The Modern Ayurveda

Milestones Beyond the Classical Age

EDITED BY
C. P. Khare
Chandra Kant Katiyar

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Dedicated to the Ayurvedic explorer of the new age

Contents

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1 How the Concept of Modern Ayurveda Emerged

C. P. Khare

In 1988 V. C. Burman (now emeritus chairman of Dabur India) had a patch of dermatitis on his neck, which used to subside after medication, but would surface again after some time. I suggested his (Dabur's) own medicine—*Khadirarishta*. He paused for a while, but agreed to try "his own medicine." I met him after a month. The patch had disappeared forever. At this point he posed a big question: How will you justify the use of Khadirarishta in dermatitis? It contains 15 herbs. The curative properties seem to be in Khadira (*Acacia catechu* heartwood extract) and Devadaru (*Cedrus deodara* bark extract). But any physician will ask, why 15 herbs, why alcoholic extract, why not the extract of a single herb.

During the last 50 years, I've had an opportunity to interact with a number of pioneers of classical Ayurvedic medicine. Most of them were concerned about the future of classical polyherbal formulations. The most popular classical tonic Dashmularishta contains 67 ingredients. Any scientist or practitioner of modern medicine will have doubt about the rational use of so many ingredients in one formulation; even studies presented by Ayurvedic institutes will be considered biased.

Dr. Bhagwan Dash gave an example of Khadiradi Vati and its multiple classical formulae. It has as many as eight formulae. The number of ingredients varies from 5 to 37, and the percentage of Khadira varies from 15 to 92. In one formula, poisonous drugs like Bhallaataka (*Semecarpus anacardum* fruit) and Bakuchi (*Psoralea corylifolia* fruit) have also been added. This indicates that there was one Khadiradi Vati that was prescribed for dermatophytosis (Materia Medica of Ayurveda, based on Ayurveda Saukhyam).

The basic concept of modern Ayurveda took shape after a number of meetings over an extended period of time with scientists and researchers of various herbal pharmaceutical companies. As time passed and competition with Chinese and Western herbal medicines intensified, the following shortcomings surfaced:

- Ayurvedic curriculum, due to its classical overtone, has overshadowed the system's scientific temper and, therefore, is lagging far behind the mainstream of contemporary systems of medicine.
- Typical Ayurvedic scholars are still psychologically confined to the 16th century AD and are not inclined to accept the fact that after more than 2000 years, classical tenets need to be reviewed.

- Ayurvedic scholars are rigid in their approach and are not prepared to restructure classical formulations through their scientific validation.
- Most Ayurvedic scholars believe in an individualized and holistic approach, based on classical tenets, but now the time has come to think beyond a set regime. There is a need to develop Ayurvedic drugs for millions based on their bioactive compounds, defined pharmacological activities and proper standardization to ensure batch-to-batch consistency for reproducible clinical efficacy.
- A complacent attitude among Ayurvedic scholars, that there is little scope for critical evaluation of ancient texts, brought in a certain amount of inertia among them and has taken away the spirit of questioning and experimentation resulting in lack of innovation.
- Due to the self-righteous feeling that practice based on classical tenets reflects unquestionable ancient wisdom, most Ayurvedic scholars are reluctant to seek and get collaboration from people working in other allied fields.

After raising all these points, a bit of introspection. Chinese medicine ran slap into Ayurvedic medicine. How? Fundamental classical principles of Chinese medicine are as theological as those of classical Ayurvedic medicine. In Chinese medicine, body types have been specified as yin (cold) and yang (hot); in Ayurvedic medicine, these are classified as *Vata, Pitta,* and *Kapha*. In Chinese medicine, the illness is the result of yin–yang imbalance; in Ayurvedic medicine, it is due to the imbalance of Vata, Pitta, and Kapha. In Chinese medicine, water, earth, metal, wood, and fire are five elements of the universe; in Ayurvedic medicine, the five elements of the universe are *Mahaabhuutaas, Aakaash, Vayu, Teja, Aapa,* and *Prithivi*. In Chinese medicine, five tastes and in Ayurvedic medicine, six tastes were associated with the pharmacological activity of a medicinal plant. There were evil spirits in Chinese medicine and *bhoot-baadhaas* in Ayurvedic medicine.

Both systems were the victim of the same weaknesses:

- Diagnosis was made on the basis of tenets that could not be interpreted in Western terms.
- Prescriptions were tailor-made to correct humoral imbalances. These could not be applied universally.
- Herbal prescriptions contained numerous components (vegetable drugs, minerals, metals, and animal parts) making it extremely difficult to determine the role of individual components.
- Many herbs were credited with a variety of indications. Many of the claims rarely have convincing evidence.
- Proper identification of a number of key herbs and a standardized nomenclature was a problem in both systems.

In spite of all this, how did Chinese medicine succeed in promoting its herbs in the West, while Ayurvedic medicine was left far behind? The answer lies in the modernizing process, research activities, and killer instinct to win the West, which is lacking among Ayurvedic scholars.

Invariably, in all books on herbal medicine in the United States, Chinese medicine is being covered in detail, whereas Ayurvedic and other classical systems as archives. The vast area of Ayurvedic medicine has been confined to yoga, massage therapy, *panchkarma,* and sex stimulants. In China, Chinese medicine is parallel with modern Western treatment. Almost all hospitals in China have a department of traditional medicine.

Even in Japan, 50 to 65 percent of doctors prescribe herbs (mostly Chinese) for disorders and symptoms of older adults, disorders involving the immune system, psychosomatic and psychiatric complaints, menopausal discomforts, chronic fatigue, and other subjective symptoms as an alternative therapy for NSAIDs and COX-2 inhibitors, as a combination therapy to enhance the effect of modern medicine, and to reduce the side effects of chemotherapy drugs. (Japan is known for world's highest longevity figures for both men and women.)

In India, there is absolutely no coordination between practitioners of modern medicine and Ayurvedic scholars. Hardly 10 to 15 herbal drugs find a place in the prescriptions of not even 10 percent of practitioners of modern medicine. They do not have faith in Ayurvedic products. Thus, the main issue is that of systematic research, restructuring the archaic formulations, and repositioning of Ayurvedic medicine in the global perspective.

Think beyond the 16th century. Time to think beyond the 21st century!

2 Transition from Ancient to Modern Ayurveda

Chandra Kant Katiyar

Over the last few decades, the popularity of Ayurveda has increased several fold not only in India but abroad as well. More than 1,000 institutions throughout the world are now running courses in Ayurveda. Ayurveda in its native country, India, suffers from a dichotomy of thoughts. There are two streams of scholars of Ayurveda. One believes in the principle of *aptopadesh* and are strong supporters of Ayurveda in its original form. They also believe that their faith in Ayurveda and its products is validated by the fact that despite onslaughts by Mughals and Britons, the system has survived due to its own inherent strengths and fundamental principles. This perception convinced them to believe that there is no need for scientific validation of Ayurveda or its products since they feel that the usefulness of Ayurvedic products can always be substantiated on the basis of their traditional use. This thinking is exhibited by current Indian regulations as well. Gazette Notification dated August 10, 2010, issued by the Ministry of Health & Family Welfare, Department of AYUSH, Government of India, New Delhi, while giving the conditions of license, provides exemption to classical Ayurvedic medicines from both safety as well as efficacy studies. On the other hand, there is a stream of scholars who strongly feel that there is a need for scientific scrutiny and validation of ancient Ayurvedic claims in a language that is understood by today's world with scientific temper.

Earlier, Ayurvedic practitioners were preparing the medicines on a small scale for their patients in limited volumes. The advent of commercialization has brought with it the need for ensuring the mechanisms of consistency of raw materials from lot to lot and ensuring batch-to-batch consistency to provide same efficacy of the Ayurvedic products over a period of time. Against this backdrop, the *Ayurvedic Pharmacopoeia of India* was constituted with a view to setting standards for the raw materials and finished products. Though the *Ayurvedic Pharmacopoeia of India* has given *Rasa, Guna, Virya, Vipak,* and in certain cases *Prabhav* of herbs, it has not given any standard test procedures to evaluate the same, thus making these classical Ayurvedic attributes redundant for the pharmacopoeia. However, the same pharmacopeia provides standard test procedures for other physicochemical parameters, chromatographic tests, assays, heavy metal tests, and so forth.

As far as our knowledge goes, after the 16–17th century, that is, after Bhavprakash, Indian Ayurvedic specialists have hardly provided *Rasa, Guna, Virya, Vipak,* and *Prabhav* with any new medicinal herb. This brings us to a debatable point of the usefulness of Ayurvedic attributes like *Rasa, Guna, Virya, Vipak,* and *Prabhav* of Ayurvedic medicinal plants in the present-day scientific context. Today we are

talking about the standardization of crude herbs, extracts, and finished products with the modern analytical tools like high-performance liquid chromatography (HPLC), high-performance thin-layer liquid chromatography (HPTLC), and gas chromatography (GC), estimation of functional groups, marker compounds, and estimation of biologically active compounds. Under these circumstances, we have already deviated from basic Ayurvedic principles.

The dichotomy of thoughts and divergence of views on Ayurveda have further been recently strengthened by a survey (Kishor Patwardhan et al., Global challenges of graduate level Ayurvedic education: A survey, *International Journal of Ayurveda Research*, Jan–Mar 2010, vol. 1, issue 1) conducted by the Department of Sharir Kriya and the Department of Community Medicine, Banaras Hindu University, Varanasi, wherein a questionnaire was filled out by teachers working at Ayurvedic College, postgraduate students registered for MD (Ay) or MS (Ay) courses, and students of the bachelor's degree in Ayurvedic medicine and surgery (BAMS) who have passed the third professional BAMS examination. As per this survey, the data collected from across the country showed a strong tendency toward agreement that the issues related to safety profile and standardization of Ayurvedic products are serious ones. Also there is a general tendency toward agreement that Ayurvedic academicians do not figure anywhere in authoring the scientific and evidence-based papers in reputed international journals and they do not voluntarily participate in international platforms to present their research data. The study also suggests that Ayurvedic academicians do not follow international standards while planning the protocols of research projects and while writing research reports. A significant number of participants in the study tend to agree that no standard international indexed and peer-reviewed journals are published by Ayurvedic institutions, making it difficult for Ayurvedic research to have global attention. A majority of students and teachers in the present study tend to agree that pharmacodynamic/pharmacokinetic properties, efficacy, and safety profiles and chemical compositions of Ayurvedic formulations are yet to be established, making it difficult for experts in conventional medicine to accept Ayurveda.

The survey continues to conclude that

> there is a need of incorporating in the Ayurvedic study curriculum, the basic methods of standardization of medicinal products, fundamental principles of evaluating the toxicity of the medicinal products, basics of pharmacovigilance, essentials of healthcare management and basics of cultivation and marketing of medicinal plants. There is also a need of involvement of phytochemistry, pharmacognosy, pharmacology, biotechnology and other relevant field experts and to train the existing Ayurvedic academicians in standard method of research and documentation skills and other relevant topics. This would make students more involved in research activities and more driven towards innovative research.

While dealing with modern Ayurveda, we felt that between the classical period and modern period there should be a demarcation line. A consensus should be built to find out how to represent the postclassical period, which includes application of modern scientific analytical tools for standardization, modern pharmacological tools for safety and efficacy evaluation, and application of biotechnology to elicit the mechanism of drug action. Why should we be waiting at the crossroads then?

3 Ayurveda and Traditional Chinese Medicine
Challenges and Strategies

Chandra Kant Katiyar

CONTENTS

INTRODUCTION

The World Health Organization (WHO) defines *traditional medicine* as "the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness."

China and India have their own heritage of traditional knowledge. The Chinese understood that their ambitions of flourishing traditional Chinese medicine (TCM) could be accomplished if it was accepted at a global level. The Chinese started generating scientific evidence for their traditional therapies to validate the age-old claims of their formulations; but the same thing did not happen in India. China started using modern scientific tools to validate TCM much earlier than India. Both systems have weaknesses, such as the diagnostic approach of TCM as well as that Ayurveda is based on traditional knowledge and traditional concepts, which was not fitting into Western terminologies. Moreover, individual specific treatments were the hallmark of both traditional systems of medicine; therefore, it was difficult to apply this approach universally. Identification of the main active compound in the herbs with the standard nomenclature was an issue in both systems; besides, the traditional prescriptions did not constitute only herbs but had various components like plants, minerals, animal parts, and so forth. Therefore, it was difficult to prove scientifically which of these ingredients was playing an active role.

In spite of all this, the Chinese succeeded in promoting TCM in the West, whereas Ayurvedic medicine was left far behind, even though the treatises written in Ayurveda were well accepted at a national level.

HISTORY AND PHILOSOPHY

Ayurveda, Siddha, and Unani (ASU) are regarded as the major Indian traditional systems of medicine (ISM). Ayurveda is the most dominant traditional system of medicine in India, although Siddha and Unani are practiced side by side. Ayurveda originated as part of the Vedic literature, which is considered the oldest recorded Indian literature ever available. The Vedas are four in number: *Rig, Saam, Yajur,* and *Atharva*. Scattered views are postulated regarding the exact time period of Vedas, starting from 6000 BC to 600 BC. Genesis of medical science in India is gradual and corresponds with the sequence of writing of the Vedas. Its initial references were found in *Rig-veda,* while its contents were proportionately increased in the subsequent literature like *Yajur-veda*, *Saam-veda*, and of course significantly increased in *Atharva-veda*. This is the reason Ayurveda is directly linked to *Atharva-veda*, which is last in the series of Vedas.

During the post-Vedic Upanishad period (1500 BC to 600 BC), Ayurveda assumed the shape of a complete medical science with the evolution of eight specialties named *Shalya* (general surgery), *Shalakya* (diseases of the upper clavicular region), *Kaumarabhritya* (pediatrics), *Kayachikitsa* (internal medicine), *Bhuta Vidya* (demonology or microbiology), *Agada Tantra* (toxicology), *Rasayana* (rejuvenation), and *Vajikarana* (aphrodisiac sciences) with adequate literature written on them. Major texts like *Agnivesha Tantra*, *Bhela Tantra*, *Brddha Sushruta Tantra*, *Aupadhenava Tantra*, and *Bhoja Tantra* were written during this period. Out of them, *Agnivesha Tantra* in the name of Charak Samhita from the school of medicine, and *Brddha Sushruta Tantra* in the name of Sushruta Samhita from the school of surgery, are available in complete form after undergoing various phases of modifications, additions, deletions, and interpolations. Another text in the name of *Kashyapa Samhita* or *Briddha Jivakiya Tantra* is available in *Kaumarabhrtya* or pediatrics in fragmented form. *Ashtanga Samgrah* and *Ashtanga Hrdaya* are two other important epitomic classics available in complete form, written around 600 AD unifying the applied portions from the classics available during that period from all the eight branches of Ayurveda. *Madhav Nidan* (in the field of aetiopathology of diseases, 800 AD), *Sharangadhar Samhita* (in the field of pharmacy and pharmaceutics, 1300 AD), and *Bhava Prakasha Nighantu* (Herbal materia medica by Bhava Mishra (1600 AD) were regarded as specialty books in their respective operating fields.

The post-8th century AD period witnessed the origin and growth of *Rasashastra* or Indian alchemy, in which toxic metals, minerals, and herbs were brought into human consumable form with a view to induce rapid onset of action with the smallest possible dose. In due course, many texts were written in this field. Some of them still exist and are available.

The antiquity of TCM is dated to 4000 BC with the existence of Fu His (4000 BC), Shen Nung (3000 BC), and Huang Ti (2700 BC), who are collectively called the ancient legend triad of Chinese medicine. *Pa Kua*, *Pan Tsao*, and *Neijing* are the

classics written by Fu His, Shen Nung, and Huang Ti, respectively. Out of these, *Pan Tsao*, or the Great Herbal, containing 365 herbs is attributed to Shen Nung or the Divine Husbandsman who is also regarded as the originator of Chinese Materia Medica and Father of Chinese Medicine. *Huang Di Neijing* (written by Huang Ti) contains medical subjects like diagnostics, pathology, acupuncture, and moxibustion in detail. *Nanjing*, another classic on medicine, describes medical thoughts more elaborately than *Huang Di Neijing*. *Huang Di Neijing* is a collection of a group of texts called *Suwen*, *Lingshu*, *Taisu*, and *Mingtang*. Out of these *Suwen* is the major text, which describes acupuncture as the principal line of treatment. Another pair of classics written during the latter period named *Shanghan Lun* (Treatise on Diseases Caused by Cold Pathogens) and *Jingui Yaolue* (Miscellaneous Diseases and Their Treatment) has mentioned the herbal therapies. Gradually the number of herbs increased significantly in therapeutics and many materia medica and other texts have been written. During the rule of the western Han dynasty for 200 years (206 BC–23 AD), Chinese medical thought underwent a process of comprehensive standardization and systematization.

BASIC PRINCIPLES

Ayurveda is a combination of two words—*Ayu* (life) and *Veda* (knowledge)—that means "the science of life." It aims at "preserving the health of the healthy person and pacifying the diseases of the ailed ones." Ayurveda postulates that universe is a confluence of *Pancha Mahabhutas* like *Vayu* (air), *Akash* (sky), *Agni* (fire), *Jala* (water), and *Prithvi* (earth). All visible and invisible matter of this universe consists of these five elements. The human body is an entity of both physiological and anatomical manifestations of these five elements. Diseases and treatment are interpreted according to the diminished and excessive presence of these five elements inside the body. The objective of treatment is to replenish the diminished constituent and to suppress or destroy the excessive constituent in the body in terms of Vayu, Pitta, and Kapha as the humoral units (Dosha) and *Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra* (*Dhatu*) as the physiological units. The balance of these units is health, whereas their imbalance is disease. Ayurveda follows the principle of "like cures like" (*Saamaanyam Vriddhi Kaaranam*) and "opposite cures opposite" (*Hraasahetur Vishehsascha*).

Charak Samhita mainly deals with drug therapy along with purification therapies; and Sushruta Samhita deals with surgical, parasurgical, and purification along with drug therapies. Bloodletting (*Rakta Mokshana*) and enema (*Vasti*) are regarded as half of therapeutics as per Sushruta and Charak, respectively. Charak classifies the drugs into 50 groups on the basis of their pharmacological activities, whereas Sushruta groups them into 37 categories on the basis of their therapeutic indications. A major part of materia medica of Ayurveda consists of herbs, and the occasional application of metals, minerals, and animal products is also there in Charak and Sushruta. However, after 800 AD, metals, minerals, and other toxic materials along with toxic herbs formed a significant part of Ayurvedic materia medica.

There are all together five pharmaceutical dosage forms mentioned in Ayurveda that are called the mother of all alternative dosage forms. These are *Swarasa*

(expressed juice), *Kalka* (paste), *Kwatha* (decoction), *Hima* (cold infusion), and *Phanta* (hot infusion). Pharmacodynamic properties like *Rasa* (taste), *Guna* (properties), *Veerya* (potency), and *Vipaka* (ultimate digestive juice after biotransformation) are attributed for pharmacodynamic actions of the Ayurvedic drugs. *Prabhava* is the specific action and comes into the picture when universal rules relating to *Rasa*, *Guna*, *Veerya*, and *Vipaka* fail.

A perfect digestion; balanced elimination of stool, urine, and sweat; and a perfect harmony between soul, sense organs, mind, and the body is essential for complete health. There are many physical, psychological, hygienic, and behavioral measures described by Ayurveda in the name of *Sadvritta* (good mental and physical attitudes) and a seasonal regimen to live a healthy and a perfect disease-free life. Group of herbs like *Jeevaniya* (vitalizer), *Rasayana* (rejuvenating), *Balya* (strength promoting), *Vrshya* (aphrodisiac), and *Brhmaniya* (bulk promoting) are mentioned to maintain perfect health and to remain free from diseases. These drugs are supposed to enhance strength, stamina, vitality, virility, luster, physical endurance, general health, immunity, and life span.

The Ayurvedic physician examines the patient by *Darshana* (inspection), *Sparshana* (palpation), and *Prashna* (interrogation). He examines 10 factors with the patient. These are *Prakriti* (constitution), *Sattwa* (psychic power), *Satmya* (assimilation), *Desha* (place), *Kala* (time), *Ahaara* (diet), *Bala* (physical strength), *Agni* (digestive fire), *Dushya* (structural traits), and *Vayasa* (age of patient). *Aahaara* (Diet), *Nidra* (sleep), and *Brahmacharya* (celibacy) are the three pillars of life. *Prajnaparadha* (perversion of mind and intellect) and *Asatmyendriyartha Samyoga* (perverted interaction between *Sattwa*, *Atma,* and *Indriya* and *Indriyartha*) are causes of disease. The concept of *Prakriti* signifies similarities in the genetic makeup of the individual.

TCM considers the human being as a constituent element of the universe that continuously interacts with its surroundings. The human body is considered as an organic unit in which organs, tissues, viscera, and other parts function independently and interactively. Their balanced function is health, whereas imbalance is the cause of disease. TCM is mainly dependent upon five elements, eight principles, the yin–yang concept, and the qi (chi) concept. The yin and yang are two opposite concepts, which are almost equivalent to the cold and hot concept of Ayurveda. Every organ of the body consists of both yin and yang. The balance of yin and yang is maintained in the whole body. Disease is caused by either excess or deficit of yin or yang. In an excess of yin, the yang qi would be suppressed and a disease of shi (cold) nature would appear. Excess of yang would damage yin qi and disease of shi (heat) nature would appear. Similarly the deficit of yin (cold energy) would cause hot nature disease or xu and deficit of yang qi (hot energy) will give rise to the dominance of cold xu. These are the fundamental concepts that shape TCM. The five elements are fire, wood, water, metal, and earth. The relatedness of all the body parts is the key concept of Chinese medicine and its treatment principles. For example, if one is suffering from headache, treatment may be given to the foot.

There are two types of channels that carry the qi. These are zang channels, which carry the yin (cold) material, and the fu channels, which carry the yang (hot) materials. The qi is responsible for the vitality, strength, and stamina of the body

without which the body becomes dead. The chief aim of the physician is to arrange the deranged qi.

CURRENT STATUS

India's Drugs and Cosmetics Act of 1940 and the Drugs and Cosmetics Rules of 1945 govern and regulate the manufacture, distribution, and sale of drugs and cosmetics, including Indian system medicines in India. Every traditional medicinal product is manufactured under licensing from the state government drug-control authorities. Indian traditional medicine drugs are classified into two major categories as per the Drugs and Cosmetics Act. These are

1. Ayurvedic, Sidha, or Unani (ASU) drugs
2. Ayurvedic, Sidha, or Unani proprietary drugs

This classification is based on the presence of these drugs or their ingredients in approved textbooks of these systems as per First Schedule of the Drugs and Cosmetics Act.

A separate department of Indian Medicine was created in 1995 by the Indian government to promote an indigenous system of medicine and was later renamed the Department of Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH). Since the formation of the AYUSH Department, there has been a significant upsurge in the infrastructural development of the ASU systems in the country. The Central Council of Indian Medicine (CCIM) was created in 1969 to regulate the education standards throughout the country at undergraduate and postgraduate levels of ASU courses. The Central Council for Research in Ayurveda and Siddha and Central Council for Research in Unani Medicine have been coordinating interdisciplinary research relating to Ayurveda, Siddha, and Unani systems since 1978. The National Medicinal Plant Board (NMPB), set up in 2000 by the Indian government, looks after conservation, preservation, cultivation, and collection of medicinal plants by adhering to good agricultural practices (GAP) and good collection practices (GCP). About 960 species of Indian medicinal plants are estimated to be in trade, out of which 178 species have annual consumption of more than 100 metric tons.

With an intention to maintain uniform standards of raw materials and finished products, the Indian government has published nine volumes of Ayurvedic pharmacopoeia to date containing 540 monographs on single herbs, herbal derivatives, metals, minerals, and some common ingredients used in Ayurveda and 101 monographs on compound formulations. Also there are two volumes of published Ayurvedic formulary of India containing 635 classical medicines of Ayurveda in order to maintain uniform methods of preparation by the entire industry. One volume each of Unani and Siddha pharmacopoeia are also published containing 45 and 73 herbs, respectively.

The Drug Control Cell of the Department of AYUSH is working for quality control of ASU drugs. The department has launched a National Mission for Medicinal Plants to promote cultivation of medicinal plants on an intensive scale. This is aimed at expanding the domestic and international market for ISM herbs and

herbal value-added products by adopting good agricultural and cultivation practices to promote standardization and quality assurance, thereby enhancing the acceptability of the AYUSH systems globally. Various collaborative research programs, including standardization, quality control, and new drug development (from herbs), have been launched by the government of India. One of these ambitious programs is the Golden Triangle Research Mission involving three national level organizations (Department of AYUSH, Council of Industrial and Scientific Research, and Indian Council of Medical Research) to develop Ayurvedic drugs for 13 diseases including diabetes, osteoporosis, and arthritis.

In 1950, the Chinese government decided to give equal support to both Western and Chinese medicine. In 1982, the development of TCM was adopted as a constitutional obligation of the Chinese government. Most of the general hospitals have a TCM department in China. In the constitution of China it is mentioned that the "State encourages the development of both modern and traditional drugs, the role of which in the prevention and treatment of diseases as well as in health care will be fully brought into play." The state protects the resources of wild herbal drugs and encourages domestic cultivation of herbal drugs. With regard to their legal status, herbal medicines in China are normally considered medicinal products with special requirements for marketing, for example, a quality dossier, safety and efficacy evaluation, and special labeling.

SCOPE AND ACHIEVEMENTS

Both TCM and Ayurveda herbs are potential sources of new drug development as a major portion of their materia medica is attributed to herbal resources. Recent reviews of different pharmacopoeias suggest that at least 120 different molecules derived from plants have life-saving properties. This is derived only from 6 percent of the total plant species, which are subjected to scientific investigations. Other herbs are also investigated for their activity in diseases like AIDS, cancer, Alzheimer's, and diabetes. The first molecule isolated from a Chinese herb was ephedrine from Ma hoang (*Ephedra sinica*). Others include artemesinin from *Artemisia annua* (Quinghao), Kanglaite from Iijen for non-small-cell lung carcinoma, xuebao PG2 (general tonic from *Astragalus membracaceous*), and camptothecin and topotecan (anticancer drugs from *Camptotheca acuminate*), which have a huge market.

Ayurveda, being a complete organized medical science, has significant contents to offer to the world of medicine, specifically in the fields of new drug development, nutraceuticals, and cosmeceuticals. India, being one of the major agroclimatic zones of the planet, has a significant reserve of medicinal plants despite several species being endangered. By adopting modern DNA finger printing and tissue culture techniques, several of them can be revived by artificial cultivation selecting the correct germplasm. Apart from herbal drugs, Ayurveda offers the benefits of several specialized surgical and parasurgical methods like *Kshara Sutra, Agni Karma, Kshara Karma,* and *Rakta Mokshana*. These procedures have been successfully evaluated in their respective indicated conditions. *Kshara Sutra* has been effectively administered in hemorrhoids. Similarly *Rasayana* (geriatrics) and *Vajikarana* (aphrodisiac science) are two additional areas of exploitation in geriatric and sexual problems,

respectively. Genetics and the concept of *Prakriti* in Ayurveda are important areas of investigation that can give preindications of an individual prone to certain kinds of diseases. Rheumatological, neurological, autoimmune, immune deficiency, and metabolic disorders have definite solutions from Ayurveda, while the role of modern medicine is limited. The nanometallic medicines can be studied for their efficacies against multiple newer diseases where modern medicine has hardly anything to offer.

The molecules identified from Indian medicinal plants are the antihypertensive reserpine (from *Rauvolfia serpentina*), curcumin from *Curcuma longa* as an anti-inflammatory and antiallergic, withaferin from *Withania somnifera* as an anti-inflammatory, andrographolide (hepatoprotective from *Andrographis paniculata*), and vascicine (antitussive from *Adhatoda vasica*). The Central Drug Research Institute (CDRI) at Lucknow has discovered guggulusterone (marketed by Cipla in the name of Gugulip) as an antihyperlipidemic agent whose activity is comparable to that of the standard drug Clofibrate and has a better safety index than its modern counterpart. Similarly, standardized bacossides from *Bacopa monnieri* for memory enhancement (marketed by the Lumen Marketing Company as Memory Sure), hepatoprotective Picroliv (a combination of 60 percent picroside I and kutoside in the ratio of 1:1.5) derived from *Picrorhiza kurroa* (found safe in clinical trials), a sterile contraceptive cream named CONSAP (licensed to Hindustan Latex) prepared from saponins of *Sapindus mukorosii*, Arteether (semisynthetic derivative of artimisinin from *Artimisia annua*), and the cervical dilator isaptent (named Dilex C, marketed by Unichem) from isabgol (*Plantago ovata*) are remarkable achievements of the Central Drug Research Institute.

Recently the nanoparticle size of Ayurvedic *bhasmas* has been the subject of intense interest. The nanoparticles are proposed to be delivered to the target through rapid cellular internalization. Subsequent actions upon the DNA/RNA molecule and protein synthesis within the cell are further hypothesized as possible mechanisms for rapid onset of therapeutic actions of *bhasma* preparations. This latest advancement has opened a new vista for active therapeutic utility of Ayurvedic *bhasmas* and herbomineral preparations.

ISSUES AND PERSPECTIVES

Some issues faced by the traditional medical world are the scientific validation of its therapies, adulteration of raw materials, quality control and standardization of both the raw materials and the finished products, presence of heavy metals beyond the permissible limits, adulteration, presence of foreign matter, drug interaction, toxicity, long-term consumption effect in herbal medicines, etc. This is the reason that several governments have started to implement the Good Agricultural Practices guidelines for the growers of medicinal plants. For marketing herbal medicines in China, special requirements such as quality dossier, safety and efficacy, evaluation, and specific labeling criteria are required. In India, the National Medicinal Plants Board (NMPB) is looking after conservation, preservation, cultivation, collection and storage, and policymaking of medicinal plants adhering to Good Agricultural Practices. The Indian government has promulgated orders to make heavy metal testing mandatory for the exported ISM products since 2006. Adoption of GMP has

become mandatory for the herbal manufacturing industry, the provision of which is given in Schedule T of the Drugs and Cosmetics Act 1940.

Both China and India share the common heritage of traditional knowledge. However, sometime down the line, the Chinese understood that globalization of TCM was possible only if they applied modern scientific tools to promote TCM. Therefore, China adopted the strategy of globalization of TCM across the boundaries. It started explaining TCM principles and products in contemporary scientific language. Thus China adopted a dual approach that consisted of development of an infrastructure and reaching out to other countries that already had advanced scientific tools. On the contrary, India lagged behind in realizing the global potential of Ayurveda. The gap between Ayurveda and modern medicine in India went on widening slowly due to comparatively lesser modern scientific research on Ayurveda and herbs, and inadvertently the message sent was that Ayurveda lacked research evidence.

Drug development in modern medicine starts from preclinical to clinical covering preclinical safety (i.e., toxicity studies), preclinical pharmacology including absorption, distribution, and the metabolism and excretion profile as well as the mode of action. Clinical studies start from phase I in a small population of healthy volunteers, phase II on a small number of patients, and phase III on a large number of patients to establish the safety and efficacy of the product that is already established at a preclinical level. However, in Ayurveda, the concept of reverse pharmacology was introduced a few decades ago, which literally meant reverse process of drug development. The basis of this concept of reverse pharmacology was that since most Ayurvedic products are already time tested in human beings, these may be subjected to preclinical studies, which should basically be directed at identification of mode of action and safety of the products.

For centuries we, the proponents of Ayurveda, have been relying on various Ayurvedic organoleptic, physicochemical, and pharmacological attributes of herbs, namely, *Rasa, Guna, Virya, Vipak,* and *Prabhav.* To the best of our knowledge, after the 16th century (i.e., after Bhavprakash) Indian Ayurvedic specialists have hardly provided *Rasa, Guna, Virya,* or *Vipaka* with any new medicinal herb. This brings us to a debatable point of the usefulness of Ayurvedic attributes like *Rasa, Guna, Virya, Vipaka*, and *Prabhava* of Ayurvedic medicinal plants in the present-day context of scientific temper. Today we are talking about the standardization of crude herbs, extracts, and finished products with the modern analytical tools like high-performance liquid chromatography (HPLC), high-performance thin-layer liquid chromatography (HPTLC), and gas chromatography (GC), and estimation of functional groups, marker compounds, and estimation of biologically active compounds. Under these circumstances, we have already deviated from basic Ayurvedic principles. The difference of opinion of conventional Ayurvedic proponents and supporters of modern scientific Ayurveda needs to lead to a mutually agreeable solution.

A perusal of scientific publications from international journals on plant-based medicines reveals that in most scientific work on Chinese medicinal plants, one Chinese scientist is invariably among the authors. It, therefore, appears that Chinese students working in universities of Western countries focus their attention on Chinese medicinal plants to enrich TCM. The same strategy may be adopted by Indian students of chemistry and pharmacology streams while pursuing their postdoctoral

fellowship in Western countries with regard to Indian Ayurvedic medicinal plants. This would enrich traditional ISM immensely.

Though several countries have started teaching courses in Ayurveda at the university level, there is a dearth of teachers on this subject globally. Several foreign students come to India to Gujarat Ayurveda University–Jamnagar and Banaras Hindu University–Varanasi for their postgraduate courses in Ayurveda, and some of them might be taking up Ayurveda teaching also as part of their career. However, since these students might not have studied Ayurveda at the undergraduate level, their clarity of the subject and basic postgraduation courses may not do justice. It is, therefore, imperative for the Indian government to focus on creating human resources appropriate for teaching Ayurveda with its scientific interpretation in universities of Western countries.

A review of current marketing of Ayurvedic products in India reveals that almost 90 percent of Ayurvedic product marketing belongs to proprietary Ayurvedic medicines, whereas classical text-based Ayurvedic medicines form only 10 percent of market space. There is a need to bring innovation in classical Ayurvedic medicines and to introduce branded generics to promote their use and prescription by Ayurvedic practitioners. This trend also requires the need of documentation of clinical practices to create the scientific data of proof of efficacy. In addition, mechanism of action-oriented studies (e.g., TNF-α inhibition with *Mahanarayan tail,* a topical formulation for osteoarthritis) would bring confidence in Ayurvedic products among clinical practitioners of other streams also.

ISM was highly protected and sacrosanct in India for various historical reasons, and it has prevented the exposure of ISM to modern science. Most hard-core Ayurvedic practitioners had great belief in the individualized and holistic approach of treating patients not only on the basis of individual psychosomatic constitution, but also by writing individualized prescriptions on that basis. Today, also as a result of genome mapping, the world is talking about the advent and emergence of individualistic medicines. Although both of these approaches have their own merits, they are difficult to practice on a mass scale. Therefore, there is a need to develop Ayurvedic treatment modalities for millions of common masses, on the basis of research in terms of phytochemistry and pharmacological evaluations for safety and efficacy. There is also a need to develop appropriate methodologies and standards to ensure batch-to-batch consistency and to have a reproducible clinical efficacy on the formulations.

CONCLUSION

The Chinese and Indian civilizations are two great ancient civilizations that made significant contributions toward overall development of mankind in science, arts, culture, ethics, medicine, sociology, and economics. There is a global resurgence of interest in complementary and alternative medicine (CAM). China and India, being the owners of two large living traditional medical systems, have to play a wider role in the global health scenario. A translational approach should be adopted to justify the scientific validity in the era of evidence-based medicines. For this purpose,

a coordinated effort between the two countries is required to face the threats and perceptions coming from the Western world.

Novel drug discovery from medicinal plants is a field of unlimited scientific exploration. It should follow a reverse pharmacological approach to reduce cost and duration of development. Traditional medical literature may serve as a powerful search engine in the context of providing the lead for new drug discovery research. The Chinese clearly understood that modernization is key for globalization of a traditional system of medicine and they generated scientific evidence for their traditional therapies to validate the age-old claims of their formulations; India could not follow the same pace. India's effort in new drug discovery in modern science is commendable. A few drugs have come to the market and are doing very well. The same approach is required to validate the efficacy and safety claims on modern scientific grounds for our traditional medicines too for their global acceptance.

The Indian government uses several measures to ensure that its herbal products comply with global standards of safety and efficacy. However, it needs to do more to promote ISM across the globe by convincing the scientific fraternity of the scientific validity of ISM's fundamental principles and medicines in light of available scientific literature. This is the only way traditional medicines can come out of the slumber of dietary supplements to the status of medicine in the Western countries.

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4 Herb Nomenclature of the Last Classical Ayurvedic Treatise: *Bhavaprakasa*

CONTENTS

BY BOTANICAL NAME

Botanical Name	Ayurvedic Name	Family
***Abies spectabilis* (D. Don) Spach.; Syn *Abies webbiana* Lindl.**	**Taalisa**	**Pinaceae**
Abies spectabilis (D. Don) Spach.; Syn *Abies webbiana* Lindl.	Taalisapatra	Pinaceae
***Abrus precatorius* Linn.**	**Gunjaa**	**Papilionaceae; Fabaceae**
Abrus precatorius Linn.	Raktikaa	Papilionaceae; Fabaceae
***Abutilon indicum* Linn. Sweet**	**Atibalaa**	**Malvaceae**
Abutilon indicum Linn. Sweet	Kankatikaa	Malvaceae
***Acacia arabica* Willd. var. *indica* Benth.**	**Babbuula**	**Mimosaceae**
Acacia arabica Willd. var. *indica* Benth.	Aabhaa	Mimosaceae
Acacia arabica Willd. var. *indica* Benth.	Babula	Mimosaceae
***Acacia catechu* (Linn. f.) Willd.**	**Khadira**	**Mimosaceae**
Acacia catechu (Linn. f.) Willd.	Gaayatri	Mimosaceae
Acacia catechu (Linn. f.) Willd.	Kantaki	Mimosaceae
Acacia catechu (Linn. f.) Willd.	Somavalka	Mimosaceae
***Acacia leucophloea* (Roxb.) Willd.; Syn A. alba Willd.**	**Irimeda**	**Mimosaceae**
Acacia leucophloea (Roxb.) Willd.; Syn A. alba Willd.	Arimeda	Mimosaceae
***Achyranthes aquatica* Br.**	**Gandira**	**Amaranthaceae**
***Achyranthes aspera* Linn.**	**Apaamaarga**	**Amaranthaceae**
Achyranthes aspera Linn.	Kharamanjari	Amaranthaceae
Achyranthes aspera Linn.	Kharapushpaa	Amaranthaceae
Achyranthes aspera Linn.	Kinihi	Amaranthaceae
Achyranthes aspera Linn.	Shikhari	Amaranthaceae

Achyranthes aspera Linn.	Vashira	Amaranthaceae
***Aconitum ferox* Wall. ex Ser.**	**Visha**	**Ranunculaceae**
Aconitum ferox Wall. ex Ser.	Amrita	Ranunculaceae
Aconitum ferox Wall. ex Ser.	Garala	Ranunculaceae
Aconitum ferox Wall. ex Ser.	Umaapati-sphuta galaalankaara vastu	Ranunculaceae
Aconitum ferox Wall. ex Ser.	Vatsanaabha	Ranunculaceae
***Aconitum heterophyllum* Wall. ex Royle.**	**Ativishaa**	**Ranunculaceae**
Aconitum heterophyllum Wall. ex Royle.	Ativisha	Ranunculaceae
Aconitum heterophyllum Wall. ex Royle.	Bhangura	Ranunculaceae
Aconitum heterophyllum Wall. ex Royle.	Vishaa	Ranunculaceae
***Aconitum palmatum* D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.**	**Prativishaa**	**Ranunculaceae**
Aconitum palmatum D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Shyaamkandaa	Ranunculaceae
Aconitum palmatum D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Patis	Ranunculaceae
***Acorus calamus* Linn.**	**Vachaa**	**Araceae**
Acorus calamus Linn.	Golomi	Araceae
Acorus calamus Linn.	Shadgranthaa	Araceae
Acorus calamus Linn.	Shataparvaa	Araceae
Acorus calamus Linn.	Tikshnagandhaa	Araceae
Acorus calamus Linn.	Ugraa	Araceae
Acorus calamus Linn.	Ugragandhaa	Araceae
***Actiniopteris dichotoma* Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.**	**Vahrishikhaa**	**Adiantaceae**
Actiniopteris dichotoma Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Barhishikhaa	Adiantaceae

Botanical Name	Ayurvedic Name	Family
***Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.**	**Vaasaka**	**Acanthaceae**
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Aatarushaka	Acanthaceae
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Atarushaka	Acanthaceae
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Simhaanana	Acanthaceae
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Simhaasya	Acanthaceae
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vaasaa	Acanthaceae
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vrisaka	Acanthaceae
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vrisha	Acanthaceae
***Adiantum lunulatum* Burn.**	**Hansapadi**	**Polypodiaceae**
Adiantum lunulatum Burn.	Hansapaadi	Polypodiaceae
***Adina cordifolia* Hook. f. ex Brandis**	**Gaurakadambaka**	**Rubiaceae**
Adina cordifolia Hook. f. ex Brandis	Haridru	Rubiaceae
Adina cordifolia Hook. f. ex Brandis	Haraduaakadamba	Rubiaceae
***Aegle marmelos* (L.) Correa ex Roxb.**	**Bilva**	**Rutaceae**
Aegle marmelos (L.) Correa ex Roxb.	Maalura	Rutaceae
Aegle marmelos (L.) Correa ex Roxb.	Sriphala	Rutaceae
***Aerva lanata* (L.) Juss. Ex. Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)**	**Paashaanabheda**	**Amaranthaceae**
Aerva lanata (L.) Juss. Ex. Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Bhadraa	Amaranthaceae
Aerva lanata (L.) Juss. Ex. Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Bhadraahva	Amaranthaceae
***Ailanthus excelsa* Roxb.**	**Aralu**	**Simaroubaceae**
Ailanthus excelsa Roxb.	Dirghavrinta	Simaroubaceae
Ailanthus excelsa Roxb.	Katvanga	Simaroubaceae
***Alangium salviifolium* (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.**	**Ankola**	**Alangiaceae**

Alangium salviifolium (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Ankota	Alangiaceae
Alangium salviifolium (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Ankotaka	Alangiaceae
***Albizia lebbeck* (Linn.) Willd.**	**Shirisha**	**Mimosaceae**
Albizia lebbeck (Linn.) Willd.	Bhandi	Mimosaceae
Albizia lebbeck (Linn.) Willd.	Bhandila	Mimosaceae
***Albizia procera* Benth.**	**Shevta Shirisha**	**Mimosaceae**
Albizia procera Benth.	Katambharaa	Mimosaceae
***Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.**	**Yavaasah**	**Papilionaceae, Fabaceae**
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Duhsparshaa	Papilionaceae, Fabaceae
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Kachhuraa	Papilionaceae, Fabaceae
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Yaasa	Papilionaceae, Fabaceae
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Yaasaka	Papilionaceae, Fabaceae
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Yavaasaka	Papilionaceae, Fabaceae
***Allium cepa* Linn.**	**Palaandu**	**Liliaceae, Alliaceae**
Allium cepa Linn.	Durgandh	Liliaceae, Alliaceae
***Allium sativum* Linn.**	**Rasona**	**Liliaceae, Alliaceae**
Allium sativum Linn.	Lashuna	Liliaceae, Alliaceae
***Alocasia indica* (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don**	**Maanakanda**	**Araceae**
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Maana	Araceae
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Maanaka	Araceae
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Maanakandaka	Araceae
***Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex. Linn.**	**Ghritakumaari**	**Liliaceae, Agavaceae**
Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex. Linn.	Grihakanyaa	Liliaceae, Agavaceae
Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex. Linn.	Kanyaa	Liliaceae, Agavaceae

Botanical Name	Ayurvedic Name	Family
Aloe barbadensis Mill; Syn *Aloe vera* Tourn.ex. Linn.	Kanyakaa	Liliaceae, Agavaceae
Aloe barbadensis Mill; Syn *Aloe vera* Tourn.ex. Linn.	Kumaari	Liliaceae, Agavaceae
Aloe barbadensis Mill; Syn *Aloe vera* Tourn.ex. Linn.	Kumaarikaa	Liliaceae, Agavaceae
***Alstonia scholaris* R. Br.**	**Saptaparna**	**Apocynaceae**
Alstonia scholaris R. Br.	Saptaahva	Apocynaceae
Alstonia scholaris R. Br.	Saptachada	Apocynaceae
***Alternanthera sessilis* (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. Non-Link.**	**Matsyaakshi**	**Amaranthaceae**
Alternanthera sessilis (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. Non-Link.	Shitivaara	Amaranthaceae
***Amaranthus spinosus* Linn.**	**Tanduliya**	**Amaranthaceae**
Amaranthus spinosus Linn.	Kanchata	Amaranthaceae
Amaranthus spinosus Linn.	Megharava	Amaranthaceae
Amaranthus spinosus Linn.	Tandulaka	Amaranthaceae
***Ammania baccifera* Linn.**	**Agnipatri**	**Lythraceae**
Ammania baccifera Linn.	Gandalikaakhya	Lythraceae
***Amomum subulatum* Roxb.**	**Sthula-elaa**	**Zingiberaceae**
Amomum subulatum Roxb.	Brihat-elaa	Zingiberaceae
Amomum subulatum Roxb.	Elaa-mahati	Zingiberaceae
Amomum subulatum Roxb.	Elikaa-brihat	Zingiberaceae
***Amorphophallus campanulatus* (Roxb.) Blume ex Decne.**	**Kandala**	**Araceae**
Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Shurana	Araceae
Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Surana	Araceae

Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Vajraandi	Araceae
***Anacyclus pyrethrum* DC.; Syn *A. officinarum* Haye**	**Aakaarakarabha**	**Compositae, asteraceae**
Anacyclus pyrethrum DC.; Syn *A. officinarum* Haye	Aakulakrit	Compositae, asteraceae
Anacyclus pyrethrum DC.; Syn *A. officinarum* Haye	Arkakarabha	Compositae, asteraceae
***Andrographis paniculata* Wall. ex Nees.**	**Bhuunimba**	**Acanthaceae**
Andrographis paniculata Wall. ex Nees.	Bhuminimba	Acanthaceae
Andrographis paniculata Wall. ex Nees.	Kaalamegha	Acanthaceae
Andrographis paniculata Wall. ex Nees.	Vishvambharaa	Acanthaceae
***Angelica archangelica* Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar**	**Chandaam-shuka**	**Umbelliferae, Apiaceae**
Angelica archangelica Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Chandaa	Umbelliferae, Apiaceae
***Angelica glauca* Edgew.**	**Choraka**	**Umbelliferae, Apiaceae**
Angelica glauca Edgew.	Taskara	Umbelliferae, Apiaceae
***Anisomeles malabarica* R. Br. ex Sims**	**Sprikkaa**	**Labiatae, Lamiaceae**
Anisomeles malabarica R. Br. ex Sims	Prukkaa	Labiatae, Lamiaceae
***Anogeissus latifolia* Wall. ex Bedd.**	**Dhava**	**Combretaceae**
Anogeissus latifolia Wall. ex Bedd.	Dhurandhara	Combretaceae
***Anthocephalus cadamba* Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.**	**Kadamba**	**Rubiaceae**
Anthocephalus cadamba Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Gaurakadambaka	Rubiaceae
Anthocephalus cadamba Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Girikadambaka	Rubiaceae
***Apium graveolens* Linn.**	**Ajamodaa**	**Apiaceae, Umbelliferae**
Apium graveolens Linn.	Ajamoda	Apiaceae, Umbelliferae
Apium graveolens Linn.	Ajamodikaa	Apiaceae, Umbelliferae
Apium graveolens Linn.	Dipyaka	Apiaceae, Umbelliferae
***Aquilaria agallocha* Roxb.; Syn *A. malaccenis* Lamk.**	**Agaru**	**Thymelaceae**

Botanical Name	Ayurvedic Name	Family
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Asitaka	Thymelaceae
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Krishnaaguru	Thymelaceae
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Loha	Thymelaceae
***Areca catechu* Linn.**	**Guwaaka**	**Arecaceae; Palmae**
Areca catechu Linn.	Kembuka	Arecaceae; Palmae
Areca catechu Linn.	Kramuka	Arecaceae; Palmae
Areca catechu Linn.	Puga	Arecaceae; Palmae
***Argemone mexicana* Linn.**	**Svarnkshiri**	**Papaveraceae**
Argemone mexicana Linn.	Hemaahvaa	Papaveraceae
Argemone mexicana Linn.	Himaavati	Papaveraceae
Argemone mexicana Linn.	Kaanchanakshiri	Papaveraceae
***Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.**	**Vriddhadaaruka**	**Convolvulaceae**
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Sthavira	Convolvulaceae
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Sthaviradaaru	Convolvulaceae
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Atarunadaaru	Convolvulaceae
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddha	Convolvulaceae
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaara	Convolvulaceae
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaaraka	Convolvulaceae
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaaru	Convolvulaceae
***Artemisia vulgaris* Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.**	**Damanaka**	**Asteraceae; Compositae**
Artemisia vulgaris Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Pushpachaamara	Asteraceae; Compositae
Artemisia vulgaris Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Gandhotkata	Asteraceae; Compositae
***Artocarpus heterophyllus* Lam.; Syn *A. integrifolia* Linn. f.**	**Panasa**	**Moraceae**

Artocarpus heterophyllus Lam.; Syn *A. integrifolia* Linn. f.	Kantakiphala	Moraceae
Artocarpus heterophyllus Lam.; Syn *A. integrifolia* Linn. f.	Ativrihatphala	Moraceae
***Artocarpus lakoocha* Roxb.; Syn *A. lacucha* Buch.-Ham.**	**Lakuch**	**Moraceae**
Artocarpus lakoocha Roxb.; Syn *A. lacucha* Buch.-Ham.	Kshudra Panas	Moraceae
Artocarpus lakoocha Roxb.; Syn *A. lacucha* Buch.-Ham.	Granthiphala	Moraceae
***Asparagus racemosus* Willd.**	**Shataavari**	**Asparagaceae**
Asparagus racemosus Willd.	Bahuputri	Asparagaceae
Asparagus racemosus Willd.	Bhiru	Asparagaceae
Asparagus racemosus Willd.	Vari	Asparagaceae
***Asteracantha longifolia* Nees;.Syn *Hygrophila spinosa* T. Anders.**	**Kokilaaksha**	**Acanthaceae**
Asteracantha longifolia Nees.; Syn *Hygrophila spinosa* T. Anders.	Ikshubaala	Acanthaceae
Asteracantha longifolia Nees.; Syn *Hygrophila spinosa* T. Anders.	Ikshubaalikaa	Acanthaceae
Asteracantha longifolia Nees.; Syn *Hygrophila spinosa* T. Anders.	Ikshura	Acanthaceae
Asteracantha longifolia Nees.; Syn *Hygrophila spinosa* T. Anders.	Kshura	Acanthaceae
Asteracantha longifolia Nees.; Syn *Hygrophila spinosa* T. Anders.	Kshuraka	Acanthaceae
Asteracantha longifolia Nees.; Syn *Hygrophila spinosa* T. Anders.	Kshurakaahva	Acanthaceae
***Averrhoa carambola* Linn.**	**Karmaranga**	**Oxalidaceae, Averrhoaceae**
***Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.**	**Nimba**	**Meliaceae**
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Arishtaka	Meliaceae
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Arishta	Meliaceae
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Nimbaka	Meliaceae
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Pichumanda	Meliaceae
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Pichumandaka	Meliaceae
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Pichumarda	Meliaceae

Botanical Name	Ayurvedic Name	Family
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Pichumardaka	Meliaceae
***Bacopa monnieri* (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.**	**Braahmi**	**Scrophulariaceae**
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Kapotavanka	Scrophulariaceae
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Kapotavankaa	Scrophulariaceae
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Bhaarati	Scrophulariaceae
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Aindri	Scrophulariaceae
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Darduradalaa	Scrophulariaceae
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Matsyaakshaka	Scrophulariaceae
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Shaaluraparni	Scrophulariaceae
***Balanites aegyptiaca* (Linn.) Delile.; Syn *B. roxburghii* Planch.**	**Ingudi**	**Simaroubaceae; Balanitaceae**
Balanites aegyptiaca (Linn.) Delile.; Syn *B. roxburghii* Planch.	Ingudi	Simaroubaceae; Balanitaceae
Balanites aegyptiaca (Linn.) Delile.; Syn *B. roxburghii* Planch.	Ingudi	Simaroubaceae; Balanitaceae
***Baliospermum calycinum* Muell.-Arg.**	**Naagadanti**	**Euphorbiaceae**

***Baliospermum montanum* (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.**	**Danti**	**Euphorbiaceae**
Baliospermum montanum (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.	Nikumbha	Euphorbiaceae
***Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.**	**Vansha**	**Gramineae; Poaceae**
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Brihat Trina	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Karira	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vaamshi	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vamsha-lochana	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vamsha-lochanaa	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vamsha-rochana	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vamsha-rochanaa	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Tugaa	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Tugaakshiri	Gramineae; Poaceae
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Tavakkshiri	Gramineae; Poaceae
***Barleria cristata* Linn.**	**Sahachara**	**Acanthaceae**
Barleria cristata Linn.	Baana	Acanthaceae
Barleria cristata Linn.	Kurantaka	Acanthaceae
Barleria cristata Linn.	Kuvaraka	Acanthaceae
Barleria cristata Linn.	Sahachara-Nila	Acanthaceae
Barleria cristata Linn.	Shairiya	Acanthaceae
***Barleria prionitis* Linn.**	**Kuranta**	**Acanthaceae**
Barleria prionitis Linn.	Sahachara	Acanthaceae
Barleria prionitis Linn.	Kurantaka	Acanthaceae

Botanical Name	Ayurvedic Name	Family
***Barringtonia acutangula* (Linn.) Gaertn.; Syn *Eugenia acutangula* L.**	**Nichula**	**Lecythidaceae, Barringtoniaceae**
Barringtonia acutangula (Linn.) Gaertn.; Syn *Eugenia acutangula* L.	Ijjala	Lecythidaceae, Barringtoniaceae
***Basella rubra* Linn; Syn *Basella alba* Linn. var. *rubra* Stewart.**	**Potaki**	**Basellaceae**
Basella rubra Linn; Syn *Basella alba* Linn. var. *rubra* Stewart.	Upodikaa	Basellaceae
***Bauhinia purpurea* Linn.**	**Kovidaara**	**Caesalpiniaceae**
Bauhinia purpurea Linn.	Rakta	Caesalpiniaceae
***Bauhinia vahlii* W. & A.**	**Ashmantaka**	**Caesalpiniaceae**
***Bauhinia variegata* Linn.; Syn *B. candida* Roxb.**	**Kaanchanaara**	**Caesalpiniaceae**
Bauhinia variegata Linn.; Syn *B. candida* Roxb.	Kaanchana	Caesalpiniaceae
***Benincasa hispida* (Thunb.) Cogn.; Syn *B. cerifera* Savi.**	**Kuushmaanda**	**Cucurbitacea**
Benincasa hispida (Thunb.) Cogn.; Syn *B. cerifera* Savi.	Kuushmaandaka	Cucurbitacea
***Berberis asiatica* Roxb. ex DC.; Syn *Berberis aristata* DC.**	**Daaruharidraa**	**Berberidaceae**
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Daarunishaa	Berberidaceae
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Daarvi	Berberidaceae
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Katamkateri	Berberidaceae
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Pachampachaa	Berberidaceae
***Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.**	**Paashaanabheda**	**Saxifragaceae**
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Ashmabheda	Saxifragaceae
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Ashmabhedaka	Saxifragaceae
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Ashmabhid	Saxifragaceae
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Paashaana	Saxifragaceae

Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Paashaanabhid	Saxifragaceae
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Shilaabhid	Saxifragaceae
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Shilodbhida	Saxifragaceae
***Biophytum sensitivum* (Linn.) DC.; Syn *Oxalis sesitiva* Linn.**	**Alambushaa**	**Oxalidaceae**
Biophytum sensitivum (Linn.) DC.; Syn *Oxalis sesitiva* Linn.	Lajjaalu (var.) Viprareet Lajjaalu	Oxalidaceae
***Blepharis edulis* Pers.; Syn *B. persica* (Burm. f.) Kuntze.**	**Ucchataa**	**Acanthaceae**
Blepharis edulis Pers.; Syn *B. persica* (Burm. f.) Kuntze.	Uchattaa	Acanthaceae
***Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.**	**Punarnavaa**	**Nyctaginaceae**
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Shothaghni	Nyctaginaceae
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Shothahrit	Nyctaginaceae
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Varshaabhu	Nyctaginaceae
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Vrishchira	Nyctaginaceae
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Vrishchiraka	Nyctaginaceae
***Borassus flabellifer* Linn.**	**Taala**	**Arecaceae; Palmae**
Borassus flabellifer Linn.	Trinraj	Arecaceae; Palmae
Borassus flabellifer Linn.	Taada	Arecaceae; Palmae
***Boswellia serrata* Roxb.**	**Shallaki**	**Burseraceae**
Boswellia serrata Roxb.	Susravaa	Burseraceae
Boswellia serrata Roxb.	Salai	Burseraceae
***Brassica alba* (L.) Boiss.; Syn *Sinapis alba* L.**	**Sarshapa-Gaura**	**Cruciferae; Brassicaceae**
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Siddhaartha Sita	Cruciferae; Brassicaceae
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Siddhaarthaka	Cruciferae; Brassicaceae
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Sidhaartha	Cruciferae; Brassicaceae
***Brassica campestris* Linn. var. *rapa* (L.) Hartm.**	**Sarshapa**	**Cruciferae; Brassicaceae**

Botanical Name	Ayurvedic Name	Family
Brassica campestris Linn. var. *rapa* (L.) Hartm.	Rakshoghna	Cruciferae; Brassicaceae
***Brassica juncea* (Linn.) Czern. & Coss.**	**Raajikaa**	**Cruciferae; Brassicaceae**
Brassica juncea (Linn.) Czern. & Coss.	Raaji	Cruciferae; Brassicaceae
Brassica juncea (Linn.) Czern. & Coss.	Tikshna Churna	Cruciferae; Brassicaceae
***Bryonopsis laciniosa* (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.**	**Lingini**	**Cucurbitaceae**
Bryonopsis laciniosa (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Bhavalingi	Cucurbitaceae
Bryonopsis laciniosa (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Ishalingi	Cucurbitaceae
Bryonopsis laciniosa (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Lingikaa	Cucurbitaceae
***Buchanania lanzan* Spreng.; Syn *B. latifolia* Roxb.**	**Chaar**	**Anacardiaceae**
Buchanania lanzan Spreng.; Syn *B. latifolia* Roxb.	Piyaala	Anacardiaceae
***Butea monosperma* (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.**	**Paalasha**	**Papilionaceae; Fabaceae**
Butea monosperma (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Kimshuka	Papilionaceae; Fabaceae
Butea monosperma (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Palaashaka	Papilionaceae; Fabaceae
***Caesalpinia bonduc* (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.**	**Kantaki Karanja**	**Caesalpiniaceae**
Caesalpinia bonduc (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Lataakaranja	Caesalpiniaceae
Caesalpinia bonduc (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Lataakaranja	Caesalpiniaceae
***Caesalpinia sappan* Linn.**	**Pattraanga**	**Caesalpiniaceae**
Caesalpinia sappan Linn.	Pattanga	Caesalpiniaceae
Caesalpinia sappan Linn.	Patura	Caesalpiniaceae
***Cajanus cajan* (Linn.) Millsp.; Syn *C. indicus* Spreng.**	**Aadhaki**	**Fabaceae**
Cajanus cajan (Linn.) Millsp.; Syn *C. indicus* Spreng.	Tuvari	Fabaceae
***Calamus tenuis* Roxb. Syn *C. amarus* Lour.**	**Vetra (var.)**	**Arecaceae; Palmae**
Calamus tenuis Roxb. Syn *C. amarus* Lour.	Vetraagra	Arecaceae; Palmae

***Callicarpa macrophylla* Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.**	**Shyamaa**	**Verbenaceae**
Callicarpa macrophylla Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Gandhalataa	Verbenaceae
Callicarpa macrophylla Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Lataa	Verbenaceae
Callicarpa macrophylla Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Phalini	Verbenaceae
Callicarpa macrophylla Vahl. *Substitute Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Shyamaa	Verbenaceae
Callicarpa macrophylla Vahl. *Substitute Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Priyangu	Verbenaceae
***Calotropis gigantea* (Linn.) R. Br. ex Ait.**	**Alarka**	**Asclepiadaceae**
Calotropis gigantea (Linn.) R. Br. ex Ait.	Bhaasvanmula	Asclepiadaceae
Calotropis gigantea (Linn.) R. Br. ex Ait.	Dinesha	Asclepiadaceae
Calotropis gigantea (Linn.) R. Br. ex Ait.	Mandaara	Asclepiadaceae
Calotropis gigantea (Linn.) R. Br. ex Ait.	Prabhaakara	Asclepiadaceae
Calotropis gigantea (Linn.) R. Br. ex Ait.	Ravi	Asclepiadaceae
Calotropis gigantea (Linn.) R. Br. ex Ait.	Vasuka	Asclepiadaceae
***Calycopteris floribunda* Lam.**	**Sushavi**	**Combretaceae**
Calycopteris floribunda Lam.	Paaniyavalli	Combretaceae
***Cannabis sativa* Linn.; Syn *C. indica* Linn.**	**Bhangaa**	**Cannabinaceae**
Cannabis sativa Linn.; Syn *C. indica* Linn.	Trailokyavijayaa	Cannabinaceae
Cannabis sativa Linn.; Syn *C. indica* Linn.	Tribhuvana	Cannabinaceae
Cannabis sativa Linn.; Syn *C. indica* Linn.	Vijayaa	Cannabinaceae
***Capparis horrida* Linn f.; Syn *Capparis zeylanica* Linn.**	**Vyaaghranakhi**	**Cappariadaceae**
Capparis horrida Linn f.; Syn *Capparis zeylanica* Linn.	Vyaaghranakha	Cappariadaceae
Capparis sepiaria Linn.	Himsraa	Capparidaceae
Capparis sepiaria Linn.	Ahimsraa	Capparidaceae
Capparis sepiaria Linn.	Ahimsraka	Capparidaceae

Botanical Name	Ayurvedic Name	Family
***Careya arborea* Roxb.**	**Kumbhika**	**Barringtoniaceae**
Careya arborea Roxb.	Katabhi	Barringtoniaceae
Careya arborea Roxb.	Kumbhi	Barringtoniaceae
***Carissa carandas* Linn. var. *congesta* (Wt.) Bedd.**	**Karamarda**	**Apocynaceae**
Carissa carandas Linn. var. *congesta* (Wt.) Bedd.	Karinkaara	Apocynaceae
Carissa carandas Linn. var. *congesta* (Wt.) Bedd.	Kshirphena	Apocynaceae
***Carthamus tinctorius* Linn.**	**Kusumbha**	**Asteraceae**
Carthamus tinctorius Linn.	Kusumbha-pushpa	Asteraceae
Carum carvi Linn.	Krishna jiraka	Apiaceae; Umbelliferae
Carum carvi Linn.	Jiraka krishna	Apiaceae; Umbelliferae
***Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.**	**Aaragvadha**	**Caesalpiniaceae**
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Aarevata	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Chaturangula	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Karnikaara	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Kritamaalaka	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Nripapaadapa	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Raaja Vriksha	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Raajadruma	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Sampaaka	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Vyaadhighaata	Caesalpiniaceae
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Vyaadhighaataka	Caesalpiniaceae
***Cassia occidentalis* Linn.**	**Kaasamarda**	**Calsalpiniaceae**
Cassia occidentalis Linn.	Kaasaari	Calsalpiniaceae

***Cassia tora* Linn.**	**Chakramarda**	**Calsalpiniaceae**
Cassia tora Linn.	Chakramardaka	Calsalpiniaceae
Cassia tora Linn.	Dadrughna	Calsalpiniaceae
Cassia tora Linn.	Prapunnaata	Calsalpiniaceae
***Cedrela toona* Roxb.; Syn *Toona ciliata* Roem.**	**Tuunikaa**	**Meliaceae**
Cedrela toona Roxb.; Syn *Toona ciliata* M. Roem.	Nandi Vrksha	Meliaceae
***Cedrus deodara* (Roxb.) Loud.; Syn *libani* Barrel. var. *deodara* Hook. f.**	**Devadaaru**	**Pinaceae**
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Amaradaaru	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Bhadradaaru	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Daaru	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Daaruka	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devaahvaa	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devadaarvi	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devadruma	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devakaastha	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Indradaaru	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Kilima	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Maruttaru	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Sraahvaya	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Suraahva	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Suradaaru	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Suradruma	Pinaceae
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Surataru	Pinaceae
***Celastrus paniculatus* Willd.**	**Jyotishmati**	**Celastraceae**

Botanical Name	Ayurvedic Name	Family
Celastrus paniculatus Willd.	Paaraavatpadi	Celastraceae
Celastrus paniculatus Willd.	Vegaa	Celastraceae
***Celosia argentea* Linn.**	**Shitivaaraka**	**Amaranthaceae**
Celosia argentea Linn.	Vitunna	Amaranthaceae
***Celosia cristata* Linn.**	**Jataadhari**	**Amaranthaceae**
Celosia cristata Linn.	Shivajataakhyaa	Amaranthaceae
***Centella asiatica* (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.**	**Manduukaparni**	**Umbelliferae; Apiaceae**
Centella asiatica (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Maanduuki	Umbelliferae; Apiaceae
***Ceratophyllum demersum* Linn.**	**Shaivaala**	**Ceratophyllaceae**
Ceratophyllum demersum Linn.	Jalanilikaa	Ceratophyllaceae
Chenopodium album Linn.	Vaastuuka	Chenopodiaceae
***Cicca acida* (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.- Arg.**	**Lavali-phala**	**Euphorbiaceae**
Cicca acida (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.- Arg.	Lowani	Euphorbiaceae
***Cicer arientinum* Linn.**	**Chanaka**	**Fabaceae; Papilionaceae**
Cicer arientinum Linn.	Chanakaa	Fabaceae; Papilionaceae
Cicer arientinum Linn.	Harimantha	Fabaceae; Papilionaceae
Cicer arietinum Linn.	Chana	Fabaceae; Papilionaceae
***Cinnamomum camphora* (Linn.) Nees & Eberm.**	**Karpura**	**Lauraceae**
Cinnamomum camphora (Linn.) Nees & Eberm.	Chandra	Lauraceae
Cinnamomum camphora (Linn.) Nees & Eberm.	Ghanasaara	Lauraceae
Cinnamomum camphora (Linn.) Nees & Eberm.	Himakara	Lauraceae
Cinnamomum camphora (Linn.) Nees & Eberm.	Indu	Lauraceae
Cinnamomum camphora (Linn.) Nees & Eberm.	Tushaara	Lauraceae

***Cinnamomum tamala* Nees. & Eberm.**	**Patra**	**Lauraceae**
Cinnamomum tamala Nees. & Eberm.	Supatra	Lauraceae
Cinnamomum tamala Nees. & Eberm.	Dala	Lauraceae
Cinnamomum tamala Nees. & Eberm.	Patraka	Lauraceae
Cinnamomum tamala Nees. & Eberm.	Tejapatra	Lauraceae
Cinnamomum tamala Nees. & Eberm.	Pallava	Lauraceae
Cinnamomum tamala Nees. & Eberm.	Amshuka	Lauraceae
***Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.**	**Daarusitaa**	**Lauraceae**
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Chocha	Lauraceae
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Daalchini	Lauraceae
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Tvacha	Lauraceae
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Tvachaa	Lauraceae
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Tvak	Lauraceae
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Utkata	Lauraceae
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Varaanga	Lauraceae
***Cissampelos pareira* Linn.**	**Paathaa**	**Menispermaceae**
Cissampelos pareira Linn.	Ambasthaa	Menispermaceae
Cissampelos pareira Linn.	Ekeishikaa	Menispermaceae
***Cissus quadrangular* Linn.; Syn *Vitis quadrangula* Wall.**	**Asthisamhaara**	**Vitaceae**
Cissus quadrangular Linn.; Syn *Vitis quadrangula* Wall.	Asthisamhrita	Vitaceae
Cissus quadrangular Linn.; Syn *Vitis quadrangula* Wall.	Hadjoda	Vitaceae
***Citrullus colocynthis* Schrad.**	**Indravaaruni**	**Cucurbitaceae**
Citrullus colocynthis Schrad.	Aindri	Cucurbitaceae
Citrullus colocynthis Schrad.	Chitraphalaa	Cucurbitaceae

Botanical Name	Ayurvedic Name	Family
Citrullus colocynthis Schrad.	Gavaakshi	Cucurbitaceae
Citrullus colocynthis Schrad.	Indraasuri	Cucurbitaceae
Citrullus colocynthis Schrad.	Indraayana	Cucurbitaceae
Citrullus colocynthis Schrad.	Mrugaadani	Cucurbitaceae
Citrullus colocynthis Schrad.	Mrugairvaaru	Cucurbitaceae
Citrullus colocynthis Schrad.	Vaaruni	Cucurbitaceae
Citrullus colocynthis Schrad.	Vishaalaa	Cucurbitaceae
Citrullus colocynthis Schrad.	Vishalyaka	Cucurbitaceae
***Citrus decumana* Linn.**	**Madhukarkati**	**Rutaceae**
***Citrus limon (Linn.)* Burm. f.**	**Jambira**	**Rutaceae**
Citrus limon (Linn.) Burm. f.	Dantashatha	Rutaceae
***Citrus maxima* (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.**	**Madhukarkatikaa**	**Rutaceae**
Citrus maxima (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Maatulunga	Rutaceae
Citrus maxima (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Maatulungi	Rutaceae
***Citrus medica* Linn.**	**Bijpuura**	**Rutaceae**
Citrus medica Linn.	Bijapuraka	Rutaceae
Citrus medica Linn.	Dantashatha	Rutaceae
Citrus medica Linn.	Jambira	Rutaceae
Citrus medica Linn.	Nimbuka	Rutaceae
Citrus medica Linn.	Phalapuraka	Rutaceae
Citrus medica Linn.	Puraka	Rutaceae
***Clerodendrum phlomidis* Linn. f.; Syn *multiflorum* (Burm. f.) O. Kuntze**	**Tarkaari**	**Verbenaceae**
Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Jayaa	Verbenaceae

Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Laghu-agnimantha	Verbenaceae
Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Tankaari	Verbenaceae
***Clerodendrum serratum* (Linn.) Moon.**	**Bhaargi**	**Verbenaceae**
Clerodendrum serratum (Linn.) Moon.	Bhaarangi	Verbenaceae
***Clitoria ternatea* Linn.**	**Aparaajitaa**	**Papilionaceae; Fabaceae**
Clitoria ternatea Linn.	Aasphotaa	Papilionaceae; Fabaceae
Clitoria ternatea Linn.	Girikarni	Papilionaceae; Fabaceae
Clitoria ternatea Linn.	Girikarnikaa	Papilionaceae; Fabaceae
Clitoria ternatea Linn.	Shankhini	Papilionaceae; Fabaceae
Clitoria ternatea Linn.	Shvetaa	Papilionaceae; Fabaceae
***Coccinia indica* W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.**	**Bimbi**	**Cucurbitaceae**
Coccinia indica W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Tundi	Cucurbitaceae
Coccinia indica W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Tundikaa	Cucurbitaceae
***Cocculus hirsutus* (Linn.) Diels.; Syn *C. villosus* (Lam.) DC.**	**Jalajamani**	**Menispermaceae**
Cocculus hirsutus (Linn.) Diels.; Syn *C. villosus* (Lam.) DC.	Paataala-garuda	Menispermaceae
***Cocos nucifera* Linn.**	**Naarikela**	**Palmae; Arecaceae**
Cocos nucifera Linn.	Naarikera	Palmae; Arecaceae
***Coix lacryma-jobi* Linn.; Syn *C. lachryma* Linn.**	**Gavedhukaa**	**Poaceae; Gramineae**
Coix lacryma-jobi Linn.; Syn *C. lachryma* Linn.	Gavedhu	Poaceae; Gramineae
***Commiphora molmol* (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.**	**Bola**	**Burseraceae**
Commiphora molmol (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Surasa	Burseraceae
Commiphora molmol (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Hiraabola	Burseraceae
***Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks**	**Guggul**	**Burseraceae**

Botanical Name	Ayurvedic Name	Family
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Kaushika	Burseraceae
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Mahishaaksha	Burseraceae
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Palankashaa	Burseraceae
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Pura	Burseraceae
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Shrivaasa	Burseraceae
***Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.**	**Shankhapushpi**	**Convolvulaceae**
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Mangalyapushpi	Convolvulaceae
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Sambukapushpi	Convolvulaceae
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Sankhapushpikaa	Convolvulaceae
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Shankhaka	Convolvulaceae
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Vishnukraantaa	Convolvulaceae
***Corallocarpus epigaeus* Benth. ex Hook. f.**	**Shukanaasaa**	**Cucurbitaceae**
Corallocarpus epigaeus Benth. ex Hook. f.	Nahikaa	Cucurbitaceae
Corallocarpus epigaeus Benth. ex Hook. f.	Katunaahi	Cucurbitaceae
***Corchorus capsularis* Linn.**	**Kaala shaaka**	**Tiliaceae**
Corchorus capsularis Linn.	Kaalasaaka	Tiliaceae
***Corchorus fascicularis* Lam.**	**Chanchuka**	**Tiliaceae**
Corchorus fascicularis Lam.	Chanchu	Tiliaceae
***Cordia dichotoma* Forst f.; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.**	**Bahuvaara**	**Boraginaceae**

Cordia dichotoma Forst f.; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.	Shelu	Boraginaceae
***Coriandrum sativum* Linn.**	**Dhaanyaka**	**Umbelliferae; Apiaceae**
Coriandrum sativum Linn.	Chhatraa	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Chhatraakhya	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Dhaanaa	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Dhaanya	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Dhaanyeyaka	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Dhanika	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Dhanikaa	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Kunati	Umbelliferae; Apiaceae
Coriandrum sativum Linn.	Kustumburu	Umbelliferae; Apiaceae
***Coscinium fenestratum* Colebr.**	**Kaaliyaka**	**Menispermaceae**
Coscinium fenestratum Colebr.	Kaaleya	Menispermaceae
Coscinium fenestratum Colebr.	Kaaliya	Menispermaceae
***Costus speciosus* (Koenig) Sm.**	**Kebuka**	**Zingiberaceae**
Costus speciosus (Koenig) Sm.	Kemuka	Zingiberaceae
Costus speciosus (Koenig) Sm.	Kevuka	Zingiberaceae
***Crataeva nurvala* Buch.-Ham.; Syn *C. magna* (Lour.) DC.**	**Varuna**	**Capparidaceae**
Crataeva nurvala Buch.-Ham.; Syn *C. magna* (Lour.) DC.	Varana	Capparidaceae
***Crocus sativus* Linn.**	**Kumkuma**	**Iridaceae**
Crocus sativus Linn.	Ghusrina	Iridaceae
Crocus sativus Linn.	Kaashmiraka	Iridaceae
Crocus sativus Linn.	Kshataja	Iridaceae
***Crotalaria juncea* Linn.**	**Shana**	**Fabaceae; Papilionaceae**

Botanical Name	Ayurvedic Name	Family
Crotalaria juncea Linn.	Shanapushpi	Fabaceae; Papilionaceae
***Croton tiglium* Linn.**	**Dravanti**	**Euphorbiaceae**
Croton tiglium Linn.	Dantiphala	Euphorbiaceae
Croton tiglium Linn.	Jaipaala	Euphorbiaceae
Croton tiglium Linn.	Vrishaa	Euphorbiaceae
***Cucumis melo* Linn. var. *utilissimus* Duth. & Fuller.**	**Ervaaru**	**Cucurbitaceae**
Cucumis melo Linn. var. *utilissimus* Duth. & Fuller.	Karkati	Cucurbitaceae
Cucumis melo Linn. var. *utilissimus* Duth. & Fuller.	Karkatikaa	Cucurbitaceae
Cucumis melo Linn. var. *utilissimus* Duth. & Fuller.	Ervaaruka	Cucurbitaceae
***Cucumis sativus* Linn.**	**Traapusha**	**Cucurbitaceae**
Cucumis sativus Linn.	Trapusha	Cucurbitaceae
***Cucurbita pepo* Linn.**	**Kushmaandi**	**Cucurbitaceae**
***Cuminum cyminum* Linn.**	**Jiraka**	**Umbelliferae; Apiaceae**
Cuminum cyminum Linn.	Ajaaji	Umbelliferae; Apiaceae
Cuminum cyminum Linn.	Jaaji	Umbelliferae; Apiaceae
Cuminum cyminum Linn.	Jarana	Umbelliferae; Apiaceae
Cuminum cyminum Linn.	Jira	Umbelliferae; Apiaceae
Cuminum cyminum Linn.	Shukla Jeeraka	Umbelliferae; Apiaceae
***Curculigo orchioides* Gaertn.**	**Mushali**	**Amaryllidaceae; Hypoxidaceae**
Curculigo orchioides Gaertn.	Taalamuli	Amaryllidaceae; Hypoxidaceae
***Curcuma angustifolia* Roxb.**	**Tikhuri**	**Zingiberaceae**

Curcuma angustifolia Roxb.	Tikhur	Zingiberaceae
Curcuma angustifolia Roxb.	Arrowroot	Zingiberaceae
***Curcuma longa* Linn.; Syn *C. domestica* Valeton**	**Haridraa**	**Zingiberaceae**
Curcuma longa Linn.; Syn *C. domestica* Valeton	Naktaahvaa	Zingiberaceae
Curcuma longa Linn.; Syn *C. domestica* Valeton	Nishaa	Zingiberaceae
Curcuma longa Linn.; Syn *C. domestica* Valeton	Raatri	Zingiberaceae
Curcuma longa Linn.; Syn *C. domestica* Valeton	Rajani	Zingiberaceae
Curcuma longa Linn.; Syn *C. domestica* Valeton	Sharvari	Zingiberaceae
***Curcuma zedoaria* Rosc.**	**Karchuura**	**Zingiberaceae**
Curcuma zedoaria Rosc.	Palaashi	Zingiberaceae
***Cymbopogon citratus* (DC.) Stapf.; Syn *Andropogon citratus* DC.**	**Bhuutika**	**Poaceae**
Cymbopogon citratus (DC.) Stapf.; Syn *Andropogon citratus* DC.	Bhuutikaa	Poaceae
***Cymbopogon jwarancusa* (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.**	**Laamajjaka**	**Poaceae**
Cymbopogon jwarancusa (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.	Laamjja	Poaceae
Cymbopogon jwarancusa (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.	Bhuutikaa	Poaceae
***Cymbopogon martini* Roxb. Wats.; Syn *Andropogon martinii* Roxb.**	**Dhyaamaka**	**Poaceae**
Cymbopogon martini Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Bhutika	Poaceae
Cymbopogon martini Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Rohisha	Poaceae
***Cynodon dactylon* Pers.**	**Duurvaa**	**Graminae; Poaceae**
Cynodon dactylon Pers.	Durvaa-shveta	Graminae; Poaceae
***Cyperus anabilis* Vahl.**	**Plava**	**Cyperaceae**
Cyperus anabilis Vahl.	Kaivarta Mustaka	Cyperaceae
Cyperus anabilis Vahl.	Kaivarttamustaa	Cyperaceae
Cyperus anabilis Vahl.	Kutanna	Cyperaceae

Botanical Name	Ayurvedic Name	Family
Cyperus anabilis Vahl.	Kutannata	Cyperaceae
Cyperus anabilis Vahl.	Vitunnaka	Cyperaceae
Cyperus rotundus Linn.	Mustaka	Cyperaceae
Cyperus rotundus Linn.	Abda	Cyperaceae
***Cyperus rotundus* Linn.**	**Ambhoda**	**Cyperaceae**
Cyperus rotundus Linn.	Ambhodhara	Cyperaceae
Cyperus rotundus Linn.	Bhadra-ghana	Cyperaceae
Cyperus rotundus Linn.	Bhadramusta	Cyperaceae
Cyperus rotundus Linn.	Bhadramustaa	Cyperaceae
Cyperus rotundus Linn.	Bhadramustaka	Cyperaceae
Cyperus rotundus Linn.	Ghana	Cyperaceae
Cyperus rotundus Linn.	Jalada	Cyperaceae
Cyperus rotundus Linn.	Jaladhara	Cyperaceae
Cyperus rotundus Linn.	Meghaahva	Cyperaceae
Cyperus rotundus Linn.	Musta	Cyperaceae
Cyperus rotundus Linn.	Mustaa	Cyperaceae
Cyperus rotundus Linn.	Naagaramusta	Cyperaceae
Cyperus rotundus Linn.	Nirada	Cyperaceae
Cyperus rotundus Linn.	Vaarida	Cyperaceae
Cyperus rotundus Linn.	Vaarivaaha	Cyperaceae
***Dalbergia sissoo* Roxb. ex DC.**	**Shimshapaa**	**Fabaceae; Papilionaceae**
Dalbergia sissoo Roxb. ex DC.	Krishna-shimshapaa	Fabaceae; Papilionaceae
Dalbergia sissoo Roxb. ex DC.	Picchilaa	Fabaceae; Papilionaceae

***Datura metel* Linn.; Syn *D. fastuosa* Linn.**	**Dhattuuraa**	**Solanaceae**
Datura metel Linn.; Syn *D. fastuosa* Linn.	Kanaka	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Dhurta	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Hema	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Hemaahva	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Maatula Mahesha	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Pramada	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Priya	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Putraka	Solanaceae
Datura metel Linn.; Syn *D. fastuosa* Linn.	Unmataka	Solanaceae
***Desmodium gangeticum* DC.; Syn *Hedysarum gangeticum* Linn.**	**Shaaliparni**	**Fabaceae**
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Amshumati	Fabaceae
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Sthiraa	Fabaceae
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Triparni	Fabaceae
***Desmostachya bipinnata* Stapf.; Syn *Eragrostis cynosuroides* Beauv.**	**Kusha**	**Poaceae**
Desmostachya bipinnata Stapf.; Syn *Eragrostis cynosuroides* Beauv.	Suuchyagra	Poaceae
Desmostachya bipinnata Stapf.; Syn *Eragrostis cynosuroides* Beauv.	Yagyabhuushana	Poaceae
***Dichrostachys cinerea* W. & A.; Syn *Cailliea cinera* Macb.**	**Viravrksha**	**Mimosaceae**
Dichrostachys cinerea W. & A.; Syn *Cailliea cinera* Macb.	Virataru	Mimosaceae
***Dioscorea bulbifera* Linn.; Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch-Ham ex Wall.**	**Vaaraahikanda**	**Dioscoreaceae**
Dioscorea bulbifera Linn.; Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch-Ham ex Wall.	Charma-kaaraaluka	Dioscoreaceae
***Dioscorea esculenta* Burkill.; Syn *D. aculeata* Linn., *D. faciculata* Roxb., *D. spinosa* Roxb. ex Wall.**	**Madhvaaluka**	**Dioscoreaceae**
Dioscorea esculenta Burkill.; Syn *D. aculeata* Linn., *D. faciculata* Roxb., *D. spinosa* Roxb. ex Wall.	Pindaaluka	Dioscoreaceae
***Diospyros embryopteris* Pers.; Syn *D. peregrina* (Gaertn.) Gurke, *D. malabarica* (Desr.) Kostel.**	**Tinduka**	**Ebenaceae**

Botanical Name	Ayurvedic Name	Family
Diospyros embryopteris Pers.; Syn *D. peregrina* (Gaertn.) Gurke, *D. malabarica* (Desr.) Kostel.	Tinduki	Ebenaceae
***Dipterocarpus turbinatus* Gaertn. f.; *D. indicus* Bedd.**	**Ajakarna**	**Dipterocarpaceae**
Dipterocarpus turbinatus Gaertn. f.; *D. indicus* Bedd.	Ashwakarna	Dipterocarpaceae
***Dolichos biflorus* Linn.; Syn *Vigna unquiculata* (L.) Walp.**	**Kulattha**	**Fabaceae; Papilionaceae**
Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulathhikaa	Fabaceae; Papilionaceae
Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulatthaka	Fabaceae; Papilionaceae
Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulthi	Fabaceae; Papilionaceae
***Dolichos lablab* Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.**	**Nishpaav**	**Fabaceae; Papilionaceae**
Dolichos lablab Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.	Sem	Fabaceae; Papilionaceae
***Dorema ammoniacum* D. Don.**	**Ushaka**	**Apiaceae; Umbelliferae**
Dorema ammoniacum D. Don.	Uushaka	Apiaceae; Umbelliferae
***Echinochloa frumentacea* Link.; Syn *Panicum frumentaceum* Roxb.**	**Shyaamaaka**	**Poaceae; Gramineae**
***Eclipta alba* (Linn.) Hassk.; Syn *E. prostrata* Roxb.**	**Bhringaraaja**	**Asteraceae: Compositae**
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Bhringa	Asteraceae: Compositae
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Maarka	Asteraceae: Compositae
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Maarkava	Asteraceae: Compositae
***Elettaria cardamomum* Maton.**	**Sukshmailaa**	**Zingiberaceae**
Elettaria cardamomum Maton.	Bahulaa	Zingiberaceae
Elettaria cardamomum Maton.	Draavidi	Zingiberaceae
Elettaria cardamomum Maton.	Elaa	Zingiberaceae
Elettaria cardamomum Maton.	Elaa-sukshma	Zingiberaceae
Elettaria cardamomum Maton.	Sukshma-elaa	Zingiberaceae
Elettaria cardamomum Maton.	Truti	Zingiberaceae

Elettaria cardamomum Maton.	Trutyau	Zingiberaceae
***Eleusine coracana* Gaertn.**	**Madhuuli**	**Poaceae; Gramineae**
Eleusine coracana Gaertn.	Madhulikaa	Poaceae; Gramineae
***Embelia ribes* Burm. f.**	**Vidanga**	**Myrsinaceae**
Embelia ribes Burm. f	Jantughna	Myrsinaceae
Embelia ribes Burm. f.	Krimighna	Myrsinaceae
Embelia ribes Burm. f.	Krimihaa	Myrsinaceae
Embelia ribes Burm. f.	Krimihara	Myrsinaceae
Embelia ribes Burm. f.	Krimihrt	Myrsinaceae
Embelia ribes Burm. f.	Krimiripu	Myrsinaceae
Embelia ribes Burm. f.	Vella	Myrsinaceae
***Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.**	**Aaamalaki**	**Euphorbiaceae**
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Aamala	Euphorbiaceae
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Aamalaa	Euphorbiaceae
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Aamalaka	Euphorbiaceae
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Dhaatri	Euphorbiaceae
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Vayasya	Euphorbiaceae
***Enhydra fluctuans* Lour.**	**Hil-mochikaa**	**Compositae; Asteraceae**
Enhydra fluctuans Lour.	Hilamochi	Compositae; Asteraceae
***Ephedra gerardiana* Wall. ex Stapf**	**Soma**	**Ephedraceae**
Ephedra gerardiana Wall. ex Stapf	Soma-Valli (substitute)	Ephedraceae
***Erythrina variegata* Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.**	**Paaribhadra**	**Fabaceae; Papilionaceae**
Erythrina variegata Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Paaribhadraka	Fabaceae; Papilionaceae
***Euphorbia dracunculoides* Lamk.**	**Saptalaa**	**Euphorbiaceae**

