in a 58-year-old woman following the administration of *Agnikarma*—a traditional Ayurvedic heat-based therapy. The patient had reportedly been suffering from migraine episodes for over a decade. Initially infrequent, occurring once every few months, the

headaches had progressively increased in frequency to every two to three weeks. Despite regular use of painkillers and prescribed medications, only temporary relief had been achieved. In search of a more sustainable and holistic solution, the patient sought Ayurvedic care in early 2023.

Physicians at RARI prescribed her a regimen of *Pathya Shadangam Kwatha* (a herbal decoction), *Shirashula Vajra Rasa* tablets, and *Shadbindu Taila* nasal drops. With consistent use beginning in May 2023, her symptoms gradually lessened. However, in mid-August, during a bout of hot and humid weather, she experienced one of her most severe migraine attacks—rated 10 out of 10 on the pain scale—with no relief from her usual medication. Given the intensity of her symptoms, doctors opted for *Agnikarma*, a classical Ayurvedic procedure that uses therapeutic heat for pain management. In this treatment, a heated metal rod known as a *Panchaloha Shalaka* was gently applied for one to two seconds on the affected area, with a protective layer of paper placed on the skin. The process was repeated several times, followed by cooling the eyes with water.

The results were highly encouraging. Within two minutes, the patient reported a significant reduction in pain, and within five minutes, her headache had vanished entirely. She experienced no side effects beyond a mild burning sensation and a small black mark at the treatment site—both of which resolved with the application of Aloe vera gel and Murivenna oil. Follow-up visits on September 13 and October 4, 2023, confirmed sustained relief. The patient remained pain-free, reported improved sleep and overall well-being, and expressed high satisfaction with the outcome.

This case underscores the potential of *Agnikarma* as a safe, rapid, and cost-effective therapeutic option for acute migraine management—particularly for patients unresponsive to conventional treatments. It also highlights the growing relevance of Ayurvedic practices in integrated, evidence-based healthcare, reaffirming that ancient wisdom can still offer solutions to modern ailments.

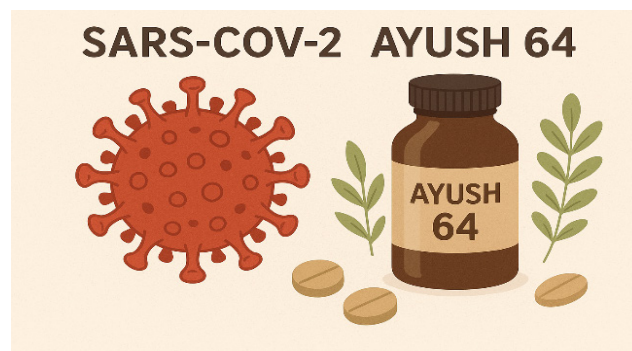
**Reference source:** Balakrishnan P, Surendran ES, Raj LS. An immediate pain relief with Agnikarma therapy for acute episode of migraine headache—a case report. *Journal of Ayurveda and Integrative Medicine*. 2024 May 1;15(3):100953.

**Reference link:** <https://www.sciencedirect.com/science/article/pii/S0975947624000688?via%3Dihub>

## In Silico Study Identifies Picroside I from AYUSH-64 Medicinal Plants as a Potential Inhibitor of SARS-CoV-2 RNA-dependent RNA polymerase

An in silico study has revealed promising antiviral potential in natural compounds derived from the AYUSH-64 formulation, traditionally used in Indian medicine. Researchers conducted a detailed computational exploration of phytocompounds from four medicinal plants—*Picrorhiza kurroa*, *Alstonia scholaris*, *Swertia chirata*, and *Caesalpinia crista*—to evaluate their binding affinity against the RNA-dependent RNA polymerase (RdRp) enzyme of SARS-CoV-2, the virus responsible for COVID-19.

AYUSH-64, an established Ayurvedic polyherbal formulation, has been historically recognized for its antiviral, anti-malarial, anticancer, and immunomodulatory properties. Among the key phytocompounds tested, Picroside I (6'-Cinnamoylcatalpol)—an iridoid glycoside found in *Picrorhiza kurroa*—emerged as the most promising candidate for inhibiting SARS-CoV-2 RdRp activity.



