

INTRODUCTION

The Indian System of Medicine is of great antiquity. It 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. Like the multifaceted culture in our country, traditional medicines have evolved over centuries blessed with a plethora of traditional medicines and practices.

A separate Department of Indian Systems of Medicine and Homoeopathy (ISM&H) was set up in 1995 to ensure the optimal development and propagation of AYUSH systems of health care. The Department of ISM&H was re-named as the Department of AYUSH (an acronym for - Ayurveda, Yoga and Naturopathy, Unani, Siddha, Homoeopathy) in November 2003. With an increase in lifestyle-related disorders there is a world wide resurgence of interest in holistic systems of health care, particularly with respect to the prevention and management of chronic, non-communicable and systemic diseases. It is increasingly understood that no single health care system can provide satisfactory answers to all the health needs of modern society. Evidently there is a need for a new inclusive and integrated health care regime that should guide health policies and programmes in future. India has an advantage in this global resurgence of interest in holistic therapies as it has a rich heritage of indigenous medical knowledge coupled with strong infrastructure and skilled manpower in modern medicine. Medical pluralism is here to stay and the AYUSH sector has a critical role to play in the new and emerging situation.

The Department of AYUSH under Ministry of Health and Family Welfare, promotes and propagates Indian systems of Medicine and Homoeopathy, and is committed to infuse the wisdom of traditional medicine with the methodologies of modern science, scientifically validating the systems and presenting them in the scientific idiom, relating their efficacy to modern life styles. The Department has, over the years, developed a broad institutional framework to carry out its activities. The National Medicinal Plants Board (NMPB) functions under the

Department to coordinate activities relating to conservation, cultivation, marketing, export and policy making for the development of the medicinal plants sector. There are two statutory regulatory bodies, namely Central Council of Indian Medicine (CCIM) and Central Council of Homoeopathy (CCH) for laying down minimum standards of education, recommending recognition of medical qualifications, registering the practitioners and laying down of ethical codes. Four research councils, for Ayurveda and Siddha (CCRAS), Unani (CCRUM), Yoga and Naturopathy (CCRYN) and Homeopathy (CCRH) are responsible for the officially sponsored research activities. So far, eight National Institutes are existing at national level for teaching, research and clinical practices.

For Standardisation and testing of Drugs, various agencies have been put in plan by the Government of India. Four different Pharmacopoeia Committees are working for preparing official formularies / pharmacopoeias to evolve uniform standards in preparation of drugs of Ayurveda, Siddha, Unani and Homeopathy and to prescribe working standards for single drugs as well as compound formulations. A Drug Quality Control Cell is working in the Department to deal with the matters pertaining to licensing, regulation and control of drugs and the spurious manufacture of Ayurvedic, Unani and Siddha Drugs and other matters. Two apex Laboratories, namely, Pharmacopoeial Laboratory for Indian Medicine (PLIM) and Homoeopathic Pharmacopoeial Laboratory (HPL) are functioning as Standard Setting-Cum-Drug-testing Laboratories for Indian Medicines and Homoeopathy respectively. Indian Medicines Pharmaceutical Corporation Ltd. (IMPCL), a Public Sector Undertaking, manufactures classical Ayurveda and Unani drugs. The Department also manages the CGHS Ayurveda Hospital at Lodhi Road, New Delhi.

Bringing AYUSH into the mainstream health care delivery system of the country has long been a major policy objective of the Department. Under the NRHM, AYUSH facilities are being set up in PHCs and CHCs and are being manned by qualified AYUSH physicians appointed on contract basis.

Since the creation of a separate Department, there has been a substantial increase in the infrastructural facilities under AYUSH systems in the country. Presently, there are 3195 hospitals with about 58321 beds,

24392 dispensaries, 720937 doctors, 514 educational institutions with admission capacity of about 25586 UG student and 2493 PG students and 8785 drug-manufacturing units under AYUSH systems. Under NRHM, AYUSH facilities have been co-located with 468 District hospitals, 2483 CHCs and 8520 PHCs.

A. AYUSH SYSTEMS

i) Ayurveda:

Ayurveda is a classical system of healthcare originating from the Vedas documented around 5000 years ago and currently recognized and practiced in India and many countries of the Indian subcontinent. It is one of the oldest healthcare systems that take a holistic view of the physical, mental, spiritual and social aspects of human life, health and disease.

Scattered references of health, disease and use of natural sources for treatment were initially made in the Vedas (particularly in *Rigveda* and *Atharvaveda*) and around 5000 to 3000 B.C. the knowledge of Ayurveda was first comprehensively documented in the compendia called *Charak Samhita* and *Sushruta Samhita*. 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). The philosophy of Ayurveda is based on the fundamental correlation between the universe and the man. Ayurveda imbibes the humeral theory of *Tridosha* - the *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. The 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*). Any imbalance due to internal or external factors leads to disease and the treatment consists of restoring the equilibrium through various procedures, regimen, diet, medicines and behavior change.

The treatment approach in the Ayurveda system is holistic and individualized having

preventive, curative, mitigative, recuperative and rehabilitative aspects. The preventive aspect of Ayurveda is called *Swasth-Vritta* and includes personal hygiene, daily and seasonal regimens, appropriate social behavior and use of materials & practices for healthy aging and prevention of premature loss of health attribute. The curative treatment consists of *Aushadhi* (drugs), *Ahara* (diet) and *Vihara* (life style). Ayurveda largely uses plants as raw materials for the manufacture of drugs, though materials of animal and marine origin, metals and minerals are also used. Ayurvedic medicines are generally safe and have little or no known adverse side-effects, if manufactured properly and consumed judiciously following necessary dos and don'ts.

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 '*Astang Ayurveda*'. During the last 60 years of its development after India became independent, Ayurveda has come up to provide 22 specialized courses of study at postgraduation level. These specialties are -- *Ayurveda Sidhanta* (Fundamental Principles of Ayurveda), *Ayurveda Samhita* (Classical Texts of Ayurveda), *Rachna Sharira* (Anatomy), *Kriya Sharira* (Physiology), *Dravya Guna Vigyan* (Materia medica and Pharmacology), *Rasa-Shastra* (Pharmaceuticals using minerals and metals), *Bhaishajya Kalpana* (Pharmaceuticals), *Kaumar Bhritya* or - *Bala Roga* (Pediatrics), *Prasuti Tantra avum Stri Roga* (Obstetrics and Gynecology), *Swasth-Vritta* (Social and Preventive Medicine), *Kayachikitsa* (Internal Medicine), *Rog Nidan avum Vikriti Vigyan* (Diagnostics & Pathology), *Shalya Tantra-Samanya* (Surgery), *Shalya Tantra - Kshar Karma avum Anushastra Karma* (Parasurgical interventions & procedures), *Shalakya Tantra -Netra Roga* (Ophthalmology), *Shalakya Tantra - Shiro-Nasa-Karna Avum Kantha Roga* (Treatment of diseases of Head and ENT), *Shalakya Tantra - Danta Avum Mukha Roga* (Dentistry), *Manovigyana avum Manas Roga* (Psychology & Psychiatry), *Panchakarma* (Bio-purification), *Agad Tantra avum Vidhi Vaidyaka* (Toxicology and Medical Jurisprudence), *Sangyahaarana* (Anesthesiology) and *Chhaya avum Vikiran Vigyan* (Radiology).

Ayurveda holds the strength to treat diseases from holistic angle in accordance with

the body-mind constitution and other psychophysiological attributes of the patients and as such is proven to be effective in the treatment of chronic, metabolic and life style diseases for which satisfactory solutions are not available in conventional allopathy medicine. Over the years, *Kshar Sutra* and *Panchakarma* therapies of Ayurveda have become very popular among the public. *Panchakarma* is a unique therapeutic procedure for the radical elimination of disease-causing factors and to maintain the equilibrium of tridosha. The *Panchakarma* therapy minimizes the chances of recurrence of the diseases and promotes positive health by rejuvenating body tissues and bio-purification. *Kshar Sutra* is a para-surgical intervention using an alkaline thread for cauterization, which is scientifically validated to be effective in the treatment of fistula-in-ano and such surgical conditions as require excision of overgrown soft tissue like polyps, warts, non-healing chronic ulcers, sinuses and papillae.

(ii) Unani:

The Unani System of Medicine originated in Greece and passed through many countries before establishing itself in India during the medieval period. This system is based on the teachings of Hippocrates and Gallen, developed into an elaborate Medical System by Arabs. It is based on well-established knowledge and practices relating to the promotion of positive health and prevention of diseases. The Unani system became enriched by imbibing what was best in the contemporary systems of traditional medicines in Egypt, Syria, Iraq, Persia, India, China and other Middle East countries.

The system of medicine was documented in *Al-Qanoon*, a medical Bible, by Sheikh Bu-Ali Sina (Avicenna, 980-1037 AD), and in *Al-Havi* by Razi (Rhazes, 850-923 AD) and in many other books written by the Unani physicians. The literature of the Unani system is mostly found in Arabic, Persian and Urdu languages.

The Unani System is based on the Humoral theory i.e. the presence of blood, phlegm, yellow bile and black bile in a person. The temperament of a person can accordingly be sanguine, phlegmatic, choleric and melancholic depending on the presence and combination of humors. According to Unani theory, the humors and medicinal plants themselves are assigned temperaments. Any change in quantity and quality of the humors, brings about a change in the status of the health of the human body. A

proper balance of humors is required for the maintenance of health.

Treatment in Unani consists of three components namely preventive, promotive and curative. Unani system of Medicine has been found to be efficacious in conditions like Rheumatoid Arthritis, Jaundice, Nervous Debility, Skin Diseases like Vitiligo & Eczema, Sinusitis and Bronchial Asthma. For the prevention of disease and promotion of health, the Unani System emphasizes six essentials (*Asbab-e-Sitta Zarooria*):- (a) pure air (b) food and water (c) physical movement and rest (d) psychic movement and rest (e) sleep and wakefulness and (f) retention of useful materials and evacuation of waste materials from the body. There are four forms of treatment in Unani medicine- *Ilaj bid Dawa* (Pharmacotherapy), *Ilaj bil Ghiza* (Dietotherapy), *Ilaj Bid Tadbir* (Regimenal Therapy) and *Ilaj bil Jarahat* (Surgery). Regimenal Therapy (*Ilaj Bid Tadbir*) is a special technique/ physical method of treatment to improve the constitution of body by removing waste materials and improving the defense mechanism of the body and protect health. Some of the special techniques are *Fasd* (Blood-letting), *Hijama* (Cupping), *Dalk* (Massage), *Taleeq-e-Alaq* (Leeching), *Hammam-e-Har* (Turkish Bath), *Riyazat* (Exercise), *Amal-e-Kai* (Cauterization). The Unani system of medicine offers various methods of treatment which are used for specific and complicated diseases. It emphasizes the use of naturally occurring, mostly herbal medicines and also uses some medicines of animal, marine and mineral origin.

During the last 50 years, eight Post Graduate specialties have been developed-(i) *Kulliyat* (Basic Principles of Unani Medicine), (ii) *Ilmul Advia* (Pharmacology), (iii) *Ilmul Saidla* (Pharmacy), (iv) *Tahaffuzi-wa-Samaji Tibb* (Preventive and Social Medicine), (v) *Moalijat* (Medicine), (vi) *Jarahiyat* (Surgery), (vii) *Ilmul Qabalat-wa-Amraz-e-Niswan* (Obstetrics and Gynecology), (viii) *Ilmul Atfal* (Paediatrics). National Institute of Unani Medicine is established in Bangalore to impart good P.G. education in Unani system.