Botanical Name	Ayurvedic Name	Family
Euphorbia dracunculoides Lamk.	Shaatalaa	Euphorbiaceae
***Euphorbia hirta* Linn.; *E. pilulifera* auct. non Linn.**	**Dudhikaa**	**Euphorbiaceae**
Euphorbia hirta Linn.; *E. pilulifera* auct. non Linn.	Dudhi	Euphorbiaceae
***Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.**	**Snuhi**	**Euphorbiaceae**
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Kulisha	Euphorbiaceae
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Sehunda	Euphorbiaceae
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Snuk	Euphorbiaceae
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Sudhaa	Euphorbiaceae
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Sudhaalataa	Euphorbiaceae
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Vajra	Euphorbiaceae
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Vajri	Euphorbiaceae
***Fagonia cretica* Linn.; Syn *F. arabica* Linn.**	**Dhanvayaasaka**	**Zygophyllaceae**
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Dhanva	Zygophyllaceae
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Duhsparshaa	Zygophyllaceae
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Dhanvayaasa	Zygophyllaceae
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Duraalabhaa	Zygophyllaceae
***Feronia limonia* (Linn.) Swingle.; Syn *F. elephantum* Corr.**	**Kapittha**	**Rutaceae**
Feronia limonia (Linn.) Swingle.; Syn *F. elephantum* Corr.	Dadhiphala	Rutaceae
***Ferula foetida* Regel.; Syn *F. assafoetida* Linn.**	**Hingu**	**Apiaceae; Umbelliferae**
Ferula foetida Regel.; Syn *F. assafoetida* Linn.	Raamatha	Apiaceae
***Ficus benghalensis* Linn.**	**Vata**	**Moraceae**
Ficus benghalensis Linn.	Bahupaada	Moraceae
Ficus benghalensis Linn.	Nyagrodha	Moraceae

***Ficus glomerata* Roxb.; Syn *F. racemosa* Linn.**	**Udumbara**	**Moraceae**
Ficus glomerata Roxb.; Syn *F. racemosa* Linn.	Audumbar	Moraceae
Ficus glomerata Roxb.; Syn *F. racemosa* Linn.	Yangyaanga	Moraceae
Ficus glomerata Roxb.; Syn *F. racemosa* Linn.	Audumbar	Moraceae
***Ficus hispida* Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.**	**Kaakodumbara**	**Moraceae**
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Kaasthodumbara	Moraceae
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Malayu	Moraceae
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Phalgu	Moraceae
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Vaayasi Shaaka	Moraceae
***Ficus lacor* Buch.-Ham.; Syn *F. infectoria* auct. non Willd.**	**Plaksha**	**Moraceae**
Ficus lacor Buch.-Ham.; Syn *F. infectoria* auct. non Willd.	Parkati	Moraceae
***Ficus religiosa* Linn.**	**Ashvattha**	**Moraceae**
Ficus religiosa Linn.	Bodhidru	Moraceae
***Flacourtia ramontchi* L. Herit.; Syn *F. indica* (Burm. f.) Merr.**	**Vikankata**	**Flacourtiaceae**
Flacourtia ramontchi L. Herit.; Syn *F. indica* (Burm. f.) Merr.	Kantaki	Flacourtiaceae
***Foeniculum vulgare* Mill.**	**Mishreyaa**	**Apiaceae; Umbelliferae**
Foeniculum vulgare Mill.	Shataahvaa	Apiaceae; Umbelliferae
Foeniculum vulgare Mill.	Shatapushpaa	Apiaceae; Umbelliferae
***Fumaria parviflora* Lam.; *F. indica* (Haussk.) Pugsley.**	**Parpata**	**Fumariaceae**
Fumaria parviflora Lam.; *F. indica* (Haussk.) Pugsley.	Parpataka	Fumariaceae
Fumaria parviflora Lam.; *F. indica* (Haussk.) Pugsley.	Raja	Fumariaceae
***Garcinia indica* Choisy.; Syn *G. purpurea* Roxb.**	**Vrkshaamla**	**Guttiferae; Clusiaceae**
Garcinia indica Choisy.; Syn *G. purpurea* Roxb.	Tintidika	Guttiferae; Clusiaceae
***Gentiana kurroo* Royle.**	**Traayamaana**	**Gentianaceae**

Botanical Name	Ayurvedic Name	Family
Gentiana kurroo Royle.	Traayanta	Gentianaceae
Gentiana kurroo Royle.	Traayanti	Gentianaceae
Gentiana kurroo Royle.	Traayantikaa	Gentianaceae
***Gloriosa superba* Linn.**	**Laangali**	**Liliaceaes**
Gloriosa superba Linn.	Laangalaki	Liliaceaes
Gloriosa superba Linn.	Laangalika	Liliaceaes
***Glycyrrhiza glabra* Linn.**	**Yashtimadhu**	**Fabaceae; Papilionaceae**
Glycyrrhiza glabra Linn.	Klitaka	Fabaceae; Papilionaceae
Glycyrrhiza glabra Linn.	Madhuyashthikaa	Fabaceae; Papilionaceae
Glycyrrhiza glabra Linn.	Madhuyashti	Fabaceae; Papilionaceae
Glycyrrhiza glabra Linn.	Yashti	Fabaceae; Papilionaceae
Glycyrrhiza glabra Linn.	Yashtimadhuka	Fabaceae; Papilionaceae
Glycyrrhiza glabra Linn.	Yashtyaahva	Fabaceae; Papilionaceae
Glycyrrhiza glabra Linn.	Yasthikah	Fabaceae; Papilionaceae
***Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.**	**Gambhaari**	**Verbenaceae**
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Madhuparnikaa	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Sarvatobhadraa	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Kaarpaasa	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Kaarpaasaka	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Kaashmari	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Kaashmarya	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Sadaabhadraa	Verbenaceae
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Trishati	Verbenaceae

***Gossypium arboreum* Linn.**	**Kaarpaasi**	**Malvaceae**
Gossypium arboreum Linn.	Kaarpaasaka	Malvaceae
***Grewia asiatica* auct. non. L.; Syn *G. subinaequalis* DC.**	**Parushaka**	**Tiliaceae**
Grewia asiatica auct. non. L.; Syn *G. subinaequalis* DC.	Parusha	Tiliaceae
Grewia asiatica auct. non. L.; Syn *G. subinaequalis* DC.	Parushaka-ubhe	Tiliaceae
***Grewia hirsuta* Vahl.; Syn *G. polygama* Mast.**	**Naagabalaa**	**Tiliaceae**
Grewia hirsuta Vahl.; Syn *G. polygama* Mast.	Gaangeruki	Tiliaceae
***Gymnema sylvestre* R. Br.**	**Meshashringi**	**Asclepiadaceae**
Gymnema sylvestre R. Br.	Ajashringi	Asclepiadaceae
Gymnema sylvestre R. Br.	Chhaagashringi	Asclepiadaceae
***Gynandropsis gynandra* (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.**	**Ajagandhaa**	**Capparidaceae**
Gynandropsis gynandra (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Bastagandhaa	Capparidaceae
Gynandropsis gynandra (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Suryaavarta	Capparidaceae
***Habenaria edgeworthii* Hook. f. ex. Collett.**	**Riddhi**	**Orchidaceae**
Habenaria intermedia D. Don.	Vriddhi	Orchidaceae
***Hedychium spicatum* Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.**	**Shati**	**Zingiberaceae**
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Palaasi	Zingiberaceae
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Suvrataa	Zingiberaceae
***Hemidesmus indicus* (L.) R. Br.; Syn *Periploca indica* Linn.**	**Saarivaa**	**Asclepiadaceae; Periplocaceae**
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Anantaa	Asclepiadaceae; Periplocaceae
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Shveta Saarivaa	Asclepiadaceae; Periplocaceae

Botanical Name	Ayurvedic Name	Family
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Gopaa	Asclepiadaceae; Periplocaceae
***Hibiscus abelmoschus* Linn.; Syn *Abelmoschus moschatus* Medic.**	**Lataakasturikaa**	**Malvaceae**
Hibiscus abelmoschus Linn.; Syn *Abelmoschus moschatus* Medic.	Lataakasturik	Malvaceae
***Hibiscus rosa-sinensis* Linn.**	**Japaa**	**Malvaceae**
Hibiscus rosa-sinensis Linn.	Javaa	Malvaceae
***Himenodictyon excelsum* Wall.**	**Bhringavriksha**	**Rubiaceae**
***Hiptage madablota* Gaertn.; Syn *H. benghalensis* Kurz.**	**Maadhavi**	**Malpighiaceae**
Hiptage madablota Gaertn.; Syn *H. benghalensis* Kurz.	Vaasanti	Malpighiaceae
***Holarrhena antidysenterica* (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.**	**Girimallikaa**	**Apocynaceae**
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Kutaja	Apocynaceae
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Shakra	Apocynaceae
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Vatshaka	Apocynaceae
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Vrikshaka	Apocynaceae
***Holoptelea integrifolia* Planch.**	**Chirabilva**	**Ulamaceae**
Holoptelea integrifolia Planch.	Putika	Ulamaceae
***Holostemma rheedii* Wall.; Syn *H. annularis* (Roxb.) K. Schum., *H. ada-kodien* Schult., *Asclepias annularis* Roxb.**	**Ark-pushpi**	**Asclepiadaceae**
***Hordeum vulgare* Linn.**	**Yava**	**Poaceae; Gramineae**
Hordeum vulgare Linn.	Hayeshtha	Poaceae; Gramineae
***Hygrorhyza aristata* Nees.**	**Nivaara**	**Poaceae**
***Hyoscyamus niger* Linn.**	**Khuraashaanikaa**	**Solanaceae**
Hyoscyamus niger Linn.	Khuraasaani Ajwaayin	Solanaceae

***Imperata cylindrica* Rausch.; Syn *I. arundinacea* Cyr.**	**Darbha**	**Poaceae; Gramineae**
Imperata cylindrica Rausch.; Syn *I. arundinacea* Cyr.	Yagnika	Poaceae; Gramineae
***Indigofera tinctoria* Linn.**	**Nili**	**Fabaceae**
Indigofera tinctoria Linn.	Nilini	Fabaceae
***Inula racemosa* Hook. f.; Syn *I. royleana* auct. non.-DC.**	**Pushkaramuula**	**Asteraceae; Compositae**
Inula racemosa Hook. f.; Syn *I. royleana* auct. non.-DC.	Paushkara	Asteraceae; Compositae
Inula racemosa Hook. f.; Syn *I. royleana* auct. non.-DC.	Pushkara	Asteraceae; Compositae
***Ionidium suffruticosum* Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.**	**Amburuha**	**Violaceae**
Ionidium suffruticosum Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.	Padmaa	Violaceae
***Ipomoea digitata* Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.**	**Kshira-vidaari**	**Convolvulaceae**
Ipomoea digitata Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.	Vidaarikanda	Convolvulaceae
***Ipomoea sepiaria* Koen. ex Roxb.; Syn *I. maxima* (Linn. f.) G. Don.**	**Lakshmanaa**	**Convolvulaceae**
Ipomoea sepiaria Koen. ex Roxb.; Syn *I. maxima* (Linn. f.) G. Don.	Banakalami	Convolvulaceae
***Jasminum arborescens* Roxb.; Syn *J. roxburghianum* Wall.**	**Nava-mallikaa**	**Oleaceae**
***Jasminum auriculatum* Vahl.**	**Yuuthi**	**Oleaceae**
Jasminum auriculatum Vahl.	Yuthikaa	Oleaceae
***Jasminum multiflorum* (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Willd., *J. bracteatum* Roxb.**	**Kunda**	**Oleaceae**
Jasminum multiflorum (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Willd., *J. bracteatum* Roxb.	Kasturi Mogaraa	Oleaceae
***Jasminum officinale* Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.**	**Maalati**	**Oleaceae**
Jasminum officinale Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Jaatikaa	Oleaceae
Jasminum officinale Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Mallikaa	Oleaceae
***Jasminum sambac* (Linn.) Ait.**	**Mallikaa**	**Oleaceae**
Jasminum sambac (Linn.) Ait.	Madayanti	Oleaceae

Botanical Name	Ayurvedic Name	Family
***Juniperus communis* Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.**	**Hapushaa**	**Cupressaceae; Pinaceae**
Juniperus communis Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.	Havushaa	Cupressaceae; Pinaceae
***Lagenaria siceraria* (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.**	**Tumbini**	**Cucurbitaceae**
Lagenaria siceraria (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Ikshvaaku	Cucurbitaceae
Lagenaria siceraria (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Laavu	Cucurbitaceae
Lagenaria siceraria (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Pralambaa	Cucurbitaceae
Lagenaria siceraria (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Tumbaa	Cucurbitaceae
***Lannea coromandelica* (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.**	**Jingini**	**Anacardiaceae**
Lannea coromandelica (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.	Jingi	Anacardiaceae
***Lathyrus sativus* Linn.**	**Triputa**	**Fabaceae; Papilionaceae**
***Launaea asplenifolia* Hook. f.**	**Gojihvaa**	**Compositae**
Launaea asplenifolia Hook. f.	Goji	Compositae
Launaea asplenifolia Hook. f.	Gojihvikaa	Compositae
***Lawsonia inermis* Linn.**	**Madayantikaa**	**Lythraceae**
Lawsonia inermis Linn.	Madayanti	Lythraceae
***Leea macrophylla* Roxb.**	**Hasti-karna Palaasha**	**Vitaceae**
Leea macrophylla Roxb.	Gajakarna	Vitaceae
Leea macrophylla Roxb.	Hastikarna	Vitaceae
***Lens culinaris* Medic.; Syn *L. esculenta* Moench.**	**Masura**	**Fabaceae; Papilionaceae**

Lens culinaris Medic.; Syn *L. esculenta* Moench.	Masuraka	Fabaceae; Papilionaceae
***Leonotis nepetaefolia* R. Br.**	**Granthiparni**	**Labiatae; Lamiaceae**
Leonotis nepetaefolia R. Br.	Kaakapuchha	Labiatae; Lamiaceae
***Lepidium sativum* Linn.**	**Chandrashuura**	**Cruciferae; Brassicaceae**
Lepidium sativum Linn.	Chandrikaa	Cruciferae; Brassicaceae
***Leptadenia reticulata* W. & A.**	**Jivanti**	**Asclepiadaceae**
Leptadenia reticulata W. & A.	Jivaakhya	Asclepiadaceae
Leptadenia reticulata W. & A.	Jivantikaa	Asclepiadaceae
***Leucas cephalotes* (Roth.) Spreng.**	**Dronpushpi**	**Labiatae; Lamiaceae**
Leucas cephalotes (Roth.) Spreng.	Drona	Labiatae; Lamiaceae
***Linum usitatissimum* Linn.**	**Atasi**	**Linaceae**
Linum usitatissimum Linn.	Umaa	Linaceae
***Liquidamber orientalis* Mill.**	**Turushka**	**Hamamelidaceae; Altingiaceae**
Liquidamber orientalis Mill.	Sihlika	Hamamelidaceae; Altingiaceae
***Loranthus longiflorus* Desr.**	**Vrikshaadani**	**Loranthaceae**
Loranthus longiflorus Desr.	Vandaaka	Loranthaceae
***Luffa cylindrica* (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.**	**Dhaamaargava**	**Cucurbitaceae**
Luffa cylindrica (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Kritabandhana	Cucurbitaceae
Luffa cylindrica (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Jaalini	Cucurbitaceae
Luffa cylindrica (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Koshaataki-tikta	Cucurbitaceae
***Luffa echinata* Roxb.**	**Devadaali**	**Cucurbitaceae**
Luffa echinata Roxb.	Taadaka	Cucurbitaceae

Botanical Name	Ayurvedic Name	Family
***Madhuca indica* J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.**	**Madhuuka**	**Sapotaceae**
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhuka Kusuma	Sapotaceae
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhukasaara	Sapotaceae
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhuphala	Sapotaceae
***Maerua arenaria* Hook. f. & Th.; Syn *M. oblongifolia* (Forsk.) A. Rich.**	**Morata**	**Capparidaceae**
Maerua arenaria Hook. f. & Th.; Syn *M. oblongifolia* (Forsk.) A. Rich.	Piluparni	Capparidaceae
***Mallotus phillippinensis* Muell.- Arg.**	**Kampillaka**	**Euphorbiaceae**
Mallotus phillippinensis Muell.- Arg.	Kampilla	Euphorbiaceae
***Malva rotundifolia* Linn.; Syn *M. neglecta* wall.**	**Suvarchalaa**	**Malvaceae**
***Mangifera indica* Linn.**	**Aamra**	**Anacardiaceae**
Mangifera indica Linn.	Chuta	Anacardiaceae
Mangifera indica Linn.	Rasaala	Anacardiaceae
Mangifera indica Linn.	Sahakaara	Anacardiaceae
***Marsdenia tenacissima* W.& A.**	**Muurvaa**	**Asclepiadaceae**
Marsdenia tenacissima W.& A.	Piluparni	Asclepiadaceae
Marsdenia tenacissima W.& A.	Madhurasaa	Asclepiadaceae
***Marsilea minuta* Linn.**	**Sunishannaka**	**Marsilaceae**
Marsilea minuta Linn.	Parnaka	Marsilaceae
***Melia azedarach* Linn.**	**Mahaanimba**	**Meliaceae**
Melia azedarach Linn.	Drekaa	Meliaceae

Melia azedarach Linn.	Vishamushtikaa	Meliaceae
***Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.**	**Naagakeshara**	**Guttiferae; Clusiaceae**
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Ahipushpa	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Gajakeshara	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Hema	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Ibhakeshara	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Karikeshara	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Keshara	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Naaga	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Naagaahva	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Naagapushpa	Guttiferae; Clusiaceae
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Uragendra-sumana	Guttiferae; Clusiaceae
***Michelia champaca* Linn.**	**Champak**	**Magnoliaceae**
Michelia champaca Linn.	Golden Champa	Magnoliaceae
***Microstylis muscifera* Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.**	**Jivaka**	**Orchidaceae**
Microstylis muscifera Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.	Madhura	Orchidaceae
***Microstylis wallichii* Lindl.; Syn *Malaxis acuminata* D. Don**	**Rshabhaka**	**Orchidaceae**
Microstylis wallichii Lindl.; Syn *Malaxis acuminata* D. Don	Rshabha	Orchidaceae
***Mimosa pudica* Linn.**	**Lajjaalu**	**Mimosaceae**
Mimosa pudica Linn.	Laajavanti	Mimosaceae
Mimosa pudica Linn.	Samangaa	Mimosaceae
***Mimusops elengi* Linn.**	**Bakula**	**Sapotaceae**
Mimusops elengi Linn.	Shakradruma	Sapotaceae
Mimusops hexandra Roxb.	Kshirini	Sapotaceae

Botanical Name	Ayurvedic Name	Family
Mimusops hexandra Roxb.	Kshirikaa	Sapotaceae
Mimusops hexandra Roxb.	Nripaadana	Sapotaceae
Mimusops hexandra Roxb.	Raajaadana	Sapotaceae
***Mitragyna parvifolia* (Roxb.) Korth.**	**Giri-kadamba**	**Rubiaceae**
Mitragyna parvifolia (Roxb.) Korth.	Kadamba (var.)	Rubiaceae
***Momordica charantia* Linn.**	**Kaaravellaka**	**Cucurbitaceae**
Momordica charantia Linn.	Kathilaka	Cucurbitaceae
Momordica charantia Linn.	Kaaravella	Cucurbitaceae
Momordica charantia Linn.	Kaaravelli	Cucurbitaceae
***Momordica dioica* Roxb. ex Willd.**	**Karkotikaa**	**Cucurbitaceae**
Momordica dioica Roxb. ex Willd.	Karkotaka	Cucurbitaceae
Momordica dioica Roxb. ex Willd.	Karkotikaa-vandhyaa	Cucurbitaceae
Momordica dioica Roxb. ex Willd.	Karkota	Cucurbitaceae
***Moringa oleifera* Lam.; Syn *M. pterygosperma* Gaertn.**	**Shobhaanjana**	**Moringaceae**
Moringa oleifera Lam.; Syn *M. pterygosperma* Gaertn.	Shigru	Moringaceae
***Mucuna monosperma* DC.**	**Kaakaandolaa**	**Fabaceae; Papilionaceae**
Mucuna monosperma DC.	Shukarashimbi	Fabaceae; Papilionaceae
***Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.**	**Kapikachhuu**	**Fabaceae; Papilionaceae**
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Aatmaguptaa	Fabaceae; Papilionaceae
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Markati	Fabaceae; Papilionaceae
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Svaguptaa	Fabaceae; Papilionaceae
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Svayamguptaa	Fabaceae; Papilionaceae
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Vaanari	Fabaceae; Papilionaceae

Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Vaanarikaa	Fabaceae; Papilionaceae
***Musa paradisiaca* Linn.; Syn *M. sapientum* Linn.**	**Kadali**	**Musaceae**
Musa paradisiaca Linn.; Syn *M. sapientum* Linn.	Kadala	Musaceae
Musa paradisiaca Linn.; Syn *M. sapientum* Linn.	Rambhaa	Musaceae
***Myrica esculenta* Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.**	**Katphala**	**Myricaceae**
Myrica esculenta Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.	Kaaphala	Myricaceae
Myrica esculenta Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.	Kaitarya	Myricaceae
***Myristica fragrance* Houtt.**	**Jaatiphala**	**Myristicaceae**
Myristica fragrance Houtt.	Jaatishasya	Myristicaceae
***Myristica fragrance* Houtt. (fragrant arill covering the fruits)**	**Jaatikosha**	**Myristicaceae**
Myristica fragrance Houtt. (fragrant arill covering the fruits)	Jaatipatra	Myristicaceae
Myristica fragrance Houtt. (fragrant arill covering the fruits)	Jaatipatraka	Myristicaceae
Myristica fragrance Houtt. (fragrant arill covering the fruits)	Jaatipatri	Myristicaceae
Myristica fragrance Houtt. (fragrant arill covering the fruits)	Jaavitree	Myristicaceae
***Nardostachys jatamansi* DC.; Syn *N. grandiflora* DC.**	**Jataamaansi**	**Valerianaceae**
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Bhutakeshi	Valerianaceae
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Jataa	Valerianaceae
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Jatilaa	Valerianaceae
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Maamsi	Valerianaceae
***Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.**	**Kamala**	**Nymphaeaceae**
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Ambuja	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Bisa	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Mrinaala	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Mrinaalikaa	Nymphaeaceae

Botanical Name	Ayurvedic Name	Family
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Padma	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Padmaka	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Padmakeshara	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Padmini	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Pankaja	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Pundarika	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Raajiva	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Shatapatra	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Utpala	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Varaatikaa	Nymphaeaceae
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Ambhoja	Nymphaeaceae
***Nerium indicum* Mill.; Syn *N. odorum* Soland.**	**Karavira**	**Apocynaceae**
Nerium indicum Mill.; Syn *N. odorum* Soland.	Ahvamaara	Apocynaceae
Nerium indicum Mill.; Syn *N. odorum* Soland.	Ashvahara	Apocynaceae
Nerium indicum Mill.; Syn *N. odorum* Soland.	Ashvaripu	Apocynaceae
Nerium indicum Mill.; Syn *N. odorum* Soland.	Hayamaaraka	Apocynaceae
Nerium indicum Mill.; Syn *N. odorum* Soland.	Hemapatra	Apocynaceae
***Nigella sativa* Linn.**	**Kaalaajaaji**	**Ranunculaceae**
Nigella sativa Linn.	Brihat jiraka	Ranunculaceae
Nigella sativa Linn.	Kalaunjee	Ranunculaceae
Nigella sativa Linn.	Mangarail	Ranunculaceae
Nigella sativa Linn.	Prithvikaa	Ranunculaceae
Nigella sativa Linn.	Sthula-jiraka	Ranunculaceae

Nigella sativa Linn.	Sushavi	Ranunculaceae
Nigella sativa Linn.	Upakunchikaa	Ranunculaceae
***Nyctanthes arbor-tristis* Linn.**	**Paarijaata**	**Oleaceae; Nyctanthaceae**
Nyctanthes arbor-tristis Linn.	Shephaali	Oleaceae; Nyctanthaceae
***Nymphaea alba* Linn.**	**Kumuda**	**Nymphaeaceae**
Nymphaea alba Linn.	Shaaluka	Nymphaeaceae
***Nymphaea stellata* Willd.**	**Nilotpala**	**Nymphaeaceae**
Nymphaea stellata Willd.	Nilaambuja	Nymphaeaceae
Nymphaea stellata Willd.	Niraja	Nymphaeaceae
Nymphaea stellata Willd.	Utpala-Nila	Nymphaeaceae
***Ocimum basilicum* Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.**	**Barbari**	**Labiatae; Lamiaceae**
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Kharapushpaa	Labiatae; Lamiaceae
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Kuthera	Labiatae; Lamiaceae
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Kutheraka	Labiatae; Lamiaceae
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Kutherakaa	Labiatae; Lamiaceae
***Ocimum sanctum* Linn.; Syn *O. tenuiflorum* Linn.**	**Tulasi**	**Labiatae; Lamiaceae**
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.	Surasaa	Labiatae; Lamiaceae
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.	Surasa	Labiatae; Lamiaceae
***Operculina turpethum* (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.**	**Trivrta**	**Convolvulaceae**
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Kaalaa	Convolvulaceae
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Kumbha	Convolvulaceae
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Tribhandi	Convolvulaceae
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Trvritaa	Convolvulaceae
***Ophiorrhiza mungos* Linn.**	**Sarpaakshi**	**Rubiaceae**

Botanical Name	Ayurvedic Name	Family
***Origanum majorana* Linn.; Syn *Majorana hortensis* Moench.**	**Phanijjaka**	**Labiatae; Lamiaceae**
Origanum majorana Linn.; Syn *Majorana hortensis* Moench.	Sukhaatmaka	Labiatae; Lamiaceae
***Oroxylum indicum* Vent.**	**Shyonaaka**	**Bignoniaceae**
Oroxylum indicum Vent.	Bhalluka	Bignoniaceae
Oroxylum indicum Vent.	Shonaka	Bignoniaceae
Oroxylum indicum Vent.	Tuntuka	Bignoniaceae
***Oryza sativa* Linn.**	**Shaali**	**Poaceae; Gramineae**
Oryza sativa Linn.	Raktashaali	Poaceae; Gramineae
Oryza sativa Linn.	Shashtika	Poaceae; Gramineae
Osmanthus fragrans Lour.	Vasuka	Oleaceae
Osmanthus fragrans Lour.	Ekaashthilaa	Oleaceae
***Ougeinia oogeinensis* (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.**	**Syandana**	**Lythraceae**
Ougeinia oogeinensis (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Tinishaa	Lythraceae
Ougeinia oogeinensis (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Tinisha	Lythraceae
***Oxalis corniculata* Linn.**	**Chaangeri**	**Oxalidaceae**
Oxalis corniculata Linn.	Amlapatrikaa	Oxalidaceae
Oxalis corniculata Linn.	Amlikaa	Oxalidaceae
***Paederia foetida* Linn.**	**Gandhaprasaarini**	**Rubiaceae**
Paederia foetida Linn.	Prasaarani	Rubiaceae
Paederia foetida Linn.	Putigandhaa	Rubiaceae
Paederia foetida Linn.	Sarani	Rubiaceae
***Pandanus odoratissimus* Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.**	**Ketaki**	**Pandanaceae**

Pandanus odoratissimus Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.	Ketaka	Pandanaceae
***Papaver somniferum* Linn.**	**Ahiphena**	**Papaveraceae**
Papaver somniferum Linn.	Khaakhasa	Papaveraceae
Papaver somniferum Linn.	Khas-phala	Papaveraceae
Papaver somniferum Linn.	Phena	Papaveraceae
***Paris polyphylla* Sm.**	**Haimavati**	**Liliaceae**
Paris polyphylla Sm.	Shvetavachaa	Liliaceae
***Parmelia perlata* (Huds.) Ach.**	**Shaileya**	**Parmeliaceae**
Parmelia perlata (Huds.) Ach.	Shaila	Parmeliaceae
Parmelia perlata (Huds.) Ach.	Shaileyaka	Parmeliaceae
***Paspalum scrobiculatum* Linn.**	**Kodrava**	**Poaceae; Gramineae**
Paspalum scrobiculatum Linn.	Koradusha	Poaceae; Gramineae
***Pentapetes phoenicea* Linn.**	**Bandhuuka**	**Sterculiaceae**
Pentapetes phoenicea Linn.	Arkavallabha	Sterculiaceae
Pentapetes phoenicea Linn.	Bandhuuka	Sterculiaceae
***Peucedanum graveolens* Linn.**	**Shataahvaa**	**Apiaceae**
***Phaseolus aconitifolius* Jacq.; Syn *Vagina aconitifolia* (Jacq.) Marechal.**	**Makushtha**	**Fabaceae; Papilionaceae**
Phaseolus aconitifolius Jacq.; Syn *Vagina aconitifolia* (Jacq.) Marechal.	Moth	Fabaceae; Papilionaceae
***Phaseolus mungo* Linn. non-Roxb. & auct.; Syn *Vigna mungo* (Linn.) Hepper.**	**Maasha**	**Fabaceae; Papilionaceae**
***Phaseolus radiatus* Linn. non-Roxb. & auct.; Syn *Vigna radiata* (Linn.) Wilczek.**	**Mudga**	**Fabaceae; Papilionaceae**
Phaseolus radiatus Linn. non-Roxb. & auct.; Syn *Vigna radiata* (Linn.) Wilczek.	Mungalya	Fabaceae; Papilionaceae
***Phaseolus trilobus* sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.**	**Mudgaparni**	**Fabaceae; Papilionaceae**
Phaseolus trilobus sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Suuryaparni	Fabaceae; Papilionaceae
Phaseolus trilobus sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Kaakaparni	Fabaceae; Papilionaceae

Botanical Name	Ayurvedic Name	Family
***Phoenix dactylifera* Linn.**	**Kharjuura**	**Palmae; Arecaceae**
Phoenix dactylifera Linn.	Kharjuraka	Palmae; Arecaceae
Phoenix dactylifera Linn.	Kharjurikaa	Palmae; Arecaceae
***Phoenix paludosa* Roxb.**	**Hintala**	**Palmae**
***Phragmites karka* Trin. ex Steud.; Syn *P. roxburghii* (Kunth) Steud., *P. maxima* Blatter & McCann in part.**	**Nala**	**Poaceae; Gramineae**
***Phyllanthus niruri* Linn.**	**Bhuumyaamalaki**	**Euphorbiaceae**
Phyllanthus niruri Linn.	Taamalaki	Euphorbiaceae
***Physalis minima* Linn.**	**Tankaari**	**Solanaceae**
Physalis minima Linn.	Parpotikaa	Solanaceae
***Picrorhiza kurroa* Royle. ex Benth.**	**Katuki**	**Scrophulariaceae**
Picrorhiza kurroa Royle. ex Benth.	Katu	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Katukaa	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Katurohini	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Katvi	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Matsyapittakhya	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Matsyashakalaa	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Tiktaa	Scrophulariaceae
Picrorhiza kurroa Royle. ex Benth.	Tiktaka-Rohini	Scrophulariaceae
***Pinus longifolia* Roxb.; Syn *P. roxburghii* Sarg.**	**Sarala**	**Pinaceae**
Pinus longifolia Roxb.; Syn *P. roxburghii* Sarg.	Shrivaasa	Pinaceae
Pinus longifolia Roxb.; Syn *P. roxburghii* Sarg.	Shrivestaka	Pinaceae
***Piper betle* Linn.**	**Taambula**	**Piperaceae**

Piper betle Linn.	Naagini	Piperaceae
Piper betle Linn.	Naagvallari	Piperaceae
***Piper chaba* Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.**	**Chavya**	**Piperaceae**
Piper chaba Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.	Chavikaa	Piperaceae
***Piper cubeba* Linn. f.**	**Kankola**	**Piperaceae**
Piper cubeba Linn. f.	Kakkola	Piperaceae
***Piper longum* Linn.**	**Pippali**	**Piperaceae**
Piper longum Linn.	Chapalaa	Piperaceae
Piper longum Linn.	Kanaaa	Piperaceae
Piper longum Linn.	Krishnaa	Piperaceae
Piper longum Linn.	Maagadhi	Piperaceae
Piper longum Linn.	Maagadhikaa	Piperaceae
Piper longum Linn.	Magadhaa	Piperaceae
Piper longum Linn.	Magadhodbhavaa	Piperaceae
Piper longum Linn.	Pippalikam	Piperaceae
Piper longum Linn.	Upkulyaa	Piperaceae
***Piper longum* Linn. (roots)**	**Pippalimula**	**Piperaceae**
Piper longum Linn. (roots)	Granthi	Piperaceae
Piper longum Linn. (roots)	Granthika	Piperaceae
Piper longum Linn. (roots)	Kanaamula	Piperaceae
Piper longum Linn. (roots)	Krishnaa-mula	Piperaceae
Piper longum Linn. (roots)	Maagadha-mula	Piperaceae
Piper longum Linn. (roots)	Maagadhi-mula	Piperaceae
***Piper nigrum* Linn.**	**Maricha**	**Piperaceae**

Botanical Name	Ayurvedic Name	Family
Piper nigrum Linn.	Katuka	Piperaceae
Piper nigrum Linn.	Ushana	Piperaceae
***Pistacia integerrima* Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.**	**Karkatashringi**	**Anacardiaceae**
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Kulingi	Anacardiaceae
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Kulirashringi	Anacardiaceae
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Shringi	Anacardiaceae
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Karkataahvaya	Anacardiaceae
***Pistia stratiotes* Linn. var. *cuneata* Engl.**	**Jalakumbhi**	**Araceae**
Pistia stratiotes Linn. var. *cuneata* Engl.	Vaariparni	Araceae
Pistia stratiotes Linn. var. *cuneata* Engl.	Vaarimuuli	Araceae
***Pisum sativum* Linn.**	**Kalaaya**	**Fabaceae**
Pisum sativum Linn.	Harenu	Fabaceae
Pisum sativum Linn.	Kaunti	Fabaceae
Pisum sativum Linn.	Satina	Fabaceae
***Pluchea lanceolata* C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)**	**Raasnaa**	**Compositae; Asteraceae**
Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Raasnikaa	Compositae; Asteraceae
Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Rasaa	Compositae; Asteraceae
Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Shreyasi	Compositae; Asteraceae
***Plumbago zeylanica* Linn.**	**Chitraka**	**Plumbaginaceae**

Plumbago zeylanica Linn.	Agni	Plumbaginaceae
Plumbago zeylanica Linn.	Anala	Plumbaginaceae
Plumbago zeylanica Linn.	Chitra	Plumbaginaceae
Plumbago zeylanica Linn.	Dahana	Plumbaginaceae
Plumbago zeylanica Linn.	Jvalanaakhya	Plumbaginaceae
Plumbago zeylanica Linn.	Paavaka	Plumbaginaceae
Plumbago zeylanica Linn.	Vahni	Plumbaginaceae
Plumbago zeylanica Linn.	Vaishvaanara	Plumbaginaceae
***Polygonatum verticillatum* All.**	**Medaa**	**Liliaceae**
Polygonatum verticillatum All.	Mahaamedaa	Liliaceae
***Polygonum affine* D. Don.; Syn *Bistorta affinis* (D. Don) Green.**	**Khukhudi**	**Polygonaceae**
Polygonum affine D. Don.; Syn *Bistorta affinis* (D. Don) Green.	Kukkuti	Polygonaceae
***Pongamia pinnata* Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.**	**Karanja**	**Papilionaceae; Fabaceae**
Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Naktaahva	Papilionaceae; Fabaceae
Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Naktamaala	Papilionaceae; Fabaceae
Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Naktamaalaka	Papilionaceae; Fabaceae
Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Putika	Papilionaceae; Fabaceae
***Premna herbacea* Roxb.; Syn *Pygmaeopremna hebacea* Moldenke.**	**Chaarati**	**Verbenaceae**
***Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.**	**Agnimantha**	**Verbenaceae**
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Arani	Verbenaceae
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Ganikaarikaa	Verbenaceae
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Shrikaarini	Verbenaceae
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Shriparni	Verbenaceae
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Vikraantaa	Verbenaceae
***Prosopis spicigera* Linn.; Syn *P. cineraria* Druce.**	**Shami**	**Mimosaceae**

Botanical Name	Ayurvedic Name	Family
Prosopis spicigera Linn.; Syn *P. cineraria* Druce.	Tungaa	Mimosaceae
Prosopis spicigera Linn.; Syn *P. cineraria* Druce.	Keshahantri	Mimosaceae
***Prunus amygdalus* Batsch. var. *amara* (bitter); var. *sativa* (sweet).**	**Badaam**	**Rosaceae**
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Vaataama	Rosaceae
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Vaataada	Rosaceae
***Prunus cerasoides* D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq.**	**Padmaka**	**Rosaceae**
Prunus cerasoides D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq.	Padmagandhi	Rosaceae
Prunus cerasoides D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq.	Padmaadyaa	Rosaceae
***Prunus cerasus* Linn.**	**Elavaaluka**	**Rosaceae**
Prunus cerasus Linn.	Elabaala	Rosaceae
***Pseudarthria viscida* Wt. & Arn.**	**Triparni**	**Papilionaceae; Fabaceae**
Pseudarthria viscida Wt. & Arn.	Sanaparni	Papilionaceae; Fabaceae
Pseudarthria viscida Wt. & Arn.	Shaalaparni	Papilionaceae; Fabaceae
***Psoralea corylifolia* Linn.**	**Baakuchi**	**Fabaceae; Papilionaceae**
Psoralea corylifolia Linn.	Avalguja	Fabaceae; Papilionaceae
Psoralea corylifolia Linn.	Shashilekhaa	Fabaceae; Papilionaceae
Psoralea corylifolia Linn.	Somaraaji	Fabaceae; Papilionaceae
Psoralea corylifolia Linn.	Vaakuchi	Fabaceae; Papilionaceae
***Pterocarpus marsupium* Roxb.**	**Bijaka**	**Fabaceae; Papilionaceae**
Pterocarpus marsupium Roxb.	Asana	Fabaceae; Papilionaceae
Pterocarpus marsupium Roxb.	Bija	Fabaceae; Papilionaceae
Pterocarpus marsupium Roxb.	Bijakasaara	Fabaceae; Papilionaceae
Pterocarpus marsupium Roxb.	Vijaysaara	Fabaceae; Papilionaceae

***Pterocarpus santalinus* Linn. f.**	**Raktachandana**	**Fabaceae; Papilionaceae**
Pterocarpus santalinus Linn. f.	Chandan-rakta	Fabaceae; Papilionaceae
Pterocarpus santalinus Linn. f.	Raktasaara	Fabaceae; Papilionaceae
***Pueraria tuberosa* DC.**	**Vidaari**	**Fabaceae; Papilionaceae**
Pueraria tuberosa DC.	Vidaarikaa	Fabaceae; Papilionaceae
Pueraria tuberosa DC.	Vidhari	Fabaceae; Papilionaceae
Pueraria tuberosa DC.	Vidaarikand	Fabaceae; Papilionaceae
***Punica granatum* Linn.**	**Daadima**	**Punicaceae**
Punica granatum Linn.	Daadimba	Punicaceae
Punica granatum Linn.	Raktapushpa	Punicaceae
***Putranjiva roxburghii* Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.**	**Putrajiva**	**Euphorbiaceae**
Putranjiva roxburghii Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Putrakamanjari	Euphorbiaceae
***Quercus infectoria* Oliv.**	**Maajuphalaka**	**Fagaceae**
Quercus infectoria Oliv.	Maayaaphala	Fagaceae
Quercus infectoria Oliv.	Maayakku	Fagaceae
***Randia dumetorum* Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.**	**Madana**	**Rubiaceae**
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Madanaphala	Rubiaceae
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Phala	Rubiaceae
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Pinditaka	Rubiaceae
***Randia uliginosa* DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.**	**Pinditaka**	**Rubiaceae**
Randia uliginosa DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Pindaalu	Rubiaceae

Botanical Name	Ayurvedic Name	Family
***Raphanus sativus* Linn.**	**Muulaka**	**Cruciferae; Brassicaceae**
Raphanus sativus Linn.	Mula	Cruciferae; Brassicaceae
Raphanus sativus Linn.	Sushkamulaka	Cruciferae; Brassicaceae
***Rauvolfia serpentina* Benth. ex Kurz.**	**Sarpagandhaa**	**Apocynaceae**
Rauvolfia serpentina Benth. ex Kurz.	Naakuli	Apocynaceae
***Rheum emodi* Wall. ex Meissn.; Syn *R. australe* D. Don.**	**Amlaparni**	**Polygonaceae**
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Amlavetasa	Polygonaceae
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Chukra	Polygonaceae
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Vetasaamla	Polygonaceae
***Rhus parviflora* Roxb.**	**Tintindeeka**	**Anacardiaceae**
Rhus parviflora Roxb.	Tintidi	Anacardiaceae
***Ricinus communis* Linn.**	**Eranda**	**Euphorbiaceae**
Ricinus communis Linn.	Vardhamaana	Euphorbiaceae
Ricinus communis Linn.	Vardhamaana	Euphorbiaceae
Ricinus communis Linn.	Gandharva	Euphorbiaceae
Ricinus communis Linn.	Gandharva-hasta	Euphorbiaceae
Ricinus communis Linn.	Gandharva-hastaka	Euphorbiaceae
Ricinus communis Linn.	Panchaangula	Euphorbiaceae
Ricinus communis Linn.	Rubu	Euphorbiaceae
Ricinus communis Linn.	Rubuka	Euphorbiaceae
Ricinus communis Linn.	Taruna	Euphorbiaceae
Ricinus communis Linn.	Urubuka	Euphorbiaceae
Ricinus communis Linn.	Vaataari	Euphorbiaceae

***Rivea ornata* (Roxb.) Choisy.**	**Phanji**	**Convolvulaceae**
***Roscoea procera* Wall.**	**Kaakoli**	**Zingiberaceae**
Roscoea procera Wall.	Kshira-shuklaa	Zingiberaceae
Roscoea procera Wall	Payasyaa	Zingiberaceae
***Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.**	**Manjishthaa**	**Rubiaceae**
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Arunaa	Rubiaceae
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Gandira	Rubiaceae
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Jingi	Rubiaceae
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Kaalaa	Rubiaceae
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Lohitayashtikaa	Rubiaceae
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Taamravalli	Rubiaceae
***Saccharum munja* Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.**	**Shara**	**Poaceae; Gramineae**
Saccharum munja Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.	Munja	Poaceae; Gramineae
***Saccharum officinarum* Linn.**	**Ikshu**	**Poaceae; Gramineae**
Saccharum officinarum Linn.	Aikshava	Poaceae; Gramineae
Saccharum officinarum Linn.	Kaantaaraka	Poaceae; Gramineae
Saccharum officinarum Linn.	Koshakaara	Poaceae; Gramineae
Saccharum officinarum Linn.	Paundra	Poaceae; Gramineae
***Saccharum spontaneum* Linn.**	**Kaasha**	**Poaceae; Gramineae**
Saccharum spontaneum Linn.	Kandekshu	Poaceae; Gramineae
***Salix caprea* Linn.**	**Vetasa**	**Salicaceae**
Salix caprea Linn.	Vanjula	Salicaceae
***Salmalia malabarica* (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.**	**Shaalmali**	**Bombacaceae**

Botanical Name	Ayurvedic Name	Family
Salmalia malabarica (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Mochaa	Bombacaceae
Salmalia malabarica (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Mochaahva	Bombacaceae
Salmalia malabarica (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Pichhila	Bombacaceae
***Salvadora oleoides* Decne.**	**Pilu**	**Salvadoraceae**
***Salvia plebeia* R. Br.**	**Samudrashosha**	**Labiatae; Lamiaceae**
Salvia plebeia R. Br.	Kammarkasa	Labiatae; Lamiaceae
***Santalum album* Linn.**	**Chandana**	**Santalaceae**
Santalum album Linn.	Bhadrashri	Santalaceae
Santalum album Linn.	Chandana-shveta	Santalaceae
Santalum album Linn.	Gandhasaara	Santalaceae
Santalum album Linn.	Malayaja	Santalaceae
Santalum album Linn.	Malayodbhava	Santalaceae
Santalum album Linn.	Patira	Santalaceae
***Saraca asoca* (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.**	**Ashoka**	**Caesalpiniaceae**
Saraca asoca (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.	Ashoku	Caesalpiniaceae
***Saussurea lappa* (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.**	**Kushtha**	**Asteraceae; Compositae**
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Aamaya	Asteraceae; Compositae
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Gada	Asteraceae; Compositae
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Kuth	Asteraceae; Compositae
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Ruk	Asteraceae; Compositae

***Saussurea obvallata* Wall. ex C. B. Clarke.**	**Prapaundarika**	**Asteraceae; Compositae**
***Schrebera swietenioides* Roxb.**	**Muskakaa**	**Oleaceae**
Schrebera swietenioides Roxb.	Vishalyaa	Oleaceae
Schrebera swietenioides Roxb.	Vishalyaka	Oleaceae
***Scindapsus officinalis* Schott.**	**Gajapippali**	**Araceae**
Scindapsus officinalis Schott.	Gajaahvaa	Araceae
Scindapsus officinalis Schott.	Gajakanaa	Araceae
Scindapsus officinalis Schott.	Gajakrishnaa	Araceae
Scindapsus officinalis Schott.	Hastipippali	Araceae
Scindapsus officinalis Schott.	Ibhakanaa	Araceae
Scindapsus officinalis Schott.	Karikanaa	Araceae
Scindapsus officinalis Schott.	Kasheruka	Araceae
***Scirpus kysoor* Roxb.; Syn *S. grossus* Linn. f.**	**Kasheruka**	**Cyperaceae**
Scirpus kysoor Roxb.; Syn *S. grossus* Linn. f.	Kaseru	Cyperaceae
Scirpus kysoor Roxb.; Syn *S. grossus* Linn. f.	Kasheru	Cyperaceae
Scirpus kysoor Roxb.; Syn *S. grossus* Linn. f.	Kasherukaa	Cyperaceae
***Selinum tenuifolium* Wall. ex DC.; Syn *S. candollei* DC.**	**Muraa**	**Apiaceae; Umbelliferae**
Selinum tenuifolium Wall. ex DC.; Syn *S. candollei* DC.	Surabhi	Apiaceae; Umbelliferae
***Semecarpus anacardium* Linn. f.**	**Bhallaataka**	**Anacardiaceae**
Semecarpus anacardium Linn. f.	Aarushka	Anacardiaceae
Semecarpus anacardium Linn. f.	Aarushkara	Anacardiaceae
Semecarpus anacardium Linn. f.	Agnika	Anacardiaceae
Semecarpus anacardium Linn. f.	Arushkara	Anacardiaceae
***Sesamum indicum* Linn.; Syn *S. orientale* Linn.**	**Tila**	**Pedaliaceae**

Botanical Name	Ayurvedic Name	Family
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Krishna Tila	Pedaliaceae
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Pinyaaka	Pedaliaceae
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Tila-asita	Pedaliaceae
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Tila-Krishna	Pedaliaceae
***Sesbania bispinosa* W. f. Wight; Syn *S. aculeata* (Willd.) Poir.**	**Itkata**	**Fabaceae; Papilionaceae**
Sesbania bispinosa W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Utkata	Fabaceae; Papilionaceae
Sesbania bispinosa W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Utkataahvaya	Fabaceae; Papilionaceae
***Sesbania grandiflora* (L.) Poir.; Syn *Agati grandiflora* Desv.**	**Agasti**	**Fabaceae; Papilionaceae**
Sesbania grandiflora (L.) Poir.; Syn *Agati grandiflora* Desv.	Kumbhodbhava-taru	Fabaceae; Papilionaceae
Sesbania grandiflora (L.) Poir.; Syn *Agati grandiflora* Desv.	Muni	Fabaceae; Papilionaceae
Sesbania grandiflora (L.) Poir.; Syn *Agati grandiflora* Desv.	Vangasena	Fabaceae; Papilionaceae
***Sesbania sesban* (Linn.) Merrill.; Syn *aegyptiaca* Pers.**	**Jayantikaa**	**Fabaceae; Papilionaceae**
Sesbania sesban (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Balaamotaa	Fabaceae; Papilionaceae
Sesbania sesban (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Motaabalaa	Fabaceae; Papilionaceae
***Setaria italica* (Linn.) Beauv.**	**Kangu**	**Poaceae; Gramineae**
Setaria italica (Linn.) Beauv.	Kanguni	Poaceae; Gramineae
***Shorea robusta* Gaertn. f.**	**Shaala**	**Dipterocarpaceae**
Shorea robusta Gaertn. f.	Saalasaara	Dipterocarpaceae
***Sida cordifolia* Linn.**	**Balaa**	**Malvaceae**
Sida cordifolia Linn.	Vaatyaa	Malvaceae
Sida cordifolia Linn.	Vaatyaalaka	Malvaceae
***Sida spinosa* Linn.; Syn *S. alba* Linn.**	**Naagabalaa**	**Malvaceae**
Sida spinosa Linn.; Syn *S. alba* Linn.	Gangaati	Malvaceae

***Smilax china* Linn.**	**Chopachini**	**Liliaceae**
Smilax china Linn.	Dvipaantara-vachaa	Liliaceae
***Solanum indicum* Linn.**	**Brihati**	**Solanaceae**
Solanum indicum Linn.	Simhi	Solanaceae
Solanum indicum Linn.	Simhi-brihat	Solanaceae
Solanum indicum Linn.	Vaartaaki	Solanaceae
Solanum indicum Linn.	Vaartaakini	Solanaceae
***Solanum melongena* Linn.**	**Vaartaaku**	**Solanaceae**
Solanum melongena Linn.	Vaartaaka	Solanaceae
Solanum melongena Linn.	Vrintaaka	Solanaceae
***Solanum nigrum* Linn.; Syn *S. rubrum* Mill.**	**Kaakamaachi**	**Solanaceae**
Solanum nigrum Linn.; Syn *S. rubrum* Mill.	Kaakaahya	Solanaceae
***Solanum tuberosum* Linn.**	**Aaluka**	**Solanaceae**
Solanum tuberosum Linn.	Aaruka	Solanaceae
***Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.**	**Kantakaari**	**Solanaceae**
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Vyaaghri	Solanaceae
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Dhaavani	Solanaceae
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Duhsparshaa	Solanaceae
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Kantakaarikaa	Solanaceae
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Kshudraa	Solanaceae

Botanical Name	Ayurvedic Name	Family
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Nidigdhikaa	Solanaceae
***Soymida febrifuga* A. Juss.**	**Maansrohini**	**Meliaceae**
Soymida febrifuga A. Juss.	Rohini	Meliaceae
***Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.**	**Munditakaa**	**Asteraceae; Compositae**
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Bhumikadamba	Asteraceae; Compositae
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Mundi	Asteraceae; Compositae
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Munditikaa	Asteraceae; Compositae
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Shraavani	Asteraceae; Compositae
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Shraavanikaa	Asteraceae; Compositae
***Spinacia oleracea* Linn.; Syn *S. tetrandra* Roxb.**	**Paalankikaa**	**Chenopodiaceae**
Spinacia oleracea Linn.; Syn *S. tetrandra* Roxb.	Paalankya	Chenopodiaceae
Spinacia oleracea Linn.; Syn *S. tetrandra* Roxb.	Paalakyaa	Chenopodiaceae
***Spondias pinnata* (Linn. f.) Kurz.; Syn *S. mangifera* Willd.**	**Aamraataka**	**Anacardiaceae**
Spondias pinnata (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Aamraata	Anacardiaceae
Spondias pinnata (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Aamadaa	Anacardiaceae
***Sterculia villosa* Roxb.**	**Uddaalaka**	**Sterculiaceae**
Sterculia villosa Roxb.	Uddaala	Sterculiaceae
***Stereospermum suaveolens* DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.**	**Paatalaa**	**Bignoniaceae**
Stereospermum suaveolens DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.	Kaamaduti	Bignoniaceae
Stereospermum suaveolens DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.	Kuberaakshi	Bignoniaceae

***Streblus asper* Lour.; Syn *Epicarpurus orientalis* Bl.**	**Shaakhotaka**	**Moraceae**
Streblus asper Lour.; Syn *Epicarpurus orientalis* Bl.	Shaakhota	Moraceae
***Strychnos nux-vomica* Linn.**	**Vishatinduka**	**Loganiaceae; Strychnaceae**
Strychnos nux-vomica Linn.	Kuchilaa	Loganiaceae; Strychnaceae
Strychnos nux-vomica Linn.	Vishamushtikaa	Loganiaceae; Strychnaceae
***Strychnos potatorum* Linn. f.**	**Kataka**	**Loganiaceae; Strychnaceae**
Strychnos potatorum Linn. f.	Katakaphala	Loganiaceae; Strychnaceae
Strychnos potatorum Linn. f.	Payah-prasaadi	Loganiaceae; Strychnaceae
***Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.**	**Chiraayita**	**Gentianaceae**
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kairaata	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kairaataka	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kiraata	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kiraataka	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kiraatatiktaa	Gentianaceae

Botanical Name	Ayurvedic Name	Family
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kiraatatiktaka	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Kiraatatiktakaa	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Raamasenaka	Gentianaceae
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Tiktaka	Gentianaceae
***Symplocos racemosa* Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.**	**Lodhra**	**Symplocaceae**
Symplocos racemosa Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Rodhra	Symplocaceae
Symplocos racemosa Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Shaavara	Symplocaceae
Symplocos racemosa Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Tilvaka	Symplocaceae
Symplocos racemosa Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Tirita	Symplocaceae
***Syzygium aromaticum* (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.**	**Lavanga**	**Myrtaceae**
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Devakusuma	Myrtaceae
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Devapushpa	Myrtaceae
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Kusuma	Myrtaceae
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Shrisangya-pushpa	Myrtaceae
***Syzygium cuminii* (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.**	**Jambu**	**Myrtaceae**
Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Mahaphalaa	Myrtaceae

Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Phalendraa	Myrtaceae
***Tamarindus indica* Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.**	**Amlikaa**	**Caesalpiniaceae**
Tamarindus indica Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.	Chinchaa	Caesalpiniaceae
***Taxus baccata* Linn.**	**Sthauneyaka**	**Taxaceae**
Taxus baccata Linn.	Sthauneya	Taxaceae
***Tecomella undulata* (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.**	**Rohitaka**	**Bignoniaceae**
Tecomella undulata (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.	Rohitaka-rakta	Bignoniaceae
***Tectona grandis* Linn. f.**	**Shaaka**	**Verbenaceae**
Tectona grandis Linn. f.	Bhuumisaha	Verbenaceae
Tectona grandis Linn. f.	Dwaaradaaru	Verbenaceae
***Tephrosia purpurea* (L.) Pers.; Syn *T. hamiltonii* Drumm.**	**Sharapunkhaa**	**Fabaceae; Papilionaceae**
Tephrosia purpurea (L.) Pers.; Syn *T. hamiltonii* Drumm.	Vishikhaapunkhaa-shvetaa	Fabaceae; Papilionaceae
***Teramnus labialis* Spreng.**	**Maashaparni**	**Papilionaceae**
Teramnus labialis Spreng.	Mahaasahaa	Papilionaceae
Teramnus labialis Spreng.	Suuryaasani	Papilionaceae
***Terminalia arjuna* (Roxb.) W. & A**	**Arjuna**	**Combretaceae**
Terminalia arjuna (Roxb.) W. & A	Kakubha	Combretaceae
Terminalia arjuna (Roxb.) W. & A	Kukubha	Combretaceae
Terminalia arjuna (Roxb.) W. & A	Viravriksha	Combretaceae
Terminalia arjuna (Roxb.) W. & A	Indravriksha	Combretaceae
Terminalia arjuna (Roxb.) W. & A	Paartha	Combretaceae
Terminalia arjuna (Roxb.) W. & A	Virataru	Combretaceae
Terminalia arjuna (Roxb.) W. & A	Aksha	Combretaceae
***Terminalia bellirica* Roxb.**	**Bibhitaki**	**Combretaceae**

Botanical Name	Ayurvedic Name	Family
Terminalia bellirica Roxb.	Baibhita	Combretaceae
Terminalia bellirica Roxb.	Bibhita	Combretaceae
Terminalia bellirica Roxb.	Kali	Combretaceae
Terminalia bellirica Roxb.	Kalidru	Combretaceae
Terminalia bellirica Roxb.	Vibhitak.	Combretaceae
***Terminalia chebula* Retz.**	**Haritaki**	**Combretaceae**
Terminalia chebula Retz.	Abhaya	Combretaceae
Terminalia chebula Retz.	Abhayaa	Combretaceae
Terminalia chebula Retz.	Kaayasthaa	Combretaceae
Terminalia chebula Retz.	Pathyaa	Combretaceae
Terminalia chebula Retz.	Praanadaa	Combretaceae
***Thespesia populnea* Soland. ex Correa.; Syn *Hibiscus populneus* Linn.**	**Paarshvpippala**	**Malvaceae**
Thespesia populnea Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Gardhabhaandaka	Malvaceae
Thespesia populnea Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Paarishapippala	Malvaceae
***Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.**	**Guduuchi**	**Menispermaceae**
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Amritalataa	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Amrutaa	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Amrutavalli	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Chhinnodbhavaa	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Chinnaa	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Kundali	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Madhuparni	Menispermaceae
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Vatsaadani	Menispermaceae

Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Vayasthaa	Menispermaceae
***Trachyspermum ammi* (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.**	**Yavaani**	**Apiaceae; Umbelliferae**
Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Yamaanikaa	Apiaceae; Umbelliferae
Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Yavaanikaa	Apiaceae; Umbelliferae
***Trapa natans* Linn. var. bispinosa (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.**	**Shrngaataka**	**Trapaceae**
Trapa natans Linn. var. bispinosa (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Shrngaata	Trapaceae
***Trianthema portulacastrum* Linn.; Syn *T. monogyna* Linn.**	**Varshaabhu**	**Aizoaceae**
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.	Vasuka	Aizoaceae
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.	Vrischira	Aizoaceae
***Tribulus terrestris* Linn.**	**Gokshura**	**Zygophyllaceae**
Tribulus terrestris Linn.	Gokantaka	Zygophyllaceae
Tribulus terrestris Linn.	Gokshuraka	Zygophyllaceae
Tribulus terrestris Linn.	Svadamstraa	Zygophyllaceae
Tribulus terrestris Linn.	Trikantaka	Zygophyllaceae
***Trichosanthes bracteata* (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.**	**Vishaalaa**	**Cucurbitaceae**
Trichosanthes bracteata (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Indravaaruni	Cucurbitaceae
Trichosanthes bracteata (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Mahaakaala	Cucurbitaceae
***Tricosanthes dioica* Roxb.**	**Patola**	**Cucurbitaceae**
Tricosanthes dioica Roxb.	Karkashadala	Cucurbitaceae
Tricosanthes dioica Roxb.	Kulaka	Cucurbitaceae

Botanical Name	Ayurvedic Name	Family
Tricosanthes dioica Roxb.	Patoli-tikta	Cucurbitaceae
Tricosanthes dioica Roxb.	Raajiphala	Cucurbitaceae
***Trigonella foenum-graecum* Linn.**	**Methikaa**	**Fabaceae; Papilionaceae**
Trigonella foenum-graecum Linn.	Methi	Fabaceae; Papilionaceae
Trigonella foenum-graecum Linn.	Vastikaa	Fabaceae; Papilionaceae
Trigonella foenum-graecum Linn.	Selu	Fabaceae; Papilionaceae
***Triticum aestivum* Linn.**	**Godhuuma**	**Poaceae; Gramineae**
Triticum aestivum Linn.	Sumanaa	Poaceae; Gramineae
Triticum aestivum Linn.	Sumanah	Poaceae; Gramineae
***Typha angustata* Bory & Chaub.; Syn *T. australis* Schum. & Thonn.**	**Gundra**	**Typhaceae**
Typha angustata Bory & Chaub.; Syn *T. australis* Schum. & Thonn.	Gundraa	Typhaceae
Typha angustata Bory & Chaub.; Syn *T. australis* Schum. & Thonn.	Gundraka	Typhaceae
***Uraria picta* Desv.; Syn *Hedysarum pictum* Jacq.**	**Prishniparni**	**Fabaceae; Papilionaceae**
Uraria picta Desv.; Syn *Hedysarum pictum* Jacq.	Dhaavani	Fabaceae; Papilionaceae
Uraria picta Desv.; Syn *Hedysarum pictum* Jacq.	Kalashi	Fabaceae; Papilionaceae
Uraria picta Desv.; Syn *Hedysarum pictum* Jacq.	Prithakparni	Fabaceae; Papilionaceae
Uraria picta Desv.; Syn *Hedysarum pictum* Jacq.	Shrigaalavinnaa	Fabaceae; Papilionaceae
***Valeriana wallichii* DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.**	**Tagara**	**Valerianaceae**
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Ambu	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Baala	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Baalaka	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Barhishtha	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Hrivera	Valerianaceae

Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Jala	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Kacha	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Murdhaja	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Nata	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Nira	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Paatha	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Paya	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Toya	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Udichi	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Udichya	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Vaari	Valerianaceae
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Vajraaksha	Valerianaceae
***Vateria indica* Linn.; Syn *V. malabarica* Bl.**	**Sarja**	**Dipterocarpaceae**
Vateria indica Linn.; Syn *V. malabarica* Bl.	Sarjaahva	Dipterocarpaceae
***Vernonia cinerea* Less.**	**Sahadevi**	**Asteraceae; Compositae**
Vernonia cinerea Less.	Sahadevaa	Asteraceae; Compositae
***Vetiveria zizanioides* (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).**	**Ushira**	**Poaceae; Gramineae**
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Nalada	Poaceae; Gramineae
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Sevya	Poaceae; Gramineae
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Virana	Poaceae; Gramineae
***Vigna unquiculata* (Linn.) Walp.**	**Raajamaasha**	**Fabaceae**

Botanical Name	Ayurvedic Name	Family
***Vitex agnus-castus* Linn.**	**Renukaa**	**Verbenaceae**
***Vitex negundo* Linn.**	**Nirgundi**	**Verbenaceae**
Vitex negundo Linn.	Sinduka	Verbenaceae
***Vitis pedata* Vahl. ex Wall.**	**Godhaapadi**	**Vitaceae**
***Vitis vinifera* Linn.**	**Draakshaa**	**Vitaceae**
Vitis vinifera Linn.	Gostana	Vitaceae
Vitis vinifera Linn.	Haarahuraa	Vitaceae
Vitis vinifera Linn.	Mridvikaa	Vitaceae
***Wedelia chinensis* Merrill.; Syn *W. calendulaceae* Less. non-Rich.**	**Kesharaaga**	**Asteraceae; Compositae**
Wedelia chinensis Merrill.; Syn *W. calendulaceae* Less. non-Rich.	Kesharaaj	Asteraceae; Compositae
***Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)**	**Ashwagandhaa**	**Solanaceae**
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Ashvakanda	Solanaceae
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Baajigandhaa	Solanaceae
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Gandharvagandhaa	Solanaceae
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Turaga	Solanaceae
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Turagagandhaa	Solanaceae
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Turangagandhaa	Solanaceae
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Vaajigandhaa	Solanaceae
***Woodfordia fruticosa* Kurz.; Syn *W. floribunda* Salisb.**	**Dhaataki**	**Lythraceae**
Woodfordia fruticosa Kurz.; Syn *W. floribunda* Salisb.	Dhaatri	Lythraceae
Woodfordia fruticosa Kurz.; Syn *W. floribunda* Salisb.	Kunjaraa	Lythraceae
***Zanthoxylum alatum* Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.**	**Tumburu**	**Rutaceae**
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Tejohvaa	Rutaceae

Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Tejovati	Rutaceae
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Tumburah	Rutaceae
***Zingiber officinale* Rosc.**	**Aardraka**	**Zingiberaceae**
Zingiber officinale Rosc.	Aardra	Zingiberaceae
Zingiber officinale Rosc.	Aardrikaa	Zingiberaceae
Zingiber officinale Rosc.	Aushadha	Zingiberaceae
Zingiber officinale Rosc.	Mahaushadha	Zingiberaceae
Zingiber officinale Rosc.	Naagara	Zingiberaceae
Zingiber officinale Rosc.	Shringavera	Zingiberaceae
Zingiber officinale Rosc.	Shunthi	Zingiberaceae
Zingiber officinale Rosc.	Vishva	Zingiberaceae
Zingiber officinale Rosc.	Vishvaa	Zingiberaceae
Zingiber officinale Rosc.	Vishvaahva	Zingiberaceae
Zingiber officinale Rosc.	Vishvabhesaja	Zingiberaceae
Zingiber officinale Rosc.	Vishvajaa	Zingiberaceae
Zingiber officinale Rosc.	Vishvaushadha	Zingiberaceae
***Zizyphus jujuba* (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.**	**Badara**	**Rhamnaceae**
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Baadara	Rhamnaceae
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Badaraamla	Rhamnaceae
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Badari	Rhamnaceae
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Kola	Rhamnaceae
Zizyphus nummularia (Burm. f.) Wight. & Arn.; Syn *Z. rotundifolia* Lam., *Rhamnus nummularia* Burm. f.	Karkandhu	Rhamnaceae

BY AYURVEDIC NAME

Ayurvedic Name	Botanical Name	Family
Aaamalaki	*Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.	Euphorbiaceae
Aabhaa	*Acacia arabica* Willd. var. *indica* Benth.	Mimosaceae
Aadhaki	*Cajanus cajan* (Linn.) Millsp.; Syn *C. indicus* Spreng.	Fabaceae
Aakaarakarabha	*Anacyclus pyrethrum* DC.; Syn *A. officinarum* Haye	Compositae, asteraceae
Aakulakrit	*Anacyclus pyrethrum* DC.; Syn *A. officinarum* Haye	Compositae, asteraceae
Aaluka	*Solanum tuberosum* Linn.	Solanaceae
Aamadaa	*Spondias pinnata* (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Anacardiaceae
Aamala	*Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.	Euphorbiaceae
Aamalaa	*Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.	Euphorbiaceae
Aamalaka	*Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.	Euphorbiaceae
Aamaya	*Saussurea lappa* (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Asteraceae; Compositae
Aamra	*Mangifera indica* Linn.	Anacardiaceae
Aamraata	*Spondias pinnata* (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Anacardiaceae
Aamraataka	*Spondias pinnata* (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Anacardiaceae
Aaragvadha	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Aardra	*Zingiber officinale* Rosc.	Zingiberaceae
Aardraka	*Zingiber officinale* Rosc.	Zingiberaceae
Aardrikaa	*Zingiber officinale* Rosc.	Zingiberaceae
Aarevata	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Aaruka	*Solanum tuberosum* Linn.	Solanaceae
Aarushka	*Semecarpus anacardium* Linn. f.	Anacardiaceae

Aarushkara	*Semecarpus anacardium* Linn. f.	Anacardiaceae
Aasphotaa	*Clitoria ternatea* Linn.	Papilionaceae; Fabaceae
Aatarushaka	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Aatmaguptaa	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Abda	*Cyperus rotundus* Linn.	Cyperaceae
Abhaya	*Terminalia chebula* Retz.	Combretaceae
Abhayaa	*Terminalia chebula* Retz.	Combretaceae
Agaru	*Aquilaria agallocha* Roxb.; Syn *A. malaccenis* Lamk.	Thymelaceae
Agasti	*Sesbania grandiflora* (L.) Poir.; Syn *Agati grandiflora* Desv.	Fabaceae; Papilionaceae
Agni	*Plumbago zeylanica* Linn.	Plumbaginaceae
Agnika	*Semecarpus anacardium* Linn. f.	Anacardiaceae
Agnimantha	*Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Verbenaceae
Agnipatri	*Ammania baccifera* Linn.	Lythraceae
Ahimsraa	*Capparis sepiaria* Linn.	Capparidaceae
Ahimsraka	*Capparis sepiaria* Linn.	Capparidaceae
Ahiphena	*Papaver somniferum* Linn.	Papaveraceae
Ahipushpa	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Ahvamaara	*Nerium indicum* Mill.; Syn *N. odorum* Soland.	Apocynaceae
Aikshava	*Saccharum officinarum* Linn.	Poaceae; Gramineae
Aindri	*Bacopa monnieri* (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Aindri	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Ajaaji	*Cuminum cyminum* Linn.	Umbelliferae; Apiaceae
Ajagandhaa	*Gynandropsis gynandra* (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Capparidaceae
Ajakarna	*Dipterocarpus turbinatus* Gaertn. f.; *D. indicus* Bedd.	Dipterocarpaceae

Ayurvedic Name	Botanical Name	Family
Ajamoda	*Apium graveolens* Linn.	Apiaceae, Umbelliferae
Ajamodaa	*Apium graveolens* Linn.	Apiaceae, Umbelliferae
Ajamodikaa	*Apium graveolens* Linn.	Apiaceae, Umbelliferae
Ajashringi	*Gymnema sylvestre* R. Br.	Asclepiadaceae
Aksha	*Terminalia arjuna* (Roxb.) W. & A	Combretaceae
Alambushaa	*Biophytum sensitivum* (Linn.) DC.; Syn *Oxalis sensitiva* Linn.	Oxalidaceae
Alarka	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae
Amaradaaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Ambasthaa	*Cissampelos pareira* Linn.	Menispermaceae
Ambhoda	*Cyperus rotundus* Linn.	Cyperaceae
Ambhodhara	*Cyperus rotundus* Linn.	Cyperaceae
Ambhoja	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Ambu	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Ambuja	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Amburuha	*Ionidium suffruticosum* Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.	Violaceae
Amlaparni	*Rheum emodi* Wall. ex Meissn.; Syn *R. australe* D. Don.	Polygonaceae
Amlapatrikaa	*Oxalis corniculata* Linn.	Oxalidaceae
Amlavetasa	*Rheum emodi* Wall. ex Meissn.; Syn *R. australe* D. Don.	Polygonaceae
Amlikaa	*Oxalis corniculata* Linn.	Oxalidaceae
Amlikaa	*Tamarindus indica* Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.	Caesalpiniaceae
Amrita	*Aconitum ferox* Wall. ex Ser.	Ranunculaceae
Amritalataa	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Amrutaa	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae

Amrutavalli	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Amshuka	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Amshumati	*Desmodium gangeticum* DC.; Syn *Hedysarum gangeticum* Linn.	Fabaceae
Anala	*Plumbago zeylanica* Linn.	Plumbaginaceae
Anantaa	*Hemidesmus indicus* (L.) R. Br.; Syn *Periploca indica* Linn.	Asclepiadaceae; Periplocaceae
Ankola	*Alangium salviifolium* (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Alangiaceae
Ankota	*Alangium salviifolium* (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Alangiaceae
Ankotaka	*Alangium salviifolium* (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Alangiaceae
Apaamaarga	*Achyranthes aspera* Linn.	Amaranthaceae
Aparaajitaa	*Clitoria ternatea* Linn.	Papilionaceae; Fabaceae
Aralu	*Ailanthus excelsa* Roxb.	Simaroubaceae
Arani	*Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Verbenaceae
Arimeda	*Acacia leucophloea* (Roxb.) Willd.; Syn *A. alba* Willd.	Mimosaceae
Arishta	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Arishtaka	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Arjuna	*Terminalia arjuna* (Roxb.) W. & A	Combretaceae
Arkakarabha	*Anacyclus pyrethrum* DC.; Syn *A. officinarum* Haye	Compositae, asteraceae
Arkavallabha	*Pentapetes phoenicea* Linn.	Sterculiaceae
Ark-pushpi	*Holostemma rheedii* Wall.; Syn *H. annularis* (Roxb.) K. Schum., *H. ada-kodien* Schult., *Asclepias annularis* Roxb.	Asclepiadaceae
Arrowroot	*Curcuma angustifolia* Roxb.	Zingiberaceae
Arunaa	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Arushkara	*Semecarpus anacardium* Linn. f.	Anacardiaceae
Asana	*Pterocarpus marsupium* Roxb.	Fabaceae; Papilionaceae

Ayurvedic Name	Botanical Name	Family
Ashmabheda	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Ashmabhedaka	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Ashmabhid	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Ashmantaka	*Bauhinia vahlii* W. & A.	Caesalpiniaceae
Ashoka	*Saraca asoca* (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.	Caesalpiniaceae
Ashoku	*Saraca asoca* (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.	Caesalpiniaceae
Ashvahara	*Nerium indicum* Mill.; Syn *N. odorum* Soland.	Apocynaceae
Ashvakanda	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Ashvaripu	*Nerium indicum* Mill.; Syn *N. odorum* Soland.	Apocynaceae
Ashvattha	*Ficus religiosa* Linn.	Moraceae
Ashwagandhaa	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Ashwakarna	*Dipterocarpus turbinatus* Gaertn. f.; *D. indicus* Bedd.	Dipterocarpaceae
Asitaka	*Aquilaria agallocha* Roxb.; Syn *A. malaccenis* Lamk.	Thymelaceae
Asthisamhaara	*Cissus quadrangular* Linn.; Syn *Vitis quadrangula* Wall.	Vitaceae
Asthisamhrita	*Cissus quadrangular* Linn.; Syn *Vitis quadrangula* Wall.	Vitaceae
Atarunadaaru	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Atarushaka	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Atasi	*Linum usitatissimum* Linn.	Linaceae
Atibalaa	*Abutilon indicum* Linn. Sweet	Malvaceae
Ativisha	*Aconitum heterophyllum* Wall. ex Royle.	Ranunculaceae
Ativishaa	*Aconitum heterophyllum* Wall. ex Royle.	Ranunculaceae
Ativrihatphala	*Artocarpus heterophyllus* Lam.; Syn *A. integrifolia* Linn. f.	Moraceae
Audumbar	*Ficus glomerata* Roxb.; Syn *F. racemosa* Linn.	Moraceae

Audumbar	*Ficus glomerata* Roxb.; Syn *F. racemosa* Linn.	Moraceae
Aushadha	*Zingiber officinale* Rosc.	Zingiberaceae
Avalguja	*Psoralea corylifolia* Linn.	Fabaceae; Papilionaceae
Baadara	*Zizyphus jujuba* (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Rhamnaceae
Baajigandhaa	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Baakuchi	*Psoralea corylifolia* Linn.	Fabaceae; Papilionaceae
Baala	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Baalaka	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Baana	*Barleria cristata* Linn.	Acanthaceae
Babbuula	*Acacia arabica* Willd. var. *indica* Benth.	Mimosaceae
Babula	*Acacia arabica* Willd. var. *indica* Benth.	Mimosaceae
Badaam	*Prunus amygdalus* Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Rosaceae
Badara	*Zizyphus jujuba* (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Rhamnaceae
Badaraamla	*Zizyphus jujuba* (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Rhamnaceae
Badari	*Zizyphus jujuba* (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Rhamnaceae
Bahulaa	*Elettaria cardamomum* Maton.	Zingiberaceae
Bahupaada	*Ficus benghalensis* Linn.	Moraceae
Bahuputri	*Asparagus racemosus* Willd.	Asparagaceae
Bahuvaara	*Cordia dichotoma* Forst f.; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.	Boraginaceae
Baibhita	*Terminalia bellirica* Roxb.	Combretaceae
Bakula	*Mimusops elengi* Linn.	Sapotaceae
Balaa	*Sida cordifolia* Linn.	Malvaceae
Balaamotaa	*Sesbania sesban* (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Fabaceae; Papilionaceae
Banakalami	*Ipomoea sepiaria* Koen. ex Roxb.; Syn *I. maxima* (Linn. f.) G. Don.	Convolvulaceae

Ayurvedic Name	Botanical Name	Family
Bandhuuka	*Pentapetes phoenicea* Linn.	Sterculiaceae
Bandhuuka	*Pentapetes phoenicea* Linn.	Sterculiaceae
Barbari	*Ocimum basilicum* Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Labiatae; Lamiaceae
Barhishikhaa	*Actiniopteris dichotoma* Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Adiantaceae
Barhishtha	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Bastagandhaa	*Gynandropsis gynandra* (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Capparidaceae
Bhaarangi	*Clerodendrum serratum* (Linn.) Moon.	Verbenaceae
Bhaarati	*Bacopa monnieri* (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Bhaargi	*Clerodendrum serratum* (Linn.) Moon.	Verbenaceae
Bhaasvanmula	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae
Bhadraa	*Aerva lanata* (L.) Juss. ex Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Amaranthaceae
Bhadraahva	*Aerva lanata* (L.) Juss. ex Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Amaranthaceae
Bhadradaaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Bhadra-ghana	*Cyperus rotundus* Linn.	Cyperaceae
Bhadramusta	*Cyperus rotundus* Linn.	Cyperaceae
Bhadramustaa	*Cyperus rotundus* Linn.	Cyperaceae
Bhadramustaka	*Cyperus rotundus* Linn.	Cyperaceae
Bhadrashri	*Santalum album* Linn.	Santalaceae
Bhallaataka	*Semecarpus anacardium* Linn. f.	Anacardiaceae
Bhalluka	*Oroxylum indicum* Vent.	Bignoniaceae
Bhandi	*Albizia lebbeck* (Linn.) Willd.	Mimosaceae

Bhandila	*Albizia lebbeck* (Linn.) Willd.	Mimosaceae
Bhangaa	*Cannabis sativa* Linn.; Syn *C. indica* Linn.	Cannabinaceae
Bhangura	*Aconitum heterophyllum* Wall. ex Royle.	Ranunculaceae
Bhavalingi	*Bryonopsis laciniosa* (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Cucurbitaceae
Bhiru	*Asparagus racemosus* Willd.	Asparagaceae
Bhringa	*Eclipta alba* (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Asteraceae: Compositae
Bhringaraaja	*Eclipta alba* (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Asteraceae: Compositae
Bhringavriksha	*Himenodictyon excelsum* Wall.	Rubiaceae
Bhumikadamba	*Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Asteraceae; Compositae
Bhuminimba	*Andrographis paniculata* Wall. ex Nees.	Acanthaceae
Bhutakeshi	*Nardostachys jatamansi* DC.; Syn *N. grandiflora* DC.	Valerianaceae
Bhutika	*Cymbopogon martini* Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Poaceae
Bhuumisaha	*Tectona grandis* Linn. f.	Verbenaceae
Bhuumyaamalaki	*Phyllanthus niruri* Linn.	Euphorbiaceae
Bhuunimba	*Andrographis paniculata* Wall. ex Nees.	Acanthaceae
Bhuutika	*Cymbopogon citratus* (DC.) Stapf.; Syn *Andropogon citratus* DC.	Poaceae
Bhuutikaa	*Cymbopogon citratus* (DC.) Stapf.; Syn *Andropogon citratus* DC.	Poaceae
Bhuutikaa	*Cymbopogon jwarancusa* (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.	Poaceae
Bibhita	*Terminalia bellirica* Roxb.	Combretaceae
Bibhitaki	*Terminalia bellirica* Roxb.	Combretaceae
Bija	*Pterocarpus marsupium* Roxb.	Fabaceae; Papilionaceae
Bijaka	*Pterocarpus marsupium* Roxb.	Fabaceae; Papilionaceae
Bijakasaara	*Pterocarpus marsupium* Roxb.	Fabaceae; Papilionaceae
Bijapuraka	*Citrus medica* Linn.	Rutaceae

Ayurvedic Name	Botanical Name	Family
Bijpuura	*Citrus medica* Linn.	Rutaceae
Bilva	*Aegle marmelos* (L.) Correa ex Roxb.	Rutaceae
Bimbi	*Coccinia indica* W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Cucurbitaceae
Bisa	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Bodhidru	*Ficus religiosa* Linn.	Moraceae
Bola	*Commiphora molmol* (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Burseraceae
Braahmi	*Bacopa monnieri* (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Brihat jiraka	*Nigella sativa* Linn.	Ranunculaceae
Brihat Trina	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Brihat-elaa	*Amomum subulatum* Roxb.	Zingiberaceae
Brihati	*Solanum indicum* Linn.	Solanaceae
Chaangeri	*Oxalis corniculata* Linn.	Oxalidaceae
Chaar	*Buchanania lanzan* Spreng.; Syn *B. latifolia* Roxb.	Anacardiaceae
Chaarati	*Premna herbacea* Roxb.; Syn *Pygmaeopremna hebacea* Moldenke.	Verbenaceae
Chakramarda	*Cassia tora* Linn.	Calsalpiniaceae
Chakramardaka	*Cassia tora* Linn.	Calsalpiniaceae
Champak	*Michelia champaca* Linn.	Magnoliaceae
Chana	*Cicer arietinum* Linn.	Fabaceae; Papilionaceae
Chanaka	*Cicer arientinum* Linn.	Fabaceae; Papilionaceae
Chanakaa	*Cicer arientinum* Linn.	Fabaceae; Papilionaceae
Chanchu	*Corchorus fascicularis* Lam.	Tiliaceae

Chanchuka	*Corchorus fascicularis* Lam.	Tiliaceae
Chandaa	*Angelica archangelica* Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Umbelliferae, Apiaceae
Chandaam-shuka	*Angelica archangelica* Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Umbelliferae, Apiaceae
Chandana	*Santalum album* Linn.	Santalaceae
Chandana-shveta	*Santalum album* Linn.	Santalaceae
Chandan-rakta	*Pterocarpus santalinus* Linn. f.	Fabaceae; Papilionaceae
Chandra	*Cinnamomum camphora* (Linn.) Nees & Eberm.	Lauraceae
Chandrashuura	*Lepidium sativum* Linn.	Cruciferae; Brassicaceae
Chandrikaa	*Lepidium sativum* Linn.	Cruciferae; Brassicaceae
Chapalaa	*Piper longum* Linn.	Piperaceae
Charma-kaaraaluka	*Dioscorea bulbifera* Linn.; Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch-Ham ex Wall.	Dioscoreaceae
Chaturangula	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Chavikaa	*Piper chaba* Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.	Piperaceae
Chavya	*Piper chaba* Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.	Piperaceae
Chhaagashringi	*Gymnema sylvestre* R. Br.	Asclepiadaceae
Chhatraa	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Chhatraakhya	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Chhinnodbhavaa	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Chinchaa	*Tamarindus indica* Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.	Caesalpiniaceae
Chinnaa	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Chiraayita	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Chirabilva	*Holoptelea integrifolia* Planch.	Ulamaceae
Chitra	*Plumbago zeylanica* Linn.	Plumbaginaceae
Chitraka	*Plumbago zeylanica* Linn.	Plumbaginaceae

Ayurvedic Name	Botanical Name	Family
Chitraphalaa	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Chocha	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Chopachini	*Smilax china* Linn.	Liliaceae
Choraka	*Angelica glauca* Edgew.	Umbelliferae, Apiaceae
Chukra	*Rheum emodi* Wall. ex Meissn.; Syn *R. australe* D. Don.	Polygonaceae
Chuta	*Mangifera indica* Linn.	Anacardiaceae
Daadima	*Punica granatum* Linn.	Punicaceae
Daadimba	*Punica granatum* Linn.	Punicaceae
Daalchini	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Daaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Daaruharidraa	*Berberis asiatica* Roxb. ex DC.; Syn *Berberis aristata* DC.	Berberidaceae
Daaruka	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Daarunishaa	*Berberis asiatica* Roxb. ex DC.; Syn *Berberis aristata* DC.	Berberidaceae
Daarusitaa	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Daarvi	*Berberis asiatica* Roxb. ex DC.; Syn *Berberis aristata* DC.	Berberidaceae
Dadhiphala	*Feronia limonia* (Linn.) Swingle.; Syn *F. elephantum* Corr.	Rutaceae
Dadrughna	*Cassia tora* Linn.	Calsalpiniaceae
Dahana	*Plumbago zeylanica* Linn.	Plumbaginaceae
Dala	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Damanaka	*Artemisia vulgaris* Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Asteraceae; Compositae
Dantashatha	*Citrus limon* (Linn.) Burm. f.	Rutaceae
Dantashatha	*Citrus medica* Linn.	Rutaceae

Danti	*Baliospermum montanum* (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.	Euphorbiaceae
Dantiphala	*Croton tiglium* Linn.	Euphorbiaceae
Darbha	*Imperata cylindrica* Rausch.; Syn *I. arundinacea* Cyr.	Poaceae; Gramineae
Darduradalaa	*Bacopa monnieri* (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Devaahvaa	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Devadaali	*Luffa echinata* Roxb.	Cucurbitaceae
Devadaaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Devadaarvi	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Devadruma	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Devakaastha	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Devakusuma	*Syzygium aromaticum* (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Myrtaceae
Devapushpa	*Syzygium aromaticum* (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Myrtaceae
Dhaamaargava	*Luffa cylindrica* (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Cucurbitaceae
Dhaanaa	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Dhaanya	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Dhaanyaka	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Dhaanyeyaka	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Dhaataki	*Woodfordia fruticosa* Kurz.; Syn *W. floribunda* Salisb.	Lythraceae
Dhaatri	*Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.	Euphorbiaceae
Dhaatri	*Woodfordia fruticosa* Kurz.; Syn *W. floribunda* Salisb.	Lythraceae
Dhaavani	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Solanaceae

Ayurvedic Name	Botanical Name	Family
Dhaavani	*Uraria picta* Desv.; Syn *Hedysarum pictum* Jacq.	Fabaceae; Papilionaceae
Dhanika	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Dhanikaa	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Dhanva	*Fagonia cretica* Linn.; Syn *F. arabica* Linn.	Zygophyllaceae
Dhanvayaasa	*Fagonia cretica* Linn.; Syn *F. arabica* Linn.	Zygophyllaceae
Dhanvayaasaka	*Fagonia cretica* Linn.; Syn *F. arabica* Linn.	Zygophyllaceae
Dhattuuraa	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Dhava	*Anogeissus latifolia* Wall. ex Bedd.	Combretaceae
Dhurandhara	*Anogeissus latifolia* Wall. ex Bedd.	Combretaceae
Dhurta	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Dhyaamaka	*Cymbopogon martini* Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Poaceae
Dinesha	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae
Dipyaka	*Apium graveolens* Linn.	Apiaceae, Umbelliferae
Dirghavrinta	*Ailanthus excelsa* Roxb.	Simaroubaceae
Draakshaa	*Vitis vinifera* Linn.	Vitaceae
Draavidi	*Elettaria cardamomum* Maton.	Zingiberaceae
Dravanti	*Croton tiglium* Linn.	Euphorbiaceae
Drekaa	*Melia azedarach* Linn.	Meliaceae
Drona	*Leucas cephalotes* (Roth.) Spreng.	Labiatae; Lamiaceae
Dronpushpi	*Leucas cephalotes* (Roth.) Spreng.	Labiatae; Lamiaceae
Dudhi	*Euphorbia hirta* Linn.; *E. pilulifera* auct. non Linn.	Euphorbiaceae
Dudhikaa	*Euphorbia hirta* Linn.; *E. pilulifera* auct. non Linn.	Euphorbiaceae
Duhsparshaa	*Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Papilionaceae, Fabaceae