(AI generated image)

Using advanced computational tools, including molecular docking, molecular dynamics simulations, and Density Functional Theory (DFT) calculations, the research team assessed the molecular interactions between selected compounds and the viral RdRp enzyme. Results indicated that Picroside I, along with Oleanolic acid, Arvenin I, Arvenin II, and Arvenin III, demonstrated strong binding affinity toward RdRp's catalytic residues (Ser759, Asp760, Asp761). Picroside I exhibited stable hydrogen bond interactions with the NTP entry channel residues (Arg553 and Arg555), essential for viral RNA synthesis. Simulation analyses, including MM-PBSA free energy, RMSD, Rg, PCA, and RMSF, confirmed the stability and favorable interaction of the Picroside I-RdRp complex over a 50-nanosecond trajectory. DFT analysis further validated the compound's electronic stability and binding robustness.

According to the study's findings, Picoside I may serve as a selective and potent inhibitor of SARS-CoV-2 RdRp, warranting further experimental validation and potential development into a natural therapeutic agent for COVID-19. The research underscores the growing importance of natural product-based drug discovery, particularly from traditional formulations such as AYUSH-64, and highlights the role of computational methods in identifying new antiviral candidates from existing herbal resources. The study contributes to ongoing global efforts to identify effective, natural, and safe antiviral agents using modern computational approaches integrated with traditional medicine knowledge.

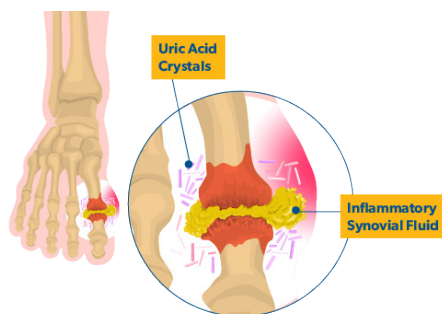
**Reference Source:** Cheemanapalli S, Golla R, Pagidi S, Pantangi S. In silico exploration of phytochemicals from AYUSH-64 medicinal plants against SARS CoV-2 RNA-dependent RNA polymerase. *Journal of Ayurveda and Integrative Medicine*. 2024 Nov 1;15(6):101026.

**Reference link:** <https://www.sciencedirect.com/science/article/pii/S0975947624001414?via%3Dihub>

### Babul Tree Leaves Show Hope in Gout Relief

A new study from Madurai Medical College and the Captain Srinivasa Murthy Central Ayurveda Research Institute, Chennai, has found that leaves of the *Acacia nilotica* L. (babul tree) may help in treating gouty arthritis. A research study tested the plant's ethanol extract in experimental gout models and showed promising results.

The extract reduced uric acid levels, joint swelling, and inflammation markers in rats, performing almost as effectively as the standard drug Allopurinol. Within 48 hours, treated animals showed major relief from swelling and regained normal mobility by 72 hours. Laboratory analysis also confirmed that the extract prevented uric acid crystal buildup and supported cartilage repair. Beyond anti-arthritic benefits, the extract demonstrated antioxidant and antimicrobial effects, particularly against *Pseudomonas aeruginosa*, bacteria known to cause septic arthritis.



**Image Source:** <https://arthritis.ca/about-arthritis/arthritis-types-%28a-z%29/types/gout>

Researchers believe that the plant's natural compounds target multiple genes involved in immunity, vitamin D regulation, and inflammation, offering a multi-dimensional approach to arthritis management. While these findings validate traditional Ayurvedic uses of babul, scientists stress the need for clinical trials in humans before recommending it as a treatment. If successful, the plant could provide a safer, cost-effective alternative to existing arthritis drugs.

**Reference Source:** Sathiyabalan G, Satya MJ, Monika N, Gokul M, Bhuvaneshwari S. In-Vivo Anti-Arthritic Potential of Ethanol Extract of *Acacia nilotica* L. Leaves in Gout Model. *Toxicol Int*. 2025;32(1):147-156.