(iii) Siddha:

The 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.

The Siddha system of Medicine emphasizes on the patient, environment, age, sex, race, habits, mental frame work, habitat, diet, appetite, physical condition, physiological constitution of the diseases for its treatment which is individualistic in nature. Diagnosis of diseases are done through examination of pulse, urine, eyes, study of voice, colour of body, tongue and status of the digestion of individual patients. System has unique treasure for the conversion of metals and minerals as drugs and many infective diseases are treated with the medicines containing specially processed mercury, silver, arsenic, lead and 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).

For development of focused research in Siddha System of medicine Govt. has constituted Central Council for Research in Siddha (CCRS), an autonomous body by bifurcating Central Council for Research in Ayurveda and Siddha (CCRAS).

(iv) Yoga:

The word "Yoga" comes from the Sanskrit word "yuj" which means "to unite or integrate." Yoga is about the union of a person's own consciousness and the universal consciousness. It is primarily a way of life, first propounded by Maharshi Patanjali in systematic form Yogsutra. The discipline of Yoga consists of eight 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). These steps in the practice of 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 and thereby inducing tranquility and serenity of mind and spirit. The practice of Yoga has also been found to be useful in the prevention of certain psychosomatic diseases and improves individual resistance and ability to endure stressful situations. Yoga is a promotive, preventive rehabilitative and curative intervention for overall enhancement of health status. A number of postures are described in Yoga literature to improve health, to prevent diseases and to cure illness. The physical postures are required to be chosen judiciously and have to be practiced in the correct way so that the benefits of prevention of disease, promotion of health and therapeutic use can be derived from them.

Studies have revealed that Yogic practice improves intelligence and memory and help in developing resistance to situations of stress and also help individuals to develop an integrated personality. Meditation can stabilize emotional changes and prevent abnormal functions of the vital organs of the body. Studies have shown that meditation not only regulates the functions of the sense organs but also strengthens the nervous system. Yoga today is no longer restricted to hermits, saints, sages but has gone to every home for the global health promotion. Yoga as a part of peoples' lifestyle has aroused a world-wide awakening and acceptance.

(v) Naturopathy:

Naturopathy is rooted in the healing wisdom of many cultures and times based on principal of natural healing. The principal's 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" and 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 autoimmune and stress related disorders. The 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.

(vi) Homoeopathy:

The Physicians from the time of Hippocrates (around 400 B.C.) have observed that certain substances could produce symptoms of a disease in healthy people similar to those of people suffering from the disease. Dr. Christian Friedrich Samuel Hahnemann, a German physician, scientifically examined this phenomenon and codified the fundamental principles of Homoeopathy. Homoeopathy was brought into India around 1810 A.D. by European missionaries and received official recognition by a resolution passed by the Constituent Assembly in 1948 and then by the Parliament.

The first principle of Homoeopathy 'Similia Similibus Curentur', says that a medicine which could induce a set of symptoms in healthy human beings would be capable of curing a similar set of symptoms in human beings actually suffering from the disease. The second principle of 'Single Medicine' says that one medicine should be administered at a time to a particular patient during the treatment. The third principle of 'Minimum Dose' states that the bare minimum dose of a drug which would induce a curative action without any adverse effect should be administered. Homoeopathy is based on the assumption that the causation of a disease mainly depends upon the susceptibility or proneness of an individual to the incidence of the particular disease in addition to the action of external agents like bacteria, viruses, etc.

Homoeopathy is a method of treating diseases by administering drugs which have been experimentally proved to possess the power to produce similar symptoms on healthy human beings. Treatment in Homoeopathy, which is holistic in nature, focuses on an individual's response to a specific environment. Homoeopathic medicines are prepared mainly from natural substances such as plant products, minerals and from animal sources. Homoeopathic medicines do not have any toxic, poisonous or side effects. Homoeopathic treatment is economical as well and has a very broad public acceptance.

Homoeopathy has its own areas of strength in therapeutics and it is particularly useful in treatment for allergies, autoimmune disorders and viral infections. Many surgical, gynaecological and obstetrical and paediatric conditions and ailments affecting the eyes, nose, ear, teeth, skin, sexual organs etc. are amenable to homoeopathic treatment. Behavioral disorders, neurological problems and metabolic diseases can also be successfully treated by Homoeopathy. Apart from the curative aspects, Homoeopathic medicines are also used in preventive and promotive health care. In recent times, there is an emergence of interest in the use of Homoeopathic medicines in veterinary care, agriculture, dentistry, etc. Homoeopathic medical education has developed in seven specialties in post-graduate teaching, which are Materia Medica, Organon of Medicine, Repertory, Practice of Medicine, Paediatrics, Pharmacy and Psychiatry.

(vii) Sowa-Rig-pa (Amchi Medicine):

"*Sowa-Rig-pa*", commonly known as Amchi medicine, is the traditional medicine of many parts of the Himalayan region used mainly by the Tribal and bhot people. *Sowa-Rig-pa* (Bodh-Kyi) means 'science of healing' and the practitioners of this medicine are known as *Amchi*.

In India, this system of medicine has been popularly practiced in Ladakh and Paddar-Pangay regions of Jammu and Kashmir, Lahulspiti, Pangi, Dhramshala and Kinnar region of Himachal Pradesh, Utrakhand, Arunachal Pradesh, Sikkim, Darjeeling-Kalingpong (West Bengal) and in Tibetan settlements all over India and abroad.

Sowa-Rig-pa is a science, art and philosophy that provide a holistic approach to health care on the basis of harmony and understanding of human being and universe i.e. the environment. It uses diagnostic techniques for examples pulse and urine examination (eight fold examination) and it embraces the key Buddhist principles of altruism, karma and ethics. According to the Amchi system, proper alignment of the three Dosha, seven body Tissue (seven Dhatus) and three excretory products (Malas) in the state of equilibrium constitutes a healthy body. Any disequilibrium in any of these energies leads to disease or ill-health. Amchi medical theory states that everything in the universe is made up of the five basic elements, namely, sa (Earth), chu (Water), me (Fire), rLung (Wind), Nam-mkha (Space). Amchi system is based on the following three Principle Energies -

(1) *rLung* (wind) manifests the nature of Air element. It is characterised as rough, light, cold, subtle, hard and mobile. It is responsible for the physical and mental activities, respiration, expulsion of urine, feces, foetus, menstruation, spitting, burping, speech, gives clarity to sense organs, sustains life by means of acting as a medium between mind and body. This is similar to Vata-dosha of Ayurveda.

(2) *mKhris-pa* (Bile) basically has the nature of fire. It is characterised as oily, sharp, hot, light, fetid, purgative and fluidity. *mKhris-pa* is responsible for hunger, thirst, digestion and assimilation, maintains body heat, gives lustre to body complexion and provides courage and determination. This is similar to Pitt-dosha of Ayurveda.

(3) *Bad-kan* (Phlegm) is cold in nature and is characterized as oily, cool, heavy, blunt, smooth, firm and sticky. *Bad-kan* is responsible for firmness of the body, stability of mind, induces sleep, connects joints, generates tolerance and lubricates the body. This is similar to Kapha-dosha of Ayurveda.

The diagnostic techniques in Sowa-Rigpa include visual observation, touch and interrogation. For treatment of health problems, the system makes use of herbs, minerals, animal products, spring and mineral water, moxibustion, mysticism and spiritual power. The medicines are used usually in the form of decoctions, powders, pills and syrups etc. Mantra and tantra

components are also very important of Sowa-rig-pa.

B. MISSION, VISION AND OBJECTIVES OF DEPARTMENT OF AYUSH:

The Mission, Vision and objectives of the Department of AYUSH are given below:

(i) Mission and Vision:

The vision statement of Department of AYUSH is "to position AYUSH systems as the preferred systems of living and practice for attaining a healthy India."

The mission statement of Department of AYUSH is as follows:

1. To mainstream AYUSH at all levels in the Health Care System.
2. To improve access to and quality of Public Health delivery through AYUSH System.
3. To focus on Promotion of health and prevention of diseases by propagating AYUSH practices.
4. Proper enforcement of provisions of Drugs & Cosmetic Act 1940 and Rules framed thereunder relating to the ASU drugs throughout the country

(ii) Objectives:

The Department of AYUSH has the following objectives:-

1. Delivery of AYUSH Services
2. Human Resource Development in AYUSH
3. Promotion and Propagation of AYUSH Systems
4. Research in AYUSH
5. Conservation and cultivation of medicinal plants
6. Effective AYUSH Drug Administration

C. NATIONAL MEDICINAL PLANTS BOARD (NMPB):

The resource base of AYUSH is largely plants. The increasing global interest in natural remedies has increased the demand for medicinal plants which are mainly sourced from the wild. This has led to the emergence of a

number of issues like sustainability, conservation, cultivation, quality assurance protection of Traditional Knowledge and related issues of access and benefit sharing etc. To coordinate all these matters, Government of India has established the **National Medicinal Plants Board (NMPB)** under the Department of AYUSH, Ministry of Health & Family Welfare. NMPB is the apex national body which coordinates all matters relating to medicinal plants in the country. The Board was established in November 2000 and acts as advisory body to the concerned Ministries, Departments and Agencies in strategic planning for medicinal plants related initiatives and to plan and provide financial support to programmes relating to conservation, cultivation and the all round development of the medicinal plants sector. The Union Minister of Health & Family Welfare is the Chairperson and the Union Minister of State for Health & Family Welfare is the Vice-Chairperson of the Board.

Functions of the NMPB

- I. Assessment of demand/supply of medicinal plants both within the country & abroad.
- II. Advise concerned Ministries/ Depts./ Organisation / State/ UT Governments on policy matters relating to schemes and programmes for development of medicinal plants.
- III. Provide guidance in the formulation of proposals, schemes and programmes etc. to be taken-up by agencies having access to land for cultivation and infrastructure for collection, storage and transportation of medicinal plants.
- IV. Identification, inventory and quantification of medicinal plants.
- V. Promotion of *ex-situ/in-situ* cultivation and conservation of medicinal plants.
- VI. Promotion of co-operative efforts among collectors and growers and assisting them to store, transport and market their produce effectively.
- VII. Setting up of data-base system for inventory, dissemination of information and facilitating prevention of patents on medicinal use of plants, information on which is already in the public domain.
- VIII. Matters relating to import/export of raw material, as well as value added products either as medicine, food supplements or as herbal cosmetics including adoption of better

techniques for marketing of produce to increase their reputation for quality and reliability within the country and abroad.

- IX. Undertaking and awarding of studies leading to scientific, technological research and promoting cost-effective practices for the development of medicinal plants.
- X. Development of protocols for cultivation and quality control.
- XI. Encouraging protection of Patent Rights and IPR.

According to estimates the global market of traditional therapy was US \$ 60 billion in 2002 and is growing steadily. Further, the global market for medicinal herbs and herbal products is estimated to touch US \$ 5 trillion by 2050. According to the report of the World Health Organization (WHO), over 80% of the world population relies on traditional systems of medicines for their primary health care. China and India are the World's leading exporters of medicinal & aromatic plant based drugs. India has a huge comparative advantage in the medicinal plants sector over other countries given that it is one of the 17 mega bio-diversity rich countries and is home to 7% of the world's bio-diversity. There are 15 agro-climatic zones, 45,000 different plant species out of which approximately 6,198 are medicinal plants.