Duhsparshaa	*Fagonia cretica* Linn.; Syn *F. arabica* Linn.	Zygophyllaceae
Duhsparshaa	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Solanaceae
Duraalabhaa	*Fagonia cretica* Linn.; Syn *F. arabica* Linn.	Zygophyllaceae
Durgandh	*Allium cepa* Linn.	Liliaceae, Alliaceae
Durvaa-shveta	*Cynodon dactylon* Pers.	Graminae; Poaceae
Duurvaa	*Cynodon dactylon* Pers.	Graminae; Poaceae
Dvipaantara-vachaa	*Smilax china* Linn.	Liliaceae
Dwaaradaaru	*Tectona grandis* Linn. f.	Verbenaceae
Ekaashthilaa	*Osmanthus fragrans* Lour.	Oleaceae
Ekeishikaa	*Cissampelos pareira* Linn.	Menispermaceae
Elaa	*Elettaria cardamomum* Maton.	Zingiberaceae
Elaa-mahati	*Amomum subulatum* Roxb.	Zingiberaceae
Elaa-sukshma	*Elettaria cardamomum* Maton.	Zingiberaceae
Elabaala	*Prunus cerasus* Linn.	Rosaceae
Elavaaluka	*Prunus cerasus* Linn.	Rosaceae
Elikaa-brihat	*Amomum subulatum* Roxb.	Zingiberaceae
Eranda	*Ricinus communis* Linn.	Euphorbiaceae
Ervaaru	*Cucumis melo* Linn. var. *utilissimus* Duth. & Fuller.	Cucurbitaceae
Ervaaruka	*Cucumis melo* Linn. var. *utilissimus* Duth. & Fuller.	Cucurbitaceae
Gaangeruki	*Grewia hirsuta* Vahl.; Syn *G. polygama* Mast.	Tiliaceae
Gaayatri	*Acacia catechu* (Linn. f.) Willd.	Mimosaceae
Gada	*Saussurea lappa* (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Asteraceae; Compositae
Gajaahvaa	*Scindapsus officinalis* Schott.	Araceae
Gajakanaa	*Scindapsus officinalis* Schott.	Araceae

Ayurvedic Name	Botanical Name	Family
Gajakarna	*Leea macrophylla* Roxb.	Vitaceae
Gajakeshara	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Gajakrishnaa	*Scindapsus officinalis* Schott.	Araceae
Gajapippali	*Scindapsus officinalis* Schott.	Araceae
Gambhaari	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Gandalikaakhya	*Ammania baccifera* Linn.	Lythraceae
Gandhalataa	*Callicarpa macrophylla* Vahl. substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Verbenaceae
Gandhaprasaarini	*Paederia foetida* Linn.	Rubiaceae
Gandharva	*Ricinus communis* Linn.	Euphorbiaceae
Gandharvagandhaa	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Gandharva-hasta	*Ricinus communis* Linn.	Euphorbiaceae
Gandharva-hastaka	*Ricinus communis* Linn.	Euphorbiaceae
Gandhasaara	*Santalum album* Linn.	Santalaceae
Gandhotkata	*Artemisia vulgaris* Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Asteraceae; Compositae
Gandira	*Achyranthes aquatica* Br.	Amaranthaceae
Gandira	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Gangaati	*Sida spinosa* Linn.; Syn *S. alba* Linn.	Malvaceae
Ganikaarikaa	*Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Verbenaceae
Garala	*Aconitum ferox* Wall. ex Ser.	Ranunculaceae
Gardhabhaandaka	*Thespesia populnea* Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Malvaceae
Gaurakadambaka	*Adina cordifolia* Hook. f. ex Brandis	Rubiaceae
Gaurakadambaka	*Anthocephalus cadamba* Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Rubiaceae
Gavaakshi	*Citrullus colocynthis* Schrad.	Cucurbitaceae

Gavedhu	*Coix lacryma-jobi* Linn.; Syn *C. lachryma* Linn.	Poaceae; Gramineae
Gavedhukaa	*Coix lacryma-jobi* Linn.; Syn *C. lachryma* Linn.	Poaceae; Gramineae
Ghana	*Cyperus rotundus* Linn.	Cyperaceae
Ghanasaara	*Cinnamomum camphora* (Linn.) Nees & Eberm.	Lauraceae
Ghritakumaari	*Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex Linn.	Liliaceae, Agavaceae
Ghusrina	*Crocus sativus* Linn.	Iridaceae
Giri-kadamba	*Mitragyna parvifolia* (Roxb.) Korth.	Rubiaceae
Girikadambaka	*Anthocephalus cadamba* Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Rubiaceae
Girikarni	*Clitoria ternatea* Linn.	Papilionaceae; Fabaceae
Girikarnikaa	*Clitoria ternatea* Linn.	Papilionaceae; Fabaceae
Girimallikaa	*Holarrhena antidysenterica* (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Apocynaceae
Godhaapadi	*Vitis pedata* Vahl. ex Wall.	Vitaceae
Godhuuma	*Triticum aestivum* Linn.	Poaceae; Gramineae
Goji	*Launaea asplenifolia* Hook. f.	Compositae
Gojihvaa	*Launaea asplenifolia* Hook. f.	Compositae
Gojihvikaa	*Launaea asplenifolia* Hook. f.	Compositae
Gokantaka	*Tribulus terrestris* Linn.	Zygophyllaceae
Gokshura	*Tribulus terrestris* Linn.	Zygophyllaceae
Gokshuraka	*Tribulus terrestris* Linn.	Zygophyllaceae
Golden Champa	*Michelia champaca* Linn.	Magnoliaceae
Golomi	*Acorus calamus* Linn.	Araceae
Gopaa	*Hemidesmus indicus* (L.) R. Br.; Syn *Periploca indica* Linn.	Asclepiadaceae; Periplocaceae
Gostana	*Vitis vinifera* Linn.	Vitaceae
Granthi	*Piper longum* Linn. (roots)	Piperaceae

Ayurvedic Name	Botanical Name	Family
Granthika	*Piper longum* Linn. (roots)	Piperaceae
Granthiparni	*Leonotis nepetaefolia* R. Br.	Labiatae; Lamiaceae
Granthiphala	*Artocarpus lakoocha* Roxb.; Syn *A. lacucha* Buch.-Ham.	Moraceae
Grihakanyaa	*Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex Linn.	Liliaceae, Agavaceae
Guduuchi	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Guggul	*Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Burseraceae
Gundra	*Typha angustata* Bory & Chaub.; Syn *T. australis* Schum. & Thonn.	Typhaceae
Gundraa	*Typha angustata* Bory & Chaub.; Syn *T. australis* Schum. & Thonn.	Typhaceae
Gundraka	*Typha angustata* Bory & Chaub.; Syn *T. australis* Schum. & Thonn.	Typhaceae
Gunjaa	*Abrus precatorius* Linn.	Papilionaceae; Fabaceae
Guwaaka	*Areca catechu* Linn.	Arecaceae; Palmae
Haarahuraa	*Vitis vinifera* Linn.	Vitaceae
Hadjoda	*Cissus quadrangular* Linn.; Syn *Vitis quadrangula* Wall.	Vitaceae
Haimavati	*Paris polyphylla* Sm.	Liliaceae
Hansapaadi	*Adiantum lunulatum* Burn.	Polypodiaceae
Hansapadi	*Adiantum lunulatum* Burn.	Polypodiaceae
Hapushaa	*Juniperus communis* Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.	Cupressaceae; Pinaceae
Haraduaakadamba	*Adina cordifolia* Hook. f. ex Brandis	Rubiaceae
Harenu	*Pisum sativum* Linn.	Fabaceae
Haridraa	*Curcuma longa* Linn.; Syn *C. domestica* Valeton	Zingiberaceae
Haridru	*Adina cordifolia* Hook. f. ex Brandis	Rubiaceae
Harimantha	*Cicer arientinum* Linn.	Fabaceae; Papilionaceae

Haritaki	*Terminalia chebula* Retz.	Combretaceae
Hastikarna	*Leea macrophylla* Roxb.	Vitaceae
Hasti-karna Palaasha	*Leea macrophylla* Roxb.	Vitaceae
Hastipippali	*Scindapsus officinalis* Schott.	Araceae
Havushaa	*Juniperus communis* Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.	Cupressaceae; Pinaceae
Hayamaaraka	*Nerium indicum* Mill.; Syn *N. odorum* Soland.	Apocynaceae
Hayeshtha	*Hordeum vulgare* Linn.	Poaceae; Gramineae
Hema	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Hema	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Hemaahva	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Hemaahvaa	*Argemone mexicana* Linn.	Papaveraceae
Hemapatra	*Nerium indicum* Mill.; Syn *N. odorum* Soland.	Apocynaceae
Hilamochi	*Enhydra fluctuans* Lour.	Compositae; Asteraceae
Hil-mochikaa	*Enhydra fluctuans* Lour.	Compositae; Asteraceae
Himaavati	*Argemone mexicana* Linn.	Papaveraceae
Himakara	*Cinnamomum camphora* (Linn.) Nees & Eberm.	Lauraceae
Himsraa	*Capparis sepiaria* Linn.	Capparidaceae
Hingu	*Ferula foetida* Regel.; Syn *F. assafoetida* Linn.	Apiaceae; Umbelliferae
Hintala	*Phoenix paludosa* Roxb.	Palmae
Hiraabola	*Commiphora molmol* (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Burseraceae
Hrivera	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Ibhakanaa	*Scindapsus officinalis* Schott.	Araceae
Ibhakeshara	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae

Ayurvedic Name	Botanical Name	Family
Ijjala	*Barringtonia acutangula* (Linn.) Gaertn.; Syn *Eugenia acutangula* L.	Lecythidaceae, Barringtoniaceae
Ikshu	*Saccharum officinarum* Linn.	Poaceae; Gramineae
Ikshubaala	*Asteracantha longifolia* Nees.; Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Ikshubaalikaa	*Asteracantha longifolia* Nees.; Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Ikshura	*Asteracantha longifolia* Nees.; Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Ikshvaaku	*Lagenaria siceraria* (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Cucurbitaceae
Indraasuri	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Indraayana	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Indradaaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Indravaaruni	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Indravaaruni	*Trichosanthes bracteata* (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Cucurbitaceae
Indravriksha	*Terminalia arjuna* (Roxb.) W. & A.	Combretaceae
Indu	*Cinnamomum camphora* (Linn.) Nees & Eberm.	Lauraceae
Ingudi	*Balanites aegyptiaca* (Linn.) Delile.; Syn *B. roxburghii* Planch.	Simaroubaceae; Balanitaceae
Ingudi	*Balanites aegyptiaca* (Linn.) Delile.; Syn *B. roxburghii* Planch.	Simaroubaceae; Balanitaceae
Ingudi	*Balanites aegyptiaca* (Linn.) Delile.; Syn *B. roxburghii* Planch.	Simaroubaceae; Balanitaceae
Irimeda	*Acacia leucophloea* (Roxb.) Willd.; Syn *A. alba* Willd.	Mimosaceae
Ishalingi	*Bryonopsis laciniosa* (Linn.) Naud.; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Cucurbitaceae

Itkata	*Sesbania bispinosa* W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Fabaceae; Papilionaceae
Jaaji	*Cuminum cyminum* Linn.	Umbelliferae; Apiaceae
Jaalini	*Luffa cylindrica* (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Cucurbitaceae
Jaatikaa	*Jasminum officinale* Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Oleaceae
Jaatikosha	*Myristica fragrance* Houtt. (fragrant arill covering the fruits)	Myristicaceae
Jaatipatra	*Myristica fragrance* Houtt. (fragrant arill covering the fruits)	Myristicaceae
Jaatipatraka	*Myristica fragrance* Houtt. (fragrant arill covering the fruits)	Myristicaceae
Jaatipatri	*Myristica fragrance* Houtt. (fragrant arill covering the fruits)	Myristicaceae
Jaatiphala	*Myristica fragrance* Houtt.	Myristicaceae
Jaatishasya	*Myristica fragrance* Houtt.	Myristicaceae
Jaavitree	*Myristica fragrance* Houtt. (fragrant arill covering the fruits)	Myristicaceae
Jaipaala	*Croton tiglium* Linn.	Euphorbiaceae
Jala	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Jalada	*Cyperus rotundus* Linn.	Cyperaceae
Jaladhara	*Cyperus rotundus* Linn.	Cyperaceae
Jalajamani	*Cocculus hirsutus* (Linn.) Diels.; Syn *C. villosus* (Lam.) DC.	Menispermaceae
Jalakumbhi	*Pistia stratiotes* Linn. var. *cuneata* Engl.	Araceae
Jalanilikaa	*Ceratophyllum demersum* Linn.	Ceratophyllaceae
Jambira	*Citrus limon* (Linn.) Burm. f.	Rutaceae
Jambira	*Citrus medica* Linn.	Rutaceae
Jambu	*Syzygium cuminii* (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Myrtaceae
Jantughna	*Embelia ribes* Burm. f.	Myrsinaceae
Japaa	*Hibiscus rosa-sinensis* Linn.	Malvaceae
Jarana	*Cuminum cyminum* Linn.	Umbelliferae; Apiaceae

Ayurvedic Name	Botanical Name	Family
Jataa	*Nardostachys jatamansi* DC.; Syn *N. grandiflora* DC.	Valerianaceae
Jataadhari	*Celosia cristata* Linn.	Amaranthaceae
Jataamaansi	*Nardostachys jatamansi* DC.; Syn *N. grandiflora* DC.	Valerianaceae
Jatilaa	*Nardostachys jatamansi* DC.; Syn *N. grandiflora* DC.	Valerianaceae
Javaa	*Hibiscus rosa-sinensis* Linn.	Malvaceae
Jayaa	*Clerodendrum phlomidis* Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Verbenaceae
Jayantikaa	*Sesbania sesban* (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Fabaceae; Papilionaceae
Jingi	*Lannea coromandelica* (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.	Anacardiaceae
Jingi	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Jingini	*Lannea coromandelica* (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.	Anacardiaceae
Jira	*Cuminum cyminum* Linn.	Umbelliferae; Apiaceae
Jiraka	*Cuminum cyminum* Linn.	Umbelliferae; Apiaceae
Jiraka krishna	*Carum carvi* Linn.	Apiaceae; Umbelliferae
Jivaakhya	*Leptadenia reticulata* W. & A.	Asclepiadaceae
Jivaka	*Microstylis muscifera* Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.	Orchidaceae
Jivanti	*Leptadenia reticulata* W. & A.	Asclepiadaceae
Jivantikaa	*Leptadenia reticulata* W. & A.	Asclepiadaceae
Jvalanaakhya	*Plumbago zeylanica* Linn.	Plumbaginaceae
Jyotishmati	*Celastrus paniculatus* Willd.	Celastraceae
Kaakaahya	*Solanum nigrum* Linn.; Syn *S. rubrum* Mill.	Solanaceae
Kaakaandolaa	*Mucuna monosperma* DC.	Fabaceae; Papilionaceae
Kaakamaachi	*Solanum nigrum* Linn.; Syn *S. rubrum* Mill.	Solanaceae
Kaakaparni	*Phaseolus trilobus* sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Fabaceae; Papilionaceae

Kaakapuchha	*Leonotis nepetaefolia* R. Br.	Labiatae; Lamiaceae
Kaakodumbara	*Ficus hispida* Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Moraceae
Kaakoli	*Roscoea procera* Wall.	Zingiberaceae
Kaala shaaka	*Corchorus capsularis* Linn.	Tiliaceae
Kaalaa	*Operculina turpethum* (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Convolvulaceae
Kaalaa	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Kaalaajaaji	*Nigella sativa* Linn.	Ranunculaceae
Kaalamegha	*Andrographis paniculata* Wall. ex Nees.	Acanthaceae
Kaalasaaka	*Corchorus capsularis* Linn.	Tiliaceae
Kaaleya	*Coscinium fenestratum* Colebr.	Menispermaceae
Kaaliya	*Coscinium fenestratum* Colebr.	Menispermaceae
Kaaliyaka	*Coscinium fenestratum* Colebr.	Menispermaceae
Kaamaduti	*Stereospermum suaveolens* DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.	Bignoniaceae
Kaanchana	*Bauhinia variegata* Linn.; Syn *B. candida* Roxb.	Caesalpiniaceae
Kaanchanaara	*Bauhinia variegata* Linn.; Syn *B. candida* Roxb.	Caesalpiniaceae
Kaanchanakshiri	*Argemone mexicana* Linn.	Papaveraceae
Kaantaaraka	*Saccharum officinarum* Linn.	Poaceae; Gramineae
Kaaphala	*Myrica esculenta* Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.	Myricaceae
Kaaravella	*Momordica charantia* Linn.	Cucurbitaceae
Kaaravellaka	*Momordica charantia* Linn.	Cucurbitaceae
Kaaravelli	*Momordica charantia* Linn.	Cucurbitaceae
Kaarpaasa	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Kaarpaasaka	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Kaarpaasaka	*Gossypium arboreum* Linn.	Malvaceae

Ayurvedic Name	Botanical Name	Family
Kaarpaasi	*Gossypium arboreum* Linn.	Malvaceae
Kaasaari	*Cassia occidentalis* Linn.	Calsalpiniaceae
Kaasamarda	*Cassia occidentalis* Linn.	Calsalpiniaceae
Kaasha	*Saccharum spontaneum* Linn.	Poaceae; Gramineae
Kaashmari	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Kaashmarya	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Kaashmiraka	*Crocus sativus* Linn.	Iridaceae
Kaasthodumbara	*Ficus hispida* Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Moraceae
Kaayasthaa	*Terminalia chebula* Retz.	Combretaceae
Kacha	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Kachhuraa	*Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Papilionaceae, Fabaceae
Kadala	*Musa paradisiaca* Linn.; Syn *M. sapientum* Linn.	Musaceae
Kadali	*Musa paradisiaca* Linn.; Syn *M. sapientum* Linn.	Musaceae
Kadamba	*Anthocephalus cadamba* Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Rubiaceae
Kadamba (var.)	*Mitragyna parvifolia* (Roxb.) Korth.	Rubiaceae
Kairaata	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Kairaataka	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Kaitarya	*Myrica esculenta* Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.	Myricaceae
Kaivarta Mustaka	*Cyperus anabilis* Vahl.	Cyperaceae
Kaivarttamustaa	*Cyperus anabilis* Vahl.	Cyperaceae
Kakkola	*Piper cubeba* Linn. f.	Piperaceae

Kakubha	*Terminalia arjuna* (Roxb.) W. & A.	Combretaceae
Kalaaya	*Pisum sativum* Linn.	Fabaceae
Kalashi	*Uraria picta* Desv.; Syn *Hedysarum pictum* Jacq.	Fabaceae; Papilionaceae
Kalaunjee	*Nigella sativa* Linn.	Ranunculaceae
Kali	*Terminalia bellirica* Roxb.	Combretaceae
Kalidru	*Terminalia bellirica* Roxb.	Combretaceae
Kamala	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Kammarkasa	*Salvia plebeia* R. Br.	Labiatae; Lamiaceae
Kampilla	*Mallotus phillippinensis* Muell.- Arg.	Euphorbiaceae
Kampillaka	*Mallotus phillippinensis* Muell.- Arg.	Euphorbiaceae
Kanaaa	*Piper longum* Linn.	Piperaceae
Kanaamula	*Piper longum* Linn. (roots)	Piperaceae
Kanaka	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Kanchata	*Amaranthus spinosus* Linn.	Amaranthaceae
Kandala	*Amorphophallus campanulatus* (Roxb.) Blume ex Decne.	Araceae
Kandekshu	*Saccharum spontaneum* Linn.	Poaceae; Gramineae
Kangu	*Setaria italica* (Linn.) Beauv.	Poaceae; Gramineae
Kanguni	*Setaria italica* (Linn.) Beauv.	Poaceae; Gramineae
Kankatikaa	*Abutilon indicum* Linn. Sweet	Malvaceae
Kankola	*Piper cubeba* Linn. f.	Piperaceae
Kantakaari	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Solanaceae
Kantakaarikaa	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccann* Sant.	Solanaceae
Kantaki	*Acacia catechu* (Linn. f.) Willd.	Mimosaceae

Ayurvedic Name	Botanical Name	Family
Kantaki	*Flacourtia ramontchi* L. Herit.; Syn *F. indica* (Burm. f.) Merr.	Flacourtiaceae
Kantaki Karanja	*Caesalpinia bonduc* (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Caesalpiniaceae
Kantakiphala	*Artocarpus heterophyllus* Lam.; Syn *A. integrifolia* Linn. f.	Moraceae
Kanyaa	*Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex Linn.	Liliaceae, Agavaceae
Kanyakaa	*Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex Linn.	Liliaceae, Agavaceae
Kapikachhuu	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Kapittha	*Feronia limonia* (Linn.) Swingle.; Syn *F. elephantum* Corr.	Rutaceae
Kapotavanka	*Bacopa monnieri* (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Kapotavankaa	*Bacopa monnieri* (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Karamarda	*Carissa carandas* Linn. var. *congesta* (Wt.) Bedd.	Apocynaceae
Karanja	*Pongamia pinnata* Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Papilionaceae; Fabaceae
Karavira	*Nerium indicum* Mill.; Syn *N. odorum* Soland.	Apocynaceae
Karchuura	*Curcuma zedoaria* Rosc.	Zingiberaceae
Karikanaa	*Scindapsus officinalis* Schott.	Araceae
Karikeshara	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Karinkaara	*Carissa carandas* Linn. var. *congesta* (Wt.) Bedd.	Apocynaceae
Karira	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Karkandhu	*Zizyphus nummularia* (Burm. f.) Wight. & Arn.; Syn *Z. rotundifolia* Lam., *Rhamnus nummularia* Burm. f.	Rhamnaceae
Karkashadala	*Tricosanthes dioica* Roxb.	Cucurbitaceae
Karkataahvaya	*Pistacia integerrima* Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Anacardiaceae

Karkatashringi	*Pistacia integerrima* Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Anacardiaceae
Karkati	*Cucumis melo* Linn. var. *utilissimus* Duth. & Fuller.	Cucurbitaceae
Karkatikaa	*Cucumis melo* Linn. var. *utilissimus* Duth. & Fuller.	Cucurbitaceae
Karkota	*Momordica dioica* Roxb. ex Willd.	Cucurbitaceae
Karkotaka	*Momordica dioica* Roxb. ex Willd.	Cucurbitaceae
Karkotikaa	*Momordica dioica* Roxb. ex Willd.	Cucurbitaceae
Karkotikaa-vandhyaa	*Momordica dioica* Roxb. ex Willd.	Cucurbitaceae
Karmaranga	*Averrhoa carambola* Linn.	Oxalidaceae, Averrhoaceae
Karnikaara	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Karpura	*Cinnamomum camphora* (Linn.) Nees & Eberm.	Lauraceae
Kaseru	*Scirpus kysoor* Roxb.; Syn *S. grossus* Linn. f.	Cyperaceae
Kasheru	*Scirpus kysoor* Roxb.; Syn *S. grossus* Linn. f.	Cyperaceae
Kasheruka	*Scindapsus officinalis* Schott.	Araceae
Kasheruka	*Scirpus kysoor* Roxb.; Syn *S. grossus* Linn. f.	Cyperaceae
Kasherukaa	*Scirpus kysoor* Roxb.; Syn *S. grossus* Linn. f.	Cyperaceae
Kasturi Mogaraa	*Jasminum multiflorum* (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Willd., *J. bracteatum* Roxb.	Oleaceae
Katabhi	*Careya arborea* Roxb.	Barringtoniaceae
Kataka	*Strychnos potatorum* Linn. f.	Loganiaceae; Strychnaceae
Katakaphala	*Strychnos potatorum* Linn. f.	Loganiaceae; Strychnaceae
Katambharaa	*Albizia procera* Benth.	Mimosaceae

Ayurvedic Name	Botanical Name	Family
Katamkateri	*Berberis asiatica* Roxb. ex DC.; Syn *Berberis aristata* DC.	Berberidaceae
Kathilaka	*Momordica charantia* Linn.	Cucurbitaceae
Katphala	*Myrica esculenta* Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.	Myricaceae
Katu	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Katuka	*Piper nigrum* Linn.	Piperaceae
Katukaa	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Katuki	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Katunaahi	*Corallocarpus epigaeus* Benth. ex Hook. f.	Cucurbitaceae
Katurohini	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Katvanga	*Ailanthus excelsa* Roxb.	Simaroubaceae
Katvi	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Kaunti	*Pisum sativum* Linn.	Fabaceae
Kaushika	*Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Burseraceae
Kebuka	*Costus speciosus* (Koenig) Sm.	Zingiberaceae
Kembuka	*Areca catechu* Linn.	Arecaceae; Palmae
Kemuka	*Costus speciosus* (Koenig) Sm.	Zingiberaceae
Keshahantri	*Prosopis spicigera* Linn.; Syn *P. cineraria* Druce.	Mimosaceae
Keshara	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Kesharaaga	*Wedelia chinensis* Merrill.; Syn *W. calendulaceae* Less. non-Rich.	Asteraceae; Compositae
Kesharaaj	*Wedelia chinensis* Merrill.; Syn *W. calendulaceae* Less. non-Rich.	Asteraceae; Compositae
Ketaka	*Pandanus odoratissimus* Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.	Pandanaceae

Ketaki	*Pandanus odoratissimus* Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.	Pandanaceae
Kevuka	*Costus speciosus* (Koenig) Sm.	Zingiberaceae
Khaakhasa	*Papaver somniferum* Linn.	Papaveraceae
Khadira	*Acacia catechu* (Linn. f.) Willd.	Mimosaceae
Kharamanjari	*Achyranthes aspera* Linn.	Amaranthaceae
Kharapushpaa	*Achyranthes aspera* Linn.	Amaranthaceae
Kharapushpaa	*Ocimum basilicum* Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Labiatae; Lamiaceae
Kharjuraka	*Phoenix dactylifera* Linn.	Palmae; Arecaceae
Kharjurikaa	*Phoenix dactylifera* Linn.	Palmae; Arecaceae
Kharjuura	*Phoenix dactylifera* Linn.	Palmae; Arecaceae
Khas-phala	*Papaver somniferum* Linn.	Papaveraceae
Khukhudi	*Polygonum affine* D. Don.; Syn *Bistorta affinis* (D. Don) Green.	Polygonaceae
Khuraasaani Ajwaayin	*Hyoscyamus niger* Linn.	Solanaceae
Khuraashaanikaa	*Hyoscyamus niger* Linn.	Solanaceae
Kilima	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Kimshuka	*Butea monosperma* (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Papilionaceae; Fabaceae
Kinihi	*Achyranthes aspera* Linn.	Amaranthaceae
Kiraata	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Kiraataka	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Kiraatatiktaa	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Kiraatatiktaka	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae

Ayurvedic Name	Botanical Name	Family
Kiraatatiktakaa	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Klitaka	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Kodrava	*Paspalum scrobiculatum* Linn.	Poaceae; Gramineae
Kokilaaksha	*Asteracantha longifolia* Nees;.Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Kola	*Zizyphus jujuba* (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Rhamnaceae
Koradusha	*Paspalum scrobiculatum* Linn.	Poaceae; Gramineae
Koshaataki-tikta	*Luffa cylindrica* (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Cucurbitaceae
Koshakaara	*Saccharum officinarum* Linn.	Poaceae; Gramineae
Kovidaara	*Bauhinia purpurea* Linn.	Caesalpiniaceae
Kramuka	*Areca catechu* Linn.	Arecaceae; Palmae
Krimighna	*Embelia ribes* Burm. f.	Myrsinaceae
Krimihaa	*Embelia ribes* Burm. f.	Myrsinaceae
Krimihara	*Embelia ribes* Burm. f.	Myrsinaceae
Krimihrt	*Embelia ribes* Burm. f.	Myrsinaceae
Krimiripu	*Embelia ribes* Burm. f.	Myrsinaceae
Krishna jiraka	*Carum carvi* Linn.	Apiaceae; Umbelliferae
Krishna Tila	*Sesamum indicum* Linn.; Syn *S. orientale* Linn.	Pedaliaceae
Krishnaa	*Piper longum* Linn.	Piperaceae
Krishnaaguru	*Aquilaria agallocha* Roxb.; Syn *A. malaccenis* Lamk.	Thymelaceae
Krishnaa-mula	*Piper longum* Linn. (roots)	Piperaceae
Krishna-shimshapaa	*Dalbergia sissoo* Roxb. ex DC.	Fabaceae; Papilionaceae
Kritabandhana	*Luffa cylindrica* (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Cucurbitaceae

Kritamaalaka	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Kshataja	*Crocus sativus* Linn.	Iridaceae
Kshira-shuklaa	*Roscoea procera* Wall.	Zingiberaceae
Kshira-vidaari	*Ipomoea digitata* Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.	Convolvulaceae
Kshirikaa	*Mimusops hexandra* Roxb.	Sapotaceae
Kshirini	*Mimusops hexandra* Roxb.	Sapotaceae
Kshirphena	*Carissa carandas* Linn. var. *congesta* (Wt.) Bedd.	Apocynaceae
Kshudra Panas	*Artocarpus lakoocha* Roxb.; Syn *A. lacucha* Buch.-Ham.	Moraceae
Kshudraa	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Solanaceae
Kshura	*Asteracantha longifolia* Nees.; Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Kshuraka	*Asteracantha longifolia* Nees.; Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Kshurakaahva	*Asteracantha longifolia* Nees.; Syn *Hygrophila spinosa* T. Anders.	Acanthaceae
Kuberaakshi	*Stereospermum suaveolens* DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.	Bignoniaceae
Kuchilaa	*Strychnos nux-vomica* Linn.	Loganiaceae; Strychnaceae
Kukkuti	*Polygonum affine* D. Don.; Syn *Bistorta affinis* (D. Don) Green.	Polygonaceae
Kukubha	*Terminalia arjuna* (Roxb.) W. & A	Combretaceae
Kulaka	*Tricosanthes dioica* Roxb.	Cucurbitaceae
Kulathhikaa	*Dolichos biflorus* Linn.; Syn *Vigna unquiculata* (L.) Walp.	Fabaceae; Papilionaceae
Kulattha	*Dolichos biflorus* Linn.; Syn *Vigna unquiculata* (L.) Walp.	Fabaceae; Papilionaceae
Kulatthaka	*Dolichos biflorus* Linn.; Syn *Vigna unquiculata* (L.) Walp.	Fabaceae; Papilionaceae
Kulingi	*Pistacia integerrima* Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Anacardiaceae

Ayurvedic Name	Botanical Name	Family
Kulirashringi	*Pistacia integerrima* Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Anacardiaceae
Kulisha	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Kulthi	*Dolichos biflorus* Linn.; Syn *Vigna unquiculata* (L.) Walp.	Fabaceae; Papilionaceae
Kumaari	*Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex Linn.	Liliaceae, Agavaceae
Kumaarikaa	*Aloe barbadensis* Mill; Syn *Aloe vera* Tourn. ex Linn.	Liliaceae, Agavaceae
Kumbha	*Operculina turpethum* (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Convolvulaceae
Kumbhi	*Careya arborea* Roxb.	Barringtoniaceae
Kumbhika	*Careya arborea* Roxb.	Barringtoniaceae
Kumbhodbhava-taru	*Sesbania grandiflora* (L.) Poir.; Syn *Agati grandiflora* Desv.	Fabaceae; Papilionaceae
Kumkuma	*Crocus sativus* Linn.	Iridaceae
Kumuda	*Nymphaea alba* Linn.	Nymphaeaceae
Kunati	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Kunda	*Jasminum multiflorum* (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Willd., *J. bracteatum* Roxb.	Oleaceae
Kundali	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Kunjaraa	*Woodfordia fruticosa* Kurz.; Syn *W. floribunda* Salisb.	Lythraceae
Kuranta	*Barleria prionitis* Linn.	Acanthaceae
Kurantaka	*Barleria cristata* Linn.	Acanthaceae
Kurantaka	*Barleria prionitis* Linn.	Acanthaceae
Kusha	*Desmostachya bipinnata* Stapf.; Syn *Eragrostis cynosuroides* Beauv.	Poaceae
Kushmaandi	*Cucurbita pepo* Linn.	Cucurbitaceae
Kushtha	*Saussurea lappa* (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Asteraceae; Compositae

Kustumburu	*Coriandrum sativum* Linn.	Umbelliferae; Apiaceae
Kusuma	*Syzygium aromaticum* (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Myrtaceae
Kusumbha	*Carthamus tinctorius* Linn.	Asteraceae
Kusumbha-pushpa	*Carthamus tinctorius* Linn.	Asteraceae
Kutaja	*Holarrhena antidysenterica* (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Apocynaceae
Kutanna	*Cyperus anabilis* Vahl.	Cyperaceae
Kutannata	*Cyperus anabilis* Vahl.	Cyperaceae
Kuth	*Saussurea lappa* (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Asteraceae; Compositae
Kuthera	*Ocimum basilicum* Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Labiatae; Lamiaceae
Kutheraka	*Ocimum basilicum* Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Labiatae; Lamiaceae
Kutherakaa	*Ocimum basilicum* Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Labiatae; Lamiaceae
Kuushmaanda	*Benincasa hispida* (Thunb.) Cogn.; Syn *cerifera* Savi.	Cucurbitacea
Kuushmaandaka	*Benincasa hispida* (Thunb.) Cogn.; Syn *B. cerifera* Savi.	Cucurbitacea
Kuvaraka	*Barleria cristata* Linn.	Acanthaceae
Laajavanti	*Mimosa pudica* Linn.	Mimosaceae
Laamajjaka	*Cymbopogon jwarancusa (Jones)* Schult.; Syn *Andropogon jwarancusa* Jones.	Poaceae
Laamjja	*Cymbopogon jwarancusa (Jones)* Schult.; Syn *Andropogon jwarancusa* Jones.	Poaceae
Laangalaki	*Gloriosa superba* Linn.	Liliaceaes
Laangali	*Gloriosa superba* Linn.	Liliaceaes
Laangalika	*Gloriosa superba* Linn.	Liliaceaes
Laavu	*Lagenaria siceraria* (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Cucurbitaceae
Laghu-agnimantha	*Clerodendrum phlomidis* Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Verbenaceae
Lajjaalu	*Mimosa pudica* Linn.	Mimosaceae

Ayurvedic Name	Botanical Name	Family
Lajjaalu (var.) Viprareet Lajjaalu	*Biophytum sensitivum* (Linn.) DC.; Syn *Oxalis sensitiva* Linn.	Oxalidaceae
Lakshmanaa	*Ipomoea sepiaria* Koen. ex Roxb.; Syn *I. maxima* (Linn. f.) G. Don.	Convolvulaceae
Lakuch	*Artocarpus lakoocha* Roxb.; Syn *A. lacucha* Buch.-Ham.	Moraceae
Lashuna	*Allium sativum* Linn.	Liliaceae, Alliaceae
Lataa	*Callicarpa macrophylla* Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Verbenaceae
Lataakaranja	*Caesalpinia bonduc* (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Caesalpiniaceae
Lataakaranja	*Caesalpinia bonduc* (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Caesalpiniaceae
Lataakasturik	*Hibiscus abelmoschus* Linn.; Syn *Abelmoschus moschatus* Medic.	Malvaceae
Lataakasturikaa	*Hibiscus abelmoschus* Linn.; Syn *Abelmoschus moschatus* Medic.	Malvaceae
Lavali-phala	*Cicca acida* (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.- Arg.	Euphorbiaceae
Lavanga	*Syzygium aromaticum* (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Myrtaceae
Lingikaa	*Bryonopsis laciniosa* (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Cucurbitaceae
Lingini	*Bryonopsis laciniosa* (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Cucurbitaceae
Lodhra	*Symplocos racemosa* Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Symplocaceae
Loha	*Aquilaria agallocha* Roxb.; Syn *A. malaccenis* Lamk.	Thymelaceae
Lohitayashtikaa	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Lowani	*Cicca acida* (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.- Arg.	Euphorbiaceae
Maadhavi	*Hiptage madablota* Gaertn.; Syn *H. benghalensis* Kurz.	Malpighiaceae
Maagadha-mula	*Piper longum* Linn. (roots)	Piperaceae
Maagadhi	*Piper longum* Linn.	Piperaceae
Maagadhikaa	*Piper longum* Linn.	Piperaceae

Maagadhi-mula	*Piper longum* Linn. (roots)	Piperaceae
Maajuphalaka	*Quercus infectoria* Oliv.	Fagaceae
Maalati	*Jasminum officinale* Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Oleaceae
Maalura	*Aegle marmelos* (L.) Correa ex Roxb.	Rutaceae
Maamsi	*Nardostachys jatamansi* DC.; Syn *N. grandiflora* DC.	Valerianaceae
Maana	*Alocasia indica* (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Araceae
Maanaka	*Alocasia indica* (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Araceae
Maanakanda	*Alocasia indica* (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Araceae
Maanakandaka	*Alocasia indica* (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Araceae
Maanduuki	*Centella asiatica* (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Umbelliferae; Apiaceae
Maansrohini	*Soymida febrifuga* A. Juss.	Meliaceae
Maarka	*Eclipta alba* (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Asteraceae: Compositae
Maarkava	*Eclipta alba* (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Asteraceae: Compositae
Maasha	*Phaseolus mungo* Linn. non-Roxb. & auct.; Syn *Vigna mungo* (Linn.) Hepper.	Fabaceae; Papilionaceae
Maashaparni	*Teramnus labialis* Spreng.	Papilionaceae
Maatula Mahesha	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Maatulunga	*Citrus maxima* (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Rutaceae
Maatulungi	*Citrus maxima* (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Rutaceae
Maayaaphala	*Quercus infectoria* Oliv.	Fagaceae
Maayakku	*Quercus infectoria* Oliv.	Fagaceae
Madana	*Randia dumetorum* Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Rubiaceae
Madanaphala	*Randia dumetorum* Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Rubiaceae
Madayanti	*Jasminum sambac* (Linn.) Ait.	Oleaceae

Ayurvedic Name	Botanical Name	Family
Madayanti	*Lawsonia inermis* Linn.	Lythraceae
Madayantikaa	*Lawsonia inermis* Linn.	Lythraceae
Madhuka Kusuma	*Madhuca indica* J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Sapotaceae
Madhukarkati	*Citrus decumana* Linn.	Rutaceae
Madhukarkatikaa	*Citrus maxima* (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Rutaceae
Madhukasaara	*Madhuca indica* J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Sapotaceae
Madhulikaa	*Eleusine coracana* Gaertn.	Poaceae; Gramineae
Madhuparni	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Madhuparnikaa	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Madhuphala	*Madhuca indica* J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Sapotaceae
Madhura	*Microstylis muscifera* Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.	Orchidaceae
Madhurasaa	*Marsdenia tenacissima* W. & A.	Asclepiadaceae
Madhuuka	*Madhuca indica* J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Sapotaceae
Madhuuli	*Eleusine coracana* Gaertn.	Poaceae; Gramineae
Madhuyashthikaa	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Madhuyashti	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Madhvaaluka	*Dioscorea esculenta* Burkill.; Syn *D. aculeata* Linn., *D. faciculata* Roxb., *D. spinosa* Roxb. ex Wall.	Dioscoreaceae
Magadhaa	*Piper longum* Linn.	Piperaceae
Magadhodbhavaa	*Piper longum* Linn.	Piperaceae

Mahaakaala	*Trichosanthes bracteata* (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Cucurbitaceae
Mahaamedaa	*Polygonatum verticillatum* All.	Liliaceae
Mahaanimba	*Melia azedarach* Linn.	Meliaceae
Mahaasahaa	*Teramnus labialis* Spreng.	Papilionaceae
Mahaphalaa	*Syzygium cuminii* (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Myrtaceae
Mahaushadha	*Zingiber officinale* Rosc.	Zingiberaceae
Mahishaaksha	*Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Burseraceae
Makushtha	*Phaseolus aconitifolius* Jacq.; Syn *Vagina aconitifolia* (Jacq.) Marechal.	Fabaceae; Papilionaceae
Malayaja	*Santalum album* Linn.	Santalaceae
Malayodbhava	*Santalum album* Linn.	Santalaceae
Malayu	*Ficus hispida* Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Moraceae
Mallikaa	*Jasminum officinale* Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Oleaceae
Mallikaa	*Jasminum sambac* (Linn.) Ait.	Oleaceae
Mandaara	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae
Manduukaparni	*Centella asiatica* (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Umbelliferae; Apiaceae
Mangalyapushpi	*Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Convolvulaceae
Mangarail	*Nigella sativa* Linn.	Ranunculaceae
Manjishthaa	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Maricha	*Piper nigrum* Linn.	Piperaceae
Markati	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Maruttaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Masura	*Lens culinaris* Medic.; Syn *L. esculenta* Moench.	Fabaceae; Papilionaceae
Masuraka	*Lens culinaris* Medic.; Syn *L. esculenta* Moench.	Fabaceae; Papilionaceae

Ayurvedic Name	Botanical Name	Family
Matsyaakshaka	*Bacopa monnieri* (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Matsyaakshi	*Alternanthera sessilis* (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. non-Link.	Amaranthaceae
Matsyapittakhya	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Matsyashakalaa	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Medaa	*Polygonatum verticillatum* All.	Liliaceae
Meghaahva	*Cyperus rotundus* Linn.	Cyperaceae
Megharava	*Amaranthus spinosus* Linn.	Amaranthaceae
Meshashringi	*Gymnema sylvestre* R. Br.	Asclepiadaceae
Methi	*Trigonella foenum-graecum* Linn.	Fabaceae; Papilionaceae
Methikaa	*Trigonella foenum-graecum* Linn.	Fabaceae; Papilionaceae
Mishreyaa	*Foeniculum vulgare* Mill.	Apiaceae; Umbelliferae
Mochaa	*Salmalia malabarica* (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Bombacaceae
Mochaahva	*Salmalia malabarica* (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Bombacaceae
Morata	*Maerua arenaria* Hook. f. & Th.; Syn *M. oblongifolia* (Forsk.) A. Rich.	Capparidaceae
Motaabalaa	*Sesbania sesban* (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Fabaceae; Papilionaceae
Moth	*Phaseolus aconitifolius* Jacq.; Syn *Vagina aconitifolia* (Jacq.) Marechal.	Fabaceae; Papilionaceae
Mridvikaa	*Vitis vinifera* Linn.	Vitaceae
Mrinaala	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Mrinaalikaa	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Mrugaadani	*Citrullus colocynthis* Schrad.	Cucurbitaceae

Mrugairvaaru	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Mudga	*Phaseolus radiatus* Linn. non-Roxb. & auct.; Syn *Vigna radiata* (Linn.) Wilczek.	Fabaceae; Papilionaceae
Mudgaparni	*Phaseolus trilobus* sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Fabaceae; Papilionaceae
Mula	*Raphanus sativus* Linn.	Cruciferae; Brassicaceae
Mundi	*Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Asteraceae; Compositae
Munditakaa	*Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Asteraceae; Compositae
Munditikaa	*Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Asteraceae; Compositae
Mungalya	*Phaseolus radiatus* Linn. non-Roxb. & auct.; Syn *Vigna radiata* (Linn.) Wilczek.	Fabaceae; Papilionaceae
Muni	*Sesbania grandiflora* (L.) Poir.; Syn *Agati grandiflora* Desv.	Fabaceae; Papilionaceae
Munja	*Saccharum munja* Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.	Poaceae; Gramineae
Muraa	*Selinum tenuifolium* Wall. ex DC.; Syn *S. candollei* DC.	Apiaceae; Umbelliferae
Murdhaja	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Mushali	*Curculigo orchioides* Gaertn.	Amaryllidaceae; Hypoxidaceae
Muskakaa	*Schrebera swietenioides* Roxb.	Oleaceae
Musta	*Cyperus rotundus* Linn.	Cyperaceae
Mustaa	*Cyperus rotundus* Linn.	Cyperaceae
Mustaka	*Cyperus rotundus* Linn.	Cyperaceae
Muulaka	*Raphanus sativus* Linn.	Cruciferae; Brassicaceae
Muurvaa	*Marsdenia tenacissima* W. & A.	Asclepiadaceae
Naaga	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Naagaahva	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Naagabalaa	*Grewia hirsuta* Vahl.; Syn *G. polygama* Mast.	Tiliaceae
Naagabalaa	*Sida spinosa* Linn.; Syn *S. alba* Linn.	Malvaceae
Naagadanti	*Baliospermum calycinum* Muell.-Arg.	Euphorbiaceae

Ayurvedic Name	Botanical Name	Family
Naagakeshara	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Naagapushpa	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Naagara	*Zingiber officinale* Rosc.	Zingiberaceae
Naagaramusta	*Cyperus rotundus* Linn.	Cyperaceae
Naagini	*Piper betle* Linn.	Piperaceae
Naagvallari	*Piper betle* Linn.	Piperaceae
Naakuli	*Rauvolfia serpentina* Benth. ex Kurz.	Apocynaceae
Naarikela	*Cocos nucifera* Linn.	Palmae; Arecaceae
Naarikera	*Cocos nucifera* Linn.	Palmae; Arecaceae
Nahikaa	*Corallocarpus epigaeus* Benth. ex Hook. f.	Cucurbitaceae
Naktaahva	*Pongamia pinnata* Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Papilionaceae; Fabaceae
Naktaahvaa	*Curcuma longa* Linn.; Syn *C. domestica* Valeton	Zingiberaceae
Naktamaala	*Pongamia pinnata* Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Papilionaceae; Fabaceae
Naktamaalaka	*Pongamia pinnata* Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Papilionaceae; Fabaceae
Nala	*Phragmites karka* Trin. ex Steud.; Syn *P. roxburghii* (Kunth) Steud., *P. maxima* Blatter & McCann in part.	Poaceae; Gramineae
Nalada	*Vetiveria zizanioides* (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Poaceae; Gramineae
Nandi Vrksha	*Cedrela toona* Roxb.; Syn *Toona ciliate* M. Roem.	Meliaceae
Nata	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Nava-mallikaa	*Jasminum arborescens* Roxb.; Syn *J. roxburghianum* Wall.	Oleaceae
Nichula	*Barringtonia acutangula* (Linn.) Gaertn.; Syn *Eugenia acutangula* L.	Lecythidaceae, Barringtoniaceae

Nidigdhikaa	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Solanaceae
Nikumbha	*Baliospermum montanum* (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.	Euphorbiaceae
Nilaambuja	*Nymphaea stellata* Willd.	Nymphaeaceae
Nili	*Indigofera tinctoria* Linn.	Fabaceae
Nilini	*Indigofera tinctoria* Linn.	Fabaceae
Nilotpala	*Nymphaea stellata* Willd.	Nymphaeaceae
Nimba	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Nimbaka	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Nimbuka	*Citrus medica* Linn.	Rutaceae
Nira	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Nirada	*Cyperus rotundus* Linn.	Cyperaceae
Niraja	*Nymphaea stellata* Willd.	Nymphaeaceae
Nirgundi	*Vitex negundo* Linn.	Verbenaceae
Nishaa	*Curcuma longa* Linn.; Syn *C. domestica* Valeton	Zingiberaceae
Nishpaav	*Dolichos lablab* Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.	Fabaceae; Papilionaceae
Nivaara	*Hygrorhyza aristata* Nees.	Poaceae
Nripaadana	*Mimusops hexandra* Roxb.	Sapotaceae
Nripapaadapa	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Nyagrodha	*Ficus benghalensis* Linn.	Moraceae
Paalakyaa	*Spinacia oleracea* Linn.; Syn *S. tetrandra* Roxb.	Chenopodiaceae
Paalankikaa	*Spinacia oleracea* Linn.; Syn *S. tetrandra* Roxb.	Chenopodiaceae
Paalankya	*Spinacia oleracea* Linn.; Syn *S. tetrandra* Roxb.	Chenopodiaceae
Paalasha	*Butea monosperma* (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Papilionaceae; Fabaceae

Ayurvedic Name	Botanical Name	Family
Paaniyavalli	*Calycopteris floribunda* Lam.	Combretaceae
Paaraavatpadi	*Celastrus paniculatus* Willd.	Celastraceae
Paaribhadra	*Erythrina variegata* Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Fabaceae; Papilionaceae
Paaribhadraka	*Erythrina variegata* Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Fabaceae; Papilionaceae
Paarijaata	*Nyctanthes arbor-tristis* Linn.	Oleaceae; Nyctanthaceae
Paarishapippala	*Thespesia populnea* Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Malvaceae
Paarshvpippala	*Thespesia populnea* Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Malvaceae
Paartha	*Terminalia arjuna* (Roxb.) W. & A.	Combretaceae
Paashaana	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Paashaanabheda	*Aerva lanata* (L.) Juss. ex Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Amaranthaceae
Paashaanabheda	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Paashaanabhid	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Paataala-garuda	*Cocculus hirsutus* (Linn.) Diels.; Syn *C. villosus* (Lam.) DC.	Menispermaceae
Paatalaa	*Stereospermum suaveolens* DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.	Bignoniaceae
Paatha	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Paathaa	*Cissampelos pareira* Linn.	Menispermaceae
Paavaka	*Plumbago zeylanica* Linn.	Plumbaginaceae
Pachampachaa	*Berberis asiatica* Roxb. ex DC.; Syn *Berberis aristata* DC.	Berberidaceae
Padma	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Padmaa	*Ionidium suffruticosum* Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.	Violaceae
Padmaadyaa	*Prunus cerasoides* D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq	Rosaceae
Padmagandhi	*Prunus cerasoides* D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq	Rosaceae

Padmaka	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Padmaka	*Prunus cerasoides* D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq	Rosaceae
Padmakeshara	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Padmini	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Palaandu	*Allium cepa* Linn.	Liliaceae, Alliaceae
Palaashaka	*Butea monosperma* (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Papilionaceae; Fabaceae
Palaashi	*Curcuma zedoaria* Rosc.	Zingiberaceae
Palaasi	*Hedychium spicatum* Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Zingiberaceae
Palankashaa	*Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Burseraceae
Pallava	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Panasa	*Artocarpus heterophyllus* Lam.; Syn *A. integrifolia* Linn. f.	Moraceae
Panchaangula	*Ricinus communis* Linn.	Euphorbiaceae
Pankaja	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Parkati	*Ficus lacor* Buch.-Ham.; Syn *F. infectoria* auct. non Willd.	Moraceae
Parnaka	*Marsilea minuta* Linn.	Marsilaceae
Parpata	*Fumaria parviflora* Lam.; *F. indica* (Haussk.) Pugsley.	Fumariaceae
Parpataka	*Fumaria parviflora* Lam.; *F. indica* (Haussk.) Pugsley.	Fumariaceae
Parpotikaa	*Physalis minima* Linn.	Solanaceae
Parusha	*Grewia asiatica* auct. non. L.; Syn *G. subinaequalis* DC.	Tiliaceae
Parushaka	*Grewia asiatica* auct. non. L.; Syn *G. subinaequalis* DC.	Tiliaceae
Parushaka-ubhe	*Grewia asiatica* auct. non. L.; Syn *G. subinaequalis* DC.	Tiliaceae
Pathyaa	*Terminalia chebula* Retz.	Combretaceae
Patira	*Santalum album* Linn.	Santalaceae
Patis	*Aconitum palmatum* D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Ranunculaceae

Ayurvedic Name	Botanical Name	Family
Patola	*Tricosanthes dioica* Roxb.	Cucurbitaceae
Patoli-tikta	*Tricosanthes dioica* Roxb.	Cucurbitaceae
Patra	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Patraka	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Pattanga	*Caesalpinia sappan* Linn.	Caesalpiniaceae
Pattraanga	*Caesalpinia sappan* Linn.	Caesalpiniaceae
Patura	*Caesalpinia sappan* Linn.	Caesalpiniaceae
Paundra	*Saccharum officinarum* Linn.	Poaceae; Gramineae
Paushkara	*Inula racemosa* Hook. f.; Syn *I. royleana* auct. non.-DC.	Asteraceae; Compositae
Paya	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Payah-prasaadi	*Strychnos potatorum* Linn. f.	Loganiaceae; Strychnaceae
Payasyaa	*Roscoea procera* Wall.	Zingiberaceae
Phala	*Randia dumetorum* Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Rubiaceae
Phalapuraka	*Citrus medica* Linn.	Rutaceae
Phalendraa	*Syzygium cuminii* (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Myrtaceae
Phalgu	*Ficus hispida* Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Moraceae
Phalini	*Callicarpa macrophylla* Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Verbenaceae
Phanijjaka	*Origanum majorana* Linn.; Syn *Majorana hortensis* Moench.	Labiatae; Lamiaceae
Phanji	*Rivea ornata* (Roxb.) Choisy.	Convolvulaceae
Phena	*Papaver somniferum* Linn.	Papaveraceae
Picchilaa	*Dalbergia sissoo* Roxb. ex DC.	Fabaceae; Papilionaceae

Pichhila	*Salmalia malabarica* (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Bombacaceae
Pichumanda	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Pichumandaka	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Pichumarda	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Pichumardaka	*Azadirachta indica* A. Juss.; Syn *Melia azadirachta* Linn.	Meliaceae
Pilu	*Salvadora oleoides* Decne.	Salvadoraceae
Piluparni	*Maerua arenaria* Hook. f. & Th.; Syn *M. oblongifolia* (Forsk.) A. Rich.	Capparidaceae
Piluparni	*Marsdenia tenacissima* W.& A.	Asclepiadaceae
Pindaalu	*Randia uliginosa* DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Rubiaceae
Pindaaluka	*Dioscorea esculenta* Burkill.; Syn *D. aculeata* Linn., *D. faciculata* Roxb., *D. spinosa* Roxb. ex Wall.	Dioscoreaceae
Pinditaka	*Randia dumetorum* Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Rubiaceae
Pinditaka	*Randia uliginosa* DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Rubiaceae
Pinyaaka	*Sesamum indicum* Linn.; Syn *S. orientale* Linn.	Pedaliaceae
Pippali	*Piper longum* Linn.	Piperaceae
Pippalikam	*Piper longum* Linn.	Piperaceae
Pippalimula	*Piper longum* Linn. (roots)	Piperaceae
Piyaala	*Buchanania lanzan* Spreng.; Syn *B. latifolia* Roxb.	Anacardiaceae
Plaksha	*Ficus lacor* Buch.-Ham.; Syn *F. infectoria* auct. non Willd.	Moraceae
Plava	*Cyperus anabilis* Vahl.	Cyperaceae
Potaki	*Basella rubra* Linn; Syn *Basella alba* Linn. var. *rubra* Stewart.	Basellaceae
Praanadaa	*Terminalia chebula* Retz.	Combretaceae
Prabhaakara	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae

Ayurvedic Name	Botanical Name	Family
Pralambaa	*Lagenaria siceraria* (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby, *Cucurbita siceraria* Mol.	Cucurbitaceae
Pramada	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Prapaundarika	*Saussurea obvallata* Wall. ex C. B. Clarke.	Asteraceae; Compositae
Prapunnaata	*Cassia tora* Linn.	Calsalpiniaceae
Prasaarani	*Paederia foetida* Linn.	Rubiaceae
Prativishaa	*Aconitum palmatum* D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Ranunculaceae
Prishniparni	*Uraria picta* Desv.; Syn *Hedysarum pictum* Jacq.	Fabaceae; Papilionaceae
Prithakparni	*Uraria picta* Desv.; Syn *Hedysarum pictum* Jacq.	Fabaceae; Papilionaceae
Prithvikaa	*Nigella sativa* Linn.	Ranunculaceae
Priya	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Priyangu	*Callicarpa macrophylla* Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Verbenaceae
Prukkaa	*Anisomeles malabarica* R. Br. ex Sims	Labiatae, Lamiaceae
Puga	*Areca catechu* Linn.	Arecaceae; Palmae
Punarnavaa	*Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Nyctaginaceae
Pundarika	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Pura	*Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Burseraceae
Puraka	*Citrus medica* Linn.	Rutaceae
Pushkara	*Inula racemosa* Hook. f.; Syn *I. royleana* auct. non.-DC.	Asteraceae; Compositae
Pushkaramuula	*Inula racemosa* Hook. f.; Syn *I. royleana* auct. non.-DC.	Asteraceae; Compositae
Pushpachaamara	*Artemisia vulgaris* Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Asteraceae; Compositae
Putigandhaa	*Paederia foetida* Linn.	Rubiaceae

Putika	*Holoptelea integrifolia* Planch.	Ulamaceae
Putika	*Pongamia pinnata* Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Papilionaceae; Fabaceae
Putrajiva	*Putranjiva roxburghii* Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Euphorbiaceae
Putraka	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Putrakamanjari	*Putranjiva roxburghii* Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Euphorbiaceae
Raaja Vriksha	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Raajaadana	*Mimusops hexandra* Roxb.	Sapotaceae
Raajadruma	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Raajamaasha	*Vigna unquiculata* (Linn.) Walp.	Fabaceae
Raaji	*Brassica juncea* (Linn.) Czern. & Coss.	Cruciferae; Brassicaceae
Raajikaa	*Brassica juncea* (Linn.) Czern. & Coss.	Cruciferae; Brassicaceae
Raajiphala	*Tricosanthes dioica* Roxb.	Cucurbitaceae
Raajiva	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Raamasenaka	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Raamatha	*Ferula foetida* Regel.; Syn *F. assafoetida* Linn.	Apiaceae
Raasnaa	*Pluchea lanceolata* C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Compositae; Asteraceae
Raasnikaa	*Pluchea lanceolata* C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Compositae; Asteraceae
Raatri	*Curcuma longa* Linn.; Syn *C. domestica* Valeton	Zingiberaceae
Raja	*Fumaria parviflora* Lam.; *F. indica* (Haussk.) Pugsley.	Fumariaceae
Rajani	*Curcuma longa* Linn.; Syn *C. domestica* Valeton	Zingiberaceae
Rakshoghna	*Brassica campestris* Linn. var. *rapa* (L.) Hartm.	Cruciferae; Brassicaceae
Rakta	*Bauhinia purpurea* Linn.	Caesalpiniaceae
Raktachandana	*Pterocarpus santalinus* Linn. f.	Fabaceae; Papilionaceae
Raktapushpa	*Punica granatum* Linn.	Punicaceae

Ayurvedic Name	Botanical Name	Family
Raktasaara	*Pterocarpus santalinus* Linn. f.	Fabaceae; Papilionaceae
Raktashaali	*Oryza sativa* Linn.	Poaceae; Gramineae
Raktikaa	*Abrus precatorius* Linn.	Papilionaceae; Fabaceae
Rambhaa	*Musa paradisiaca* Linn.; Syn *M. sapientum* Linn.	Musaceae
Rasaa	*Pluchea lanceolata* C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Compositae; Asteraceae
Rasaala	*Mangifera indica* Linn.	Anacardiaceae
Rasona	*Allium sativum* Linn.	Liliaceae, Alliaceae
Ravi	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae
Renukaa	*Vitex agnus-castus* Linn.	Verbenaceae
Riddhi	*Habenaria edgeworthii* Hook. f. ex. Collett.	Orchidaceae
Rodhra	*Symplocos racemosa* Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Symplocaceae
Rohini	*Soymida febrifuga* A. Juss.	Meliaceae
Rohisha	*Cymbopogon martini* Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Poaceae
Rohitaka	*Tecomella undulata* (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.	Bignoniaceae
Rohitaka-rakta	*Tecomella undulata* (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.	Bignoniaceae
Rshabha	*Microstylis wallichii* Lindl.; Syn *Malaxis acuminata* D. Don	Orchidaceae
Rshabhaka	*Microstylis wallichii* Lindl.; Syn *Malaxis acuminata* D. Don	Orchidaceae
Rubu	*Ricinus communis* Linn.	Euphorbiaceae
Rubuka	*Ricinus communis* Linn.	Euphorbiaceae
Ruk	*Saussurea lappa* (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Asteraceae; Compositae
Saalasaara	*Shorea robusta* Gaertn. f.	Dipterocarpaceae
Saarivaa	*Hemidesmus indicus* (L.) R. Br.; Syn *Periploca indica* Linn.	Asclepiadaceae; Periplocaceae

Sadaabhadraa	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Sahachara	*Barleria cristata* Linn.	Acanthaceae
Sahachara	*Barleria prionitis* Linn.	Acanthaceae
Sahachara-Nila	*Barleria cristata* Linn.	Acanthaceae
Sahadevaa	*Vernonia cinerea* Less.	Asteraceae; Compositae
Sahadevi	*Vernonia cinerea* Less.	Asteraceae; Compositae
Sahakaara	*Mangifera indica* Linn.	Anacardiaceae
Salai	*Boswellia serrata* Roxb.	Burseraceae
Samangaa	*Mimosa pudica* Linn.	Mimosaceae
Sambukapushpi	*Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Convolvulaceae
Sampaaka	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Samudrashosha	*Salvia plebeia* R. Br.	Labiatae; Lamiaceae
Sanaparni	*Pseudarthria viscida* Wt. & Arn.	Papilionaceae; Fabaceae
Sankhapushpikaa	*Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Convolvulaceae
Saptaahva	*Alstonia scholaris* R. Br.	Apocynaceae
Saptachada	*Alstonia scholaris* R. Br.	Apocynaceae
Saptalaa	*Euphorbia dracunculoides* Lamk.	Euphorbiaceae
Saptaparna	*Alstonia scholaris* R. Br.	Apocynaceae
Sarala	*Pinus longifolia* Roxb.; Syn *P. roxburghii* Sarg.	Pinaceae
Sarani	*Paederia foetida* Linn.	Rubiaceae
Sarja	*Vateria indica* Linn.; Syn *V. malabarica* Bl.	Dipterocarpaceae
Sarjaahva	*Vateria indica* Linn.; Syn *V. malabarica* Bl.	Dipterocarpaceae
Sarpaakshi	*Ophiorrhiza mungos* Linn.	Rubiaceae
Sarpagandhaa	*Rauvolfia serpentina* Benth. ex Kurz.	Apocynaceae

Ayurvedic Name	Botanical Name	Family
Sarshapa	*Brassica campestris* Linn. var. *rapa* (L.) Hartm.	Cruciferae; Brassicaceae
Sarshapa-Gaura	*Brassica alba* (L.) Boiss.; Syn *Sinapis alba* L.	Cruciferae; Brassicaceae
Sarvatobhadraa	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Satina	*Pisum sativum* Linn.	Fabaceae
Sehunda	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Selu	*Trigonella foenum-graecum* Linn.	Fabaceae; Papilionaceae
Sem	*Dolichos lablab* Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.	Fabaceae; Papilionaceae
Sevya	*Vetiveria zizanioides* (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Poaceae; Gramineae
Shaaka	*Tectona grandis* Linn. f.	Verbenaceae
Shaakhota	*Streblus asper* Lour.; Syn *Epicarpurus orientalis* Bl.	Moraceae
Shaakhotaka	*Streblus asper* Lour.; Syn *Epicarpurus orientalis* Bl.	Moraceae
Shaala	*Shorea robusta* Gaertn. f.	Dipterocarpaceae
Shaalaparni	*Pseudarthria viscida* Wt. & Arn.	Papilionaceae; Fabaceae
Shaali	*Oryza sativa* Linn.	Poaceae; Gramineae
Shaaliparni	*Desmodium gangeticum* DC.; Syn *Hedysarum gangeticum* Linn.	Fabaceae
Shaalmali	*Salmalia malabarica* (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Bombacaceae
Shaaluka	*Nymphaea alba* Linn.	Nymphaeaceae
Shaaluraparni	*Bacopa monnieri* (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Scrophulariaceae
Shaatalaa	*Euphorbia dracunculoides* Lamk.	Euphorbiaceae
Shaavara	*Symplocos racemosa* Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Symplocaceae

Shadgranthaa	*Acorus calamus* Linn.	Araceae
Shaila	*Parmelia perlata* (Huds.) Ach.	Parmeliaceae
Shaileya	*Parmelia perlata* (Huds.) Ach.	Parmeliaceae
Shaileyaka	*Parmelia perlata* (Huds.) Ach.	Parmeliaceae
Shairiya	*Barleria cristata* Linn.	Acanthaceae
Shaivaala	*Ceratophyllum demersum* Linn.	Ceratophyllaceae
Shakra	*Holarrhena antidysenterica* (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Apocynaceae
Shakradruma	*Mimusops elengi* Linn.	Sapotaceae
Shallaki	*Boswellia serrata* Roxb.	Burseraceae
Shami	*Prosopis spicigera* Linn.; Syn *P. cineraria* Druce.	Mimosaceae
Shana	*Crotalaria juncea* Linn.	Fabaceae; Papilionaceae
Shanapushpi	*Crotalaria juncea* Linn.	Fabaceae; Papilionaceae
Shankhaka	*Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Convolvulaceae
Shankhapushpi	*Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Convolvulaceae
Shankhini	*Clitoria ternatea* Linn.	Papilionaceae; Fabaceae
Shara	*Saccharum munja* Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.	Poaceae; Gramineae
Sharapunkhaa	*Tephrosia purpurea* (L.) Pers.; Syn *T. hamiltonii* Drumm.	Fabaceae; Papilionaceae
Sharvari	*Curcuma longa* Linn.; Syn *C. domestica* Valeton	Zingiberaceae
Shashilekhaa	*Psoralea corylifolia* Linn.	Fabaceae; Papilionaceae
Shashtika	*Oryza sativa* Linn.	Poaceae; Gramineae
Shataahvaa	*Foeniculum vulgare* Mill.	Apiaceae; Umbelliferae
Shataahvaa	*Peucedanum graveolens* Linn.	Apiaceae
Shataavari	*Asparagus racemosus* Willd.	Asparagaceae
Shataparvaa	*Acorus calamus* Linn.	Araceae

Ayurvedic Name	Botanical Name	Family
Shatapatra	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Shatapushpaa	*Foeniculum vulgare* Mill.	Apiaceae; Umbelliferae
Shati	*Hedychium spicatum* Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Zingiberaceae
Shelu	*Cordia dichotoma* Forst f. ; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.	Boraginaceae
Shephaali	*Nyctanthes arbor-tristis* Linn.	Oleaceae; Nyctanthaceae
Shevta Shirisha	*Albizia procera* Benth.	Mimosaceae
Shigru	*Moringa oleifera* Lam.; Syn *M. pterygosperma* Gaertn.	Moringaceae
Shikhari	*Achyranthes aspera* Linn.	Amaranthaceae
Shilaabhid	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Shilodbhida	*Bergenia ciliata* Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Saxifragaceae
Shimshapaa	*Dalbergia sissoo* Roxb. ex DC.	Fabaceae; Papilionaceae
Shirisha	*Albizia lebbeck* (Linn.) Willd.	Mimosaceae
Shitivaara	*Alternanthera sessilis* (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. non-Link.	Amaranthaceae
Shitivaaraka	*Celosia argentea* Linn.	Amaranthaceae
Shivajataakhyaa	*Celosia cristata* Linn.	Amaranthaceae
Shobhaanjana	*Moringa oleifera* Lam.; Syn *M. pterygosperma* Gaertn.	Moringaceae
Shonaka	*Oroxylum indicum* Vent.	Bignoniaceae
Shothaghni	*Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Nyctaginaceae
Shothahrit	*Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Nyctaginaceae
Shraavani	*Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Asteraceae; Compositae
Shraavanikaa	*Sphaeranthus indicus* Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Asteraceae; Compositae
Shreyasi	*Pluchea lanceolata* C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Compositae; Asteraceae

Shrigaalavinnaa	*Uraria picta* Desv.; Syn *Hedysarum pictum* Jacq.	Fabaceae; Papilionaceae
Shrikaarini	*Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Verbenaceae
Shringavera	*Zingiber officinale* Rosc.	Zingiberaceae
Shringi	*Pistacia integerrima* Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Anacardiaceae
Shriparni	*Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Verbenaceae
Shrisangya-pushpa	*Syzygium aromaticum* (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Myrtaceae
Shrivaasa	*Commiphora mukul* (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Burseraceae
Shrivaasa	*Pinus longifolia* Roxb.; Syn *P. roxburghii* Sarg.	Pinaceae
Shrivestaka	*Pinus longifolia* Roxb.; Syn *P. roxburghii* Sarg.	Pinaceae
Shrngaata	*Trapa natans* Linn. var. bispinosa (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Trapaceae
Shrngaataka	*Trapa natans* Linn. var. bispinosa (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Trapaceae
Shukanaasaa	*Corallocarpus epigaeus* Benth. ex Hook. f.	Cucurbitaceae
Shukarashimbi	*Mucuna monosperma* DC.	Fabaceae; Papilionaceae
Shukla Jeeraka	*Cuminum cyminum* Linn.	Umbelliferae; Apiaceae
Shunthi	*Zingiber officinale* Rosc.	Zingiberaceae
Shurana	*Amorphophallus campanulatus* (Roxb.) Blume ex Decne.	Araceae
Shveta Saarivaa	*Hemidesmus indicus* (L.) R. Br.; Syn *Periploca indica* Linn.	Asclepiadaceae; Periplocaceae
Shvetaa	*Clitoria ternatea* Linn.	Papilionaceae; Fabaceae
Shvetavachaa	*Paris polyphylla* Sm.	Liliaceae
Shyaamaaka	*Echinochloa frumentacea* Link.; Syn *Panicum frumentaceum* Roxb.	Poaceae; Gramineae
Shyaamkandaa	*Aconitum palmatum* D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Ranunculaceae

Ayurvedic Name	Botanical Name	Family
Shyamaa	*Callicarpa macrophylla* Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Verbenaceae
Shyamaa	*Callicarpa macrophylla* Vahl. Substitute *Prunus mahaleb* (Rosaceae).; Syn *C. incana* Roxb.	Verbenaceae
Shyonaaka	*Oroxylum indicum* Vent.	Bignoniaceae
Siddhaartha Sita	*Brassica alba* (L.) Boiss.; Syn *Sinapis alba* L.	Cruciferae; Brassicaceae
Siddhaarthaka	*Brassica alba* (L.) Boiss.; Syn *Sinapis alba* L.	Cruciferae; Brassicaceae
Sidhaartha	*Brassica alba* (L.) Boiss.; Syn *Sinapis alba* L.	Cruciferae; Brassicaceae
Sihlika	*Liquidamber orientalis* Mill.	Hamamelidaceae; Altingiaceae
Simhaanana	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Simhaasya	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Simhi	*Solanum indicum* Linn.	Solanaceae
Simhi-brihat	*Solanum indicum* Linn.	Solanaceae
Sinduka	*Vitex negundo* Linn.	Verbenaceae
Snuhi	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Snuk	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Soma	*Ephedra gerardiana* Wall. ex Stapf	Ephedraceae
Somaraaji	*Psoralea corylifolia* Linn.	Fabaceae; Papilionaceae
Somavalka	*Acacia catechu* (Linn. f.) Willd.	Mimosaceae
Soma-Valli (substitute)	*Ephedra gerardiana* Wall. ex Stapf	Ephedraceae
Sprikkaa	*Anisomeles malabarica* R. Br. ex Sims	Labiatae, Lamiaceae
Sraahvaya	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Sriphala	*Aegle marmelos* (L.) Correa ex Roxb.	Rutaceae
Sthauneya	*Taxus baccata* Linn.	Taxaceae

Sthauneyaka	*Taxus baccata* Linn.	Taxaceae
Sthavira	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Sthaviradaaru	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Sthiraa	*Desmodium gangeticum* DC.; Syn *Hedysarum gangeticum* Linn.	Fabaceae
Sthula-elaa	*Amomum subulatum* Roxb.	Zingiberaceae
Sthula-jiraka	*Nigella sativa* Linn.	Ranunculaceae
Sudhaa	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Sudhaalataa	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Sukhaatmaka	*Origanum majorana* Linn.; Syn *Majorana hortensis* Moench.	Labiatae; Lamiaceae
Sukshma-elaa	*Elettaria cardamomum* Maton.	Zingiberaceae
Sukshmailaa	*Elettaria cardamomum* Maton.	Zingiberaceae
Sumanaa	*Triticum aestivum* Linn.	Poaceae; Gramineae
Sumanah	*Triticum aestivum* Linn.	Poaceae; Gramineae
Sunishannaka	*Marsilea minuta* Linn.	Marsilaceae
Supatra	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Suraahva	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Surabhi	*Selinum tenuifolium* Wall. ex DC.; Syn *S. candollei* DC.	Apiaceae; Umbelliferae
Suradaaru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Suradruma	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae
Surana	*Amorphophallus campanulatus* (Roxb.) Blume ex Decne.	Araceae
Surasa	*Commiphora molmol* (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Burseraceae
Surasa	*Ocimum sanctum* Linn.; Syn *O. tenuiflorum* Linn.	Labiatae; Lamiaceae
Surasaa	*Ocimum sanctum* Linn.; Syn *O. tenuiflorum* Linn.	Labiatae; Lamiaceae
Surataru	*Cedrus deodara* (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Pinaceae

Ayurvedic Name	Botanical Name	Family
Suryaavarta	*Gynandropsis gynandra* (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Capparidaceae
Sushavi	*Calycopteris floribunda* Lam.	Combretaceae
Sushavi	*Nigella sativa* Linn.	Ranunculaceae
Sushkamulaka	*Raphanus sativus* Linn.	Cruciferae; Brassicaceae
Susravaa	*Boswellia serrata* Roxb.	Burseraceae
Suuchyagra	*Desmostachya bipinnata* Stapf.; Syn *Eragrostis cynosuroides* Beauv.	Poaceae
Suuryaasani	*Teramnus labialis* Spreng.	Papilionaceae
Suuryaparni	*Phaseolus trilobus* sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Fabaceae; Papilionaceae
Suvarchalaa	*Malva rotundifolia* Linn.; Syn *M. neglecta* wall.	Malvaceae
Suvrataa	*Hedychium spicatum* Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Zingiberaceae
Svadamstraa	*Tribulus terrestris* Linn.	Zygophyllaceae
Svaguptaa	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Svarnkshiri	*Argemone mexicana* Linn.	Papaveraceae
Svayamguptaa	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Syandana	*Ougeinia oogeinensis* (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Lythraceae
Taada	*Borassus flabellifer* Linn.	Arecaceae; Palmae
Taadaka	*Luffa echinata* Roxb.	Cucurbitaceae
Taala	*Borassus flabellifer* Linn.	Arecaceae; Palmae
Taalamuli	*Curculigo orchioides* Gaertn.	Amaryllidaceae; Hypoxidaceae
Taalisa	*Abies spectabilis* (D. Don) Spach.; Syn *Abies webbiana* Lindl.	Pinaceae
Taalisapatra	*Abies spectabilis* (D. Don) Spach.; Syn *Abies webbiana* Lindl.	Pinaceae
Taamalaki	*Phyllanthus niruri* Linn.	Euphorbiaceae

Taambula	*Piper betle* Linn.	Piperaceae
Taamravalli	*Rubia cordifolia* Linn.; Syn *R. munjesta* Roxb.	Rubiaceae
Tagara	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Tandulaka	*Amaranthus spinosus* Linn.	Amaranthaceae
Tanduliya	*Amaranthus spinosus* Linn.	Amaranthaceae
Tankaari	*Clerodendrum phlomidis* Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Verbenaceae
Tankaari	*Physalis minima* Linn.	Solanaceae
Tarkaari	*Clerodendrum phlomidis* Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Verbenaceae
Taruna	*Ricinus communis* Linn.	Euphorbiaceae
Taskara	*Angelica glauca* Edgew.	Umbelliferae, Apiaceae
Tavakkshiri	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Tejapatra.	*Cinnamomum tamala* Nees. & Eberm.	Lauraceae
Tejohvaa	*Zanthoxylum alatum* Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Rutaceae
Tejovati	*Zanthoxylum alatum* Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Rutaceae
Tikhur	*Curcuma angustifolia* Roxb.	Zingiberaceae
Tikhuri	*Curcuma angustifolia* Roxb.	Zingiberaceae
Tikshna Churna	*Brassica juncea* (Linn.) Czern. & Coss.	Cruciferae; Brassicaceae
Tikshnagandhaa	*Acorus calamus* Linn.	Araceae
Tiktaa	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Tiktaka	*Swertia chirayita* (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Gentianaceae
Tiktaka-Rohini	*Picrorhiza kurroa* Royle. ex Benth.	Scrophulariaceae
Tila	*Sesamum indicum* Linn.; Syn *S. orientale* Linn.	Pedaliaceae
Tila-asita	*Sesamum indicum* Linn.; Syn *S. orientale* Linn.	Pedaliaceae
Tila-Krishna	*Sesamum indicum* Linn.; Syn *S. orientale* Linn.	Pedaliaceae

Ayurvedic Name	Botanical Name	Family
Tilvaka	*Symplocos racemosa* Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Symplocaceae
Tinduka	*Diospyros embryopteris* Pers.; Syn *D. peregrina* (Gaertn.) Gurke, *D. malabarica* (Desr.) Kostel.	Ebenaceae
Tinduki	*Diospyros embryopteris* Pers.; Syn *D. peregrina* (Gaertn.) Gurke, *D. malabarica* (Desr.) Kostel.	Ebenaceae
Tinisha	*Ougeinia oogeinensis* (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Lythraceae
Tinishaa	*Ougeinia oogeinensis* (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Lythraceae
Tintidi	*Rhus parviflora* Roxb.	Anacardiaceae
Tintidika	*Garcinia indica* Choisy.; Syn *G. purpurea* Roxb.	Guttiferae; Clusiaceae
Tintindeeka	*Rhus parviflora* Roxb.	Anacardiaceae
Tirita	*Symplocos racemosa* Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Symplocaceae
Toya	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Traapusha	*Cucumis sativus* Linn.	Cucurbitaceae
Traayamaana	*Gentiana kurroo* Royle.	Gentianaceae
Traayanta	*Gentiana kurroo* Royle.	Gentianaceae
Traayanti	*Gentiana kurroo* Royle.	Gentianaceae
Traayantikaa	*Gentiana kurroo* Royle.	Gentianaceae
Trailokyavijayaa	*Cannabis sativa* Linn.; Syn *C. indica* Linn.	Cannabinaceae
Trapusha	*Cucumis sativus* Linn.	Cucurbitaceae
Tribhandi	*Operculina turpethum* (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Convolvulaceae
Tribhuvana	*Cannabis sativa* Linn.; Syn *C. indica* Linn.	Cannabinaceae
Trikantaka	*Tribulus terrestris* Linn.	Zygophyllaceae
Trinraj	*Borassus flabellifer* Linn.	Arecaceae; Palmae
Triparni	*Desmodium gangeticum* DC.; Syn *Hedysarum gangeticum* Linn.	Fabaceae
Triparni	*Pseudarthria viscida* Wt. & Arn.	Papilionaceae; Fabaceae

Triputa	*Lathyrus sativus* Linn.	Fabaceae; Papilionaceae
Trishati	*Gmelina arborea* Roxb.; Syn *Premna arborea* Roth.	Verbenaceae
Trivrta	*Operculina turpethum* (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Convolvulaceae
Truti	*Elettaria cardamomum* Maton.	Zingiberaceae
Trutyau	*Elettaria cardamomum* Maton.	Zingiberaceae
Trvritaa	*Operculina turpethum* (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Convolvulaceae
Tugaa	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Tugaakshiri	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Tulasi	*Ocimum sanctum* Linn.; Syn *O. tenuiflorum* Linn.	Labiatae; Lamiaceae
Tumbaa	*Lagenaria siceraria* (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Cucurbitaceae
Tumbini	*Lagenaria siceraria* (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Cucurbitaceae
Tumburah	*Zanthoxylum alatum* Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Rutaceae
Tumburu	*Zanthoxylum alatum* Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Rutaceae
Tundi	*Coccinia indica* W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Cucurbitaceae
Tundikaa	*Coccinia indica* W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Cucurbitaceae
Tungaa	*Prosopis spicigera* Linn.; Syn *P. cineraria* Druce.	Mimosaceae
Tuntuka	*Oroxylum indicum* Vent.	Bignoniaceae
Turaga	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Turagagandhaa	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Turangagandhaa	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Turushka	*Liquidamber orientalis* Mill.	Hamamelidaceae; Altingiaceae
Tushaara	*Cinnamomum camphora* (Linn.) Nees & Eberm.	Lauraceae

Ayurvedic Name	Botanical Name	Family
Tuunikaa	*Cedrela toona* Roxb.; Syn *Toona ciliata* M. Roem.	Meliaceae
Tuvari	*Cajanus cajan* (Linn.) Millsp.; Syn *C. indicus* Spreng.	Fabaceae
Tvacha	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Tvachaa	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Tvak	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Ucchataa	*Blepharis edulis* Pers.; Syn *B. persica* (Burm. f.) Kuntze.	Acanthaceae
Uchattaa	*Blepharis edulis* Pers.; Syn *B. persica* (Burm. f.) Kuntze.	Acanthaceae
Uddaala	*Sterculia villosa* Roxb.	Sterculiaceae
Uddaalaka	*Sterculia villosa* Roxb.	Sterculiaceae
Udichi	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Udichya	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Udumbara	*Ficus glomerata* Roxb.; Syn *F. racemosa* Linn.	Moraceae
Ugraa	*Acorus calamus* Linn.	Araceae
Ugragandhaa	*Acorus calamus* Linn.	Araceae
Umaa	*Linum usitatissimum* Linn.	Linaceae
Umaapati-sphuta galaalankaara vastu	*Aconitum ferox* Wall. ex Ser.	Ranunculaceae
Unmataka	*Datura metel* Linn.; Syn *D. fastuosa* Linn.	Solanaceae
Upakunchikaa	*Nigella sativa* Linn.	Ranunculaceae
Upkulyaa	*Piper longum* Linn.	Piperaceae
Upodikaa	*Basella rubra* Linn; Syn *Basella alba* Linn. var. *rubra* Stewart.	Basellaceae
Uragendra-sumana	*Mesua ferrea* Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Guttiferae; Clusiaceae
Urubuka	*Ricinus communis* Linn.	Euphorbiaceae

Ushaka	*Dorema ammoniacum* D. Don.	Apiaceae; Umbelliferae
Ushana	*Piper nigrum* Linn.	Piperaceae
Ushira	*Vetiveria zizanioides* (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Poaceae; Gramineae
Utkata	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Utkata	*Sesbania bispinosa* W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Fabaceae; Papilionaceae
Utkataahvaya	*Sesbania bispinosa* W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Fabaceae; Papilionaceae
Utpala	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Utpala-Nila	*Nymphaea stellata* Willd.	Nymphaeaceae
Uushaka	*Dorema ammoniacum* D. Don.	Apiaceae; Umbelliferae
Vaajigandhaa	*Withania somnifera* (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Solanaceae
Vaakuchi	*Psoralea corylifolia* Linn.	Fabaceae; Papilionaceae
Vaamshi	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Vaanari	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Vaanarikaa	*Mucuna pruriens* Baker non DC.; Syn *M. prurita* Hook.	Fabaceae; Papilionaceae
Vaaraahikanda	*Dioscorea bulbifera* Linn.; Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch-Ham ex Wall.	Dioscoreaceae
Vaari	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Vaarida	*Cyperus rotundus* Linn.	Cyperaceae
Vaarimuuli	*Pistia stratiotes* Linn. var. *cuneata* Engl.	Araceae
Vaariparni	*Pistia stratiotes* Linn. var. *cuneata* Engl.	Araceae
Vaarivaaha	*Cyperus rotundus* Linn.	Cyperaceae
Vaartaaka	*Solanum melongena* Linn.	Solanaceae
Vaartaaki	*Solanum indicum* Linn.	Solanaceae
Vaartaakini	*Solanum indicum* Linn.	Solanaceae
Vaartaaku	*Solanum melongena* Linn.	Solanaceae

Ayurvedic Name	Botanical Name	Family
Vaaruni	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Vaasaa	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Vaasaka	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Vaasanti	*Hiptage madablota* Gaertn.; Syn *H. benghalensis* Kurz.	Malpighiaceae
Vaastuuka	*Chenopodium album* Linn.	Chenopodiaceae
Vaataada	*Prunus amygdalus* Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Rosaceae
Vaataama	*Prunus amygdalus* Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Rosaceae
Vaataari	*Ricinus communis* Linn.	Euphorbiaceae
Vaatyaa	*Sida cordifolia* Linn.	Malvaceae
Vaatyaalaka	*Sida cordifolia* Linn.	Malvaceae
Vaayasi Shaaka	*Ficus hispida* Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Moraceae
Vachaa	*Acorus calamus* Linn.	Araceae
Vahni	*Plumbago zeylanica* Linn.	Plumbaginaceae
Vahrishikhaa	*Actiniopteris dichotoma* Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Adiantaceae
Vaishvaanara	*Plumbago zeylanica* Linn.	Plumbaginaceae
Vajra	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Vajraaksha	*Valeriana wallichii* DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Valerianaceae
Vajraandi	*Amorphophallus campanulatus* (Roxb.) Blume ex Decne.	Araceae
Vajri	*Euphorbia neriifolia* auct. non Linn.; Syn *E. ligularia* Roxb.	Euphorbiaceae
Vamsha-lochana	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Vamsha-lochanaa	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Vamsha-rochana	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae

Vamsha-rochanaa	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Vandaaka	*Loranthus longiflorus* Desr.	Loranthaceae
Vangasena	*Sesbania grandiflora* (L.) Poir.; Syn *Agati grandiflora* Desv.	Fabaceae; Papilionaceae
Vanjula	*Salix caprea* Linn.	Salicaceae
Vansha	*Bambusa arundinacea* Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Gramineae; Poaceae
Varaanga	*Cinnamomum zeylanicum* Blume; Syn *C. verum* Presl.	Lauraceae
Varaatikaa	*Nelumbo nucifera* Gaertn.; Syn *Nelumbium speciosum* Willd.	Nymphaeaceae
Varana	*Crataeva nurvala* Buch.-Ham.; Syn *C. magna* (Lour.) DC.	Capparidaceae
Vardhamaana	*Ricinus communis* Linn.	Euphorbiaceae
Vardhamaana	*Ricinus communis* Linn.	Euphorbiaceae
Vari	*Asparagus racemosus* Willd.	Asparagaceae
Varshaabhu	*Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Nyctaginaceae
Varshaabhu	*Trianthema portulacastrum* Linn.; Syn *T. monogyna* Linn.	Aizoaceae
Varuna	*Crataeva nurvala* Buch.-Ham.; Syn *C. magna* (Lour.) DC.	Capparidaceae
Vashira	*Achyranthes aspera* Linn.	Amaranthaceae
Vastikaa	*Trigonella foenum-graecum* Linn.	Fabaceae; Papilionaceae
Vasuka	*Calotropis gigantea* (Linn.) R. Br. ex Ait.	Asclepiadaceae
Vasuka	*Osmanthus fragrans* Lour.	Oleaceae
Vasuka	*Trianthema portulacastrum* Linn.; Syn *T. monogyna* Linn.	Aizoaceae
Vata	*Ficus benghalensis* Linn.	Moraceae
Vatsaadani	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae
Vatsanaabha	*Aconitum ferox* Wall. ex Ser.	Ranunculaceae
Vatshaka	*Holarrhena antidysenterica* (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Apocynaceae
Vayasthaa	*Tinospora cordifolia* (Willd.) Miers ex Hook. f. & Thoms.	Menispermaceae

Ayurvedic Name	Botanical Name	Family
Vayasya	*Emblica officinalis* Gaertn.; Syn *Phyllanthus emblica* Linn.	Euphorbiaceae
Vegaa	*Celastrus paniculatus* Willd.	Celastraceae
Vella	*Embelia ribes* Burm. f.	Myrsinaceae
Vetasa	*Salix caprea* Linn.	Salicaceae
Vetasaamla	*Rheum emodi* Wall. ex Meissn.; Syn *R. australe* D. Don.	Polygonaceae
Vetra (var.)	*Calamus tenuis* Roxb. Syn *C. amarus* Lour.	Arecaceae; Palmae
Vetraagra	*Calamus tenuis* Roxb. Syn *C. amarus* Lour.	Arecaceae; Palmae
Vibhitak.	*Terminalia bellirica* Roxb.	Combretaceae
Vidaari	*Pueraria tuberosa* DC.	Fabaceae; Papilionaceae
Vidaarikaa	*Pueraria tuberosa* DC.	Fabaceae; Papilionaceae
Vidaarikand	*Pueraria tuberosa* DC.	Fabaceae; Papilionaceae
Vidaarikanda	*Ipomoea digitata* Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.	Convolvulaceae
Vidanga	*Embelia ribes* Burm. f.	Myrsinaceae
Vidhari	*Pueraria tuberosa* DC.	Fabaceae; Papilionaceae
Vijayaa	*Cannabis sativa* Linn.; Syn *C. indica* Linn.	Cannabinaceae
Vijaysaara	*Pterocarpus marsupium* Roxb.	Fabaceae; Papilionaceae
Vikankata	*Flacourtia ramontchi* L. Herit.; Syn *F. indica* (Burm. f.) Merr.	Flacourtiaceae
Vikraantaa	*Premna obtusifolia* R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Verbenaceae
Virana	*Vetiveria zizanioides* (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.)	Poaceae; Gramineae
Virataru	*Dichrostachys cinerea* W. & A.; Syn *Cailliea cinera* Macb.	Mimosaceae
Virataru	*Terminalia arjuna* (Roxb.) W. & A.	Combretaceae
Viravriksha	*Terminalia arjuna* (Roxb.) W. & A.	Combretaceae

Viravrksha	*Dichrostachys cinerea* W. & A.; Syn *Cailliea cinera* Macb.	Mimosaceae
Visha	*Aconitum ferox* Wall. ex Ser.	Ranunculaceae
Vishaa	*Aconitum heterophyllum* Wall. ex Royle.	Ranunculaceae
Vishaalaa	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Vishaalaa	*Trichosanthes bracteata* (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Cucurbitaceae
Vishalyaa	*Schrebera swietenioides* Roxb.	Oleaceae
Vishalyaka	*Citrullus colocynthis* Schrad.	Cucurbitaceae
Vishalyaka	*Schrebera swietenioides* Roxb.	Oleaceae
Vishamushtikaa	*Melia azedarach* Linn.	Meliaceae
Vishamushtikaa	*Strychnos nux-vomica* Linn.	Loganiaceae; Strychnaceae
Vishatinduka	*Strychnos nux-vomica* Linn.	Loganiaceae; Strychnaceae
Vishikhaapunkhaa-shvetaa	*Tephrosia purpurea* (L.) Pers.; Syn *T. hamiltonii* Drumm.	Fabaceae; Papilionaceae
Vishnukraantaa	*Convolvulus pluricaulis* Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Convolvulaceae
Vishva	*Zingiber officinale* Rosc.	Zingiberaceae
Vishvaa	*Zingiber officinale* Rosc.	Zingiberaceae
Vishvaahva	*Zingiber officinale* Rosc.	Zingiberaceae
Vishvabhesaja	*Zingiber officinale* Rosc.	Zingiberaceae
Vishvajaa	*Zingiber officinale* Rosc.	Zingiberaceae
Vishvambharaa	*Andrographis paniculata* Wall. ex Nees.	Acanthaceae
Vishvaushadha	*Zingiber officinale* Rosc.	Zingiberaceae
Vitunna	*Celosia argentea* Linn.	Amaranthaceae
Vitunnaka	*Cyperus anabilis* Vahl.	Cyperaceae

Ayurvedic Name	Botanical Name	Family
Vriddha	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Vriddhadaara	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Vriddhadaaraka	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Vriddhadaaru	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Vriddhadaaruka	*Argyreia nervosa* (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Convolvulaceae
Vriddhi	*Habenaria intermedia* D. Don.	Orchidaceae
Vrikshaadani	*Loranthus longiflorus* Desr.	Loranthaceae
Vrikshaka	*Holarrhena antidysenterica* (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Apocynaceae
Vrintaaka	*Solanum melongena* Linn.	Solanaceae
Vrisaka	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Vrischira	*Trianthema portulacastrum* Linn.; Syn *T. monogyna* Linn.	Aizoaceae
Vrisha	*Adhatoda vasika* Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Acanthaceae
Vrishaa	*Croton tiglium* Linn.	Euphorbiaceae
Vrishchira	*Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Nyctaginaceae
Vrishchiraka	*Boerhavia diffusa* Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Nyctaginaceae
Vrkshaamla	*Garcinia indica* Choisy.; Syn *G. purpurea* Roxb.	Guttiferae; Clusiaceae
Vyaadhighaata	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Vyaadhighaataka	*Cassia fistula* Linn.; Syn *C. rhombifolia* Roxb.	Caesalpiniaceae
Vyaaghranakha	*Capparis horrida* Linn f.; Syn *Capparis zeylanica* Linn.	Cappariadaceae
Vyaaghranakhi	*Capparis horrida* Linn f.; Syn *Capparis zeylanica* Linn.	Cappariadaceae
Vyaaghri	*Solanum xanthocarpum* S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Solanaceae
Yaasa	*Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Papilionaceae, Fabaceae

Yaasaka	*Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Papilionaceae, Fabaceae
Yagnika	*Imperata cylindrica* Rausch.; Syn *I. arundinacea* Cyr.	Poaceae; Gramineae
Yagyabhuushana	*Desmostachya bipinnata* Stapf.; Syn *Eragrostis cynosuroides* Beauv.	Poaceae
Yamaanikaa	*Trachyspermum ammi* (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Apiaceae; Umbelliferae
Yangyaanga	*Ficus glomerata* Roxb.; Syn *F. racemosa* Linn.	Moraceae
Yashti	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Yashtimadhu	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Yashtimadhuka	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Yashtyaahva	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Yasthikah	*Glycyrrhiza glabra* Linn.	Fabaceae; Papilionaceae
Yava	*Hordeum vulgare* Linn.	Poaceae; Gramineae
Yavaani	*Trachyspermum ammi* (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Apiaceae; Umbelliferae
Yavaanikaa	*Trachyspermum ammi* (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Apiaceae; Umbelliferae
Yavaasah	*Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Papilionaceae, Fabaceae
Yavaasaka	*Alhagi pseudalhagi* (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Papilionaceae, Fabaceae
Yuthikaa	*Jasminum auriculatum* Vahl.	Oleaceae
Yuuthi	*Jasminum auriculatum* Vahl.	Oleaceae

5 Classical Attributes of Ayurvedic Herbs

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Abies spectabilis (D. Don) Spach.; Syn *Abies webbiana* Lindl.	Taalisa	Pinaceae	Svaasa (dyspnea), Kaasa (cough), Aama (digestive toxins), Kshaya (emaciation).
Abrus precatorius Linn.	Gunjaa	Papilionaceae; Fabaceae	Keshya (wholesome for hair), Vrshya (aphrodisiac), Balya (strength promoting). Indicated in Mukhasosa (diseases of mouth), Svaasa (dyspnea), Mada (narcotic), Netra Roga (diseases of the eyes), Kandu (itching), Indralupta (alopecia), Kustha (skin diseases).
Abutilon indicum Linn. Sweet	Atibalaa	Malvaceae	Balya (strength promoting), Kaantivardhak (luster promoting), Rakta Vikaara (blood diseases), Vrana (ulcer), Prameha (polyuria).
Acacia arabica Willd. var. indica Benth.	Babbuula	Mimosaceae	Krimi (worm infestation), Visa (poisoning), Kustha (skin diseases).
Acacia catechu (Linn. f.) Willd.	Khadira	Mimosaceae	Medoroga (obesity), Prameha (polyuria), Svitra (leucoderma), Kustha (skin diseases).
Acacia leucophloea (Roxb.) Willd.; Syn *A. alba* Willd.	Irimeda	Mimosaceae	Mukha Roga (diseases of the mouth), Danta Roga (diseases of the teeth), Krimi (worm infestation), Kustha (skin diseases), Kandu (pruritus).
Achyranthes aquatica Br.	Gandira	Amaranthaceae	Urustambha (stiffness, loss of movement of leg), Prameha (polyuria), Sotha (edema), Arsha (piles), Paandu (anemia), Shula (colic), Halimaka (chronic obstructive jaundice).
Achyranthes aspera Linn.	Apaamaarga	Amaranthaceae	Hrdroga (diseases of heart), Apachi (chronic lymphadenitis), Arsha (piles).
Aconitum ferox Wall. ex Ser.	Visha	Ranunculaceae	Vaata Jvara (fever due to Vata), Sannipaata Jvara (typhoid fever), Mandaagni (dyspepsia), Grahani (sprue), Shula (abdominal colic), Gulma (abdominal lump), Krimi (worm infestation), Vaatarakta (gout), Kaasa (cough), Svaasa (dyspnea), Kshaya (phthisis).
Aconitum heterophyllum Wall. ex Royle.	Ativishaa	Ranunculaceae	Dipana (digestive stimulant), Paachana (digestive), Aama Visha (indigestive toxins), Krimiroga (worm infestation).
Aconitum palmatum D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Prativishaa	Ranunculaceae	Kustha (skin diseases), Vaatarakta (gout), Raktadosha (disorders of blood).

