



SYSTEMS OF MEDICINES & PLANT DIVERSITY

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INTRODUCTION

- The Indian System of Medicine is the culmination of Indian thought of medicine which represents a way of healthy living valued with a long and unique cultural history, as also amalgamating the best of influences that came in from contact with other civilizations be it Greece (resulting in Unani Medicine) or Germany (Homeopathy) or our scriptures/sages which gave us the science of Ayurveda, Siddha as also Yoga & Naturopathy.
- A separate Department of Indian Systems of Medicine and Homoeopathy (ISMH) was set up in 1995 to ensure the optimal development and propagation of AYUSH systems of health care.
- The Department of ISMH was re-named as the Department of AYUSH (an acronym for - Ayurveda, Yoga and Naturopathy, Unani, Siddha, Homoeopathy) in November 2003.

SYSTEMS OF MEDICINES

India has the unique distinction of having six recognized systems of medicine.

They are-

1. Ayurveda
2. Unani
3. Siddha
4. Yoga
5. Naturopathy
6. Homoeopathy

Ayurveda

- The word 'Ayurveda' has derived from two separate words-
Āyu' i.e. life & 'Veda' i.e. knowledge.
- Ayurveda is a classical system of preventive, promotive & curative healthcare originating from the Vedas documented around 5000 years ago & currently recognized and practiced in India & many countries in the world.
- It is one of the most ancient healthcare systems having equal scientific relevance in the modern world, that take a holistic view of the physical, mental, spiritual & social aspects of human life, health & disease.
- Any imbalance due to internal & external factors causes disease & restoring equilibrium through various techniques, procedures, regimes, diet & medicine constitute treatment.
- The philosophy of Ayurveda is based on the theory of Pancha bhootas (five element theory) of which all the objects and living bodies are composed of.
- *Ayurveda is originated out of Vedas (particularly Rigveda & Atharvaveda)*

- Numerous references of health, diseases, their treatment as well as use of non-materialistic things such as sun rays, fasting, mantra etc; are available in these Vedas.
- Knowledge of Ayurveda was first comprehensively documented in the compendia like 'Brahma Samhita', 'Āgnivesha tantra', 'Bhela Samhita' etc.
- Out of these, only some part of Bhela Samhita is available today. The Agnivesha Tantra was edited by Charak around 5000 years back called *Charak Samhita* and thereafter re-edited by Dridhbala, which is one of the main text of Ayurveda available in complete form today.
- Likewise another full available ancient text mainly dealing with surgical aspect of diseases is *Sushruta Samhita*, which has also undergone 3-4 editions in past 5000 years.
- According to Ayurveda, health is considered as a basic pre-requisite for achieving the goals of life - Dharma (duties), Arth (finance), Kama (materialistic desires) and Moksha (salvation).
- As per the fundamental basis of Ayurveda, all objects and living bodies are composed of five basic elements, called the Pancha Mahabhootas, namely: Prithvi (earth), Jal (water), Agni (fire), Vayu (air) and Akash (ether).
- Philosophy of Ayurveda is based on the fundamental correlation between the universe & the man, Hence stressed on environmental aspects & has advised various measures for conservation of nature as well as to avoid the pollution of Air, Water and Soil.
- Ayurveda imbibes the humoral theory of Tridosha- Vata (ether + air), Pitta (fire) and Kapha (earth + water), which are considered as the three physiological entities in living beings responsible for all metabolic functions.
- Mental characters of human beings are attributable to Satva, Rajas and Tamas, which are the psychological properties of life collectively terms as 'Triguna'.
- Ayurveda aims to keep structural and functional entities in a state of equilibrium, which signifies good health (Swasthya).
- The preventive aspect of Ayurveda is called Svasth-Vritta and includes personal hygiene, daily and seasonal regimens.
- The curative treatment consists of Aushadhi (drugs), Ahara (diet) and Vihara (life style).
- It mainly uses plants as raw materials for manufacture of drugs, though materials of animal and marine origin, metals & minerals are also used.
- Ayurvedic medicines are generally safe & have little or no known adverse side-effects, if manufactured properly & consumed judiciously following the necessary do's and don'ts.
- Ayurveda has also described about genetic predisposition for health as well as development of described various treatments so as to restrict the transfer of genetic linked diseases to next generation. This speciality of Ayurveda is known as 'Vrishya'.
- Initially, clinical medicine of Ayurveda was developed into eight distinct specialties, i.e. Kayachikitsa (Internal Medicine), Shalya Tantra (Surgery), Shalakya (Eye and ENT), Kaumar Bhritya (Pediatrics), Graha Chikitsa (Psychiatry), Agad Tantra (Toxicology), Rasayana (Gerontology) and Vajikarana (Science of virility), on the basis of which it is called 'Ashtang Ayurveda'.