- India is blessed with a diversity of medicinal plants ranging from the Himalayan to marine ecosystems and from deserts to rain forests. Most MAPs are collected from forests or wild sources but with increasing abiotic and biotic pressures on natural habitats a number of species are becoming endangered or threatened. As a result, it is getting increasingly difficult to meet the demand for MAPs sustainably from natural sources. Therefore, there is need to give a boost to cultivation by farmers and resource augmentation of important medicinal plants in the forests.

- The base of AYUSH drugs is primarily medicinal plants. The greatest challenge to widespread acceptance of AYUSH drugs remains quality assurance. Today globally companies are looking for traceability of raw materials to their source, as it is obvious that the quality of the end product can only be as good as the quality of the components that go into that product. Hence the importance of maintaining the highest standards while collecting, cultivating and post-harvest handling of the raw material cannot be gainsaid.

- As per data available from DGCIS, Govt. of India and Pharmexcil research, India's Exports of Ayurvedic, Siddha, Unani,

Homeopathy Medicants and Medicaments and Herbal exports are estimated at INR 1318.69 Crores during the year 2010-11 growing at CAGR of 137.69% during the period from 2005-06 to 2010-11 as detailed in the following table.

Category	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Ayush	248.51	281.28	346.55	591.43	701.44	711.12
Herbals	306.30	375.60	470.12	594.87	570.76	607.57
Grand Total	554.80	656.89	816.67	1186.29	1272.20	1318.69

Source: DGCIIS, Pharmexcil Research

Sr. No.	Countries	2006	2007	2008	2009	2010
1	USA	1013.73	1016.13	1149.53	1049.02	1250.20
2	Germany	520.02	585.28	657.24	634.52	690.49
3	Japan	492.49	494.01	554.53	516.34	551.22
4	France	301.63	355.60	431.46	338.79	379.51
5	UK	246.46	252.95	258.92	230.56	270.25
6	China, Hong Kong SAR	193.58	213.98	210.47	206.75	246.36
7	China	139.60	165.72	188.57	198.98	242.07
8	Italy	212.89	223.07	250.89	206.46	227.76
9	Spain	194.57	180.38	217.80	187.86	210.24
10	Canada	161.33	161.96	183.56	178.06	208.43
11	Rep. of Korea	153.04	161.58	165.34	161.37	203.41
12	Netherlands	135.27	161.73	198.96	172.65	188.41
13	Belgium	124.48	160.91	199.43	186.55	185.47
14	Switzerland	147.21	155.24	186.93	155.50	166.68
15	Mexico	129.01	129.09	152.96	148.05	160.30
16	Russia	67.10	99.58	163.09	139.32	159.15
17	Singapore	92.87	118.78	120.64	118.07	127.69
18	India	96.17	99.21	122.92	121.09	122.76

Source: UNComtrade, Pharmexcil Research

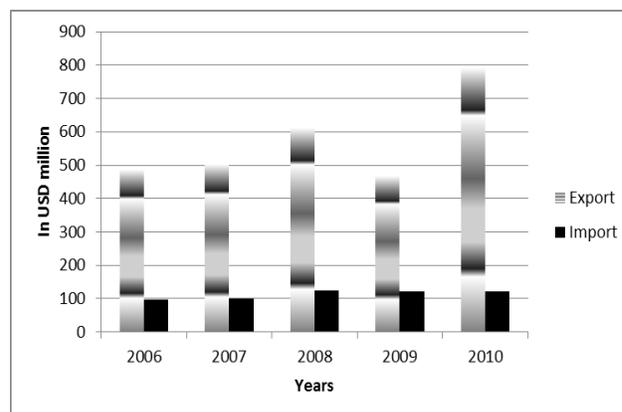
Sr. No.	Countries	2006	2007	2008	2009	2010
1	China	522.44	675.50	944.64	1042.08	1329.72
2	India	485.72	501.59	612.59	467.39	790.56
3	USA	522.94	587.50	639.78	705.62	787.25
4	Germany	529.11	617.26	860.25	720.16	756.73
5	Egypt	33.27	34.19	125.34	273.60	303.65
6	France	263.09	276.56	300.60	284.61	296.33
7	Spain	260.34	260.75	285.73	242.06	273.14
8	Nigeria	188.87	68.10	66.20	166.06	232.79
9	Italy	183.21	162.73	192.10	166.97	174.96
10	Canada	123.80	129.77	108.79	129.59	170.33
11	U.K.	143.88	149.63	244.50	165.92	166.10
12	Brazil	116.02	131.62	154.43	126.68	159.71
Grand Total		5363.67	5729.26	6870.68	6560.32	7592.09

Source: UNComtrade, Pharmexcil Research

According to data compiled by Pharmexcil from Uncomtrade the global trade of medicinal plants including gums and resin, essentials oils, vegetables, saps, plants and extracts thereof, was US\$7592.09 million in 2010. India's share in global exports in US\$790.56 million, bringing it in second position in exports, whereas India is eighteenth position in imports with total imports US\$122.76.

From the comparative analysis of export and import from above tables and bar chart and table below, it is obvious that in recent years due to efforts of the NMPB the export has grown substantially whereas, import stagnating and therefore improving India's position consistently.

Years	Export	Import
2006	485.72	96.17
2007	501.59	99.21
2008	612.59	122.92
2009	467.39	121.09
2010	790.56	122.76
Total	2857.85	562.14



A study on demand and supply of medicinal plants in India conducted by National Medicinal Plants Board (NMPB), through F.R.L.H.T., during 2007-08 reveals that 960 species of medicinal and aromatic plants are in trade, out of which 178 species are high in demand i.e. traded in volumes of over 100 MT.

The annual demand of botanical raw drugs in our country has been estimated at 3,19,500 MT for the year 2005-06 corresponding to an annual trade value of Rs.1,069 crore.

Schemes of NMPB

- Currently, NMPB is implementing two schemes a Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants and a Centrally Sponsored Scheme of National Mission on Medicinal plants.

(a) Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants:

- This scheme was approved by the Cabinet Committee on Economic Affairs in its meeting on 26th June, 2008 with a total outlay of Rs. 321.30 crores during the 11th plan.

Objectives of the Scheme

- To promote *in-situ* / *ex-situ* conservation of medicinal plants which are critical components of the AYUSH and Folk systems of medicine by supporting such programmes in forest/ public/ non-public/ institutional lands.
- To promote R&D for domestication of wild medicinal plants, development of agro-techniques and post harvest management storage and processing.
- To promote quality assurance and standardization through development of Good Agriculture Practices (GAP), Good Collection Practices (GCP), and Good Storage Practices (GSP) and through development of monographs on medicinal plants.
- To develop, implement and support certification mechanism for quality standards, Good Agriculture Practices (GAP), Good Collection Practices (GCP), and Good Storage Practices (GSP).

- To promote sustainable harvesting protocols of medicinal plants from forest areas and certification thereof.
- To support Survey, inventory and documentation of endangered medicinal plants through periodic surveys and inventory.
- Creating Gene banks/ Seed orchards to create an authentic source of seed and germ plasm for future.
- Promote capacity building and human resource development at all levels.
- Adopt a coordinated approach and promotion of partnership, convergence and synergy among R&D; processing and marketing in public as well as private sector at national, regional, state and sub state levels.
- To provide Information, Education and Communication through organization of seminars, trainings and exposure visits within the country and abroad.
- Function as clearinghouse of information on medicinal plants including their occurrence, usage, ethno-botanical uses, cultivation practices and post harvest practices, markets etc. and dissemination thereof through print and electronic media, printing of brochures, posters and other publicity material.

Important Achievements under the Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants during 2011-12:

- Re-afforestation/conservation of Medicinal Plants in 9663.57 hectares in Forest Areas:
 - 9263.57 hectares under Resource Augmentation
 - 400 hectares under Medicinal Plants Conservation Areas
- Set up a network of ex-situ conservation through establishing:-
 - Herbal Gardens - 24 (in nos)
 - No.JFMCs supported - 38 (in nos)
 - Home Herbal Gardens - 2000 (in nos.)
- Supported Research Studies on:
 - Bioactivity guided fractionation studies
 - Sustainable harvesting
 - Post Harvest Management
 - Inter-cropping
 - Chemical and Molecular Profiling
 - Production of Quality Planting Material

- Germplasm and Genotype Identification and Conservation
- Finalized Volume- II of Agro-Techniques for 32 selected medicinal plants for publication.
- Supported 23 Facilitation Centers in different parts of the country.
- Financial Assistance was given to 3 states viz. Andhra Pradesh, Haryana and Madhya Pradesh, during 2011-12 for National Campaign on Amla.
- Finalized Voluntary Certification scheme of Medicinal Plants for Good Agricultural Practices (GAPs), Good Filed Collection Practices (GFCEPs) and Organic production to ensure availability of quality raw material.
- Undertook assessment of consumption of raw material by Ayurveda, Siddha and Unani (ASU) Industries.

(b) Centrally Sponsored Scheme of National Mission on Medicinal Plants

The Govt. of India has approved a Centrally Sponsored Scheme of National Mission on Medicinal Plants with a total outlay of Rs. 630.00 Crores for implementation during the 11th plan. The Scheme is primarily aimed at supporting market driven medicinal plants cultivation on private land with backward linkages for establishment of nurseries, for supply of quality planting material and forward linkages for post-harvest management, marketing infrastructure, certification and crop-insurance in a Mission mode.

Objectives of the Scheme

- To support cultivation of identified medicinal plants through their integration in the farming system and offer an option for crop diversification and enhance income of farmers.
- To support cultivation of medicinal plants following Good Agricultural and Collection Practices (GACPs) for increasing availability of quality raw material
- To support setting up of processing zones/clusters through convergence of cultivation, warehousing, value addition and marketing and development of infrastructure for entrepreneurs to set up units in such zones/clusters.
- To support cultivation mechanism for quality standards, Good Agriculture Practices (GAPs), Good Collection Practices (GCPs), and Good Storage Practices (GSPs).

- To adopt a Mission approach and promote partnership, convergence and synergy among stake holders involved in R&D, processing and marketing in public as well as private sector at national, regional, state and sub state level.

Mission Strategy

- The Mission aims at adopting an end-to-end approach covering production, post harvest management, processing and marketing. This is sought to be achieved by promoting cultivation of medicinal plants in identified clusters/zones within selected districts of states having potential for medicinal plants cultivation and to promote such cultivation following Good Agriculture and Collection Practices (GACPs) through synergistic linkage with production and supply of quality planting material, processing, quality testing, certification, warehousing and marketing for meeting the demands of the AYUSH industry and for exports of value added items.
- The Mission also seeks to promote medicinal plants as an alternative crop to the farmers through increased coverage of medicinal plants and with linkages for processing, marketing and testing, offer remunerative prices to the growers/farmers. This will also reduce pressure on forests on account of wild collection.
- Mission seeks to adopt communication through print and electronic media as a strong component of its strategy to promote integration of medicinal plants farming in the agriculture/horticulture systems with emphasis on quality and standardization through appropriate pre and post-harvest linkages.
- Promote and support collective efforts at cultivation and processing in clusters through Self sHelp Groups, growers cooperatives/associations, producer companies and such other organizations with strong linkages to manufacturers/traders and R&D institutions.

Mission Structure

- The Mission has a two tier structure one at the National and the other at the State Level. The National Medicinal Plants Board (NMPB) in the Department of AYUSH is the Nodal Organization at the National Level for implementation of the Mission Scheme.