Acorus calamus Linn.	Vachaa	Araceae	Dipana (digestive stimulant), Apasmaara (epilepsy), Unmaada (insanity).
Actiniopteris dichotoma Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Vahrishikhaa	Adiantaceae	Mutraaghaata (dysuria).
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vaasaka	Acanthaceae	Svarya (good for voice), Kaasa (cough), Svaasa (dyspnea), Jvara (fever).
Adiantum lunulatum Burn.	Hansapadi	Polypodiaceae	Visarpa (erysipelas), Lutaa Visha (spider venom), Agni Rohini (diphtheria).
Adina cordifolia Hook. f. ex Brandis	Gaurakadambaka	Rubiaceae	Baalagraha (specific diseases of children).
Aegle marmelos (L.) Correa ex Roxb.	Bilva	Rutaceae	Balya (strength promoting), Dipana (digestive stimulant), Paachana (digestive).
Aerva lanata (L.) Juss. ex Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Paashaanabheda	Amaranthaceae	Kaphaashmari (calculus due to Kapha).
Ailanthus excelsa Roxb.	Aralu	Simaroubaceae	Kustha (skin diseases), Prameha (polyuria), Gulma (abdominal lump), Arsha (piles), Mushika Visha (rat poison).
Alangium salviifolium (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Ankola	Alangiaceae	Krimi (worm infestation), Sula (colic pain), Bisarpa (erysipelas), Musika Visha (rat poison).
Albizia lebbeck (Linn.) Willd.	Shirisha	Mimosaceae	Sotha (edema), Visarpa (erysipelas), Kaasa (cough), Vrana (ulcer).
Albizia procera Benth.	Shevta Shirisha	Mimosaceae	Prameha (polyuria), Arsha (piles), Naadivrana (sinus).
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Yavaasah	Papilionaceae; Fabaceae	Medoroga (obesity), Kustha (skin diseases), Vaatarakta (gout), Jvara (fever).
Allium cepa Linn.	Palaandu	Liliaceae; Alliaceae	Vaata Roga (diseases due to Vata), Balya (strength promoting), Vrshya (aphrodisiac).
Allium sativum Linn.	Rasona	Liliaceae; Alliaceae	Brhmana (beneficial for bulk promoting), Vrshya (aphrodisiac), Bhagna (fracture), Samdhaana Kaaraka (promotes reunion of fractured bones), Kanthya (beneficial for throat), Medhya (nootropic), Netrya (beneficial for eyes), Rasaayana (rejuvenative), and specifically used in all kinds of Vaata and Kapha diseases.

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Maanakanda	Araceae	Sotha (edema).
Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.	Ghritakumaari	Liliaceae; Agavaceae	Rasaayana (rejuvenating), Netrya (beneficial for eyes), Balya (strength promoting), Vrshya (aphrodisiac), Pleehaa (splenic disorders), Yakrit Briddhi (hepatomegaly), Granthi (cyst), Bisphota (blisters), and skin diseases.
Alstonia scholaris R. Br.	Saptaparna	Apocynaceae	Kustha (skin diseases), Dipana (digestive stimulant), Svaasa (dyspnea).
Alternanthera sessilis (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. non-link.	Matsyaakshi	Amaranthaceae	Kaphaja Mutrakrchhra (dysuria due to Kapha).
Amaranthus spinosus Linn.	Tanduliya	Amaranthaceae	Dipana (digestive stimulant), Mutrala (diuretic).
Ammania baccifera Linn.	Agnipatri	Lythraceae	Unmaada (insanity), Apasmaara (epilepsy), Jvara (fever), Kaasa (cough), Agnimaandya (dyspepsia), Vaatarakta (gout), Pratishyaaya (rhinitis), Sosa (emaciation), Mutrakrchhra (dysuria), Katisula (lumbago), Visarpa (erysipelas), Paandu (anemia), Prameha (polyuria), Bhrama (vertigo), Murchaa (syncope).
Amomum subulatum Roxb.	Sthula-elaa	Zingiberaceae	Kandu (pruritus), Svaasa (dyspnea), Siroroga (diseases of the head).
Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Kandala	Araceae	Arsha (piles), Pleehaa (splenic diseases).
Anacyclus pyrethrum DC.; Syn *A. officinarum* Haye	Aakaarakarabha	Compositae; Asteraceae	Vaajikarana (aphrodisiac).
Andrographis paniculata Wall. ex Nees.	Bhuunimba	Acanthaceae	Sannipaata Jwara (typhoid fever), Shvaasa (dyspnea), Kaasa (cough), Kustha (skin diseases), Jvara (fever), Vrana (ulcer), Krimi (worm infestation).
Angelica archangelica Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Chandaam-shuka	Umbelliferae; Apiaceae	Svedaghna (anti-diaphoretic).

Angelica glauca Edgew.	Choraka	Umbelliferae, Apiaceae	Hrdya (wholesome for heart), Medoroga (obesity), Kustha (skin diseases), Kandu (pruritus).
Anisomeles malabarica R. Br. ex Sims	Sprikkaa	Labiatae, Lamiaceae	Vrshya (aphrodisiac), Kustha (skin diseases), Kandu (pruritus).
Anogeissus latifolia Wall. ex Bedd.	Dhava	Combretaceae	Prameha (polyuria), Arsha (piles), Paandu (anemia).
Anthocephalus cadamba Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Kadamba	Rubiaceae	Stanya Vardhaka (galactagogue).
Apium graveolens Linn.	Ajamodaa	Apiaceae, Umbelliferae	Dipana (digestive stimulant), Hrdya (wholesome for heart), Vrshya (semen promoting), Valya (strength promoting).
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Agaru	Thymelaceae	Tvachya (good for the skin), indicated in diseases of ear and eyes.
Areca catechu Linn.	Guwaaka	Arecaceae; Palmae	Dipana (digestive stimulant).
Argemone mexicana Linn.	Svarnkshiri	Papaveraceae	Rechana (purgative), Krimi (worm infestation), Kandu (pruritus), Kustha (skin diseases).
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaaruka	Convolvulaceae	Aamavata (rheumatism), Arsha (piles), Vrshya (aphrodisiac), Balya (strength promoting), Medhya (brain tonic), Varnya (complexion promoting), Svarya (beneficial for voice), Dipana (digestive stimulant).
Artemisia vulgaris Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Damanaka	Asteraceae; Compositae	Hrdya (wholesome for the heart), Vrshya (aphrodisiac), Kustha (skin diseases), Kandu (pruritus).
Artocarpus heterophyllus Lam.; Syn *A. integrifolia* Linn. f.	Panasa	Moraceae	Balya (strength promoting), Vrshya (aphrodisiac), Bishtambhi (obstructs Vaata).
Artocarpus lakoocha Roxb.; Syn *A. lacucha* Buch.-Ham.	Lakuch	Moraceae	Agni Vardhak (digestive stimulant), Svaasa (dyspnea).

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Asparagus racemosus Willd.	Shataavari	Asparagaceae	Rasaayana (rejuvenative), Medhya (brain tonic), Vrshya (aphrodisiac), Balya (strength promoting), Varnya (complexion enhancing), Agnivardhak (digestive stimulant), Stanya Vardhak (galactagogue).
Asteracantha longifolia Nees;. Syn *Hygrophila spinosa* T. Anders.	Kokilaaksha	Acanthaceae	Vrshya (aphrodisiac), Asmari (calculus), Sotha (edema).
Averrhoa carambola Linn.	Karmaranga	Oxalidaceae, Averrhoaceae	Graahi, Vaatarakta (gout), Sphota (blisters), Kustha (skin diseases).
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Nimba	Meliaceae	Kustha (skin diseases), Prameha (polyuria), Krimi (worm infestation).
Bacopa monnieri (Linn.) Penn.; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Braahmi	Scrophulariaceae	Ayushya (beneficial for life span), Medhya (brain tonic), Rasayana (rejuvenative), Kustha (skin diseases), Pandu (anemia), Sotha (edema).
Balanites aegyptiaca (Linn.) Delile.; Syn *B. roxburghii* Planch.	Ingudi	Simaroubaceae; Balanitaceae	Kustha (skin diseases), Svitra (leucoderma), Bhuta Graha Baadha (psychological disorders), Sulaghna (anti-colic).
Baliospermum calycinum Muell.-Arg.	Naagadanti	Euphorbiaceae	Bhagandara (fistula-in-ano), Baalagraha (specific disease of children).
Baliospermum montanum (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.	Danti	Euphorbiaceae	Arsha (piles), Ashmari (calculus), Sula (colic), Kandu (pruritus), Udara (diseases of the abdomen).
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vansha	Gramineae; Poaceae	Vasti Sodhan (corrects the urinary bladder).
Barleria cristata Linn.	Sahachara	Acanthaceae	Useful in Kustha (obstinate skin diseases), Vaatarakta (gout), Visha (poison), Kandu (pruritus), Kesharanjana (colors the hairs).
Barleria prionitis Linn.	Kuranta	Acanthaceae	Useful in Kustha (obstinate skin diseases), Vatarakta (gout), Visha (poison), Kandu (pruritus), Kesharanjana (colors the hairs).

Barringtonia acutangula (Linn.) Gaertn.; Syn *Eugenia acutangula* L.	Nichula	Lecythidaceae, Barringtoniaceae	Kustha (skin diseases), Prameha (polyuria), Gulma (abdominal lump), Arsha (piles), Sotha (edema), Vaatarakta (gout), Bidradhi (abscess), Bhagna (bone fracture).
Basella rubra Linn.; Syn *Basella alba* Linn. var. *rubra* Stewart.	Potaki	Basellaceae	Sukrala (semen promoting), Balya (strength promoting), Nidraakara (induces sleep), Brhmana (bulk promoting).
Bauhinia purpurea Linn.	Kovidaara	Caesalpiniaceae	Krimi (worm infestation), Kustha (skin diseases), Gudabhramsha (prolapse of rectum), Gandamaalaa (scrophula).
Bauhinia vahlii W. & A.	Ashmantaka	Caesalpiniaceae	Hrdroga (diseases of the heart), Kandu (pruritus), Kustha (skin diseases), Jvara (fever).
Bauhinia variegata Linn.; Syn *B. candida* Roxb.	Kaanchanaara	Caesalpiniaceae	Krimi (worm infestation), Kustha (skin diseases), Gudabhramsha (prolapse of rectum), Gandamaalaa (scrophula).
Benincasa hispida (Thunb.) Cogn.; Syn *B. cerifera* Savi.	Kuushmaanda	Cucurbitacea	Vasti Sodhan (useful in disorders of urinary bladder), Maanasika Roga (mental diseases).
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Daaruharidraa	Berberidaceae	Varnya (complexion promoting), Kustha (skin diseases), Karna and Netra Roga (ear and eye diseases).
Biophytum sensitivum (Linn.) DC.; Syn *Oxalis sensitiva* Linn.	Alambushaa	Oxalidaceae	Krimi (worm infestation), pacifies Kapha and Pitta.
Blepharis edulis Pers.; Syn *B. persica* (Burm. f.) Kuntze.	Ucchataa	Acanthaceae	Kustha (skin diseases), Vaatarakta (gout), Kshaya (phthisis), Vrana (ulcer), Shvaassa (dyspnea), Aamavaata (rheumatism), Rasaayana (rejuvenative).
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Punarnavaa	Nyctaginaceae	Sotha (edema), Sopha (inflammation), Bradhna (hydrocele), Udara (diseases of the abdomen).
Borassus flabellifer Linn.	Taala	Arecaceae; Palmae	Rakta Vardhaka (hematinic), Sukrala (semen promoting), Mutrala (diuretic).
Boswellia serrata Roxb.	Shallaki	Burseraceae	Tvachya (beneficial for skin), Mukharoga (beneficial for diseases of the mouth), Unmaada (insanity), Baalagraha (specific diseases of children), Kapha (diseases due to Kapha), Krimi (helminthes), Raktapitta (disorders of blood), Vrana (ulcers), Aama (digestive toxins), Atisaara (diarrhea), Prushtikara (nutritious).

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Sarshapa-Gaura	Cruciferae; Brassicaceae	Kandu (pruritus), Kustha (skin diseases), Krimi (worm infestation).
Brassica juncea (Linn.) Czern. & Coss.	Raajikaa	Cruciferae; Brassicaceae	Kandu (pruritus), Kustha (skin diseases), Krimi (worm infestation).
Brassica campestris Linn. var. *rapa* (L.) Hartm.	Sarshapa	Cruciferae; Brassicaceae	Kandu (pruritus), Kustha (skin diseases), Krimi (worm infestation).
Bryonopsis laciniosa (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Lingini	Cucurbitaceae	Vaatakaphajwara, Vaajikarana (aphrodisiac), Shukravardhaka (semen promoting), Diptaagni (digestive stimulant).
Buchanania lanzan Spreng.; Syn *B. latifolia* Roxb.	Chaar	Anacardiaceae	Prushtikara (nutritious).
Butea monosperma (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Paalasha	Papilionaceae; Fabaceae	Bhagna (bone fracture), Arsha (piles), Krimi (worm infestation).
Caesalpinia bonduc (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Kantaki Karanja	Caesalpiniaceae	Krimi (worm infestation), Kustha (skin diseases), Prameha (polyuria), Mutrakrchhra (dysuria).
Caesalpinia sappan Linn.	Pattraanga	Caesalpiniaceae	Vrana (ulcers), indicated in Pitta dominant and Rakta dominant diseases, specifically indicated in Daaha (burning sensation).
Cajanus cajan (Linn.) Millsp.; Syn *C. indicus* Spreng.	Aadhaki	Fabaceae	Varnya (complexion promoting), Hrdya (wholesome for heart), Vaata Roga (diseases of the nervous system).
Calamus tenuis Roxb. Syn *C. amarus* Lour.	Vetra (var.)	Arecaceae; Palmae	Ashmari (calculus), Sotha (edema), Arsha (piles), Yoniroga (diseases of female genitalia).
Callicarpa macrophylla Vahl. Substitute *Prunus mahaleb* (Rosaceae); Syn *C. incana* Roxb.	Shyamaa	Verbenaceae	Raktaatisaara (blood dysentery), Baktra Jaadya (aphasia).

Calotropis gigantea (Linn.) R. Br. ex Ait.	Alarka	Asclepiadaceae	Kustha (leprosy), Kandu (itching), Arsha (hemorrhoids), Udara (ascites).
Calycopteris floribunda Lam.	Sushavi	Combretaceae	Snaayuka (dracunculiasis), Masurikaa (small pox), Romantikaa (measles), Yoniroga (diseases of female genitalia), Vrana ropana (ulcer healing).
Cannabis sativa Linn.; Syn *C. indica* Linn.	Bhangaa	Cannabinaceae	Paachana (digestive), Dipana (digestive stimulant), Madakaari (narcotic).
Capparis horrida Linn f.; Syn *Capparis zeylanica* Linn.	Vyaaghranakhi	Cappariadaceae	Rakta Pradara (excess vaginal discharge of blood).
Capparis sepiaria Linn.	Himsraa	Capparidaceae	Vaata Vyaadhi (diseases of the nervous system), Galaganda (goiter), Vaatikashotha (edema due to Vata), Naadivrana (sinus), Kaphaja Vaatarakta (gout due to Kapha).
Careya arborea Roxb.	Kumbhika	Barringtoniaceae	Prameha (polyuria), Arsha (piles), Nadivrana (sinus).
Carissa carandas Linn. var. *congesta* (Wt.) Bedd.	Karamarda	Apocynaceae	Pacifies aggravated Pitta and Vaayu.
Carthamus tinctorius Linn.	Kusumbha	Asteraceae	Mutrakrchhra (dysuria), Raktapitta (hemorrhagic disorders).
Carum carvi Linn.	Krishna jiraka	Apiaceae; Umbelliferae	Dipana (digestive stimulant), Paachana (digestive), Vrshya (aphrodisiac), Balya (strength promoting), Medhya (brain tonic).
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Aaragvadha	Caesalpiniaceae	Sramsana (purgative), Jvara (fever), Hrdroga (diseases of heart), Udaavarta (abdominal diseases characterized by retention of feces), Sula (colic), Pods are mild purgatives and effective in skin diseases and fever.
Cassia occidentalis Linn.	Kaasamarda	Calsalpiniaceae	Vrshya (aphrodisiac), Arochaka (anorexia), Kaasa (cough), Visha (poison), Paachana (digestive), especially Kaasahara (antitussive) and pacifies Pitta Dosha.
Cassia tora Linn.	Chakramarda	Calsalpiniaceae	Svaasa (dyspnea), Dadru (ring worm), Kustha (skin diseases), Kandu (pruritus).
Cedrela toona Roxb.; Syn *Toona ciliata* M. Roem.	Tuunikaa	Meliaceae	Vrshya (aphrodisiac), Vrana (ulcer healing), Kustha (skin diseases), Rakta Dosha (pacifies Rakta Dosha).
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devadaaru	Pinaceae	Prameha (polyuria), Pinasa (ozena), Kandu (pruritus), Kassa (cough), Vaata Roga (diseases due to dominance of Vata).

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Celastrus paniculatus Willd.	Jyotishmati	Celastraceae	Agni Vardhaka (digestive stimulant), Buddhi Smriti Pada (intellect promoting).
Celosia argentea Linn.	Shitivaaraka	Amaranthaceae	Ashmari (calculus), Mutrakrchhra (dysuria), Pradara (excessive vaginal discharges), Yonishula (pain in vagina), Shukradosha (disorders of sperm).
Celosia cristata Linn.	Jataadhari	Amaranthaceae	Sarva Jvarahara (useful in all kinds of fevers).
Centella asiatica (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Manduukaparni	Umbelliferae; Apiaceae	Aayushya (beneficial for life span), Medhya (brain tonic), Rasaayana (rejuvenative), Kustha (skin diseases), Paandu (anemia), Sotha (edema).
Ceratophyllum demersum Linn.	Shaivaala	Ceratophyllaceae	Sukrameha (spermatorrhea), Pittaja Visarpa (erysipelas).
Chenopodium album Linn.	Vaastuuka	Chenopodiaceae	Dipana (digestive stimulant), Paachana (digestive), Sukrala (semen promoting), Balya (strength promoting), Pleehaa (splenic disorders), Arsha (piles), Krimi (worm infestation).
Cicca acida (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.-Arg.	Lavali-phala	Euphorbiaceae	Ashmari (calculus), Arsha (piles).
Cicer arientinum Linn.	Chanaka	Fabaceae; Papilionaceae	Used as a dietary article in Jvara (fever), Raktapitta (bleeding disorders), Aamavata (rheumatism), Vaatarakta (gout), Annadravashula (gastric ulcer/acute gastritis), Prameha (polyuria).
Cinnamomum camphora (Linn.) Nees & Eberm.	Karpura	Lauraceae	Kustha (skin diseases), Kandu (itching), Vamana (vomiting).
Cinnamomum tamala Nees. & Eberm.	Patra	Lauraceae	Dipana (digestive stimulant), Paachana (promoting digestion).
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Daarusitaa	Lauraceae	Sukrala (semen promoting), Balya (strength promoting).
Cissampelos pareira Linn.	Paathaa	Menispermaceae	Sula (colic), Jvaara (fever), Atisaara (diarrhea), Hrdroga (diseases of the heart), Svaasa (dyspnea), Kandu (pruritus).

Cissus quadrangular Linn.; Syn *Vitis quadrangula* Wall.	Asthisamhaara	Vitaceae	Indicated in bone fracture, Arsha (piles), eye diseases, Krimi (worm infestation).
Citrullus colocynthis Schrad.	Indravaaruni	Cucurbitaceae	Plihaa (splenic disorders), Udara (diseases of the abdomen), Svaasa (dyspnea), Kaasa (cough), Kustha (skin diseases), Mudhagarbha (fetal malpresentation), Prameha (polyuria).
Citrus decumana Linn.	Madhukarkati	Rutaceae	Indicated in Svaasa (dyspnea), Kaasa (cough), Kshaya (phthisis).
Citrus limon (Linn.) Burm. f.	Jambira	Rutaceae	Tridosha Jvara (fever due to all Doshas), Arsha (piles), Ajirna (indigestion), Shula (abdominal colic), Plihaa (splenic diseases), Kushtha (diseases of skin).
Citrus maxima (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Madhukarkatikaa	Rutaceae	Dipana (digestive stimulant), Svaasa, (dyspnea), Kaasa (cough).
Citrus medica Linn.	Bijpuura	Rutaceae	Jirna Jwara (chronic fever), Ajirna (indigestion), Shula (colic), Udara Roga (diseases of abdomen).
Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Tarkaari	Verbenaceae	Vaatika Jvara (fever due to predominance of Vaata), Urustambha (stiffness of thigh muscles), Shirashula (headache), Kaphaasmari (urinary calculus), Gulma (abdominal lump).
Clerodendrum serratum (Linn.) Moon.	Bhaargi	Verbenaceae	Paachana (digestive), Dipana (digestive stimulant), Kaasa (cough), Svaasa (dyspnea), Pinasa (ozena), Jvara (pyrexia).
Clitoria ternatea Linn.	Aparaajitaa	Papilionaceae; Fabaceae	Medhya (intellect promoting), Kanthya (beneficial for throat), Drishtishakti Vardhak (vision promoting), Smruti Buddhi Vardhak (memory and intellect promoting).
Coccinia indica W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Bimbi	Cucurbitaceae	Lekhana (emaciating).
Cocculus hirsutus (Linn.) Diels.; Syn *C. villosus* (Lam.) DC.	Jalajamani	Menispermaceae	Vrshya (aphrodisiac), Kaphaghna (pacifies aggravated Kapha Dosha).
Cocos nucifera Linn.	Naarikela	Palmae; Arecaceae	Brhmana (bulk promoting), Balya (strength promoting).

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Coix lacryma-jobi Linn.; Syn *C. lachryma* Linn.	Gavedhukaa	Poaceae; Gramineae	Kaarshya Krut (emaciating).
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Guggul	Burseraceae	Vrshya (aphrodisiac), Rasaayana (geriatrics), Bhagna Samdhaana Krut (promotes reunion of fractured bones), Dipana (digestive stimulant), Balya (strength promoting), Medohara (anti-obesity), pacifies aggravated Vaata Dosha.
Commiphora molmol (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Bola	Burseraceae	Rakta Hara (diseases of blood), Shita (rigor), Medhya (brain tonic), Dipana (digestive stimulant), Jvara (fever), Apasmara (epilepsy), Kustha (skin diseases), Garbhasaya Vishodhaka (purifies the uterus).
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Shankhapushpi	Convolvulaceae	Medhya (brain tonic), Vrshya (aphrodisiac), Balya (strength promoting), Rasaayana (rejuvenating), Maanasa Roga (mental disorders), Apasmaara (epilepsy), Krimi (worm infestation), Kustha (skin diseases).
Corallocarpus epigaeus Benth. ex Hook f.	Shukanaasaa	Cucurbitaceae	Yoniroga (diseases of female genitalia), Vaata Kapha Jvara.
Corchorus capsularis Linn.	Kaala shaaka	Tiliaceae	Medhya (brain tonic), Valya (strength promoting), Sotha (edema).
Corchorus fascicularis Lam.	Chanchuka	Tiliaceae	Dhaatu Vardhaka (bulk promoting), Balya (strength promoting), Medhya (brain tonic).
Cordia dichotoma Forst f ; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.	Bahuvaara	Boraginaceae	Keshya (beneficial for hair).
Coriandrum sativum Linn.	Dhaanyaka	Umbelliferae; Apiaceae	Dipana (digestive stimulant), Paachana (digestive).
Coscinium fenestratum Colebr.	Kaaliyaka	Menispermaceae	Varnya (complexion promoting), Kustha (skin diseases), Karna and Netra Roga (ear and eye diseases), Upadamsha (syphilis), Yuvaanapidaka (acne vulgaris), Vyanga (chloasma of face), Nyachha (capillary angiomata), Tila (nonelevated mole).
Costus speciosus (Koenig) Sm.	Kebuka	Zingiberaceae	Kustha (skin diseases), Kaasa (cough), Prameha (polyuria).

Crataeva nurvala Buch.-Ham.; Syn *C. magna* (Lour.) DC.	Varuna	Capparidaceae	Ashmari (urolithiasis), Mutrakrchhra (dysuria), Vaatarakta (gout), Krimi (worm infestation).
Crocus sativus Linn.	Kumkuma	Iridaceae	Varnya (complexion promoting), Shira Roga (diseases of head), Vyanga (chloasma of face).
Crotalaria juncea Linn.	Shana	Fabaceae; Papilionaceae	Kapha Pitta Hara (pacifies the aggravated Kapha and Pitta).
Croton tiglium Linn.	Dravanti	Euphorbiaceae	Urustambha (stillness, loss of movement of leg), Virechana (purgation).
Cucumis sativus Linn.	Traapusha	Cucurbitaceae	Mutrala (diuretic).
Cucurbita pepo Linn.	Kushmaandi	Cucurbitaceae	Kapha Vaatahara (pacifies aggravated Kapha and Vaata).
Cuminum cyminum Linn.	Jiraka	Umbelliferae; Apiaceae	Dipana (digestive stimulant), Paachana (digestive), Vrshya (aphrodisiac), Balya (strength promoter), Medhya (brain tonic).
Curculigo orchioides Gaertn.	Mushali	Amaryllidaceae; Hypoxidaceae	Vrshya (aphrodisiac), Rasaayana (rejuvenative), specially indicated for Arsha (piles).
Curcuma angustifolia Roxb.	Tikhuri	Zingiberaceae	Rakta Pitta (disorders of blood), Sita Pitta (urticaria), Amlapitta (hyperacidity), Aruchi (anorexia), Mandaagni (dyspepsia), Daaha (burning sensation), Trishna (excess thirst).
Curcuma longa Linn.; Syn *C. domestica* Valeton	Haridraa	Zingiberaceae	Varnya (complexion promoting), Tvagdoshahara (eliminates skin diseases), Prameha (polyuria), Sotha (edema).
Curcuma zedoaria Rosc.	Karchuura	Zingiberaceae	Dipana (digestive stimulant), Kaasa (cough), Svaasa (dyspnea), Arsha (piles), Vrana (ulcer).
Cymbopogon citratus (DC.) Stapf.; Syn *Andropogon citratus* DC.	Bhuutika	Poaceae	Rechana (purgative), Dipana (digestive stimulant), Mukhasodhan (mouth freshener).
Cymbopogon jwarancusa (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.	Laamajjaka	Poaceae	Tvag Roga (skin disease), Mutrakrchhra (dysuria).
Cymbopogon martini Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Dhyaamaka	Poaceae	Indicated in Aamaashayagata Vaata.
Cynodon dactylon Pers.	Duurvaa	Graminae; Poaceae	Skin diseases, Rakta Pitta (diseases of the blood).

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Cyperus anabilis Vahl.	Plava	Cyperaceae	Kaantivardhaka (promotes luster), Visarpa (erysipelas), Kustha (skin diseases), Kandu (pruritus).
Cyperus rotundus Linn.	Mustaka	Cyperaceae	Dipana (digestive stimulant), Paachana (digestive), Jvara (fever).
Dalbergia sissoo Roxb. ex DC.	Shimshapaa	Fabaceae; Papilionaceae	Kustha (skin diseases), Svitra (leucoderma), Garbha Paataka (abortifacient), Vasti Roga (diseases of the bladder).
Datura metel Linn.; Syn *D. fastuosa* Linn.	Dhattuuraa	Solanaceae	Varnya (complexion promoting), Agnivardhak (digestive stimulant), Krimi (worm infestation), Kustha (skin diseases), Kandu (pruritus), Jvara (fever).
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Shaaliparni	Fabaceae	Brhmana (bulk promoting), Rasaayana (rejuvenating), Jvara (fever), Svaasa (dyspnea), Kaasa (cough), Atisaara (acute diarrhea).
Desmostachya bipinnata Stapf.; Syn *Eragrostis cynosuroides* Beauv.	Kusha	Poaceae	Mutrakrchhra (dysuria), Ashmari (calculus).
Dichrostachys cinerea W. & A.; Syn *Cailliea cinera* Macb.	Viravrksha	Mimosaceae	Mutraaghaata (retention of urine), Ashmari (calculus), Yoniroga (diseases of the female reproductive system).
Dioscorea bulbifera Linn.; Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch-Ham ex Wall.	Vaaraahikanda	Dioscoreaceae	Sukrala (semen promoting), Varnya (promotes complexion), Svarya (promotes voice), Ayushya (beneficial for life span), Dipana (digestive stimulant), Rasaayana (geriatric).
Dioscorea esculenta Burkill.; Syn *D. aculeata* Linn., *D. faciculata* Roxb., *D. spinosa* Roxb ex Wall.	Madhvaaluka	Dioscoreaceae	Balya (strength promoting), Vishahara (anti-poison).
Diospyros embryopteris Pers.; Syn *D. peregrina* (Gaertn.) Gurke, *D. malabarica* (Desr.) Kostel.	Tinduka	Ebenaceae	Prameha (polyuria).
Dipterocarpus turbinatus Gaertn. f.; Syn *D. indicus* Bedd.	Ajakarna	Dipterocarpaceae	Urustambha (stillness of thigh muscles), Aamavata (rheumatism), Kapha Vaata Roga (diseases due to Kaph and Vata Dosha), Dandakaakshepa, Kaphaja Upadamsha (syphilis due to Kapha).

Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulattha	Fabaceae; Papilionaceae	Ashmari (calculus), Pinasa (ozena), Medoroga (obesity), Krimi (worm infestation).
Dolichos lablab Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.	Nishpaav	Fabaceae; Papilionaceae	Sotha (edema).
Dorema ammoniacum D. Don.	Ushaka	Apiaceae; Umbelliferae	Ashmari (calculus due to Vata and Kapha).
Echinochloa frumentacea Link.; Syn *Panicum frumentaceum* Roxb.	Shyaamaaka	Poaceae; Gramineae	Ruksha (creates dryness).
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Bhringaraaja	Asteraceae: Compositae	Keshya (beneficial for hair), Tvachya (beneficial for skin), Rasaayana (geriatric), Balya (strength promoting), Svaasa (dyspnea), Kaasa (cough), Sotha (edema), Aama (food toxins), Paandu (anemia), Kustha (skin diseases), Netra roga (diseases of eye), Siroroga (diseases of head).
Elettaria cardamomum Maton.	Sukshmailaa	Zingiberaceae	Kaasa (cough), Svaasa (dyspnea), Arsha (piles), Mutrakrchhra (dysuria).
Eleusine coracana Gaertn.	Madhuuli	Poaceae; Gramineae	Bhagna (fracture of bone), Akshepaka (convulsion), Pakshaghata (hemiplegia), Sirashula (headache).
Embelia ribes Burm. f.	Vidanga	Myrsinaceae	Dipana (digestive stimulant), Krimi (worm infestation), Sula (colic), Adhmaana (tympanitis).
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Aaamalaki	Euphorbiaceae	Rasaayana (geriatrics), Vrshya (aphrodisiac), Prameha (polyuria).
Enhydra fluctuans Lour.	Hil-mochikaa	Compositae; Asteraceae	Sotha (edema), Kustha (skin diseases), pacifies aggravated Kapha and Pitta Dosha.
Ephedra gerardiana Wall. ex Stapf	Soma	Ephedraceae	Rasaayana (rejuvenating and geriatric).
Erythrina variegata Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Paaribhadra	Fabaceae; Papilionaceae	Sotha (edema), Meda (obesity), Krimi (worm infestation), Karna Roga (diseases of the ear).
Euphorbia hirta Linn.; *E. pilulifera* auct. non Linn.	Dudhikaa	Euphorbiaceae	Garbhakara (helps in conception), Vrshya (aphrodisiac), Vaatabyaadhi (diseases of the nervous system).

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Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Snuhi	Euphorbiaceae	Tikshna Rechana (drastic purgative), Dipana (digestive stimulant), Adhmaana (tympanitis), Udara (diseases of the abdomen), Sotha (edema), Kustha (skin diseases), Arsha (piles).
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Dhanvayaasaka	Zygophyllaceae	Vishama Jvara (malarial fever), Sannipaata Jvara (typhoid fever), Hikkaa (hiccup), Kaasa (cough), Svaasa (dyspnea), Sutikaa Roga (post partum diseases).
Feronia limonia (Linn.) Swingle.; Syn *F. elephantum* Corr.	Kapittha	Rutaceae	Grahani (sprue), Trshna (excess thirst), Vaata Vyadhi (diseases of nervous system), Vaatarakta (gout), Prameha (polyuria), Mutrakrchra (dysuria).
Ferula foetida Regel.; Syn *F. assafoetida* Linn.	Hingu	Apiaceae; Umbelliferae	Dipana (digestive stimulant), Sula (colic), Gulma (abdominal lump), Udara (diseases of abdomen), Anaaha (constipation), Krimi (worm infestation).
Ficus benghalensis Linn.	Vata	Moraceae	Svitra (leucoderma), Kustha (Paandu and Arsha).
Ficus glomerata Roxb.; Syn *F. racemosa* Linn.	Udumbara	Moraceae	Varnya (enhances complexion), Vrana Sodhana (ulcer disinfectant), Ropana (ulcer healing).
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Kaakodumbara	Moraceae	Svitra (leucoderma), Kustha (Pandu and Arsha).
Ficus lacor Buch.-Ham.; Syn *F. infectoria* auct. non Willd.	Plaksha	Moraceae	Yoniroga (diseases of female genitalia), Daaha (burning sensation), Vrana (ulcers).
Ficus religiosa Linn.	Ashvattha	Moraceae	Yoniroga (diseases of female genitalia), Daaha (burning sensation), Vrana (ulcers).
Flacourtia ramontchi L. Herit.; Syn *F. indica* (Burm. f.) Merr.	Vikankata	Flacourtiaceae	Dantanaadivrana (sinus in the tooth or gum).
Foeniculum vulgare Mill.	Mishreyaa	Apiaceae; Umbelliferae	Dipana (digestive stimulant), Paachana (digestive), Sula (colic).

Fumaria parviflora Lam.; Syn *F. indica* (Haussk.) Pugsley.	Parpata	Fumariaceae	Pitta Rakta Saamaka (pacifies aggravated Pitta and Rakta), Bhrama (giddiness), Trushaa (excessive thirst), Daaha (burning sensation), Kaphaghna (pacifies Kapha).
Garcinia indica Choisy.; Syn *G. purpurea* Roxb.	Vrkshaamla	Guttiferae; Clusiaceae	Arsha (piles), Grahani (sprue), Sula (abdominal colic), Hrdroga (diseases of heart).
Gentiana kurro Royle.	Traayamaana	Gentianaceae	Indicated in Hrdroga (diseases of heart), Jvara (fever), Gulma (abdominal lump), Arsha (piles), Sula (abdominal colic), Visha (poison).
Gloriosa superba Linn.	Laangali	Liliaceaes	Kustha (skin diseases), Sopha (inflammation), Arsha (piles), Garbhapata (abortifacient).
Glycyrrhiza glabra Linn.	Yashtimadhu	Fabaceae; Papilionaceae	Chakshushya (beneficial for eyes), Balya (strength promoting), Varnya (complexion promoting), Vrshya (aphrodisiac), Keshya (beneficial for hair), Svarya (beneficial for voice), good for Vrana (ulcers), Sotha (edema), Visha (poison), Vamana (vomiting), Kshaya (phthisis).
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Gambhaari	Verbenaceae	Dipana (digestive stimulant), Paachana (digestive), Medhya (brain tonic), Arsha (piles), Jvara (fever), Aama (digestive toxins).
Gossypium arboreum Linn.	Kaarpaasi	Malvaceae	Pacifies aggravated Vata and useful in Karna Roga (ear diseases).
Grewia asiatica auct. non. L.; Syn *G. subinaequalis* DC.	Parushaka	Tiliaceae	Brhmana (bulk promoting).
Grewia hirsuta Vahl.; Syn *G. polygama* Mast.	Naagabalaa	Tiliaceae	Balya (strength promoter), Kshata (wound).
Gymnema sylvestre R. Br.	Meshashringi	Asclepiadaceae	Svaasa (dyspnea), Kaasa (cough), Prameha (polyuria), pain in the eyes, Dipana (digestive stimulant), Sramsana (purgation).
Gynandropsis gynandra (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Ajagandhaa	Capparidaceae	Urustambha (stillness of thigh muscles), Udara (diseases of the abdomen), Bhagandara (fistula-in-ano), Paandu (anemia), Kasa (cough), Shwasha (dyspnea), Galagraha (difficulty in swallowing), Hrdroga (diseases of the heart), Grahani (sprue), Kaphaja Sotha (edema due to Kapha).
Habenaria edgeworthii Hook. f. ex Collett.	Riddhi	Orchidaceae	Brmhana (bulk promoting), Vrshya (aphrodisiac).

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Habenaria intermedia D. Don.	Vriddhi	Orchidaceae	Vaatarakta (gout), Sosha (emaciation), Urustambha (stillness and loss of movement of leg), Kosthakasirsha (osteoarthritis of knee joints), Gridhrasi (sciatica), Kaamalaa (jaundice), Stanyakrit (galactagogue), Vrshya (aphrodisiac).
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Shati	Zingiberaceae	Svaasa (dyspnea), Kaasa (cough), Sidhma (pityriasis versicolor).
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Saarivaa	Asclepiadaceae; Periplocaceae	Sukrala (semen promoting), Agnimaandya (dyspepsia), Svaasa (dyspnea), Kaasa (cough), Pradara (excessive vaginal discharge), Atisaara (acute diarrhea).
Hibiscus abelmoschus Linn.; Syn *Abelmoschus moschatus* Medic.	Lataakasturikaa	Malvaceae	Vrshya (aphrodisiac), Chakshushya (beneficial for eyes), Chedana (expectorant/channel cleansing), Vastiroga (diseases of the urinary bladder).
Hibiscus rosa-sinensis Linn.	Japaa	Malvaceae	Keshya (beneficial for hair).
Himenodictyon excelsum Wall.	Bhringavriksha	Rubiaceae	Baala Roga (diseases of children).
Hiptage madablota Gaertn.; Syn *H. benghalensis* Kurz.	Maadhavi	Malpighiaceae	Udaravriddhi (distension of abdomen), Jeerna Aamavata (chronic rheumatism), and Svaasa (dyspnea).
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Girimallikaa	Apocynaceae	Jvara (fever), Atisaara (acute diarrhea), Raktarsha (bleeding piles), Vamana (vomiting), Visarpa (erysipelas), Kustha (skin diseases), Dipana (digestive stimulant), Vaatarakta (gout).
Holoptelea integrifolia Planch.	Chirabilva	Ulamaceae	Krimi (worm infestation), Kustha (skin diseases), Prameha (frequent urination).
Holostemma rheedii Wall.; Syn *H. annularis* (Roxb.) K. Schum., *H. ada-kodien* Schult., *Asclepias annularis* Roxb.	Ark-pushpi	Asclepiadaceae	Baalaka Shaktivardhaka (enhances energy and endurance level of children).

Hordeum vulgare Linn.	Yava	Poaceae; Gramineae	Medhya (brain tonic), Varnya (complexion promoter), Kantha Roga (diseases of throat), Tvag Roga (diseases of skin), Pinasa (ozena), Svaasa (dyspnea), Kaasa (cough).
Hygrorhyza aristata Nees.	Nivaara	Poaceae	It is a dietary article used in Raktapitta (disorders of blood), Vaatarakta (gout), Udara Roga (diseases of abdomen).
Hyoscyamus niger Linn.	Khuraashaanikaa	Solanaceae	Dipana (digestive stimulant), Madakaari (intoxicant).
Imperata cylindrica Rausch.; Syn *I. arundinacea* Cyr.	Darbha	Poaceae; Gramineae	Mutrakrchhra (dysuria), Mutraaghaata (retention of urine), Ashmari (calculus).
Indigofera tinctoria Linn.	Nili	Fabaceae	Rechana (purgation), Keshya (beneficial for hair), Aamavata (rheumatism), Udaavarta (abdominal diseases characterized by retention of feces).
Inula racemosa Hook. f.; Syn *I. royleana* auct. non.-DC.	Pushkaramuula	Asteraceae; Compositae	Svaasa (dyspnea), Paarsvasula (pleurodyria and intercostal neuralgia).
Ionidium suffruticosum Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.	Amburuha	Violaceae	Sannipaata Jvara (typhoid fever), Garbhini Chaturtha Maashiki Chikitshaa (for the treatment of diseases in the fourth month of pregnancy).
Ipomoea digitata Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.	Kshira-vidaari	Convolvulaceae	Gulma (abdominal lump), Vaatarakta (gout), Mutraaghaata (dysuria), Ushnavaata (urethritis), Kaarshya (emaciation).
Ipomoea sepiaria Koen. ex Roxb.; Syn *I. maxima* (Linn. f.) G. Don.	Lakshmanaa	Convolvulaceae	Helps to conceive male child.
Jasminum arborescens Roxb.; Syn *J. roxburghianum* Wall.	Nava-mallikaa	Oleaceae	Tridoshahara (pacifying three Doshas).
Jasminum auriculatum Vahl.	Yuuthi	Oleaceae	Mukha, Danta, Akshi, Siroroga (diseases of mouth, teeth, eyes, and head).
Jasminum multiflorum (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Willd., *J. bracteatum* Roxb.	Kunda	Oleaceae	Svaasa (dyspnea).
Jasminum officinale Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Maalati	Oleaceae	Netra Roga Naashak (eliminates diseases of eye), Kusthahara (useful in skin diseases).

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Jasminum sambac (Linn.) Ait.	Mallikaa	Oleaceae	Karna (diseases of ear), Akshiroga (diseases of eyes), Mukha Roga (diseases of oral cavity).
Juniperus communis Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.	Hapushaa	Cupressaceae; Pinaceae	Dipana (digestive stimulant), Vishaghna (antipoison).
Lagenaria siceraria (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Tumbini	Cucurbitaceae	Vata Pitta Jwara (fever due to Vata and Pitta), Hrdya (wholesome for heart).
Lannea coromandelica (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.	Jingini	Anacardiaceae	Manyaastambha (torticollis), Urdhwajatrugata Roga (diseases of head and neck), Vaatarakta (gout), Sphota (boil), Charmadala (excoriation), Kustha (skin diseases), Arsha (piles), Visarpa (erysipelas), Bhagandara (fistula-in-ano).
Lathyrus sativus Linn.	Triputa	Fabaceae; Papilionaceae	Vaata prakopaka (aggravates Vata).
Launaea asplenifolia Hook. f.	Gojihvaa	Compositae	Prameha (polyuria), Kaasa (cough), Svaasa (dyspnea), Jvara (fever), Naadivrana (sinus).
Lawsonia inermis Linn.	Madayantikaa	Lythraceae	Urustambha (stillness, loss of movement of leg), Vaatarakta (gout), Aamavata (rheumatism), Jvara (fever).
Leea macrophylla Roxb.	Hasti-karna Palaasha	Vitaceae	Grahani (sprue), Arsha (piles), Vrana (ulcers), Raktapitta (disorders of blood), Kaasa (cough), Svaasa (dyspnea), Rasaayana (rejuvenative).
Lens culinaris Medic.; Syn *L. esculenta* Moench.	Masura	Fabaceae; Papilionaceae	Jvara (fever).
Leonotis nepetaefolia R. Br.	Granthiparni	Labiatae; Lamiaceae	Raktapitta (hemorrhagic disorders), Kshaya (phthisis), Jvara (fever), Daaha (burning sensation), Kustha (skin diseases), Vaajikarana (aphrodisiac).
Lepidium sativum Linn.	Chandrashuura	Cruciferae; Brassicaceae	Paachana (digestive), Ajirna (indigestion), Sula (colic), Adhmana (flatulence).

Leptadenia reticulata W. & A.	Jivanti	Asclepiadaceae	Rasaayana (rejuvenative), Balya (strength promoting), Chakshushya (beneficial for eyes), Tridoshahara (pacifies all the aggravated three Doshas).
Leucas cephalotes (Roth.) Spreng.	Dronpushpi	Labiatae; Lamiaceae	Jvara (fever).
Linum usitatissimum Linn.	Atasi	Linaceae	Pakshaaghaata (paralysis/hemiplegia), Aakshepaka (convulsion), Urustambha (stillness/loss of movement of leg), Vaatarakta (gout), Sandhishula (joint pain), Galaganda (goiter), Gandamaalaa (cervical lymphadenitis).
Liquidamber orientalis Mill.	Turushka	Hamamelidaceae; Altingiaceae	Raktapitta (disorders of blood), Kshaya (emaciation), Jvara (fever), Daaha (burning sensation), Bandhyaa (infertility), Vaajikarana (aphrodisiac).
Loranthus longiflorus Desr.	Vrikshaadani	Loranthaceae	Apasmaara (epilepsy), Asmari (calculus), Mutrakrchhra (dysuria), Baalagraha (specific diseases of child), Pradara (excessive vaginal discharge).
Luffa cylindrica (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Dhaamaargava	Cucurbitaceae	Raktapitta (hemorrhagic diseases).
Luffa echinata Roxb.	Devadaali	Cucurbitaceae	Sopha (swelling), Paandu (anemia), Hikkaa (hiccup), Krimi (worm infestation), Jvara (fever).
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhuuka	Sapotaceae	Balya (strength promoting), Vrshya (aphrodisiac).
Maerua arenaria Hook. f. & Th.; Syn *M. oblongifolia* (Forsk.) A. Rich.	Morata	Capparidaceae	Hrdroga (diseases of the heart), Kandu (pruritus), Kustha (skin diseases), Jwara (fever).
Mallotus phillippinensis Muell.-Arg.	Kampillaka	Euphorbiaceae	Useful in Rakta Pitta (hemorrhagic disorders), Udara (diseases of the abdomen), Vrana (ulcer), Rechana (purgative), Prameha (polyuria), Anaaha (constipation), Visha (poison), Ashmari (calculus).
Mangifera indica Linn.	Aamra	Anacardiaceae	Varnya (complexion promoting), Hrdya (wholesome for heart), Vata (diseases of nervous system).

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Marsdenia tenacissima W. & A.	Muurvaa	Asclepiadaceae	Hrdroga (diseases of the heart), Kandu (pruritus), Kustha (skin diseases), Jwara (fever).
Marsilea minuta Linn.	Sunishannaka	Marsilaceae	Used as a vegetable in Vaatajakaasa (cough due to predominance of Vaata), Urustambha (stiffness of thigh muscles), Vaatarakta (gout), Vrana (wounds).
Melia azedarach Linn.	Mahaanimba	Meliaceae	Kustha (skin diseases), Prameha (polyuria), Gulma (abdominal lump), Arsha (piles), Mushika Visha (rat poison).
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Naagakeshara	Guttiferae; Clusiaceae	Aamapachana (digests Ama), Jwara (fever), Kandu (pruritus), Kustha (skin diseases), Visarpa (erysipelas).
Michelia champaca Linn.	Champak	Magnoliaceae	Mutrakrchhhra (dysuria).
Microstylis muscifera Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.	Jivaka	Orchidaceae	Vrshya (aphrodisiac), Stanyakaaraka (galactagogue), Brhmana (bulk promoting).
Microstylis wallichii Lindl.; Syn *Malaxis acuminata* D. Don	Rshabhaka	Orchidaceae	Vrmhana (bulk promoting), Vrshya (aphrodisiac), Vaatarakta (gout), Kustha (skin diseases), Visarpa (erysipelas), Gridhrasi (sciatica).
Mimosa pudica Linn.	Lajjaalu	Mimosaceae	Atisaara (acute diarrhea), Yoniroga (diseases of female genitalia), Rakta Pitta (hemorrhagic diseases).
Mimusops elengi Linn.	Bakula	Sapotaceae	Danta Roga (diseases of teeth), Krimi (worm infestation).
Mimusops hexandra Roxb.	Kshirini	Sapotaceae	Vrshyam (aphrodisiac), Balyam (strength promoting).
Mitragyna parvifolia (Roxb.) Korth.	Giri-kadamba	Rubiaceae	Baalagraha (specific disorders of children).
Momordica charantia Linn.	Kaaravellaka	Cucurbitaceae	Paandu (anemia), Prameha (polyuria), Krimi (worm infestation).
Momordica dioica Roxb.	Karkotikaa	Cucurbitaceae	Sarpa Visha Naashaka (anti-snake poison), Visarpa (erysipelas), Vrana (ulcer).
Moringa oleifera Lam.; Syn *M. pterygosperma* Gaertn.	Shobhaanjana	Moringaceae	Sula (colic), Kustha (skin diseases), Kshaya (phthisis), Swasa (dyspnea).

Mucuna monosperma DC.	Kaakaandolaa	Fabaceae; Papilionaceae	Pumsavana (for procuring male child).
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Kapikachhuu	Fabaceae; Papilionaceae	Vaatahara (pacifies the aggravated Vata), Vrshya (aphrodisiac), Balya (strength promoting).
Musa paradisiaca Linn.; Syn *M. sapientum* Linn.	Kadali	Musaceae	Vrshya (aphrodisiac), Brhmana (bulk promoting).
Myristica fragrance Houtt. (fragrant arill covering the fruits)	Jaatikosha	Myristicaceae	Dipana (digestive stimulant), Svarya (beneficial for the voice), Svaasa (dyspnea), Pinasa (ozena), Sosha (cachexia).
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Jataamaansi	Valerianaceae	Medhya (brain tonic), Kaanti Vardhak (promotes luster), Balya (strength promoting), Kustha (skin diseases).
Nerium indicum Mill.; Syn *N. odorum* Soland.	Karavira	Apocynaceae	Kustha (skin diseases), Sopha (inflammation), Arsha (piles), Krimi (worm infestation), Garbha Paatini (abortifacient).
Nigella sativa Linn.	Kaalaajaaji	Ranunculaceae	Dipana (digestive stimulant), Paachana (digestive), Vrshya (semen promoting), Balya (strength promoting), Medhya (brain tonic).
Nyctanthes arbor-tristis Linn.	Paarijaata	Oleaceae; Nyctanthaceae	Sotha (edema), Meda (obesity), Krimi (worm infestation), Karna Roga (diseases of the ear).
Nymphaea alba Linn.	Kumuda	Nymphaeaceae	Varnya (complexion enhancing), Bisphota (blisters), Visarpa (erysipelas).
Nymphaea stellata Willd.	Nilotpala	Nymphaeaceae	Mutraaghaata (retention of urine), Vaatavyaadhi (diseases of the nervous system), Unmaada (insanity), Apasmaara (epilepsy), Agnimaandya (dyspepsia), Arochaka (anorexia), Kaasa (cough).
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Barbari	Labiatae; Lamiaceae	Hrdya (wholesome for heart), Dipana (digestive stimulant), Kustha (skin diseases), Kandu (Pruritus), Krimi (worm infestation).
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.	Tulasi	Labiatae; Lamiaceae	Hrdya (cardiac diseases), Dipana (digestive stimulant), Mutrakrchhra (dysuria), Paarsvasula (pleurodyria and intercostal neuralgia), Jvara (fever).

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Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Trivrta	Convolvulaceae	Rechana (purgation), Vaayu Nashak (pacifies the aggravated Vaayu), Udara (diseases of the abdomen), Anaaha (constipation), Vivandha (constipation).
Ophiorrhiza mungos Linn.	Sarpaakshi	Rubiaceae	Useful in poison due to scorpion sting, rat bite, and snake bite, Vrana Ropana (ulcer healing).
Origanum majorana Linn.; Syn *Majorana hortensis* Moench.	Phanijjaka	Labiatae; Lamiaceae	Apatantraka (hysteria), Aaamavata (rheumatism), Baalagraha (specific diseases of children).
Oroxylum indicum Vent.	Shyonaaka	Bignoniaceae	Dipana (digestive stimulant), Kaasa (cough).
Oryza sativa Linn.	Shaali	Poaceae; Gramineae	Valya (strength promoter), Jvarahara (antipyretic).
Osmanthus fragrans Lour.	Vasuka	Oleaceae	Urustambha (stiffness of thigh muscles), Aamavata (rheumatism).
Ougeinia oogeinensis (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Syandana	Lythraceae	Baalagraha (specific disorders of children).
Oxalis corniculata Linn.	Chaangeri	Oxalidaceae	Grahani (sprue), Arsha (piles), Kustha (skin diseases), Atisaara (diarrhea).
Paederia foetida Linn.	Gandhaprasaarini	Rubiaceae	Vrshya (aphrodisiac), Samdhaanakara (union promoters), Balya (strength promoters), Vatarakta (gout).
Pandanus odoratissimus Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.	Ketaki	Pandanaceae	Chakshushya (beneficial for eyes), Kaphahara (pacifies Kapha Dosha).
Papaver somniferum Linn.	Ahiphena	Papaveraceae	Useful in Kapha (pacifies Kapha Dosha) and Kaasa (cough), Madakara (intoxicant), Abhisyanda (blocks the channels).
Paris polyphylla Sm.	Haimavati	Liliaceae	Udararoga (diseases of the abdomen), Shula (colic pain), Adhmaana (constipation).
Parmelia perlata (Huds.) Ach.	Shaileya	Parmeliaceae	Hrdya (wholesome for heart), indicated in Kustha (minor skin diseases), Ashmari (urinary calculus), bleeding from anus.

Paspalum scrobiculatum Linn.	Kodrava	Poaceae; Gramineae	Used as a dietary article in Urustambha (stillness, loss of movement of leg), Annadravashula (gastric ulcer/acute gastritis), Prameha (polyuria), and Medavriddhi (obesity).
Pentapetes phoenicea Linn.	Bandhuuka	Sterculiaceae	Vishghna (anti-poison), Upadamsha (soft chancre).
Phaseolus mungo Linn. non-Roxb. & auct.; Syn *Vigna mungo* (Linn.) Hepper.	Maasha	Fabaceae; Papilionaceae	Balya (strength promoting), Vrshya (aphrodisiac), Arsha (piles), Ardita (facial paralysis), Swasa (dyspnea).
Phaseolus radiatus Linn. non-Roxb. & auct.; Syn *Vigna radiata* (Linn.) Wilczek.	Mudga	Fabaceae; Papilionaceae	Netrya (beneficial for eyes), Jwaraghna (antipyretic).
Phaseolus trilobus sensu Ait. & auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Mudgaparni	Fabaceae; Papilionaceae	Sukrala (semen promoting), Chakshushya (beneficial for eye), indicated in Jwara (fever), Sotha (edema).
Phoenix paludosa Roxb.	Hintala	Palmae	Not to be used for brushing teeth.
Phoenix dactylifera Linn.	Kharjuura	Palmae; Arecaceae	Rakta Pitta (hemorrhagic disorder), Kshata (wound), Kshaya (phthisis).
Phragmites karka Trin. ex Steud.; Syn *P. roxburghii* (Kunth) Steud., *P. maxima* Blatter & McCann in part.	Nala	Poaceae; Gramineae	Vaatavyaadhi (diseases of the nervous system), Mutraaghaata (retention of urine), Mutra-krichhra (dysuria), Daaha (burning sensation), Visarpa (erysipelas).
Phyllanthus niruri Linn.	Bhuumyaamalaki	Euphorbiaceae	Kaasa (cough), Raktapitta (bleeding disorders), Kandu (pruritus).
Physalis minima Linn.	Tankaari	Solanaceae	Udara (diseases of abdomen), Bisarpa (erysipelas).
Picrorhiza kurroa Royle. ex Benth.	Katuki	Scrophulariaceae	Hrdya (wholesome for heart), Bhedana (stool softening), Prameha (polyuria), Svaasa (dyspnea), Kaasa (cough), Kustha (skin diseases), Krimi (helminthes).
Pinus longifolia Roxb.; Syn *P. roxburghii* Sarg.	Sarala	Pinaceae	Karna, Kantha, and Netra Roga (diseases of ear, throat, and eyes).
Piper betle Linn.	Taambula	Piperaceae	Balya (strength promoter), Dipana (digestive stimulant).
Piper chaba Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.	Chavya	Piperaceae	Dipana (digestive stimulant), Paachana (digestive), Guda-roga (diseases of the anal canal).
Piper cubeba Linn. f.	Kankola	Piperaceae	Hrdya (wholesome for heart), indicated in loss of vision (Andhya Roga).

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Piper longum Linn.	Pippali	Piperaceae	Rasayana (rejuvenative), Kaasa (cough), Shvaash (dyspnea), Medhya (brain tonic), Agni Vardhaka (digestive stimulant).
Piper nigrum Linn.	Maricha	Piperaceae	Dipana (digestive stimulant), Svaasahara (relieving dyspnea), Sula hara (relieving colic), Krimihara (anthelmintic).
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Karkatashringi	Anacardiaceae	Kshaya (phthisis), Svaasa (dyspnea), Urdhvavata (stertorous breathing), Kaasa (cough), Hikka (hiccup).
Pistia stratiotes Linn. var. *cuneata* Engl.	Jalakumbhi	Araceae	Mutrajanana (diuretic), Kaasahara (antitussive).
Pisum sativum Linn.	Kalaaya	Fabaceae	Ruksha (dry), Sheeta (cooling), Madhura (sweet).
Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Raasnaa	Compositae; Asteraceae	Aamapachani (digestive of Ama), useful in all kinds of diseases due to dominance of Vata, Sidhma (pityriasis versicolor).
Plumbago zeylanica Linn.	Chitraka	Plumbaginaceae	Agnivardhak (digestive stimulant), Paachana (digestive).
Polygonatum verticillatum All.	Medaa	Liliaceae	Brhmana (bulk promoting), Vrshya (aphrodisiac), Stanyakrit (galactagogue), Baalaroga (diseases of children), Kamala (jaundice).
Polygonum affine D. Don.; Syn *Bistorta affinis* (D. Don) Green.	Khukhudi	Polygonaceae	Baalagraha (specific disorders of children).
Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Karanja	Papilionaceae; Fabaceae	Diseases of female reproductive system, Kustha (skin diseases), Krimi (worm infestation), Arsha (piles).
Premna herbacea Roxb.; Syn *Pygmaeopremna herbacea* Moldenke.	Chaarati	Verbenaceae	Lingaarsha (venereal warts).
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.	Agnimantha	Verbenaceae	Agni Vardhak (digestive stimulant), Sotha (edema).

Prosopis spicigera Linn.; Syn *P. cineraria* Druce.	Shami	Mimosaceae	Rechana (purgative), Kaasa (cough), Svaasa (dyspnea), Arsha (piles), Kustha (skin diseases).
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Badaam	Rosaceae	Vaata Vyaadhi (diseases of nervous system), Vrshya (aphrodisiac).
Prunus cerasoides D. Don.; Syn P. puddum Roxb. ex Brandis. non-Miq.	Padmaka	Rosaceae	Bisphota (blisters), Kustha (skin diseases), Garbha Sthaapaka (induces pregnancy).
Prunus cerasus Linn.	Elavaaluka	Rosaceae	Kandu (pruritus), Chardi (vomiting), Kaasa (cough), Hrdroga (heart diseases).
Psoralea corylifolia Linn.	Baakuchi	Fabaceae; Papilionaceae	Rasaayana (geriatrics), Keshya (beneficial for hair), Tvachya (beneficial for skin), useful in skin diseases.
Pterocarpus marsupium Roxb.	Bijaka	Fabaceae; Papilionaceae	Kustha (dermal diseases), Visarpa (erysipelas), Svitra (leucoderma), Prameha (polyuria), Guda Krimi (anal worms), Tvachya (beneficial for skin), Keshya (beneficial for hair), Rasaayana (geriatric).
Pterocarpus santalinus Linn. f.	Raktachandana	Fabaceae; Papilionaceae	Netrya (beneficial for eyes), Vrshya (aphrodisiac), diseases due to aggravation of Pitta.
Pueraria tuberosa DC.	Vidaari	Fabaceae; Papilionaceae	Brhmana (bulk promoting), Stanyakara (galactagogue), Vrshya (aphrodisiac), Mutrala (diuretic), Balya (strength promoting), Varnya (complexion promoting).
Punica granatum Linn.	Daadima	Punicaceae	Medhya (brain tonic), Balya (strength promoting), Jvara (fever).
Putranjiva roxburghii Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Putrajiva	Euphorbiaceae	Vrshya (aphrodisiac), Garbhadaa (induces conception).
Quercus infectoria Oliv.	Maajuphalaka	Fagaceae	Vaajikara (aphrodisiac), Atisaara (acute diarrhea).
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Madana	Rubiaceae	Vaamaka (emetic), Vidradhi (abscess), Pratishyaaya (rhinitis), Kustha (leprosy), Sotha (edema).

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Randia uliginosa DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Pinditaka	Rubiaceae	Balya (strength promoting), Visha hara (anti-poison).
Raphanus sativus Linn.	Muulaka	Cruciferae; Brassicaceae	Jvara (fever), Swasa (dyspnea).
Rauvolfia serpentina Benth. ex Kurz.	Sarpagandhaa	Apocynaceae	Snake bite poisoning, scorpion sting poison, spider bite, rat bite poisoning, Jvara (fever), Krimi (worm infestation), Vrana (ulcers).
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Amlaparni	Polygonaceae	Svaasa (dyspnea), Kaasa (cough), Ajirna (indigestion).
Rhus parviflora Roxb.	Tintidi	Anacardiaceae	Aruchi (anorexia), Paandu (anemia), Hrdroga (diseases of heart), Grahani (sprue), Pinasa (coryza), Svaasa (dyspnea), Kaasa (cough).
Ricinus communis Linn.	Eranda	Euphorbiaceae	Anaaha (distention of abdomen due to obstruction of passage of stool and urine), Sula (colic), Sotha (edema), Vastirujaa (pain in bladder), Sirorujaa (pain in head), Udara (diseases of abdomen), Jwara (fever), Bradhna (hydrocele), Svaasa (dyspnea), Kaasa (cough), Kustha (skin diseases), Aamavaata (rheumatism).
Rivea ornata (Roxb.) Choisy.	Phanji	Convolvulaceae	Baalagraha (specific diseases of children).
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Manjishthaa	Rubiaceae	Svarya (beneficial for voice), Varnya (complexion promoting), Raktaatisaara (blood dysentery), Kustha (skin diseases), Visarpa (erysipelas), Vrana (ulcers), Meha (polyuria).
Saccharum munja Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.	Shara	Poaceae; Gramineae	Mutrala (diuretic), Vrsya (aphrodisiac), Daaha (burning sensation), Visarpa (erysipelas), Mutrakrichhra (dysuria).
Saccharum officinarum Linn.	Ikshu	Poaceae; Gramineae	Raktapitta (hemorrhagic diseases), Balya (strength promoter), Vrshya (aphrodisiac), Mutrala (diuretic).

Saccharum spontaneum Linn.	Kaasha	Poaceae; Gramineae	Mutrakrchhra (dysuria), Mutraghaata (retention of urine).
Salix caprea Linn.	Vetasa	Salicaceae	Ashmari (calculus), Sotha (edema), Arsha (piles), Yoniroga (diseases of the female genitalia).
Salmalia malabarica (DC.) Schott & Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Shaalmali	Bombacaceae	Rasaayana (rejuvenating and geriatrics), Raktapitta (hemorrhagic disorders), Vaatarakta (gout).
Salvadora oleoides Decne.	Pilu	Salvadoraceae	Gulma (abdominal lump), Bhedana (stool softening).
Salvia plebeia R. Br.	Samudrashosha	Labiatae; Lamiaceae	Vaajikarana (aphrodisiac).
Santalum album Linn.	Chandana	Santalaceae	Pitta Vikaara (diseases due to predominance of Pitta), Daaha (burning sensation).
Saraca asoca (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.	Ashoka	Caesalpiniaceae	Varnya (complexion promoting), Pradara (leukorrhea), Trusha (thirst), Daaha (burning sensation), Krimi (worm infestation), Sosa (emaciation), Visha (poison).
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Kushtha	Asteraceae; Compositae	Sukrala (semen promoting), Visarpa (erysipelas), Kaasa (cough), Svaasa (dyspnea), Kustha (skin diseases), Vaatarakta (gout).
Saussurea obvallata Wall. ex C. B. Clarke.	Prapaundarika	Asteraceae; Compositae	Vaatarakta (gout), Sthaulya (obesity), Bhagna (fracture of bones), Akshepaka (convulsion).
Schrebera swietenioides Roxb.	Muskakaa	Oleaceae	Sukhaprasava (facilitates childbirth).
Scindapsus officinalis Schott.	Gajapippali	Araceae	Agni Vardhak (digestive stimulant), Svaasa (dyspnea).
Scirpus kysoor Roxb.; Syn *S. grossus* Linn. f.	Kasheruka	Cyperaceae	Raktavikaara (disorders of blood), Netra Roga (eye diseases), Daaha (burning sensation), Shukrala (semen promoting), Stanyavardhak (galactagogue).
Selinum tenuifolium Wall. ex DC.; Syn *S. candollei* DC.	Muraa	Apiaceae; Umbelliferae	Jvara (fever), Vaatavyadhi (diseases of the nervous system), Raktapitta (hemorrhagic disorders), Kshaya (phthisis), Vaajikaran (aphrodisiac).

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Semecarpus anacardium Linn. f.	Bhallaataka	Anacardiaceae	Medhya (intellect promoting), Vrshya (aphrodisiac), Keshya (beneficial for hair), Dipana (digestive stimulant), Arsha (piles), Udara (diseases of the abdomen), Kustha (skin diseases).
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Tila	Pedaliaceae	Keshya (beneficial for hair), Twachya (beneficial for skin).
Sesbania bispinosa W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Itkata	Fabaceae; Papilionaceae	Pittasmari (calculus due to Pitta Dosha).
Sesbania grandiflora (L.) Poir.; Syn *Agati grandiflora* Desv.	Agasti	Fabaceae; Papilionaceae	Pratishyaaya (coryza).
Sesbania sesban (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Jayantikaa	Fabaceae; Papilionaceae	Vranaropana (ulcer healing).
Setaria italica (Linn.) Beauv.	Kangu	Poaceae; Gramineae	Dietary article for Annadravashula (gastric ulcer/acute gastritis).
Shorea robusta Gaertn. f.	Shaala	Dipterocarpaceae	Bradhna (hydrocele), Bidradhi (abscess), Vadhirya (deafness), Yoni Roga (diseases of female genitalia), Karna Roga (diseases of ear).
Sida cordifolia Linn.	Balaa	Malvaceae	Balya (strength promoting), Mutrakrichhra (dysuria), Vrana (ulcer), Kaantivardhak (promotes complexion and luster), Raktavikara (bleeding disorders), Jwara (fever), Unmaada (insanity), Apasmaara (epilepsy), Gridhrasi (sciatica), Pakshaaghaata (hemiplegia/paralysis), Vaatarakta (gout), Aamavata (rheumatism).
Smilax china Linn.	Chopachini	Liliaceae	Agni Vardhaka (digestive stimulant), body ache, Apasmaara (epilepsy), Unmaada (insanity), Phiranga Roga (syphilis).
Solanum indicum Linn.	Brihati	Solanaceae	Hrdya (wholesome for heart), Dipana (digestive stimulant), Paachana (digestive), Kustha (skin diseases), Jvara (fever), Svaasa (dyspnea), Sula (colic), Kaasa (cough).

Solanum melongena Linn.	Vaartaaku	Solanaceae	Jvara (fever), Dipana (digestive stimulants).
Solanum nigrum Linn.; Syn *S. rubrum* Mill.	Kaakamaachi	Solanaceae	Beneficial for the voice, Rasaayana (geriatric), Sukrala (semen promoting), Sotha (edema), Kustha (skin diseases), Hrdroga (diseases of the heart).
Solanum tuberosum Linn.	Aaluka	Solanaceae	Balya (strength promoting), Vrshya (aphrodisiac).
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Kantakaari	Solanaceae	Svaasa (dyspnea), Kaasaghna (antitussive).
Soymida febrifuga A. Juss.	Maansrohini	Meliaceae	Vrana Ropana (wound healing), Vrshya (aphrodisiac).
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Munditakaa	Asteraceae; Compositae	Medhya (brain tonic), Gandamaalaa (scrofula), Apachi (chronic lymphadenitis), Sleepada (elephantiasis), Apasmaara (epilepsy), Arsha (piles).
Spinacia oleracea Linn.; Syn *S. tetrandra* Roxb.	Paalankikaa	Chenopodiaceae	Swaasa (dyspnea), Mada (intoxicant).
Spondias pinnata (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Aamraataka	Anacardiaceae	Valya (strength promoting), Vrshya (aphrodisiac), Bhagna Samdhaana Kara (bone fracture union promoter).
Sterculia villosa Roxb.	Uddaalaka	Sterculiaceae	Dietary article for Urustambha (stillness and loss of movement of leg), Prameha (polyuria), Medavriddhi (obesity).
Stereospermum suaveolens DC.; Syn *S. personatum* (Hassk.) D. Chatterjee., *S. chelonoides* (Linn. f.) DC. (now *S. colais*)., *S. tetragonum* A. DC.	Paatalaa	Bignoniaceae	Kaasahara (anti-tussive).
Streblus asper Lour.; Syn *Epicarpurus orientalis* Bl.	Shaakhotaka	Moraceae	Raktapitta (hemorrhagic diseases), Arsha (piles), Atisaara (acute diarrhea).
Strychnos nux-vomica Linn.	Vishatinduka	Loganiaceae; Strychnaceae	Byathaahara (analgesic), Madakara (intoxicant).
Strychnos potatorum Linn. f.	Kataka	Loganiaceae; Strychnaceae	Netrya (beneficial for eyes).

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Chiraayita	Gentianaceae	Sannipaata Jwara (typhoid fever), Shvaasa (dyspnea), Kaasa (cough), Kustha (skin diseases), Jwara (fever), Vrana (ulcer), Krimi (worm infestation).
Symplocos racemosa Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Lodhra	Symplocaceae	Beneficial for eyes, indicated in Jwara (fever), Atisaara (acute diarrhea).
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Lavanga	Myrtaceae	Dipana (digestive stimulant), Paachana (digestive), Sula (colic), Svaasa (dyspnea), Kaasa (cough), Hikkaa (hiccup).
Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Jambu	Myrtaceae	Bistambhi (constipative), Atisaara (acute diarrhea), Raktaatisarara (malena).
Tamarindus indica Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.	Amlikaa	Caesalpiniaceae	Dipana (digestive stimulant).
Taxus baccata Linn.	Sthauneyaka	Taxaceae	Vaatavyadhi (diseases of nervous system), Sthaulya (obesity), Kandu (itching), Kustha (skin diseases), Rasaayana (rejuvenative), Durgandha (foul smell of the body).
Tecomella undulata (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.	Rohitaka	Bignoniaceae	Pleehaa Roga (diseases of the spleen), Rakta Prasaadana (hematinic).
Tectona grandis Linn. f	Shaaka	Verbenaceae	Vaatika Ashmari (calculus due to Vata), Garbhini Chikitshaa (treatment of pregnant woman).

Tephrosia purpurea (L.) Pers.; Syn *T. hamiltonii* Drumm.	Sharapunkhaa	Fabaceae; Papilionaceae	Pleeha (splenic diseases), Yakrit Vikaara (diseases of liver), Swasa (dyspnea), Kaasa (cough), Jwara (fever).
Teramnus labialis Spreng.	Maashaparni	Papilionaceae	Sukrakrut (semen promoting), Sotha (edema), Jwara (fever).
Terminalia arjuna (Roxb.) W. & A.	Arjuna	Combretaceae	Hrdya (wholesome for heart), Meda (obesity), Meha (polyuria), Vrana (ulcer).
Terminalia bellirica Roxb.	Bibhitaki	Combretaceae	Keshya (beneficial for hair), Kaasa (cough).
Terminalia chebula Retz.	Haritaki	Combretaceae	Rasaayana (rejuvenating), Kaasa (cough), Swaasa (dyspnea), Prameha (polyuria).
Thespesia populnea Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Paarshvpippala	Malvaceae	Sukrakara (semen promoting), Balya (strength promoting), Vaatavyaadhi (diseases of nervous system), Baadhirya (deafness), Netraroga (diseases of eyes).
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Guduuchi	Menispermaceae	Rasayana (rejuvenation and geriatric), Balya (strength promoting), Dipana (digestive stimulant), Jwara (fever), Prameha (polyuria), Kamalaa (jaundice).
Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Yavaani	Apiaceae; Umbelliferae	Vrshya (aphrodisiac).
Trapa natans Linn. var. *bispinosa* (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Shrngaataka	Trapaceae	Vrshya (aphrodisiac).
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.	Varshaabhu	Aizoaceae	Sotha (edema), Sopha (inflammation), Bradhna (hydrocele), Udara (diseases of the abdomen).
Tribulus terrestris Linn.	Gokshura	Zygophyllaceae	Dipana (digestive stimulant), Vrshya (aphrodisiac), Balya (strength promoter), Ashmari (calculus), Prameha (polyuria), Swaasa (dyspnea), Kaasa (cough), Arsha (piles), Mutrakrchhra (dysuria), Hrdroga (diseases of heart).

Botanical Name	Common Ayurvedic Name	Family	Classical/Ayurvedic Attributes
Trichosanthes bracteata (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Vishaalaa	Cucurbitaceae	Jwara (fever), Unmaada (insanity), Apasmaara (epilepsy), Agnimaandya (dyspepsia), Urustambha (stillness of thigh muscles).
Tricosanthes dioica Roxb.	Patola	Cucurbitaceae	Kaasa (cough), Jwara (fever), Kustha (skin diseases), Hrdya (wholesome for heart).
Trigonella foenum-graecum Linn.	Methikaa	Fabaceae; Papilionaceae	Pacifies Vaata and Kapha and useful in Jwara (fever).
Triticum aestivum Linn.	Godhuuma	Poaceae; Gramineae	Valya (strength promoting), Vrshya (aphrodisiac), Samdhaana Kara (union promoter), Varnya (complexion promoting).
Typha angustata Bory & Chaub.; Syn *T. australis* Schum. & Thonn.	Gundra	Typhaceae	Mutrakrchhra (dysuria), Mutraaghaata (retention of urine).
Uraria picta Desv.; Syn *Hedysarum pictum* Jacq.	Prishniparni	Fabaceae; Papilionaceae	Vrshya (aphrodisiac), Daaha (burning sensation), Jwara (fever), Swaasa (dyspnea).
Valeriana wallichii DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Tagara	Valerianaceae	Apasmaara (epilepsy), Netra Roga (diseases of eye).
Vateria indica Linn.; Syn *V. malabarica* Bl.	Sarja	Dipterocarpaceae	Paandu (anemia), Karna Roga (diseases of the ear), Prameha (polyuria), Vrana (ulcers).
Vernonia cinerea Less.	Sahadevi	Asteraceae; Compositae	Jwara (fever).
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.)	Ushira	Poaceae; Gramineae	Paachan (digestive), Mutrakrchhra (dysuria).
Vigna unquiculata (Linn.) Walp.	Raajamaasha	Fabaceae	Annadrava Shula (peptic ulcer pain).

Vitex negundo Linn.	Nirgundi	Verbenaceae	Keshya (beneficial for hair), Netrya (beneficial for eyes), Krimi (worm infestation), Amavata (rheumatism).
Vitis pedata Vahl. ex. Wall.	Godhaapadi	Vitaceae	Mutraaghaata (retention of urine).
Vitis vinifera Linn.	Draakshaa	Vitaceae	Netrya (beneficial for eyes), Brhmana (bulk promoting), Dipana (digestive stimulant).
Wedelia chinensis Merrill.; Syn *W. calendulaceae* Less. non-Rich.	Kesharaaga	Asteraceae; Compositae	Keshya (beneficial for hair), Twachya (beneficial for skin), Rasaayana (geriatric), Balya (strength promoting), Swaasa (dyspnea), Kaasa (cough), Sotha (edema), Aama (food toxins), Paandu (anemia), Kustha (skin diseases), Netra Roga (diseases of eyes), Siro Roga (diseases of the head).
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Ashwagandhaa	Solanaceae	Rasaayana (geriatric), Medhya (intellect promoting), Balya (strength promoting), Sukrala (semen promoting), Switra (leucoderma), Sotha (edema).
Woodfordia fruticosa Kurz.; Syn *W. floribunda* Salisb.	Dhaataki	Lythraceae	Atisaara (acute diarrhea), Krimi (worm infestation), Visarpa (erysipelas).
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Tumburu	Rutaceae	Kaasa (cough), Swaasa (dyspnea), Dipana (digestive stimulant).
Zingiber officinale Rosc.	Aardraka	Zingiberaceae	Agni Dipana (digestive stimulant), Anulomana (carminative), Shula (pain), Svaasa (dyspnea), Kaasa (cough), Sleepada (elephantiasis), Shotha (edema), Arsha (piles).
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Badara	Rhamnaceae	Rakta vikaara (bleeding disorders), Kshaya (emaciation).
Zizyphus nummularia (Burm f.) Wight. & Arn.; Syn *Z. rotundifolia* Lam., *Rhamnus nummularia* Burm. f.	Karkandhu	Rhamnaceae	Rakta vikaara (bleeding disorders), Kshaya (emaciation), Daaha (burning sensation).

6 Bioactive Constituents of Medicinal Plants

V. K. Agarwal

CONTENTS

The biological activity of plants on the basis of their chemical constituents forms an integral part of all research material published in German Commission E, European Scientific Cooperative on Phytotherapy (ESOP), or World Health Organization (WHO) monographs and journals. Chemical constituents of the plants are generally responsible for

- Herbs' definite pharmacological actions
- Synergistic actions of herbs
- Toxic components and potential risks
- Balancing factors
- Bioavailability of active principles
- Possible interaction with drugs of modern medicine

Bridging the gap between classical wisdom and phytopharmacological research is a topic of interest. Thus, phytopharmacological research is now playing a decisive role in herbal drug development. Total phytochemical complex in herbal medicines is responsible for biological activity. The spectrum of phytochemical compounds is discussed next.