UNANI

- Unani System of medicine is based on established knowledge and practices relating to promotion of positive health and prevention of diseases.
- Although Unani system originated in Greece, passed through many countries, Arabs enriched it with their aptitude and experience and the system was brought to India during Medieval period.
- Unani System emphasise the use of naturally occurring, most herbal medicines, though it uses ingredients of animal and marine origin.
- Unani system of medicine described four mode of treatment viz.,
 - a. Ilaj-bil-Tadbir (Regimenal Therapy),
 - b. Ilaj-bil-Ghidha (Dietotherapy),
 - c. Ilaj-bilDawa (Pharmacotherapy) &
 - d. Ilaj-bil-Yad (Surgery).
- Thrust Areas of Unani Medicine include; skin diseases, liver disorders, non-communicable diseases including life style diseases, metabolic & geriatric diseases, menstrual/ gynaecological disorders etc.
- Drugs obtained only from herbal, animal & mineral sources are used for medication. They may be subjected to physico- chemical processing but without breaking up their natural character. Thus, Unani system of medicine uses only natural substances in treatment.
- Unani classical books that were mostly in Arabic & Persian were translated in to Urdu & other languages, to benefit the scholars & practitioners. A number of health based literature were published to create awareness among the masses.
- There are number of Unani drugs manufacturing units in the Government & private sectors in the country. Pharmacopoeia Laboratory for Indian Medicine (PLIM) is functioning since 1970 as an appellate laboratory for testing of traditional medicines including; Unani drugs & development of pharmacopoeia standards.

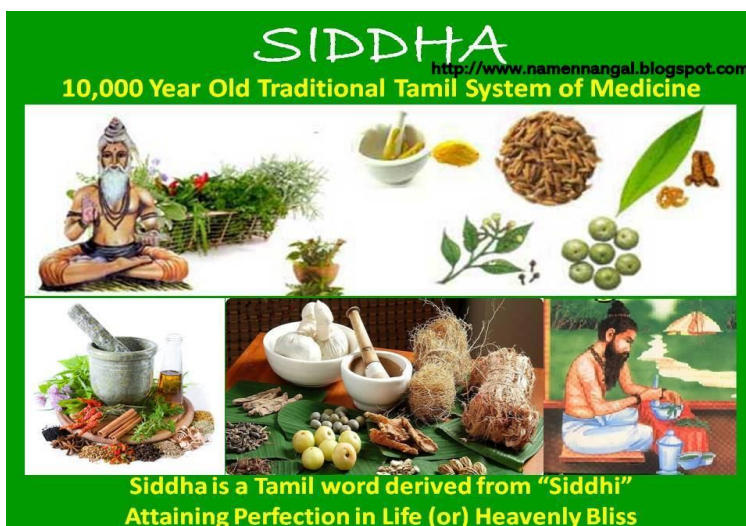


SIDHHA

- Siddha system emphasize that medical treatment is oriented not merely to disease, but also has to take into account the patient, environment, age, habits, physical condition. Siddha literature is in Tamil and it is largely practiced in Tamil speaking parts of India.
- Siddha System of medicine is one of the ancient systems of medicine in India having its close bedd with Dravidian culture. The term Siddha means achievements and Siddhars are those who have achieved perfection in medicine. Eighteen Siddhars are said to have contributed towards the systematic development of this system and recorded their experiences in Tamil language.
- Diagnosis of are done through examination of pulse, urine, eyes, study of voice, colour of body, tongue & status of the digestion of patients. System has unique treasure for the conversion of metals & minerals

as drugs & many infective diseases are treated with medicines containing specially processed mercury, silver, arsenic, lead & sulphur without any side-effects.