Technical Standing Committee (TSC)

- A Technical Screening Committee has been constituted under the scheme with the

approval of Secretary (AYUSH). The Committee comprises of domain experts from different fields and has representations from the following organizations/ Ministries:

- I. National Horticulture Board
- II. ICAR
- III. CSIR
- IV. Department of AYUSH
- V. North Eastern Council, Shillong
- VI. Domain experts nominated by Secretary (AYUSH)- Two
- VII. National Medicinal Plants Body- Member Secretary

The committee examines and recommends action plans submitted by different states.

Standing Finance Committee (SFC)

The Board has a Standing Finance Committee (SFC), which is headed by Secretary (AYUSH). This committee acts as the Executive Committee of the Mission. The committee is the final authority for approval of state action plans recommended by the TSC.

• State Level Steering Committee for the Mission

The State level Steering Committee is headed by Addl. Chief Secretary/ Agriculture Production Commissioner/ Development Commissioner at the State level to provide directions and guidance for implementation of the Scheme as well as approve the action plans of the respective states.

• Implementing Agencies

The scheme is being implemented in states through State Horticulture Missions designated as Mission Directors who are also the Member Secretaries of the State Level Steering Committees. In some cases, State Govt. has also nominated State Medicinal Plants Boards as Implementing Agencies. Out of 26 States, where the scheme is being implemented presently, 19 Mission Directors are the Directors of Horticulture and remaining 7 are CEOs of SMPBs and other Herbal Boards.

• Prioritized species of Medicinal Plants

Board has also prioritized 116 important species of medicinal plants, which have a potential for cultivation, marketing, trade and are raw materials for herbal medicines. The commercial cultivation of medicinal plants offers opportunities for crop diversification and income

generation to the farmers. However, development of sound agro- techniques for the plants that have traditionally been collected from forests has been a major challenge in promoting cultivation. In this background agro-techniques for some of the important medicinal plants by involving the R&D institutions and universities in the country have been developed (List of prioritised species of medicinal plants - Annexure- V)

Achievements of the Mission Scheme

- National Mission on Medicinal Plants is being implemented in 26 States.
- Established 150 model and small nurseries for production of quality planting material of medicinal plant species.
- Promoted cultivation of commercially important 116 medicinal plants species.
- Supported cultivation over an area of 28051.542 ha.
- Supported creation of post- harvest infrastructure by setting up 30 drying shed /storage godown.
- Supported the establishment of 1 processing units for value addition and market development.
- Supported the establishment of 1 district mandi
- Promoted cultivation and processing in clusters through Self Help Groups, Growers Cooperatives/Associations, Producer's companies and such other organizations with linkages to manufacturers/traders and R&D institutions.

OTHER IMPORTANT ACTIVITIES

(i) Strengthening of State Medicinal Plants Boards:

Financial assistance is being provided to State Medicinal Plants Boards for their day-to-day activities including the monitoring of sanctioned projects. At present 35 State Medicinal Plants Board are working in different states to implement the schemes of NMPB. (List of State Medicinal Plants Board - Annexure - IV)

(ii) Launch of Amla Campaign:

The NMPB has launched Amla Campaign through State Medicinal Plants Boards. The objective behind the Campaign is promotion of awareness regarding use of Amla, increase its production and consumption.

Financial assistance is provided to organizations in States / UTs for promotion of cultivation, IEC activities, training, capacity building, value addition and project management etc. As many as 19 SMPBs have been sanctioned projects under Amla Campaign Viz. Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Gujarat, Haryana, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Mizoram, Meghalaya, Maharashtra, Nagaland, Orissa, Sikkim, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

iii) **Launch of Moringa Campaign:**

Sahjan (*Moringa oleifera*) is an important plant nutritionally, medicinally and economically particularly for the poor. It is an important source of food contributing to a more balanced diet and can be a significant factor in providing food security for the community at large.

A campaign on Moringa as part of the Amla Campaign was launched to promote consumption and planting of the plant in public premises like school, colleges, homestead gardens, government and private institutions, universities, by involving different stakeholders, through State Medicinal Plants Board (SMPBs).

(iv) **Involvement of Agricultural Finance Corporation Ltd. for 100% 3rd party Monitoring and Evaluation of project sanctioned by NMPB:**

NMPB has initiated 100% monitoring of all projects under the Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants (except R&D) through Agricultural Finance Corporation. This has enabled better utilization of resources as funds are released only to well performing projects.

(v) **Setting up Facilitation Centres (FCs) for Extension and Support Services on medicinal plants:**

Since SMPBs in states / UTs are not adequately equipped with staff and infrastructure support, NMPB has set up Facilitation Centres in State Agriculture Universities and R&D Institutions. These centres act as one stop shops for growers and other stake holders and would work in close coordination with SMPBs. 203 Facilitation Centres have been set up so far. The State Chief Secretaries have been requested to set up Monitoring Committees under the chairpersonships of the Agricultural Production Commissioners to oversee the functioning of the FCs.

(vi) **Herbal Garden network of India:**

NMPB has sanctioned a project entitled "Networking of Herbal Gardens for supply of quality planting material" to National Research Centre for Medicinal and Aromatic Plants, Anand, Gujarat with the following objectives:

- To develop a national herbal garden network.
- Strengthen the *Ex-situ* conservation activities of Medicinal & Aromatic plants of India
- Provide access to quality planting material of MAPs.

The project aims at:

- Identify the locations of herbal gardens in India
- Construct a herbal garden network and link up all the herbal gardens to this net.
- Data base development on number of species, availability of planting material, quantity of the available planting material, cost of planting material etc. from different herbal gardens of India are being maintained under this umbrella.
- Structuring of information
- Development of web based software package
- Provide online information about the herbal gardens and facilitate the exchange of medicinal species among the member herbal gardens within the country.

(vii) **Dissemination of information on marketing of medicinal plants:**

Dissemination of market information is the key to promoting cultivation and marketing of the produce. For this purpose the Board has developed e-portal which seeks to disseminate information on medicinal plants and their prices in various mandies on a weekly basis. The portal can also function as a virtual mandi for trading medicinal plants by exchange of information between buyers and sellers.

(viii) **Database on quantum of raw material used by ASU Industry:**

The Department of AYUSH has issued a notification under the Drugs and Cosmetics Act making it mandatory for ASU Industries to provide information on the quantum of raw material used in the form of annual statements of

species wise consumption. The information has to be furnished to NMPB or an agency appointed by it by 30th June of every year.

(ix) Creation of Awareness and dissemination of information

Brochures, posters, bulletins and e- book etc. consisting of information on cultivation, therapeutic values, cultivation economics and objectives/ activities of Medicinal Plants Board were prepared for wider dissemination.

Participated in Arogya and other Health Melas for propagation of information through display and distribution of publicity material relating to development of medicinal plants sector and schemes of NMPB.

(x) Good Agriculture Practices and Good Field Collection Practices

The quality of AYUSH products is critically dependent upon the quality of raw material used for their manufacturing. For the purpose of ensuring the quality of the manufacturing process, the Government has already notified Good Manufacturing Practices (GMPs) under the Drugs & Cosmetics Act. The quality of raw material used, however, is generally assessed with reference to the adoption of Good Agricultural & Collection Practices. The World Health Organization (WHO) has already evolved guidelines on Good Agricultural and Collection Practices (GACPs). The National Medicinal Plants Board, Department of AYUSH has through a wide ranging consultative process, also developed Good Agricultural Practices for cultivated Medicinal Plants and Good Field Collection Practices for the collection of medicinal plants.

(xi) Voluntary Certification Scheme for Medicinal Plants

The National Medicinal Plants Board has developed the Certification Standards and Procedures and Scheme of Certification through Quality Council of India (QCI), Under the Scheme, any producer / collector / group of producers or collectors can obtain a certification from a designated Certification Body (CB) and will be under regular surveillance of the certification body. An option of getting a lot inspected and certified has also been made in the Scheme. It also allows certification of intermediaries like traders who may source certified medicinal plant material and supply further. The certification process in general

would cover following steps viz. Registration of Application, Evaluation(s) at the site, Testing of sample(s), Grant of Certificate, Periodic Surveillance Evaluation, Market sampling and Renewal of certificate.

The Voluntary Certification in the field of Medicinal Plants Sector would go a long way in improving the quality of raw material to Ayurveda, Siddha and Unani industry and other sister industries.

D. RESEARCH COUNCILS:

The Central Council for Research in Indian Medicine and Homoeopathy (CCRIMH) was established in 1969 to carry out research in Ayurveda, Siddha, Unani, Yoga and Homoeopathy under the Ministry of Health and Family Welfare. Later, in 1978, this composite Council was dissolved to pave the way for the formation of four independent Research Councils, one each for Ayurveda and Siddha, Unani, Homoeopathy and Yoga and Naturopathy. The four successor Research Councils were established as autonomous organizations registered under Societies Act, to initiate, guide, develop and coordinate scientific research, both fundamental and applied, in different aspects of their respective systems. The Research Councils, which are fully financed by the Government of India, are the apex bodies for scientific research in the concerned systems of medicine. The research activities of the Research Councils are monitored and reviewed periodically in order to ensure that the research is focused and that it is undertaken in a time bound manner. The outputs of the research studies are disseminated among educationists, researchers, physicians, manufacturers and the common man.

(i) Central Council for Research in Ayurveda Sciences (CCRAS):

The Central Council for Research in Ayurvedic Sciences (CCRAS), Department of AYUSH, Ministry of Health and Family Welfare, Government of India, an autonomous body for under taking, coordinating , formulating, developing and promoting research in Ayurveda on scientific lines. The activities are carried out through 300 Institutes/Centres/Units located at different states across the country and also in collaboration with reputed academic and research organizations. The broad areas of research comprise Medicinal Plant Research (Medico-ethno Botanical survey, cultivation,

Pharmacognosy), Drug standardization Research, Pharmacology Research (Pre-clinical Safety/Toxicity and Biological Activity Studies), Clinical Research, Literary Research & Documentation. The extension activities include Tribal Health Care Research, Health Care Services, Information, Education and Communication (IEC) etc.

The Council's Institutional network encompass 1. National Research Institute for Ayurveda Siddha Human Resource development, Gwalior 2. National Research institute for Panchakarma, Cheruthuruthy 3. National Research Institute for Ayurveda Drug Development, Kolkata, 4 Captain Srinivasa Murthy Research Institute for Ayurveda and Siddha Drug Development, Chennai 5. National Research Institute for Ayurveda Drug Development, Bhubaneswar 6. National Institute of Indian Medical Heritage, Hyderabad 7. National Research Institute of Basic Ayurvedic Sciences, Pune 8. National Institute of Ayurvedic Pharmaceutical Research, Patiala 9. North East India Ayurveda Research Institute, Guwahati 10. National Vriksha Ayurveda Research Institute, Jhansi 11. National Veterinary Ayurveda Research Institute, Lucknow 12. National Ayurveda Dietetics Research Institute, Bangluru, 13. National Ayurveda Research Institute for Vector Borne Diseases, Vijayawada 14. National Research Institute for Sowa Rigpa, Leh 15. Ayurveda Central Research Institute, Delhi 16. Ayurveda Contraceptive Drug Research Institute, Ahmadabad 17. Ayurveda Research Institute for Mother and Child Health Care, Thiruvananthapuram 18. Advanced Center for Ayurveda in Mental Health & Neurosciences, Bangluru 19. Ayurveda Cancer Research Institute, Mumbai 20. Ayurveda Mental Health Research Institute, Nagpur 21. Regional Research Institute of Himalayan Flora, Tarikhet, Ranikhet 22. Dr. Achanta Lakshmipati Research Centre for Ayurveda, Chennai 23. Ayurveda Regional Research Institute, Gangtok 24. Ayurveda Regional Research Institute, Mandi 25. Ayurveda Regional Research Institute, Jammu 26. Ayurveda Tribal Health Care Research Project, Port Blair 27. Ayurveda Regional Research Institute, Patna 28. Ayurveda Regional Research Institute, Itanagar 29. Ayurveda Central Research

Institute, Jaipur 30. Herbal Ayurveda Research Centre, Nagaland.