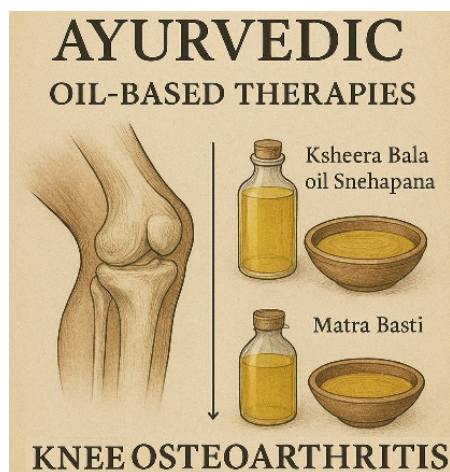
**Reference link:** <https://informaticsjournals.co.in/index.php/toxi/article/view/44423/32429>

### Pilot Study Shows Promising Effect of Ayurvedic Oil-Based Therapies (*Ksheera Bala oil Snehapana* and *Matra Basti*) in Managing Knee Osteoarthritis

A pilot study has introduced a promising Ayurvedic treatment protocol for knee osteoarthritis, scientifically known as *Janu Sandhigata Vata*, offering patients an effective and convenient alternative to traditional therapies that require hospitalization.

Knee osteoarthritis, one of the most common degenerative joint diseases affecting both men and women, is characterized by pain, stiffness, and reduced mobility. In Ayurveda, its symptoms closely resemble those described under *Janu Sandhigata Vata*, a condition associated with *Vata Dosha* imbalance. With the increasing prevalence of lifestyle-related disorders and age-associated degeneration, there is a growing need to explore safe, practical, and accessible treatment options within Ayurvedic medicine.

Traditionally, *Matra Basti*—a medicated oil enema—is a well-established therapy for managing *Janu Sandhigata Vata*. However, it typically requires hospitalization and extended rest, making it difficult for patients with busy schedules to adhere to the treatment regimen. To address this limitation, researchers conceptualized a new approach using *Snehapana*—the oral administration of unctuous substances—as a simpler and non-invasive alternative.



(AI generated image)

The study utilized *Ksheera Bala* oil, an Ayurvedic formulation recommended by Acharya Charaka for managing disorders caused by *Vata Dosha*. A total of 24 patients diagnosed with *Janu Sandhigata Vata* were enrolled and randomly divided into two groups. In Group A (*Snehapana* group), the patients received *Ksheera Bala* oil orally for 21 days, in a dose of 20 ml daily on an empty stomach after sunrise. In the Group B (*Matra Basti* group), patients underwent the traditional *Matra Basti* procedure for 21 days, receiving 60 ml of *Ksheera Bala* oil daily after *Abhyanga* (oil massage) and *Nadi Swedana* (steam therapy). Both groups were followed up after 42 days.

The results revealed that patients in the *Snehapana* group experienced statistically significant relief in pain, stiffness, and functional mobility compared to those in the *Matra Basti* group. The findings suggest that *Snehapana* not only provides comparable therapeutic benefits but also offers greater convenience, as it can be administered without hospitalization or disruption to daily routines.

The researchers concluded that *Snehapana* with *Ksheera Bala* oil is an effective and practical treatment modality for managing *Janu Sandhigata Vata* (knee osteoarthritis). This approach represents an important step toward integrating traditional Ayurvedic therapies with modern lifestyle needs, providing patients with a safe, accessible, and time-efficient alternative for joint health management.