ALKALOIDS

Alkaloid is an old term for vegetable alkali that covers a wide range of potent plant constituents. Alkaloids comprise the largest class of plant products. They were the first chemical substances to be derived from the plants. A mixture of morphine and narcotine was isolated from opium in 1803.

Fundamentally, alkaloids are defined as naturally occurring basic plant products possessing a nitrogen atom in a heterocyclic ring with marked pharmacological activity. Most alkaloids are heterocyclic, whereas some, such as mescaline and ephedrine, are noncyclic and are sometimes referred as proalkaloids. These drugs are known potential pharmacological agents, and their properties and physiological actions are well described and documented. These are amazing chemicals that have given humanity a wide range of natural products that are used for curing various ailments.

The important alkaloids that have been isolated are reserpine, vincristine, vinblastine, codeine, morphine, atropine, quinine, pilocarpine, theophylline, colchine, and pseudoephedrine. They have maintained an important role in drug therapy.

The alkaline nature of alkaloids is due to the presence of a nitrogen atom, which might range in number from one atom (atropine) to five atoms (ergotamine). The nitrogen atom in an alkaloid may also be present as a primary amine (mescaline), secondary amine (cystisine), tertiary amine (physostigmine), or as a quaternary ammonium (tubocurarine). The degree of basicity varies from weak to moderate to strong.

Classification of Alkaloids

Alkaloids are grouped based on their chemical structures. The most important skeletons found in alkaloids are indole, isoquinoline, piperidine, tropane, and steroidal. The less common skeletons include pyridine, quinoline, pyrrole, imidazole, purine, norlupine, acridine, indolizidine, monoterpenoids, and quinazoline. The probable amino acid precursors of the alkaloids are ornithine (tropane and pyrrolidines), lysine and cadavarine (pyridines and norlupines), phenylalanine and tyrosine (isoquinolines and protoalkaloids), and tryptophan (indoles and quinolines). Steroidal alkaloids are also found in plants. Some are combined as glycosides like solanine from potato shoots.

The alkaloids are mostly used as analgesics (codeine), central stimulants (strychnine), local anesthetics (cocaine), miotics (physostigmine), antispasmodics (atropine), vermifuges (pelletierine), aphrodisiacs (yohimbine), antihypertensives (reserpine), muscle paralyzer (tubocurarine), cardiac depressants (quinine), or antileukemics (vincristine).

In the plant, alkaloids may be present in all parts or restricted to specific parts like roots or rhizomes, stem barks, leaves, fruits, or seeds. Most alkaloids have natural sources but a few are synthesized commercially, for example, ephedrine and papaverine.

General Properties of Alkaloids

The alkaloids are usually colorless, crystalline, nonvolatile solids, which are insoluble in water but are soluble, for example, in ethanol, ether, and chloroform. Some alkaloids like berberine and serpentine are yellow, whereas sanguinarine is brownish red.

Most alkaloids have a bitter taste and are optically active (levorotatory). Normally only one of the isomers occurs naturally in plant and very rarely occurs as racemic mixtures. In most cases the isomers differ in their physiological activities. Alkaloids also occur as salts of the various plant acids in the cell sap. Most of the alkaloids are isolated from plants though a few of them are found in animals, too.

Pharmacology

Alkaloids have two key properties that determine much of their pharmacology: (1) an ability to cross the blood–brain barrier and exert depressant or stimulant action on the central nervous system, and (2) the ability to interact with the various neurotransmitter receptors. Examples of CNS depressants are morphine and codeine; CNS stimulants are caffeine and cocaine; and a sympathetic system stimulant is ephedrine.

ANTHOCYANINS

Anthocyanins are natural plant pigments. They are glycosides and their aglycons, that is, the sugar-free part, are known as anthocyanidins, which seldom occur in nature in the free form. They are responsible for the red, pink, violet, and blue colors found in fruits and flowers.

Anthocyanins occur as water-soluble pigments, generally found in the aqueous cell sap. They occur as mono and diglycosides. In the case of diglycosides, the sugar may be linked to different carbon atoms. Most of the anthocyanins are acylated in which benzoic/cinnamic acids occur esterified to the sugars. The reaction of anthocyanins to acids and alkalis is characteristic. All the anthocyanins exhibit a blue color in alkaline medium and red-orange in acidic conditions. The color of anthocyanidins is significantly influenced by methoxylation or glycosylation.

The anthocyanin pigments are amphoteric. An increase in the methyl group increases the redness in flower petals, whereas an increase in the hydroxyl groups or 5-glycosylation turns them blue. In addition to anthocyanins the color depends on the presence of copigments such as flavones and flavonoids, and to metal chelation, particularly with iron and aluminum. The fundamental nucleus in anthocyanidins is benzopyrylium chloride but the parent compound is 2-phenyl benzopyrylium chloride or flavylium chloride.

Anthocyanidins are also formed by the hydrolysis of flovolans or proanthocyanidins. These polymers are a group of condensed tannins, occurring mostly in the heartwood and yield 25 percent anthocyanidins, which, on hydrolysis, yield a group of high molecular weight polymers. Depending on the anthocyanidins formed, the flovolans are designated as prodelphinidin, procyanidin, and propelargonidin.

FLAVONES

The flavones, which are also known as the anthoxanthins, are yellow pigments that occur in the plant kingdom. Flavones occur naturally in free state or as the glycosides. The flavones are very closely related to anthocyanins.

The flavones are most widely found as phenols in the plant world. They occur in living tissues only as flavonoid glycosides. They are found especially in flowers, fruits, and leaves. Their color enables them to play a part in attracting pollinating insects, but being toxic to many insects, also play a part in deterring insects. They are also thought to have growth-regulating properties in the living plant.

Flavonoids have two benzene rings attached by a propane unit and are derived from flavones. They are found throughout the plant kingdom, whereas isoflavonoids are more restricted in distribution and are present in the Fabaceae family, in which they are widely distributed. They function as antimicrobial and anti-insect compounds. Flavonoids are brightly colored compounds, generally present in plants as their glycosides. Different classes within this group differ by additional oxygen-containing heterocyclic rings and hydroxyl groups. They include the chalcones, flavones, flavonols, flavonones, anthocyanins, and isoflavones.

The isoflavonoids are rearranged flavones, in which these rearrangements are brought about by a cytochrome P-450-dependent enzyme, which transforms the

flavones liquiritigenin or nerigenin into the isoflavones daidzein or genistein, respectively. Simple isoflavones like daidzein and coumestans such as coumestrol have sufficient estrogenic activity to seriously affect the reproduction of grazing animals and are known as phytostrogens.

Major sources of isoflavones for humans are pulses, particularly soybeans and chickpeas. Epidemiological studies showed a link between consumption of soy isoflavones and a reduced risk of breast and prostate cancers. Isoflavones also possess other health-promoting activities, such as chemoprevention of osteoporosis and prevention of postmenopausal disorders and cardiovascular diseases.

Phenoxodiol, a synthetic analogue of diadzein, is being developed as a therapy for cervical, ovarian, prostate, renal, and vaginal cancers, and induces apoptosis through inhibition of antiapoptopic protons. The other important compounds of this group include quercetin, silibinin (flavonolignan), and genistan (isoflavone).

A new anti-HIV flavonoid identified as apigenin 7-0-β-D (4-cafeeoyl) glucuronide and the known compound apigenin 7-0-β-D-glucuronide have been isolated from the flowers of *Chrysanthemum morifolium* along with five known flavonoids.

Among the isolated compounds, apigein 7-0-β-D-(4-caffeoyl) glucuronide showed strong HIV-I intergrase inhibitory activity (IC/50 = 7.2 +/– 3.4 μg/ml) and anti-HIV activity in a cell culture assay (EC50 = 41.86 +/– 1.43 μg/ml) using HIV–I (IIIB) infected MT-4 cells.

Silibinin, a natural flavonoid isolated from the seeds of milk thistle, has recently received more attention for its potential anti-cancer and nontoxic roles in animals and humans. Silibinin has clearly shown the inhibition of multiple cancer cell signaling pathways, including growth inhibition of angiogenesis, chemosensitization, and inhibition of invasion and metastasis. Cumulative evidence indicates that silibinin is a potential agent for cancer chemoprevention and chemotherapy.

The molecular mechanism of silibinin-mediated antiproliferative effects is mainly via receptor tyrosine, kinases, and androgen receptor. Targeting inhibition of proliferative pathway in silibinin treatment may provide a new approach for improving chemopreventive and chemotherapeutic effects.

FLAVONOIDS

Flavonoids are extremely common and widespread in the plant kingdom. They function as plant pigment, being responsible for the colors of flowers and fruits. The name flavonoid is derived from the Latin word *flavus* for their usual yellow color. Flavonoids contain phenolic groups and they occur in many plants. It has been reported that about 50 percent of the flowering plants contain flavonoids in the leaves. Geissman has termed the flavonoids to embrace all compounds whose structure is based on flavones. Thus anthocyanins are the group of flavonoid compounds. Their color enables them to play a part in attracting pollinating insects, but being toxic to many insects they also play an important role in repelling insects.

Flavonoids are found in almost every plant, though their concentration varies. They are commonly consumed in the human diet in fruits and vegetables. Flavonoids found in leaves are said to protect the plant tissues against the damaging effect of ultraviolet light. The various groups of flavonoids give rise to characteristic color

reactions. There are three main types, classified according to the state of oxygenation at the carbon-3 position.

Flavonoids are polyphenolic compounds. They are able to complex metal ions and act as antioxidants, and bind to proteins such as enzymes and structural proteins. Thus *in vitro* antioxidant properties of flavonoids have been the focus of research in recent years. The antioxidant properties of flavonoids could also contribute to observed anti-inflammatory and antiplatelet effects.

Like most other antioxidants, flavonoids can also act as pro-oxidants in particular circumstances. In addition to their antioxidant properties, many have diuretic, antispasmodic, anti-inflammatory, antiseptic, and antitumor activities. Pharmacological interest in flavonoids arose during vitamin P research.

Studies by Hungarian workers show that a number of fruits and vegetables (notably citrus) contain substances capable of correcting certain abnormalities associated with scurvy. In particular, this new factor, designated as vitamin P, corrected the capillary fragility associated with ascorbic acid deficiency. Vitamin P was found to be a mixture of flavonoids, but, due to some dispute, the research was not continued. However, the research did confirm the therapeutic value of flavonoids for fragile capillaries and as extenders of vitamin C activity, possibly through improved absorption and protection from oxidation.

Flavonoids are phenolic substances isolated from a wide range of vascular plants with over 8,000 compounds reported in literature. They act in plants as anti-oxidants, antimicrobials, and photoreceptors. They also exhibit biological activities, namely, antiallergenic, antiviral, and anti-inflammatory, and vasodilating actions. However, most interest has been devoted to the antioxidant activity of flavonoids, which reduces the free radical formation and is able to scavenge free radicals.

Flavonoids are plant pigment which are synthesized from phenylalanine, generally display marvelon colors in petals, mostly emit brilliant fluorescence when they are excited by UV light, and are ubiquitous to green plant cells.

The flavonoids are used by botanists for taxonomical classification. They inhibit or kill many bacterial strains, inhibit important viral enzymes, such as reverse transcriptase and protease, and destroy pathogenic protozoans. Yet their toxicity to animal cells is low. Flavonoids are major functional components of many herb insect preparations for medical use, for example, propolis (bee's glue) and honey, which have been used since ancient times.

Depending on their structure, flavonoids display more or less potent inhibitory effects on the growth and proliferation of malignant cells *in vitro.*

TANNINS

The name tannin is derived from their ability to tan leather and is not based on a class of compounds with a common basic structure. There are two groups of tannin: the first, hydrolyzable tannins, which are esters; and the second, condensed tannins, which are polymers derived from various flavonoids.

Condensed tannins or nonhydrolyzable tannins are most resistant to splitting. They are related to the flavonoid pigments such as flavins and catechin. When heated

in acid they tend to polymerize to form a red insoluble substance called tannin red or phlobaphenes. These are reddish deposits that are found to form tincture and fluid extracts of some plants, on long standing, especially in light; their presence is indicative of a high level of condensed tannin in the plant.

The phlobaphenes give a characteristic red color to some plant tissues, for example, the root of tormental (*Potentilla erecta*). The final breakdown product after heating all the condensed tennins is catechol.

Properties of Tannins

All tannins have a number of properties in common:

1. They are soluble in water and alcohols but not in organic solvents.
2. They form precipitates with protein, especially proline-rich proteins like gelatin and salivary proteins, nitrogenous bases, polysaccharides, some alkaloids, and a few glycosides.

Tannins have been used therapeutically as antidotes to alkaloid poisoning on the basis of their ability to form insoluble tannates with them. Much of the tannin ingested remains unabsorbed in the gut but a variable proportion reaches the body fluids as soluble tannates and is excreted by the kidney as such.

With third-degree burns the use of very strong tannin sources is the most effective traditional technique for preventing septicemia and saving life. Pouring a strong decoction of tannin-rich material on the open flesh produces a sealing "eschar" that provides almost a temporary new skin. In rural China, this technique is still applied as a part of the primary health-care system, and is recommended as a first aid measure where emergency services are defective. The technique involves repeated washing with the tannins. A useful remedy is provided by the fact that the bacteria are killed by such exposure. Thus tannins can be considered local antiseptics, too. The tannins are also used externally as hemostatic to check hemorrhaging and to subdue exposed inflammations.

Since tannins are largely polar molecules, they are poorly absorbed through the skin or gastrointestinal tract. Hence the pharmacological effect of tannins can be explained in terms of their local effects on those organs or effects within the gastrointestinal lumen. However, decomposition products of tannins are absorbed and do exert systemic effects. The poor bioavailability of tannins is fortunate, since they can be quite toxic if absorbed in large amounts.

The traditional application of tannin as a remedy is for controlling diarrhea. In rural areas, most diarrheas are caused by inflammation or irritation in the small intestine, enteritis. The diarrhea involves the large bowel but this a reflex response originating higher up and designed to remove the offending material as speedily as possible. The beneficial effects of tannins in the bowel should be balanced against possible problems in their widespread use. It was seen that tannins form precipitates with all proteins. Such precipitated protein–tannin complexes are far less likely to be absorbed into the blood stream as they become resistant to the action of digestive enzymes. This fact should limit the time in which tannin-rich remedies are

used. More important, it cast a shadow over the widespread use of coffee and in particular tea. The astringent taste of over-steeped tea is familiar, and it is generally recommended that tea should be taken only lightly brewed. It forms a typical complex. Since caffeine is an alkaloid, it forms a complex with tannins, which means that it is less available to the body in more tannin-rich tea than in coffee. There may be advantages in the tannin effect; it is known that milk added to tea permanently changes its quality. This involves the formation of complexes with the milk proteins; for those allergic to cow's milk this may mean that milk taken in tea is acceptable.

Industrial Uses of Tannins

Tannins are groups of polyphenols that can bind with the proteins of animal hides converting them to nonputrescible leather. They are used primarily for the manufacture of leather. They are employed as deflocculants in controlling the viscosity and gel strength of mud in oil-well drilling also. Other uses of tannins include the manufacture of gallotannate ink, as antioxidants in edible oils, astringents in medicine, and adhesives in plywood and particle board.

ESSENTIAL OILS

Essential oils (from the word *essence*) are mixtures of fragrant compounds that can be obtained from plants by steam distillation. Since they are volatile in steam and usually have pronounced aromas, essential oils or ethereal oils are often referred to as volatile oils. The oils are essential oils in the sense that they carry the distinctive scent or essence of the plant. Other processes used to produce essential oils include solvent extract using hexane or liquid or supercritical carbon dioxide.

The simple mono- and sesquiterpenoids are the chief constituents of essential oils. The monoterpenes identified in essential oils are limonene, geraneol, borneol, and thujone, whereas bisabolol is a sesquiterpene. Polypropanoids are far less common as components of essential oils. Their basic chemical skeleton is a three-carbon chain attached to the benzene ring. They are formed by the shikimic acid biosynthetic pathway and examples are anethole and eugenol. Chemically each plant has an amazing array of different specific oils that combine to produce the unique quality of each type of flavor and has the distinct effect upon the mind as well as their antiseptic and other properties.

Essential oil constituents can also be classified according to their functional groups. The most common compounds found in essential oils are hydrocarbons, alcohols, aldehydes, ketones, phenols, oxides, and esters. These functional groups play an important role in determining the pharmacology and toxicology of the essential oil components. For example, ketones are more active and toxic than alcohols, and alcohols and phenols are more potent as antimicrobial agents, the phenols being more irritant. Essential oil components often exhibit optical isomerism (where the two isomers are mirror images of each other). For example, (+)-carvone isolated from caraway oil has a caraway-like odor and (–)-carvone isolated from spearmint oil has spearmint-like odor.

Essential oils/volatile oils are sweet-smelling lipids, synthesized and stored in various plant parts. They occur in schizogeneous or lysigenous cavities. Volatile oils may be systemic (conifers) or localized in the plant organs such as roots (vetiver), rhizomes (galanga), wood (camphor tree), bark (cinnamon), flowers (clove), fruits (star anise), or seeds (nutmeg). They provide protection from microbial contamination and act as insect repellents.

Plants containing essential oils usually have the greatest concentration at some particular time, for example, jasmine at sunset. Essential oils obtained usually contain a number for terpenoids and these are separated by fractional distillation. The synthesis and accumulation of essential oils are generally associated with the presence of specialized structures in the plants that are often located on or near the surface; for example, the delicate glandular trichromes (hairs) of the mint family. Essential oil composition varies quite dramatically within a species, and, often, distinct chemotypes are recognized, meaning the same plant species can produce quite different oils in terms of chemistry, pharmacology, and toxicology. From a biosynthetic perspective, the components of essential oils can be classified into two major groups: the terpenoids and the phenylpropanoids.

Any given essential oil might contain 100 or more of these components. More recently gas chromatography has been used for the isolation and separation of minor constituents present in the essential oils. The diterpenes are not considered essential oils that constitute a component of plant resins because of their higher boiling points. Essential oils are water-insoluble oily liquids that are usually colorless. Despite the fact that they are called oils, they are not chemically treated as lipid oils (fixed oils) such as olive oils and corn oil.

Pharmacology

The fragrance of flowers is one of their most wonderful gifts to humanity and in recent years the healing value of this aroma has been increasingly recognized. It is the plant oils that are the basic factors for the aroma and each plant has an amazing array of specific oils that combine to produce the unique quality of each type of flower, one of the oldest and most popular forms of gentle medicine. Physicians and tribal healers across civilizations have used it since ancient times and this continues even today.

Menthol

Menthol is extracted from peppermint (*Mentha piperita*) and other members of the mint family. Menthol is cooling on the skin and is accompanied by a slight local anesthetic action followed by reflex local vasodilatation. This combination of properties makes it a popular ingredient for liniments or muscular and joint pains. It is also a powerful antiseptic and antiparasitic, and in alcoholic solution it has been used for treating ringworms. It also appears to have some benefit for treating scaling from the scalp and any accompanying hair loss. When inhaled, it checks nasopharyngeal catarrh and will bring relief in nasal congestion. When ingested, menthol is an effective carminative, as are most volatile oils, but is noted for its apparent benefits in cases of colitis and bowel disease.

Camphor

Camphor is obtained naturally from the camphor plant (*Cinnamomum camphora*) or produced synthetically from a base of pinene isolated from turpentine. It is a first aid remedy as a cold compress for bruises and sprains, reduces swelling, and is also a strong stimulant. It is locally rubefacient and anti-inflammatory, producing menthol-like cooling, which makes it slightly anesthetic. Internally it encourages the secretion of saliva and digestive juices, stimulates peristalsis, and relaxes sphincters, and it thus aids the digestive process. Camphor, when inhaled, stimulates mucus flow and acts to cleanse a congested condition.

Clove

Clove helps lift mental and physical debility. As an antiseptic it may be used as an inhalation or on the skin. It is best known for treating tooth infection and toothache.

Cypress

Cypress is good for flu, coughs, and as an inhaler. It clears the sinuses. It makes good massage oil for use around varicose veins. It provides relief in menstrual problems.

Lavender

Lavender relaxes and eases aches and pains. It has a whole range of positive physical actions but is especially useful for migraines and headaches. It also has antianxiety effects and promotes sleep.

Jasmine

Jasmine has a wonderful aroma that is an antidepressant and supposedly a sensual stimulant. It eases pain in the female reproductive system.

Patchouli

Patchouli is a stimulant to the nerves that lifts anxiety and depression. It is popularly known as an aphrodisiac.

Eucalyptus

Eucalyptus is a strong antimicrobial oil that has several uses such as inhalator and can be applied directly to the skin. It is also used as insect repellent.

Rosemary

The oil of rosemary may stimulate a weak memory and general dullness. It is also useful for headaches. The oil is considered a heart tonic in Russian folk medicine.

Other Uses of Essential Oils

Essential oils exhibit a wide range of pharmacological activities; however, some common themes do emerge, notably antimicrobial and spasmolytic actions. Antimicrobial

activity was said to parallel cytotoxic activity, which suggests a similar mode of action, most probably exerted by membrane-associated reactions.

Of the five components of an essential oil tested for antibacterial activity, cinnamaldehyde was the most active, followed by citral, geraniol, eugenol, and menthol. In another study, linalool was the most active antibacterial agent. Citral and geraniol were the most effective antifungal agents.

Essential oils with high monoterpene hydrocarbon levels were very active against bacteria although not against fungi with the exception of dill oil.

In the case of tea tree oil, terpinen-4-ol was identified as the most important antimicrobial compound. Certain essential oils are used as expectorants. A proprietary product containing myrtol oil known as Gelomyrtol is popularly prescribed by doctors in Germany as an expectorant and mucolytic for acute and chronic bronchitis/sinusitis. An expectorant activity for this oil was confirmed in a clinical trial on patients with chronic obstructive airway disease.

Also essential oils have been widely used in the perfume industry from the earliest times as fragrances.

TERPENOIDS

The terpenoids are a group of compounds that occur mostly in plants. The simpler monoterpenoids and sesquiterpenoids are the chief constituent of the essential oils. The diterpenoids and triterpenoids, which are not steam volatile, are obtained from plants and tree gums and resins. The tetraterpenoids from a group of compounds which are known as carotenoids. Rubber is the most important polyterpenoid. The functional diversity of chemicals within plants is best demonstrated by terpenoids. More than 30,000 terpenoids have been identified. The terpenes have a simple unifying feature by which they are defined and classified as well. This is generally referred to as the isoprene rule having the fundamental repeating 5-carbon isoprene units. Thus, terpenes are defined as a unique group of hydrocarbon-based natural products that possess a structure that may be divided into isoprene, giving rise to structures that may further be divided into isopentace (2-methyl butane) units.

Most natural terpenoid hydrocarbons have the molecular formula $(C_5H_8)_n$ and the value of *n* is the basis for classification:

Number of Carbon Atoms	Class
10	Monoterpenoids ($C_{10}H_{16}$)
15	Sesquiterpenoids ($C_{15}H_{24}$)
20	Diterpenoids ($C_{20}H_{32}$)
25	Sesterterpenoids ($C_{25}H_{40}$)
30	Triterpenoids ($C_{30}H_{48}$)
40	Tetraterpenoids ($C_{40}H_{64}$)
>40	Polyterpenoids ($C_{50}H_8)_n$

Thus the term *terpene* is restricted to the hydrocarbon, $C_{10}H_{16}$. The thermal decomposition of almost all terpenoids results in isoprene as one of the products

and this led to the suggestion that the skeleton structure of all naturally occurring terpenoids can be built of isoprene units. Thus, the divisibility into isoprene units may be regarded as a necessary condition to be satisfied by the structure of any plant-synthesized terpenoid.

Monocyclic terpenoids contain a six-member ring, the monoterpenoid open chain gives rise to only one possibility for a monocyclic monoterpenoid, namely, the p-cymene structure. Most natural monocyclic monoterpenoids are derivatives of p-cymene. Bicyclic monoterpenoids contain a six-member ring and a three-, four-, or five-member ring. The monoterpenoids are major components of many essential oils. Common acyclic compounds include myrcene, geraneol, and linalool. Cyclic structures include menthol, camphor, pinene, and limonene. Sesquiterpene, C_{15} or compounds having 3-isoprene units, exists in aliphatic, bicyclic, and tricyclic frameworks. A member of this series, farnesol, is a key intermediate in terpenoid biosynthesis. Arteether is derived from artemisinin, a sesquiterpene loctone isolated from *Artemisia annua* and currently used as an antimalarial drug. Several derivatives of artemisinin are in various stages of clinical trials as antimalarial drugs in Europe and as antineoplastic agents.

The diterpenes are not considered essential oils and constitute a component of plant resins because of their higher boiling point. These are composed of four isoprene units. Gebberalic acid, a plant growth regulator, and taxol are diterpenes. Taxol obtained from *Taxus brevifolia* is a promising anticancer drug and eventually received marketing approval from the U.S. Food and Drug Administration (FDA).

Triterpenes (C_{30} compounds) are composed of six isoprene units and are biosynthetically derived from squalene. These are high-melting point, colorless solids and constitute a component of resins, cork, and cutin. Triterpenoids produce several pharmacologically active groups such as steroids, saponins, and cardiac glycosides. Azadirachtin, a powerful insect antifeedant, is obtained from the seeds of *Azadirachta indica*. Other triterpenes include limonins and curcubitacins, which are potent insect steroid hormone antagonists.

STEROIDS

The steroids are arranged in four rings. They are a class of compounds having a structure of 17 carbons and form a group of structurally related compounds that are widely distributed in animals and plants. In fact a steroid could be defined as any compound that gives a Diels hydrocarbon when distilled with selenium. The steroids are sterols (from which the name is derived), vitamin D, the bile acids, a number of sex hormones, the adrenal cortex hormones, some carcinogenic hydrocarbons, and certain sapogenins. The structures of steroids are based on the 1,2-cyclopentenophenanthrene skeleton. The cholesterol deposited on the walls of the arteries and the chief constituent of gallstones is a kind of alcohol called sterol. All plant steroids hydroxylated at C-3 are sterols. Steroids are modified triterpenes and have profound importance as hormones (androgens such as testerone and estrogens such as progesterone), coenzymes, and provitamins in animals. Many progesterones are derived semisynthetically from diosgenin. A steroid also includes cardiac glycosides and bile acids. Because of their biological importance and fascinating complexity, their study has become one of the most active areas of research.

STEROLS

Sterols occur in animals and plant oils and fats. They are crystalline compounds and contain an alcoholic group. They occur free or as esters of higher fatty acids and are isolated from the unsaponifiable portion of oils and fats. Cholesterol, 5α-cholestan-3β-ol (cholestanol), and 5β-cholestan-3β-ol (coprostanol) are animal sterols; ergosterol and stigmastrol are the principal plant sterols. The sterols that are obtained from animal sources are often referred to as the zoosterols, and those obtained from plant sources as the phytosterols. A third group of sterols, which are obtained from yeast and fungi are referred to as the mycosterols.

Cholesterol

Cholesterol, the substance deposited on the walls of arteries and the chief constituent of gallstones, is a kind of alcohol called a sterol. This is a sterol of higher animals, occurring free or as fatty esters in all animal cells, particularly in the brain and spinal cord. Thus cholesterol occurs in all animal tissues. The main sources of cholesterol are fish liver oils, and the brain and spinal cord of cattle. Lanolin, the fat from wool, is a mixture of cholesteryl palmitate, stearate, and oleate. The structure of cholesterol was elucidated only after a tremendous amount of work done by Wieland, Windaus, and their coworkers. The molecule consists of a side chain and a nucleus that is composed of four rings; these rings are usually designated A, B, C, and D, beginning from the six-member ring on the left. The nucleus contains two angular methyl groups: one at C-10 and another at C-30.

Ergosterol

Ergosterol occurs in yeast. Ergosterol forms esters, for example, acetate with acetic anhydride, thus there is a hydroxyl group present in ergosterol, which is a precursor of vitamin D.

Stigmasterol

Stigmasterol is obtained from soybean oil. It is present either in the free state or in the form of glycosides. Stigmasterol also forms tetrabromide, thus it contains two double bonds. Hydrogenation of stigmasterol produces stigmastanol ($C_{29}H_{52}O$) and since its acetate oxidation with chromium trioxide gives the acetate of 3β-hydroxy-nor-5α cholanic acid, it follows that stigmastanol differs from 5α-cholestan-3β-ol oil only in the side chain. Ozonolysis of stigmasterol gives, among other products, ethylisopropylacetaldehyde, suggesting that the side chain has a double bond at the 22 and 23 positions.

CARDIOACTIVE GLYCOSIDES

Steroidal Glycosides

There are many plant steroids that occur as glycosides and have the property of stimulating heart muscles. These are referred to as cardioactive or cardiotonic glycosides.

Cardiac glycosides are drugs used in the treatment of congestive heart failure and cardiac arrhythmia.

Ever since Withering studied the action of foxglove (*Digitalis* spp.) from the prescription made by an English West Country herbalist for dropsy in 1785, the value of the cardioactive glycosides in supporting a failing heart and preventing the unpleasant symptoms has been well established. Dropsy was the only obvious sign of heart failure in former times.

Cardiac glycosides are a group of saponins exhibiting cardiotonic properties in lower concentrations but are toxic at higher concentrations. These compounds in higher doses cause violent contractions resulting in death and so were used by hunters around the world as arrow poison.

The cardiac glycosides are built up from a steroidal aglycone having similar properties and origins to the steroidal saponins (they are sometimes found together) and thus to the steroidal hormones, vitamin D, bile acids, and cholesterol. They are divided into the two groups on the basis of whether the aglycone possesses a five- or six-member lactone ring.

A glycoside is a chemical compound made up of two parts, an active aglycone that is often a steroidal base, combined with a sugar. This combination makes a biologically absorbable entity that will deliver the active bit into the body with ease. The cardiac glycosides are those in which the aglycone acts on the heart. Thus the essential pharmacological activity of the glycosides resides in the aglycone; nevertheless, the sugar moiety is relatively complex and affects the availability and distribution of the aglycone and its specific presentation to the heart tissue.

The cardiac glycosides of the heart have effects on two types of heart activities: inotropic (force of contraction) and chronotropic (rate and rhythm of contraction). Thus there is reduction in the heart rate but an increase in the force of contraction, thereby an effective increase in the efficiency of the heart, so that cardiac output per unit of oxygen consumed is much improved. It is this effect that may be life saving in conditions such as congestive heart failure. A whole range of plants has cardiac glycosides naturally present but only a few are used therapeutically; of these the medical professions favor foxglove, whereas medical herbalists prefer lily of the valley. The reasons for this are worth exploring. Due to structural differences, the glycosides in lily of the valley have less potential for cumulative poisoning. This is partly due to the main component of the cardiac glycoside fraction of the lily of the valley being more water soluble and, therefore, excreted more rapidly. Also a comparatively lower dose of the plant has proportionately greater activity than foxglove because other less active compounds, such as convallataxol, are metabolized into active convallatoxin as it is needed. So we have an extended effect from each dose.

In Britain, herbal practitioners regularly used cardiac glycosides and the leaves of dandelion (*Taraxacum officinale*) as an accompanying diuretic. This has been shown to lead to unusually high levels of potassium, enough to lead to a net gain of potassium to the body after the diuresis. In Britain, the favorite cardioactive remedy among medical herbalists is lily of the valley leaves (*Convallaria majalis*) that have a particularly selective action, low toxicity, and an unusual mixture of cardiac glycosides that ensure a slow onset of effect.

Cardiac Glycosides of Digitalis

Digitalis leaves contain more than 40 cardiac glycosides based on four genins: digitoxigenin, gitoxigenin, gitaloxigenin, and gitaligenin. Primary glycosides (tetraglycosides) and triglycosides form the major compounds in the leaves.

Digitoxin is a cardiotonic used to improve the rhythm of heartbeats, making the contraction of the heart more powerful and helping the heart to pump blood at the time of cardiac failure. Gitalin and many other glycosides exhibit similar properties.

SAPONINS

Saponins are phytochemicals that produce foam when dissolved in water. Deriving their name from the Latin *sapo* meaning "soap," saponins have long been implicated as the plant constituent producing frothing in aqueous solution. It was the predominant principle of the European plant *Saponaria officinalis,* the roots of which have been used as a rural soap substitute. Like soaps or detergents, saponins are large molecules that contain the water-loving (hydrophilic) part at one end, which is separated from the fat-loving (lipophilic or hydrophobic) part at the other end. In aqueous solution, saponin molecules align themselves vertically on the surface with their hydrophobic end oriented away from the water. This has the effect of reducing the surface tension of the water, causing it to foam. For this reason, saponins are classified as surface-active agents.

Saponins are extremely complex chemical structures that differ from one another by the basic framework of carbon atoms. The high molecular weights of saponins and their usual occurrence in groups have led to difficulties in isolating and elucidating their structures. Saponins are glycosides (the sugar part comprises the hydrophilic end). Saponins can be divided into two categories on the basis of the sapogenin: steroidal and triterpenoidal.

Steroidal saponins contain the characteristic four-ringed steroid nucleus, whereas the triterpenoidal saponins have a five-ringed structure. In both cases the sugar moiety is attached to the carbon-3 point. Steroidal saponins are mainly found in monocotyledons, and triterpenoidal saponins are by far the most common. There are some unusual classifications; for example, the ginsenosides in ginseng are grouped with the triterpenoidal saponins even though they exhibit a steroidal structure. Good examples of triterpenoid saponins are glycyrrhizic acid and glycyrrhizin found in licorice. They have a strengthening effect upon the adrenal gland as they mimic the activity of adrenocorticotrophic hormones (ACTH). This is implicated in many stress problems. Other valuable triterpenoid saponins are found in lung remedies. Primrose, senega, blood root, and horse chestnut leaves also contain such constituents, as do figwort, golden rod, and chickweed. Steroidal saponins typically contain extrafuran and pyran heterocyclic rings, which are not a feature of ginsenosides (furans and pyrans are, respectively, five- and six-member rings containing oxygen).

Saponins from Licorice

Licorice is the root, subterranean stems, and leaves of *Glycyrrhiza glabra,* a native of Southern Europe and West and Central Asia. Licorice contains 3–15 percent of

glycyrrhizin (a saponin; 50 times sweeter than sugar), which is the calcium and potassium salts of glycyrrhizinic acid. The sweetness of glycyrrhizin is lost in hydrolysis when saponin yields glycyrrhetic acid and two molecules of glucuronic acid. The yellow color of the drug is due to a chalcone, isoliquiritin. Glycyrrhiza is an expectorant, laxative, and a flavoring agent. Glycyrrhetic acid is anti-inflammatory.

Saponins from Soapnut

Soapnut is the fruit of various species of *Sapindus*, especially of *S. mukorossi*. These fruits are largely used as detergents for washing clothes before dyeing and for washing hair. Fruits contain about 10 percent saponins mainly concentrated in the pericarp. The principal saponin is mukuroside, which on hydrolysis yields hederagenin (sapogenin) and sugars such as arabinose, glucose, rhamnose, and xylose. The kernel contains about 35 percent of a fixed oil and 31 percent protein. Saponins of marked pharmacological activity are obtained from a number of plants. The Chinese system of medicine is particularly rich in saponin drugs. In India, important medicinal plants yielding saponins are licorice (*Glycyrrhiza glabra* L.), sarsaparilla (*Smilax* spp. roots), asparagus root (*A. racemosus* Willd., root tubers), randia (*R. dumetorum lan* bark), soapnut (*Sapindus laurifolius* Vohl roots), and ziziphus (*Z. jujube* var. *spinosa* Hu). Other triterpenoids of pharmacological interest are quassin (*Picrasina excelsa planch* wood), guggulsterols (*Commiphora wightii* Arnott stem exudates), and curcubutacins (*Cirtrullus colocynthis* Sch resin) from fruits.

Pharmacological Activity of Saponins

Saponins cause lysis of the blood cells, hemolysis, and are highly toxic. Many arrow blood poisons have a saponin base; however, this has been shown to be a property of a whole molecule, glycoside. On oral ingestion, hydrolysis readily occurs, splitting the glycoside into its sugar moiety and the aglycone or sapogenin. The sapogenin does not possess hemolytic properties and is quite safe. One has to remember that the saponins are a further reason for not injecting herbal extracts intravenously. It is interesting to note that fish and cold-blooded creatures' saponins are not always toxic (and provide the basis for many fish poisons harmless to humans).

All saponins have useful topical affects that have been largely neglected in modern pharmacology. The most notable is an effect on the respiratory system: a stimulating expectoration brought about by the reflex stimulation of the stomach wall. This, in turn, is the result of the fact that most saponins, when taken in bulk, have an emetic effect: the detergent actively promotes elimination on the part of the stomach. When taken in subemetic lozenges, the emetic action is sublimated to a reflex stimulating expectoration, as with such well-known alkaloid emetics as lobelia (*Lobelia inflata*) or ipecacuanha or ipeac (*Cephails ipceacuanha*). Sqills (*Urginea maritima*) is one example of an emetic expectorant with a saponin constituent. Other saponins have a less irritating effect on the digestion, actually settling it, and adding absorption of important minerals. The saponins of spinach, asparagus, beetroot, oats, and many of the legumes are likely to have useful action here.

Saponins are capable of destroying red blood cells (RBCs) by dissolving their membranes; known as hemolysis, this releases free hemoglobin into the blood stream. Red blood cells are particularly susceptible to this form of chemical attack because they have no nucleus and therefore cannot affect membrane repair. Hemolysis explains why saponins are much more toxic when injected than taken orally. The toxic dose of an injected saponin occurs when sufficient hemoglobin is released to cause renal failure (hemoglobin is damaging to the delicate membranes of the glomerulus). After oral intake, much of the saponin is not absorbed or is slowly and partially absorbed as the glycone.

Saponins are more or less irritating to gastrointestinal mucous membranes (whether this is related to their detergent or hemolytic properties is not well understood). This irritant property creates an acrid sensation in the throat when a saponin containing herbs is chewed. Certainly many of the traditional expectorant herbs such as soap bark, senega, and primrose root and ivy leaf are rich in acrid saponins. This reflex expectorant effect and its relationship to emesis have been demonstrated in animals. Early research has suggested that the incorporation of saponins into the cell membrane probably forms a structure that is more permeable than the original membrane. Saponins readily increase the permeability of the mammalian small intestine *in vitro* leading to the increased uptake of otherwise poorly permeable substances and a loss of normal function.

Disogenins also markedly enhance cholesterol secretion into bile, which, in conjunction with the unabsorbed cholesterol, results in increased fecal excretion of cholesterol without effecting excretion of bile acids. Higher levels of ingestion of saponins or sapogenins lead to cholestasis and jaundice associated with the presence of cholesterol-like crystals in hepatocytes. Saponin intake lowers plasma cholesterol levels in animals.

Saponins are used as very gentle detergent to wash the hair and to treat skin conditions such as acne without causing a rebound increase in sebum production. One of the most interesting effects of saponins or sapogenins that follows from their ingestion is their capacity to interact with the ingestion of steroid hormone metabolism. In the last few years, the role of enzymes that metabolize steroids in regulating the actions of these hormones has been appreciated. For example, 11β-hydroxysteroid dehydrogenase regulates glucocorticoid action by catalyzing the interconversion of hydrocortisone and cortisone, inactive steroids. Aldosterone is inert to 11β-hydroxysteroid dehydrogenase and can regulate mineralocorticoid responsive genes in the kidneys. Inhibition of the enzyme in the kidney allows hydrocortisone to exert an additional aldosterone-like effect. This is exactly what licorice does.

The saponins have a subtle sweet taste (and in the case of licorice a very sweet taste). They also demonstrate similar qualities of tonifying the system and maintaining balance, and are indicated in deficiency states.

GUM, RESIN, AND MUCILAGE

Gums and Mucilage

Gums are substances that swell in water to form gels, for example, gum arabic and gum tragacanth. On hydrolysis, the former gives arabinose, galactose, rhamnose, and glucuronic acid; and the latter yields xylose. Mucilages are polysaccharides

that swell in water to form viscous solutions. On hydrolysis, they give galacturonic acid, arabinose, and xylose. It is a sap or other resinous material associated with certain species of the plant kingdom. This material is often polysaccharide-based and most frequently associated with woody plants, particularly under the bark or a seed coating. The gums and mucilages are extremely common constituents of the plant and have several very important functions central to the action of many herbal prescriptions. Gums and mucilages have traditionally been distinguished by their physical properties. However, there is no clear chemical distinction between the two groups and they are most often found together in plants. Gums have been used as thickening and bulking agents in pharmaceutics, as they play a less obvious part in most plants. Once swallowed, their actions are no different from those of mucilages. The gums and mucilages are made of uronic acid and sugar derivatives, and even if they are broken down on digestion they can have no great pharmacological effects. As such, these molecules are very resistant to the digestive juices.

From the phytochemical point of view, mucilages are often considered to be a minor category of the group of large plant polysaccharides (a category which includes gums, various mannans, hemicelluloses, and pectins). They are highly prized by phytotherapists. The class of compounds, which the phytotherapist considers as mucilages, is acidic heterogeneous polysaccharide or the acidic mucilage. Mucilages are generally not chemically well defined. They are very hydrophilic (water loving) and are capable of trapping water (and other molecules) in their cage-like structure to form a gel. Consequently, when mucilage is mixed with water it swells to many times its original volume as it absorbs water. The saccharide linkages are in β-configuration, which means that human digestive enzymes cannot break down mucilages. However, they can at least be partially decomposed by bowel flora into short-chain fatty acids (SCFA). This may explain the traditional use of slippery elm bark (*Ulmus rubra*) as a food for convalescence. Not only would the mucilage soothe a disturbed digestive tract, SCFA formed in the colon would provide a source of readily absorbed and assimilated nourishment. The key action of the mucilages is on the surface with which they are in direct contact. They produce a casting of slime that acts to soothe and protect any exposed surface. Thus the mucilaginous plants have been primarily and universally used as wound remedies, soothing pain, irritation, and itching. It also binds damaged tissue. The overall action is referred to demulcent or as emollient properties and provides temporary benefits in the management of inflammatory conditions in the digestive tract. This anti-inflammatory effect is probably more than just mechanical, although the protective benefits of a layer of mucilage on the digestive mucosa are obvious, especially as an extra barrier to gastric acid. This protective effect of mucilage isolated from *Plantago ovata* leaves against aspirin-induced gastric ulcers has been demonstrated in rats. Similar gastroprotective activity has also been shown by guar gum. It has been shown that guar gum forms a layer closely associated with the intestinal mucosal surface when given to rats, providing a protective barrier. Mucilages are topically applied for an anti-inflammatory (demulcent) effect but also for a drying and healing effect in wounds and infected skin lesions. This latter application is analogous to the use of hydrocelluloid dressings in modern medicine.

Mucilages can also function as bulk laxatives, and most widely used in this regard is isapagula or psyllium husks as proprietary products such as Metamucil. However, the traditional uses of mucilages such as linseed (flaxseed) and fenugreek as bulk laxatives often provide valuable alternatives, particularly when psyllium causes the characteristic side effect of bloating, abdominal pain, and flatulence. Mucilages can also be used as a weight loss agent and presumably act by creating a sensation of fullness. Since they have been known to cause esophageal obstruction, mucilages should be taken with plenty of water.

An extract of marshmallow root (*Althea officinalis*) and the isolated mucilage showed significant antitussive activity. In an animal test, doses were administered orally and cough from both laryngopharyangeal and tracheobronchial stimulation was depressed. Mucilages are also a class of soluble fibers, and in this context the properties of psyllium husks have been well studied. The mucilages from psyllium have been shown to be effective in lowering blood cholesterol level. Trial results suggest that it must be taken with food to be effective, and helps to retain glucose in the gut and to reduce blood insulin levels after eating. Psyllium seed was shown to have particular benefits in this regard with a clear dose-related response on the effects of glucose challenge. Soluble fiber and mucilages in particular also act as a prebiotic, enhancing the population of beneficial organisms in the gut flora. Mucilages are water soluble and relatively insoluble in ethanol. Liquid galenical preparations of mucilages are not appropriate (except for their use as reflex demulcents).

RESINS

Resins are a complex group of solids or occasionally liquids insoluble in water but soluble in alcohol, ether, and chloroform. They are obtained from many plants either spontaneously or as a result of injury. Their role in the plant is probably to protect against the effects of insect, fungal, or other infestation, or to seal the tissues against the effects of damage. The resulting exudates are an amorphous complex mixture of chemicals that soften on heating. Such resins are often associated with essential oils, with gum resins, or with oil and gum. Their resin compounds, which mainly comprise diterpenes, are known as resin acids, resin alcohols, and resin phenols. They are soluble in alcohol and ether but insoluble in water and hexane. Thus resins can be defined as any organic substance of natural or synthetic origin characterized by being polymeric in structure and predominantly amorphous. Most resins have high molecular weight and consist of a long chain or network molecular structure.

The oleoresins obtained from the stem of shrubs or the myrrh tree (*Commiphora molmol*) show astringent and antimicrobial properties. The former quality is probably entirely due to the resin and the latter is a combined effect from the resin and the essential oil. Tincture of myrrh is a potent antiseptic used in the mouth and throat. Resins have also been applied to inflammatory conditions of the upper digestive tract and this probably reflects on their astringent property. The oleoresin mastic (*Pistacia lentiscus* var. *chia*) is traditionally used for the relief of dyspepsia and peptic ulcers. Mastic showed a duodenal ulcer healing effect at 1 g/day in a double-blind, placebo-controlled clinical trial. The essential resin is a mixture of resin acids, resin alcohols (resinols), resin phenols (resino-tannols), esters, and inert substances called

resins. This may also be mixed with volatile oils and gums to form oleo resins and gum resins, respectively. Other resins are complexed with aromatic balsamic acids like benzoic and cinnamic acids (which partially increase their solubility in water) and are referred to a balsamic resins. Resins include guaivacum (*Guaicum* spp.), colophony (*Pinus* spp.), and Dragon's blood (*Daemonorops* spp.).

Apart from uses in pharmacy and industry, the medicinal effects of resin are almost entirely as an antiseptic and stimulant to phagocytic activity. In the form of mouthwashes or gargles they both disinfect the region and provoke a local increase in white blood cell counts (leucocytosis).

The balsams have been used as antiseptic wound dressings for several centuries. In Western herbal medicine, 90 percent of tinctures of myrrh and marigold (*Calendula officinalis*) are used as effective topical application for infections of mucosal surfaces. Resins are contact allergens that can cause oral ulceration and contact dermatitis.

BITTERS

Bitters are substances capable of strongly stimulating the bitter receptors in the taste buds at the back of the tongue. Most herbal preparations or prescriptions have an element of bitterness. It is this quality that differentiates herbal medicine and sets it apart from other therapies. Bitter principles have in common the ability to stimulate the bitter receptors inside the mouth and thus evoke the taste of bitterness. Given that bitters are defined physiologically, it might be expected that bitter compounds come from a number of phytochemical classes. The largest groups of bitter substances are of terpenoid structure such as monoterpenes, sesquiterpenes, diterpenes, flavonoids, and triterpenes. However, the most notable bitter compounds are the monoterpenes secoiridoid glycosides of gentian (particularly amarogentin), centaury and bogbean, and the sesquiterpene lactone dimers (such as absinthin) of wormwood. These compounds are among the bitterest substances known. Sesquiterpenes are responsible for the major bitterness of the *Artemisia* or wormwood genus, blessed thistle (*Cnicus benedictus*), and ginkgo (*Ginkgo biloba*). There are also diterpene bitters, as in white horehound (*Marrubium vulgare*) or Colombo root (*Jateorrhiza palmata*), and triterpenoids have been found to be responsible for the toxic bitterness of the *Curcubitaceae* (including colocynth, bryonies, pumpkin, cucumber, and marrows). Many alkaloids are bitter, notable among these being the protoberberine, isoquinoline alkaloids of berberis and golden seal (*Hydrastis camadonsis*), the morphine alkaloids, the purine alkaloids and the quinoline alkaloids of quinine, and angostura. There are many miscellaneous compounds with bitter taste. For example, the strong bitterness of hops (*Humulus lupulus*) is due to a mixture of ketones and amino acids.

Dandelion and chicory roots are used with coffee beans (*Coffea arabica*) to provide a pleasant after-meal bitter drink. The drink vermouth gets its name from the bitter plant wormwood (*Artemisia absinthium*) and is widely used as an appetite stimulating aperitif, the same principle underlies the digestive action of traditional bitter beer brewed with hops (*Humulus lupulus*). All these uses are manifestations of the universal cultural experience that bitters are excellent adjuncts to food (especially when eaten richly). On checking the traditional plant medicines, it has been found that bitter remedies are referred to as the true stimulants; a notion

surviving is the modern idiom that nasty-tasting medicines are best. Many countries recognize the value of bitter substances in promoting the digestive system and general health. In Holland older people would celebrate the bitter hour in the early morning when they would partake of bitter food and drink to support their fading digestive power. In India, it is said that those with liver problems seek bitter-tasting substances. In Africa, the medicinal value of bitter herbs, particularly as digestive stimulants, is commonly recognized in traditional medical systems. In the early 20th century, it was still widely accepted in medical and scientific circles that bitters promote digestion.

The action of bitter remedies has moved far in recent years. It is known that they are only effective in the stimulation of bitter taste receptors and have no effect, for example, if administered in capsule form or in an intragastric tube. The bitter receptors that mediate the response witnessed is a classic example of a reflex response where a small stimulus provokes a complex reaction.

Studies have shown that bitters increase the secretion of saliva. A lemon wedge saturated with Angostura bitters was also found to cure hiccups in 88 percent of subjects in open trial. Some bitter herbs may also have a direct effect on the stomach. Bitters were administrated by mouth and swallowed into the blind esophagus; the resulting salivary volume and gastric secretion were compared with direct administration into the stomach. It was found, that there was considerable variation in the effect of bitters. Golden seal (*Hydrastis canadensis*) was the most effective herb and gentian was virtually inactive at the levels tested. A recent research finding also suggests that bitters exert an action in the stomach. A significant effect for gentian extract was observed at the concentration of 10–1000 mg/ml. This concentration range can be readily achieved by normal doses of gentian. A radically different activity profile has been demonstrated for bitters. Moorhead found that a tincture of the herb gentian (*Gentiana lutea*) given by mouth or directly in the stomach of cachectic dogs caused a marked increase in appetite. Also, only when gentian was given by mouth (i.e., tasted), did it cause a marked increase in gastric secretion and its acids and pepsin contents. All the aforementioned facts were absent in the normal animal. Thus, it may be concluded that the following observations could be drawn from the early research.

- Bitters increase appetite only if cachectic, malnourished, or debilitated states exist in the body.
- Bitters increase digestive power mainly when it is below optimum, as in a state of cachexia.
- Experiment with bitters should involve actual feeding, that is, the presence of food in the stomach is important for their activity.
- At normal doses, bitters act in the mouth, hence, they must be tasted. Bitters applied to the mouth (tasted) before a meal has a priming effect on upper digestive function.

This effect is more marked in states where digestion is below optimum, where a positive effect on appetite is observed. This increase in upper digestive function is prob-

ably mediated by a nerve reflex from the bitter taste buds and involves an increase in various stimulations. Thus vagal stimulation causes

- An increase in gastric acid secretion
- A transient rise in gastrin
- An increase in pepsin secretion
- A slight increase in gallbladder motility
- A priming of the pancreas

These bitters could have a promoting effect of all components of upper digestive function, namely, the stomach, liver, and pancreas. Healthy upper digestive function is important for maintaining health and preventing disease. Gastric secretion declines with age and a significant percentage of people aged 65 years and older have abnormally low gastric activity. Low acidity can lead to poor nutrient absorption and abnormal bowel flora. Patients with reduced gastric secretion are more susceptible to bacteria and parasitic enteric infection. Low gastric activity is often associated with a number of chronic diseases such as rosacea, gallbladder disease, eczema, and asthma.

Diabetics respond well to bitters and some herbalists believe that they can assist normalizing blood sugar levels in both reactive hypoglycemia and diabetes. A lack of insulin could impair the vagal stimulation of gastric secretion and oral doses of bitter herb lowered blood sugar in healthy rats. Long-standing diabetics may have impaired upper digestive function secondary to vagal neuropathy. It has been found that in same cases the patient's response to herbal medicines depends on their upper digestive function. Herbalists consider that bitters have a tonic effect on the body and the term *bitter tonic* is often used. Besides their use for poor upper digestive function, low appetite, and hypochlorhydria and its consequences, bitters are also used to treat anemia. Bitters are also valuable for food allergies, since poorly digested proteins and other compounds probably contribute to this condition. Herbalists also believe that bitters stimulate immune function and a patient who is pale, lethargic, and prone to infections is a prime candidate for bitters. Bitters can be an excellent remedy for anorexic children. Bitters neutralize the negative influence of higher mental functions on digestion, which usually results from chronic stress, and had a tonic effect on the colon when applied over a long period.

PUNGENT CONSTITUENTS

The mustard oil glycosides represent only one group of irritant pungent constituents used in herbal medicine. The sulphur-containing constituents of the onion family, for example, garlic (*Allium sativum*), share pharmacological characteristics with mustard oil glycosides. Like bitters, pungency is a physiological classification rather than a phytochemical one. The three most commonly used hot spices are cayenne pepper (*Capsicum*), black pepper, and ginger. Although their pungent components, that is capsaicin, piperine, and gingerols, respectively, are chemically distinct, capsaicin and piperine are alkaloids based on homovanillic acid (hence vanilloid receptor), and the gingerols are substituted alkylphenols. Capsaicin has been the most commonly studied of the pungent compounds. C-fiber sensory neurons, which release

inflammatory neuropeptides, including neurogenic inflammation, thermoregulation, and chemically initiated pain, have been studied. A process known as tachyphylaxis provides the basis for the current therapeutic interest in capsaicin. Capsaicin is postulated to stimulate C-fibers by interacting with vanilloid receptors. The intense sensation of pain and heat that is experienced after eating hot curry is testimony of this C-fiber activation. Although the pain and burning from consumption of cayenne or capsaicin can be disturbing, no actual harm results from its consumption. In effect, the specific action on nervous system receptors creates an illustration of pain and burning. Tissue damage is not concurrent with these sensations. This contrasts strongly with the mustard oils, which are highly corrosive and burning in association with tissue damage.

The desensitization of C-fibers has been found to be beneficial in a number of chronically painful disorders. Controlled clinical trial topical use of capsaicin cream has demonstrated symptom relief in osteoarthritis, neuropathy, and postherpetic neuralgia. Topical capsaicin is effective for painful skin disorders such as psoriasis and pruritus. It may be useful for neural function in cluster headache and phantom limb pain. Vasomotor rhinitis may also be susceptible to topical capsaicin. The higher fibrinolytic activity observed in Thai people has been attributed to daily intake of cayenne pepper. Capsicum also increases gastric acid output. Since gastric acid is a natural defense against gastrointestinal pathogens, it can be postulated that this could be the reason for the preference for hot, spicy food in tropical countries. However, excessive capsaicin exposure caused tachyphylaxis and impaired these defensive mechanisms. Like capsaicin, piperine has also attracted research interest but for quite different reasons. Attention has focused on the capacity of piperine to enhance the bioavailability of other agents. This includes aflatoxin B_1 in rats, and propanal, theophylline, curcumin, vaccine, and spartenine in humans. Piperine inhibits drug metabolism by the intestine and liver; other possibilities include increased permeability of intestinal cells and even complexation with drugs. In traditional Chinese medicine, a mixture of radish and pepper is used to treat epilepsy. Piperine and some other synthetic derivatives have also been shown to be anticonvulsant drugs that antagonize convulsion induced by physical and chemical methods. Antepilespirime, one of the derivatives of piperine, is widely used as an antiepileptic drug in China.

In modern times, hot spices are used around the world for their general warming and stimulating circulatory activity. Pungent agents increase the secretion of catecholamine, especially adrenaline. Capsaicin was most active. Piperine and zingerone (from ginger) also showed their activity. Capsaicin also increases energy expenditure in the body and boosts the basal metabolic rate, which has implications for its use in weight control. These findings led Samuel Thomson to promote cayenne as a life-promoting heating herb and a general metabolic stimulant. The physiomedicalist extended this concept and proposed that cayenne administered in conjunction with other herbs would augment the particular stimulatory activity of that herb. Several studies have been conducted to determine the potential mutagenic and carcinogenic activity of capsaicin and cayenne but findings are contradictory. Capsaicin also shows chemoprotective activity against some chemical carcinogens and mutagens. Piperine appears to lack mutagenic activity.

Sometimes acrid is also called pungent. The main action of the acid agents is to stimulate circulation. This is an extension of their general irritable nature, which involves provoking a low-grade inflammatory response from living tissues. The action can be evoked after external and internal application. Externally the acrid constituents are widely used in the form of poultices or ointments as rubefacients and vesicants over inflamed organs or tissues, particularly arthritic joints, in a paradoxical action referred to as counterirritation. However, in addition to dispersing circulation more effectively, the acrid remedies also clearly add to the body's total quota of heat. It must be assumed that they also have a stimulating effect on aspects of heat-producing metabolism. The other effects of the acrid remedies can be appreciated in this context, thus increasing sweat production, maintaining the circulatory effort throughout the body, and improving the ability of the digestive system.

The acrid remedies are still indicated whenever there is an apparently sluggish circulation, or when the sensation of cold is a feature of a syndrome. In such cases they may bring apparent relief beyond that expected by their immediate pharmacological actions. Acrid remedies have other specific applications. They stimulate the secretion of stomach acid and tend to settle digestion in the lower gut. The effects of the acrid remedies on the lower digestive tract are more relaxing than stimulating. They tend to have a carminative action: reducing flatus, colic, and other signs of poor digestion. Along with action to stimulate gastric acid, they thus make ideal condiments, especially with meat and other rich foods. Many acrid constituents are removed from the bloodstream through the lungs. For this to occur the constituents must be volatile and as such they are simply breathed off. The volatile oils of ginger and garlic, and volatile isothiocyanates of horseradish are examples. As the acrid constituents are harmful to pathogens and the volatile oils doubly so, pulmonary secretions effectively disinfect the lungs. They also act as expectorants, improving the flow upward of bronchial mucus, and actually warm the lungs. They are thus ideal for reducing bronchial and pulmonary infections, and when the lungs are affected by cold, catarrhal congestion.

COUMARINS

Coumarins are a group of substances found very widely in plants but little studied pharmacologically. Coumarins owe their name to the common name for the tonka bean (*Dipteyx odorata*) from which the simple compound coumarin was first isolated in 1820. Chemically the coumarins are derivatives of benzopyrone (lactones of o-hydroxy cinnamic acid), where a pyrone ring is attached to the basic phenolic ring. All plant coumarins contain a hydroxyl or methoxy group in position 7. Simple coumarins have a pleasant vanilla-like odor. It is probably not present in the intact plant but is rather formed by enzymatic activity from a glycoside of o-hydroxy cinnamic acid after harvesting and drying.

Coumarin is used to perfume pipe tobacco and can be sometimes found as an adulterant in commercial vanilla flavorings. The furanocoumarins are closely related furano derivatives of coumarins, which are commonly found in the Rutaceae (rue) and Umbelliferae family. Linear furanocoumarins are often called psoralens and act as photosensitizing agents. Coumarins are fluorescent compounds and this

property is widely utilized in a number of biochemical techniques. Simple substituted coumarins are also used as pigments in sunscreens.

The fermentation product of coumarin itself, dicoumarol, found naturally in sweet clove hay (*Melilotus* spp.), is a potent anticoagulant. Its discovery led to the development of modern anticoagulant drugs. Dicoumarol and related anticoagulants are hydroxylated in the 4-position. This is said to be an essential requirement for powerful anticoagulant activity.

All common plant coumarins are not substituted at this position and, therefore, lack significant clinical anticoagulant activity, although many coumarins do possess activity when given to animals in high doses. Coumarins have also been shown to possess antiedema, anti-inflammatory, immune-enhancing, and anticancer activities. The spasmolytic activity of scopoletin is probably a major reason behind the use of the *Viburnum* spp. such as cramp bark and black haw for hypertension and dysmenorrhea. Scopoletin and aesculatin were identified in black haw as having significant spasmolytic action on guinea pig small intestine. Like coumarin, substituted coumarins may have a role to play in cancer prevention and treatment. Aesculetin exhibited considerably higher cytotoxic activity than coumarin *in vitro* on two tumor cell lines, but scopoletin was found to be inactive. Umbelliferone has similar cytotoxic activity like coumarins.

Furanocoumarins have a long history of therapeutic use in humans. Long ago it was recorded in Egyptian Ayurvedic literature that the ingestion of herbs containing psoralens followed by exposure to sunlight could assist in the treatment of vitiligo, a skin condition characterized by loss of pigmentation. This traditional knowledge developed on the 1940s when xanthotoxin (8-methoxypsoralarn or 8-MOP) plus sunlight exposure was introduced as a therapy for vitiligo. The treatment was not very successful, mainly due to a phototoxic side effect, and it was only when an ultraviolet A (UVA) light source became available that significant advances were made. UVA radiation is less energetic, therefore less damaging, than ultraviolet B (UVB). It was shown that oral 8-MOP and UVA were highly effective in the control of psoriasis and the malignant skin condition mycosis fungoides. More recently it has been realized that bergaloten (5-methoxypsoralen or 5-MOP) is a psoralen with better therapeutic characteristics. Psoralen is now the basis of yet another new breed of therapy, photochemoprotection. The use of 5-MOP has provided a more effective treatment of vitiligo and gives fewer side effects in UVA therapy of psoriasis.

Furanocoumarins in conjunction with UV light kill bacteria and inactivate viruses. In addition, they may be responsible for the enhanced bioavailability with grapefruit juice in several pharmaceuticals. In Egypt, the decoction of the fruits of *Ammi visnaga* has been used since ancient times as a spasmolytic for kidney stones and in the treatment of angina pectoris. The pyranocoumarin visnadin exhibited positive inotropic and marked coronary vasodilator activities. Visnadin is still used as a treatment for angina and possibly acts as a calcium channel blocker. *Ammi visnaga* also contains the spasmolytic furanochromone khellin, which was used for the treatment of angina and asthma. Its use was discontinued because of side effects, including drowsiness, headache, and nausea.

ANTHRAQUINONES

Anthraquinones are the phytochemicals based on anthracene where three benzene rings are joined together. At each apex of the central ring is a carbonyl group (carbon double-bonded to oxygen), which is the quinine part. Anthraquinones usually occur in plants as glycosides; for example, the sennosides from senna (*Cassia* spp.) are O-glycosides and the aloin from aloe are C-glycosides. Plants like rhubarb, senna, and cascara have been used for their laxative effects since ancient times. The laxative effect on the gut is largely a local one; systemic absorption is limited. The action of anthraquinone is dependent on the presence of the bile in the gut and on the fact that they are ingested in the glycoside form. The anthraquinone laxatives essentially irritate the bowel wall, provoking increased muscle contractions and peristaltic movements. Accumulation of fluid in the colonic lumen can also lead to laxative effects. It has been suggested that this could be due to the inhibitory effect of the anthrone. These agents have instead been shown to stimulate active chloride secretion into the lumen, which is balanced by an increase in sodium and water flow. Prostaglandins may be involved in this process but not a platelet-activating factor. Alteration of calcium transport may also play a role. The dual action of anthraquinones highlights an important aspect of their safe and effective usage. In lower laxative doses that produce a normal motion, the effects on motility are apparent, but in higher doses, electrolyte excretion and secretion and diarrhea will predominate. Chronic use of laxative raises aldosterone levels in response to electrolyte loss, which diminishes their effectiveness.

Natural anthraquinones in the form of chrysarobin have also been used topically in the treatment of psoriasis and is an effective agent for psoriasis. However, it has a number of drawbacks: it is only stable in a greasy base and it irritates and stains the skin. Most recent research on chrysarobin has been concerned with tumor-promoting activity. Hypericin and pseudohypericin are dianathrones, structurally related to anthraquinones. They have been shown to have antiviral activity. Several anthraquinone aglycones, including rhein, alizarin, and emodin also demonstrated antiviral activity against human cytomegalo virus. This may justify the traditional use of applying the leaves of *Cassia* spp. in viral skin conditions.

Rhein is an anthraquinone aglycone found in rhubarb that inhibits the activity of cytokines in models of osteoarthritis. This observation led to the development of diacylrhein, a synthetic derivative with better bioavailability. Clinical studies of oral diacetylrhein at 100 mg/day improved symptoms in patients with osteoarthritis. Madder root (*Rubia tinatorum*) contains a characteristic spectrum of intensely colored anthraquinone glycosides, such as glycosides of lucidin and alizarin. It has been used as vegetable dye and natural food coloring. Madder has traditionally been employed for the prevention and treatment of kidney stones. The anthraquinones in madder can function as chelating agents with some metal ions like calcium and magnesium. A therapeutic oral dose of madder root will color urine slightly pink, indicating that a significant quantity of anthraquinone is excreted in the urine. Its regular use is said to slowly dissolve kidney stones. Madder may also be used as an oral chelation therapy in patients with atherosclerotic lesions.

7 Chemical Constituents of Ayurvedic Herbs

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Abies spectabilis (D. Don) Spach.; Syn *Abies webbiana* Lindl.	Taalisa	Pinaceae	Alpha-pinene, l-limonene, delta-carene, dipentene	Leaf
Abrus precatorius Linn.	Gunjaa	Papilionaceae; Fabaceae	Abrin, anthocyanins, sterols	Seeds
Abutilon indicum Linn. Sweet	Atibalaa	Malvaceae	Mucilage, tannin, gallic acid, flavonoids	Seeds
Acacia arabica Willd. var. *indica* Benth.	Babbuula	Mimosaceae	Tannins	Seeds
Acacia catechu (Linn. f.) Willd.	Khadira	Mimosaceae	Tannins, catechin, quercetin, resins, pigments	Seeds
Acacia leucophloea (Roxb.) Willd.; Syn *A. alba* Willd.	Irimeda	Mimosaceae	Leucophleol, leucophleoxol, leucoxol	Bark
Achyranthes aspera Linn.	Apaamaarga	Amaranthaceae	Alkaloids	Whole plant
Aconitum ferox Wall. ex Ser.	Visha	Ranunculaceae	Alkaloids (aconitine)	Root
Aconitum heterophyllum Wall. ex Royle.	Ativishaa	Ranunculaceae	Alkaloids	Root
Aconitum palmatum D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Prativishaa	Ranunculaceae	Diterpenoid alkaloids, vakognavine, palmatisine, vakatisine, vakatidine	Root
Acorus calamus Linn.	Vachaa	Araceae	Volatile oil	Rhizome
Actiniopteris dichotoma Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Vahrishikhaa	Adiantaceae	Flavonoids (rutin)	Stem and leaf
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vaasaka	Acanthaceae	Alkaloids (0.5–2.5%)	Leaf
Adiantum lunulatum Burn.	Hansapadi	Polypodiaceae	Carotenoids	Whole plant
Adina cordifolia Hook. f. ex Brandis	Gaurakadambaka	Rubiaceae	Indole alkaloids, tannins, ursolic acid, quercetin	Heartwood
Aegle marmelos (L.) Correa ex Roxb.	Bilva	Rutaceae	Alkaloids, coumarins, flavonoids, sterols	Unripe fruit and root

Aerva lanata (L.) Juss. ex schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Paashaanabheda	Amaranthaceae	Tannin, volatile oil, palmitic acid, beta-sitosterol, alpha-amyrine	Whole plant
Ailanthus excelsa Roxb.	Aralu	Simaroubaceae	Quassinoids, bitters, lactones, quercetin	Bark and leaf
Alangium salviifolium (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Ankola	Alangiaceae	Alkaloid alangine deoxytubulosine in flowers, triterpenoids	Bark and root
Albizia lebbeck (Linn.) Willd.	Shirisha	Mimosaceae	Flavonoids, terpenoids, saponins	Bark
Albizia procera Benth.	Shevta Shirisha	Mimosaceae	Beta-sitosterol, saponins, tannins	Bark
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Yavaasah	Papilionaceae; Fabaceae	Anthraquinones, flavonoids, tannin, triterpines, saponins	Whole plant
Allium cepa Linn.	Palaandu	Liliaceae; Alliaceae	Flavonoids, alliin, allicin	Bulb
Allium sativum Linn.	Rasona	Liliaceae; Alliaceae	Amino acids, alliin (1.5–2.5%)	Bulb
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Maanakanda	Araceae	Volatile oil (0.1–0.5%), cynogenins, hydrocyanic acid, sterols	Whole plant
Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.	Ghritakumaari	Liliaceae; Agavaceae	Anthraquinone glycosides, aloin (1.5%)	Leaf
Alstonia scholaris R. Br.	Saptaparna	Apocynaceae	Indole alkaloids	Bark
Alternanthera sessilis (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. non-Link.	Matsyaakshi	Amaranthaceae	Iron, protein, stigmasterol, beta-sitosterol	Whole plant
Amaranthus spinosus Linn.	Tanduliya	Amaranthaceae	Sterols, hentracontane	Whole plant
Ammania baccifera Linn.	Agnipatri	Lythraceae	Naphthaquinones (lawsone)	Whole plant
Amomum subulatum Roxb.	Sthula-elaa	Zingiberaceae	Essential oil, flavonoids, glycosides	Seed
Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Kandala	Araceae	Calcium oxalate, betulinic acid, tricontane, lupeol, beta-sitosterol	Corm

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Anacyclus pyrethrum DC.; Syn *A. officinarum* Haye	Aakaarakarabha	Compositae; Asteraceae	Anacycline, isobutylamide, essential oil	Flower
Andrographis paniculata Wall. ex Nees.	Bhuunimba	Acanthaceae	Andrographolides, bitters	Whole plant
Angelica archangelica Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Chandaam-shuka	Umbelliferae; Apiaceae	Flavonoids, coumarins, furanocumarins, angeicin	Root
Angelica glauca Edgew.	Choraka	Umbelliferae; Apiaceae	Coumarins, furanocumarins, lactones	Root
Anisomeles malabarica R. Br. ex Sims	Sprikkaa	Labiatae; Lamiaceae	Anisomelic acid, beta-sitosterol, letulinic acid, ovatodiolid, essential oil	Whole plant
Anogeissus latifolia Wall. ex Bedd.	Dhava	Combretaceae	Quinic acid, shikmic acid, tannins, gallotannin	Bark, gum, heartwood, and leaf
Anthocephalus cadamba Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Kadamba	Rubiaceae	Alkaloids, reducing sugars, sterols, tannins	Bark and stem
Apium graveolens Linn.	Ajamodaa	Apiaceae; Umbelliferae	Volatile oils (3.0%), *d*-lemonene, coumarins	Seed
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Agaru	Thymelaceae	Alpha- and beta-amyrin, betulin, volatile oil, taraxasterol	Heartwood
Areca catechu Linn.	Guwaaka	Arecaceae; Palmae	Alkaloids (arecoline), arecaidine, tannins	Fruits
Argemone mexicana Linn.	Svarnkshiri	Papaveraceae	Alkaloids (berberine) (0.74%), protopine (0.36%), free amino acids, sanguinarine	Seed
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaaruka	Convolvulaceae	Ergoline alkaloids (ergine) and isoergine, sitosterol	Root, seed, and leaf

Artemisia vulgaris Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Damanaka	Asteraceae; Compositae	Volatile oils (cineol), thujone, thujyl and citral, beta-sentonin and terpenes	Whole plant
Artocarpus heterophyllus Lam.; Syn *A. integrifolia* Linn. f.	Panasa	Moraceae	Sapogenins, saponins, beta-sitosterol, flavonoids	Fruit
Artocarpus lakoocha Roxb.; Syn *A. lacucha* Buch.-Ham.	Lakuch	Moraceae	Lectins, artocarpin	Fruit
Asparagus racemosus Willd.	Shataavari	Asparagaceae	Saponins (15%), sitosterols	Roots
Asteracantha longifolia Nees;. Syn *Hygrophila spinosa* T. Anders.	Kokilaaksha	Acanthaceae	Apigenin, glucuronide, lupeol, stigmasterol	Whole plant
Averrhoa carambola Linn.	Karmaranga	Oxalidaceae; Averrhoaceae	Iron, oxalic acid, ascorbic acid	Whole plant
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Nimba	Meliaceae	Bitters (2.5%), rutin	Leaf
Bacopa monnieri (Linn.) Penn ; Syn *Herpestis monnieria* (Linn.) H. B. and K., *Moniera cuneifolia* Michx.	Braahmi	Scrophulariaceae	Alkaloids (brahmine) (5%), herpestine, baccosides (15–50%)	Whole plant
Balanites aegyptiaca (Linn.) Delile.; Syn *B. roxburghii* Planch.	Ingudi	Simaroubaceae; Balanitaceae	Diosgenin, steroidal saponins	Leaf, seed, bark, and fruit
Baliospermum calycinum Muell.-Arg.	Naagadanti	Euphorbiaceae	Flavonoids, terpenoids, steroids	Root
Baliospermum montanum (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.	Danti	Euphorbiaceae	Flavonoids, terpenoids, steroids	Root
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vansha	Gramineae; Poaceae	Silicic acid, cyanogenic glucoside (taxiphyllin)	Leaf

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Barleria cristata Linn.	Sahachara	Acanthaceae	Anthraquinone, apigenin, neringenin, quercetin, malvindin	Root and flower
Barleria prionitis Linn.	Kuranta	Acanthaceae	Alkaloids (0.5%), flavonoids, beta-sitosterol, irridoid glucoside, barlerin, tannins (5%)	Whole plant
Barringtonia acutangula (Linn.) Gaertn.; Syn *Eugenia acutangula* L.	Nichula	Lecythidaceae; Barringtoniaceae	Tannins, triterpenoids, sapogenins	Fruit
Basella rubra Linn; Syn *Basella alba* Linn. var. *rubra* Stewart.	Potaki	Basellaceae	Amino acids, carotenoids, polysaccharides	Whole plant
Bauhinia purpurea Linn.	Kovidaara	Caesalpiniaceae	Anthocyanin, quercetin, isoquercetin, astragalin	Flower, seed, and bark
Bauhinia vahlii W. and A.	Ashmantaka	Caesalpiniaceae	Tannins (17%)	Gum and stem
Bauhinia variegata Linn.; Syn *B. candida* Roxb.	Kaanchanaara	Caesalpiniaceae	Tannins (25%)	Flower
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Daaruharidraa	Berberidaceae	Berberine (>8%)	Root
Benincasa hispida (Thunb.) Cogn.; Syn *B. cerifera* Savi.	Kuushmaanda	Cucurbitacea	Amino acids, beta-sitosterol, lupeol	Fruit
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Paashaanabheda	Saxifragaceae	Bergenin, gallic acid, tannin	Rhizome
Biophytum sensitivum (Linn.) DC.; Syn *Oxalis sensitiva* Linn.	Alambushaa	Oxalidaceae	Insulin-like principles	

Blepharis edulis Pers.; Syn *B. persica* (Burm. f.) Kuntze.	Ucchataa	Acanthaceae	Benzoxazine glucoside, blepharine, saponin	Seed and root
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Punarnavaa	Nyctaginaceae	Quinolizidine alkaloids (boeravinone), xanthone, beta-ecdysone, flavonoid (arabinofuranoside), rotenoids, punarnavoside	Whole plant
Borassus flabellifer Linn.	Taala	Arecaceae; Palmae	Riboflavin	Whole plant and fruit sap
Boswellia serrata Roxb.	Shallaki	Burseraceae	Alpha, beta, gamma-Boswellic acids (>50%) and their derivatives, triterpenes of oleanane, ursane, euphane series	Gum resin
Brassica juncea (Linn.) Czern. and Coss.	Raajikaa	Cruciferae; Brassicaceae	Sinigrin, fixed oil, euricic acid	Seed
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Sarshapa-Gaura	Cruciferae; Brassicaceae	Sinalbin, fixed oil, euricic acid	Seed
Brassica campestris Linn. var. *rapa* (L.) Hartm.	Sarshapa	Cruciferae; Brassicaceae	Sinigrin, fixed oil, euricic acid	Seed
Bryonopsis laciniosa (Linn.) Naud; Syn *Diplocyclos palmatus* Jeff., *Bryonia laciniosa* Linn.	Lingini	Cucurbitaceae	Goniothalamine, punicic acid, lipids	Whole plant
Buchanania lanzan Spreng.; Syn *B. latifolia* Roxb.	Chaar	Anacardiaceae	Gallo-tannin, tannins, saponins, flavonoids, palmitic acid, oleic acid	Seed and bark
Butea monosperma (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Paalasha	Papilionaceae; Fabaceae	Flavonoids, butin, butrin, isobutrin, and palastrin, coreopsin, monospermoside and its derivatives, sulphurein	Bark, flowers, and leaf
Caesalpinia bonduc (L.) Roxb. Dandy and Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Kantaki Karanja	Caesalpiniaceae	Alkaloids as caesalpinine, bitter principles as bonducin (2.5%), saponins, fixed oil	Seed
Caesalpinia sappan Linn.	Pattraanga	Caesalpiniaceae	Brazilin, amyrin glucoside, amino acids, carbohydrates	Heartwood

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Cajanus cajan (Linn.) Millsp.; Syn *C. indicus* Spreng.	Aadhaki	Fabaceae	Phenylalanine, riboflavin, pyridoxine, flavones, isoflavones (cajanol), sterols, triterpenoids, anthraquinone derivatives	Seed and leaf
Calamus tenuis Roxb. Syn *C. amarus* Lour.	Vetra (var.)	Arecaceae; Palmae	Saponins, alkaloid, flavonoid	
Callicarpa macrophylla Vahl. Substitute *Prunus mahaleb* (Rosaceae); Syn *C. incana* Roxb.	Shyamaa	Verbenaceae	Calliterpenone and its monoacetate, fatty acids, beta-sitosterol, beta-D-glucoside	Seed and leaf
Calotropis gigantea (Linn.) R. Br. ex Ait.	Alarka	Asclepiadaceae	Alkaloides. glycosides (0.6–1.42%), beta-amyrin, stigmasterol, akudarin	Root, flower, and leaf
Calycopteris floribunda Lam.	Sushavi	Combretaceae	Flavanol (calycopterin), quercetin	Leaf and flower
Cannabis sativa Linn.; Syn *C. indica* Linn.	Bhangaa	Cannabinaceae	Cannabinoids (delta-9-tetrahydrocannabinol) (THC), cannabispirans, alkaloids	Leaf
Capparis horrida Linn f.; Syn *Capparis zeylanica* Linn.	Vyaaghranakhi	Cappariadaceae	Saponins, *p*-hydroxybenzoic acid, vanillic acid, ferulic acid	Whole plant
Capparis sepiaria Linn.	Himsraa	Capparidaceae	Taraxasterol, alpha- and beta-amyrin, betasitosterol, erythrodiol, betulin	Root
Careya arborea Roxb.	Kumbhika	Barringtoniaceae	Sapogenols, sterols; triterpine ester, beta-amyrin, hexacosanol, taraxerol, taraxeryl acetate, quercetin	Bark
Carissa carandas Linn. var. *congesta* (Wt.) Bedd.	Karamarda	Apocynaceae	Ascorbic acid, potassium salt, odoroside H glucoside	Stem, bark, and root
Carthamus tinctorius Linn.	Kusumbha	Asteraceae	Carthamone, lignans, polysaccharide, sesquiterpene glycoside, hinesol-beta-D-fucopyranosoid, luteolin-7-glucoside	Aerial part

Carum carvi Linn.	Krishna jiraka	Apiaceae; Umbelliferae	Volatile oil (carvone) (40–60%), limonene, flavonoids, polysaccharides, fixed oil, Ca-oxalate	Fruit
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Aaragvadha	Caesalpiniaceae	Anthraquinone glycosides (Sennoside A and B), rhein, barbaloin, aloin, formic acid, butyric acid, their ethyl esters, oxalic acid, pectin, tannin, ceryl alcohol, kaempferol, biantharaquinone glycoside (fistulin)	Flowers and pods
Cassia occidentalis Linn.	Kaasamarda	Calsalpiniaceae	Sennosides, anthraquinones, galactomannan, dianthronic hetroside, apigenin, emodol, cassiolin, emodin, phytosterols	Seed, bark, root, and leaf
Cassia tora Linn.	Chakramarda	Calsalpiniaceae	Chrysophenol, aloe-emodin, rhein, emodin, naphtho-pyrone glycosides (cassiaside and rubrofusarin-6-beta-gentiobioside), thrachrysone, chrysophanic acid-9-anthrone	Seed and leaf
Cedrela toona Roxb.; Syn *Toona ciliata* M. Roem.	Tuunikaa	Meliaceae	Tetratriterpenoids (toonacilin), cumarins	Bark, heartwood
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devadaaru	Pinaceae	Sesquiterpenoids (alpha- and beta-himchalenes), butyric acid, caproic acid, methyltaxifolin, dihydroquercetin, methylquercetin, quercetin, sitosterol, tannins, volatile oil (borneol)	Wood, bark, and leaf
Celastrus paniculatus Willd.	Jyotishmati	Celastraceae	Alkaloids (celastrine, paniculatine) (0.1%), organic acids, tannins	Seed, root, bark
Celosia argentea Linn.	Shitivaaraka	Amaranthaceae	Flavonoids, proteins, fatty oil, triterpenoidal saponins, vitamin B1 and B6, potassium salt	Whole plant
Celosia cristata Linn.	Jataadhari	Amaranthaceae	Betanin, sterols, amarantin, isoamarantin, celosianin, isocilosianin, proteins (10.1–12.8%), fatty oil (7.2–7.9%)	Seed
Centella asiatica (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Manduukaparni	Umbelliferae; Apiaceae	Saponins (Brahmoside, asiaticoside (>10%), thankuniside), alkaloids (hydrocotyline), bitter principles (velarin)	Whole plant

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Ceratophyllum demersum Linn.	Shaivaala	Ceratophyllaceae	Plastocynin, ferredoxin, protein, calcium and magnesium salts	Whole plant
Chenopodium album Linn.	Vaastuuka	Chenopodiaceae	Ascaridole, saponins (8%), cryptomeridiol	Leaf and seed
Cicca acida (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.- Arg.	Lavali-phala	Euphorbiaceae	Gallic acid, saponins, tannins	Bark
Cicer arientinum Linn.	Chanaka	Fabaceae; Papilionaceae	Pangamic acid, flavonoids (biochanin A, formonetin)	Seed
Cinnamomum camphora (Linn.) Nees and Eberm.	Karpura	Lauraceae	Volatile oils (camphor, safrole, linalool, eugenol, terpeneol), lignans	Leaf
Cinnamomum tamala Nees. and Eberm.	Patra	Lauraceae	Volatile oils (cinnamaldehyde, linalool, alpha- and beta-pinene, *p*-cymene, limonene)	Bark and leaf
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Daarusitaa	Lauraceae	Volatile oils (eugenol, cinnamaldehyde, camphor), tannins, diterpenes, cinnzeylanin and cinnzeylanol	Leaf, bark, and root
Cissampelos pareira Linn.	Paathaa	Menispermaceae	Alkaloids (hayatine) (*dl*-berberine), methiodide and methochloride derivatives	Root
Cissus quadrangular Linn.; Syn *Vitis quadrangula* Wall.	Asthisamhaara	Vitaceae	Phytosteroids (coloside A), ketosteroids (>5%), sitosterol, alpha-amyrine, alpha-ampyrone, tetracyclic triterpenoids	Aerial parts
Citrullus colocynthis Schrad.	Indravaaruni	Cucurbitaceae	Cucurbitacins (E, J, L-glucosides), caffeic acid derivatives, quercetin, kaempferol	Fruit and leaf
Citrus decumana Linn.	Madhukarkati	Rutaceae	Beta-sitosterol, acridone alkaloid	Fruit and leaf
Citrus limon (Linn.) Burm. f.	Jambira	Rutaceae	Coumarins, psoralins, flavonoids, ascorbic acid, riboflavin, volatile oils (limonene, alpha- and beta-pinenes, alpha terpenes and citral)	Fruit

Citrus maxima (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Madhukarkatikaa	Rutaceae	Beta-sitosterol, acridone alkaloids, coumarins, volatile oils (limonene, nerolol, nerolyl acetate, geraniol)	Fruit and leaf
Citrus medica Linn.	Bijpuura	Rutaceae	Cumarins (limettin, scoparone, scopoletin, umbelliferon), nobiletin, limonin, diosmin, beta-sitosterol, beta-D-glucoside, campesterol, stigmasterol, sitosterol, cholesterol	Peel
Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Tarkaari	Verbenaceae	Flavonoids (scutellarein, pectolinarin) *d*-mannitol, beta-sitosterol, ceryl alcohol, clerodin, clerosterol, clerodendrin A	Root
Clerodendrum serratum (Linn.) Moon.	Bhaargi	Verbenaceae	Triterpenoids (serratagenic, oleanolic, queretaric acids), alpha-spinasterol, flavonoids (luteoline, apigenin, baicalein, scutellarein), caffeic and ferulic acids	Root and leaf
Clitoria ternatea Linn.	Aparaajitaa	Papilionaceae; Fabaceae	A nucleoprotein similar to insulin amino acid sequence, flavonoids (kaempferol, flavonol), cinnamic acid	Seed, bark, root, and leaf
Coccinia indica W. and A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Bimbi	Cucurbitaceae	Beta-amyrin and its acetate, cucurbitacin B, lupeol	Whole plant
Cocculus hirsutus (Linn.) Diels.; Syn *C. villosus* (Lam.) DC.	Jalajamani	Menispermaceae	Coclaurine, magnoflorine, beta-sitosterol, ginnol and monomethyl ether of inositol, bis-benzylisoquinoline alkaloids (pendulin, cocsulin), quercitol	Leaf, stem, and root
Cocos nucifera Linn.	Naarikela	Palmae; Arecaceae	Fixed oil (lauric acid, 50%)	Dried endosperm
Coix lacryma-jobi Linn.; Syn *C. lachryma* Linn.	Gavedhukaa	Poaceae; Gramineae	Trans-ferulyl stigmastenol and trans-ferulyl campestanol, coixenolides (mixed esters of palmitoleic and vaccenic acids)	Fruit, seed, root