The main objectives comprise

1. The formulation of aims and patterns of research on scientific lines in Ayurveda.
2. To undertake any research or other programmes in Ayurveda.
3. The prosecution of and assistance in research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of diseases.
4. To initiate, aid, develop and coordinate scientific research in different aspects, fundamental and applied of Ayurveda and to promote and assist institutions of research for the study of diseases, their prevention, causation and remedy.
5. To finance enquiries and researches for the furtherance of objects of the Central Council.
6. To exchange information with other institutions, associations and societies interested in the objects similar to those of the Central Council and especially in observation and study of diseases in East and in India in particular.
7. To prepare, print, publish and exhibit any papers, posters, pamphlets, periodicals and books for furtherance of the objects of the Central Council and contribute of such literature.

For more about CCRAS, visit Website at: www.ccras.nic.in

(ii) Central Council for Research in Siddha (CCRS) :

The Central Council for Research in Siddha (CCRS) ([Website: www.crisiddha.tn.nic.in](http://www.crisiddha.tn.nic.in)) is an apex body for the formulation, Co-ordination and development of scientific validation of Siddha System of Medicine and was established as a separate Research Council w.e.f. September 2010. The research activities of CCRS are carried out through 5 peripheral Institutes / Units in the State of Tamilnadu, Kerala and the U.T. of Puducherry. These units include 1 Central Research Institute at Chennai, 2 Regional Research Institutes at Puducherry and Thiruvananthapuram, 1 Clinical Research Unit at Palayamkottai, 1 Medicinal Plants Garden at Mettur. This is inclusive of 2 attached hospitals at Chennai and Puducherry; 2

attached dispensaries at Palayamkottai and Thiruvananthapuram. The council emphasis on finding effective and low cost remedies for various disease conditions through systematic research. The research activity of the council includes clinical research, fundamental research, drug research and literary research.

The main objectives of the CCRS are following:-

- The formulation of aims and patterns of research on scientific lines in Siddha.
- To undertake any research or other related programmes in Siddha.
- The prosecution of and assistance in research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of diseases.
- To initiate, aid, develop and coordinate scientific research in different aspect, fundamental and applied aspects of Siddha and to promote and assist institutions of research for the study diseases, their prevention, causation and remedy.
- To finance enquires and researches for the furtherance of objects of the Central Council.
- To exchange information with other institutions, associations and societies interested in the objects similar to those of the Central council and specially in observation and study of diseases in India in particular.
- TO prepare, print, publish and exhibit any papers, posters, pamphlets, periodicals and books for furtherance of the objects of the Central Council and contribute to such literature.
- To create Administrative, Technical and Ministerial and other posts under the Society and to make appointments thereto in accordance with the rules and regulations of the Society.
- To undertake R & D Consultancy projects and transfer of patents on drugs and process tso industry.
- To undertake R & D projects sponsored by industries in Public / Private Sector.

(iii) Central Council for Research in Unani Medicine (CCRUM):

The Central Council for Research in Unani Medicine (CCRUM) is an autonomous organization under Department of AYUSH, Ministry of Health and Family Welfare, Government of India. The Council was established on 30 March 1978 under Societies Registration Act, 1860. However, it started functioning from 10 January 1979. The main objectives of the Council are as follows.

- Formulation of aims and patterns of research on scientific lines in Unani Medicine.
- To undertake research or any other programmes in Unani medicine.
- Prosecution of and assistance in research and propagation of knowledge and experimental measures generally in connections with the causation, mode of spread and prevention of diseases.
- To initiate, aid, develop and coordinate scientific research on different aspects, fundamental and applied, of Unani medicine, and to promote and assist institutions of research for the study of diseases, their prevention, causation and remedy.
- To finance enquiries and researches for the furtherance of objectives of the Council.
- To exchange information with other institutions, associations and societies interested in the objectives similar to those of the Council especially in the observation and study of diseases in the East in general, and in India in particular.
- To prepare, print, publish and exhibit any articles, posters, pamphlets, periodicals and books for furtherance of the objectives of the Council and to contribute to such literature.

The Council's research programme comprises clinical research, drug research, literary research and survey and cultivation of medicinal plants. Besides, extension health services and information, Education & Communication (IEC) activities are also part of the Council's programme. The Council's research activities are being carried out though a network of 24 Institutes/Units functioning in different part of the country. These include two Central Research Institue of Unani Medicine (CRIUM) - one each at Hyderabad and Lucknow, eight Regional research Institue of Unani

Medicine (RRIUM) - one each at Chennai, Bhadrak, Patna, aligarh, Mumbai, Srinagar, Kolkata and New Delhi; two Regional Research Centres of Unani medicine (RRCUM) - one each at Allahabad and Silchar (Assam) with an extension Centre at Karimganj; five Clinical Research Units (CRUs) - one each at Bangalore, Meerut, Bhopal, Bhurhanpur and Edathala (Kerala); a Drug Standardization Research Unit (DSRU) at Ghaziabad and New Delhi; a Chemical Research Unit (CRU) at Aligarh and Literary Research Institute of Unani Medicine (LRIUM) at New Delhi. Besides, two Unani Medicine Medical Centres (UMCs) are also functioning in modern allopathic hospitals in New Delhi. A Clinical Research Pilot Project (CRPP) is also functioning in Manipur.

The Council is engaged in multifaceted research activities. In the area of clinical research, the Council is conducting clinical studies and therapeutic trials on some common and chronic ailments with emphasis on diseases having national health priorities. Besides, scientific validation of classical/Pharmacopoeial Unani drugs is also being undertaken with a view to validate their efficacy and safety. Pre-clinical safety evaluation studies are also being taken for new drugs.

Research on fundamental aspects of Unani medicine is also continued with a view to scientifically validate different concepts. Besides, experimental validation of Unani regimental therapies in different chronic condition is also being undertaken at different centres of the Council.

In the area of drug research, development of Standard Operating Procedures (SOPs) for single and compound drugs is being done. The standards so developed have been incorporated in the Unani Pharmacopeia of India. Modification in the form of the Unani drugs to make it more palatable using modern pharmaceutical techniques is also being done. Quality control of Unani drugs is also part of this Programme.

In the literary research programme, collation, editing and translation of classical Unani books is being done. Besides, reprinting of out of print classical books also continued. Disease-wise data base of information available in the Unani classics is also being developed. Work on compilation of standard treatment guidelines in Unani Medicine is continued. Compiled document on standard Unani terminologies.

In the area of survey & cultivation of medicinal plants, the Council is busy undertaking ethanobotanical explorations of different forest areas collecting information on medicinal flora. Besides collecting information on medicinal folk claims from different tribes in the region so as to develop a database is also part of this programme. Experimental cultivation of some important medicinal plants is also being undertaken at the Council's herb gardens.

Extension health services is being provided to the common man through General OPD at the Councils's centres, mobile OPD at the door steps of the patients and in the Unani OPD at the modern Allopathic hospitals (under the scheme of co-location of AYUSH Dispensaries in modern Allopathic Hospitals). Two such centres of the Council are functioning in New Delhi.

Under the Information, Education and Communication (IEC) activities, the Council is engaged in propagating the strength of the system on the preventive, Promotive and curative health aspects among the masses by organizing conferences, seminars, workshops, group meetings, health exhibitions in the country. Efforts are on to introduce the system in the foreign countries also.

(iv) Central Council for Research in Yoga & Naturopathy (CCRYN):

Central Council for Research in Yoga & Naturopathy was established in 1978 with a view to provide better opportunities for all round development of Yoga and Naturopathy independently according to their own doctrines and fundamental principles (website: www.ccryn.org). The Council has been involved in carrying out research on various aspects of Yoga and Naturopathy by funding such research in various institutions. Leading Medical as well as Yoga institutions like the All India Institute of Medical Sciences (AIIMS), New Delhi; National Institute of Mental Health & Neuro-Sciences (NIMHANS), Bengaluru; Dr. RML Hospital, New Delhi; GTB Hospital, New Delhi, and Vivekananda Yoga Anusandhan Sansthan, Bengaluru etc. are involved in conducting Clinical Research in the field of Yoga and Naturopathy with the financial support of the Council. Besides, the OPD facility of Yoga and Naturopathy exists in Delhi at Safdarjung Hospital, Lady Harding Medical College, Dr. R.M.L. Hospital, Ch. Brahm Prakash Ayurvedic

Charak Sansthan, University College of Medical Sciences, Naturopathy Hospital, Rohini and CCRYN Headquarters as well outside Delhi and also Pt. B. D. Sharma Post Graduate Medical Institute, Rohtak and Vinoba Niketan Nedumangad, Thiruvananthapuram.

Council also conducts yoga classes six days a week for general public at the Council Headquarter, Janakpuri, New Delhi. Yoga fitness classes for Government employees also running by Council at Udyog Bhawan, New Delhi. Council is in the process of establishing its Central Research Institutes in Karnataka, Haryana, Delhi and Odisha for carrying out research activities. Council has completed 37 research studies in past and 41 research papers have published. The Council has following objectives:-

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- Formulation of aimss and patterns of Research on scientific lines in Yoga and Naturopathy.
 - Undertaking education, training, research and other programmes in Yoga and Naturopathy
 - Promoting and assisting institutions in the prosecution of research, propagation of knowledge and experimental measures in connection with the study of disease, their prevention, causation and remedy especially with emphasis for covering the rural population of the country.
 - Initiation, aiding, developing and co-ordinating scientific research in fundamental and applied aspects of Yoga and Naturopathy.
 - Financing enquiries and research for the furtherance of objects of the Council and exchanging information with other institutions, associations and societies having similar object.
 - Preparing, printing, publishing and exhibiting papers, posters, pamphlets, periodicals and books for the furtherance of the objectives of the Council and to contribute to such literature.
 - Grant-in-aid to Naturopathy & Yoga Hospitals under Treatment cum Propagation Centre and Patient Care Centre Schemes.
 - \=Scholarships for Ph.D. Fellows.
 - Research Monographs Published so far:
1. Coronary Atherosclerosis Reversal Potential of Yoga Life Style Intervention

2. Clinical Research Profile
3. Yoga and Biofeedback for the treatment of Irritable Bowel Syndrome
4. Yoga for Computer Related health Problems
5. Yogic Relaxation in the Management of Ulcerative Colitis
6. Uni-nostril Yoga breathing and Obesity: A study of efficacy & Mechanisms
7. Effect of Asans and Pranayams on Neurological, Neuromuscular & Cardio-Respiratory functions in Healthy Human Volunteers
8. Autonomic Function Tests in Epilepsy: Effect of Hatha Yoga
9. Assessment of the efficacy of Vipasana Meditation on various age groups: A polysomnographic and endocrine function evolution.
10. A Randomized Controlled Trial on the Efficacy of Yoga in the Management of Bronchial Asthma
11. Research Methodology in Yoga & (compilation of presentations of workshop in Research Methodology)
12. Research Methodology in Naturopathy & Yoga-II (compilation of presentations of workshop in Research Methodology)