**Reference:** Katara PK, Sawarkar P, Jain S. Evaluation the Efficacy of *Snehapana* (Oral Route) and *Matra Basti* (Rectal Route) with *Ksheera Bala Taila* in the Management of *Janu Sandhi Vata* (Osteoarthritis of Knee)-A Pilot Study. *African Journal of Biomedical Research* 2024;27(45):5622-31

**Reference link:** <https://africanjournalofbiomedicalresearch.com/index.php/AJBR/article/view/4655/3572>

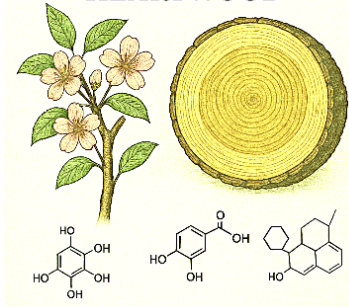
## ANALYTICAL RESEARCH

### Ayurvedic Researchers Decode the Phytochemical Secrets of *Prunus cerasoides* Heartwood

In recent research focused on Ayurvedic pharmacognosy, scientists from the Central Ayurveda Research Institute (CARI), Calcutta, and the Regional Ayurveda Research Institute (RARI), Ranikhet, have successfully developed a comprehensive phytopharmacognostic profile of *Prunus cerasoides* Buch.-Ham. ex D. Don—commonly known as Padmak in classical Ayurvedic texts.

The study was undertaken to scientifically document and authenticate the medicinal properties of the plant's heartwood, which has been traditionally recognized for its therapeutic significance. Researchers aimed to establish a pharmacognostic and phytochemical blueprint to aid in the identification, standardization, and pharmaceutical development of *Prunus cerasoides*.

#### PRUNUS CERASOIDES HEARTWOOD



(AI generated image)

The heartwood of *Prunus cerasoides* has long been referenced in Ayurvedic literature for its potential benefits in balancing *Pitta dosha* and supporting skin and cardiovascular health. Recognizing its classical importance, the research team sought to detect bioactive flavonoids such as Biochanin A, Genistein, and Sakuranetin, compounds known for their antioxidant and anti-inflammatory properties.

Using pharmacognostic evaluation, physicochemical analysis, HPTLC fingerprinting, and advanced LC-MS/MS orbitrap techniques, the scientists meticulously profiled the heartwood's phytochemical composition. The investigation compared extracts obtained from solvents of varying polarity, revealing that methanol was the most effective solvent for extracting key bioactive compounds.

The study identified a rich spectrum of major phytochemicals, including *Apigetrin*, *Astilbin*, *Betaine*, *Biochanin A*, *Catechin*, *Coumarin*, *Formononetin*, *Genistein*, *Naringenin*, *Quercetin*, *Rutin*, and *Taxifolin*. These compounds are well-recognized for their pharmacological potential, especially in antioxidant, hepatoprotective, and anti-inflammatory activities.

According to the researchers, the generated dataset serves as a multifaceted reference tool for future phytopharmaceutical and natural product research. The HPTLC fingerprinting ensures accurate species authentication, while LC-MS/MS profiling offers a complete view of the plant's secondary metabolites—critical components contributing to its medicinal value.

The findings not only reinforce the therapeutic relevance of *Prunus cerasoides* but also pave the way for compiling an authentic monograph on the plant, essential for global recognition of Ayurvedic botanicals. Furthermore, insights into solvent-based extractability may guide phytopharmaceutical innovations, ensuring maximum yield and efficacy of bioactive compounds. The investigation furnishes a set of qualitative and quantitative phyto-pharmacognostic parameters that can act as a blueprint for future standardization and quality control. The study bridges traditional Ayurvedic knowledge with modern analytical science, creating pathways for developing authentic and standardized herbal formulations.

**Reference Source:** Hazra K, Kumar D, Mitra A, Dutta S, Sarkar S, Babu G. Phytopharmacognostic profiling of *Prunus cerasoides* Buch.-Ham. ex D. Don, heartwood. *Indian J Nat Prod Resour.* 2024 Mar;15(1):146-55.