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Guggul	Burseraceae	Steroids (guggulsterones Z and E, guggulsterols I-V), terpene hydrocarbon (cambrene A)	Oleo-gum resin
Commiphora molmol (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Bola	Burseraceae	Acidic polysaccharide (30–60%), volatile oil (2–10%), heerabolene, furanosesquiterpines, and monoterpene	
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Shankhapushpi	Convolvulaceae	Sunkhpushpine alkaloids	Whole plant
Corallocarpus epigaeus Benth. ex Hook f.	Shukanaasaa	Cucurbitaceae	Bitters (bryonin)	Root
Corchorus capsularis Linn.	Kaala shaaka	Tiliaceae	Cardiac glycoside (helveticoside, corchoroside A, erysimoside, olitoriside), beta-sitosterol	Leaf and seed
Corchorus fascicularis Lam.	Chanchuka	Tiliaceae	Betulinic acid, beta-sitosterol, cardenolides (trilocularin), alpha-amyrin, apigenin, luteolin, flavonoids (quercetin and kaempferol)	Whole plant
Cordia dichotoma Forst f.; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.	Bahuvaara	Boraginaceae	Ca (55 mg), P (275 mg), Zn (2 mg), Fe (6 mg), Mn (2 mg), Cr (0.2 mg), Cu (1.6 mg) per 100 g, alpha-amyrin, taxifolin-3, 5-dirhamnoside	Fruit
Coriandrum sativum Linn.	Dhaanyaka	Umbelliferae; Apiaceae	Volatile oils (0.5–1.0%) (delta-linalool, alphapinene, terpinene), flavonoids, cumarins, phenolic acids (caffeic and chlorogenic acid), coriandrin, acetylcholine	Fruit
Coscinium fenestratum Colebr.	Kaaliyaka	Menispermaceae	Alkaloids (berberine, 3.5–5%; jatorrhizine), ceryl palmitic acid, oleic acid	Root
Costus speciosus (Koenig) Sm.	Kebuka	Zingiberaceae	Saponins (dioscin, gracillin), beta-sitosterol, beta-D-glucoside, alkaloids, steroidal sapogenin, diogenin	Rhizome

Crataeva nurvala Buch.-Ham.; Syn *C. magna* (Lour.) DC.	Varuna	Capparidaceae	Lupeol	Bark
Crocus sativus Linn.	Kumkuma	Iridaceae	Volatile oil, crocin, crocetin, carotenoids, riboflavin, thiamine	Dried style and stigma
Crotalaria juncea Linn.	Shana	Fabaceae; Papilionaceae	Pyrrolizidine alkaloids (junceine, tricodesmine, riddelline, seneciphylline, senecionine), fixed oil	Seed
Croton tiglium Linn.	Dravanti	Euphorbiaceae	Terpenoid, crotin	Seed
Cucumis sativus Linn.	Traapusha	Cucurbitaceae	Rutin, cucurbitaside B and C, ferredoxin, alpha-spinasterol, proteolytic enzymes	Fruit and seed
Cucurbita pepo Linn.	Kushmaandi	Cucurbitaceae	Fixed oil (38%) (glycerides of linoleic acid, oleic acid, palmitic and stearic acid), sterols	Seed
Cuminum cyminum Linn.	Jiraka	Umbelliferae; Apiaceae	Volatile oil (cuminaldehyde, 20–40%), *p*-cymene, lipids (14.5%)	Fruit
Curculigo orchioides Gaertn.	Mushali	Amaryllidaceae; Hypoxidaceae	Saponins (curculigosaponin C and F), sapogenins, phenolic glycosides, triterpenes, hentriacontanol, sitosterol, stigmasterol, cycloartenol, curculin C	Dried rhizome
Curcuma angustifolia Roxb.	Tikhuri	Zingiberaceae	Volatile oil (9.4%) (alpha-pinene, beta-pinene, *d*-ar-curcumene, *d*-camphor, *d*-alpha-terpineol, borneol, zingiberol, sesquiterpene alcohol)	Dried rhizome
Curcuma longa Linn.; Syn *C. domestica* Valeton	Haridraa	Zingiberaceae	Curcumin, volatile oil (3–5%), turmerones	Dried rhizome
Curcuma zedoaria Rosc.	Karchuura	Zingiberaceae	Triterpenoids (curcumene, curcumenone, curdione curcumenol), curzerenone, furanogermenone, germacrone and its epoxide, volatile oil (1.0–1.5%)	Dried rhizome
Cymbopogon citratus (DC.) Stapf.; Syn *Andropogon citratus* DC.	Bhuutika	Poaceae	Volatile oil (citral, 70%; citronellal, geraniol, myrcene, *d*-limonene)	Leaf

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Cymbopogon jwarancusa (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.	Laamajjaka	Poaceae	Volatile oil (piperitone 64.7%), borneol, cadinene, camphene, camphor, farnesene, geraniol, alpha- and beta-pinene	Flower
Cymbopogon martini Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Dhyaamaka	Poaceae	Geraniol (79–95%)	Grass
Cynodon dactylon Pers.	Duurvaa	Graminae; Poaceae	Phenolic acids (ferulic, syringic, p-coumaric, vanillic, *p*-hydroxybenzoic and *o*-hydroxyphenyl acetic acids), flavonoids	Whole plant
Cyperus anabilis Vahl.	Plava	Cyperaceae	Sesquiterpine alcohols and ketones (cyperenone, articulone)	
Cyperus rotundus Linn.	Mustaka	Cyperaceae	Volatile oil (0.5–0.9%), beta-sitosterol	Rhizome
Dalbergia sissoo Roxb. ex DC.	Shimshapaa	Fabaceae; Papilionaceae	Isoflavone-sissotrin, 7,4′-di-Me-tectorigenin, fixed oil, tannin	Heartwood
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Shaaliparni	Fabaceae	Petrocarpanoids (gangetin, gangetinin, desmodin), alkaloids, indole-3-alkylamine	Root
Datura metel Linn.; Syn *D. fastuosa* Linn.	Dhattuuraa	Solanaceae	Alkaloids (hyosine, hyoscyamine)	Whole plant
Dichrostachys cinerea W. and A.; Syn *Cailliea cinera* Macb.	Viravrksha	Mimosaceae	Tannin, *n*-octacosanol, beta-amyrin, friedelan-3-one, friedelan-3-beta-ol, beta-sitosterol, cynadin, quercetin	Root and bark
Dioscorea bulbifera Linn.; Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch-Ham ex Wall.	Vaaraahikanda	Dioscoreaceae	Furanoid diterpenes (diosbulbins A-D, 2,4,6,7-tetrahydroxy-9,10-dihydrophenanthrene, tetrahydroxyphenanthrene, diosgenin, lucein, neoxanthine, violaxanthin, zeaxanthin, auroxanthin, cryptoxanthin), D-sorbitol	Tuber
Dioscorea esculenta Burkill.; Syn *D. aculeata* Linn., *D. faciculata* Roxb., *D. spinosa* Roxb. ex Wall.	Madhvaaluka	Dioscoreaceae	Albuminoids	

Diospyros embryopteris Pers.; Syn *D. peregrina* (Gaertn.) Gurke, *D. malabarica* (Desr.) Kostel.	Tinduka	Ebenaceae	Betulinic acid, myricyl alcohol, beta-sitosterol, betulin, oleanolic acid, hexacosane, hexacosanol and triterpene ketone	Bark
Dipterocarpus turbinatus Gaertn. f.; *D. indicus* Bedd.	Ajakarna	Dipterocarpaceae	Volatile oil (humulene, beta-caryophyllene and other sesquiterpines), tannins	Oleo-gum resin
Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulattha	Fabaceae; Papilionaceae	Proteins, pyroglutamylglutamine, water soluble gum, hemagglutinin, vitamin A, ascorbic acid, calcium salt, phytosterols, strepogenin	Seed
Dolichos lablab Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.	Nishpaav	Fabaceae; Papilionaceae	Ascorbic acid, phytosterols, flavonoids, alkaloids (trigonelline)	Pods
Dorema ammoniacum D. Don.	Ushaka	Apiaceae; Umbelliferae	Resin (amino-resinol), gum, volatile oil (0.5% ferulene), salicylic acid, coumarins	Gum resin
Echinochloa frumentacea Link.; Syn *Panicum frumentaceum* Roxb.	Shyaamaaka	Poaceae; Gramineae	Amino acids	Whole plant
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Bhringaraaja	Asteraceae; Compositae	Wedelolactone, demethyl wedelolactone (>3%), thiophene acetylenes	Whole plant
Elettaria cardamomum Maton.	Sukshmailaa	Zingiberaceae	Volatile oil (6–11%), 1,8-cineol, alpha-terpinyl acetate, limonene, alpha-terpineol, sabinene and linalool, fixed oil, sterols (alpha-tocopherol, desmosterol, campesterol)	Seed and fruit
Eleusine coracana Gaertn.	Madhuuli	Poaceae; Gramineae	Proteins, thiamine, riboflavin	Whole plant
Embelia ribes Burm. f.	Vidanga	Myrsinaceae	Embelin, rapanone, homoembelin, homorapanone, vilangin	Fruit
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Aaamalaki	Euphorbiaceae	Ascorbic acid, minerals, aminoacids, zeatin, phyllembin, gallic acid, tannin	Fruit, leaf, and seed
Enhydra fluctuans Lour.	Hil-mochikaa	Compositae; Asteraceae	Beta-carotene	Leaf
Ephedra gerardiana Wall. ex Stapf	Soma	Ephedraceae	Alkaloids (ephedrine, 0.68%; pseudoephedrine, ephedroxane)	Aerial part

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Erythrina variegata Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Paaribhadra	Fabaceae; Papilionaceae	Beta-erythroidine and dihydro-beta-erythroidine	Bark
Euphorbia dracunculoides Lamk.	Saptalaa	Euphorbiaceae	Euphorbol, glycosides, sterols, kaempferol	Root
Euphorbia hirta Linn.; Syn *E. pilulifera* auct. non Linn.	Dudhikaa	Euphorbiaceae	Terpenes, anthocynins, alcohols, steroids, shikmic acid, L-inositol, choline, quercitrin, tannins, euphorbains	Whole plant
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Snuhi	Euphorbiaceae	Triterpenoids, euphol, 24-methylenecycloartenol, euphorbol, hexacosonate, glut-5(10)-en-1-one, taraxerol, alpha-friedelanol, beta-friedelanol, flavones, alkaloids	Latex
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Dhanvayaasaka	Zygophyllaceae	Terpenoidal saponins (sapogenin, nahagenin, oleanolic acid), diterpenes (fagonone), flavonoids (quercetin, kaempferol), ascorbic acid	Whole plant
Feronia limonia (Linn.) Swingle.; Syn *F. elephantum* Corr.	Kapittha	Rutaceae	Coumarins (luvengetin, xanthotoxin, limonin), steroids, sitosterol and its glucoside, psoralene, osthenol, dimethoxybenzoquinone, bergapten	Fruit
Ferula foetida Regel.; Syn *F. assafoetida* Linn.	Hingu	Apiaceae; Umbelliferae	Resin (asaresionotannols and their esters), farnesiferols, ferulic acid, gum, volatile oil (sec-propenylisobutyl disulphide), sulphated terpenes, pinene, cadinene, vanillin and sesquiterpenoidal coumarins	Oleo-gum resin
Ficus benghalensis Linn.	Vata	Moraceae	Phytosterolin, bengalenoside, flavonoids, leucocyanidin, leucopelargonidine	Whole plant
Ficus glomerata Roxb.; Syn *F. racemosa* Linn.	Udumbara	Moraceae	Bergapten, psoralene, taraxasterol, beta-sitosterol, rutin sapogenin calotropenyl acetate, lepeol acetate, oleanolic acid	Fruit and root

Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Kaakodumbara	Moraceae	Bergapten, psoralene, beta-sitosterol, beta-amyrin, *n*-triacontanyl acetate, gluacol acetate, hispidine, leucocyanin, oleanolic acid	Fruit, root, seed, and bark
Ficus lacor Buch.-Ham.; Syn *F. infectoria* auct. non Willd.	Plaksha	Moraceae	Methyl-ricinolate, beta-sitosterol, lanosterol, caffeic acid, bergenin, lupeol, alpha- and beta-amyrin, flavonoids	Fruit, bark, and leaf
Ficus religiosa Linn.	Ashvattha	Moraceae	Beta-D-sitosteryl-D-glucoside, vitamin K, *n*-octacosanol, methyl oleanolate, lanosterol, stigmasterol, lupenone	Bark and fruit
Flacourtia ramontchi L. Herit.; Syn *F. indica* (Burm. f.) Merr.	Vikankata	Flacourtiaceae	Phenolic glucoside ester (-)-flacourtin, steroids (ramontoside), beta-sitosterol, beta-D-glucopyranoside, vitamin C, proteins	Bark and leaf
Foeniculum vulgare Mill.	Mishreyaa	Apiaceae; Umbelliferae	Volatile oil (anethole 50–60%; fenchone, methylchavicol), flavonoids, coumarins, sterols, petroselenic acid	Fruit
Fumaria parviflora Lam.; *F. indica* (Haussk.) Pugsley.	Parpata	Fumariaceae	Protopine, sanguinarine, cryptopine, d-bicuculline, fumaridine, fumaramine, flavonoids (kaempferol), quercetin	Whole plant
Garcinia indica Choisy.; Syn *G. purpurea* Roxb.	Vrkshaamla	Guttiferae; Clusiaceae	Garcinol, isogarcinol, cyanidin glucoside, cyanidin sambubioside, L-leucine, DNP-L-leucine hydrochloride	Fruit, root, bark, and leaf
Gentiana kurroo Royle.	Traayamaana	Gentianaceae	Irridoid glycosides (amarogentin), gentiopicroside, alkaloids (gentianine), gentioflevine; bitter olegosaccharide, xanthones	Root
Gloriosa superba Linn.	Laangali	Liliaceaes	Colchicine (0.23–0.3%), gloriosine	Tuberous root
Glycyrrhiza glabra Linn.	Yashtimadhu	Fabaceae; Papilionaceae	Glycyrrhizine (2–9%), glycyrrhetinic acid, isoflavanoids, volatile oil, triterpenoids, chalcones, lignans, amino acids, amines, coumarine	Root
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Gambhaari	Verbenaceae	Lignans (arborone, paulownin acetate, epieudesmin) *p*-methoxycinnamate, trans-*p*-hydroxycinnamic acid	Root, root bark, and heartwood

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Gossypium arboreum Linn.	Kaarpaasi	Malvaceae	Polyphenolic compound (gossypol), protein, fixed oil	Seed
Grewia asiatica auct. non. L.; Syn *G. subinaequalis* DC.	Parushaka	Tiliaceae	Taraxasterol, beta-sitosterol, erythrodiol, lupeol, betulin, lupenone, friedelin, alpha-amyrin, quercetin, kaempferol, ratinol, ascorbic acid, amino acids, pelargonidine-3	Friut and bark
Gymnema sylvestre R. Br.	Meshashringi	Asclepiadaceae	Gymnemic acids (gymnemagenin, 3.9–4.6%)	Leaf
Gynandropsis gynandra (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Ajagandhaa	Capparidaceae	Cleomin, hexacosanol, kaempferol, beta-sitosterol, glucosinolates	Seed and leaf
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.	Shati	Zingiberaceae	Sitosterol and its glucoside, furanoid diterpene-hedychenone, volatile oil (cineol, gamma-terpinene, limonene, beta-phellendrene, p-cymene, linalool, beta-terpineol	Rhizome
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Saarivaa	Asclepiadaceae; Periplocaceae	Hemidesmine, hemidesmin-1,2, hemidine, hemidescine, emidine, indicine, lupanone, sitosterol, hexadecanoic acid	Root
Hibiscus abelmoschus Linn.; Syn *Abelmoschus moschatus* Medic.	Lataakasturikaa	Malvaceae	Fixed oil contains alpha-cephalin, phosphatidylserine and its plasmalogen, farnesol, ambrettolic acid lactones, beta-sitosterol and its beta-D-glucoside	Seed
Hibiscus rosa-sinensis Linn.	Japaa	Malvaceae	Methyl sterculate and its derivatives, malvalate, beta-sitosterol, cyanidin-3-sophoroside, amino acids, canthin-6-one	Flower
Himenodictyon excelsum Wall.	Bhringavriksha	Rubiaceae	Scopoletin, apioglucoside, glucose fructose amino acids	Whole plant
Hiptage madablota Gaertn.; Syn *H. benghalensis* Kurz.	Maadhavi	Malpighiaceae	Friedelin, *epi*-friedelinol, beta-sitosterol, octacosanol, alpha-amyrin, hiptagin, mangiferin	Fruit, seed, and root

Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Girimallikaa	Apocynaceae	Regholarrhenine A-F, pubescine, norholadiene, pubessine, kurchinine, kurchinidine, holarrifine, holadiene, kurchilidine, kurchamide, kurcholessine, kurchessine, conessine, conessimine and isoconessimine, steroidal compounds, kurchinicin, holadyson	Root, bark, and seed
Holoptelea integrifolia Planch.	Chirabilva	Ulamaceae	Holoptelin A and B, friedelin, epi-friedelinol	Fruit and bark
Holostemma rheedii Wall.; Syn *H. annularis* (Roxb.) K. Schum., *H. ada-kodien* Schult., *Asclepias annularis* Roxb.	Ark-pushpi	Asclepiadaceae	Alpha-amyrin, lupeol, beta-sitosterol	Tuber
Hordeum vulgare Linn.	Yava	Poaceae; Gramineae	Gramine, 2²-*o*-glucosyl-isovitexin, ascorbic acid	Seed and leaf
Hygrorhyza aristata Nees.	Nivaara	Poaceae	Amino acids	Grass
Hyoscyamus niger Linn.	Khuraashaanikaa	Solanaceae	Tropane alkaloids (hyoscine, hyoscyamine)	Whole plant
Imperata cylindrica Rausch.; Syn *I. arundinacea* Cyr.	Darbha	Poaceae; Gramineae	Flavonoidal lignans (Graminone A and B), cylindrene, cylindol A and B	Root
Indigofera tinctoria Linn.	Nili	Fabaceae	Indicine, flavonoids (apigenin, kaempferol, luteolin, quercetin), coumarins, cardiac glycosides, saponins, and tannins	Dried leaf
Inula racemosa Hook. f.; Syn *I. royleana* auct. non.-DC.	Pushkaramuula	Asteraceae; Compositae	Volatile oil (1–4%), inulin, helenaline, alantolactone, isoalantolactone, and their derivatives	Root
Ionidium suffruticosum Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.	Amburuha	Violaceae	Dipeptide alkaloid, aurantiamide acetate, triterpene, isoarborinol, beta-sitosterol	Leaf and root
Ipomoea digitata Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.	Kshira-vidaari	Convolvulaceae	Taraxerol acetate, beta-sitosterol, carotene	Tuber

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Jasminum arborescens Roxb.; Syn *J. roxburghianum* Wall.	Nava-mallikaa	Oleaceae	Volatile oil (benzyl benzoate, benzyl alcohol, eugenol, farnesol, bergamotene, nerolidol, p- cresol, benzyl acetate, bergamontane, linalool, indole, geranoil, a-terpineol, benzoic acid, and vanilloin)	Leaf
Jasminum auriculatum Vahl.	Yuuthi	Oleaceae	Lupeol, hentriaconate, n-tricantanol, jasminol, d-mannitol, jasmone, benzyl acetate, indol, and methyl anthranilate	Leaf
Jasminum multiflorum (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Wild., *J. bracteatum* Roxb.	Kunda	Oleaceae	Secoiridoid lactones (Jasmolactone A, B, C, and D), secoiridoid glycosides	Leaf
Jasminum officinale Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Maalati	Oleaceae	Volatile oil (benzyl acetate, benzyl benzoate, phytol, isophytol, jasmone, methyl jasmonate, linalool, geranyl linalool, eugenol, isophytylacetate), ascorbic acid, anthranilic acid, alkaloid jasminine, salicylic acid, pyridine, and nicotinate derivatives	Leaf
Jasminum sambac (Linn.) Ait.	Mallikaa	Oleaceae	Jasminin, quercetrin, isoquercetrin, rutin, kaempferol-3-dirhamnoglycoside, alpha-amyrin, beta-sitosterol, mannitol, irridoid glycoside-sambacin	Root and leaf
Juniperus communis Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.	Hapushaa	Cupressaceae; Pinaceae	Volatile oil (alpha-pinene, sabinene, alpha-terpinene), flavonoids, cupressuflavone, amentoflavone, hinokiflavone, isocryptomerin, sciadopitysin, sugrol, beta-sitostero, 10-nonacosanol	Fruits
Lagenaria siceraria (Mol.) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby., *Cucurbita siceraria* Mol.	Tumbini	Cucurbitaceae	Cucurbitacin B, D, G, H, beta-glucosidase	Fruit pulp and leaf

Lannea coromandelica (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.	Jingini	Anacardiaceae	Cluytyl ferulate, lanosterol, *dl-epi*-catechin, (+)-leucocyanidin, ellagic acid, quercetin and its arabinaside, isoquercetin and morin, beta-sitosterol, leucodelphinidin	Root and bark
Lathyrus sativus Linn.	Triputa	Fabaceae; Papilionaceae	Selenium	Seed
Lawsonia inermis Linn.	Madayantikaa	Lythraceae	Naphthoquinones (lawsone), coumarins (laxanthone I, II, and III), flavonoids, luteolin and its 7-*O*-glucoside, beta-sitosterol, tannins	Leaf
Lens culinaris Medic.; Syn *L. esculenta* Moench.	Masura	Fabaceae; Papilionaceae	Proteins (30%)	Seed
Leonotis nepetaefolia R. Br.	Granthiparni	Labiatae; Lamiaceae	*n*-Octacosanol, *n*-octacosanoic acid, quercetin, 4,6,7-trimethoxy-5-methylchromene-2-one, campesterol, beta-sitosterol-beta-D-glucopyranoside, neptaefolin, neptaefuran, neptaefuranol, neptaefolinol, leonitin, (-)-55, 6-octadecadienoic acid, fixed oil	Root and leaf
Lepidium sativum Linn.	Chandrashuura	Cruciferae; Brassicaceae	Alkaloids (0.19%), glucotropaeolin, sinapin, uric acid, pantothenic acid, pyridoxin, rutin	Seed
Leptadenia reticulata W. and A.	Jivanti	Asclepiadaceae	*n*-Triacontane, cetyl alcohol, beta-sitosterol, beta-amyrin acetate, lupanol-3-*O*-diglucoside and lepitidine glycoside, stigmasterol	Whole plant
Leucas cephalotes (Roth.) Spreng.	Dronpushpi	Labiatae; Lamiaceae	Beta-sitosterol, traces of an alkaloid	Whole plant
Linum usitatissimum Linn.	Atasi	Linaceae	Fixed oil, mucilage, cyanogenic glycosides (linustatin, neolinustatin, linamarin), lignans, linusitamarin,	Seed and flower
Liquidamber orientalis Mill.	Turushka	Hamamelidaceae; Altingiaceae	Cinnamic acid and its esters, styracin, phenyl propyl cinnamate, vanillin, styrene, triterpene acids, aromatic alcohols, pentacyclic triterpene aldehydes, liquidambronal, ambronal, bornyl trans-cinnamate	Gum resin

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Loranthus longiflorus Desr.	Vrikshaadani	Loranthaceae	Flavonoids	Bark
Luffa cylindrica (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Dhaamaargava	Cucurbitaceae	Lucyoside A-H, ginsenosides, bryonolic acid	Whole plant
Luffa echinata Roxb.	Devadaali	Cucurbitaceae	Flavonoids, chrysoeriol and its glycoside, cucurbitacin B, saponins	Fruit
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhuuka	Sapotaceae	Triterpenoids, alpha- and beta-amyrins acetate, *n*-hexacosanol, beta-sitosterol and its beta-D-glucoside, quercetin, dihydroquercetin, sugars, vitamins, saponins, 2,3-di-*O*-glucopyranoside of bassic acid (saponin A and B), lupeol acetate, alpha-spinasterol, erythrodiol monocaprylate, betulinic acid	Flower and bark
Mallotus phillippinensis Muell.- Arg.	Kampillaka	Euphorbiaceae	Phloroglucinol derivatives, rottlerin, isorottlerin, iso-allorattlerin, methylene-bis-methylphloroacetophenon, kamalin-1 and 2, kamaladiol-3-acetate, friedelin	Fruit
Mangifera indica Linn.	Aamra	Anacardiaceae	Mangiferin, citric acid, ascorbic acid, amino acids, beta-carotene, *m*-digallic acid, gallotannin, phloroglucinol, protocatechuic acid, flavonoids, pentacyclic triterpene, indicol, taraxero, taraxerone, friedelin, lupeol, beta-sitosterol, alpha- and beta-amyrins, glucogallin	Fruit, seed, and bark
Marsdenia tenacissima W. and A.	Muurvaa	Asclepiadaceae	Tenacissoside A-E, pregnane glycosides	Stem and root
Marsilea minuta Linn.	Sunishannaka	Marsilaceae	Marsilin (1-triacontanol cerotate)	Whole plant

Melia azedarach Linn.	Mahaanimba	Meliaceae	Bitter (bakayanin), bakalactone, quercetin, rutin, tetranortriterpenoids (salanin and vilasinin), azadrin, meliotannic acid, melianoninol, melianol, melianone, vanillic acid, vanillin, gedunin	Leaf, fruit, seed, stem, and root bark
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Naagakeshara	Guttiferae; Clusiaceae	Xanthones, mesuol, mammeigin, mesuagin, mammeisin and mesuone, alpha- and beta-amyrins, beta-sitosterol, mesuaferrones A and B, mesuanic acid	Dried stamen and seed
Michelia champaca Linn.	Champak	Magnoliaceae	Liriodenine, sesquiterpine lactones (parthenolide, micheliolide), polyisoprenoid, beta-sitosterol, esssential oil	Flower and bark
Microstylis muscifera Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.	Jivaka	Orchidaceae	Puerarin, diadzein, tuberosin	Tuber
Microstylis wallichii Lindl.; Syn *Malaxis acuminata* D. Don	Rshabhaka	Orchidaceae	Puerarin, diadzein, tuberosin	Tuber
Mimosa pudica Linn.	Lajjaalu	Mimosaceae	Mimosine, turgorine, flavonoids, 2²-*O*-rhamnosylorientin, 2²-O-rhamnosylisoorientin	Whole plant
Mimusops elengi Linn.	Bakula	Sapotaceae	Essential oil, saponins, mimusopsic acid, mimusopsic acid	Seed and bark
Mimusops hexandra Roxb.	Kshirini	Sapotaceae	Tannin, cinnamates, quercitol	
Mitragyna parvifolia (Roxb.) Korth.	Giri-kadamba	Rubiaceae	Indole, oxindole alkaloids, akuammigine, mitraphylline, isomitraphyllin, pteropodine, isopteropodine, speciophyllin and uncarine F	Bark and root
Momordica charantia Linn.	Kaaravellaka	Cucurbitaceae	Momordicosides, 5-hydroxytryptamine, charantin, diosgenin, sterols, cucurbitacin glycosides, momorcharin glycoproteins, vicine, momordica anti-HIV proteins	Fruit and seed
Moringa oleifera Lam.; Syn *M. pterygosperma* Gaertn.	Shobhaanjana	Moringaceae	Spirochin, pterygospermin, niazirin, niazirinin, benzylisothiocynate	Whole plant
Mucuna monosperma DC.	Kaakaandolaa	Fabaceae; Papilionaceae	Alkaloids, mucunine	Seed

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Mucuna prurien Baker non DC.; Syn *M. prurita* Hook.	Kapikachhuu	Fabaceae; Papilionaceae	Alkaloids, mucunine, mucunadine, mucunadinine, prurieninine, pruriendine, nicotine, beta-sitosterol, gluthion, lacithin, vernolic and gallic acids, steroids, flavonoids, coumarins, cardenolides	Seed and root
Musa paradisiaca Linn.; Syn *M. sapientum* Linn.	Kadali	Musaceae	Pectins, uronic acid, acylsterylglycoside (sitoindoside IV)	Flower
Myristica fragrance Houtt.	Jaatiphala	Myristicaceae	Myristicin (0.24%), licarin B, resorcinols (malabaricone B and C), volatile oil containing eugenol, isoeugenol	Endosperm of dried seed
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Jataamaansi	Valerianaceae	Sesquiterpenoids, *d*-nardostachone, valeranone, and jatamansone	Root
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Kamala	Nymphaeaceae	Isoquinoline alkaloids, nuciferin, nelumbin, roemerin, flavonoids, kaempferol, quercetin, quercetrin, isoquercetrin, leucoanthocyanidin	Flower and leaf
Nerium indicum Mill.; Syn *N. odorum* Soland.	Karavira	Apocynaceae	Glycosides of 8-beta-hydroxy-digitoxigenin, cardenolides, pregnanolone glycosides	Root and leaf
Nigella sativa Linn.	Kaalaajaaji	Ranunculaceae	Volatile oil, nigellone, 2-methyl-4-isopropyl-*p*-quinone, carvone (45–60%), *d*-limonene, cymene, fixed oil, beta-sitosterol	Seed
Nyctanthes arbor-tristis Linn.	Paarijaata	Oleaceae; Nyctanthaceae	Irridoid glycosides, mannitol, beta-amyrin, beta-sitosterol, hentriacontane, astragalin, benzoic acid, nicotiflorin, nyctanthic acid, polysaccharide-glucomannan	Leaf
Nymphaea alba Linn.	Kumuda	Nymphaeaceae	Flavonoids, quercetin, kaempferol, apigenin, nymphalin	Flower and seed
Nymphaea stellata Willd.	Nilotpala	Nymphaeaceae	Flavonoids. quercetin, kaempferol, apigenin	Leaf

Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Barbari	Labiatae; Lamiaceae	Essential oil, estragole (70%), linalool, eugenol, caffeic acid derivatives, flavonoids, thymol and xanthomicrol, aesculetin, p-coumaric acid, eriodictyol and its 7-glucoside, vicenin-2	Whole plant
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.	Tulasi	Labiatae; Lamiaceae	Essential oil, eugenol, carvacrol, nerol, flavonoids, luteolin and their glucuronide, ursolic acid, apigenin, orientin, molludistin	Whole plant
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Trivrta	Convolvulaceae	Turpethin, alpha- and beta-terpethein	Root
Ophiorrhiza mungos Linn.	Sarpaakshi	Rubiaceae	Resin, bitter alkaloid, beta-sitosterol, 5-alpha-ergost-7-en-3-beta-ol, traces of hydrocyanic acid	Root
Origanum majorana Linn.; Syn *Majorana hortensis* Moench.	Phanijjaka	Labiatae; Lamiaceae	Sabinene, linalool, carvacrol, estrogol, eugenol, terpenes, flavonoids, luteolin-7-glucoside, diosmetin-7-glucoside, apigenin-7-glucoside, rosmarinic acid, caffeic acid, terpenoids, ursolic acid, oleanolic acid, sterols, arbutin, hydroxyquinone	Whole plant
Oroxylum indicum Vent.	Shyonaaka	Bignoniaceae	Flavones and their glycosides, baicalein, scutellarein, prunetin, anthraquinone, aloe emodin, chrysin, oroxylin A	Root
Oryza sativa Linn.	Shaali	Poaceae; Gramineae	Diglycosidic anthocyanin, starch, fixed oil	Root and seed
Osmanthus fragrans Lour.	Vasuka	Oleaceae	Ursolic acid, beta-sitosterol, oleanolic acid, wax (mainly triacontane)	Flower
Ougeinia oogeinensis (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Syandana	Lythraceae	Flavonoids, dalbergion, hemoferritin and urgenin, quercetin, kaempferol, leucopelargonidin, lupeol, betulin	Bark
Oxalis corniculata Linn.	Chaangeri	Oxalidaceae	Flavonoids, vitexin, isovitexin, vitexin-2²-O-beta-D-glucopyranoside, fatty acids, alpha- and beta-tocopherol, ascorbic acid, carotene, tarteric, citric, malic acids	Whole plant

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Paederia foetida Linn.	Gandhaprasaarini	Rubiaceae	*epi*-Friedelanol, embelin, beta-sitosterol, irridoid glycosides, sitosterol, stigmasterol, campesterol, ursolic acid, hentriacontane, hentriacontanol, ceryl alcohol, palmitic acid, methyl mercaptan	Whole plant
Pandanus odoratissimus Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.	Ketaki	Pandanaceae	Piperidine alkaloids, volatile oil contains methyl ether of beta-phenylethyl alcohol, diterpine, d-linalool, phenylethyl acetate, citral, phenylethyl alcohol, ester of pthalic acid, stearoptene	Root and flower
Papaver somniferum Linn.	Ahiphena	Papaveraceae	Isoquinoline alkaloids, morphine, narcotine, papaverine, thebaine, vitamins, thiamine, riboflavin, folic acid, pantothenic acid, niacin, amino acids, fixed oil	Seed and poppy
Paris polyphylla Sm.	Haimavati	Liliaceae	Glycoside alpha-paristyphnin	Rhizome
Parmelia perlata (Huds.) Ach.	Shaileya	Parmeliaceae	Lecanoric acid, atranorin	Whole thalus
Paspalum scrobiculatum Linn.	Kodrava	Poaceae; Gramineae	Hentriacontanol, hentriacontanone, sitosterol	Whole plant
Phaseolus trilobus sensu Ait. and auct.; Syn *Vigna trilobata* (Linn.) Verdcourt.	Mudgaparni	Fabaceae; Papilionaceae	Friedelin, *epi*-friedelinol, stigmasterol, tannin, amino acids, streptogenin, uridine, diphosphate-glacturonic acid	Whole plant
Phoenix dactylifera Linn.	Kharjuura	Palmae; Arecaceae	Vitamin C, A, B1, B2, and nicotinic acid, sugars, ergosterols, flavonoids, caffeylshikimic acid, leucocynadin	Fruit
Phoenix paludosa Roxb.	Hintala	Palmae	Triacontanol, beta-sitosterol	Fruit
Phragmites karka Trin. ex Steud.; Syn *P. roxburghii* (Kunth) Steud., *P. maxima* Blatter and McCann in part.	Nala	Poaceae; Gramineae	Asparagine, sugars, ascorbic acids, furfural	Rhizome
Phyllanthus niruri Linn.	Bhuumyaamalaki	Euphorbiaceae	Niuride	Whole plant

Physalis minima Linn.	Tankaari	Solanaceae	Quercetin-3-O-galactoside, withasteroids, physalindicanols, withaminimin, withaphysalin, 3-O-glucoside of kaempferol and quercetin, beta-sitosterol and its glucoside, potassium nitrate	Berries
Picrorhiza kurroa Royle. ex Benth.	Katuki	Scrophulariaceae	Bitter iridoid glycosides, kutkoside, picroside I, D-mannitol, kutkiol, kutkisterol	Root
Pinus longifolia Roxb.; Syn *P. roxburghii* Sarg.	Sarala	Pinaceae	Longifoline, alpha- and beta-pinene, carene, abetic acid	Heartwood and root
Piper betle Linn.	Taambula	Piperaceae	Beta- and gamma-sitosterol, hentriacontane, pentatriacontane, n-triacontanol, stearic acid, chavicol, essential oil contains carvecrol, eugenol, allyl catechol, cineol, estragol, caryophylline, cardinene, p-cymene	Leaf and fruit
Piper chaba Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.	Chavya	Piperaceae	Piperine alkaloid, piplartine, beta-sterol glycoside	Fruit and root
Piper cubeba Linn. f.	Kankola	Piperaceae	Cubebine, (-)-cubebinine, kinikinin, cubebic acid, oxygenatedcyclohexanes, piperinol A and B with (+)-crotepoxide, and (+)-zeylenol	Fruit
Piper longum Linn.	Pippali	Piperaceae	Piperine alkaloid, longamide, pluviatilol, fargesin, sesamin, asarinine	Fruit
Piper nigrum Linn.	Maricha	Piperaceae	Piperine, piperatine and piperidine, piperyline, piperolein A and B	Fruit
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Karkatashringi	Anacardiaceae	Tricyclic triterpenes, pistacigerrimones A, B, C, alpha-beta-pinenes, delta-carene	Gall
Pistia stratiotes Linn. var. *cuneata* Engl.	Jalakumbhi	Araceae	C-glycosylflavones of vicenin, lucenin, vitexin, orientin, cyanidin-3-glucoside, luteolin-7-glycoside	Whole plant

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Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Raasnaa	Compositae; Asteraceae	Moretenol, moretenol acetate, neolupenol, octa-, hexa-, tetra-cosanoic acids, tetra- and hexacosanols, triacontanol, stigmasterol, beta-sitosterol-D-glucoside	Aerial part
Plumbago zeylanica Linn.	Chitraka	Plumbaginaceae	Naphthaquinone derivatives, plumbagin	Root
Polygonatum verticillatum All.	Medaa	Liliaceae	Diosgenin (6.2–9%), amino acids	Rhizome
Polygonum affine D. Don.; Syn *Bistorta affinis* (D. Don) Green.	Khukhudi	Polygonaceae	Flavonoids	Flower
Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Karanja	Papilionaceae; Fabaceae	Flavonoids, sterols, seed oil contains karanjin, pongamol, pongapin, kanjone	Seed
Premna herbacea Roxb.; Syn *Pygmaeopremna herbacea* Moldenke.	Chaarati	Verbenaceae	Diterpinoids, quinonemethide, bharangin	Root and leaf
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. and Willd.	Agnimantha	Verbenaceae	Isoxazole alkaloid, premnazole	Leaf and root
Prosopis spicigera Linn.; Syn *P. cineraria* Druce.	Shami	Mimosaceae	Vitamin K, n-octacosyl acetate, sugars, patulibin	Leaf and fruit
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet)	Badaam	Rosaceae	Amygdalin, globulin, amandin, albumin proteins	Seed kernel
Prunus cerasoides D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq	Padmaka	Rosaceae	Flavonoids, puddumin A, prunetinoside, neosakuranin, ursolic acid, beta-sitosterol, stigmasterol, glucogenkuanin	Heartwood
Prunus cerasus Linn.	Elavaaluka	Rosaceae	Flavonoids, tannin, amygdalin	Heartwood, leaf, and fruit

Psoralea corylifolia Linn.	Baakuchi	Fabaceae; Papilionaceae	Flavonoids, furanocoumarins, coumesterol, psoralen, isosoralen, bavachinin	Seed
Pterocarpus marsupium Roxb.	Bijaka	Fabaceae; Papilionaceae	Flavonoids, tannins, terpenoids, kinotannic acid, *epi*-catechin, pterostilbene, liquitrigenin, pterosupin, marsupin	Heartwood
Pterocarpus santalinus Linn. f.	Raktachandana	Fabaceae; Papilionaceae	Eudesmol, iso-pterocarpolone, pterocarpol, cryptomeridiol, santalin A and B, beta-ampyrone, lupenone, lupeol, acetyl oleanolic aldehyde, acetyl oleanolic acid	Heartwood
Pueraria tuberosa DC.	Vidaari	Fabaceae; Papilionaceae	Puerarin, diadzein, tuberosin	Tuber
Punica granatum Linn.	Daadima	Punicaceae	Ellegitannin, granatin A and B, punicafolin, punicalagin, punicalin and ellagic acid, pentose glycosides of malvidin and pentunidin, sitosterol, ursolic acid, maslinic acid, asiatic acid	Fruit, root, bark, and flower
Putranjiva roxburghii Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Putrajiva	Euphorbiaceae	Glucoputranjivin, glucocochlearin, glucojiaputin, glucocleomin, mannitol, alkaloids, glycosides, putranjivoside A–D, putranjiva saponin A–D, stigmasterol, flavonoids, putranjivadione, roxburgholone, putranjivic acid, putric acid	Fruits and seed kernel
Quercus infectoria Oliv.	Maajuphalaka	Fagaceae	Amenthoflavone hexamethyl ether, isocryptomerin, beta-sitosterol, tannins, gallotannic acid, gallic acid, rubric acid, nyctanthic acid, sugars, essential oil, anthocyanin	Gall and fruits
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. and A., *R. tomentosa* W. and A. non Blume., *Xeromphis spinosa* Keay.	Madana	Rubiaceae	Saponins, randialic acid, randianin, ursolic acid	Fruit
Randia uliginosa DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Pinditaka	Rubiaceae	Saponins of oleanolic acid, leucocynadin, mannitol, essential oil	Fruit and root

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Raphanus sativus Linn.	Muulaka	Cruciferae; Brassicaceae	Trans-4-methyl-thiobutenylcyanate glucoside, cyanidin-5-glucoside, pelargonidin diglycoside, methiin, steroidal sapogenin, sulphorophene, caffeic acid and ferulic acid, machrolysin, raphanin	Root and seed
Rauvolfia serpentina Benth. ex Kurz.	Sarpagandhaa	Apocynaceae	Alkaloids, reserpine, ajmaline, ajmalicine, yohimbine, coryanthine, rauwolsine, serpentinine, papaverine	Root
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Amlaparni	Polygonaceae	Glycosides of emodin, aloe-emodin, rhein, sennoside A and B chrysophenol, gallic acid, cinnamic, rheinolic acids, volatile oil	Root
Rhus parviflora Roxb.	Tintidi	Anacardiaceae	Flavonoids, myricetin, quercetin kaempferol and their glycosides, hentriacontane, hentriacontanol, beta-sitosterol, lignoceric acid	Fruit and leaf
Ricinus communis Linn.	Eranda	Euphorbiaceae	Fixed oil contains ricinoleic acid, stearic and linoleic acids, ricin	Seed
Rivea ornata (Roxb.) Choisy.	Phanji	Convolvulaceae	Ergot type alkaloids, ergine, and isoergine	Whole plant
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Manjishthaa	Rubiaceae	Anthraquinone glycosides, purpurine, munjistin, xanthopurpurine, pseudopurpurine, alizarin, rubicoumaric acid, rubifolic acid	Stem
Saccharum munja Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.	Shara	Poaceae; Gramineae	Furfural, sugars	Root
Saccharum officinarum Linn.	Ikshu	Poaceae; Gramineae	Sucrose, glucose, fructose, amino acids, vitamins, aconitic acid, glycolic acid, tannin, anthocyanin, vanilloyl-1-*O*-beta-D-glucoside	Stem

Salix caprea Linn.	Vetasa	Salicaceae	Alkaloids, delphinidin, cyanidin, pipecolic acid, fragilin, picein, salicin, salicortin, vimalin, saponins, diomnetin, isorhamnetin, capreoside, salicapreoside, tannin	Leaf, bark, and root
Salmalia malabarica (DC.) Schott and Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Shaalmali	Bombacaceae	Triacontanol, beta-sitosterol-D-glucoside, lupeol, hentriacontanol, fixed oil, carotene, tocopherols, gallic and tannic acid	Stem bark
Salvia plebeia R. Br.	Samudrashosha	Labiatae; Lamiaceae	Flavones, nepetin, hispidulin, sitosterol, oleanolic acid	Whole plant
Santalum album Linn.	Chandana	Santalaceae	Volatile oil, santalol, santalenes, alpha- and beta-curcumene, beta-farnesene, dihydroagarofuran	Heartwood
Saraca asoca (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.	Ashoka	Caesalpiniaceae	Flavonoids, apigenin, quercetin, kaempferol and their glucosides, *n*-octacosanol, tannin, catechin, catechol, epicatechin andepicatechol, leucocyanidin, gallic acid	Bark
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Kushtha	Asteraceae; Compositae	Alkaloid, saussurine, saussureamine A, B, C, resinoids, volatile oil, inulin, tannin, costic acid	Root
Schrebera swietenioides Roxb.	Muskakaa	Oleaceae	Betulinic acid, oleanolic acid	Fruits, bark, and root
Scindapsus officinalis Schott.	Gajapippali	Araceae	Scindapsin A and B glycosides, sugars	Fruit
Scirpus kysoor Roxb.; Syn *S. grossus* Linn. f.	Kasheruka	Cyperaceae	Progesterone, sugars, tannin, saponin, amylase, derivatives of benzaldehyde, hydroxybenzoic acid, and cinnamic acid	Rhizome
Selinum tenuifolium Wall. ex DC.; Syn *S. candollei* DC.	Muraa	Apiaceae; Umbelliferae	Terpenoids, isoimperatorin, oxypeucedanin	Root
Semecarpus anacardium Linn. f.	Bhallaataka	Anacardiaceae	Flavonoids, anacardic acid, bhilawanol (mixture of *cis* and *trans* urushenol, monohydroxy phenol, semicarpol	Fruit
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Tila	Pedaliaceae	Sesamin, sesamolin, sesamol, pedalin flavonoid, pinoresinol, vitamins, fixed oil	Seed

Botanical Name	Common Ayurvedic Name	Family	Chemical Composition	Parts Used
Sesbania bispinosa W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Itkata	Fabaceae; Papilionaceae	Alkaloids, saponins, oleanolic	Seed
Sesbania grandiflora (L.) Poir.; Syn *Agati grandiflora* Desv.	Agasti	Fabaceae; Papilionaceae	Flavonoids, nonacosan-6-one, kaempferol, rutin, leucocyanidin, cyanidin, galactomannan, saponins, aliphatic alcohol, grandiflorol	Whole plant
Sesbania sesban (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Jayantikaa	Fabaceae; Papilionaceae	Cholesterol, beta-sitosterol, cyanidin, delphinidine	Leaf
Setaria italica (Linn.) Beauv.	Kangu	Poaceae; Gramineae	Proteins, prolamin, fat, minerals	Grains
Shorea robusta Gaertn. f.	Shaala	Dipterocarpaceae	Tannins, triterpenoids, oleanolic acid, hydroxy-hopanone, dammarenediol II, dammarenolic acid, essential oil (Chuaa oil)	Heartwood
Sida cordifolia Linn.	Balaa	Malvaceae	Alkaloids (0.085%), ephedrine, *si*-ephedrine, vasicinone, vasicine, vasicinol, cholein and batain, steroids, phytosterols, resin, mucin, sitoindoside	Whole plant
Smilax china Linn.	Chopachini	Liliaceae	Steroidal saponin, prosapogenin-A of dioscin, gracillin, Me-protogracillin, beta-sitosterol, smilaxin, furostan, spirostane glycosides	Root
Solanum indicum Linn.	Brihati	Solanaceae	Glycoalkaloids, solasonine, solanine, diosgenin, beta-sitosterol, lanosterol, solamargine, solasodine, tomatidenol, carpestrol	Root
Solanum melongena Linn.	Vaartaaku	Solanaceae	Melongosides, tigogenin, diosgenin, flavonoids, solasodine, campesterol, beta-sitosterol, solamargine	Fruit
Solanum nigrum Linn.; Syn *S. rubrum* Mill.	Kaakamaachi	Solanaceae	Solasonine, alpha- and beta-solanigrine, solamargine, steroidal sapogenins, diosgenin, tigogenin, solasodine	Whole plant
Solanum tuberosum Linn.	Aaluka	Solanaceae	Starch	Tuber

Solanum xanthocarpum S. and W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Kantakaari	Solanaceae	Solasonine, beta-solanigrine, solamargine, diosgenin, solasodine, flavonoids, sitosterol	Whole plant
Soymida febrifuga A. Juss.	Maansrohini	Meliaceae	Triterpenoids, febrifugine A and B, febrinins A and B, flavonoids, sitosterol, obtusifoliol, syringetin, and dihydrosyringetin	Bark
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Munditakaa	Asteraceae; Compositae	Alkaloid, sphaeranthine, volatile oil methyl chvicol, alpha-ionone, d-cadinene and *p*-methoxycinnamaldehyde, tannins, phytosterols	Leaf
Spinacia oleracea Linn.; Syn *S. tetrandra* Roxb.	Paalankikaa	Chenopodiaceae	Rutin, hyperoside, astragalin, caffeic, chlorogenic, neochlorogenic and protocatechuic acids, spirasaponins	Aerial parts
Spondias pinnata (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Aamraataka	Anacardiaceae	Beta-amyrin, oleanolic acid, amino acids, lignoceric acid, beta-citosterol and its glucoside	Bark
Streblus asper Lour.; Syn *Epicarpurus orientalis* Bl.	Shaakhotaka	Moraceae	Cardenolide glycosides, asperoside and strebloside, alpha-amyrin acetate, lupeol acetate, beta-sitosterol	Bark
Strychnos nux-vomica Linn.	Vishatinduka	Loganiaceae; Strychnaceae	Indole alkaloids (1.8–5.3%), strychnine, strychnin *N*-oxide, brucine and its *N*-oxide, alpha and beta-colubrine, condylocarpine, diaboline, geissoschizine, novacine, isostrychnine, vomicine, loganine	Seed
Strychnos potatorum Linn. f.	Kataka	Loganiaceae; Strychnaceae	Alkaloids, diabolin, acetyldiabolin, brucine, strychnine, icajine, isomotiol, stigmasterol, campesterol, sitosterol	Seed
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Chiraayita	Gentianaceae	Oxygenated xanthones decussatin, mangiferin, swerchirin, swertianin, isobelidifollin, iridoids chiratin, alkaloids gentianine, gentiocrucine, enicoflavine, and glycosyl flavones	Whole plant

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Symplocos racemosa Roxb.; Syn *S. beddomei* C. B. Clarke, *S. candolleana* Brand.	Lodhra	Symplocaceae	Colloturine, loturine, loturidine, betulinic, oleanolic, ellegic acids	Bark
Syzygium aromaticum (Linn.) Merr. and Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Lavanga	Myrtaceae	Eugenin, crategolic acid, steroidal glucosides, eugenol, and other triterpinoids	Flower buds
Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Jambu	Myrtaceae	Bergenin, gallic acid, tannin, citric, malic acids, beta sitosterol, flavonoids	Bark and seed
Tamarindus indica Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.	Amlikaa	Caesalpiniaceae	Orientin, vitexin, iso orientin, tartaric acid, tamarindienal	Fruit
Taxus baccata Linn.	Sthauneyaka	Taxaceae	Diterpene esters of taxane, taxine A and B, taxol, flavonoids, betulosides	Leaf and bark
Tecomella undulata (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.	Rohitaka	Bignoniaceae	Tecomin, beta-sitosterol, chromone glycosides, undulatosides A and B, iridoids, tecomellosides, tecosides, quinonoid, lapachol, veratric acid, dehydrotectol	Flower and bark
Tectona grandis Linn. f.	Shaaka	Verbenaceae	Anthraquinones, tectoleafquinone, tannin, fixed oil	Heartwood
Tephrosia purpurea (L.) Pers.; Syn *T. hamiltonii* Drumm.	Sharapunkhaa	Fabaceae; Papilionaceae	Flavonoids, rutin, lupeol, beta-sitosterol, pongamol, lonchocaprin, karanjin, kanjone, rotenoids	Whole plant
Terminalia arjuna (Roxb.) W. and A.	Arjuna	Combretaceae	Arjunolic, terminic acid, arjunatin, arjunatoside I–IV, flavonoids, tannins, casuarinin	Bark
Terminalia bellirica Roxb.	Bibhitaki	Combretaceae	Beta-sitosterol, ellegic acid, gallic acid, chebulagic acid, bellaricanin	Fruit

Terminalia chebula Retz.	Haritaki	Combretaceae	Shikimic, gallic, triacontanoic acids, beta-sitosterol, daucosterol, ellagitannin, terchebulin, punicalagin, teaflavin A, phloroglucinol, pyrogallol	Fruit
Thespesia populnea Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Paarshvpippala	Malvaceae	Populnetin, herbacetin, populneol, quercetin and its glycosides, kaempferol, rutin, gossypol, lupeol, thespesin, beta-sitosterol, gossypetin	Flowers and fruit
Tinospora cordifolia (Willd.) Miers ex Hook. f. and Thoms.	Guduuchi	Menispermaceae	Alkaloids, berberine, bitters- columbine, chasmanthin, palmarin, tinosporon, tinosporic acid, tinosporol	Stem
Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Yavaani	Apiaceae; Umbelliferae	Essential oil, thymol, carvacrol, protein, fats, carbohydrates, sterols, tannins, phenolic glycosides, flavones	Fruit
Trapa natans Linn. var. *bispinosa* (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Shrngaataka	Trapaceae	Proteins, minerals, amylose, amylopectin	Seed
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.	Varshaabhu	Aizoaceae	Alkaloid, trianthemine, punaranavine, ecdysterone, nicotinic acid, and ascorbic acid	Root
Tribulus terrestris Linn.	Gokshura	Zygophyllaceae	Saponins, diosgenin gitogenin, chlorogenin, ruscogenin, flavonoids, rutin, quercetin, kaempferol, tribuloside, harmane and harmene, harmol	Fruit
Trichosanthes bracteata (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Vishaalaa	Cucurbitaceae	Triterpenoid, trichoteterol, cyclotrichosantol and cycloeucalenol	Root
Tricosanthes dioica Roxb.	Patola	Cucurbitaceae	Amino acids, vitamins cucarbita-5, 24-dienol, colocynthin tricosanthin, hantriacontane, fatty acids	Leaf
Trigonella foenum-graecum Linn.	Methikaa	Fabaceae; Papilionaceae	Alkaloids, trigonelline, gentianine and carpane, saponin, diosgenin, yamogeni, gitogenin, flavonoids, volatile oil mucilage	Seed

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Triticum aestivum Linn.	Godhuuma	Poaceae; Gramineae	Proteins minerals, carbohydrates, tocopherols, glutenlipids	Seed
Typha angustata Bory and Chaub.; Syn *T. australis* Schum. and Thonn.	Gundra	Typhaceae	Isorhamnetin, pentacosane, sterols, quercetin	Rhizome
Valeriana wallichii DC.; Syn *V. jatamansi* Jones, *Nardostachys jatamansi* (Jones) DC.	Tagara	Valerianaceae	Cyclopentapyrans, acacetin-7-*O*-routinosides, valtrate, didrovalterate, linarin, iridoide glycocydes, valerosidatem, essential oil, calarene, beta-bargamotene, valeranane, curcumene, maalioxide and maalitol	Rhizome
Vateria indica Linn.; Syn *V. malabarica* Bl.	Sarja	Dipterocarpaceae	Polyphenols, catechin, fisetinidol, fzelechin and berganin, tannins, essential oil	Resin
Vernonia cinerea Less.	Sahadevi	Asteraceae; Compositae	Flavonoids, luteolin, triterpines, beta-amyrin acetate lupeol, sterols	Whole plant
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Ushira	Poaceae; Gramineae	Khusilal, khusol, khusimol, khusitone, cadinene, laevojuneold	Root
Vitex negundo Linn.	Nirgundi	Verbenaceae	Iridoid glycosides flavonoids, phytosterols	Leaf and root
Vitis vinifera Linn.	Draakshaa	Vitaceae	Flavonoids, tannins, tartrates, inositol, carotenes, choline, sugars, vitamins, anthocyanins	Fruit
Wedelia chinensis Merrill.; Syn *W. calendulaceae* Less. non-Rich.	Kesharaaga	Asteraceae; Compositae	Wedelolactone, ginsenoside Ro (chikusetsusaponin V), isoflavonoids, tannins, saponins, phytosterols	Bark
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Ashwagandhaa	Solanaceae	Alkaloids, withanine, withananine, pseudo-withanine, somnine, somniferine, somniferinine, withaferin A, steroidal lactones	Root

Woodfordia fruticosa Kurz.; Syn *W. floribunda* Salisb.	Dhaataki	Lythraceae	Ellegic acid, polystachoside, myricetin galactoside, anthocyanins, beta-sitosterol, hecogenin, mesoinositol, flavonoids, tannins, woodfordin A-I, oenothein A and B, isoischimawalin A	Flower
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. and Zucc.; Syn *Z. armatum* DC.	Tumburu	Rutaceae	Volatile oil, linalool, linalylacetate, citral, geraniol methyl cinnamate, limonene and sabinene, sesamin, fargesineudesmin, magnoflorine, xanthoplanine, skimmianine, dictamine and gama-fagarine, flavonoids-tambulin and tambulol	Bark
Zingiber officinale Rosc.	Aardraka	Zingiberaceae	Volatile oil, geranial, neral, beta-bisabolene, curcumene, alpha-zingiberene, gingerols, shogaols	Rhizome
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Badara	Rhamnaceae	Alkaloids, protropine, berberine, sisyphus saponins I, II, III, jujuboside A and B, jujubogenin	Fruit and bark
Zizyphus nummularia (Burm. f.) Wight. and Arn.; Syn *Z. rotundifolia* Lam., *Rhamnus nummularia* Burm. f.	Karkandhu	Rhamnaceae	Alkaloids, nummularines A, B, C, M, R, S, mucronine D, amphibine H, frangufoline	Root

8 Phytochemical Markers of Ayurvedic Herbs

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Abies spectabilis (D. Don) Spach.; Syn *Abies webbiana* Lindl.	Taalisa	Pinaceae	Alkaloids (>0.5%)	Leaf
Abrus precatorius Linn.	Gunjaa	Papilionaceae; Fabaceae	Glycosides (15%), alkaloids (1%)	Seeds
Abutilon indicum Linn. Sweet	Atibalaa	Malvaceae	Mucilage (10%)	Seeds
Acacia arabica Willd. var. *indica* Benth.	Babbuula	Mimosaceae	Tannins (40%)	Seeds
Acacia catechu (Linn. f.) Willd.	Khadira	Mimosaceae	Tannins (60%), catechins (20%)	Seeds
Acacia leucophloea (Roxb.) Willd.; Syn *A. alba* Willd.	Irimeda	Mimosaceae	Tannins	Bark
Achyranthes aspera Linn.	Apaamaarga	Amaranthaceae	Saponins (3%)	Whole plant
Aconitum ferox Wall. ex Ser.	Visha	Ranunculaceae	Aconitine	Root
Aconitum heterophyllum Wall. ex Royle.	Ativishaa	Ranunculaceae	Atisine	Root
Aconitum palmatum D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Prativishaa	Ranunculaceae	Vakognavine	Root
Acorus calamus Linn.	Vachaa	Araceae	Beta-asarone	Rhizome
Actiniopteris dichotoma Kuhn.; Syn *A. australis* (L. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Vahrishikhaa	Adiantaceae	Rutin	Stem and leaf
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vaasaka	Acanthaceae	Vasicine	Leaf
Adiantum lunulatum Burn.	Hansapadi	Polypodiaceae	Carotenoids	Whole plant
Adina cordifolia Hook. f. ex Brandis	Gaurakadambaka	Rubiaceae	Quercetin	Heartwood
Aegle marmelos (L.) Correa ex Roxb.	Bilva	Rutaceae	Aegeline alkaloid, rutin	Unripe fruit and root
Aerva lanata (L.) Juss. ex Schult. Substitute of *Bergenia ligulata,* (Saxifragaceae)	Paashaanabheda	Amaranthaceae	Beta-sitosterol	Whole plant
Ailanthus excelsa Roxb.	Aralu	Simaroubaceae	Quasinoids	Bark and leaf

Alangium salviifolium (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Ankola	Alangiaceae	Triterpenoids	Bark and root
Albizia lebbeck (Linn.) Willd.	Shirisha	Mimosaceae	Albegenic acid, acacic acid	Bark
Albizia procera Benth.	Shevta Shirisha	Mimosaceae	Beta-sitosterol	Bark
Alhagi pseudalhagi (Bieb.) Desv.; Syn *A. camelorum* Fish. ex DC., *A. maurorum* Medic.	Yavaasah	Papilionaceae; Fabaceae	Flavonoids, tannins	Whole plant
Allium cepa Linn.	Palaandu	Liliaceae; Alliaceae	Quercetin	Bulb
Allium sativum Linn.	Rasona	Liliaceae; Alliaceae	Allin	Bulb
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don	Maanakanda	Araceae	Volatile oil	Whole plant
Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.	Ghritakumaari	Liliaceae; Agavaceae	Aloin, barbeloin	Leaf
Alstonia scholaris R. Br.	Saptaparna	Apocynaceae	Echetamine	Bark
Alternanthera sessilis (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. non-Link.	Matsyaakshi	Amaranthaceae	Beta-sitosterol	Whole plant
Ammania baccifera Linn.	Agnipatri	Lythraceae	Lawsone	Whole plant
Amomum subulatum Roxb.	Sthula-elaa	Zingiberaceae	Cineol	Seed
Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Kandala	Araceae	Beta-sitosterol	Corm
Anacyclus pyrethrum DC.; Syn *A. officinarum* Haye	Aakaarakarabha	Compositae; Asteraceae	Alkaloids (0.5%)	Flower
Andrographis paniculata Wall. ex Nees.	Bhuunimba	Acanthaceae	Andrographolides (>10%)	Whole plant
Angelica archangelica Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Chandaam-shuka	Umbelliferae; Apiaceae	Angelicin	Root
Angelica glauca Edgew.	Choraka	Umbelliferae; Apiaceae	Coumarins	Root
Anisomeles malabarica R. Br. ex Sims	Sprikkaa	Labiatae; Lamiaceae	Beta-sitosterol	Whole plant
Anogeissus latifolia Wall. ex Bedd.	Dhava	Combretaceae	Tannins	Bark, gum, heartwood, and leaf
Anthocephalus cadamba Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.	Kadamba	Rubiaceae	Alkaloids, tannins	Bark and stem

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Apium graveolens Linn.	Ajamodaa	Apiaceae; Umbelliferae	d-Lemonene	Seed
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Agaru	Thymelaceae	Volatile oil	Heartwood
Areca catechu Linn.	Guwaaka	Arecaceae; Palmae	Alkaloids, tannins	Fruits
Argemone mexicana Linn.	Svarnkshiri	Papaveraceae	Alkaloids	Seed
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaaruka	Convolvulaceae	Ergine, isoergine	Root, seed, and leaf
Artemisia vulgaris Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Damanaka	Asteraceae; Compositae	Aristolochic acid	Whole plant
Artocarpus heterophyllus Lam.; Syn *A. integrifolia* Linn. f.	Panasa	Moraceae	Sapogenins	Fruit
Artocarpus lakoocha Roxb.; Syn *A. lacucha* Buch.-Ham.	Lakuch	Moraceae	Lectin	Fruit
Asparagus racemosus Willd.	Shataavari	Asparagaceae	Saponins	Roots
Asteracantha longifolia Nees;.Syn *Hygrophila spinosa* T. Anders.	Kokilaaksha	Acanthaceae	Stigmasterol	Whole plant
Averrhoa carambola Linn.	Karmaranga	Oxalidaceae; Averrhoaceae	Oxalic acid	Whole plant
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Nimba	Meliaceae	Rutin	Leaf
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. and K., *Moniera cuneifolia* Michx.	Braahmi	Scrophulariaceae	Baccosides	Whole plant
Balanites aegyptiaca (Linn.) Delile.; Syn *B. roxburghii* Planch.	Ingudi	Simaroubaceae; Balanitaceae	Saponins	Leaf, seed, bark, and fruit
Baliospermum calycinum Muell.-Arg.	Naagadanti	Euphorbiaceae	Terpenes	Root
Baliospermum montanum (Willd.) Muell. Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.	Danti	Euphorbiaceae	Terpenes	Root
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vansha	Gramineae; Poaceae	Silicic acid	Leaf

Barleria cristata Linn.	Sahachara	Acanthaceae	Quercetin	Root and flower
Barleria prionitis Linn.	Kuranta	Acanthaceae	Beta-sitosterol	Whole plant
Barringtonia acutangula (Linn.) Gaertn.; Syn *Eugenia acutangula* L.	Nichula	Lecythidaceae; Barringtoniaceae	Tannin, saponin	Fruit
Basella rubra Linn; Syn *Basella alba* Linn. var. *rubra* Stewart.	Potaki	Basellaceae	Carotenoids	Whole plant
Bauhinia purpurea Linn.	Kovidaara	Caesalpiniaceae	Quercetin	Flower, seed, and bark
Bauhinia vahlii W. and A.	Ashmantaka	Caesalpiniaceae	Tannins	Gum and stem
Bauhinia variegata Linn.; Syn *B. candida* Roxb.	Kaanchanaara	Caesalpiniaceae	Tannins	Flower
Benincasa hispida (Thunb.) Cogn.; Syn *B. cerifera* Savi.	Kuushmaanda	Cucurbitacea	Beta-sitosterol	Fruit
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Daaruharidraa	Berberidaceae	Berberine	Root
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Paashaanabheda	Saxifragaceae	Tannin	Rhizome
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Punarnavaa	Nyctaginaceae	Punarnavoside	Whole plant
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Sarshapa-Gaura	Cruciferae; Brassicaceae	Euricic acid	Seed
Brassica campestris Linn. var. *rapa* (L.) Hartm.	Sarshapa	Cruciferae; Brassicaceae	Euricic acid	Seed
Brassica juncea (Linn.) Czern. and Coss.	Raajikaa	Cruciferae; Brassicaceae	Euricic acid	Seed
Caesalpinia bonduc (L.) Roxb. Dandy and Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.	Kantaki Karanja	Caesalpiniaceae	Bonducin	Seed
Caesalpinia sappan Linn.	Pattraanga	Caesalpiniaceae	Brazilin	Heartwood
Callicarpa macrophylla Vahl. Substitute *Prunus mahaleb* (Rosaceae); Syn *C. incana* Roxb.	Shyamaa	Verbenaceae	Beta-sitosterol	Seed and leaf
Calycopteris floribunda Lam.	Sushavi	Combretaceae	Quercetin	Leaf and flower
Cannabis sativa Linn.; Syn *C. indica* Linn.	Bhangaa	Cannabinaceae	Delta-9-tetrahydrocannabinol (THC)	Leaf

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Capparis horrida Linn f.; Syn *Capparis zeylanica* Linn.	Vyaaghranakhi	Cappariadaceae	Saponin	Whole plant
Capparis sepiaria Linn.	Himsraa	Capparidaceae	Beta-sitosterol	Root
Careya arborea Roxb.	Kumbhika	Barringtoniaceae	Triterpenoids	Bark
Carissa carandas Linn. var. *congesta* (Wt.) Bedd.	Karamarda	Apocynaceae	Odoroside H	Stem, bark, and root
Carthamus tinctorius Linn.	Kusumbha	Asteraceae	Saponin	Aerial part
Carum carvi Linn.	Krishna jiraka	Apiaceae; Umbelliferae	Carvone	Fruit
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Aaragvadha	Caesalpiniaceae	Fistulin	Flowers and pods
Cassia occidentalis Linn.	Kaasamarda	Calsalpiniaceae	Anthraquinone glycosides, beta-sitosterol	Seed, bark, root, and leaf
Cassia tora Linn.	Chakramarda	Calsalpiniaceae	Anthraquinones	Seed and leaf
Cedrela toona Roxb.; Syn *Toona ciliata* M. Roem.	Tuunikaa	Meliaceae	Toonacilin	Bark and heartwood
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.	Devadaaru	Pinaceae	Borneol	Wood, bark, and leaf
Celastrus paniculatus Willd.	Jyotishmati	Celastraceae	Alkaloids	Seed and root bark
Celosia argentea Linn.	Shitivaaraka	Amaranthaceae	Triterpenoidal saponins	Whole plant
Celosia cristata Linn.	Jataadhari	Amaranthaceae	Fatty oil	Seed
Centella asiatica (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Manduukaparni	Umbelliferae; Apiaceae	Asiaticoside, asiatic acid	Whole plant
Ceratophyllum demersum Linn.	Shaivaala	Ceratophyllaceae	Plastocynin	Whole plant
Chenopodium album Linn.	Vaastuuka	Chenopodiaceae	Ascaridole	Leaf and seed
Cicca acida (Linn.) Merrill; Syn *Phyllanthus distichus* Muell.-Arg.	Lavali-phala	Euphorbiaceae	Gallic acid	Bark
Cicer arientinum Linn.	Chanaka	Fabaceae; Papilionaceae	Flavonoids	Seed
Cinnamomum camphora (Linn.) Nees and Eberm.	Karpura	Lauraceae	Camphor (volatile oil)	Leaf

Cinnamomum tamala Nees. and Eberm.	Patra	Lauraceae	Cinnamaldehyde, linalool	Bark and Leaf
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Daarusitaa	Lauraceae	Cinnzeylanin and cinnzeylanol	Leaf, bark, and root
Cissampelos pareira Linn.	Paathaa	Menispermaceae	Berberine	Root
Cissus quadrangular Linn.; Syn *Vitis quadrangula* Wall.	Asthisamhaara	Vitaceae	Coloside A	Aerial parts
Citrullus colocynthis Schrad.	Indravaaruni	Cucurbitaceae	Cucurbitacins	Fruit and leaf
Citrus decumana Linn.	Madhukarkati	Rutaceae	Beta-sitosterol, alkaloids	Fruit and leaf
Citrus limon (Linn.) Burm. f.	Jambira	Rutaceae	Flavonoids	Fruit
Citrus maxima (Burm.) Merrill.; Syn *C. decumana* Watt., *C. grandis* (L.) Osbeck.	Madhukarkatikaa	Rutaceae	Volatile oils	Fruit and leaf
Citrus medica Linn.	Bijpuura	Rutaceae	Coumarins	Peel
Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Tarkaari	Verbenaceae	Beta-sitosterol	Root
Clerodendrum serratum (Linn.) Moon.	Bhaargi	Verbenaceae	Flavonoids	Root and leaf
Clitoria ternatea Linn.	Aparaajitaa	Papilionaceae; Fabaceae	Kaempferol	Seed, bark, root, and leaf
Coccinia indica W. and A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Bimbi	Cucurbitaceae	Lupeol/Cucurbitacin B	Whole plant
Cocculus hirsutus (Linn.) Diels.; Syn *C. villosus (*Lam.) DC.	Jalajamani	Menispermaceae	Pendulin, cocsulin	Leaf, stem, and root
Cocos nucifera Linn.	Naarikela	Palmae; Arecaceae	Caprylic and caproic acid	Dried endosperm
Coix lacryma-jobi Linn.; Syn *C. lachryma* Linn.	Gavedhukaa	Poaceae; Gramineae	Coixenolides	Fruit, seed, and root
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Guggul	Burseraceae	Guggulsterone Z and E	Oleo-gum-resin
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Shankhapushpi	Convolvulaceae	Sankhpushpine alkaloids	Whole plant
Corallocarpus epigaeus Benth. ex Hook f.	Shukanaasaa	Cucurbitaceae	Bryonin	Root

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Corchorus capsularis Linn.	Kaala shaaka	Tiliaceae	Glycosides/sitosterol	Leaf and seed
Corchorus fascicularis Lam.	Chanchuka	Tiliaceae	Quercetin	Whole plant
Cordia dichotoma Forst. f.; Syn *C. obliqua* Willd., *Cordia myxa* Roxb. non Linn.	Bahuvaara	Boraginaceae	Alpha-amyrin	Fruit
Coriandrum sativum Linn.	Dhaanyaka	Umbelliferae; Apiaceae	Delta-linalool	Fruit
Coscinium fenestratum Colebr.	Kaaliyaka	Menispermaceae	Berberine	Root
Costus speciosus (Koenig) Sm.	Kebuka	Zingiberaceae	Saponins	Rhizome
Crataeva nurvala Buch.-Ham.; Syn *C. magna* (Lour.) DC.	Varuna	Capparidaceae	Lupeol	Bark
Crocus sativus Linn.	Kumkuma	Iridaceae	Crocin	Dried style and stigma
Crotalaria juncea Linn.	Shana	Fabaceae; Papilionaceae	Junceine	Seed
Croton tiglium Linn.	Dravanti	Euphorbiaceae	Crotin	Seed
Cucumis sativus Linn.	Traapusha	Cucurbitaceae	Cucurbitaside B and C	Fruit and seed
Cucurbita pepo Linn.	Kushmaandi	Cucurbitaceae	Linoleic acid	Seed
Cuminum cyminum Linn.	Jiraka	Umbelliferae; Apiaceae	Cuminaldehyde	Fruit
Curculigo orchioides Gaertn.	Mushali	Amaryllidaceae; Hypoxidaceae	Curculigosaponin C and F	Dried rhizome
Curcuma angustifolia Roxb.	Tikhuri	Zingiberaceae	d-ar-Curcumene	Dried rhizome
Curcuma longa Linn.; Syn *C. domestica* Valeton	Haridraa	Zingiberaceae	Turmerone	Dried rhizome
Curcuma zedoaria Rosc.	Karchuura	Zingiberaceae	Curcumenol	Dried rhizome
Cymbopogon citratus (DC.) Stapf.; Syn *Andropogon citratus* DC.	Bhuutika	Poaceae	Citral	Leaf

Cymbopogon jwarancusa (Jones) Schult.; Syn *Andropogon jwarancusa* Jones.	Laamajjaka	Poaceae	Piperitone	Flower
Cymbopogon martini Roxb. Wats.; Syn *Andropogon martinii* Roxb.	Dhyaamaka	Poaceae	Geraniol	Grass
Cynodon dactylon Pers.	Duurvaa	Graminae; Poaceae	Ferulic acid	Whole plant
Cyperus anabilis Vahl.	Plava	Cyperaceae	Cyperenone	
Cyperus rotundus Linn.	Mustaka	Cyperaceae	Volatile oil	Rhizome
Dalbergia sissoo Roxb. ex DC.	Shimshapaa	Fabaceae; Papilionaceae	Sissotrin	Heartwood
Datura metel Linn.; Syn *D. fastuosa* Linn.	Dhattuuraa	Solanaceae	Hyoscine	Whole plant
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Shaaliparni	Fabaceae	Petrocarpanoids	Root
Dichrostachys cinerea W. and A.; Syn *Cailliea cinera* Macb.	Viravrksha	Mimosaceae	n-Octacosanol, beta-sitosterol	Root and bark
Dioscorea bulbifera Linn.; Syn *D. sativa* Thunb. auct. non L.; *D. versicolor* Buch.-Ham. ex Wall.	Vaaraahikanda	Dioscoreaceae	Diosbulbins	Tuber
Dipterocarpus turbinatus Gaertn. f.; *D. indicus* Bedd.	Ajakarna	Dipterocarpaceae	Humulene	Oleo-gum-resin
Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulattha	Fabaceae; Papilionaceae	Phytosterols	Seed
Dolichos lablab Linn. var. *typicus* Prain.; Syn *Lablab purpureus* Linn.	Nishpaav	Fabaceae; Papilionaceae	Beta-sitosterol	Pods
Dorema ammoniacum D. Don.	Ushaka	Apiaceae; Umbelliferae	Ferulene	Gum resin
Echinochloa frumentacea Link.; Syn *Panicum frumentaceum* Roxb.	Shyaamaaka	Poaceae; Gramineae	Glutelin	Whole plant
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.	Bhringaraaja	Asteraceae; Compositae	Wedelactone, Demethyl wedelolactone	Whole plant
Elettaria cardamomum Maton.	Sukshmailaa	Zingiberaceae	1,8-Cineol	Seed and fruit
Eleusine coracana Gaertn.	Madhuuli	Poaceae; Gramineae	Amino acids	Whole plant
Embelia ribes Burm. f.	Vidanga	Myrsinaceae	Embelin	Fruit
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.	Aaamalaki	Euphorbiaceae	Phyllembin/gallic acid	Fruit, leaf, and seed

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Enhydra fluctuans Lour.	Hil-mochikaa	Compositae; Asteraceae	Beta-carotene	Leaf
Ephedra gerardiana Wall. ex Stapf.	Soma	Ephedraceae	Ephedrine	Aerial part
Erythrina variegata Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Paaribhadra	Fabaceae; Papilionaceae	Beta-erythroidine	Bark
Euphorbia dracunculoides Lamk.	Saptalaa	Euphorbiaceae	Kaempferol	Root
Euphorbia hirta Linn.; Syn *E. pilulifera* auct. non Linn.	Dudhikaa	Euphorbiaceae	Quercitrin	Whole plant
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Snuhi	Euphorbiaceae	Triterpenoids	Latex
Fagonia cretica Linn.; Syn *F. arabica* Linn.	Dhanvayaasaka	Zygophyllaceae	Sapogenin, nahagenin	Whole plant
Feronia limonia (Linn.) Swingle.; Syn *F. elephantum* Corr.	Kapittha	Rutaceae	Coumarins	Fruit
Ferula foetida Regel.; Syn *F. assafoetida* Linn.	Hingu	Apiaceae; Umbelliferae	Asaresionotannols, farnesiferols	Oleo-gum-resin
Ficus benghalensis Linn.	Vata	Moraceae	Phytosterolin	Whole plant
Ficus glomerata Roxb.; Syn *F. racemosa* Linn.	Udumbara	Moraceae	Beta-sitosterol	Fruit and root
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Kaakodumbara	Moraceae	Hispidine	Fruit, root, seed, and bark
Ficus lacor Buch.-Ham.; Syn *F. infectoria* auct. non Willd.	Plaksha	Moraceae	Beta-sitosterol	Fruit, bark, and leaf
Ficus religiosa Linn.	Ashvattha	Moraceae	Beta-sitosterol	Bark and fruit
Flacourtia ramontchi L. Herit.; Syn *F. indica* (Burm. f.) Merr.	Vikankata	Flacourtiaceae	(-)-Flacourtin	Bark and leaf
Foeniculum vulgare Mill.	Mishreyaa	Apiaceae; Umbelliferae	Anethole, fenchone	Fruit
Fumaria parviflora Lam.; *F. indica* (Haussk.) Pugsley.	Parpata	Fumariaceae	Protopine	Whole plant
Garcinia indica Choisy.; Syn *G. purpurea* Roxb.	Vrkshaamla	Guttiferae; Clusiaceae	Garcinol, isogarcinol	Fruit, root, bark, and leaf

Gentiana kurro Royle.	Traayamaana	Gentianaceae	Amarogentin, gentiopicroside	Root
Gloriosa superba Linn.	Laangali	Liliaceaes	Gloriosine	Tuberous root
Glycyrrhiza glabra Linn.	Yashtimadhu	Fabaceae; Papilionaceae	Glycyrrhizine, glycyrrhetinic acid	Root
Gmelina arborea Roxb.; Syn *Premna arborea* Roth.	Gambhaari	Verbenaceae	Arborone	Root, root bark, and heartwood
Gossypium arboreum Linn.	Kaarpaasi	Malvaceae	Gossypol	Seed
Grewia asiatica auct. non. L.; Syn *G. subinaequalis* DC.	Parushaka	Tiliaceae	Beta-sitosterol	Fruit and bark
Gymnema sylvestre R. Br.	Meshashringi	Asclepiadaceae	Gymnemagenin	Leaf
Gynandropsis gynandra (Linn.) Briq.; Syn *G. pentaphylla* DC., *Cleome gynandra* Linn.	Ajagandhaa	Capparidaceae	Beta-sitosterol	Seed and leaf
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch.-Ham. ex Wall.	Shati	Zingiberaceae	Hedychenone, 7-hydroxyhedychenone	Rhizome
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Saarivaa	Asclepiadaceae; Periplocaceae	Hemidesmine, hemidesmin-1	Root
Hibiscus abelmoschus Linn.; Syn *Abelmoschus moschatus* Medic.	Lataakasturikaa	Malvaceae	Beta-sitosterol	Seed
Hibiscus rosa-sinensis Linn.	Japaa	Malvaceae	Cyanidin-3-sophoroside	Flower
Himenodictyon excelsum Wall.	Bhringavriksha	Rubiaceae	Scopoletin	Whole plant
Hiptage madablota Gaertn.; Syn *H. benghalensis* Kurz.	Maadhavi	Malpighiaceae	Hiptagin	Fruit, seed, and root
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Girimallikaa	Apocynaceae	Regholarrhenines	Root, bark, and seed
Holoptelea integrifolia Planch.	Chirabilva	Ulamaceae	Holoptelin A and B	Fruit and bark
Holostemma rheedii Wall.; Syn *H. annularis* (Roxb.) K. Schum., *H. ada-kodien* Schult., *Asclepias annularis* Roxb.	Ark-pushpi	Asclepiadaceae	Beta-sitosterol	Tuber
Hordeum vulgare Linn.	Yava	Poaceae; Gramineae	Gramine alkaloid	Seed and leaf

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Hygrorhyza aristata Nees.	Nivaara	Poaceae	Amino acids	Grass
Hyoscyamus niger Linn.	Khuraashaanikaa	Solanaceae	Hyoscine, hyoscyamine	Whole plant
Imperata cylindrica Rausch.; Syn *I. arundinacea* Cyr.	Darbha	Poaceae; Gramineae	Graminone A and B	Root
Indigofera tinctoria Linn.	Nili	Fabaceae	Indicine	Dried leaf
Inula racemosa Hook. f.; Syn *I. royleana* auct. non.-DC.	Pushkaramuula	Asteraceae; Compositae	Inulin, alanolactone	Root
Ionidium suffruticosum Ging.; Syn *Hybanthus enneaspermus* (Linn.) F. Muell.	Amburuha	Violaceae	Aurantiamide acetate	Leaf and root
Ipomoea digitata Linn.; Syn *I. paniculata* R. Br. Burm., *I. mauritiana* Jacq.	Kshira-vidaari	Convolvulaceae	Beta-sitosterol	Tuber
Jasminum arborescens Roxb.; Syn *J. roxburghianum* Wall.	Nava-mallikaa	Oleaceae	Volatile oil	Leaf
Jasminum auriculatum Vahl.	Yuuthi	Oleaceae	Jasminol, jasmone	Leaf
Jasminum multiflorum (Burm. f.) Andr.; Syn *J. pubescens* Willd., *J. hirsutum* Willd., *J. bracteatum* Roxb.	Kunda	Oleaceae	Jasmolactones	Leaf
Jasminum officinale Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.	Maalati	Oleaceae	Jasminine alkaloid, benzyl acetate	Leaf
Jasminum sambac (Linn.) Ait.	Mallikaa	Oleaceae	Sambacin glycoside	Root and leaf
Juniperus communis Linn. var. *saxatillis* Palias. *J. communis* auct. non. L.	Hapushaa	Cupressaceae; Pinaceae	Surgol (diterpene ketone)	Fruits
Lagenaria siceraria (Mol) Standl.; Syn *L. vulgaris* Ser., *L. leucanth* Rusby, *Cucurbita siceraria* Mol.	Tumbini	Cucurbitaceae	Cucurbitacin B	Fruit pulp and leaf
Lannea coromandelica (Houtt.) Merrill.; Syn *L. grandis* (Dennst.) Engl., *Odina wodier* Roxb.	Jingini	Anacardiaceae	Dl-epicatechin	Root and bark
Lathyrus sativus Linn.	Triputa	Fabaceae; Papilionaceae	Selenium	Seed

Lawsonia inermis Linn.	Madayantikaa	Lythraceae	Lawsone	Leaf
Lens culinaris Medic.; Syn *L. esculenta* Moench.	Masura	Fabaceae; Papilionaceae	Amino acids	Seed
Leonotis nepetaefolia R. Br.	Granthiparni	Labiatae; Lamiaceae	Quercetin, neptaefolin	Root and leaf
Lepidium sativum Linn.	Chandrashuura	Cruciferae; Brassicaceae	Sinapin	Seed
Leptadenia reticulata W. and A.	Jivanti	Asclepiadaceae	Beta-sitosterol	Whole plant
Leucas cephalotes (Roth.) Spreng.	Dronpushpi	Labiatae; Lamiaceae	Beta-sitosterol	Whole plant
Linum usitatissimum Linn.	Atasi	Linaceae	Linustatin	Seed and flower
Liquidamber orientalis Mill.	Turushka	Hamamelidaceae; Altingiaceae	Liquidambronal, ambronal	Gum resin
Loranthus longiflorus Desr.	Vrikshaadani	Loranthaceae	Quercetin	Bark
Luffa cylindrica (Linn.) M. J. Roem.; Syn *L. aegyptiaca* Mill., *L. pentandra* Roxb.	Dhaamaargava	Cucurbitaceae	Lucyosides	Whole plant
Luffa echinata Roxb.	Devadaali	Cucurbitaceae	Chrysoeriol	Fruit
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhuuka	Sapotaceae	Quercetin	Flower and bark
Mallotus phillippinensis Muell.-Arg.	Kampillaka	Euphorbiaceae	Kamalin-1 and 2, iso-allorattlerin	Fruit
Mangifera indica Linn.	Aamra	Anacardiaceae	Mangiferin	Fruit, seed, and bark
Marsdenia tenacissima W. and A.	Muurvaa	Asclepiadaceae	Tenacissosides	Stem and root
Marsilea minuta Linn.	Sunishannaka	Marsilaceae	Marsilin	Whole plant
Melia azedarach Linn.	Mahaanimba	Meliaceae	Bakayanin, gedunin, rutin	Leaf, fruit, seed, stem, and root bark
Mesua ferrea Linn.; Syn *M. nagassarium* (Burm. f.) Kosterm.	Naagakeshara	Guttiferae; Clusiaceae	Mesuaferrones A and B	Dried stamen and seed
Michelia champaca Linn.	Champak	Magnoliaceae	Liriodenine	Flower and bark

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Microstylis muscifera Ridley.; Syn *Malaxis muscifera* (Lindley) Kuntz.	Jivaka	Orchidaceae	Tuberosin	Tuber
Microstylis wallichii Lindl.; Syn *Malaxis acuminata* D. Don.	Rshabhaka	Orchidaceae	Tuberosin	Tuber
Mimosa pudica Linn.	Lajjaalu	Mimosaceae	Mimosine	Whole plant
Mimusops elengi Linn.	Bakula	Sapotaceae	Mimusopic acid, mimusopsic acid	Seed and bark
Mimusops hexandra Roxb.	Kshirini	Sapotaceae	Quercitol	
Mitragyna parvifolia (Roxb.) Korth.	Giri-kadamba	Rubiaceae	Akuammigine, mitraphylline	Bark and root
Momordica charantia Linn.	Kaaravellaka	Cucurbitaceae	Momordicosides, charatin	Fruit and seed
Moringa oleifera Lam.; Syn *M. pterygosperma* Gaertn.	Shobhaanjana	Moringaceae	Spirochin, niazirin	Whole plant
Mucuna monosperma DC.	Kaakaandolaa	Fabaceae; Papilionaceae	Mucunine	Seed
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.	Kapikachhuu	Fabaceae; Papilionaceae	Mucunine	Seed and root
Musa paradisiaca Linn.; Syn *M. sapientum* Linn.	Kadali	Musaceae	Sitoindoside IV	Flower
Myristica fragrance Houtt.	Jaatiphala	Myristicaceae	Myristicin	Endosperm of dried seed
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Jataamaansi	Valerianaceae	Jatamansone	Root
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Kamala	Nymphaeaceae	Nuceferin, nelumbin	Flower and leaf
Nerium indicum Mill.; Syn *N. odorum* Soland.	Karavira	Apocynaceae	Digitoxigenin	Root and leaf
Nigella sativa Linn.	Kaalaajaaji	Ranunculaceae	Nigellone	Seed
Nyctanthes arbor-tristis Linn.	Paarijaata	Oleaceae; Nyctanthaceae	Irridoid glycosides	Leaf
Nymphaea alba Linn.	Kumuda	Nymphaeaceae	Nymphalin	Flower and seed
Nymphaea stellata Willd.	Nilotpala	Nymphaeaceae	Quercetin	Leaf

Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Wild.	Barbari	Labiatae; Lamiaceae	Estragole	Whole plant
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.	Tulasi	Labiatae; Lamiaceae	Carvacrol	Whole plant
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.	Trivrta	Convolvulaceae	Turpethin	Root
Ophiorrhiza mungos Linn.	Sarpaakshi	Rubiaceae	Beta-sitosterol	Root
Origanum majorana Linn.; Syn *Majorana hortensis* Moench.	Phanijjaka	Labiatae; Lamiaceae	Sabinene and its hydrate	Whole plant
Oroxylum indicum Vent.	Shyonaaka	Bignoniaceae	Oroxylin A	Root
Oryza sativa Linn.	Shaali	Poaceae; Gramineae	Diglycosidic anthocyanin	Root and seed
Osmanthus fragrans Lour.	Vasuka	Oleaceae	Beta-sitosterol	Flower
Ougeinia oogeinensis (Roxb.) Hochr.; Syn *Ougeinia dalbergioides* Benth.	Syandana	Lythraceae	Dalbergion	Bark
Oxalis corniculata Linn.	Chaangeri	Oxalidaceae	Vitexin	Whole plant
Paederia foetida Linn.	Gandhaprasaarini	Rubiaceae	Epi-friedelanol, beta-sitosterol	Whole plant
Pandanus odoratissimus Linn. f.; Syn *P. tectorius* auct. non Soland ex Parkinson., *Pandanus facicularis* Lam.	Ketaki	Pandanaceae	Methyl-ether of beta-phenyl-ethyl alcohol	Root and flower
Papaver somniferum Linn.	Ahiphena	Papaveraceae	Morphine (isoquinoline alkaloids)	Seed and poppy
Paris polyphylla Sm.	Haimavati	Liliaceae	Glycoside alpha-paristyphnin	Rhizome
Parmelia perlata (Huds.) Ach.	Shaileya	Parmeliaceae	Lecanoric acid	Whole thallus
Paspalum scrobiculatum Linn.	Kodrava	Poaceae; Gramineae	Sitosterol	Whole plant
Pentapetes phoenicea Linn.	Bandhuuka	Sterculiaceae	Uridine	Whole plant
Phoenix dactylifera Linn.	Kharjuura	Palmae; Arecaceae	C-glycosylflavones, caffeylshikimic acid	Fruit

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Phoenix paludosa Roxb.	Hintala	Palmae	Beta-sitosterol	Fruit
Phragmites karka Trin. ex Steud.; Syn *P. roxburghii* (Kunth) Steud., *P. maxima* Blatter and McCann in part.	Nala	Poaceae; Gramineae	Furfural	Rhizome
Phyllanthus niruri Linn.	Bhuumyaamalaki	Euphorbiaceae	Niuride	Whole plant
Physalis minima Linn.	Tankaari	Solanaceae	Withaminimin, withaphysalin	Berries
Picrorhiza kurroa Royle. ex Benth.	Katuki	Scrophulariaceae	Picroside I, kutcoside	Root
Pinus longifolia Roxb.; Syn *P. roxburghii* Sarg.	Sarala	Pinaceae	Longifolin	Heartwood and root
Piper betle Linn.	Taambula	Piperaceae	Chavicol	Leaf and fruit
Piper chaba Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.	Chavya	Piperaceae	Piperine	Fruit and root
Piper cubeba Linn. f.	Kankola	Piperaceae	Cubenine	Fruit
Piper longum Linn.	Pippali	Piperaceae	Piperine	Fruit
Piper nigrum Linn.	Maricha	Piperaceae	Piperine	Fruit
Pistacia integerrima Stewart ex Brandis.; Syn *P. chinensis* Bunge, subspecies *integerrima* (Stewart) Rech. f.	Karkatashringi	Anacardiaceae	Pistacigerrimones	Gall
Pistia stratiotes Linn. var. *cuneata* Engl.	Jalakumbhi	Araceae	Vicenin, lucenin flavones	Whole plant
Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga* (Zingiberaceae)	Raasnaa	Compositae; Asteraceae	Moretenol	Aerial part
Plumbago zeylanica Linn.	Chitraka	Plumbaginaceae	Plumbagin	Root
Polygonatum verticillatum All.	Medaa	Liliaceae	Diosgenin	Rhizome
Polygonum affine D. Don.; Syn *Bistorta affinis* (D. Don.) Green.	Khukhudi	Polygonaceae	Quercetin	Flower

Pongamia pinnata Pierre.; Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.	Karanja	Papilionaceae; Fabaceae	Karanjin, quercetin	Seed
Premna herbacea Roxb.; Syn *Pygmaeopremna hebacea* Moldenke.	Chaarati	Verbenaceae	Bharangin	Root and leaf
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. and Willd.	Agnimantha	Verbenaceae	Premnazole	Leaf and root
Prosopis spicigera Linn.; Syn *P. cineraria* Druce.	Shami	Mimosaceae	Patulibin	Leaf and fruit
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Badaam	Rosaceae	Amygdalin	Seed kernel
Prunus cerasoides D. Don.; Syn *P. puddum* Roxb. ex Brandis. non-Miq	Padmaka	Rosaceae	Puddumin A, beta-sitosterol	Heartwood
Prunus cerasus Linn.	Elavaaluka	Rosaceae	Amygdalin	Heartwood, leaf, and fruit
Psoralea corylifolia Linn.	Baakuchi	Fabaceae; Papilionaceae	Psoralen	Seed
Pterocarpus marsupium Roxb.	Bijaka	Fabaceae; Papilionaceae	Kino-tanic acid	Heartwood
Pterocarpus santalinus Linn. f.	Raktachandana	Fabaceae; Papilionaceae	Eudesmol	Heartwood
Pueraria tuberosa DC.	Vidaari	Fabaceae; Papilionaceae	Tuberosin	Tuber
Punica granatum Linn.	Daadima	Punicaceae	Granatin A and B	Fruit, root, bark. and flower
Putranjiva roxburghii Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Putrajiva	Euphorbiaceae	Putranjivosides	Fruits and seed kernel
Quercus infectoria Oliv.	Maajuphalaka	Fagaceae	Gallo-tanic acid, rubric acid	Gall and fruits
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. and A., *R. tomentosa* W. and A. non Blume, *Xeromphis spinosa* Keay.	Madana	Rubiaceae	Randialic acid	Fruit
Randia uliginosa DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Pinditaka	Rubiaceae	Leucocyanidin	Fruit and root

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Raphanus sativus Linn.	Muulaka	Cruciferae; Brassicaceae	Raphanin	Root and seed
Rauvolfia serpentina Benth. ex Kurz.	Sarpagandhaa	Apocynaceae	Reserpine	Root
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Amlaparni	Polygonaceae	Sennosides	Root
Rhus parviflora Roxb.	Tintidi	Anacardiaceae	Quercetin	Fruit and leaf
Ricinus communis Linn.	Eranda	Euphorbiaceae	Ricinoliec acid	Seed
Rivea ornata (Roxb.) Choisy.	Phanji	Convolvulaceae	Alkaloids	Whole plant
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.	Manjishthaa	Rubiaceae	Purpurine glycoside	Stem
Saccharum munja Roxb. Linn.; Syn *S. sara* Roxb., *S. bengalense* Retz., *Erianthus munja* Jesw.	Shara	Poaceae; Gramineae	Furfural	Root
Saccharum officinarum Linn.	Ikshu	Poaceae; Gramineae	Sucrose	Stem
Salix caprea Linn.	Vetasa	Salicaceae	Delphinidin	Leaf, bark, and root
Salmalia malabarica (DC.) Schott and Endl.; Syn *Bombax ceiba* Linn., *Bombax malabaricum* DC., *Gossampinus malabarica* (DC.) Merr.	Shaalmali	Bombacaceae	Beta-sitosterol	Stem bark
Salvia plebeia R. Br.	Samudrashosha	Labiatae; Lamiaceae	Nepetin	Whole plant
Santalum album Linn.	Chandana	Santalaceae	Santalol	Heartwood
Saraca asoca (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.	Ashoka	Caesalpiniaceae	Quercetin	Bark
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Kushtha	Asteraceae; Compositae	Saussurine	Root
Schrebera swietenioides Roxb.	Muskakaa	Oleaceae	Betulinic acid	Fruits, bark, and root
Scindapsus officinalis Schott.	Gajapippali	Araceae	Scindapsinidine A and B	Fruit
Scirpus kysoor Roxb.; Syn *S. grossus* Linn. f.	Kasheruka	Cyperaceae	Progesterone	Rhizome
Selinum tenuifolium Wall. ex DC.; Syn *S. candollei* DC.	Muraa	Apiaceae; Umbelliferae	Isoimperatorin	Root

Semecarpus anacardium Linn. f.	Bhallaataka	Anacardiaceae	Anacardic acid	Fruit
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Tila	Pedaliaceae	Sesamin, sesamolin	Seed
Sesbania bispinosa W. f. Wight; Syn *S. aculeata* (Willd.) Poir.	Itkata	Fabaceae; Papilionaceae	Sapogenin	Seed
Sesbania grandiflora (L.) Poir.; Syn *Agati grandiflora* Desv.	Agasti	Fabaceae; Papilionaceae	Grandiflorol	Whole plant
Sesbania sesban (Linn.) Merrill.; Syn *S. aegyptiaca* Pers.	Jayantikaa	Fabaceae; Papilionaceae	Beta-sitosterol	Leaf
Setaria italica (Linn.) Beauv.	Kangu	Poaceae; Gramineae	Amino acids	Grains
Shorea robusta Gaertn. f.	Shaala	Dipterocarpaceae	Pyrogallol type tannins	Heartwood
Sida cordifolia Linn.	Balaa	Malvaceae	Ephedrine, *si*-ephedrine	Whole plant
Smilax china Linn.	Chopachini	Liliaceae	Dioscin	Root
Solanum indicum Linn.	Brihati	Solanaceae	Solasonine	Root
Solanum melongena Linn.	Vaartaaku	Solanaceae	Melongosides	Fruit
Solanum nigrum Linn.; Syn *S. rubrum* Mill.	Kaakamaachi	Solanaceae	Solasonine	Whole plant
Solanum xanthocarpum S. and W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Kantakaari	Solanaceae	Solasonine	Whole plant
Soymida febrifuga A. Juss.	Maansrohini	Meliaceae	Febrifugines	Bark
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.	Munditakaa	Asteraceae; Compositae	Sphaeranthine	Leaf
Spinacia oleracea Linn.; Syn *S. tetrandra* Roxb.	Paalankikaa	Chenopodiaceae	Rutin	Aerial parts
Spondias pinnata (Linn. f.) Kurz.; Syn *S. mangifera* Willd.	Aamraataka	Anacardiaceae	Beta-amyrin	Bark
Streblus asper Lour.; Syn *Epicarpurus orientalis* Bl.	Shaakhotaka	Moraceae	Asperoside, strebloside	Bark
Strychnos nux-vomica Linn.	Vishatinduka	Loganiaceae; Strychnaceae	Strychnine, brucine	Seed
Strychnos potatorum Linn. f.	Kataka	Loganiaceae; Strychnaceae	Diaboline, brucine	Seed
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Chiraayita	Gentianaceae	Chiratin glycoside, decussatin	Whole plant

Botanical Names	Common Ayurvedic Name	Family	Phytochemical Markers	Parts Used
Symplocos racemosa Roxb.; Syn *S.beddomei* C. B. Clarke, *S. candolleana* Brand.	Lodhra	Symplocaceae	Loturine (Harman)	Bark
Syzygium aromaticum (Linn.) Merr. and Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Lavanga	Myrtaceae	Eugenin, eugenol	Flower buds
Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Jambu	Myrtaceae	Bergenin	Bark and seed
Tamarindus indica Linn.; Syn *T. occidentalis* Gaertn., *T. officinalis* HK.	Amlikaa	Caesalpiniaceae	Tamarindienal	Fruit
Taxus baccata Linn.	Sthauneyaka	Taxaceae	Taxol	Leaf and bark
Tecomella undulata (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.	Rohitaka	Bignoniaceae	Tecomin, tecoside	Flower and bark
Tectona grandis Linn. f.	Shaaka	Verbenaceae	Tectoleafquinone	Heartwood
Tephrosia purpurea (L.) Pers.; Syn *T. hamiltonii* Drumm.	Sharapunkhaa	Fabaceae; Papilionaceae	Rutin	Whole plant
Terminalia arjuna (Roxb.) W. and A.	Arjuna	Combretaceae	Arjunatosides	Bark
Terminalia bellirica Roxb.	Bibhitaki	Combretaceae	Bellaricanin, beta-sitosterol	Fruit
Terminalia chebula Retz.	Haritaki	Combretaceae	Teaflavin A, pyrogallol	Fruit
Thespesia populnea Soland. ex Correa.; Syn *Hibiscus populneus* Linn.	Paarshvpippala	Malvaceae	Populnetin, herbacetin	Flowers and fruit
Tinospora cordifolia (Willd.) Miers ex Hook. f. and Thoms.	Guduuchi	Menispermaceae	Berberine, columbine	Stem
Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Yavaani	Apiaceae; Umbelliferae	Thymol	Fruit
Trapa natans Linn. var. *bispinosa* (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Shrngaataka	Trapaceae	Amylopectin	Seed
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.	Varshaabhu	Aizoaceae	Trianthemine	Root

Tribulus terrestris Linn.	Gokshura	Zygophyllaceae	Tribuloside	Fruit
Trichosanthes bracteata (Lam.) Viogt.; Syn *T. palmata* Roxb., *T. lepiniana* (Naud.) Cogn., *Involucraria lepiniana* Naud.	Vishaalaa	Cucurbitaceae	Trichotetrol	Root
Tricosanthes dioica Roxb.	Patola	Cucurbitaceae	Colosynthin	Leaf
Trigonella foenum-graecum Linn.	Methikaa	Fabaceae; Papilionaceae	Trigonelline	Seed
Triticum aestivum Linn.	Godhuuma	Poaceae; Gramineae	Starch	Seed
Typha angustata Bory and Chaub.; Syn *T. australis* Schum. and Thonn.	Gundra	Typhaceae	Quercetin	Rhizome
Valeriana wallichii DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Tagara	Valerianaceae	Beta-bargamotene	Rhizome
Vateria indica Linn.; Syn *V. malabarica* Bl.	Sarja	Dipterocarpaceae	Catechin	Resin
Vernonia cinerea Less.	Sahadevi	Asteraceae; Compositae	Beta-sitosterol	Whole plant
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Ushira	Poaceae; Gramineae	Khusilal	Root
Vitex negundo Linn.	Nirgundi	Verbenaceae	Casticin, beta-sitosterol	Leaf and root
Vitis vinifera Linn.	Draakshaa	Vitaceae	Anthocyanin	Fruit
Wedelia chinensis Merrill.; Syn *W. calendulaceae* Less. non-Rich.	Kesharaaga	Asteraceae; Compositae	Wedelolactone	Bark
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Ashwagandhaa	Solanaceae	Withanine, somniferine	Root
Woodfordia fruticosa Kurz.; Syn *W. floribunda* Salisb.	Dhaataki	Lythraceae	Woodfordins	Flower
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. and Zucc.; Syn *Z. armatum* DC.	Tumburu	Rutaceae	Sesamin, fargesin	Bark
Zingiber officinale Rosc.	Aardraka	Zingiberaceae	Zingiberene, gingerol	Rhizome
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Badara	Rhamnaceae	Jujuboside A and B	Fruit and bark
Zizyphus nummularia (Burm. f.) Wight. and Arn.; Syn *Z. rotundifolia* Lam., *Rhamnus nummularia* Burm. f.	Karkandhu	Rhamnaceae	Nummularines	Root

9 Interactions, Toxicities, and Specific Findings of Ayurvedic Herbs

C. P. Khare

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Abies spectabilis (D. Don.) Spach.; Syn *Abies webbiana* Lindl.	Taalisa	Pinaceae	*Abies alba* (needle oil): Bronchospasm can be increased.[1] Can exacerbate asthma and whooping cough.[1,2]
Abrus precatorius Linn.	Gunjaa	Papilionaceae; Fabaceae	Toxic constituent: Alkaloid abrin: Cytotoxic potential.[4b] 5 mg of abrin is reported to be toxic in humans.[3] (0.15% in the seed. LD_{50} is 0.029 mg/kg body wt of mice.[4b])
Abutilon indicum Linn. Sweet	Atibalaa	Malvaceae	Plant considered as an abortifacient.[4c] Country mallow with ephedrine content is banned in the United States.
Acacia arabica Willd. var. *indica* Benth.	Babbuula	Mimosaceae	Acacia gum: Contains peroxidase enzyme, which forms colored complexes with certain amines and phenols and enhances the destruction of many pharmaceutical products, including alkaloids.[3] Contraindicated in intestinal obstruction.[5] When exposed to alcohol, becomes insoluble and will form a precipitate.[5,6] Drugs interacting with the herb: Amoxicillin.[2]
Acacia catechu (Linn. f.) Willd.	Khadira	Mimosaceae	Leukoagglutinating activity of saline extract of seeds against leukemic cells is inhibited by simple sugars.[4c] Catechin (cianidanol) is associated with fatal hemolytic anemia. Unstandardized products may contain high amount of aflatoxin, metabolite of Aspergillus, which is toxic and may lead to certain cancers.[2] Drugs interacting with herb: Antihypertensive drugs.[2]
Acacia concinna (Willd) D C.; Syn *A. sinuata* (Lour.) Merrill, *A. rugata* (Lamk.) Ham.	Saptalaa	Mimosaceae	Bark saponins. Spermicidal. Pods: Used for fish poisoning.[4b]
Acacia leucophloea (Roxb.) Willd.; Syn *A. alba* Willd.	Irimeda	Mimosaceae	Root: Abortifacient.[4c] Root contains anthraquinone glycosides.[4d]
Achyranthes aspera Linn.	Apaamaarga	Amaranthaceae	The benzene extract of the plant exhibited (100%) abortifacient activity experimentally.[4c] Acetone and methanolic extract of the root exhibited anti-implantation activity in rats.[4d]

Aconitum ferox Wall. ex Ser.	Visha	Ranunculaceae	Aconitine: 2 to 5 mg may cause death. Even external application is reported to cause toxic symptoms.[3] Contraindicated with antiarrhythmics, antihypertensives, cardiac glycosides.[5] Confined to homeopathic medicine.[2] Toxic constituents: Aconitine, mesaconitine, hypaconitine, diterpenoid-ester alkaloids.[11] Processed aconite may be devoid of toxicity.[3]
Aconitum heterophyllum Wall. ex Royle.	Ativishaa	Ranunculaceae	Atisine: Much less toxic than aconitine, although produces hypotension.[4b]
Aconitum palmatum D. Don.; Syn *A. bimsa* (Buch.-Ham.) Rapaics.	Prativishaa	Ranunculaceae	Root: Toxicity of diterpenoid alkaloids not reported. Feebly toxic.[4b]
Acorus calamus Linn.	Vachaa	Araceae	Calamus oil: Beta-isoasarone is carcinogenic.[11] North American variety: isoasarone free. European variety: less than 10% isoasarone; type III and IV: up to 96% isoasarone (in volatile oil).[2] Tincture therapeutic dose: 1.85–3.7 ml. Tincture (1:2). LD_{50} 5 ml/kg IP in mice.[11] Drugs interacting with the herbs: Antacids, CNS depressants, H_2 blockers, monoamine oxidase inhibitors, proton pump inhibitors.[2]
Actiniopteris dichotoma Kuhn.; Syn *A. australis*. f.) Link., *A. radiata* (Sw.) Link., *A. dichotoma* Kuhn.	Vahrishikhaa	Adiantaceae	Ethanolic extract (50%) of the plant showed antispermatogenic activity in male rats.[4d]
Adhatoda vasika Nees.; Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.	Vaasaka	Acanthaceae	Vasicine and vasicinone may potentiate bronchodilatory activity of theophylline and isoprenaline.[9] Vasicine was formerly used as the starting substance for production of mucolytics Bromhexin and Ambroxol. Now, not available in the United States.[2]
Aegle marmelos (L.) Correa ex Roxb.	Bilva	Rutaceae	Aqueous and alcoholic extract of leaves are reported to possess effect like digitalis on amphibian and mammalian hearts.[4b] Aurapten is found comparable with verapamil.[4c] Marmelosin, like psoralen, causes an increased deposition of pigment melanin by augmenting enzymic activity.[4d]

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Aerva lanata (L.) Juss. ex Schult. substitute of *Bergenia ligulata,* (Saxifragaceae)	Paashaanabheda	Amaranthaceae	(A substitute for paashaanabheda AFI.) Plant extract did not show any significant diuretic activity in healthy human volunteers.[15]
Ailanthus excelsa Roxb.	Aralu	Simaroubaceae	An alcoholic extract of leaf and stem bark showed anti-implantation and early abortifacient activities in female rats.[4c]
Alangium salviifolium (Linn. f.) Wang.; Syn *Alangium lamarckii* Thw.	Ankola	Alangiaceae	Flowers contain deoxytubulosine, a potent antiplatelet aggregation component.[4c]
Albizia lebbeck (Linn.) Willd.	Shirisha	Mimosaceae	Seed saponin: Spermicidal.[4c]
Albizia procera Benth.	Shevta Shirisha	Mimosaceae	Seed saponin: Spermicidal.[4c]
Allium cepa Linn.	Palaandu	Liliaceae; Alliaceae	Contraindicated in bleeding disorders, uncontrolled diabetes. Daily maximum amount of diphenylamine: 0.035g.[1]
Allium sativum Linn.	Rasona	Liliaceae; Alliaceae	Contrainidicated in bleeding disorders, gastric ulcer, thyroid disease.[5] Inhibits platelet aggregation, shows additive anticoagulant, antiplatelet effects.[12] Harmful interaction with heparin, warfarin, NSAIDS.[13] For hyperlipidemia and hypertension, extract (containing 1.3% allicin) 600–1,200 mg, divided and given three times daily, has been used in clinical trials.[2] Average daily dose: 4 g fresh garlic (to be chewed) or equivalent preparations.[1] To be discontinued at least 7 days prior to surgery.[5] Enteric coated tablets, containing alliin and alliinase, enhance allicin.[9]
Alocasia indica (Lour.) Spach.; Syn *A. macrorrhiza* (Linn.) G. Don.	Maanakanda	Araceae	Leaves, stalks, tubers, and roots contain high concentration of soluble oxalates, prolonged use may lead to calcium deficiency and oxaluria. All parts, except rhizome, contain cyanogenic principle.[4b]

Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.	Ghritakumaari	Liliaceae; Agavaceae	Dried latex: Contraindicated in intestinal obstruction, acutely inflamed intestinal diseases, e.g., Crohn's disease, ulcerative colitis, appendicitis, abdominal pain of unknown origin. Not to be prescribed during pregnancy or to children under 12 years of age.[1,10] Toxic constituents in dried latex: Anthraquinone glycosides.[11] (Not in *A. vera* gel.)[11] *A. vera* latex: Interacts with cardiac glycosides and thiazide diuretics; can cause electrolyte imbalance, may potentiate drug toxicity.[12] The FDA required manufacturers to remove or reformulate all OTC laxative products containing aloe from the U.S. market in 2002.[2] Avoid during the first trimester of pregnancy or take under medical supervision.[8b] Drugs interacting with the herb: Antidiabetic drugs, digoxin, diuretic drugs, sevoflurane, stimulant laxatives.[2]
Alstonia scholaris R. Br.	Saptaparna	Apocynaceae	Alkaloid echitamine (from the bark) is found to be toxic to mice in doses of 0.3–0.5 mg/20 g body wt.[4b]
Alternanthera sessilis (Linn.) R. Br. ex DC.; Syn *A. triandra* Lam., *A. denticulata* R. Br., *A. repens* Gmael. non-Link.	Matsyaakshi	Amaranthaceae	Alkaloidal extract of the plant in moderate and high dose levels produces slight hepatotoxic and nephrotoxic effects.[4d]
Amanita muscaria Linn.	Soma (component)	Agaricaceae; Amanitaceae	Toxic constituents: Ibotenic acid and muscimol (isoxazole derivative), muscazone (oxazole derivative), small amount of muscarine (alkaloid), stizolic acid, tricholomic acid. Isoxazole constituents are psychoactive.[2,11]
Amaranthus spinosus Linn.	Tanduliya	Amaranthaceae	The plant gave negative antibiotic tests, but has a high phagocytic index.[4b]
Amomum subulatum Roxb.	Sthula-elaa	Zingiberaceae	Seeds: Promote elimination of bile; used in congestion of liver.[4b]
Amorphophallus campanulatus (Roxb.) Blume ex Decne.	Kandala	Araceae	Alcoholic extract of the plant oxytocic.[4d]
Anacyclus pyrethrum DC.; Syn *A. officinarum* Haye	Aakaarakarabha	Compositae; Asteraceae	Seeds: Abortifacient.[4c]

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Andrographis paniculata Wall. ex Nees.	Bhuunimba	Acanthaceae	Contraindicated in bleeding disorders, hypotension, male sterility.[5] Adverse reactions: GI distress,[5,10] anaphylaxis, infertility.[5] Patients with autoimmune diseases, including rheumatoid arthritis should avoid or use *Andrographis* with caution.[2] Drugs interacting with the herb: Anticoagulant drugs, antiplatelet drugs, immunosuppressants.[2]
Angelica archangelica Linn. var. *himalacia* (C. B. Clarke) Krishna and Badhwar	Chandaam-shuka	Umbelliferae; Apiaceae	Root contains furanocoumarins; intense UV radiation should be avoided.[1,2,10] Emmenagogue, uterine stimulant,[10] can induce miscarriage,[7] can cause uterine contractions.[2] GRAS (generally recognized as safe) status in the United States. Canada does not allow *Archangelica* species as food ingredients.[2] *A.sinensis*: Contraindicated in bleeding disorders, lactation, pregnancy.[5] Osthole and ferulic acid may inhibit platelet aggregation.[5] Herb interacts with anticoagulants, antiplatelet agents, estrogen replacement therapy/oral contraceptives, may result in estrogen excess.[12]
Anisomeles malabarica R. Br. ex Sims	Sprikkaa	Labiatae; Lamiaceae	Aqueous extract of the shoot. Spermicidal effect in albino rats (*in vitro*), also on human semen.[4b]
Anogeissus latifolia Wall. ex Bedd.	Dhava	Combretaceae	Alcoholic extract of the stem bark: CNS depressant, hypothermic, responds to amphetamine hyperactivity test.[4d]
Apium graveolens Linn.	Ajamodaa	Apiaceae; Umbelliferae	Contraindicated in kidney inflammation, furanocoumarin constituents may cause photosensitivity.[9] Seed tablets interact with thyroxine, and anticoagulants. Potential allergenicity, including anaphylactic shock reported.[1] Furanocoumarin content increases 100-fold in injured or diseased celery.[2]
Aquilaria agallocha Roxb.; Syn *A. malaccenis* Lamk.	Agaru	Thymelaceae	Benzene extract of the wood exhibited potent CNS depressant activity in mice.[4c]

Areca catechu Linn.	Guwaaka	Arecaceae; Palmae	Interactions: High tannin of the nut may cause alkaloids to become insoluble and precipitate. The cholinergic activity of arecoline interacts with anticholinergic drugs.[5,14] Toxic constituents: Arecoline, arecain (pyridine alkaloids).[11] Asthmatic and chronic obstructive pulmonary disease (COPD) patients may be at risk.[14]
Argemone mexicana Linn.	Svarnkshiri	Papaveraceae	Adulteration of edible oil with sanguinarine containing argemone oil has led to widespread epidemic of dropsy and glaucoma. Sanguinarine is also carcinogenic.[4b] Traditional medicinal uses attributed to this plant are based on wrong identity.[4b] Drugs interacting with the herb: Anticholinergic drugs, cholinergic drugs, procycline.[2]
Argyreia nervosa (Burm. f.) Boj; Syn *A. speciosa* Sweet.	Vriddhadaaruka	Convolvulaceae	Seeds contain 0.5–0.9% ergoline alkaloids; a few are reported to be hallucinogenic. LD_{50}: 500 mg/kg body wt.[4b]
Aristolochia indica Linn.	Ishvari	Aristolochiaceae	Toxic constituents: Aristolochin, aristolochic acid.[11] Toxic to kidneys. Carcinogenic in animals and human cells.[2, 11] Many cases of nephropathy associated with *Aristolochia* use have been reported wordwide.[2] Any product which contains plants known or suspected to contain aristolochic acid is detained in the United States.[2] A cytotoxic lignan, savinin, has been isolated from the root.[4c] Root: Oxytocic, emmenagogue, abortifacient.[4b]
Artemisia vulgaris Linn. var. *nilagirica* Clarke; Syn *Artemesia nilagirica* (Clarke) Pamp.	Damanaka	Asteraceae; Compositae	Emmenagogue, uterine stimulant.[4b,10] Toxic constituent: Thujone.[4c,11] May interact with anticonvulsants, may lower seizure threshold.[12] *A. absinthium*: Plant extract decreased hepatotoxicity of acetaminophen in mice.[5]
Artocarpus heterophyllus Lam.; Syn *A. integrifolia* Linn. f.	Panasa	Moraceae	A lectin, jacalin, a potent polyclonal activator for human lymphocytes has been isolated from the seeds.[4c]
Artocarpus lakoocha Roxb.; Syn *A. lacucha* Buch.-Ham.	Lakuch	Moraceae	A lectin, artocarpin, isolated from the seeds precipitates several galactomannans. Besides human and animal erythrocytes, it agglutinates rat lymphocytes and mouse ascites cells.[4c]

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Asparagus adscendens Roxb.	Mushali	Asparagaceae	*A. officinalis*: Contraindicated in inflammatory kidney diseases; in edema due to functional heart or kidney disorders.[1,10]
Asparagus racemosus Willd.	Shataavari	Asparagaceae	The alkaloid A (in the root) showed antioxytocic activity *in vitro*.[4d] Roots are reported to show inhibitory effects on digestive enzymes; lipase and trypsin may lead to stoppage of degradation of food material in the intestinal tract.[4c]
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.	Nimba	Meliaceae	The oil might cause morphological changes in sperm; leaf can effect sperm motility and viability. Avoid in couples with infertility.[2] Might decrease the effectiveness of immunosuppressants in organ transplant patients.[2]
Bacopa monnieri (Linn.) Penn. ; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.	Braahmi	Scrophulariaceae	Herb: Prolongs hypnotic effect of pentobarbitone; may antagonize haloperidol-induced catalepsy, suggesting involvement of GABA-ergic system. Potentiates phenothiazines.[5] Herb's CNS action does not include serious sedation; caution with phenothinzine coadministration is indicated.[3] Taking 300 mg extract per day for 12 weeks improved verbal learning, memory, and information processing in healthy men and women.[2,16]
Bambusa arundinacea Retz. Roxb.; Syn *Bambusa bambos* (L.) Voss., *Arundo bambos* L.	Vansha	Gramineae; Poaceae	Tender shoots and root contain a cyanogenic glucoside.[4b] Manna consists of silica 90.5%, potash 1.1%, alumina 0.4%, and iron peroxide 0.9 %.[4b] Ethanolic extract of tender shoots adversely affects the sperm count and motility in rats.[4d]
Bauhinia variegata Linn.; Syn *B. candida* Roxb.	Kaanchanaara	Caesalpiniaceae	Seeds exhibit hemagglutinating activity.[4c]

Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.	Daaruharidraa	Berberidaceae	Toxic constituent: Berberine (isoquinoline alkaloids). Berberine containing herbs: Not recommended during pregnancy.[10] Berberine is well tolerated up to 0.5 g, equivalent to about 8 g dried root. Therapeutic dose. Powder 0.32–2.6 g.[11] Drug interaction with berberine: Cyclosorine, Cytochrome P450 3A4 (CYP3A4) substrates.[2]
Bergenia ciliata Sternb.; *Bergenia ligulata* (Wall.) Engl., *Saxifraga ligulata* Wall.	Paashaanabheda	Saxifragaceae	*Bergenia ciliata* rhizome: Acetone extract reported to be cardiotoxic in higher doses and depressant on CNS. Mildly diuretic; in higher doses antidiuretic in experimental animals.[4b]
Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.	Punarnavaa	Nyctaginaceae	Official as a diuretic in IP. The cholinergic activity of the root was observed *in vitro* but not *in vivo*.[4d]
Boswellia serrata Roxb.	Shallaki	Burseraceae	For osteoarthritis (adult dose): 250–1,200 mg of alcoholic dry extract (4.2–5.9:1, to contain approximately 65% of total organic acids) divided into 3 doses.[8b] Boswellic acids might prevent organ rejection and ischemia/reperfusion injury.[2]
Brassica alba (L.) Boiss.; Syn *Sinapis alba* L.	Sarshapa-Gaura	Cruciferae; Brassicaceae	Isothiocyanates can cause endemic goiter.[2] Irritant poisoning (on ingestion of a large quantity) can occur in people with kidney disorders.[2] GRAS status in the United States.
Brassica campestris Linn. var. *rapa* (L.) Hartm.	Sarshapa	Cruciferae; Brassicaceae	The pollen grains act as allergens causing bronchial and bronchopulmonary problems. Glycoprotein containing 11.4% of carbohydrate is the main allergin.[4d]
Brassica juncea (Linn.) Czern. & Coss.	Raajikaa	Cruciferae; Brassicaceae	Toxic constituent: Glucosinolates.[11] Vegetable containing glucosinolates are goitrogenic.[5] Drugs interacting with black mustard: antacids, H_2 blockers, proton pump inhibitors.[2]
Butea monosperma (Lam.) Taub.; Syn *B. frondosa* Koenig ex Roxb.	Paalasha	Papilionaceae; Fabaceae	Flower and seed: Antiestrogenic. Seed: Nephrotoxic. Anthelmintic principle: Palasonin.[4b]
Calotropis gigantea (Linn.) R. Br. ex Ait.	Alarka	Asclepiadaceae	Root: Cardiac glycosides[2] may be additive with digoxin.[5] Drugs interacting with the herb: Digoxin, diuretic drugs, stimulant laxatives.[2]

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Cannabis sativa Linn.; Syn *C. indica* Linn.	Bhangaa	Cannabinaceae	Toxic constituents: Tetrahydrocannabinol (cannabinoids 15–20%).[11] Oxytocic, crosses human placenta, high doses damage developing embryos.[11] Dried crushed mature leaves and flower shoots, known as Bhaang, are an ingredient in cannabis chocolates in the United States and Mexico.
Carthamus tinctorius Linn.	Kusumbha	Asteraceae	Flowers: Sedative, emmenagogue.[4b] The plant contains a propanetriol derivative which can be used for the treatment of circulatory disorders.[4c]
Carum carvi Linn.	Krishna jiraka	Apiaceae; Umbelliferae	Seed: May lower blood glucose and test results.[2] Should not be used in gastroesophageal reflux disease or during pregnancy (uterine relaxation may occur). Side effects include renal dysfunction.[7] Drugs interacting with the herbs: Antidiabetic drugs.[2]
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.	Aaragvadha	Caesalpiniaceae	*Senna* spp.: Contraindicated in abdominal pain of unknown origin, pregnancy, lactation, appendicitis, Crohn's disease, ulcerative colitis, ileus, intestinal inflammation or obstruction, children under 12 year of age;[1,5,8a] in hemorrhoids.[10] With chronic use or abuse: Electrolyte imbalance, potassium deficiency, albuminuria, hematuria.[1] May potentiate toxicity of digitalis and diuretics.[12] Toxic constituents in *Senna* spp.; anthraquinone glycosides, dianthrones, anthrones.[11] Drugs interacting with the herbs: Digoxin, diuretic drugs.[2]
Celastrus paniculatus Willd.	Jyotishmati	Celastraceae	Seed oil: CNS depressant, additive to pentobarbitol.[4b]
Centella asiatica (Linn.) Urban.; Syn *Hydrocotyle asiatica* Linn.	Manduukaparni	Umbelliferae; Apiaceae	Emmenagogue.[3,6] Excessive internal use is contraindicated in early pregnancy.[6] Canadian regulation do not allow the herb as a nonmedical ingredient for oral use products.[10] In majority of randomized and placebo controlled studies, in which daily dose of 60–180 mg of *Centella* triterpene fractions have been taken orally for periods up to 12 months, no side effects were reported.[8b]

Chenopodium album Linn.	Vaastuuka	Chenopodiaceae	Toxic constituents of *C. ambrosioides* (American wormseed): Ascaridole (unsaturated terpene peroxide of volatile oxide); nitrates. Emmenagogue, abortifacient.[11]
Cinnamomum camphora (Linn.) Nees & Eberm.	Karpura	Lauraceae	Contraindicated externally on injured skin, burns,[1] preparation not to be used in the facial region of infants and small children, especially in the nasal area.[1,10] Not for long term use.[10] Toxic constituents: Camphor (volatile saturated ketone), 30–50% of volatile oil, safrole, cincole, (volatile oxides) in crude camphor oil.[11] Camphorated oil (20% camphor in cottoneseed oil) was removed from the U.S. market due to toxicity in 1980s. Available without a prescription in Canada.[2]
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.	Daarusitaa	Lauraceae	Contraindicated in pregnancy.[1] Large doses caused stimulation of vasomotor center.[5,10] Drugs interacting with the herb: Antidiabetic drugs.[2]
Cissampelos pareira Linn.	Paathaa	Menispermaceae	Root: Alkaloid haytine (methiodide and methochloride derivatives), reported to be potent neuromuscular-blocking agent.[4b]
Cissus quadrangular Linn.; Syn *Vitis quadrangula* Wall.	Asthisamhaara	Vitaceae	Total alcoholic extract of the plant, on parenteral administration, neutralizes antianabolic effect of the cortisone in healing fractures.[4b]
Citrullus colocynthis Schrad.	Indravaaruni	Cucurbitaceae	Toxic constituents in dried pulp or unripe fruit: Up to 3% E-, I-, and L-cucurbitacins and 0.21% alpha-elaterin (glycosides). Toxic dose: 0.6–1 g.[11] Contraindicated in infections or inflammatory gastrointestinal conditions. Death has resulted from the consumption of as little as 1½ teaspoons of powder.[2] Drugs interacting with the herb: Digoxin, diuretic drugs.[2]
Citrus limon (Linn.) Burm. f.	Jambira	Rutaceae	The furocoumarins, bergapten, and oxypeucedanin in oil are photosensitizing. Topically photosensitivity can occur.[2]
Clematis gouriana Roxb.	Muurvaa		Leaves: Protoanemonin is a direct irritant to the skin and mucous membranes, check after drying the herb.[10]
Clerodendrum phlomidis Linn. f.; Syn *C. multiflorum* (Burm. f.) O. Kuntze	Tarkaari	Verbenaceae	Plant: Exhibited antiovulatory activity and prevented pregnancy in albino rats.[4c]

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Clitoria ternatea Linn.	Aparaajitaa	Papilionaceae; Fabaceae	Seeds: Contain a nucleoprotein with its amino acid sequence similar to insulin, but for the absence of histidine, threonine, proline, and cystine.[4c]
Coccinia indica W. & A.; Syn *C. cordifolia* Cogn., *Cephalandra indica* Naud.	Bimbi	Cucurbitaceae	Pectin extracted from the fruit enhanced glycolysis and glycogenesis, and decreased glycogenolysis.[4c]
Cocos nucifera Linn.	Naarikela	Palmae; Arecaceae	Coconut oil, in amounts commonly found in food, has GRAS status in the United States. Coconut or coconut oil consumption is not associated with an increased risk of atherosclerosis and coronary heart disease, though it can increase LDL levels.[2]
Coix lacryma-jobi Linn.; Syn *C. lachryma* Linn.	Gavedhukaa	Poaceae; Gramineae	Seeds and leaves: May promote fertility in woman; trans-ferulyl stigmastanol and trans-ferulyl campestanol (isolated from the seed) may induce ovulation.[4c]
Commiphora molmol (Nees) Engl.; Syn *Balsamodendron myrrha* Nees., *C. abyssinica* (Berg.) Engl.	Bola	Burseraceae	Amounts greater than 2–4g can cause kidney irritation and diarrhea; large amounts can affect heart rate.[2]
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks	Guggul	Burseraceae	Emmenagogue, uterine stimulant.[10] In contrast to studies of guggul in Indian population, taking guggul in dose of 3,000 or 6,000 mg per day does not seem to lower total cholesterol or triglycerides, or raise HDL cholesterol in people on Western diet. It seems to increase LDL cholesterol by 9 to 10%.[2,17] Drugs interacting with the herbs: Antiplatelet/anticoagulant drugs, contraceptive drugs, cytochrome P450 3A4 substrates, diltiazem, estrogens, propranolol, tamoxifen, thyroid hormones.
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.	Shankhapushpi	Convolvulaceae	Multiple doses of "Shankhapushpi syrup" decreased serum level of phenytoin and half life (Dilantin);[5] Loss of seizure control was reported.[4c,9,12]

Corallocarpus epigaeus Benth. ex Hook f.	Shukanaasaa	Cucurbitaceae	Root: Emetic; contains cucurbitacin B.[4c]
Coriandrum sativum Linn.	Dhaanyaka	Umbelliferae; Apiaceae	Contraindications: May interact with hypoglycemic agents.[5]
Coscinium fenestratum Colebr.	Kaaliyaka	Menispermaceae	Plant contains 5% berberine.[4c]
Costus speciosus (Koenig) Sm.	Kebuka	Zingiberaceae	Rhizomes: Abortifacient. Diosgenin, isolated from the plant, is the raw material for synthesis of corticosteroids, sex hormones, oral contraceptives, and anabolic agents.[4c]
Crocus sativus Linn.	Kumkuma	Iridaceae	Toxic constituents in stigma and styles: Alpha-crocin (carotenoids), picrocrocin (volatile glycoside).[11] Emmenagogue, uterine stimulant, abortifacient.[10] Side effects occur on 5 g, lethal dose 20 g, therapeutic dose 1.5 g/day.[10] Abortifacient dose 10 g,[1] side effects include severe purpura, a thrombocytopenia of 24,000, hypothrombinemia of 41%, severe collapse with uremia, bleeding from uterus, bloody diarrhea, bleeding from nose and eyelids, vertigo, dizziness, numbness.[1]
Crotalaria juncea Linn.	Shana	Fabaceae; Papilionaceae	Seeds: An ethanolic extract (90%) exhibited antiimplantation activity in albino rats (200 mg/kg for 7 days after coitus), abortifacient activity when given for 3 days after coitus.[4c]
Croton tiglium Linn.	Dravanti	Euphorbiaceae	Toxic constituents in oil from seeds: Phorbols (terpenoids) from nonvolatile oil. Crotin, a toxic albuminous substance, is not extracted in the oil.[11] Phorbol esters: Tumor promoting.[4c]
Cucurbita pepo Linn.	Kushmaandi	Cucurbitaceae	Average daily dose of ripe, dried seeds in irritable bladder, micturition problems of benign prostatic hyperplasia, stages 1 and 2: 10 g or equivalent preparations.[1] No restriction. Long-term administration may be advisable.[8b]
Cuminum cyminum Linn.	Jiraka	Umbelliferae; Apiaceae	Fine grinding of seed can cause loss of 50% of volatile oil, most within 1 hour.[2] Phytotoxic effect of oil, due to cuminaldehyde.[2] An aqueous extract, its concentrated fraction and an isolated flavonoid glycoside (CC-I) increased bioavailability of the antituberculosis drugs like rifampicin (PO in rats).[6,18]

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Curcuma longa Linn.; Syn *C. domestica* Valeton	Haridraa	Zingiberaceae	Root: Contraindicated in obstruction of bile passage, in cases of gallstones use only after consulting a physician.[1,5,10] Not to be administered to patients with stomach ulcers or hyperacidity.[5,10] Emmenagogue, uterine stimulant.[5,10] Curcumin may potentiate antiplatelet activity, interacts with antiplatelet agents.[12]
Curcuma zedoaria Rosc.	Karchuura	Zingiberaceae	To be used with caution during excessive menstruation.[10]
Cymbopogon citratus (DC.) Stapf.; Syn *Andropogon citratus* DC.	Bhuutika	Poaceae	Emmenagogue, uterine stimulant.[10] Contraindicated in glaucoma, (citral raised ocular pressure in very low doses in experimental studies), in benign prostatic hyperplasia (due to citral),[6] in pregnancy.[5] Adverse reactions include slight elevation of direct bilirubin and amylase.[2,5]
Cyperus rotundus Linn.	Mustaka	Cyperaceae	Methanolic extract of plant stimulates the production of melanin in cultured melanocytes.[4c] Alcoholic and aqueous extract of tubers possess lipolytic action.[4c]
Datura metel Linn.; Syn *D. fastuosa* Linn.	Dhattuuraa	Solanaceae	Toxic constituents: Hyoscine, hyoscyamine.[11] Adverse reactions: Agitation, blurred vision, dilated pupils, disorientation, hallucinations, mydriasis, tachycardia, seizures, xerostomia, and coma.[5] Lethal dose for adults: 15–100 g dry leaf powder; 15–25 g seeds; 100 mg atropine.
Desmodium gangeticum DC.; Syn *Hedysarum gangeticum* Linn.	Shaaliparni	Fabaceae	Root extract exhibited significant antifertility activity at 50 and 100 mg/kg in rats.[4c]
Dolichos biflorus Linn.; Syn *Vigna unquiculata* (L.) Walp.	Kulattha	Fabaceae; Papilionaceae	A dipeptide, pyroglutamyglutamine, is diuretic, found to be 2–3 times that of acetazolamide in albino rats.[4e]
Dorema ammoniacum D. Don.	Ushaka	Apiaceae; Umbelliferae	Oleo-gum resin is the source of the drug Amoniacum.[4a]
Echinochloa frumentacea Link.; Syn *Panicum frumentaceum* Roxb.	Shyaamaaka	Poaceae; Gramineae	Contains glutelin.[4a]

Elettaria cardamomum Maton.	Sukshmailaa	Zingiberaceae	Contraindicated in case of gallstones (to be used only after consultation with physician);[1] in gastroesophageal reflux disease,[7] cholagogue.[1]
Embelia ribes Burm. f.	Vidanga	Myrsinaceae	A potential contraceptive plant.[4c] Embelin: Antispermatogenic, changes can be reversed. [4c]
Ephedra gerardiana Wall. ex Stapf.	Soma	Ephedraceae	Toxic constituents: Ephedrine, pseudoephedrine, (2-aminophenylpropane alkaloids),[11] contraindicated in anxiety, high blood pressure, glaucoma, impaired circulation of the cerebrum, adenoma of the prostate with residual urine accumulation, pheochromocytoma, thyrotoxicosis, may potentiate MAO inhibition.[3,10,13] Interacts with methyldopa, beta blockers, caffeine, monoamine oxidase inhibitors, theophylline sympathomimetics, St. John's wort, guanethidine, cardiac glycosides, oxytocin.[12]
Erythrina variegata Linn. var. *orientalis* (Linn.) Merrill.; Syn *E. indica* Lam.	Paaribhadra	Fabaceae; Papilionaceae	Alkaloids: Muscle relaxants, increase the sedative effect of hexabarbitol, LD_{50} in mice 306.4 mg/kg.[4c]
Euphorbia hirta Linn.; Syn *E. pilulifera* auct. non Linn.	Dudhikaa	Euphorbiaceae	Contraindicated in individuals with infection or inflammatory gastrointestinal conditions.[2]
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.	Snuhi	Euphorbiaceae	Canadian regulations do not allow *Euphorbia* in foods.[10]
Ferula foetida Regel.; Syn *F. assafoetida* Linn.	Hingu	Apiaceae; Umbelliferae	Emmenagogue, uterine stimulant, contraindicated in infant colic,[10] in bleeding disorders, pregnancy, infection or inflammatory GI diseases,[5] peptic ulcers,[6] 50–100 mg of gum resin may cause convulsions in persons suffering from nervousness.[2,10] Drugs interacting with the herb: anticoagulant/antiplatelet drugs, antihypertensive drugs.[2]
Ficus benghalensis Linn.	Vata	Moraceae	Bark extracts due to leucodelphinidin and bengalenoside, not to be taken concurrently with diabetes medications.[5] Three constituents decreased blood glucose in research animals.[5]
Ficus hispida Linn. f.; Syn *F. daemona* Koen. ex Vahl., *F. oppositifolia* Roxb.	Kaakodumbara	Moraceae	Fruits, seeds, bark: Emetic.

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Foeniculum vulgare Mill.	Mishreyaa	Apiaceae; Umbelliferae	Fennel oil: Not to be used for infants and toddlers.[1] Estragole (5–10% of essential oil): A procarcinogen,[10] concomitant use of fennel may reduce ciprofloxacin bioavailability by nearly 50% possibly due to calcium, iron, and magnesium contained in fennel. Fennel increases tissue distribution and slows elimination of ciprofloxacin.[2,14] Similar effects may be expected from fluroquinolones.[14]
Fumaria parviflora Lam.; *F. indica* (Haussk.) Pugsley.	Parpata	Fumariaceae	Should not be used by persons with seizure disorders or increased intraocular pressure.[7] *Fumaria officinalis* contraindicated in biliary obstructions. In cases of gallstones, not to be used without medical advice. [8b]
Garcinia indica Choisy.; Syn *G. purpurea* Roxb.	Vrkshaamla	Guttiferae; Clusiaceae	*Garcinia cambogia*: Mixed evidence of the use of garcinia fruit rind extract for weight loss. An extract containing 50% hydroxycitric acid, 1,000 mg three times daily and 500 mg four times daily has been used.[2]
Gentiana kurroo Royle.	Traayamaana	Gentianaceae	Toxic constituents in *Glutea* root are amarogentine, gentiopicrin, swertia marin, sweroside, (iridoid monoterpenes).[11] Contraindicated in gastric and duodenal ulcers.[1]
Gloriosa superba Linn.	Laangali	Liliaceaes	Young sprouts, seeds, tubers: Source of colchicine.[4a]
Glycyrrhiza glabra Linn.	Yashtimadhu	Fabaceae; Papilionaceae	Toxic constituent in the root: 6–14% glycyrrhizic acid (saponin glycoside) interacts with spironolactone (antagonizes diuretic effect), cardiac glycosides, thiazide diuretics (can cause hypokalemia, may potentiate digoxin toxicity, corticosteroids, cyclosporine, monoamine oxidase inhibitors (immunostimulating effect may decrease response to the drugs). Sympathomimetic amines, may increase the risk of hypertensive crisis.[10,12] Contraindicated in cholestatic liver disorders, liver cirrhosis, hypertonia, hypokalemia, severe kidney insufficiency, pregnancy,[1] bleeding disorders, diabetes (on insulin), impotence, male infertility.[5] Deglycyrrhizinized licorice (DGL) is usually free of side effects.[10] French regulation limits daily consumption to 5 g or as tea 8 g.[10]

Gossypium arboreum Linn.	Kaarpaasi	Malvaceae	Root bark: Abortifacient, emmenagogue, uterine stimulant, contraindicated in urogenital irritation or tendency to inflammation. Chronic use may cause sterility in men.[10] Gossypol decreases sperm count, interacts with diuretics and potentiates hypokalemia, with NSAIDs, increases gastrointestinal irritations, concurrent use with thyroid replacement therapy may require an increase in dosage of the drug.[5] Canadian regulation does not allow an excess of 450 ppm of free gossypol in foods (cottonseed meal and oils).[10] Drugs interacting with gossypol: Digoxin, diuretic drugs, NSAIDS, stimulant laxatives, theophylline.[2]
Gymnema sylvestre R. Br.	Meshashringi	Asclepiadaceae	Gymnemic acid and Gurmarin, inhibit the ability to taste bitter (quinine) or sweet (sugar), without affecting the ability to taste sour, astringent, or pungent flavors.[2]
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.	Saarivaa	Asclepiadaceae; Periplocaceae	Known as Indian or false sarsaparilla, in Western herbals; according to Tyler (Honest herbals), does not contain same saponins or other principal constituents found in sarsaparilla.
Hibiscus rosa-sinensis Linn.	Japaa	Malvaceae	Alcoholic extract of flowers showed anti-implanation activity. [4c,d]
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.	Girimallikaa	Apocynaceae	Latex: Irritant, high doses affect blood vascular system.[4c]
Hordeum vulgare Linn.	Yava	Poaceae; Gramineae	Seeds contain gliadin, a component of gluten.[5] May suppress the secretion of milk in women whose children have died after birth.[19]
Hyoscyamus niger Linn.	Khuraashaanikaa	Solanaceae	Toxic constituents in whole plant: Scopolamine (hyoscine), hyoscyamine, butyrine (tropane alkaloids), hyospicrin (glucoside).[11] Leaf: Contraindicated in tachycardiac arrythmias, prostatic adenoma with urine retention, narrow angle glaucoma, acute pulmonary edema, mechanical stenosis in any part of the gastrointestinal tract, megacolon.[1] Hyoscymine and scopolamine alkaloids are anticholinergic.[5] Therapeutic dose: 130–325 mg powder, hyoscine hydrobromate 0.33–0.93 mg.[11]

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Imperata cylindrica Rausch.; Syn *I. arundinacea* Cyr.	Darbha	Poaceae; Gramineae	Leaves and stem contain cyanophoric compounds.[4c] Plant can be used as a substitute for ephedra (as an antifatigue agent).[4c]
Indigofera tinctoria Linn.	Nili	Fabaceae	The plant contains appreciable amount of conjugated indoxyl, together with rotenoids. Can be used in endogenous depression.[4c] Indirubin isolated from the plant: an antitumor constituent.[4d]
Inula racemosa Hook. f.; Syn *I. royleana* auct. non.-DC.	Pushkaramuula	Asteraceae; Compositae	The root powder has been found to possess beta-blocking activity.[4c]
Juniperus communis Linn. var. *saxatillis* Palias.; Syn *J. communis* auct. non L.	Hapushaa	Cupressaceae; Pinaceae	Fruits are contraindicated in pregnancy and inflammatory kidney diseases.[1,10] Not for use exceeding four to six weeks in succession. Canadian regulation does not allow juniper as a nonmedical ingredient for oral use products.[10] The volatile monoterpenes are irritant to the urinary mucosa.[11]
Lathyrus sativus Linn.	Triputa	Fabaceae; Papilionaceae	Seeds: Neurotoxic.[4c]
Lawsonia inermis Linn.	Madayantikaa	Lythraceae	Leaf: History of internal use as an abortifacient is recorded in Africa.[10] Leaf juice (50 g), taken as an oral herbal contraceptive in both the sexes; prolonged use may cause permanent sterility.[4c]
Linum usitatissimum Linn.	Atasi	Linaceae	Contraindicated in intestinal obstruction of any origin[1,8a] bleeding disorders, elevated prolactin, hypokalemia.[5] Use during pregnancy or lactation, only on medical advice.[5] Toxic constituents: Linatine, (glutamic acid derivatives) from seed; lotaustralin (cyanogenic glycosides) from leaves, stems, and roots; 0.1–1.5 % linustatin and neolinustatin (cyanogenic glycosides) in seeds.[11] In spite of cyanogenic glycosides, single dose of up to 150-300 g of powdered linseed is not toxic.[8a]

Loranthus longiflorus Desr.	Vrikshaadani	Loranthaceae	Plant: Diuretic, antilithiatic.[4c]
Madhuca indica J. F. Gmel.; Syn *M. logifolia* (Koen.) Macb. var. *latifolia* (Roxb.) Cheval., *Bassia latifolia* Roxb.	Madhuuka	Sapotaceae	Seed oil causes total but reversible sterility in male rats; shows testicular atrophy and degeneration of seminiferous tubules.[4c]
Malva rotundifolia Linn.; Syn *M. neglecta* wall.	Suvarchalaa	Malvaceae	Leaves: Emmenagogue.[4a]
Maranta arundinacea Linn.	Tugaa	Marantaceae	Roots: Canadian regulations do not allow arrow roots as a nonmedical ingredient for oral use products.[10] The tuber contains a protease inhibitor, which inhibits the proteolytic activity of human and bovine pancreatic secretion.[4d]
Marsdenia tenacissima W. & A.	Muurvaa	Asclepiadaceae	The roots are used as a substitute for black nishoth (*Ipomoea turpethum*).[4c]
Melia azedarach Linn.	Mahaanimba	Meliaceae	Fruits: Poisonous. Cases of severe poisoning have been reported.[4a]
Mimosa pudica Linn.	Lajjaalu	Mimosaceae	Feeding trials with horses in large doses caused toxic symptoms including loss of hair. Leaf meal caused stunted growth in chicks.[4a]
Momordica charantia Linn.	Kaaravellaka	Cucurbitaceae	Potentiates effects of hypoglycemic drugs.[12] Safety in pregnancy is not established. Red arils should not be consumed by children. Excessive amount can cause diarrhea and GI distress.[5] Juice: Emmenagogue and abortifacient.[6]
Moringa oleifera Lam.; Syn *M. pterygosperma* Gaertn.	Shobhaanjana	Moringaceae	Root and bark extract: Antifertility activity in experimental animals.[4c] Root more potent than bark.[4c] Due to levodopa, the herb might cause false urine glucose test, elevated liver function test, and elevated urine uric acid levels.[2] Drugs interacting with the herb: antidiabetic drugs, antipsychotic drugs, guanethidine, methyldopa, MAO inhibitors, tricyclic antidepressants.[2]
Myrica esculenta Buch.-Ham. ex Don.; Syn *M. nagi* Hook. f. non-Thunb.	Katphala	Myricaceae	Canadian regulations do not allow bayberry (*Myrica*) as a nonmedical ingredient for oral use products.[10] Fruits are sedative.[4a]

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Myristica fragrance Houtt.	Jaatiphala	Myristicaceae	Toxic constituents: Myristicin, elemicine, safrole. More than 5 g of powdered nutmeg, or mace affects the central nervous system, producing hallucinations, headache, dizziness, drowsiness, nausea, stomach pain, liver pain, excessive thirst, rapid pulse, anxiety, double vision, and sometimes acute panic, coma or death.[1,5,10] With ingestion of 9 teaspoons of nutmeg powder per day, an atropine-like effect was observed.[1,5] When taken in a larger amount, the herb has abortifacient action.[1]
Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.	Jataamaansi	Valerianaceae	Rhizome: Emmenagogue, uterine stimulant.[10] Oil: Potentiated phenobarbital narcosis, reduced brain serotonin content in rats.[4c] Action at variance with that of reserpine which has direct action on cell to liberate serotonin.[4c]
Nelumbo nucifera Gaertn.; Syn *Nelumbium speciosum* Willd.	Kamala	Nymphaeaceae	Contraindicated in constipation and stomach distention.[10]
Nerium indicum Mill.; Syn *N. odorum* Soland.	Karavira	Apocynaceae	Powdered extract of leaf: Contraindicated in hypercalcemia.[5] Entire plant is toxic, has caused fatal poisonings. Contains cardiac glycosides.[5] Between 65–86% of the cardioactive glycosides are absorbed and about 50% are protein bound. The duration of effect is about 2.65 days.[11]
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.	Barbari	Labiatae; Lamiaceae	Not recommended for infants or toddlers or for extended period of time.[10] The herb contains about 0.5% of essential oil with up to 85% of estragole (a procarcinogen).[1,5]
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.	Tulasi	Labiatae; Lamiaceae	Essential oil contains estragole (a procarcinogen).[5] In mice, leaf extract decreased serum T4. To be used with caution in thyroid diseases.[5]
Origanum majorana Linn.; Syn *Majorana hortensis* Moench.	Phanijjaka	Labiatae; Lamiaceae	Emmenagogue,[6] has the potential for stimulating menstruation.[2] Should be avoided in early pregnancy.[6]
Paederia foetida Linn.	Gandhaprasaarini	Rubiaceae	Root and bark: Emetic.[4a]

Papaver somniferum Linn.	Ahiphena	Papaveraceae	Toxic constituents in latex from unripe seed capsules: Morphine, codeine, papaverine (isoquinoline alkaloids).[11] Opium is a controlled substance in many countries.[10]
Picrorhiza kurroa Royle. ex Benth.	Katuki	Scrophulariaceae	There is some concern that *Picrorhiza* might adversely affect patients with autoimmune disorders because of its immune-stimulating effects. Avoid using in patients with multiple sclerosis, systemic lupus erythomatosus, rheumatoid arthritis, and other autoimmune disorders.[2] Interacts with immunosuppressants.[2]
Piper cubeba Linn. f.	Kankola	Piperaceae	Contraindicated in nephritis,[2,10] also in individuals with infections or inflammatory GI conditions.[2] Drugs interacting with the herb: Antacids, H_2 blockers, proton pump inhibitors.[2]
Piper longum Linn.	Pippali	Piperaceae	Contraindicated in pregnancy in large doses.[5,6] Piperine inhibits gastric emptying and GI transit. Also increases drug-induced sleep.[5]
Piper nigrum Linn.	Maricha	Piperaceae	Contraindicated in pregnancy in large doses.[5,6] Phenytoin was more rapidly and more completely absorbed and eliminated more slowly when taken with piperine.[6] Piperine can augment the therapeutic effects of phenobarbital, phenytoin, rifampicin, theophylline, and other drugs; it can also predispose the patient to an increased risk of side effects of drugs with a narrow therapeutic window that are liver metabolized (e.g., theophylline).[14] Drugs interacting with the herb: CYP 3A4 substrates, P-glycoprotein substrates, phenytoin, propranolol, rifampicin, sparteine, theophylline.[2]
Pisum sativum Linn.	Kalaaya	Fabaceae	An antifertility agent. *m*-Xylohydroquinone, isolated from peas, produced fatal resorption in rats; in humans reduced fertility rate by 50%.[4d]
Polygonatum verticillatum All.	Medaa	Liliaceae	Plant: Diuretic, contains a digitalis glucoside.[4a] Rhizomes may be used as a source of diosgenin.[4c]

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet).	Badaam	Rosaceae	A Japanese patent claims isolation of low molecular weight peptides with analgesic and anti-inflammatory properties.[2] Drugs interacting with the herb: ACE inhibitors, antihypertensive drugs.[2]
Prunus cerasus Linn.	Elavaaluka	Rosaceae	Leaves: Anticonvulsant. Seed kernel: Nervine tonic.[4a]
Psoralea corylifolia Linn.	Baakuchi	Fabaceae; Papilionaceae	Toxic symptoms of seeds: Nausea, vomiting, malaise, GI disturbances. External application of oil: Irritant to skin, causes blistering.[4a] Oil even in high dilutions (up to 1 in 100,000) increases tone of the uterus and stimulates smooth muscles of experimental animals.[4a] A mixture of psoralen and isopsoralen (in 1:3 ratio) is recommended in leucoderma.[4d] A powder has been patented in China containing salt as the main ingredient with *P. corylifolia* extract for odontopathy, dental caries, and periodontal diseases. In Japan, oral compositions are being patented containing extracts of *P. corylifolia* for controlling *Streptococcus mutans*–related dental caries.[4d]
Pterocarpus santalinus Linn. f.	Raktachandana	Fabaceae; Papilionaceae	Regulated in the United States as an allowable flavoring agent in alcoholic beverages only.[10]
Putranjiva roxburghii Wall.; Syn *Drypetes roxburghii* (Wall.) Hurusawa.	Putrajiva	Euphorbiaceae	Dried root bark, stem bark, seeds contain toxic constituents pelletrin, piperidine alkaloids 0.4%, punicalagin, punicacontein C, casurin (tannins 20–25%).[10,11]
Quercus infectoria Oliv.	Maajuphalaka	Fagaceae	Oak bark: Contraindicated in cardiac insufficiency, hypertonia and externally on broken skin.[5] Tannins may interfere with absorption of drugs.[5]
Randia dumetorum Lam.; Syn *R. spinosa* Poir., *R. brandsii* Gamble, *R. longispina* W. & A., *R. tomentosa* W. & A. non Blume., *Xeromphis spinosa* Keay.	Madana	Rubiaceae	Fruit pulp: Emetic and abortifacient, potentiates penobarbitone, depresses heart, relaxes ileum, antagonizes effect of acetylcholine (in animal studies).[4a,c]

Randia uliginosa DC.; Syn *Catunaregam uliginosa* (Retz.) Sivarajan.	Pinditaka	Rubiaceae	Roasted pulp is used during pregnancy in GI distress.[4a]
Raphanus sativus Linn.	Muulaka	Cruciferae; Brassicaceae	Contraindicated in cholelithiasis.[1] It might cause biliary colic.[2] Seeds contain glycosidically bound mustard oils.[4a] Red radish contains anthocyanins.[4d]
Rauvolfia serpentina Benth. ex Kurz.	Sarpagandhaa	Apocynaceae	Contraindicated in depression, ulcer, pheochromocytoma, pregnancy and lactation,[1] Parkinson's disease.[7] Toxic constituents: Reserpine, serpentine, raupine, ajmaline, and other indole alkaloids.[11]
Rheum emodi Wall. ex Meissn.; Syn *R. australe* D. Don.	Amlaparni	Polygonaceae	Rhubarb root: Contraindicated in intestinal obstruction, Crohn's disease, colitis ulcerosa, appendicitis, abdominal pain of unknown origin,[1] pregnancy and children under 12 years of age. Toxic constituents: Emodin, anthraquinones.[11]
Ricinus communis Linn.	Eranda	Euphorbiaceae	Seed oil: Contraindicated in intestinal obstruction and abdominal pain of unknown origin, appendicitis, ulcerative colitis.[5,10] Must be used with caution during pregnancy and menstruation.[10] Toxic constituents seeds, leaves: 3% ricin (toxalbumin), ricinine.[11] (Ricin as a warfare agent: weapons-grade ricin is purified and produced in inhalable particles that can be aerosolized for a mass attack.[2])
Salvia plebeia R. Br.	Samudrashosha	Labiatae; Lamiaceae	Sage leaf: Essential oil and alcoholic extracts contraindicated during pregnancy.[1,10] Sage oil contains more thujone than absinthium oil, yet it has not been reported as toxic.[10] Alcoholic preparations to be used with caution due to the presence of thujone.[8a] Essential oil not recommended during pregnancy or lactation.[8a]
Santalum album Linn.	Chandana	Santalaceae	Contraindicated in the diseases of parenchyma of the kidney.[1,10] Oil is considered to be the kidney irritant.[2] Use longer than six weeks not advised.[2] Extracts of the alpha- and beta-santols are sedative and could be considered as neuroleptic by resemblance to pharmacological activities of chloropromazine.[4d]

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Sarcostemma brevistigma W. & A.; *S. acidum* Voigt.	Somavalli	Asclepiadaceae	Dried stem: Emetic. Active constituents of the plant: Toxic.
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.	Kushtha	Asteraceae; Compositae	The root is commonly contaminated with aristolochic acid which is nephrotoxic and carcinogenic. Any product that contains plants, known or suspected to contain aristolochic acid is detained in the United States.[2]
Sesamum indicum Linn.; Syn *S. orientale* Linn.	Tila	Pedaliaceae	Anaphylaxis associated with sesame consumption has been described, especially in persons with a known history of asthma or with other anaphylactic sensitivity.[10]
Sida cordifolia Linn.	Balaa	Malvaceae	Ephedrine is reported to be present in the plant.[4a] Drugs interacting with the herb: Antidiabetic drugs, dexamethasone, ergot derivatives, methylxnathine, MAOs, tricyclic antidepressants.[2]
Solanum indicum Linn.	Brihati	Solanaceae	Utilization of the fruit as an alternative source of steroidal material for the preparation of cortisone and steroid sex hormones has been suggested.[4a]
Solanum nigrum Linn.; Syn *S. rubrum* Mill.	Kaakamaachi	Solanaceae	Toxic constituents: Glycosidal alkaloids, solamargine and solasonine. Total alkaloids in fruits and leaves: 0.101 and 0.431%, respectively.[4a]
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., *S. virginianum* Linn., *S. maccanni* Sant.	Kantakaari	Solanaceae	Glycoalkaloids and fatty fractions of the herbs cause depletion of histamine from bronchial and lung tissues.[4a]
Spinacia oleracea Linn.; Syn *S. tetrandra* Roxb.	Paalankikaa	Chenopodiaceae	Spinach is not recommended in diets of growing children, pregnant women and patients suffering from calcium deficiency (due to high content of oxalate in leaves).[4a] Oxalates can be eliminated by boiling the vegetable for 15 minutes and rejecting the water. Discarding the cooking water reduces nitrate content.[4a]

Streblus asper Lour.; Syn *Epicarpurus orientalis* Bl.	Shaakhotaka	Moraceae	The Central Drug Research Institute, Lucknow, India, has developed an antifilarial elephantiasis drug (glycoside asperoside-K029 and glycoside strebloside-K030) from the crude extracts of the stem.[4c]
Strychnos nux-vomica Linn.	Vishatinduka	Loganiaceae; Strychnaceae	Toxic constituents of dried ripened seeds: 1–2%, strychnine and brucine, vomicine and other indole alkaloids, glycoside loganin, caffeotannic acid.[11] Toxic dose: 5 mg strychnine.[11]
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke., *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.	Chiraayita	Gentianaceae	May exacerbate duodenal ulcers.[2] Unlike most other bitters, it does not constipate the bowels, may nauseate and oppress in overdoses.[4a] GRAS status in the United States.
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.	Lavanga	Myrtaceae	Contraindicated in bleeding disorders.[5] Smoking cloves may cause hemoptysis and irritation of mucous membrane.[5] (Clove cigarettes generally contain 60–80% tobacco and 20–40% ground clove.[2]) Drugs interacting with the herbs: Anticoagulant/antiplatelet drugs.[2] Eugenol and acetyl eugenol in clove oil inhibit platelet aggregation, which may be additive with anticoagulants.[5] Case reports of acute liver toxicity, intravascular coagulation, acidosis, CNS depression, and coma.[5]
Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.	Jambu	Myrtaceae	Seeds extract exhibited protection against the effect of exposure to gamma radiation.[2,20] Fruit extract not to be used concurrently with aspirin or ibuprofen.[2]
Taxus baccata Linn.	Sthauneyaka	Taxaceae	The cancer chemotherapeutic compound taxol (paclitaxel) from the bark of *T. brevifolia* and semisynthetic docetaxel from *T. baccata* are not present in nature in effective therapeutic quantities. Taxol in taxus media cultivars "Hicksy" fresh needles is at 0.0086–0.0094 g% and in microwave and oven dried needles at 0.0052 and 0.0029 g%, respectively.[11]

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Terminalia arjuna (Roxb.) W. & A	Arjuna	Combretaceae	Crude extract of the bark showed anti-implantation as well as fetus absorption activity; ethanolic extract showed only anti-implantation activity. The drug had no effect on spermatogenesis.[4d]
Terminalia chebula Retz.	Haritaki	Combretaceae	Fruit: Contraindicated in acute cough, acute diarrhea early stage dysentery. Contains tannins (25–30%).[10]
Thevetia neriifolia Juss. ex Steud.; Syn *T. peruviana* (Pers.) K. Schum.	Pita-Karavira	Apocynaceae	The oral absorbability of peruvoside is comparable to that of digoxin. It has very low toxicity. Peruvoside-containing drug, endocordin, has been marketed in Germany for cardiac insufficiency.[4d]
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.	Guduuchi	Menispermaceae	Root: Emetic. Alkaloidal constituents include berberine.[4a]
Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.	Yavaani	Apiaceae; Umbelliferae	Thymol, produced from ajowan oil, is toxic in high doses, may lead to fatal poisoning.[4a]
Trapa natans Linn. var. *bispinosa* (Roxb.) Makino.; Syn *T. bispinosa* Roxb., *T. quadrispinosa* Wall.	Shrngaataka	Trapaceae	Dentrifrices, containing collagenase inhibitor extracted from the seed extract, are used for periodontal disease control.[4d] The collagenase inhibitor is anti-inflammatory and can be incorporated into skin lotions and creams.[4d]
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.	Varshaabhu	Aizoaceae	The leaves and stems, eaten as vegetables, may produce toxic effects, even paralysis. Roots: Cathartic, contraindicated in pregnancy due to use in traditional medicine as an abortifacient.[4a]
Tribulus terrestris Linn.	Gokshura	Zygophyllaceae	Hormonal activity is attributed to protodioscin constituent of *T. terrestris*.[2,21] In Bulgaria, plant is used for impotency. A pharmaceutical preparation developed from the plant, Tribestan, has been found to increase the libido, the number and motility of sperm in men; in women it improves ovarial functions.[4d] Plant can cause neurotoxicity when used in high doses over a long period.[4d]

Trigonella foenum-graecum Linn.	Methikaa	Fabaceae; Papilionaceae	Contraindicated with all medications, may reduce absorption if used concurrently. Not to be used concurrently with anticoagulants.[6] The crude steroidal extract of seeds exerts both antifertility and antiandrogenic activity in male albino rats; fed orally 100 mg/day for 60 days significantly declined the sperm count.[4c] The European Scientific Cooperative on Phytotherapy (ESCOP) recommends seeds or equivalent preparations daily as adjuvant therapy in diabetes or for hypercholesterolemia.[8a]
Triticum aestivum Linn.	Godhuuma	Poaceae; Gramineae	Gluten sensitivity has been reported.[4a]
Valeriana wallichii DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.	Tagara	Valerianaceae	Lethal dose: Valerenic acid 400 mg/kg IP in mice; Valepotriates LD_{50} 64–150 mg/kg IP in mice; nontoxic at 4.6 g/kg orally in mice.[11] Valerian: Interacts with opiates, alcohol, CNS depressants.[5,12]
Vetiveria zizanioides (Linn.) Nash.; Syn *Andropogon muricatus* Retz., *A. squarrosus* Hook. f. (non L. f.).	Ushira	Poaceae; Gramineae	Root: Emmenagogue, uterine stimulant. Regulated in the United States as an allowable flavoring agent in alcoholic beverages only.[10]
Vitex negundo Linn.	Nirgundi	Verbenaceae	*Vitex agnus castus* berry: Contraindicated in depression associated with reduced estrogen level.[6] Not to be used during pregnancy and lactation.[7] Mutual attenuation effects might occur in patients under concomitant treatment with dopamine receptor antagonists.[8a,12] *Vitex agnus castus* has dopaminergic effect, may antagonize effects of dopamine receptor antagonists (phenothiazines).[12] Possible harmful interaction: Bromocriptine and related drugs; may augment prolactin inhibitory effects.[14] Drugs interacting with *V. agnus castus*: Antipsychotic drugs, contraceptive drugs, dopamine agonists, estrogens, metoclopramide.[2] Hormones that affect the pituitary.[5]
Vitis vinifera Linn.	Draakshaa	Vitaceae	Red vine leaf, aqueous dry extract (4–7:1) for chronic venous insufficiency.[8b] Grape seed extracts are standardized to 85–95% procynacidins.[7]

Botanical Names	Common Ayurvedic Name	Family	Herb Interactions, Toxicity, Leads
Wendlandia exserta DC.	Tilaka	Rubiaceae	An oral contraceptive of folk medicine; 20–25 g paste of young leaves, mixed with sugar, on empty stomach on third or fourth day of menstruation.
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)	Ashwagandhaa	Solanaceae	Preliminary evidence: Ashwagandhaa might boost thyroid hormone synthesis and or secretion.[22] May increase serum T4.[2,5] Contraindicated in pregnancy.[5,6,10] May potentiate barbiturates.[10] Possible harmful interaction: Antipsychotic agents, benzodiazepines, carbamazepines, phenobarbital, phenytoin, primidone, valproic acid, tricyclic antidepressants, zolpidem.[13]
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.	Tumburu	Rutaceae	Essential oil from seeds: Strong antibacterial against *Escherichia coli*, *Vibrio cholerae*, *Mycrococcus pyogens* var. *aureus*, *Shigella dysenteriae*, and *Salmonella typhi*. In a dilution of 1 in 40,000, the oil killed 50% of ciliates.[4a]
Zingiber officinale Rosc.	Aardraka	Zingiberaceae	Contraindicated in gallstones (only to be used after consultation with a physician).[1] Safety of large doses in pregnancy, not established,[5] due to emmenagogue and abortifacient effects.[6] For nausea and vomiting in pregnancy: Only under medical supervision.[8b] FDA considers ginger as GRAS.[3] Drugs interacting with the herb: Calcium channel blockers.[2]
Zizyphus jujuba (Lam.) Gaertn. non-Mill.; Syn *Z. mauritiana* Lam., *Rhamnus jujuba* L.	Badara	Rhamnaceae	Kernels: Reported to have sedative effects, are prescribed to stop nausea and vomiting and for relief from abdominal pain in pregnancy, also given as an antidote to aconite poisoning.[4a]

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10 Modern Pharmacological Classification of Ayurvedic Herbs

Chandra Kant Katiyar and Arun Gupta

CONTENTS

Ayurveda is more than just a medical system. It is a science of life. Ayurveda is a system that helps maintain health in a person by using the inherent principles of nature to bring the individual back into equilibrium with his true self. In Ayurveda there are specific terms mentioned for indications of individual herbs, for example, *kasa* (cough), *sopha* (inflammation), and *swasa* (dyspnea). Based on the indications mentioned, Ayurvedic herbs can be categorized into modern pharmacological classification: antacids, antiallergics, antiasthmatics, anticancer, antidiabetics, antidiarrheals, anti-DUB (dysfunctional uterine bleeding), antiemetics, antiflatulents, antihypertensives, anti-inflammatory, antimicrobials, antiobesity, antiparkinsonians, antipyretics, antispasmodics, antistress, antitussives and expectorants, antiurolithiatics, aphrodisiacs, blood purifiers, cardioprotectives, digestives, diuretics, galactogogues, hepatoprotectives, hypolipidemics, immunomodulators, laxatives, narcotics, nephroprotectives, nootropics, phytoestrogens, sedatives, skin disorders, tonics, and wound healers.

ANTACIDS

Asparagus racemosus Willd.
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.
Glycyrrhiza glabra Linn.

ANTIALLERGICS

Albizia lebbeck (Linn.) Willd.
Curcuma amada Roxb.
Curcuma longa Linn.; Syn *C. domestica* Valeton
Curcuma zedoaria Rosc.
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch-Ham. ex Wall.
Ocimum basilicum Linn.; Syn *O. caryophyllatum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.

ANTIASTHMATICS

Abies spectabilis (D. Don.) Spach.; Syn *Abies webbiana* Lindl.
Adhatoda vasika Nees. Syn *A. zeylanica* Medic, *Justicia adhatoda* Linn.
Albizia lebbeck (Linn.) Willd.
Alpinia galanga Willd.
Alstonia scholaris R. Br.
Amomum subulatum Roxb.
Cassia tora Linn.

Elettaria cardamomum Maton.
Ephedra nebrodensis (Tineo.) Stapf.
Glycyrrhiza glabra Linn.
Hedychium spicatum Ham. ex Smith.; Syn *H. album* Buch.-Ham. ex Wall.
Ocimum basilicum Linn; Syn *O. caryophyllatum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.
Ocimum sanctum Linn; Syn *O. tenuiflorum* Linn.
Root of *Piper longum* Linn.
Solanum indicum Linn.
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., S. *virginianum* Linn, *S. maccanni* Sant.
Taxus baccata Linn.

ANTICANCER

Abies spectabilis (D. Don.) Spach.; Syn *Abies webbiana* Lindl.
Calotropis gigantea (Linn.) R. Br. ex Ait.
Curcuma longa Linn; Syn *C. domestica* Valeton.
Semecarpus anacardium Linn. f.
Taxus baccata Linn.
Tecomella undulate (G. Don.) Seem.; Syn *Tecoma undulata* G. Don., *Bignonia undulata* Sm.

ANTIDIABETICS

Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.
Cinnamomum cassia Blume.
Cinnamomum tamala Nees. & Eberm.
Cinnamomum zeylanicum Blume; Syn *C. verum* Presl.
Curcuma longa Linn.; Syn *C. domestica* Valeton
Gymnema sylvestre R. Br.
Momordica charantia Linn.
Pterocarpus marsupium Roxb.
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke, *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.
Syzygium cuminii (Linn.) Skeels.; Syn *S. jambolanum* (Lam.) DC., *Eugenia jambolana* Lam.
Trigonella foenum-graecum Linn.

ANTIDIARRHEALS

Aconitum heterophyllum Wall. ex Royle.
Holarrhena antidysenterica (Linn.) Wall.; Syn *H. pubescens* (Buch.-Ham.) Wall. ex G. Don.
Mimosa pudica Linn.

ANTI-DUB

Nigella sativa Linn.
Saraca asoca (Roxb.) De. Wilde.; Syn *S. indica* auct. non L.
Symplocos racemosa Roxb.; Syn *S.beddomei* C. B. Clarke, *S. candolleana* Brand.

ANTIEMETICS

Citrus medica Linn.
Zingiber officinale Rosc.

ANTIFLATULENTS

Anethum sowa Roxb. ex Flem.
Ferula foetida Regel.; Syn *F. assafoetida* Linn
Foeniculum vulgare Mill.

ANTIHYPERTENSIVES

Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.
Rauvolfia serpentina Benth. ex Kurz.

ANTI-INFLAMMATORY

Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.
Boswellia serrata Roxb.
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks.
Curcuma longa Linn.; Syn *C. domestica* Valeton
Cyperus rotundus Linn.
Gum resin of *Boswellia serrata* Roxb.
Moringa oleifera Lam. Syn *M. pterygosperma* Gaertn.
Pluchea lanceolata C. B. Clarke. Substitute *Alpinia galanga*.
Ricinus communis Linn.
Semecarpus anacardium Linn. f.
Trianthema portulacastrum Linn. Syn *T. monogyna* Linn.
Vitex negundo Linn.
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)
Zingiber officinale Rosc.

ANTIMICROBIALS

Acacia arabica Willd. var. *indica* Benth.
Aconitum heterophyllum Wall. ex Royle.
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.
Berberis asiatica Roxb. ex DC.*;* Syn *Berberis aristata* DC.

Caesalpinia bonduc (L.) Roxb. Dandy & Exell.; Syn *C. bonducella* Flem., *C. crista* Linn.
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.
Embelia ribes Burm. f.
Mallotus phillippinensis Muell-Arg.
Mimusops elengi Linn.
Pongamia pinnata Pierre. Syn *P. glabra* Vent., *Derris indica* (Lam.) Benett.
Santalum album Linn.
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.
Zanthoxylum alatum Roxb. Var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.

ANTIOBESITY

Garcinia indica Choisy.; Syn *G. purpurea* Roxb.
Premna obtusifolia R. Br.; Syn *P. integrifolia* Linn., *P. corymbosa* auct. non Rottl. & Willd.

ANTIPARKINSONIANS

Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.

ANTIPYRETICS

Alstonia scholaris R. Br.
Cissampelos pareira Linn.
Leucas cephalotes (Roth.) Spreng.
Ocimum basilicum Linn.; Syn *O. caryophyllatum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.
Solanum indicum Linn.
Swertia chirayita (Roxb. ex Flem.) Karst.; Syn *S. chirata* (Wall.) C. B. Clarke, *S. tongluensis* Burkill., *Gentiana chirayita* Roxb. ex Flem., *G. chirata* Wall., *Ophelia chirata* Griseb.
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.

ANTISPASMODICS

Anethum sowa Roxb. ex Flem.
Carum carvi Linn.
Foeniculum vulgare Mill.
Hyoscyamus niger Linn.
Mentha piperata Linn. emend. Huds.
Nigella sativa Linn.

Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.

ANTISTRESS

Asparagus racemosus Willd.
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)

ANTITUSSIVES AND EXPECTORANTS

Abies spectabilis (D. Don.) Spach.; Syn *Abies webbiana* Lindl.
Adhatoda vasika Nees. Syn *A. zeylanica* Medic., *Justicia adhatoda* Linn.
Alpinia galanga Willd.
Amomum subulatum Roxb.
Cassia tora Linn.
Cedrus deodara (Roxb.) Loud.; Syn *C. libani* Barrel. var. *deodara* Hook. f.
Elettaria cardamomum Maton.
Glycyrrhiza glabra Linn.
Ocimum basilicum Linn; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.
Ocimum sanctum Linn; Syn *O. tenuiflorum* Linn.
Phyllanthus niruri Linn.
Saussurea lappa (Decne) Sch.-Bip.; Syn *S. costus* (Falc.) Lipsch.
Solanum indicum Linn.
Solanum xanthocarpum S. & W.; Syn *S. surattense* Burm. f., S. *virginianum* Linn, *S. maccanni* Sant.
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb., *Caryophyllus aromaticus* Linn.
Taxus baccata Linn.
Terminalia bellirica Roxb.
Zingiber officinale Rosc.

ANTIUROLITHIATICS

Crataeva nurvala Buch.-Ham.; Syn *C. magna* (Lour.) DC.
Saxifraga ligulata (Wall.) Engl. Syn *B. ciliata* Sternb., *B. ligulata* (Wall.) Engl.

APHRODISIACS

Cuminum cyminum Linn.
Curculigo orchioides Gaertn.
Dioscorea bulbifera Linn. Syn *D. sativa* Thumb auct. non L.; D. *versicolor* Buch.-Ham. ex Wall.
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.
Myristica fragrance Houtt.
Pueraria tuberosa DC.

Tribulus terrestris Linn.
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.)

BLOOD PURIFIERS

Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.
Hemidesmus indicus (L.) R. Br.; Syn *Periploca indica* Linn.

CARDIOPROTECTIVES

Iris germanica Linn.
Terminalia arjuna (Roxb.) W. & A.

DIGESTIVES

Allium sativum Linn.
Amomum subulatum Roxb.
Anethum sowa Roxb. ex Flem**.**
Apium graveolens Linn.
Cannabis sativa Linn.; Syn *C. indica* Linn.
Carum carvi Linn.
Cinnamomum cassia Blume.
Cinnamomum tamala Nees. & Eberm.
Cinnamomum zeylanicum Blume.; Syn *C. verum* Presl.
Coriandrum sativum Linn.
Cuminum cyminum Linn.
Curcuma zedoaria Rosc.
Cyperus rotundus Linn.
Elettaria cardamomum Maton.
Ferula foetida Regel.; Syn *F. assafoetida* Linn.
Foeniculum vulgare Mill.
Hyoscyamus niger Linn.
Nigella sativa Linn.
Phyllanthus niruri Linn.
Picrorhiza kurroa Royle. ex Benth.
Piper chaba Hunter non-Blume.; Syn *P. retrofractum* Vahl., *P. officinarum* DC.
Piper longum Linn.
Piper nigrum Linn.
Plumbago zeylanica Linn.
Root of *Piper longum* Linn.
Scindapsus officinalis Schott.
Solanum indicum Linn.
Syzygium aromaticum (Linn.) Merr. & Perry.; Syn *Eugenia aromatica* Kuntze., *Eugenia caryophyllata* Thunb.*, Caryophyllus aromaticus* Linn.
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.

Trachyspermum ammi (Linn.) Sprague.; Syn *T. copticum* Link., *Carum copticum* Benth. ex Hiern.
Trigonella foenum-graecum Linn.
Zanthoxylum alatum Roxb. var. *Z. planispinum* Sieb. & Zucc.; Syn *Z. armatum* DC.
Zingiber officinale Rosc.

DIURETICS

Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.
Crataeva nurvala Buch.-Ham.; Syn *C. magna* (Lour.) DC.
Tribulus terrestris Linn.

GALACTOGOGUES

Anthocephalus cadamba Miq.; Syn *A. indicus* A. Rich., *A. chinensis* (Lam.) A. Rich. ex Walp.
Asparagus racemosus Willd.
Carum carvi Linn.

HEPATOPROTECTIVES

Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.
Eclipta alba (Linn.) Hassk.; Syn *E. prostrata* Roxb.
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.
Phyllanthus niruri Linn.
Picrorhiza kurroa Royle. ex Benth.
Tephrosia purpurea (L.) Pers.; Syn *T. hamiltonii* Drumm.
Terminalia chebula Retz.