(v) Central Council for Research in Homoeopathy (CCRH):

Among the Traditional / Complementary systems of Medicine in the country, Homoeopathy is one of the most popular System of Medicine. Recognizing the acceptance of this system by the masses, the Government of India established the Central Council for Research in Indian Medicine and Homoeopathy in 1969. In 1978, the Council was split to streamline the research work in all the system of medicines under AYUSH. Thus the Central Council for Research in Homoeopathy came into existence as an autonomous organization at New Delhi. At present, the Central Council for Research in Homoeopathy (CCRH) has a network of 29 Institutes/Units including 02 independent extension Units across the country which comprises of two (02) Central Research Institutes (H,) (CRIH), Kottayam (Kerala) & Nodia, (U.P.), one (01) Homoeopathic Drug Research Insitute (HDRI), Lucknow, (U.P.), eight (08) Regional Research Institutes (Homoeopathy) (RRIH), Mumbai (Maharashtra), Gudivada, (Andhra Pradesh), Jaipur (Rajasthan), Imphal (Manipur), Guwahati (Assam), Shimla (Himachal Pradesh), Puri (Orissa) & Kolkata

(West Bengal), thirteen **(13)** Clinical Research Units for Homoeopathy (CRUH), Chennai (Tamil Nadu), Siliguri (West Bengal), Port Blair (Andaman and Nicobar Islands), Ranchi (Jharkhand), Puducherry (U.T.), Tirupati (Andhra Pradesh), Dimapur (Nagaland), Aizwal (Mizoram), Itanagar (Arunachal Pradesh), Shillong (Meghalaya), Agartala (Tripura), Gangtok (Sikkim), Patna (Bihar), one **(01)** Drug Standardization Unit (DSU), Hyderabad (Andhra Pradesh), One **(01)** Survey of Medicinal Plants and Collection Unit (SMPCU), Ooty (Tamil Nadu), one **(01)** Homoeopathic Treatment Centre (HTC) and two **(02)** Extension Units, Puri (Orissa) & Hyderabad (Andhra Pradesh). Other than this there are three **(03)** OPD Centers, Nedumangad (Kerala), Delhi Cantonment (New Delhi) & Lady Harding Medical College (New Delhi).

The Council has IPD facilities at four **(04)** Centers (Kottayam, Noida, Gudivada and Puri) and OPD service at 27 Centres. Out of the Units mentioned above, the Units of the Council that are not directly dealing with the patients are Drugs Proving Extension Units at Regional Research Institute (H), Puri and Survey of Medicinal Plants and Collection Unit, Ooty.

The Main Objectives of CCRH are:

- Formulation of aims and patterns of research on scientific lines in Homoeopathy.
- Initiation, development, undertaking and co-ordination of scientific research in fundamental and applied aspects of Homoeopathy.
- Collaboration of research studies with other institutes of excellence towards promotion of Homoeopathy.
- Exchanging of information with other institutions, associations and societies interested in the objects similar to those of the Central Council for Research in Homoeopathy and especially in observation and study of diseases.
- Propagation of research findings through monographs, journals, workshops & develop audiovisual aids for dissemination of information to the profession & Public.

The main areas of research of the Council are Clinical Research, Drug Standardisation, Drug Proving, Clinical Verification, Survey, Collection and Cultivation of

medicinal plants, Extramural and Collaborative Research studies.

E. STATUTORY REGULATORY BODIES:

There is a need to initiate measures to improve the standards of Medical Education by revising curricula to contemporary relevance by creating medical institutions and Centre of Excellence and providing assistance for infrastructural growth. The Department is committed for the development and propagation of Ayurveda, Yogsa, Naturopathy, Unani, Siddha and Homoeopathy systems and strives to maintain standards of education in the existing colleges. AYUSH teaching institutions are being provided financial assistance for creating infrastructural facilities as specified in the Minimum Standards Regulations and the regulations of Under-graduate and Post-graduate education issued by Central Council of Indian Medicine (CCIM) and Central Council of Homoeopathy (CCH). So far, total (510) i.e. 325 and 185 colleges/institutions have been permitted by CCIM and CCH respectively to undertake UG /PG courses and these colleges are affiliated with 76 recognized universities throughout the country including two exclusive Ayurveda universities and six Health Universities (Annexure - VI).

Regulation of Medical education and maintenance of Central Register of ISM &H are two main functions of these regulatory bodies. There are 47 State Boards of Indian System of Medicine and Homoeopathy (Annexure -VII) for registering AYUSH practitioners possessing recognized medical qualifications.

(i) Central Council of Indian Medicine (CCIM):

The Central Council of Indian Medicine is a statutory body constituted under the Indian Medicine Central Council Act, 1970 vide Gazette Notification Extraordinary Part- II Section 3 (ii) dated 10.8.1971. The Government of India vide issuing amendments in the said Gazette Notification has changed the members in 1984 and 1995. The main objects of the Central Council are as under:-

- To prescribe minimum standards of education in Indian Systems of Medicine viz. Ayurveda, Siddha and Unani Tib.
- To advise Central Government in matters relating to the recognition

(inclusion/withdrawal) of medical qualifications in/from Second Schedule to Indian Medicine Central Council Act, 1970.

- To maintain a Central Register of Indian Medicine and revise the Register from time to time.
- To Prescribe Standards of Professional Conduct, Etiquette and Code of Ethics to be observed by the practitioners.
- To consider and furnish the recommendations to Government of India on the proposal received from various institutions through Government of India for establishment of new colleges of Indian Systems of Medicine, to increase intake capacity in Under-graduate course/Post-graduate course and to start new Post-graduate course or additional subjects.

Since its establishment in 1971, the Central Council has been framing on and implementing various regulation including the Curricula and Syllabii in Indian Systems of Medicine viz. Ayurved, Siddha and Unani Tib at Under-graduate level and Post-graduate level.

Now all the Colleges of Indian Systems of Medicine are affiliated to 44 Universities in the Country. These Colleges are following the minimum standards of education and Curricula and Syllabii, prescribed by Central Council.

The Central Council of Indian Medicine has prescribed Regulations for Under-graduate and Post-graduate courses of Ayurveda, Siddha and Unani Tib considering that after completion of education, they would become profound scholars having deep basis of Ayurved, Siddha and Unani with scientific knowledge in the fundamentals of respective systems. Through extensive practical training students become an efficient Teachers, Research scholars, Kayachikitsak (Physicians) and Shalya Chikitsak (Surgeons) who are fully competent to serve in the medical and health services of the Country. The Central Council has prescribed the following Regulations:-

Rules (framed by Government of India)

- 1) Indian Medicine Central Council (Election) Rules, 1975 amended in 2012 (framed by Government of India).

Regulations framed by CCIM with the previous sanction of Government of India.

- 2.) Central Council of Indian Medicine (Election of President and Vice-President) Regulations, 1971.
- 3.) Central Council of Indian medicine (General) Regulations, 1976 amended in 2012.
- 4.) Central Council of Indian Medicine (Inspectors and Visitors) Regulations, 1977.
- 5.) Practitioners of Indian Medicine (Standards of Professional Conduct, Etiquette and Code of Ethics) Regulations, 1982.
- 6.) Indian Medicine Central Council (Minimum Standards of Education in Indian Medicine) (Amendment) Regulations, 1989 Subsequently amended 2005 and further amended 2005, 2010, 2011 and 2012 for Ayurvedacharya (Bachelor of Ayurvedic Medicine & Surgery) Course.
- 7.) Indian Medicine Central Council (Minimum Standards of Education in Indian Medicine) (Amendment) Regulations, 1995 for Kamil-e-tib-o-jarahat (Bachelor of Unani Medicine & Surgery Course).
- 8.) Indian Medicine Central Council (Minimum Standards of Education in Indian Medicine) Amendment Regulations, 2006 for Siddha Maruthuva Arignar (Bachelor of Siddha Medicine and Surgery) BSMS Course.
- 9.) Indian Medicine Central Council (Post-graduate Ayurveda Education) Regulations to 2012 for Ayurveda Vachaspati MD (Ay.).
- 10.) Indian Medicine Central Council (Post Graduate Unani Education) Regulation, 2007 for Mahir-e-Jarahat (Master of Surgery).
- 11.) Indian Medicine Central Council (Post-graduate Education) Regulations, 1986 and further added in 1994 for Siddha Maruthuva Perarignar, MD (Siddha) Course.
- 12.) Establishment of New Medical College opening of new or Higher Course of Study of training and increase of admission capacity by a medical college Regulations, 20503.
- 13.) Indian Medicine Central Council (Permission of Existing Medical Colleges) Regulations, 2006.
- 14.) Indian Medicine Central Council (Post-Graduate Unani Education) Regulations, 2007.
- 15.) Indian Medicine Central Council (Post-graduate Diploma Course) Regulations 2010.

Status/Number of College

At present there are 256 Ayurved, 09 Siddha and 41 Unani Colleges, affiliated with various universities of the Country. 55 colleges in

Ayurved, 03 in Siddha and 08 in Unani imparting Post-graduate education in different specialties.

Central Council has prescribed following courses at Under-graduate and Post-graduate level. Minimum Standards of education and syllabi for different courses for Ayurveda, Siddha and Unani Tib have also been laid down by the Council.

Ayurveda

Ayurvedacharya (Bachelor of Ayurvedic Medicine & Surgery) - 5-1/2 Years.

Ayurved Vachaspati (MD-Ayurved)-3 Years

Ayurved Dhanwantari (MS-Ayurved)-3 Years

Diploma in Ayurved - 2 years

Unani Tib

Kamil-e-Tib-o-Jarahat (Bachelor of Unani Medicine & Surgery) - 5-1/2 years

Mahir-e-Tib (MD-Unani) - 3 years

Mahir-e-jarahat (MS-Unani)- 3 years

Diploma in Unani - 2 Years

Siddha

Siddha Maruthuva Arignar (Bachelor of Siddha Medicine & Surgery)- 5-1/2 years

Siddha Maruthuva Perignar (MD-Unani) -3 years.

CENTRAL REGISTER OF INDIAN MEDICINE.

As per provision of 23 of IMCC Act 1970 reads as under:-

The Central Council shall cause to maintained in the prescribed manner, a register of practitioners in separate part for each of the system of Indian medicine to be known as the Central Register of Indian medicine which shall contain the names of all persons who are for the time being enrolled on any State Register of Indian Medicine and who possess any of the recognized medical qualifications.

Preparation and maintenance of Central Register of Indian Medicine is one of the main objects of the Central Council. As per provisions of the IMCC Act, 1970, Central Council is maintaining a Central Register in the prescribed manner, which is containing, the names of persons who are enrolled on any State Register of Indian Medicine and who possess any of the recognized medical qualifications included in the Schedules to the Indian Medicine Central Council Act, 1970. The maintenance of Central Register of Indian

Medicine and updating of the same is a continuous process.

The Central Council of Indian Medicine has updated the Central Register and about 1.80 lakh names of ISM practitioners from all over country have been uploaded on website of CCIM, therefore, practitioners can ensure the availability of his/her name on the Central Register of Indian Medicine and can do practices anywhere in India. Moreover, the names of Ayurveda, Unani and Siddha Practitioners of all States of India got centrally registered and their names have been published in Gazette notification.