**Reference link:** <https://or.niscpr.res.in/index.php/IJNPR/article/view/4232/2863>

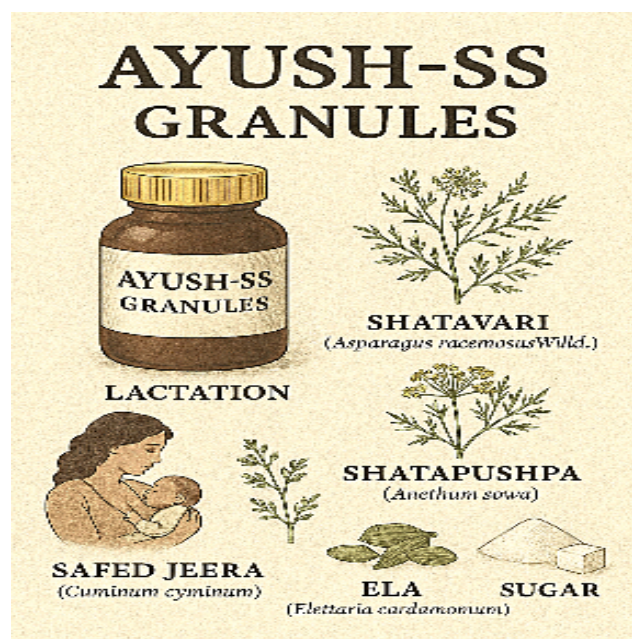
## DRUG RESEARCH AND MEDICINE PLANT SURVEY

### AYUSH-SS Granules: A Safe and Effective Ayurvedic Innovation to Support Lactation

In research for maternal health, researchers have studied AYUSH-SS granules, a unique polyherbal Ayurvedic formulation designed to support healthy lactation in new mothers. Breast milk is widely recognized as the most complete and vital source of nutrition for newborns, providing essential proteins, fats, carbohydrates, and minerals while strengthening immunity and protecting infants from infections. However, many mothers experience lactation insufficiency due to various

physiological and lifestyle factors. To address this concern, AYUSH-SS granules were formulated as a safe, natural, and effective solution that harmonizes classical Ayurvedic wisdom with modern scientific validation.

The formulation combines four renowned herbs—*Shatavari* (*Asparagus racemosus* Willd.), *Shatapushpa* (*Anethum sowa*), *Safed Jeera* (*Cuminum cyminum*), and *Ela* (*Elettaria cardamomum*)—blended with *Sharkara* (sugar) and mild preservatives. Among these, *Shatavari* serves as the key ingredient, long celebrated in Ayurveda for its galactagogue properties and its role in stimulating the production of corticoids and prolactin, hormones essential for lactation. The careful selection and blending of these botanicals aim to enhance both milk production and overall maternal well-being, offering an easy-to-administer and palatable option suited for the needs of today's mothers.



(AI generated image)

To ensure the safety, purity, and efficacy of AYUSH-SS granules, a series of rigorous pharmacognostical and analytical evaluations were conducted. Microscopic studies confirmed the presence of all characteristic plant tissues, verifying the authenticity of the herbal components. Physicochemical assessments—including measurements of extractive values, ash content, moisture loss, and pH—were found to be within the acceptable range prescribed by the Ayurvedic Pharmacopoeia of India. The researchers also carried out heavy metal analysis for lead, mercury,

arsenic, and cadmium, all of which were well below permissible limits. Further testing through GC-MS-MS confirmed the absence of pesticide residues, while microbial analysis showed no presence of harmful pathogens such as *E. coli*, Salmonella, Staphylococcus aureus, and Pseudomonas aeruginosa. Aflatoxin testing indicated that B1, B2, G1, and G2 were not detected in any sample, affirming the product's uncompromised safety profile.

Chemical fingerprinting through High-Performance Thin-Layer Chromatography (HPTLC) revealed distinct and reproducible chemical profiles, identifying marker compounds such as Carvone and Cuminaldehyde. These markers serve as reliable indicators for quality control, helping to ensure consistency across production batches. The thoroughness of these evaluations not only establishes the formulation's authenticity but also provides a scientific framework for maintaining quality standards in future manufacturing and regulatory processes.