HYPOLIPIDEMICS

Allium sativum Linn.
Commiphora mukul (Hook. ex Stocks) Engl; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks

IMMUNOMODULATORS

Acorus calamus Linn.
Allium sativum Linn.
Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.
Asparagus racemosus Willd.
Azadirachta indica A. Juss.; Syn *Melia azadirachta* Linn.
Bacopa monnieri (Linn.) Penn; Syn *Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.

Boerhavia diffusa Linn.; Syn *B. repens* Linn., *B. procumbens* Roxb.
Commiphora mukul (Hook. ex Stocks) Engl.; Syn *C. wightii* (Arn.) Bhandari, *Balsamodendron mukul* Hook. ex Stocks
Celastrus paniculatus Willd.
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.
Dioscorea bulbifera Linn. Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch.-Ham. ex Wall.
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.
Ephedra nebrodensis (Teno.) Stapf.
Glycyrrhiza glabra Linn.
Leptadenia reticulata W. & A.
Ocimum basilicum Linn.; Syn *O. caryophyllantum* Roxb., *O. minimum* Linn., *O. pilosum* Willd.
Ocimum sanctum Linn.; Syn *O. tenuiflorum* Linn.
Piper longum Linn.
Solanum nigrum Linn.; Syn *S. rubrum* Mill.
Sphaeranthus indicus Linn. (also auct. non L.); Syn *S. hirtus* Willd.
Terminalia chebula Retz.
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.
Withania somnifera Dunal.

LAXATIVES

Baliospermum montanum (Willd.) Muell Arg.; Syn *B. axillare* Bl., *B. polyandrum* Wt., *Croton polyandrus* Roxb.
Cassia fistula Linn.; Syn *C. rhombifolia* Roxb.
Croton tiglium Linn.
Euphorbia neriifolia auct. non Linn.; Syn *E. ligularia* Roxb.
Operculina turpethum (Linn.) Silva Manso.; Syn *Ipomoea turpethum* R. Br.
Plantago ovata Forsk. Syn *P. ispaghula* Roxb.
Terminalia chebula Retz.

NARCOTICS

Cannabis sativa Linn. Syn *C. indica* Linn.
Datura metel Linn. Syn D. fastuosa Linn.
Papaver somniferum Linn.

NEPHROPROTECTIVES

Boerhavia diffusa Linn. Syn *B. repens* Linn. *B. procumbens* Roxb.
Trianthema portulacastrum Linn.; Syn *T. monogyna* Linn.

NOOTROPICS

Acorus calamus Linn.
Bacopa monnieri (Linn.) Penn; *Syn Herpestis monnieria* (Linn.) H. B. & K., *Moniera cuneifolia* Michx.
Celastrus paniculatus Willd.
Clitoria ternatea Linn.
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., *C. prostratus* Frosk.
Emblica officinalis Gaertn.
Nardostachys jatamansi DC; Syn *N. grandiflora* DC.
Terminalia chebula Retz.

SEDATIVES

Nardostachys jatamansi DC.; Syn *N. grandiflora* DC.
Papaver somniferum Linn.
Rauvolfia serpentina Benth. ex Kurz.
Valeriana wallichii DC.; Syn *V. jatamansi* Jones., *Nardostachys jatamansi* (Jones) DC.

SKIN DISORDERS

Aloe barbadensis Mill; Syn *Aloe vera* Tourn. ex Linn.
Azadirachta indica A. Juss.; Syn *Melia azadirachta Linn.*
Berberis asiatica Roxb. ex DC.; Syn *Berberis aristata* DC.
Cynodon dactylon Pers.
Eclipta alba (Linn.) Hassk; Syn *E. prostrata* Roxb.
Psoralea corylifolia Linn.
Solanum nigrum Linn.; Syn *S. rubrum* Mill.

TONICS

Asparagus racemosus Willd.
Convolvulus pluricaulis Choisy.; Syn *C. microphyllus* Sieb., C. *prostratus* Frosk.
Crocus sativus Linn.
Cuminum cyminum Linn.
Curculigo orchioides Gaertn.
Dioscorea bulbifera Linn, Syn *D. sativa* Thumb auct. non L.; *D. versicolor* Buch.-Ham. ex Wall.
Emblica officinalis Gaertn.; Syn *Phyllanthus emblica* Linn.
Ephedra nebrodensis (Tineo.) Stapf.
Glycyrrhiza glabra Linn.
Leptadenia reticulata W. & A.
Mucuna pruriens Baker non DC.; Syn *M. prurita* Hook.
Prunus amygdalus Batsch. var. *amara* (bitter); var. *sativa* (sweet)
Pueraria tuberosa DC.

Sida cordifolia Linn.
Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms.
Tribulus terrestris Linn.
Withania somnifera (Linn.) Dunal.; Syn *W. ashwagandha* Kaul (cultivated var.) etc.

WOUND HEALERS

Curcuma longa Linn. Syn *C. domestica* Valeton.
Jasminum officinale Linn. var. *grandiflorum* (L.) Kobuski.; Syn *J. grandiflorum* Linn.
Moringa oleifera Lam.; Syn *M. pterygosperma* Gaertn.
Rubia cordifolia Linn.; Syn *R. munjesta* Roxb.

11 Evaluation of Efficacy and Safety of Herbal/Ayurvedic Medicines

Arun Gupta and Chandra Kant Katiyar

CONTENTS

INTRODUCTION

The search for natural and safe health products has led to the recent resurgence of interest in herbal medicines. In both developed and developing countries, consumers and health care providers need to be supplied with up-to-date and authoritative information on the beneficial properties and possible harmful effects of herbal medicines. The potential benefits of herbal medicines could lie in their high acceptance by patients, efficacy, relative safety, and affordable cost. Patients worldwide seem to have adopted herbal medicines in a major way.

The safety and efficacy of herbal and traditional medicines have become important concerns since the tremendous expansion of use of these medicines worldwide. This has necessitated a move from traditionally followed observations to the current concepts of research. The efficacy of herbal medicines has been tested in hundreds of clinical trials, and it is wrong to say that they are all of inferior methodological quality, but this volume of data is still small considering the multitude of herbal medicines.

Indian traditional medical knowledge and the medicinal plant resources are vanishing under the influence of modern medicine and axed plant habitat. Moreover, the situation further worsened largely due to lack of adequate research funding, and poor laboratory and human capacities, among several other reasons. Some scientists think that the current approach to medical use of herbal or traditional medicine without subjecting them to some rigorous scientific evaluation like their Western counterparts is irrational. However, we need to understand that herbal medicines are different from synthetic ones in several aspects. For example, plants are polypharmacy themselves with active principles frequently unknown; standardization, stability, and quality control are feasible but not easy. The availability and quality of raw materials are frequently problematic. Well-controlled, double-blind clinical and toxicological studies to prove herbal medicines' efficacy and safety are rare. They have a wide range of therapeutic use and are suitable for chronic treatments. The occurrence of undesirable side effects seems to be less frequent with herbal medicines, but few well-controlled randomized clinical trials have revealed that they also exist.

Many advocates for the use of herbal and traditional medicines argue that the current universal scientific procedures are simply not applicable to remedies that are already accepted and used by some communities based on their long history of use, because herbal and traditional medicines did not evolve from fundamental or basic science. Rather, they rely on traditional methods of knowledge transfer from generation to generation. There is no doubt that the situation with herbal and traditional medicine research offers a great opportunity to develop new strategies for the exploitation of these valuable resources. The objective of clinical trials on herbal drugs, however, is radically different from a new chemical entity. Before designing a

clinical trial protocol for a traditional or herbal medicine product, it must be understood that the purpose of a trial should ideally be to elicit any side effects rather than finding the efficacy, since herbal and traditional medicine products have been in use for centuries. Let us not forget that traditional use for centuries provides a much better parameter of efficacy evaluation than a clinical trial conducted for a few days to a few months on a representative population, that too in controlled manner. Probably, this is the reason why there have been no cases of withdrawal of the herbal products from the market in contrast to certain classes of synthetic drugs internationally.

Definitions

Herbal medicines are broadly covered under the category of complementary/traditional medicines globally. In India, Ayurvedic, Unani, Homoeopathic, and Siddha systems of medicine are quite popular and are licensed accordingly. These products contain herbs, minerals, metals, animal origin products, and marine products. Recent years have witnessed introduction of European herbal products too in Indian markets, which are sold as dietary supplements.

Ayurveda, Siddha, or Unani (ASU) drugs include all medicines intended for internal (except injectables) or external use for or in the diagnosis, treatment, mitigation, or prevention of disease or disorder in human beings or animals, and manufactured exclusively in accordance with the formulae described in the authoritative books of Ayurveda, Siddha, and Unani systems of medicine, specified in the first schedule of the Drugs & Cosmetics Act 1940.

The World Health Organization (WHO, 2000) has specified the definitions of crude herbs, processed herbs, and finished herbal products, in addition to traditional medicines. All the related definitions are given next.

Traditional Medicines

WHO has defined *traditional medicines* as "the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses." The term *complementary and alternative medicine* is used in some countries to refer to a broad set of health care practices that are not part of the country's own tradition and are not integrated into the dominant health care system.

Herbal Medicines

WHO defines *herbal medicines* as

> finished, labeled medicinal products that contain as active ingredients aerial or underground parts of plants, or other plant material, or combinations thereof, whether in the crude state or as plant preparations. Plant material includes juices, gums, fatty oils, essential oils, and any other substances of this nature. Herbal medicines may contain excipients in addition to the active ingredients. Medicines containing plant material combined with chemically defined active substances, including chemically defined, isolated constituents of plants are not considered to be herbal medicines.

Exceptionally, in some countries herbal medicines may also contain, by tradition, natural organic or inorganic active ingredients, which are not of plant origin.

HISTORICAL ASPECTS

All cultures have long folk medicine histories that include the use of plants. Physical evidence of use of herbal remedies goes back some 60,000 years. Egyptian, Indian, and Chinese traditional medicines are considered as the oldest systems of medicine in the world. Ayurveda, the science of life, prevention, and longevity, is the oldest and most holistic or comprehensive Indian medical system. The first comprehensive documented treatise on Ayurveda is available in the form of *Charak Samhita*, which is almost 3,000 years old (*Charak Samhita*, 2005). Sushruta was an ancient Indian surgeon (who was possibly born in the 7th century BC) and is the author of the book *Sushruta Samhita*, in which he describes over 120 surgical instruments, 300 surgical procedures, and classifies human surgery in 8 categories. Chinese traditional medicine also has a history of thousands of years; however, reliable historical records are not available before 722 BC. Three thousand years ago on oracle bones (tortoise shells and animal bones) from the shell dynasty (1766 to 1122 BC) records of illnesses, medicines, and treatments were found inscribed in China. Acupuncture has been used as a therapeutic method in China for over 2,000 years. The earliest Chinese text, the *Huang Ti Nei Jing Su Wen Ling Shu'* (*The Yellow Emperor's Classic of Internal Medicine*) is ascribed to the 2nd and 1st centuries BC.

As a result of WHO promotion of traditional medicine, countries have been seeking the assistance of WHO in identifying safe and effective herbal medicines for use in national health care systems. In 1991, the director general of WHO, in a report to the 44th World Health Assembly, emphasized the great importance of medicinal plants to the health of individuals and communities. Earlier, in 1978, the 31st World Health Assembly (WHA) had adopted a resolution (WHA31.33) that called upon the director general to compile and periodically update a therapeutic classification of medicinal plants, related to the therapeutic classification of all drugs. Subsequently, resolution of WHA40.33, adopted in 1987, urged member states to ensure quality control of drugs derived from traditional plant remedies by using modern techniques and applying suitable standards and good manufacturing practices. Resolution WHA42.43 of 1989 urged member states to introduce measures for the regulation and control of medicinal plant products and for the establishment and maintenance of suitable standards. Moreover, the International Conference on Primary Health Care, held in Alma-Ata, USSR, in 1978, recommended inter alia, the accommodation of proven traditional remedies in national drug policies and regulatory measures.

REGULATORY ASPECTS ON CONDUCTING CLINICAL TRIALS

Clinical trials have not been made mandatory by the regulatory authorities as a prerequisite to market authorization in the majority of the countries including India. The recent resurgence of herbal/traditional medicines has generated interest among the scientific community and it has started demanding the evidence of efficacy through the clinical trials. Most clinical trials are currently conducted to generate

the data to validate the claim. In the absence of any harmonized guideline on clinical trials on traditional and herbal medicines, *sui generis* systems are being followed by enthusiasts.

Currently there are no harmonized regulations or guidelines that should be adopted to do clinical trials on herbal, Ayurvedic, or alternative medicines. The guidelines available for allopathic stream of medicines may not be directly applicable to herbal medicines. However, few organizations have developed broad directional guidelines, a few of which are summarized next.

World Health Organization (WHO) Guidelines

WHO has published guidelines to define basic criteria for evaluating the quality, safety, and efficacy of herbal medicines aimed at assisting national regulatory authorities, scientific organizations, and manufacturers in this particular area. Furthermore, WHO has prepared pharmacopoeial monographs on herbal medicines and the basic guidelines for the assessment of herbal drugs. Originally, WHO guidelines for Good Clinical Practice (GCP) have been adapted from International Conference of Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) guidelines. These guidelines specify the requirements for clinical trial protocol and protocol amendment(s); background information about the name and description of the investigational product(s); trial objectives and purpose and trial design selection and withdrawal of subjects; treatment of subjects; assessment of efficacy and safety; statistics; direct access to source data/documents; quality control and quality assurance; description of ethical considerations relating to the trial; data handling and record keeping; financing and insurance if not addressed in a separate agreement; publication policy if not addressed in a separate agreement; pharmaceutical assessment of preparations; and stability and safety aspects.

Indian Council of Medical Research (ICMR) Guidelines

Indian Council of Medical Research (ICMR) guidelines have classified herbal drugs in three categories and have suggested following different approaches for their clinical evaluation. The herbal products can belong to any of the following three categories:

1. A lot is known about the use of a plant or its extract in the ancient Ayurveda, Siddha, or Unani literature, or the plant may actually be regularly used by physicians of the traditional systems of medicine for a number of years.
2. When an extract of a plant or a compound isolated from the plant has to be clinically evaluated for a therapeutic effect not originally described in the texts of traditional systems or the method of preparation is different, it should be treated as a new drug.
3. An extract or a compound isolated from a plant that has never been in use before and has not been mentioned in ancient literature, should be treated as a new drug.

Clinical trials with herbal preparations should be carried out only after these have been standardized and markers identified to ensure that the substances being evaluated are always the same. The standard recommendations regarding informed consent, inducements for participation, information to be provided to the subject, withdrawal from the study, and research involving children or persons with diminished autonomy, all apply to trials on plant drugs also. These trials have also got to be approved by the appropriate scientific and ethical committees of the concerned institutes. However, it is essential that such clinical trials be carried out only when a competent Ayurvedic, Siddha, or Unani physician is an investigator or coinvestigator in such a clinical trial.

Good Clinical Practice (GCP) Guidelines

GCP is an international ethical and scientific quality standard for designing, conducting, recording, and reporting trials that involve the participation of human subjects. Compliance with this standard provides public assurance that the rights, safety, and well being of trial subjects are protected, consistent with the principles that have their origin in the Declaration of Helsinki, and that the clinical trial data are credible. The objective of the ICH GCP guidelines is to provide a unified standard for the European Union (EU), Japan, and the United States to facilitate the mutual acceptance of clinical data by the regulatory authorities in these jurisdictions. The ICH guideline was developed with consideration of the current good clinical practices of the European Union, Japan, and the United States, as well as those of Australia, Canada, the Nordic countries, and the World Health Organization. India has also developed its own GCP guidelines.

Department of AYUSH, India

AYUSH is an agency for all the coordinating works such as education, research, and health care through Indian Systems of Medicine, Ayurveda, Homeopathy, Naturopathy, Siddha, and Yoga. This department funds several extramural projects besides having a research council called Central Council for Research in Ayurveda sciences dedicated to research in Ayurveda through its several labs. In order to lay down standards on medicinal plants, the Department of AYUSH has prepared 540 monographs on individual medicinal plant parts and 152 Ayurvedic formulation monographs, through the Ayurvedic Pharmacopoeia Committee. Under this program, monographs of all the 326 medicinal plant parts have been published.

Ethical Issues

The main players in the exploitation of herbal medicines include the traditional medicine practitioners, research scientists, pharmaceutical industries that will bring forth the medicines and medicinal products of research to the public, and the larger society that will ultimately benefit. National governments are also involved as they have the responsibility of ensuring the welfare and safety of citizens. All the parties mentioned are interested in developing herbal medicines for public use. However, in the clinical

development of herbal traditional medicines, the tripartite relationship between the researcher, the traditional practitioner, and the research participant is paramount.

Treating physicians have the obligation of judging the material risks of their medical treatments, and this may include the risks associated with complementary medicine. Most patients and many health care professionals view traditional medicine as virtually risk free, a notion that is often misguided. Complementary medicine is likely to become relevant to the informed consent obligations.

Informed consent (IC) is an integral part of research by which we create understanding on research projects. IC is a process of weighing up any possible risks and benefit to be derived. IC has become the cornerstone of research ethics because it provides the research participants the ability to exercise their rights to beneficence and autonomy. Nevertheless, informed consent as contained in the international guidelines focuses mainly on the relationship between the researcher and the research participant. As the popularity of complementary medicine grows, and as informed consent becomes more comprehensive, its relevance for clinical trial practice is becoming more important. At present, however, ethical obligations still exceed the legal ones.

Traditional medicine may be less risky than most conventional therapies but it is not totally devoid of adverse effects. Treating physicians have the obligation of informing about adverse events. Many modern practitioners believe that all forms of traditional medicine lack evidence of efficacy. This is clearly not the case. If Cochrane reviews are anything to go by, several herbal remedies are of proven efficacy. For instance, St. John's wort is an effective symptomatic treatment for mild to moderate depression, so is horse chestnut seed extract for primary venous insufficiency, and so is ginkgo for dementia.

Researchers should also remember that herbal medical care is a longtime cultural duty of the traditional medicine practitioner within the community. He or she holds this responsibility on trust for the community, but it is also his or her source of livelihood. These are important considerations in the consent process. Therefore the need for understanding IC before research commences is strongly advocated. The concerns and benefits of all the stakeholders who share the burden of herbal medicine research should be defined and determined. This measure should be considered as part and parcel of submissions to regulatory and ethical review committees. These should be clear terms on the outcome of research regarding benefit and royalties. This should be included in the Institutional Review Board/Ethics Committee (IRB/EC) review process of herbal traditional medicines.

In Schedule Y of the Drugs and Cosmetics Act of India, the formats of informed consent as well as the composition of an ethics committee and its functions have been given. ICMR developed detailed guidance in 2000, which was revised in 2006. This document very nicely covers almost all the broad ethical issues and concerns related to clinical research.

LIMITATIONS OF HERBAL AND TRADITIONAL MEDICINE WITH REFERENCE TO CLINICAL TRIALS

Several factors make the task of conducting clinical trials on traditional and herbal medicines daunting. A few important ones are discussed next.

Trial Design

Herbal and traditional medicines present a special challenge in the design and execution of studies, with respect to both internal validity and generalizability. These problems relate to specifying the intervention sufficiently that others can apply it the way it is applied in traditional medicine practices. There is also concern regarding the difficulties in controlling the expectation bias (the systematic effect on the results of the participants' belief that a certain therapy will help them). Most traditional medicine interventions are investigated only once they are so widespread that they can no longer be ignored; however, the traditional medicine practices are highly diversified in practices, personal experiences, biases, and expectations. A single research strategy will not fit all circumstances and all traditional medicine interventions. Hence, there is need for flexibility in designing trials like randomized trial, single case, black box, and ethnographic. The study design may be chosen from a whole spectrum of clinical research designs that are suitable for assessing traditional medicine.

Randomized Controlled Trials

The most powerful method for testing the effect of a conventional medical intervention is a randomized clinical trial, which however is not suitable for many traditional medicines. Standard randomized controlled trials (RCTs) consisting of two or three study arms; a large number of patients in each study arm; one specific, standard treatment or dose of treatment per study arm; and one or two years of follow-up may be ill suited to answer questions about the long-term effects of complementary and alternative medicine. In many other traditional medicine therapies, however, the conceptual basis for the therapy requires an interaction between the practitioners and patients that modifies the therapy to the individual. Indian traditional medicines, especially Ayurvedic medicine, require individualization of treatment based on examination and understanding of the patient's condition using concepts that do not have an analogue in Western allopathic medicine. Consequently, traditional medicine and complementary and alternative medicine advocates have criticized randomized clinical trials that reported no effect for not having allowed the necessary tailoring of the intervention.

Blinding

Blind assessment is a critical component of conventional evaluation of therapeutic interventions. Treatment blinding in the evaluation of herbal medicines should adopt the approach of conventional medicines, for example, using active and control formulations with similar color, taste, and aroma. However, in the evaluation of efficacy of traditional therapies, it can be difficult, impractical, or impossible for the practitioner to be kept ignorant of what treatment the patients are receiving. It is important, however, to reduce any bias introduced by nonblinded treatment by carrying out a blinded assessment of the primary outcomes of the study. If the herbal medicine cannot be administered in a predetermined standardized formulation, it will be impossible to keep the treatment blinded.

Placebo

Use of placebo may not always be possible as there may be ethical as well as technical problems. For example, it may not be possible to have a placebo control if the herbal medicine has a strong or prominent smell or taste, as in the case of products containing essential oils. In addition, patients who have been treated previously with the herbal medicine under investigation that has a characteristic organoleptic property cannot be randomized into control groups. In the case of herbal medicines with a strong flavor, placebo substances with the same flavor may have a similar function. This problem may become more compounded in the case of semisolid formulations like chyawanprash. In such cases, it may be advisable to use a low dosage of the same herbal medicine as a control. Alternatively, a positive control, such as well-established treatment, can be used.

Standardization or Quality Control

Plants are polypharmacy themselves containing hundreds of constituents and some of them are present at very low concentrations. Standardization of herbal products is a burning issue being discussed and debated from academic to regulatory forums. Quality of the finished product depends upon the quality and authenticity of the crude raw material, geographical location of herbs collection, time of collection, method of harvesting, storage, processing, microbial load, heavy metal contamination, and so forth. The most critical point to achieve standardization is identification, isolation, and characterization of the marker compounds. It is followed by developing appropriate analytical methods to test the qualitative and quantitative presence of the compounds not only in the crude plant material, but also in the intermediates like extracts and their finished formulations. Intense efforts are ongoing globally to evolve and develop the pharmacopoeia standards of the medicinal plants used in traditional medicines.

Ayurvedic Perspective

The word Ayurveda is derived from *Ayu* (life) and *Veda* (knowledge); therefore, it is knowledge of life. Its objectives are twofold, namely, to maintain the health of a healthy person and if by chance, despite following all the instructions of leading a healthy life, somebody falls ill, then to cure the disease, with a view to remain healthy for 100 years in order to achieve *dharm, arth, kama,* and *moksha* (*Charak Samhita,* 2000), Ayurveda has prescribed both nontherapeutic and therapeutic measures. Therapeutic measures again are of two types: life sustaining and disease alleviating. Both of these include threefold measures: dietary regimen, behavioral modalities, and drugs.

Ayurveda or other traditional systems of medicine seldom use mono herb-based therapy. In most cases, traditional medicine physicians follow the approach of multiple therapies coupled with dietary and behavioral modalities to achieve therapeutic effectiveness. Rheumatoid arthritis is a typical example in which oral drugs

(mostly polyherbal), topical application of medicated oils, along with strict dietary restrictions are common features.

NEED OF ALTERNATIVE APPROACH TO CLINICAL TRIAL FOR TRADITIONAL MEDICINE

The conventional, randomized, controlled clinical trials are considered to be the gold standard. However, while applying it to evaluate herbal and traditional medicine, especially Ayurvedic medicines, its limitations come to the forefront. A careful study of a holistic approach to treatment followed in traditional medicine suggests that the current method of conducting clinical trials has various limitations in evaluating the evidence of efficacy of Ayurvedic or traditional medicine products, and the reason being that the treatment regimens used by traditional medicines are holistic in nature, whereas the treatment approach in contemporary medicine is generally symptomatic. Several limiting factors make the task of conducting clinical trials on traditional and herbal medicine in a conventional way difficult. A few important ones are narrated in the following.

An integrated/holistic approach is essential while undertaking the clinical trial with an Ayurveda drug and the following factors need to be considered as individual variables and should be accommodated while designing the clinical trial protocols for Ayurvedic/herbal medicines.

Essential elements of an Ayurvedic therapeutic regimen are

Prakriti (psychosomatic constitution)
Rogi (patient), *Rog*a (disease), and *Pariksh*a (examination)
*Kriyakal*a (interventions at different stages of disease)
Pathya apathya (diet) to be followed with medicine
Anupana (vehicle for drug administration)

Prakriti (Psychosomatic Constitution)

Prakriti of an individual is determined at the time of conception and can be defined as a psychosomatic constitution of the individual. The total population can be divided into seven psychosomatic types. *Prakriti pariksha* is based on physical and mental traits and influenced by *tridosha* (*Vata, Pitta,* and *Kapha*). The Ayurvedic system of medicine believes in individualistic treatment. This is the reason why different patients with the same disease are prescribed different drugs depending upon several factors including their psychosomatic constitution. This may also partly explain why most of the Ayurvedic medicines are polyherbal in composition.

Rogi (Patient), *Roga* (Disease), and *Pariksha* (Examination)

An integrated/holistic approach of Ayurveda does not differentiate the disease from the patient. Rather both are considered simultaneously. This approach places

insurmountable challenges on deciding the inclusion and exclusion criteria in a clinical trial of Ayurvedic medicines following Ayurvedic principles.

Kriyakala (Interventions at Different Stages of Disease)

Ayurveda proposes different interventions at different stages of disease (*kriyakala*) in the same patient, providing another variable in a clinical trial.

Pathya-apathya (Diet) to Be Followed with Medicine

The diet component may also affect the treatment outcome in a clinical trial. Administration of Maha Yogaraj Guggulu (a formulation having anti-inflammatory effects) with restriction of rice, curd, or brinjal will give positive outcomes. However, in similar kinds of patients without restriction of rice, curd, or brinjal may give a negative outcome of therapy.

Anupana (Vehicle) for Drug Administration

Most of the time, Ayurvedic drugs are recommended to be administered with a specific vehicle like honey, sugar, jaggery, buttermilk, curd, ghee, warm water, or expressed juice of an herb. An *anupana* is a half-medicine in itself. An interesting example is Mrityunjaya Rasa, used for fever in Ayurveda. It is given with different *anupana* (vehicle) in different kinds of fevers. For example in *vataja jwara* with buttermilk, in *sannipata jwara* with *ardraka swarasa* (ginger juice), in *ajirna jwara* with *nimbu swarasa* (lemon juice), in *vishama jwara* with *krishna jeeraka* and jaggery.

Proposed Methodologies for Clinical Trials on Ayurvedic Drugs

The authors propose that the proper way of conducting clinical trials with Ayurvedic medicine is to subject the whole treatment regime to the test rather than its individual components, and the best way to achieve this is to follow the concept of observational research rather than double-blind, placebo-controlled clinical trials.

One strategy that could be used is the pragmatic trial approach; however, it has its own problems. In a pragmatic trial, patients are assigned to a traditional practitioner rather than a tightly specified traditional therapy. The traditional practitioners can provide their treatments in their usual fashion, individualizing the therapy for each patient. While this strategy allows the conventional practice to occur in its traditional fashion, it makes blinding or otherwise controlling expectation bias very difficult.

Furthermore, while in one way individualizing the therapy increases generalizibility, it also increases the sensitivity of the results to the skill of the practitioners. Since the intervention relies on practitioner expertise in understanding the patient and delivering the therapy, the study results are more difficult to apply to other practitioners. Thus, pragmatic trials should discuss the training and experience of the traditional practitioner. Large pragmatic trials that include many practitioners

and that compare a traditional therapy with a credible control or alternative therapy would be particularly useful in assessing traditional medicines.

The most appropriate method to generate efficacy data on classical Ayurvedic therapeutic regimen appears to be observational research as it involves:

- Efficacy of the whole treatment regimen
- It is conducted in a real-life situation

Data generated by this method can be used by other physicians as well. However, change in mind set is required among traditional medicine physicians to start proper documentation of their practice to generate the data, since it must be acceptable to both WHO as well as to drug regulatory agencies as documented evidence of traditional use.

Observational studies collect findings on a therapeutic or prophylactic treatment under routine conditions. The special feature of these studies is that they seek, as far as possible, not to influence the individual doctor–patient relationship with respect to indications, and the selection of and carrying out of the treatment. These studies may be conducted with or without a control group. The specific details of the study (e.g., the time and extent of examination for each individual patient, the number of patients involved) and the envisaged methods (e.g., data recording and evaluation) must be adapted to the question investigated in the study (e.g., safety or appropriate posology). Observational studies have specific advantages in studying aspects of clinical safety. The use of such studies to prove efficacy is limited because bias in patient selection may occur. Nevertheless, the level of evidence on efficacy of traditional medicine can be significantly increased by well-designed observational studies.

Some of the methodological approaches specific to the assessment of traditional medicines through clinical research are given next.

Evaluate traditional medicine in its own theoretical framework—This approach is related to clinical evaluation of a holistic multipronged therapeutic approach basis the traditional system of medicine practices.

Evaluate traditional medicine in the theoretical framework of conventional medicine—This approach refers to certain cases of Ayurvedic drugs where single herbs are used as stand-alone medicine in traditional medicine.

Compare the efficacy of different traditional practices within a system of traditional medicine—This approach refers to clinical evaluation of nontherapeutic or semitherapeutic practices, for example, panchkarma, which involves use of medicated oils or yoga practices without using any medicine.

Evaluate the efficacy of pure active phytochemicals under the rigorous current scientific procedures or conventional methods for clinical trials.

TOXICITY STUDIES ON AYURVEDIC AND HERBAL DRUGS

The major issue with Ayurvedic and herbal medicines is that there is very little scientific data available on their safety. However, it is also a fact that it is difficult to

evaluate polyherbal medicines using the conventional array of toxicological methods since these materials consist of hundreds of active ingredients. There are several publications that state the potential toxicity of the phyto products. Contamination of these products by pesticides, herbicides, naturally occurring toxins, microbes, or adulteration by means of synthetic substitutes is a cause for concern. Toxicity manifestations include hepatotoxicity (most prominent is mild elevations of liver enzymes to fulminant liver failure), nephrotoxicity, and neurotoxicity, hematological, mutagenic, and cardiovascular toxicities. Hence, there is a need for a fundamentally different approach for toxicological studies that need to be adopted for Ayurvedic and herbal products. In light of the aforementioned facts, an integrated approach for safety assessment focused on the hazard identification is imperative. The type, nature, and extent of effects obtained during toxicity studies can help in adequately classifying herbal medicines as nontoxic, moderately toxic, or severely toxic on selected biological systems. (In this text, toxicity tests based on the Organisation for Economic Co-operation and Development [OECD] guidelines are used.)

It is essential that the literature sources be reviewed for the toxicities of the herbal products in prior human experiences or existing animal data. The need for additional preclinical studies prior to clinical trials depends on the following considerations:

- Similarities between the new and old preparations, in terms of product characteristics, and usages in clinical settings
- Scale and exposure (dosage/duration) of the proposed new clinical studies
- Frequency and severity of any known toxicity

Thus, in general, requirements for preclinical studies may range from none for early phase, small studies using the same preparations that have been used extensively and without known safety problems to a complete set of conventional toxicology studies for relatively new products in large, phase 3 trials. For many herbal products, certain preclinical studies may be necessary but can be conducted concurrently with the proposed clinical trials.

Following preclinical studies used for conventional medicines may be adopted to suit the needs of traditional medicine on a case-to-case basis.

Acute Toxicity (OECD Test No. 43)

Acute toxicity tests are generally the first tests conducted. They provide data on the relative toxicity likely to arise from a single or brief exposure. Standardized tests are available for oral and inhalation exposures. Basic parameters of these tests are

Species	Rats (female, nonpregnant) for oral and inhalation tests
Age	Young adults
Number of animals	5 rats for each sex per dose level
Dosage	Three dose levels recommended; exposures are single doses or fractionated doses up to 24 hours for oral and 4-hour exposure for inhalation studies
Observation period	≤14 days

Subacute Toxicity (OECD Test No. 412)

The subacute toxicity studies are employed to determine toxicity likely to arise from repeated exposures of a few weeks. Standardized tests are available for oral, dermal, and inhalation exposures, not long enough to be called long-term or chronic at three or more concentration levels, and also concurrent negative and/or vehicle controls as needed.

Species	Rats for oral/diet/drinking water tests
Age	Young adults
Number of animals	5 rats per dose level
Dosage	Three dose levels recommended; exposures are single doses or fractionated
Observation period	14–28 days

Subchronic Toxicity (OECD Test No. 413)

Subchronic toxicity tests are employed to determine toxicity likely to arise from repeated exposures of several weeks to several months. Standardized tests are available for oral, dermal, and inhalation exposures. Detailed clinical observations and pathology examinations are conducted. Basic parameters of these tests are

Species	Rodents (usually rats) preferred for oral and inhalation studies; rabbits for dermal studies; nonrodents (usually dogs) recommended as a second species for oral tests
Age	Young adults
Number of animals	10 of each sex for rodents, 4 of each sex for nonrodents per dose level
Dosage	Three dose levels plus a control group; include a toxic dose level plus NOAEL (no observed adverse effect level); exposures are 90 days
Observation period	30–90 days

Chronic Toxicity (OECD Test Guideline 452)

Chronic toxicity tests determine toxicity from exposure for a substantial portion of a subject's life. They are similar to the subchronic tests except that they extend over a longer period of time and involve larger groups of animals. Basic parameters of these tests include

Species	Two species recommended: rodent and nonrodent (rat and dog)
Age	Young adults
Number of animals	20 of each sex for rodents, 4 of each sex for nonrodents per dose level
Dosage	Three dose levels recommended; includes a toxic dose level and NOAEL; exposures generally for 12 months
Observation period	12–24 months

Carcinogenicity (OECD Test Guideline 451)

Carcinogenicity tests are similar to chronic toxicity tests. However, they extend over a longer period of time and require larger groups of animals in order to assess the potential for cancer. Basic parameters of these tests are

Species	Testing in two rodent species; the rat and mouse preferred due to relatively short life spans
Age	Young adults
Number of animals	Each dose group and concurrent control group should therefore contain at least 50 animals of each sex
Dosage	Three dose levels recommended; highest should produce minimal toxicity and NOAEL; exposure periods are at least 18 months for mice and 24 months for rats
Observation period	18–24 months for mice and 24–30 months for rats

Developmental and Reproductive Toxicity (OECD Test Guideline 415 and Test Guideline 416)

Developmental and reproductive studies could be one generation (OECD 415), two-generation (OECD 416), or three-generation tests. Developmental toxicity studies (also called teratology studies) are designed to look at a wide spectrum of possible in utero outcomes including death, malformations, functional deficits, and developmental delays in fetuses.

Reproductive toxicity testing is intended to determine the effects of substances on gonadal function, conception, birth, and the growth and development of the offspring. The oral route is preferred. Basic parameters of these tests are

Species	Rat, dog is recommended
Age	Young adults
Number of animals	20 pregnant females of each sex per dose level
Dosage	Three dose levels recommended; highest dose should produce toxicity but not mortality in parents; lowest dose should not produce toxicity and NOAEL
Observation period	28 days depending on the animal species

Ocular Toxicity (OECD Test No. 4052)

Ocular toxicity tests provide information on health hazards likely to arise from exposure to test substance (liquids, solids, and aerosols) by application on the eye. The guideline is intended preferably for use with the albino rabbit. The test substance is applied in a single dose in the conjunctival sac of one eye of each animal. The other eye, which remains untreated, serves as a control. The initial test uses an animal; the dose level depends on the test substance nature. A confirmatory test should be made if a corrosive effect is not observed in the initial test; the irritant or negative response should be confirmed using up to two additional animals. It is recommended that it be conducted in a sequential manner in one animal at a time, rather than exposing the two additional animals simultaneously. The duration of the observation period should be sufficient to fully evaluate the magnitude and reversibility of the effects observed. The eyes should be examined at 1, 24, 48, and 72 hours after test substance application. The ocular irritation scores should be evaluated in conjunction with the nature and severity of lesions, and their reversibility or lack of reversibility. The individual scores do not represent an absolute standard for the irritant properties of a material, as other effects of the test material are also evaluated.

Neurotoxicity (OECD Test No. 424)

The guideline is designed for use with the rat. It specifically addresses the daily oral administration by gavage (in the diet, in drinking water or by capsules) of the test substance.

Species	Rat is recommended
Age	Young adults
Number of animals	20 animals (10 females and 10 males) per dose level
Dosage	Three dose levels recommended; highest dose should produce toxicity but not mortality; lowest dose should not produce toxicity and NOAEL
Observation period	28 days

The dosing regimen may be 28 days for delayed neurotoxicity, 90 days for subchronic, or 1 year or longer for chronic. The results of this study include measurements (weighing, food/water consumption), functional tests, and, at least, daily detailed observations (ophthalmology, hematology, clinical biochemistry, and histopathology).

The following preclinical safety evaluation requirements for Ayurveda, Siddha, and Unani drugs and other traditional medicine has been prescribed through *The Gazette of India* (G.S.R 663(e), August 2010).

Following is the safety data required for various ASU product categories:

Patent or Proprietary Drugs—ASU drugs with any of the ingredients of Schedule E (1) (List of poisonous substances under the Ayurvedic (including Siddha) and Unani Systems of Medicine) of Drugs & Cosmetics Act, 1940 with existing indication

ASU drugs for Balya and Poshak—If any of the ingredients specified in Schedule E (1) of Drugs & Cosmetics Act, 1940

ASU drugs for Saundarya Prasadak—If any of the ingredients specified in Schedule E (1) of Drugs & Cosmetics Act, 1940

Medicines based on extracts of medicinal plants (dry or wet)—Hydro-alcohol extract for new indications and hydro/hydro-alcohol extract

For herbal Ayurvedic preparations only subchronic studies are required, except herbal extracts other than aqueous and hydro-alcoholic extracts where acute, chronic, mutagenicity, and teratogenicity toxicity studies should be done.

CONCLUSION AND WAY FORWARD

Increasing popularity also invites cynicism followed by criticism. This sometimes leads to innovative solutions to the problems. Identification and validation of one universally acceptable method of conducting clinical trials on traditional and herbal drugs would remain a dream if top brains do not converge to look at this issue after understanding the basic philosophies behind the traditional systems of medicines. Until that happens let us accept that one size fits all is not true for knowledge-based traditional medicines. Let us hope that the current chaos in clinical trial methodologies on herbal drugs will ultimately lead to more disciplined

approaches that will be universally acceptable to the scientific community and regulatory authorities alike.

The concept of evidence-based medicine necessitated clinical evaluation of traditional medicines preferably following the gold standard randomized placebo controlled clinical trials. After a few attempts it was realized that the gold standard of evaluating the efficacy of conventional drugs does not do justice with traditional medicines. Soon the realization dawned upon the clinical researchers that there is a need of identifying newer techniques to evaluate the clinical efficacy of traditional and herbal medicines.

Normally, clinical research of all types of conventional medicine considers both efficacy and safety, and is conducted according to good clinical practice guidelines and the Declaration of Helsinki. Particular focus either on efficacy or on safety evaluation, however, may not be the main focus of clinical research in traditional medicine because of the long history of traditional medicine. Herbal traditional medicines evolved from traditional knowledge rather than laboratory experimentation. Their development process works backward from actual use to scientific/laboratory evidence or correlation, often referred to as reverse pharmacology. Because the drug development process in Western medicine is prospective in nature, from preclinical and clinical research, it is the reverse in knowledge-based traditional and herbal medicine. Since the two approaches are fundamentally different, their strategies for development should also differ. Based on their extensive use in humans, herbal traditional medicines may have sufficient information to support limited pilot clinical study with little preclinical testing, especially when the herbal remedies are prepared in the same way, used in the original form as the traditional practitioner, and if the trial is to be carried out in the same community that uses them. However, new compounds, isolates, or new formulations of the herbs may bear different characteristics and scientific behavior from the original products. These should, therefore, undergo full-scale preclinical and clinical evaluation to establish their traditional validity using current standards.

The conventional method of the controlled and randomized clinical trial is considered the gold standard; however, when applying it for evaluation of traditional or alternative medicine, especially Ayurvedic medicines, its limitations are identified in a glaring manner. Hence, there is need for a paradigm shift in the clinical research on herbal medicines. Different methodologies should be adopted while evaluating the safety and efficacy of traditional medicine through clinical trials.

A paradigm shift in approach is required to conduct clinical trials on traditional medicines. There is a huge difference right from the objective to the evaluation parameters when this approach is compared to clinical trials on modern synthetic products. Even if we assume that there is need of a double-blind, placebo-controlled trial, its methodology needs significant modification. There is, therefore, an urgent need to do brainstorming and evolving harmonized guidelines for clinical trials to be conducted on traditional and herbal medicine products. Further, there is an urgent need to document the safety of herbal medicines through conventional pharmacovigilance methodologies. The majority of traditional herbal/Ayurvedic medicines may not require toxicity studies as per modern toxicological methodologies. However, the same needs to be conducted as per country-specific requirements as well as depending upon the format of the herb used, for example, raw herb, aqueous extract, hydro-alcoholic extract, or other extracts.

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12 International Regulatory Status of Herbal Drugs

Sanjay Sharma

CONTENTS

Countries across the globe have different approaches toward the regulatory controls over herbal drugs. In the herbal drug sector, licensing, manufacturing, and trading of products are not universal and some countries have well-laid policies to control them, whereas in a few countries the control is either very lax or nonexistent. The main concern of authorities today is documentation of safety and efficacy of herbal drugs. This is a major hindrance in the way of recognition of herbal products as medicines, as only a few plant species have been scientifically studied for their medicinal applications. Safety and efficacy data is available for an even smaller number of medicinal plants and their active ingredients.

There exists a difference across the globe in the legal status of herbal medicines owing to the difference in legal framework. In some countries like India and China, plant-based medicines are recognized as established systems of medicine, whereas in some other countries like the United States and Canada they are regarded as foods or supplements. It is mostly in the developing countries where herbal medicines are used in folklore but they do not have legislative procedures to include these remedies as part of the drugs. In Australia, the herbs are categorized as "officially approved" or "officially accepted." Out of these, the latter category does not require any scientific assessment as a premarketing condition.

Some of the factors that influence the classification of herbal drugs are inclusion of monographs in pharmacopoeias, claims of therapeutic effects, prescription status, period of use, and so forth.

The role of herbal drugs in treating chronic ailments has been found to be highly effective for, for example, gastrointestinal problems, upper respiratory tract ailments, skin diseases, and many chronic diseases. This factor has made the drug regulatory agencies in developed countries relook at the issue, and, as a result, the European Union has adopted policies that legalize the trade of herbal products. The new policy ensures that the safety of the consumer is not compromised and at the same time, herbal drugs are allowed to be manufactured, imported, and traded in the member countries as medicines instead of supplements. A review of the status of herbal products in various countries is given next.

SOUTHEAST ASIA

Bangladesh

Ayurveda, well-documented in the ancient texts, is widely practiced in Bangladesh. There are educational institutions offering four-year diplomas in Ayurvedic and Unani systems of medicine. The Board of Unani and Ayurvedic Systems of Medicine is responsible for maintaining educational standards at teaching institutions and granting registration to practitioners.

Regulatory Status

In Bangladesh, the Board of Unani and Ayurvedic Systems of Medicine, controls the standardization of Unani and Ayurvedic medicines. Other functions controlled by the board are registration of the traditional medicines, recognition of teaching

institutions, holding qualifying examinations, and publication of textbooks, pharmacopoeias, and formularies. The National Formularies, one for Unani and the other for Ayurvedic drugs, published by the board are approved by the government. They are used as official guides for the manufacture of all recognized Unani and Ayurvedic medicinal preparations.

India

India has a long, established history of the practice of Ayurveda, Siddha, and Unani systems of medicine. The prevailing laws in the country accord equal status to these streams of medicine and modern medicine. There are well-established educational institutions that impart education in the streams of Ayurveda, Siddha, and Unani medicine. These institutes are required to have attached hospitals, where the students get practical exposure to the practice of these streams of medicine. The pharmacies of the institutes provide training related to the processing of the herbs for production of herbal medicines.

The Ministry of Health and Family Welfare has a department dedicated to streamlining the education and practice of these systems of medicine, called the Department of AYUSH. The functions being controlled by the Department of AYUSH are

- Quality education and training of AYUSH doctors, scientists, and teachers, and improving their skills and attitudes
- Paramedical, pharmacy, and nursing education and training in AYUSH
- Capacity building of institutions; establishing and running centers of excellence and national institutes
- Conservation and cultivation of medicinal plants
- Promoting research initiatives in the systems of AYUSH

Regulatory Status

Ayurveda, Unani, and Siddha medicines are regulated by the Drugs and Cosmetics Act (1940) and Drug and Cosmetics Rules (1945) of India. Schedule T of the rules establishes Good Manufacturing Practices for Ayurvedic, Siddha, and Unani medicines. Schedule E1 has listed a number of poisonous substances under the Ayurvedic (including Siddha) and Unani Systems of Medicine. Any product containing detoxified toxic ingredient(s) needs to be taken under medical supervision.

The Department of AYUSH has published *Ayurvedic Pharmacopoeia of India* (*API*), which has monographs giving information regarding identity, purity, constitution, quality specifications, properties, actions, dosage, and so forth of drugs and their testing methods. *API,* part I has 7 volumes providing 540 monographs of individual Ayurvedic herbs; *API*, part II has 3 volumes providing 152 monographs of Ayurvedic formulations. Ayurveda, Unani, and Siddha are all recognized as established systems of medicine by the government of India. The Department of AYUSH regulates the practice of herbal system of medicine and homoeopathy through the Central Council of Indian Medicine and the Central Council of Homoeopathy.

The Ayurveda, Siddha, or Unani drugs include all medicines intended for internal (except injectables) or external use for, or in the diagnosis, treatment, mitigation, or prevention of disease or disorder in human beings or animals.

Regulations of the Ministry of Health of the government of India cover all the formulations manufactured according to the formulae and methods described in the textbooks included in first schedule, patent, or proprietary medicines including the formulations for health promotion, cosmetic formulations, and medicinal extracts. Recently, the Department of AYUSH has made pilot clinical trials mandatory for proprietary medicines for licensing of Ayurveda, Siddha, and Unani products in certain cases.

Indonesia

Indonesia has a history of the practice of traditional medicine, which includes herbal medicine as well. The Centre for Traditional Medicine Research provides training in traditional medicine.

Regulatory Status

Indonesia's Health Law Act regulates traditional medicine in the country. Articles 1, 2, and 3 of Indonesia's Health Law Act guide various aspects of the practice of traditional medicine. Article 1 places traditional medicine as an integral part of curative and nursing care. Article 2 emphasizes the supervision of traditional medicine to ensure its safety and efficacy. Article 3 deals with further development and improvement of forms of traditional medicine.

The Health Law Act classifies traditional medicines into two groups: (1) those produced by individuals and (2) those produced and packaged on a commercial scale. In the former, the Ministry of Health permits the use of only 54 plants in these medicines. These plants are accepted as safe by virtue of their history of safe use in the country. The traditional medicines produced and packaged on a commercial scale require mandatory registration and a license to sell.

In order to be registered, the traditional medicines, which are not indigenous to Indonesia, must have undergone scientific study to ensure their safety, efficacy, rationality of composition, dosage form, and justification of claims. For use in formal health services, the medicines must have gone through structured clinical trials for scientific evaluation of their safety and efficacy in human subjects. The Ministry of Health of Indonesia has published *Guidance for Clinical Trial of Traditional Drugs* to guide the manufacturers.

The National Agency for Drug & Food Control (NADFC) issues the registration number to foreign drugs that are registered. These drugs have undergone quality and safety evaluation and are given a registration number.

Myanmar

The traditional medicine in Myanmar is based on Ayurvedic concepts. A four-year training program in traditional indigenous medicine is run by the Institute of Indigenous Medicine. The duration of the course includes a one-year internship.

A successful candidate is conferred a bachelor of Myanmar traditional medicine. Since 2003, the basic concept of Myanmar traditional medicine has been introduced in the third-year curriculum of the bachelor of medicine, bachelor of surgery (MBBS).

Household Traditional Medicine Kits containing seven different types of traditional drugs have been provided to the general public for the treatment of minor ailments. The objective of this is to provide easy access to common traditional medicines and to minimize the cost of treatment of general and minor ailments.

Regulatory Status

The production and sale of traditional medicines was regulated by the Traditional Medical Council Law. In 1996, the government promulgated the Traditional Medicine Drug Law to control the production and sale of traditional medicine drugs systematically. According to the Traditional Medicine Drug Law, all traditional medicine drugs produced in the country must be registered and manufacturers must have licenses to produce their products as per good manufacturing practice (GMP) standards. The Department of Traditional Medicine controls the production of traditional medicines according to the national formulary in two of its facilities. In the public sector there is a number of private organizations engaged in the manufacture of traditional medicines.

The Myanmar Traditional Medicine National Formulary contains 57 traditional medicine formulations; each monograph gives information on therapeutic uses, caution, and dosage. These traditional medicines were standardized and evaluated for safety and efficacy between 1984 and 1989.

The published monograph of 120 Myanmar medicinal plants provides basic information related to their use in primary health care.

Nepal

The history of use of Ayurvedic herbal drugs in the traditional medicine of Nepal is rich like that of India. It has been an integral part of the national health system. Formal education in the Ayurvedic system is supervised by the Institute of Medicine of Tribhuvan University.

Regulatory Status

The Council of Ayurvedic Medicine regulates the practice of Ayurveda in Nepal. The Ministry of Health of Nepal has established a focal unit, the Ayurveda & Alternative Medicine Section, which is responsible for establishing the necessary policies, rules and regulations for all the systems of traditional medicine existing in the country. The section plays a vital role in coordination, providing direction, and monitoring progress under the ministry.

Sri Lanka

Traditional medicine is an integral part of health care in Sri Lanka. Ayurveda is widely practiced as a traditional system of medicine. The National Institute of

Traditional Medicine, which is a government establishment, imparts educational courses in Ayurveda and traditional medicine. This is an education and training institute and is under the Department of Ayurveda. The main objectives of this institute are the development of traditional medicine and the improvement of the health of the community through the traditional health care systems. The Institute of Indigenous Medicine, University of Colombo, offers postgraduate study courses.

Regulatory Status

The Ministry of Indigenous Medicine regulates the registration of Ayurvedic practitioners. The Ayurvedic Medical Council Act advocates a code of ethics for the Ayurvedic Practitioners. Prior approval for the sale of Ayurvedic pharmaceutical products is required from the Ayurvedic Formulary Committee.

Thailand

There exists a well-recorded history of traditional medicine in Thailand. Ayurvedic doctors and traditional Thai practitioners are allowed to practice the traditional systems of medicine after registration with the Medical Registration with the Ministry of Public Health.

Regulatory Status

The 1967 Drug Act had been employed for almost two decades before the latest revision in 1987. One of the important reasons for this revision was that the 1967 Drug Act had no control measure for the manufacturing of traditional drugs using modern technology. As per the 1967 Drug Act, ingredients that are not of natural origin are not permitted in traditional drugs. The rigidity of the law created the problem of stability of the drugs, especially from microbes, since the natural preservatives, such as benzoin, are not very effective in controlling the microbial contamination. It also prevents the manufacturer from applying modern manufacturing techniques. The 1987 Drug Act, however, permits the use of chemical additives and modern manufacturing technology, which comply with the requirements for criteria and methods specified under Ministerial Regulation No. 25 (1994).

The registration procedure for a traditional drug is simple. Laboratory examination of submitted product sample(s) may be required in some cases. Once registered, its formula, method of manufacturing, and labeling cannot be altered without official approval or permission from the authority.

The Drug Act requires that people who wish to sell a traditional medicinal product or import drugs into the country have to obtain a license from the Food and Drug Administration (FDA). There are three different kinds of licenses related to the traditional medicine:

- License to manufacture traditional drugs
- License to sell traditional drugs
- License to import traditional drugs into the country

EASTERN MEDITERRANEAN

Egypt

The practice of traditional medicine in Egypt is limited to a very few practitioners.

Regulatory Status

All herbal preparations and herbal products are required to meet the same standards as synthetic chemicals. Herbal preparations and herbal products must be manufactured in a licensed pharmaceutical plant in compliance with the local and international good manufacturing practices (GMP). They must be registered with the Central Administration of Pharmaceutical Affairs.

Herbal medicines are regulated as prescription medicines, over-the-counter medicines, self-medication, and dietary supplements. The law permits medical, health, and nutrient content claims on herbal medicines. The Egyptian pharmacopoeia (1972, 1980) is the national pharmacopoeia and contains monographs on herbal medicines.

The safety of the herbal products is reviewed by the National Organization for Drug Control and Research (NODCAR).

The manufacture of herbal medicines has to be as per GMP norms. There is a postmarketing surveillance system and a national system to monitor adverse events for herbal medicines. Both registration and quality control of herbal drugs must be performed in the laboratories of NODCAR.

Iran

Traditional medicine and Islamic medicine are practiced in Iran through hokama who prepare, recommend, and sell the medicines. The Shaheed Beheshti University of Medical Sciences has done a lot of research on medicinal plants. However, most of it has been preclinical. Although all the students of pharmacy must study pharmacognosy, in few universities are pharmacy students required to do research related to a medicinal plant.

Regulatory Status

Traditional medicine practitioners are neither supported nor banned by the government. The Food and Drug Control Agency has been working in the field of herbal medicines.

In 1991, the National Academy of Traditional Medicine in Iran and Islam was established. Its area of activity involves research and preservation of traditional Iranian medicine. As per the recommendation of the academy, medical students should be trained in the field of Iranian traditional medicine.

The Council Committee of Medicinal Herbs and Products regulates the safety and efficacy of herbs and herbal products, and the packaging of herbal medicines.

Kuwait

In the year 1978, the Islamic Medicine Centre was established and the regulation of traditional medicine was started in Kuwait. The Islamic Medicine Centre also serves

as a research institute in herbal medicine. In 1984, a national program on traditional medicine was created, and in 1989, laws and regulations were laid down for the same. Kuwait began regulation of herbal medicine in 1989 with the introduction of a separate law on herbal medicines.

Regulatory Status

The laws in Kuwait prohibit traditional medicine providers from practicing medicine. However, herbal medicines are not banned. Herbal medicines are regulated as over-the-counter medicines, self-medication, dietary supplements, health foods, and functional foods. Medical and health claims may legally be made.

A document and guidelines have been issued on the safety and quality assurance of herbal medicines. The document categorizes the medicinal plants into three groups:

- Plants used on a daily basis
- Plants subject to large-scale scientific studies and included in pharmacopoeias
- Plants that need to be studied

For each of these plants there are specific registration requirements.

The registration of herbal medicines and the use of medicinal plants in the treatment of some of the diseases are controlled by the Centre for Islamic Medicine. The center also looks into the following areas:

- Registration of herbal medicines imported into Kuwait
- Import of medicinal plants necessary for the preparation of drugs used in the treatment of some diseases
- Studies on each plant, preparation, and product so as to identify the stability, efficacy, suitability, and safety of the active substances therein

Pakistan

Herbal medicine is practiced in Pakistan as Ayurveda and Unani systems of medicine. There are institutions offering four-year diploma courses in Pakistani traditional Unani and Ayurvedic systems of medicine that follow the prescribed curriculum and conditions set in the regulations.

Regulatory Status

Unani Tibb and Ayurveda have been accepted and integrated into the national health system in Pakistan. The Unani, Ayurvedic and Homoeopathy Practitioners Act of 1965 regulates the qualifications and registration of practitioners of the systems.

Saudi Arabia

Traditional medicine in Saudi Arabia is based on herbal remedies and spiritual healing, and is widespread. Herbal, nutritional, and health food products are very popular.

Regulatory Status

Paragraph 13A of the special provisions on registration regulations for pharmaceutical companies and their products requires the registration of medicines and all products having medical claims, including herbal preparations containing active ingredients that possess medicinal effects.

The License Committee under the Ministry of Health is responsible for approving the marketing and use of herbal products, health food products, and natural health products, mainly based on their safety and efficacy.

United Arab Emirates

The Ministry of Health's Zayed Centre for Herbal Research and Traditional Medicine was established in Abu Dhabi to conduct research on medicinal plants. There is high consumer demand for herbal preparations and herbal products in the United Arab Emirates.

Regulatory Status

Section 1 of Federal Law 7 of 1975 regulates the licensing and registration requirements for the practice of medicine. In order to provide a legal framework, registration criteria for herbal medicines were published in January 1998. The registration criteria include the following:

- Documentation, including detailed monographs, for the herb
- Reference sample of the active ingredient of the herb
- Laboratory analysis for identity, purity, and quantity

Priority is given to single-ingredient products. Products containing more than one herb must have a rationale for the combination. Therapeutic claims beyond traditional uses are not accepted unless scientifically validated.

WESTERN PACIFIC

Australia

Australia has a history of usage of herbal medicine owing to the Chinese migration.

Regulatory Status

There exists regulatory control over the sale of complementary medicine in Australia. The *Australian Regulatory Guidelines for Complementary Medicines* (*ARGCM*) provides guidance for the registration of complementary medicines to manufacturers or traders. The Therapeutic Goods Act (TGA) contains general provisions relating to all the therapeutic products to control this registration or cancellation of existing registrations of medicines.

The safety and efficacy of the raw material and finished product is a major determining factor for permitting the registration. The TGA maintains a list of

substances that may be used as active ingredients in listed medicines in Australia. The active ingredients that can be included in complementary medicine are listed in Schedule 14. Medicines that are composed of only approved ingredients and make only general or medium-level indications are eligible to be entered in the Australian Register of Therapeutic Goods. Traditional herbal medicines have a special mention in complementary medicine and are defined as "those therapeutic goods which are, or contain as the major active ingredient(s), herbal substances."

For registration purposes in Australia, the traditional herbal medicine should have

- An established and acknowledged use of a herbal preparation
- Well-established efficacy, dosage, and usage
- Established botanical identity of the herbal ingredient

China

China has a long history of herbal medicine. Chinese materia medica has listed a large number of herbal drugs. There has been continuous support to the herbal system of medicine from the constitution resulting in the integration and simultaneous development of an herbal system of medicine.

Regulatory Status

The Chinese pharmacopoeia has the listing of herbal drugs and the monographs provide information about identification, indications, and dosage. For marketing an herbal preparation, there is the requirement of a dossier having data on the quality, safety, and efficacy. A new drug is given an approval number, and thereafter it is permitted to be placed in the market. The Drug Administration Law of the People's Republic of China regulates the drugs.

Fiji

Fiji has a history of practice of herbal medicine.

Regulatory Status

In addition to traditional Fijian medicines, traditional herbal medicines from other countries like India and China are also marketed in Fiji. The *Pharmacy and Poisons Act* controls the import of herbal medicines into the country. If there is a therapeutic claim on the label of a product, the marketer has to provide the scientific evaluation data for the efficacy before it is permitted to be sold in the market. The national drug policy of Fiji encourages research in the area of herbal medicine; however, the safety and efficacy of the products are major areas of concern.

Japan

The per-capita consumption of herbal medicine in Japan is one of the highest in the world. The traditional medicine is known as Kampo medicine.

Regulatory Status

New Kampo drugs are regulated in the same way as Western drugs in Japan. Chronic toxicity studies (including carcinogenicity, mutagenicity, and teratogenicity studies) and three-phase clinical studies are required depending upon the duration of usage and indications.

There is a three-way pharmacovigilance system in Japan for collecting adverse drug reaction data:

- Adverse drug reaction reporting by the hospitals
- Adverse drug reaction reporting by the pharmacies for over-the-counter drugs
- Adverse drug reaction reporting by the manufacturers

AFRICA

South Africa

A significant number of people visit traditional healers, and herbal medicines are used as self-medication, too. However, trade in the herbal medicines is totally non-regulated. But if any health-related claim is made on any finished product, it has to go through the medicine evaluation procedure in the Medicine Control Council before marketing.

Regulatory Status

Regulations regarding registration and control of new traditional medicines do not exist.

THE AMERICAS

United States of America

Complementary and alternative medicine is slowly gaining acceptance in the United States and herbal drugs have a substantial part in alternative medicine. However, as compared to other developed countries, the consumption of herbal drugs is less.

Regulatory Status

In the United States, licensing, practice, and malpractice are regulated by state laws. The Food and Drug Administration (FDA) regulates and controls access to treatments. Legal rules are made to safeguard consumers' interest. Any products that claim to treat, cure, mitigate, or prevent a disease are treated as a drug by the FDA. Thus, for claims on any herbal medicine to be allowed, the same procedures must be followed as for a chemical drug. For the standards of some herbal drugs, the U.S. Pharmacopeia has given quality specifications of crude raw materials extracts and dosage forms of herbs.

Although many herbal products are used by consumers as folk medicines, most natural products in the United States are regulated as foods, supplements, or food additives. The main concern of the regulatory authorities is safety of the consumers, and the sale of a product containing a herb that is categorized as generally

recognized as safe (GRAS) is permitted. Natural products have GRAS status, so long as qualified experts confirm this and are not contradicted by other experts. Herbs that are commonly used in food or as food are permitted to be used in food products. The requirement of "common use in food" is not restricted to herbs used in the United States alone, but applies also to herbs that are alien to the United States.

Dietary Supplements

The law provides that a dietary supplement is considered to be a food that does not need premarket approval by the FDA and not as a food additive, which needs premarket approval from an authority.

Herbs and other botanicals, vitamins, and minerals fall under the category of a dietary supplement that is presented in a dosage form such as capsules, tablets, and liquids, and is not represented as a conventional food, but is labeled as a dietary supplement. Dietary supplements do not include substances first sold as drugs and later as dietary supplements, nor do they include substances undergoing clinical studies that were not first sold as dietary supplements.

The FDA requires that randomized controlled trials should be done to evaluate the efficacy of an herbal product to market it as a drug or to give it medicinal claims. The trials should be conducted as per good clinical practice (GCP) to be accepted as valid scientific data by the FDA.

Argentina

In Argentina, herbal drugs are sold through various channels like herboristerias, pharmacies, and the pharmaceutical industry. All of these are controlled by pharmacists. The people who grow medicinal plants should have authorization from the Ministry of Health. Mixtures of vegetable drugs are controlled, together with preparations made by industry, under the Drug Law.

Regulatory Status

In November 1993, a regulation for registration and commercialization of medicinal plants was published by the Health Ministry of the Provincia de Buenos Aires. With this regulation, the registration of medicinal herbs was made mandatory. The documents containing the name of the plant, part of the plant, active principles, identification, and indications have to be furnished to the herboristerias. In the case of a product containing a mixture of herbs, the rationale of the combination needs to be demonstrated through scientific data supporting the rationale. The certificate issued by the Laboratorio Central de Salud is valid for 5 years. An application for renewal of the same has to be applied for 30 days before expiration.

Canada

In Canada, the complementary and alternative medicine training programs are provided by private institutes, universities, and community colleges, but there is no universal accreditation and validation of these programs. Recently Health Canada, the regulatory

body, has given legal status to natural health products and has defined a provision for registration of these products. The system ensures that though natural products reaching the population are safe and are quality products, there is a recall provision in case of an adverse event being reported or a quality issue associated with a product.

Natural health products are regulated by the Natural Health Products Regulations of the Food and Drugs Act. These regulations apply to the

- Sale of natural health products
- Manufacture, packaging, labeling, and import for sale of natural products
- Distribution of natural health products
- Storage of natural health products for any activity in manufacturing, labeling, distribution, etc.

When submitting the application for license, the details of medicinal ingredients are required to be provided along with the quantity per dosage, potency, source material, and a statement if it is synthetically manufactured. Along with this, the information on safety and efficacy of the product has to be provided. The labeling information is also controlled by these regulations.

The ministry assigns a product number to each natural health product, in respect of which a license is issued. The regulation directs every licensee to keep the following records for a period of one year following the expiration date of the natural health product:

- A list of ingredients contained in each lot or batch of the natural health product made available for sale
- Distribution records to enable recall of every lot or batch made available for sale

Pharmacovigilance

A licensee is required to provide a case report of any serious adverse drug reaction to the natural health product within 15 days from the date when the licensee becomes aware of it.

Chile

A regulation for the control of the practice of alternative medicines exists in Chile. The Unidad de Medicina Tradicional was established for incorporating traditional medicine with validated efficacy into health programs.

Regulatory Status

A registration for marketing authorization is needed for herbal products. The application for registration has to be submitted giving details of the complete formula, labeling, samples of the product, and a monograph that permits identification of the formula and characteristics of the product.

Natural products are recognized as

- Drugs intended to cure, alleviate, or prevent diseases
- Food products for medicinal use and with therapeutic properties
- Food products for nutritional purposes

According to a regulation for the control of drugs, food products for medicinal use, cosmetics, and herbal products with therapeutic indication claims or dosage recommendations are considered to be drugs. These are made available at pharmacies and drug stores, which need a special authorization from the Ministry of Health.

Nicaragua

The Ministry of Health has included herbal products in the basic list of medicines to be made available through community pharmacies in local health systems.

The National Centre for Popular and Traditional Medicine has the following objectives:

- To recover, preserve, and develop the resources, techniques, and procedures of popular and traditional medicine
- To ensure the application of technical resources and knowledge acquired by investigation and interchange of information on popular and traditional medicine
- To design and implement a national program for the promotion of the use of medicinal plants and the prevention and cure of illnesses
- To create a network for distribution and commercialization of medicinal plants and their derivatives through popular, private, and state pharmacies

EUROPE

European Union

There has been a growing concern around the globe about the safety, efficacy, lack of reliable information, and quality of some unlicensed herbal products. Although many unlicensed herbal medicines on the market are already manufactured under good manufacturing practice (GMP) standards, it is impossible for consumers to identify which products are made to acceptable standards. All of these concerns have caused the establishment of the European Union (EU) directive on traditional herbal medicinal products (THMPD). The directive requires each EU member state to set up its own traditional herbal registration scheme. A provision has thus been made to market herbal medicinal products as medicines, instead of foods or supplements through the THMPD.

The THMPD is therefore the main regulatory approval process for traditional herbal medicines in the EU. If a medicine is registered under this directive, the manufacturers are permitted to make restricted medicinal claims on the label and the patient information leaflet.

For providing guidelines, European pharmacopoeia has given standards of certain medicinal herbs. In addition, European Scientific Cooperative on Phytotherapy

(ESCOP) monographs have been published on several medicinal herbs. Presently, the EU is developing community herbal monographs on medicinal herbs that are traditionally used to facilitate inclusion in THMPD.

The Traditional Herbal Medicines Registration Scheme (THMRS) is designed for manufactured traditional herbal medicines that are suitable for use without medical supervision. This mechanism is to ensure that the patient is receiving not only a good-quality product but also reliable advice on its use. However, this scheme does not apply to products that are manufactured from isolated chemical constituents of plants.

Previous legislation meant that the products could be sold with little regard to safety, quality, or the provision of useful patient information. Although the primary objective of the THMRS is to protect the patient, it is also favorable for the manufacturers of herbal medicinal products by providing a scope to market the product as a medicine, without needing to comply with the stringent requirements of a full marketing authorization. Thus this option provides greater freedom to marketers for promoting their products. In the present scenario, this is an easier option for the manufacturers of herbal medicines as many of the conditions of the marketing authorization are almost impossible to meet for herbal drugs.

As a result of Directive 2004/24/EC, all new over-the-counter herbal medicines in the United Kingdom will require either a traditional herbal medicines registration or a full marketing authorization.

CONCLUSION

The world over, societies have been using herbs or herbal drugs in various forms, whether there exists a formal education or regulatory system for the herbal system of medicine or not. Medicinal plants have always been an important therapeutic aid for alleviating ailments of mankind. In many Eastern countries like India, China, and Sri Lanka, the herbal systems have been integrated into regular health care and have become a part of the materia medica of these countries. All these traditional systems have over the years developed independent of each other, but a common factor between them remains that all are predominantly plant based.

Growing concern for the safety of humans is pushing the regulatory authorities to have more stringent controls over the herbal drugs. The claim of safety and efficacy may be required to be substantiated through validated scientific data.

At the same time, provisions are being made for the inclusion of herbal products in the regulatory frameworks of several countries. To provide guidance to the industry, plant monographs are being developed on herbal drugs to provide specifications and testing methods for the standards. In the future, herbal products are likely to gain more popularity as a regulated product segment.

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U.S. Food and Drug Administration, www.fda.gov
World Health Organization, Essential Medicines and Pharmaceutical Policies, Egypt, www.emro.who.int/edb/medicines_country_traditional_egy.htm
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13 Information Resources

CONTENTS

DATABASES

AGRICOLA, http://agricola.nal.usda.gov/
AGRICOLA (AGRICultural OnLine Access) is a bibliographic database of citations to the agricultural literature created by the National Agricultural Library, USA.

American Indian Ethnobotany Database, http://herb.umd.umich.edu
A database of foods, drugs, dyes, and fibers of Native North American Peoples.

BMC Complementary and Alternative Medicine Journal, www.biomedcentral.com/bmccomplementalternmed
Publishes original research articles in complementary and alternative health care interventions, with a specific emphasis on those that elucidate biological mechanisms of action.

CAB Abstracts: CAB International, Oxford, UK, www.cabi.org/Publishing/Products/Database/Abstracts/Index.asp
Bibliographic database compiled by CAB International. It covers agriculture, forestry, aspects of human health, human nutrition, animal health, and the management and conservation of natural resources.

Carotenoid Database for US Foods, www.nal.usda.gov/fnic/foodcomp/Data/car98/car98.html
: Collaborative effort between the U.S. Department of Agriculture and the Nutrition Coordinating Center at the University of Minnesota. Mainly pdf files. The complete database can be downloaded.

HerbMed, www.herbmed.org
: Categorized, evidence-based resource for herbal information, with hyperlinks to clinical and scientific publications and dynamic links for automatic updating, produced by the nonprofit Alternative Medicine Foundation.

IBIDS, http://ods.od.nih.gov/showpage.aspx?pageid=48
: International Bibliographic Information on Dietary Supplements (IBIDS) is a database of published, international, scientific literature on dietary supplements, including vitamins, minerals, and botanicals, produced by the Office of Dietary Supplements at the National Institutes of Health.

LIGAND Database, www.genome.ad.jp/htbin/www_bfind?ligand
: Ligand chemical database from GenomeNet, Kyoto University.

Lloyd Library and Museum, www.lloydlibrary.org
: The 200,000 volume collection contains pharmacy, botany, and horticulture rare books and other collections.

NAPRALERT, www.napralert.com
: Large relational database of worldwide literature on ethnomedical, chemistry, pharmacology of plant, microbial, and animal extracts from the University of Illinois.

Patents Database, www.uspto.gov/patft/index.html
: The U.S. Patent and Trademark Office full-text and full-page image database includes many entries related to botanical medicine.

Phytochemical and Ethnobotanical Databases, www.ars-grin.gov/duke/
: Dr. Duke's Phytochemical and Ethnobotanical Databases, Agricultural Research Service of the U.S. Department of Agriculture.

Plants for a Future, www.scs.leeds.ac.uk/pfaf/D_intro.html
: From Leeds University, United Kingdom, the species database contains nearly 7,000 plants, either edible, having medicinal properties, or having some other use such as fibers, oils, or soaps. It has three Web sites for searching and a downloadable version.

Poisonous Plants Informational Database, www.ansci.cornell.edu/plants/index.html
: Reference resource from Cornell University that includes plant images, pictures of affected animals, presentations of the botany, chemistry, toxicology, diagnosis, and prevention of poisoning of animals by plants and other natural flora.

PubMed, www.ncbi.nlm.nih.gov/PubMed/
: National Library of Medicine's search interface to access the 10 million citations in MEDLINE, Pre-MEDLINE, and other related databases.

Tropical Plant Database, http://rain-tree.com/plants.htm
Each plant file contains taxonomy data, phytochemical and ethnobotanical data, uses in traditional medicine, and clinical research from Raintree Nutrition, Inc., Austin, Texas.

World Health Organization (WHO) documents and publications on traditional medicine, www.who.int/topics/traditional_medicine/en/
The World Health Organization is the United Nations specialized agency for health. This page provides links to descriptions of activities, reports, news, and events, as well as contacts and cooperating partners in the various WHO programs and offices working on this topic.

HERBAL MONOGRAPHS

Publicly Available

Longwood Herbal Task Force, www.longwoodherbal.org/monographs.htm
Monographs, patient and professional information from the faculty, staff, and students of the Children's Hospital, the Massachusetts College of Pharmacy and Health Sciences, and the Dana Farber Cancer Institute. No longer maintained.

Memorial Sloan-Kettering Cancer Center: About Herbs, Botanicals, & Other Products, www.mskcc.org/mskcc/html/11570.cfm
Provides information evaluated by oncologists and health care professionals at MSK, including a clinical summary for each agent and details about constituents, adverse effects, interactions, and potential benefits or problems.

Phytotherapies.org Monographs, www.phytotherapies.org
Free service to practitioners registered with this Australian site, sponsored by Herbworx Corporation.

Subscription Based

American Botanical Council, www.herbalgram.org
ABC member benefits include access to HerbClip Online, Complete German Commission E Monographs, and Clinical Guide to Herbs.

HealthGate, www.healthgate.com
General medical information and herb monographs aimed at licensing for commercial outlets. Advisory board and sources of information specified on Web site.

HealthNotes, www.healthnotes.com
U.K.-based company provides consumer information on health, food, and lifestyle information for in-store touchscreen kiosks. States that all information is verified by compilers in peer-reviewed journals.

Herb Research Foundation, http://www.herbs.org/index.html
HRF provides a search service from its specialty research library containing more than 300,000 scientific articles on thousands of herbs.

Intramedicine, www.intramedicine.com
Management team and advisory team specified on Web site. Provides a Chinese herbal database as part of resources. Professional pharmacist and patient oriented.

Natural Medicines, www.naturaldatabase.com
Large collection of monographs aimed at medical professionals generally. Also available in book format. Editorial team listed.

Natural Standard, www.naturalstandard.com
Monographs compiled by a multidisciplinary team. High-profile advisory team. Methodology, selection criteria, and evaluation clearly described. Primarily oriented to clinicians and pharmacists.

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Click on the Herbal Therapeutics Research Library for full text pdf files of rare and out-of-print manuscripts from the extensive research library.

Fitoterapia, www.weizmann.ac.il/pages/library-services
Phytotherapy journal published by Elsevier Science for Indena, Italy, a private company specializing in botanical derivatives for the pharmaceutical, cosmetic, and food industries. Abstracts available. Click on Fitoterapia.

Journal of Ethnopharmacology, www.elsevier.com/wps/find/journaldescription.cws_home/506035/description#description
Interdisciplinary journal from Elsevier devoted to research on biological activities of plant and animal substances used in traditional medical systems.

Journal of Natural Products, http://pubs3.acs.org/acs/journals/cover_art.page?incoden=jnprdf
Joint publication of the American Chemical Society and the American Society of Pharmacognosy, for natural product chemists, biochemists, taxonomists, ecologists, and pharmacologists.

Medical Herbalism, medherb.com/mhhome.shtml
A full-text clinical newsletter for the herbal practitioner.

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Formerly the *International Journal of Pharmacognosy.* Research on the bioactivity of plants and extracts from all parts of the globe.

Phytochemistry, http://www.elsevier.com/wps/find/journaldescription.cws_home/273/description
Published by Elsevier, covers research on all aspects of plant chemistry, plant biochemistry, plant molecular biology, and chemical ecology.

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ABC's main mission is to educate the public on the use of herbs and phytomedicinals. ABC publishes *HerbalGram* and has an extensive collection of information and research resources for members.

American Herbal Products Association, www.ahpa.org
Trade Association providing information on the botanical products industry for companies and the public.

American Herbalists Guild, www.americanherbalistsguild.com/
Nonprofit educational organization representing herbalists. AHG also provides a large database of certified herbalists, educational programs, and publications.

Council for Responsible Nutrition, www.crnusa.org/
CRN is a Washington-based trade association representing ingredient suppliers and manufacturers in the dietary supplement industry.

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Herb growing and marketing network.

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Alternative Nature Online Herbal, www.altnature.com/index.html
Miscellany of links and resources for herbalists.

American Herbal Pharmacopoeia, www.herbal-ahp.org
The goal of AHP is to produce authoritative herbal monographs containing accurate, critically reviewed information on botanicals to provide guidance in the appropriate use of herbal therapeutics.

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Collection of resources and links on botanicals. Features a hypertext version of *A Modern Herbal,* 1931, by Mrs. M. Grieve: www.botanical.com/botanical/mgmh/mgmh.html

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Missouri Botanical Garden rare books collection has been scanned and made available. Includes medicinal plants and their uses.
Southwest School of Botanical Medicine, http://chili.rt66.com/hrbmoore/HOMEPAGE/HomePage.html
Scroll down to Michael Moore's collection of medicinal plant images.

ADVERSE EFFECTS, SAFETY, AND STANDARDS

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Canadian Poisonous Plants Information System, http://sis.agr.gc.ca/pls/pp/poison?p_x=px
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ConsumerLab, www.consumerlab.com
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Business Guide for Dietary Supplement Industry Released by FTC Staff, www.ftc.gov/opa/1998/11/dietary.shtm
Guide will assist industry in ensuring truthful ads (document).

Citizens for Health, www.citizens.org
Citizens For Health is the national grassroots organization committed to protecting and advancing consumer access, choice, information, and safety for natural health products and therapies.

Codex Alimentarius, www.codexalimentarius.net/
Information on Codex Alimentarius, a collection of internationally recognized standards, codes of practice, guidelines, and other recommendations relating to food.

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Council for Responsible Nutrition (CRN), www.crnusa.org
The Council for Responsible Nutrition is dedicated to helping reduce health care costs and enhancing the public's health through good nutrition, including the appropriate use of dietary supplements. To fulfill this mission, CRN supports a science-based environment for the responsible marketing of dietary supplement products and provides its member companies with legislative guidance, regulatory interpretation, scientific information on supplement benefits and safety issues, and communications expertise.

Dietary Supplement Quality Initiative (DSQI), www.supplementquality.com
Committed to consumer-oriented activities and developing comprehensive quality practices and standards for dietary supplements.

Food and Drug Administration, Dietary Supplements, http://www.fda.gov/food/dietarysupplements/default.htm
Overview of dietary supplement regulation by the U.S. Food and Drug Administration.

Herb World News Online, www.herbs.org/current/topnews.html
Latest herb-related news from the Herb Research Foundation, includes legal updates.

National Institutes of Health, Office of Dietary Supplements, http://dietary-supplements.info.nih.gov
The Office of Dietary Supplements supports research and disseminates research results in the area of dietary supplements. The office also provides advice to other federal agencies regarding research results related to dietary supplements.

Natural Products Association, www.npainfo.org
The Natural Products Association (formerly the National Nutritional Foods Association) represents the interests of retailers and manufacturers, suppliers, and distributors of health foods, dietary supplements, natural ingredient cosmetics, and other natural products.

COUNTRY-SPECIFIC COMPLEMENTARY AND ALTERNATIVE MEDICINE

United Kingdom

Bandolier Library of Complementary and Alternative Therapies, www.medicine.ox.ac.uk/bandolier/booth/booths/altmed.html

This site is intended to gather the best evidence available about complementary and alternative therapies (CAT) for sufferers and professionals.

Electronic Quality Information for Patients (EQUIP), www.equip.nhs.uk

A gateway to quality health and social care information for U.K. patients, their families, and carers. The site contains information on: risks, symptoms, and treatment options; where to seek support and advice (in United Kingdom); and information for the West Midlands.

Evidence-Based Complementary and Alternative Medicine, www.ecam.oupjournals.org

Evidence-Based Complementary and Alternative Medicine (eCAM) is an international, peer-reviewed journal that seeks to understand the sources and to encourage rigorous research in this new, yet ancient world of complementary and alternative medicine.

Internet Health Library, www.internethealthlibrary.com

The Internet Health Library is the United Kingdom's largest alternative medicine, complementary therapy, and natural health care resource.

The Research Council for Complementary Medicine, www.rccm.org.uk

The NHS priorities project is a three-year project that is being conducted by The Research Council for Complementary Medicine (RCCM) in collaboration with the School of Integrated Health, University of Westminster, London. The main outcome of the project is the Complementary and Alternative Medicine Evidence Online (CAMEOL) database, which provides reviews of research evidence of effectiveness of a number of complementary and alternative medicine therapies within areas of NHS priority, including cancer, mental health, coronary heart disease, and stroke, and chronic conditions such as arthritis, asthma, back pain, diabetes, and multiple sclerosis.

United States of America

Alternative Medicine Foundation, www.amfoundation.org

The Alternative Medicine Foundation is a nonprofit 501(c)(3) organization, founded in March 1998 to provide responsible and reliable information about alternative medicine to the public and health professionals.

The Alternative Medicine Homepage, http://zone.medschool.pitt.edu/sites/StudentGroups/IHIG/Shared%20Documents/The%20Alternative%20Medicine%20Homepage.htm

This site is a jumpstation for sources of information on unconventional, unorthodox, unproven, or alternative, complementary, innovative, integrative therapies

Columbia University Rosenthal Center Directory of Databases, http://cpmcnet.columbia.edu
Compilation of the major databases containing significant alternative medicine resources. The categorized listings are hyperlinked to existing Web sites where available, or to brief information on the resource, such as how to obtain further details, type of literature covered, size of the holding, and mode of access.

CAM on PubMed, http://nccam.nih.gov/research/camonpubmed/
Search for citations of journal articles related to complementary and alternative medicine.

M. D. Anderson Cancer Center, Complementary/Integrative Medicine Education Resources, www.mdanderson.org/departments/cimer
The CIMER Web site is a cooperative effort of the Integrative Medicine Program and the Office of Academic Affairs at the University of Texas M. D. Anderson Cancer Center. The CIMER staffs create, develop, and maintain the information contained on the site. Additional expertise is provided by an Operational Committee, an Internal Advisory Committee, and an External Advisory Committee of nationally recognized experts.

National Cancer Institute, Thinking about Complementary and Alternative Medicine: A Guide for People with Cancer, www.cancer.gov/cancertopics/thinking-about-CAM

National Center for Complementary and Alternative Medicine (NCCAM), http://nccam.nih.gov
NCCAM is dedicated to exploring complementary and alternative healing practices in the context of rigorous science, training complementary and alternative medicine (CAM) researchers, and disseminating authoritative information to the public and professionals.

Natural Standard, http://naturalstandard.com
Validated rating scales are used to evaluate the quality of available evidence. Information is incorporated into comprehensive monographs that are designed to facilitate clinical decision making.

India

AYUSH Department, http://indianmedicine.nic.in/index.asp?lang=1
Department of Indian Systems of Medicine and Homoeopathy (ISM&H) was created in March 1995 with a view to providing focused attention to development of education and research in Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy systems. The department continued to lay emphasis on upgrading AYUSH educational standards; quality control and standardization of drugs; improving the availability of medicinal plant material; research and development; and awareness generation about the efficacy of the systems domestically and internationally.

Central Council for Research in Ayurveda & Siddha (CCRAS), www.ccras.nic.in
The Central Council for Research in Ayurveda & Siddha (CCRAS) is an autonomous body of the Department of AYUSH (Ayurveda, Yoga &

Naturopathy, Unani, Siddha and Homeopathy), Ministry of Health & Family Welfare, Government of India. It is an apex body in India for the formulation, coordination, development, and promotion of research on scientific lines in Ayurveda and Siddha systems of medicine and also the Sowa-Rigpa, commonly known as Tibetan or Amchi medicine.

Indian Council of Medical Research (ICMR), http://icmr.nic.in

The Indian Council of Medical Research (ICMR), New Delhi, the apex body in India for the formulation, coordination, and promotion of biomedical research, is one of the oldest medical research bodies in the world. The council's research priorities coincide with the national health priorities such as control and management of communicable diseases, fertility control, maternal and child health, control of nutritional disorders, developing alternative strategies for health care delivery, containment within safety limits of environmental and occupational health problems; research on major noncommunicable diseases like cancer, cardiovascular diseases, blindness, diabetes, and other metabolic and hematological disorders; mental health research and drug research (including traditional remedies). All these efforts are undertaken with a view to reduce the total burden of disease and to promote health and well-being of the population.

Indian Journal of Experimental Biology (*IJEB*), www.niscair.res.in/sciencecommunication/ResearchJournals/rejour/ijeb/ijeb0.asp

The *Indian Journal of Experimental Biology*, started in 1963, publishes full papers, notes, and reviews in cell biology, molecular biology, genetic engineering, endocrinology, reproductive biology, immunology, developmental biology, comparative physiology, radiation biology, chronobiology, microbiology, pharmacology, toxicology, and other biological fields including instrumentation and methodology.

Indian Journal of Pharmacology, www.ijp-online.com

The *Indian Journal of Pharmacology* is an official organ of the Indian Pharmacological Society. The first issue of the journal came out in 1969 and it was published quarterly. In 1997 it became a bimonthly publication.

International Journal of Ayurveda Research, www.ijaronline.com/contributors.asp

The *International Journal for Ayurveda Research*, a publication of the Department of AYUSH, Government of India, is a quarterly peer-reviewed international journal. This is the first journal from India that can present to the world the wealth of science generated in Ayurveda in the medical schools and research organizations in the country.

National Institute of Ayurveda, www.nia.nic.in

The National Institute of Ayurveda was established in 1976 by the Government of India as an apex institute to promote the growth and development of Ayurveda; to produce graduates and postgraduates in all branches of Ayurveda; to conduct research on various aspects of Ayurveda; to provide medical care through the Ayurvedic System of Medicine to the suffering humanity; to provide and assist

in providing services and facilities of the highest order for research, evaluation, training, consultation, and guidance to Ayurvedic System of Medicine; and to conduct experiments and develop patterns of teaching in undergraduate and postgraduate education in all branches of Ayurveda.

National Medicinal Plants Board, http://nmpb.nic.in/index.php

The National Medicinal Plants Board (NMPB), set up in November 2000 by the Government of India, has the primary mandate of coordinating all matters relating to medicinal plants and support policies and programs for growth of trade, export, conservation, and cultivation. The board is located in the Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy (AYUSH) of the Ministry of Health & Family Welfare.

Rashtriya Ayurveda Vidyapeeth, www.ravdelhi.nic.in

Rashtriya Ayurveda Vidyapeeth was established in 1988 with one of the objectives of promoting knowledge of Ayurveda.

Traditional Knowledge Digital Library, www.tkdl.res.in/tkdl/langdefault/common/Home.asp?GL=Eng

The Traditional Knowledge Digital Library is a representative database containing 1,200 formulations selected from various classical texts of Ayurveda, Unani, and Siddha systems of medicine. Five-hundred formulations from Ayurveda, 500 formulations from Unani, and 200 Siddha formulations are readily available.