- The strength of the Siddha system lies in providing very effective therapy in the case of Psoriasis, Rheumatic disorders, Chronic liver disorders, Benign prostate hypertrophy, bleeding piles, peptic ulcer including various kinds of Dermatological disorders of non psoriatic nature.
- During the last six decades, there has been continuous development in Siddha medical education and this has led to the establishment of the National Institute of Siddha at Chennai as apex Institute having six specialties in post-graduate teaching leading to the award of M.D(S) Degree.
- These are Maruthuvam (General Medicine), Sirappu Maruthuvam (Special Medicine), Kuzhanthai Maruthuvam (Paediatrics), Gunapadam (Pharmacology), Noi Nadal (Pathology) and Nanju Nool & Maruthuva Neethinool (Toxicology).



YOGA

- Word "Yoga" comes from Sanskrit word "yuj" which means "to unite or integrate."
- Yoga is a way of life, which has potential for improvement of social & personal behavior, improvement of physical health by encouraging better circulation of oxygenated blood in the body, restraining sense organs & thereby inducing tranquility & serenity of mind.
- Yoga is about union of a person's own consciousness & universal consciousness. It is a way of life, propounded by Maharshi Patanjali in systematic form Yogsutra.
- Discipline of Yoga consists of 8-Components namely, restraint (Yama), observance of austerity (Niyama), physical postures (Asana), breathing control (Pranayam), restraining of sense organs (Pratyahar), contemplation (Dharna), meditation (Dhyan) and Deep meditation (Samadhi).
- Yoga have the potential to elevate social and personal behavior and to promote physical health by better circulation of oxygenated blood in the body, restraining the sense organs & thereby inducing tranquility and serenity of mind and spirit.
- Yogic practice has also been found to be useful in the prevention of certain psychosomatic diseases & improves individual resistance & ability to endure stressful situations.
- Yogic practice improves intelligence and memory & helps in developing resistance to situations of stress & also help individuals to develop an integrated personality.
- Meditation can stabilize emotional changes & prevent abnormal functions of the vital organs of the body. Meditation not only regulates the functions of the sense organs but also strengthens the nervous system.

- United Nations General Assembly had declared June 21st as International Yoga Day on December 11, 2014.



NATUROPATHY

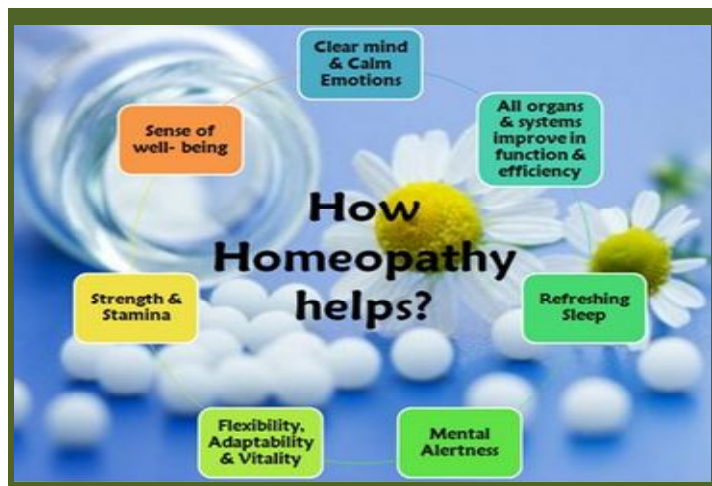
- Naturopathy is rooted in the healing wisdom of many cultures and times based on principal of natural healing. The principles and practices of Naturopathy are integrated in the life style, if the people observe living close to nature.
- Naturopathy is a cost effective drugless, non-invasive therapy involving the use of natural materials for health care and healthy living. It is based on the theories of vitality, boosting the self healing capacity of the body and the principles of healthy living.
- Naturopathy is a system of natural treatment and also a way of life widely practiced, globally accepted and recognized for health preservation and management of illnesses without medicines.
- Naturopathy advocates living in harmony with constructive principles of Nature on the physical, mental, social and spiritual planes. It has great promotive, preventive, curative as well as restorative potentials.
- Naturopathy promotes healing by stimulating the body's inherent power to regain health with the help of five elements of nature – Earth, Water, Air, Fire and Ether.
- It is a call to "Return to Nature" & to resort to a simple way of living in harmony with the self, society and environment. Naturopathy advocates 'Better Health without Medicines'.
- It is reported to be effective in chronic, allergic auto-immune and stress related disorders.
- Theory and practice of Naturopathy are based on a holistic view point with particular attention to simple eating and living habits, adoption of purificatory measures, use of hydrotherapy, cold packs, mud packs, baths, massages, fasting etc.