The findings of this study demonstrate that AYUSH-SS granules are a safe, standardized, and effective Ayurvedic product for lactation support. This innovation represents a meaningful step toward integrating the timeless principles of Ayurveda into modern, convenient dosage forms that meet current pharmaceutical and safety requirements. By combining traditional knowledge with evidence-based validation, the formulation - AYUSH-SS granules highlights Ayurveda's relevance and potential to address contemporary health challenges naturally and holistically. For new mothers seeking gentle yet effective support, this formulation offers significant hope for nourishing both mother and child.

**Reference source:** Das M, Debnath S, Dutta S, Singh R, Singh A, Banerji A, Dixit AK, Babu G. Development of quality standards of AYUSH SS granules: A unique poly herbal formulation for lactation insufficiency. Journal of Drug Research in Ayurvedic Sciences. 2025;10(4):278-86.

**Reference link:** [https://journals.lww.com/jdra/fulltext/2025/07000/development\\_of\\_quality\\_standards\\_of\\_ayush\\_ss.3.aspx](https://journals.lww.com/jdra/fulltext/2025/07000/development_of_quality_standards_of_ayush_ss.3.aspx)

### Scientific Profiling of Guggulu Resin Confirms Presence of Key Bioactive Compound Guggulsterone-Z

In a major step toward standardizing Ayurvedic medicines through modern analytical science, researchers have identified and quantified Guggulsterone-Z through marker-based

chromatographic methods, the key bioactive compound in Guggulu (*Commiphora wightii* (Arn.) Bhandari) resin and related polyherbal Ayurvedic formulations (PHAFs). This original research help form scientific basis for Ayurveda uses of Guggulu using chromatography, and offers a scientific foundation for the quality assurance of one of Ayurveda's most revered medicinal resins.

For more than 3,000 years, *Guggulu* has held a prominent place in Ayurvedic therapeutics, renowned for its effectiveness in managing lipid disorders, inflammation, arthritis, and hemorrhoids. Its pharmacological potency is attributed primarily to Guggulsterone-Z, a plant-derived steroid that plays a key role in regulating cholesterol metabolism and supporting cardiovascular health. Recognizing the need for precise and reliable methods to standardize herbal formulations, scientists employed High-Performance Thin-Layer Chromatography (HPTLC) and High-Performance Liquid Chromatography (HPLC) to evaluate the presence and concentration of Guggulsterone-Z in both raw *Guggulu* resin and its polyherbal derivative.



**Image:** Oleo-gum resin (*Guggulu*)

**Image source:** <https://www.cultivatornatural.com/project/commiphora-wightii-Guggulu-oleo-gum-resin-tbc/>

The HPTLC analysis utilized silica gel plates and a toluene:acetone (90:10 v/v) solvent system, producing clear and distinct bands at an R<sub>f</sub> value of 0.47 under ultraviolet light at 254 nm and 366 nm, which became more pronounced after derivatization at 540 nm. Complementing these findings, HPLC analysis conducted on a C18 column with a mobile phase of water (buffered with KH<sub>2</sub>PO<sub>4</sub>) and acetonitrile (20:80 v/v) detected Guggulsterone-Z at a retention time of 3.679 minutes, confirming the method's precision and reproducibility.

Quantitative estimation revealed that Guggulsterone-Z constituted 0.5020% of the raw *Commiphora wightii* resin and 0.2994% of the polyherbal formulation, demonstrating consistent retention of the bioactive compound through the formulation process. This consistency underscores the effectiveness of traditional preparation methods and validates their reliability when evaluated through advanced analytical techniques.

The researchers emphasized that the combined HPTLC and HPLC fingerprints act as a chemical barcode for *Guggulu*-based products, ensuring authentication, standardization, and quality control across batches. This advancement is particularly significant for the global acceptance of Ayurvedic medicines, as it aligns traditional formulations with internationally recognized analytical standards.

The validated methods not only guarantee the purity and potency of *Guggulu*-containing formulations but can also serve as a benchmark for quality assurance in herbal drug development. As Ayurveda continues to gain recognition worldwide, such evidence-based research strengthens confidence in the safety, efficacy, and standardization of India's ancient healing system—ensuring that time-honored remedies like *Guggulu* continue to benefit modern generations with unwavering authenticity.