The Central register of following states for the period mentioned against the names are prepared and notified in the Gazette of India:-

(ii) Central Council of Homoeopathy (CCH):

The Central Council of Homoeopathy is a corporate body constituted by the Government of India under the provisions of Homoeopathy Central Council Act, 19703 (website: www.cchindia.com). This council is comprised of members elected from the States/U.T.s and from Faculties/Departments of Homoeopathy in Universities and of members nominated by the Central Government. Its main objectives are:

- Regulation of Medical education in Homoeopathy.
- Maintenance of a Central Register of Homoeopathic Practitioners in the country.
- Prescribing standards of professional conduct, etiquette and a code of ethics for the practitioners of Homoeopathy.
- Recommending recognition and / or withdrawal of recognition of medical qualification in Homeopathy.
- Recommending for approval of a new college or increase of seats of starting of new or higher courses in existing colleges.

(a) Regulation of Medical Education of Homoeopathy:

The Regulations of CCH prescribed for Under Graduate degree course 'Bachelor of Homoeopathic Medicine and Surgery (BHMS)' (5 & 1/2 years) and a bridge course BHMS of 2 Years and Post Graduate M.D. (Hom) courses (3 year in seven specialty subjects are as under.

- Homoeopathy (Degree Course) Regulations, 1983 further amended in 2003 and 2005 respectively.
- Homoeopathy (Graded Degree Course) Regulation, 1983 (further amended in 2001).
- Homoeopathy (Post Graduate Degree courses) Regulations, 1989, (further amended in 1993, 2001 & 2012 respectively).

The Homeopathy Central Council Act, 1973 was amended in 2002 (but amendments were enforced w.e.f. 28.01.2003) and the power to grant permission for starting new colleges, introducing new or higher courses of study and increasing the number of seats in a college has been vested with the Central Government on the recommendation of Central Council.

In exercise of the powers conferred by Sections 33 & 12A of the HCC Act, 1973, the Central Council of Homoeopathy with the previous sanction of Central Government enforced the Establishment of New Medical College (opening of New or Higher course of Study of Training and increase of admission capacity by a Medical College) Regulations 2011.

(b) Central Register of Homoeopathy:

Under the provisions of Homoeopathy Central Council Act, 1973, CCH has the responsibility to maintain the Central Register of Homoeopathy in two parts (Part I and in Part II); Part I contains the names of all the persons who possess any of the recognised medical qualification in Homoeopathy and Part II contains the names of all the persons other than those included in Part I who were enrolled on any State Register of Homoeopathy before the commencement of the provisions of the Homoeopathy Central Council Act, 1973. Direct registration is also done by Central Council as per its registration Regulations, 1982. As reported by State Governments, there are 2.29 lakh Homoeopathy doctors in the country.

F. NATIONAL INSTITUTES:

National Institutes in various AYUSH systems have been set up by the Central Government to set benchmarks for teaching, research and clinical practices. Upgrading these National institutes into Centres of Excellence has been a constant endeavour of the Department. There are three National Institute under

Ayurveda system, whereas, one National Institute exists each in Unani, Siddha, Yoga, Naturopathy and Homoeopathy systems.

(i) National Institute of Ayurveda (NIA), Jaipur:

National Institute of Ayurveda, Jaipur established in 1976 by the Government of India, is an apex Institute of Ayurveda in the country to develop high standards of teaching, training and research in all aspects of the Ayurvedic System of Medicine with scientific approach (website: www.nia.nic.in). It is affiliated to the Rajasthan Ayurved University, Jodhpur. The Institute is conducting an Under-Graduate Course (BAMS) (92 Seats in 2009). The Institute is also conducting a three year Post-Graduate Course "Ayurveda Vachaspati" (M.D. Ayurveda) in 14 Subjects, viz. Dravya Guna Vigyana, Kayachikitsa, Kaumarbhritya, Panchakarma, Rasa Shastra and Bhaishajya Kalpana, Roga and Vikriti Vigyan, Maulik Siddhanta (Samhita), Shalya Tantra and Sharir Kriya, Sharir Rachana, Swastha Vritta, Shalaky Tantra, Prasuti, Stri Roga and Agad Tantra with admission capacity of 104 students. The Institute also grants regular Fellowships leading to the award of Ph.D.(Ayurved) in 11 Subjects, viz. Kaya Chikitsa, Shalya Tantra, Maulik Siddhanta, Rog Vigyan, Dravya Guna, Sharir Kriya, Panchakarma, Rasa Shastra and Bala Roga, Prasuti Tantra-Stri Roga and Sharir Rachana. The Institute also conducts a Diploma Course in Ayurveda Nursing and Pharmacy of two and a half years duration with an intake capacity of 30 seats annually and 3 months Panchkarma Attendant Training Course in Classical and Keraliya Panchakarma Procedure with an intake capacity of 40 Seats (10 for SC and 10 for others).. Besides, the Institute is involved in Clinical Research. The Institute has 2 Hospitals with a Bed Strength of **357**. It also has a separate fully equipped Panchakarma unit and also Specialty Clinics like Geriatrics & Dietetics, Nature Cure, Diabetic, Allergic, Child Mental Health, Centre of Excellence for Musculoskeletal Disorders and also Tele-Medicine and Satellite Clinics. There is a Central Laboratory for various types of patient investigations including TMT, ECG etc. It has a Centre of Excellence for Eye Diseases in collaboration with Sreedhareeyam of Kerala. The Institute is soon starting another Centre of Excellence with Vaidyaratnam Oushadhalaya of Kerala. Institute has a Satellite Clinic in a popular residential-cum-commercial area of Jaipur (Jawahar Nagar). NIA is also conducting

Short Term Training Course for Foreign Medical Doctors and Professionals. Various other Colloration projects with some foreign countries are also in the pipeline.

(ii) Rashtriya Ayurveda Vidyapeeth (RAV), New Delhi:

The Rashtriya Ayurveda Vidyapeeth, New Delhi, an autonomous organization, registered under Societies' Act was established in 1988 (website: www.ravdelhi.nic.in). The RAV imparts practical training to Ayurvedic graduates and post graduates through the Guru-Shishya Parampara i.e. the traditional method of transfer of knowledge.

The one-year course of Member of Rashtriya Ayurveda Vidyapeeth (MRAV) facilitates literary research for the acquisition of knowledge of the Ayurvedic Samhitas and commentaries thereon in order to enable the students to become good teachers, research scholars and experts in Samhitas. The students, who have completed post graduation in Ayurveda and below 30 years of age, are admitted for critical study on Samhita, related to their P.G. studies.

In the other one-year Certificate Course of Rashtriya Ayurveda Vidyapeeth (CRAV), candidates possessing Ayurvedacharya (BAMS) or equivalent degree who are below the age of 27 years, are trained under eminent Vaidyas in some Ayurvedic clinical and other practices.

The Vidyapeeth organizes Seminars/Workshops every year to disseminate traditional knowledge and research outcomes to practitioners and researchers. The Vidyapeeth also conducts Interactive Workshops for the discussion of controversial issues between students and teachers so as to provide clarity for further utilization in the fields of education, research and patient care.

The Vidyapeeth is also assisting the Department of AYUSH in implementing Central Sector Scheme of Continuing Medical Education (CME) in AYUSH systems all over the country.

(iii) Institute for Post Graduate Teaching and Research in Ayurveda (IPGT&RA), Jamnagar (GUJARAT):

Institute for Post Graduate Teaching and Research in Ayurveda (IPGT & RA) is established by Govt. of India in 1956. It is one of the constituent body of Gujarat Ayurveda University and is the oldest PG teaching and Reasearch Centre for Ayurveda.

There are 10 teaching departments with facilities of teaching in 12 specialties for Post Graduate (MD / MS [PhD [Ayu.] levels. Institute also conducts Mpharma (Ayu.) and MSc (Medicinal Plants) courses under Self Finance Course (SFC) Cell. Besides these; the institute also conducting short term courses like Threee Months Introductory Course in Ayurveda for Foreigners; Four Months Training Programme in Panchakarma etc. at regular intervals. The Gujarat University has signed MoU with many National and International Institutions and IPGT&RA is the nodal implementing agency for all these MoUs. The thrust areas of research for Madhumeha (Diabetes), Tamaka Swasa (Bronchial Asthma), Sthaulya (Obesity), Jara (Old age disorders & Pre mature ageing), Buddhi Manday (Mental Retardation) Cerebral Palcy etc.

The hospitals of the Institute with more than 180 indoor capacity provide treatment to indoor & outdoor patients. The institute is well equipped laboratories like Pathology, Bio-Chemistry, Micro-Biology, Pharmacology, Pharmacognosy, Pharmaceutical Chemistry etc. Facilities for investigations like X-Ray, Sonography etc. are also available. Hospital provides specialized treatments like Pasnchkarma, Kshara sutra and Kriya Kalpa for the patients attending daily the OPD and IPDs. In addition to these activities; Institute is providing health care services through Four satellite OPDs clinics at Old Age Home, Jamnagar Jail and Sasoi Botanical Garden (25 Km away from Jamnagar City).IPGT & RA is the first institute in India, which provides weekly OPD health-care facility to all the three defense services viz. IMS, Valsura; Air Force Station, Jamnagar and Army Centre, Jamnagar.

Implementation of RUDRA software in the hospitals, Central library with huge collection of rare manuscripts, Digitization of manuscripts, Pub Med enlisted Quarterly Peer Reviewed International Journal of Ayurveda - 'AYU', e-learning programme for sensitization of modern medical professionals, Pharmacovigilance Programme for Ayurveda, Siddha and Unani Drugs are the few assets of the Institute. Insitute is publishing many

monographs and project report on researches conducted in the institute.

(iv) National Institute of Unani Medicine (NIUM), Bangalore:

National Institute of Unani Medicine, Bangalore established in 1984 as an autonomous organization under the Department of AYUSH, Ministry of Health and Family Welfare, Govt. of India and registered under the Societies Registration Act, 1960. The academic activities were started in 2004-05. Presently the Institute is affiliated to Rajiv Gandhi University of Health Science, Karnataka and follows the curriculum prescribed by the Central Council of Indian Medicine as approved by the RGUHS.

In a short span of time the Institute has emerged as a center of quality teaching and research at Post Graduate level. This institute is spread over 55 acre of land and has a 150 bedded Hospital, Academic Block, separate hostel buildings for Boys and Girls Students, Administrative Block and Library. A Well equipped Central Instrumentation Lab has recently been established for the purpose of standardization of Drugs and other research studies. Establishment of Herbal Garden consisting of medicinal herbs, shrubs and trees is under progress under a project of National Medicinal Plant Board. A state of art animal house has been constructed with all the facilities for arrangement of animal care and breeding with the aim to make the institute self dependent for the supply of animals required for different experimental studies.

The spacious library is having classical and latest books, rare manuscripts & journals etc. with the facility of reading room. The library is equipped with internet facility for both staff and the students. Digitalization of the library is under progress.

The institute has its own web site as <http://www.nium.in>. The whole administrative block is being connected with the LAN (Local Area Network).

The hospital has an OPD wing and 150 Bed IPD constructed in a wide, well ventilated and in a serene atmosphere having separate wards for male and female patients. It possesses good infrastructure and skillful nursing staff extending their services round the clock to the suffering patients. The treatment of poor patients in the OPD is free of cost. Diet is also provided to

the patients free of cost and is based on recommendation of respective physicians. No registration fees are collected from SC/ST patients and are offered 50% rebate on all medical investigations. Populations living below poverty line are also similarly treated.