HOMEOPATHY

- Homeopathy is a system of medicine, which believes in a specialized method of treatment of curing diseases by administration of potency drugs, which have been experimentally proved to possess the power of producing similar artificial systems on human beings.

- The word "homoeo-pathy" (which comes from the Greek: *hómoios*, "-like" and *páthos*, "suffering").
- Based on this, Hahnemann postulated the key principle of Homoeopathy, the Law of Similars, logically evolving it as an experimental science, according to the method of inductive reasoning after exact observation, correct interpretation, rational explanation and scientific construction.



MEDICINAL PLANT DIVERSITY

- In different civilizations of India, the contribution of floral biodiversity to health care has been well documented (Posey 1999).
- Because of the accelerated local, national and international interest in recent years the demand for medicinal and aromatic plants has increased manifold and pharmaceutical industry views plant wealth as a source of income.
- Due to easy availability, no side-effects, and sometimes only source of health care, the demand for medicinal plants is increasing in both developing and developed countries.
- According to Schippmann et al. (2002) more than 50,000 species are used for medicinal purposes worldwide, of which almost 13% are flowering plants. Over 8000 plant species are used in traditional and modern medicine in India (Planning Commission 2000), and 90-95% collection of medicinal plants is from the wild, of which more than 70% collection involves destructive and unscientific extraction.
- Medicinal plants comprise trees, shrubs, herbs, climbers, ferns and grasses belong to diverse families.
- Poaceae, Asteraceae, Cyperaceae and Euphorbiaceae are the largest families and have more than 20 species of medicinal plants. Fabaceae, Asteraceae, Poaceae, Euphorbiaceae, Lamiaceae, Malvaceae, Acanthaceae, Apocynaceae, Caesalpiniaceae, Verbenaceae, Cucurbitaceae and Solanaceae are the dominant families with high species diversity.
- Among plant parts, bark, leaves and roots are mainly used for trees, shrubs and climbers, respectively. However, the entire plant of herbs, grasses and sedges and leaves and roots of ferns are used.
- Most of the species of trees, herbs and climbers are used for diarrhea / dysentery, shrubs for cough/cold, grasses and sedges for fever and ferns for skin diseases.
- Even for a particular disease, there is huge diversity among the remedies, medicinal plants and plant parts as well.

REFERENCES

- Cotton C. M. 1996. *Ethnobotany : Principles and applications*. John Wiley and Sons Inc.
- Cunningham A.B. 2001. *Applied ethnobotany. People, wild plant use and conservation*. People and plants conservation manual. Earthscan, London.

- Martin G.J. 1995. *Ethnobotany. A methods manual*. People and plants conservation manual. Chapman and Hall, London.
- Schultes R.E. and von Reis S. 1995 (eds). *Ethnobotany, evolution of a discipline*. Chapman and Hall, London.
- Alexander P. 2002. *The Forest in Folklore and Mythology*.
- Bansi L. M. 2000. *Trees in Indian Art, Mythology, and Folklore*.
- Baumann H., William T. S., Stearn E. R. 1993. *The Greek Plant World in Myth, Art and Literature*. Workman Pub Co.
- Fred H. 2005. *The Meaning of Trees: Botany, History, Healing, Lore*.
- Martin G.J. 1995. *Ethnobotany. A methods manual*. People and plants conservation manual. Chapman and Hall, London.