**Reference source:** Narasimhaji CV, Marimuthu G, Meena AK, Singh A, Raju I, Singh R, Govindarajan N, Srikanth N, Acharya R. Marker-based HPTLC profiling and HPLC method for estimating Guggulsterone-Z in *Commiphora wightii* (Arn.) Bhandari resin and polyherbal Ayurveda formulation (PHAF). *Journal of Drug Research in Ayurvedic Sciences*. 2025;10(1):48-55.

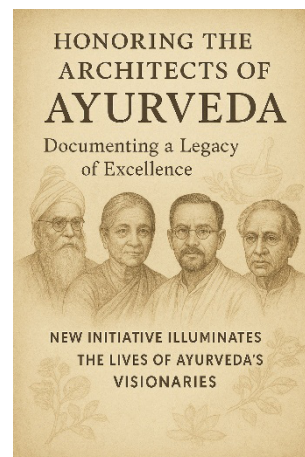
**Reference link:** [https://journals.lww.com/jdra/fulltext/2025/01000/marker\\_based\\_hptlc\\_profiling\\_and\\_hplc\\_method\\_for.6.aspx](https://journals.lww.com/jdra/fulltext/2025/01000/marker_based_hptlc_profiling_and_hplc_method_for.6.aspx)

## LITERARY RESEARCH

### Honoring the Architects of Ayurveda: Documenting a Legacy of Excellence - New Initiative Illuminates the Lives of Ayurveda's Visionaries

Ayurveda, India's ancient system of natural healing, has been passed down through generations, rooted in timeless texts like the *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*. But beyond these texts, it is the people, the dedicated scholars, doctors, teachers, and healers, who have kept Ayurveda alive and relevant in our modern world. The Central Council for Research in Ayurvedic Sciences (CCRAS) has started a special endeavor

to honor and commemorate these remarkable people. CCRAS is releasing in-depth biographies of these Ayurvedic pioneers through the *Journal of Research in Ayurvedic Sciences*. The goals are to preserve their priceless contributions, share their knowledge, and motivate present and future generations.



These biographies are much more than just tributes. They help us protect Ayurveda's rich cultural heritage by connecting us with the lives of those who helped shape its journey. Learning about their challenges and achievements can guide students and practitioners alike, offering lessons on handling difficulties, making better decisions, and staying committed to the path. Their stories serve as a source of motivation, showing how dedication and hard work can bring positive change. They also offer a deeper understanding of how Ayurveda has evolved not just as a medical system, but as a way of life grounded in balance between body, mind, and spirit. For today's Ayurvedic professionals, these profiles can support ongoing learning and professional development, helping them combine traditional knowledge with the needs of modern healthcare.

Each life profile covers the individual's early life, education, career path, teachings, research, awards, and overall impact on Ayurveda and society. These stories often reveal how deeply they were trained, the unique treatments they practiced, and how they served communities, especially during public health crises. The initiative features various individuals — from expert physicians and teachers to administrators, researchers, and thought leaders. Some well-known figures include Vaidya Brihaspati Dev Triguna, a legendary healer; Shri Krishna Ram Bhatt, royal physician of Jaipur; Nana Joshi, who helped popularize Panchakarma; and Dr. P.R. Krishna Kumar, who revived the traditional

gurukul system and promoted Ayurveda globally. Others like Bapalal Shah, Gananath Sen, D.G. Thatte, and experts in Rasa Shastra (medicine preparation with minerals), such as Chivukula Satya Narayana Sastry and Damodar Joshi, reflect how ancient knowledge can blend beautifully with modern science.

This documentation project is ongoing, and CCRAS invites everyone in the Ayurvedic community to get involved. Colleges and institutions are encouraged to share these inspiring stories with students, as they offer valuable guidance from the very beginning of their journey. Teachers, researchers, and professionals are also invited to contribute by suggesting more names and stories of unsung heroes who deserve to be remembered. By doing so, we can make sure that the legacy of these masters continues to shine and guide the path of Ayurveda in the years to come.