List of Research Paper Publications by Dr. Arun K. Zingare

- Ethnobotanical and Ethnomedicinal survey of Nagzira Wild life Sanctuary, District Gondia (M. S.) *Indian Association of Angiosperm Taxonomy- IAAT- Nag. -2005*
- Ethnobotanical Uses of Equisetum sp. A Fern, By Tribal peoples of Bhandara and Gondia District of Maharashtra. *Emerging Trends in Medicinal Plants and Their Biotechnological Advances (ETMPBA)-2007*.
- Ethnomedicinal & Ethnobotanical survey of Nagzira wildlife sanctuary Distt. Gondia (MS)India Part – I *Ethnobotanical leaflet vol 2008 PP. 56-69 ISSN 1/69*
- Ethnomedicinal & Ethnobotanical survey of Nagzira wildlife sanctuary Distt. Gondia (MS)India Part –II *Ethnobotanical leaflet vol 2008 PP. 532-537 ISSN 1/69*
- Documenting Tribal Remedies For Sex Related Disorders. *National Seminar on Ethnobotany 2009*.
- Current status and future strategy for Development of Ethnobotanical plants in Tribal Area of Maharashtra State. *National seminar on Ethnobotany 2009*.
- History of Ethnobotany 2009. *National seminar on Ethnobotany 2009*
- Ethnomedicinal Tree Species Survey of Nagzira Wildlife Sanctuary. *Status of Biodiversity in India, Dec. 2011*
- Ethnomedicinal Plant Diversity of Sakoli Taluka of Bhandara District (M.S.) *Journal of Science Information / Special Issue – 3 , ISSN:2229-5836, Feb 2012*
- Tribal Herbal Remedies for Snake Bite. *Innovative Research Trends in Biological Sciences, ISBN : 978-81-923621-0-6, Sept 2012*
- Ethnomedicinal Uses of Plants among the Halba Tribe of Gondia District of Maharashtra , India. *IInd World Congress for Man and Nature, Nov 2012*
- Ethnoveterinary use of Medicinal Plants From Sakoli Taluka of Bhandara District , M.S. *Indian Streams Research Journal , Impact factor 0.2105 , ISSN No. – 2230-7850 , Jan.2013, pp -22-24*.
- Plants as Ethnoveterinary Medicines from Lakhandur Taluka of Bhandara District (M. S.) *Proceeding: National Conference on 'Ethnobotany' (NCEB-2013) ISBN- 978-81-926403-0-3 pp. 89-91*.
- Herbal Treatments for women's problems, used by tribals of Bhandara District (MS): XXIII IAAT, National Conference, PGTD, Botany, RTM NU Campus, Nagpur. (Dec, 2013) pp-108-109.
- Diarrhoea: Local herbal treatment from Sakoli Taluka of Bhandara District of Maharashtra state. : *International Journal of Life Sciences, 2014, Special Issue A2 Oct, 2014. ISSN No. 2320-7817 pp. 191-193*.
- Stomach Ailments cured by Ethnomedicinal plants from Gondia District of Eastern Vidharbh, Maharashtra: Souvenir of 24th Annual Conference of IAAT, Nov. 2014, pp.-87-88.
- Extraction of secondary metabolites from medicinal plants and study of its
- Ethnomedicine from Bhandara District used used for curing bone fracture by tribal peoples.: *Ethnopharmacology, Feb. 2015. Pp. 193-194*.
- Plants used as source of dyes by tribals of Sakoli Taluka, Dist- Bhandara (M.S.) *International Journal of Research in Bioscience, Agriculture and Technology, March, 2015, ISSN No. 2347-517, pp. 136-138*.