(v) National Institute of Siddha (NIS), Chennai:

National Institute of Siddha, Chennai established in 2004, as an autonomous organization, under the control of the Ministry of Health and Family Welfare, is being developed as a Centre of Excellence for the Siddha system of Medicine (website: www.nischennai.org). The Institute has been established by the Government of India as a joint venture with the Government of Tamil Nadu under the Societies (Registration) Act, 1975.

The institute conducts Post-graduate courses in Siddha in six specialized branches of Siddha viz. 1) Maruthuvam, 2)Gunapadam, 3)Sirappu Maruthvam, 4)Kuzhanthai Maruthuvam 5)Noi Nadal, and 6)Nanju noolum Maruthuva Neethinoolum with varying admission capacity of 7-8 in each branch and altogether 46 including 1 from BIMSTEC countries.

Presently 46 students (Siddha graduates) get admitted every year in the first year of the M.D. (Siddha) course in the aforementioned 6 branches through a separate entrance examination conducted by NIS. The sanctioned strength of faculty members is Professor-6, Associate Professor-12, Assistant Professor-10 and Lecturers-18. Separate Hostels for men and women students and also for staff-nurse are available within our campus. Solar water heater, a man-made pond, sewage water recycling plants, herbal house, animal house, auditorium, library and a guest house are other facilities available in NIS. A 160-bedded hospital- Ayothidoss Pandithar hospital- attached to NIS provides 24-hour medical care to patients and conducts researches to develop, promote and propagate Siddha system. Outpatient Department caters to the medical need of 1100-1700 patients daily. Number of patients treated in OPD during 2011-12 were 4,34,8s05 patients, of whom 52.6% and 47.4% were males and females respectively. The bed occupancy of in-patients varies from 68% to 107% during different months of the year. The bed occupancy during 2011-12 remains at 92%. Siddha dispensary, laboratories of clinical Pathology, Microbiology, Biochemistry and Pharmacology are functioning

in the hospital. X-ray and ECG units are also functioning. Special Siddha therapies such as Varmam, Thokkanam, Yogam, Otradam, Ennaikkattu etc. are available for the treatment of neuromuscular, skeletal and joint disorders. Weekly special OP clinics-Geriatric special OP clinic and Yoga special OP clinic are conducted for the benefit of the public. About 250 to 300 geriatric patients are attending weekly geriatric OP. A weekly mobile Siddha clinic is conducted in Old Perungalathur, the adopted village of NIS.

NIS is affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai. NIS has also been recognized as a Center for Ph. D studies by the same University. At present 6 full time Ph.D scholars and 21 part-time Ph.D scholars (our faculty members) are pursuing their research studies under 6 professors who have been recognized as guides by the T.N. Dr. M.G.R. Medical University. The research projects are reviewed and monitored by Institutional Ethics Committee and Institutional Animal Ethics Committee. NIS is publishing periodically 'Journal of Siddha' (Half yearly) and 'NIS Newsletter' (Bimonthly). NIS is developing as a centre of excellence and a referral institute for everything in Siddha. By way of conducting Continuing Medical Education (CME) programmes for Teachers and Doctors, NIS is catering to the academic needs and professional skills of the members of the teaching faculty as well as doctors who are rendering health care services to people.

(vi) Morarji Desai National Institute of Yoga (MDNIY), New Delhi

Morarji Desai National Institute of Yoga (MDNIY), New Delhi is an autonomous organization under the Department of AYUSH. The objectives of the Institute are to act as a centre of excellence, develop, promote and propagate the science of Yoga, to provide and facilities training, teaching and research in Yoga. It is housed in a state-of-the art complex with air conditioned and ultra-modern building which includes Auditorium, Conference Hall, Kriya Block, Class Rooms, Lecture Halls etc. with properly equipped teaching facilities. It provides conducive environment for Yoga sadhana, Yoga Therapy OPD, Pathology Labs, etc.

The objectives of the Institute are:

- To act as a Centre of Excellence in Yoga;
- To develop, promote and propagate the science and art of Yoga; and
- To provide and promote facilities of training, teaching and research to fulfill the above two objectives.

The vision and mission of the Institute is Health, Happiness and Harmony for all through Yoga. The Institute provides the best of Teaching, Education, Training, Therapy and Research facilities to Yoga aspirants. The aim of the Institute is to promote deeper understanding of Yoga philosophy and practices based on classical Yoga amongst the people.

The Institute provides the best of Teaching, Education, Training Therapy and Research facilities to Yoga aspirants.

Schemes

- Diploma in Yoga Sciences of One Year duration for Graduates is being conducted.
- Foundation Course in Yoga Science for Medical Professionals are being conducted.
- The Institute had launched a scheme to run Swami Vivekananda District Yoga Wellness Centre (SVDYWC) through Public Private Partnership (PPP) mode in 2010-11.

The Institute conducts one year regular Diploma in Yoga Sciences (DYSc.) for graduates and 3½ months Certificate in Yoga Science (CYSc.) for target groups like Air Force, BSF etc. Besides, the Institute also runs one month Foundation Course in Yoga Science (FCYSc.) for general public. It is also conducting several Yoga training programmes for the general public, working executives, women, children etc. in the Institute and outside. Different Yoga therapy Programmes are also being conducted in the Institute for patients having different disorders.

MDNIY is running an OPD attached with Pathological & Biochemistry Lab, Sleep Lab and an X-Ray unit. It has established four Yoga therapy and Research Lab and X-ray Unit programmes on different disorders. It has also

established four Yoga Therapy Centres at AYUSH/Allopathy hospitals of Delhi. Five Advanced Centres for Yoga Therapy and Research have been set up by the Institute in leading Medical institute of the country like NIMHANS, Bangalore; JIPMER, Puducherry; DIPAS, Delhi; GAU, Jamnagar, Gujarat and Govt. Medical College, Jammu. MDNIY is running 20 Preventive Health care Units of Yoga in CGHS Dispensaries of Delhi and NCR.

The Institute is also participating in National and International events like Health exhibitions, Health Melas, Festivals, Seminars, Conferences etc. It is involved in propagation of Yoga through print and electronic media. The Institute brings out Quarterly Newsletter and a Quarterly Journal "Yoga Vijnana" for disseminating the knowledge of Yoga. It has brought out 10 diseases-wise booklets for the benefit of the public and Yoga manual for Medical professional/Students has published. The TKDL (Yoga) project is housed at MDNIY. The institute is also housed AYUSH Planet Health Museum. The institute has been conducting workshop for Children in Summer Vacation, Workshop on Yogic Management of Stress and another workshop on Yogic Management of Lifestyle related Disorders on last Saturday of every month since December, 2010.

(vii) National Institute of Naturopathy (NIN), Pune:

National Institute of Naturopathy, Pune registered under the Societies Registration Act was established in 1986 at Babu Bhawan with an objective of promotion and propagation of Naturopathy in the country and to encourage research in the field of Naturopathy treatments for prevention and cure of diseases and promotion of health living (website: www.punenin.org).

The NIN has an OPD clinic with free consultation services where various Naturopathy treatments are given to the patients at very subsidized rates. About 300 patients avail these treatment facilities daily. Free Acupressure treatment is given to patients for six days in a week. The institute also conducts 8 batches of Yoga classes daily. The Institute publishes "Nisargopachar varta" a bilingual magazine (Hindi / English) every month. NIN has a Library with lending and reading facilities with 9000 books and national and international journals.

A Health Shop is being run on self sustaining basis in the institute where natural food, drinks and chemical-free products are made available to the public. Also, books on naturopathy, Yoga and other Health subjects and various instruments used in the treatment of Naturopathy are sold here. NIN is running a Naturopathic Diet Centre, providing diet facilities to the general public and patients who visit this institute.

NIN is regularly conducting lecture classes on various Health subjects on every Saturdays. NIN conducts one full day workshop on last Saturday of every month on any one disease, its cause and remedies. NIN conducts an exclusive full day workshop on 3rd Saturday of the month in any one of the regional languages of India.

The institute is conducting One-Year full-time "Treatment Assistant Training Course" (TATC) for male and female youth having passed 10th standard, age between 18 to 30 years. NIN is giving internship training to 12s BNYS internees regularly. NIN is conducting a mini Gym where health seekers from general public and patients are given service.

NIN conducts Continuous Medical Education (CME/CPDP/ROTP) programme for Naturopathy graduates and Doctors of other systems of medicine periodically. NIN also conducts periodic workshops on Research Methodology for the Naturopathy doctors. Annually NIN is conducting Re-orientation programme for the practicing Naturopaths.

NIN participates in exhibitions all over India to propagate and promote the science of Naturopathy. NIN also organizes Natural Health Food Fair and Yog Naturopathy seminars with demonstration of Yoga and exhibition of more than 150 delicious dishes.

A unique activity of NIN is the sanatorium, for HIV+ve patients at Panchagani where they are treated under Naturopathy and Yoga life style modification treatment modalities. As the patients undergone treatment here are largely benefitted, the response is growing.

(viii) National Institute of Homoeopathy (NIH), Kolkata:

The National Institute of Homoeopathy was established in 1975 at Kolkata as a model Institute in Homoeopathy. The institute is affiliated to West Bengal University of Health Sciences, Kolkata and conducts Under Graduate and Post Graduate courses in Homoeopathy.

The main campus of the Institute is housed in a plot measuring 16.5 acres of land situated at Block-GE, Sector-III, Salt Lake, Kolkata - 700106. The Academic building/ Administrative block, Hospital and UG hostels are located in this block. There are two other campuses; one measuring 9.5 acres of land for Residential Quarters for the staff of the Institute in JC-Block, Salt Lake and the other is the Medicinal Plant Garden on 25 acres of land situated at Kalyani, Dist. Nadia, West Bengal, about 60 kms away from the main campus. The hospital has got 100 beds with a spacious OPD block, dispensing rooms, laboratory medicine department and a research wing. The boys hostel and girls hostel for the UG students are housed in the academic complex and the PG hostel, international hostel and staff quarters are at JC block. The Library & information Services division has more than 19, 845 documents including rare homoeopathy treatises. There are 1042 bound journals, 61 periodicals which are subscribed regularly.

The main objective of the Institute is Excellence in Homeopathic education and therefore conducts the UG and PG courses. The admission capacity in UG course is 93 and in PG course is 36 per year. Out of the 93 seats in UG, 14 seats are reserved for nominated candidates of States/ Union Territories where there is no Homoeopathic Medical College. Apart from these the institute also provide 10 admissions to Sri Lankan students nominated by Govt. of Sri Lanka, 05 admissions to **BIMSTEC** (Bay of Bengal initiative for Multi-Sectorial Technical and Economic Cooperation) candidate nominated by Indian council of Cultural Relation and 01 admission to foreign national. The remaining seats are filled through All India entrance examination conducted by the Institute. PG specialization is available in six subjects and the admissions are made through an All India entrance examination conducted by the West Bengal University of Health Sciences. 02 seats are reserved for the BIMSTEC candidate in MD(Homoeo.) course.

The clinical research is being carried out the Thyroid, Spondylitis, Allergic Rhinitis and Cancer. Number of patients registered with Out Patients Department during 2011-12 were

2,68,388 whereas 799 patients were admitted in IPD. 5076 patients were treated at the peripheral OPD at Kalyani which is operated on a tri-weekly basis. Investigations on Pathology - 6602, Biochemistry-7239, ECG-764, X-ray-2940, USG-1014, PFT-9 nos. of cases were done during the period of 2011-12. CPWD has completed construction of PG Hostel in JC-Block, Salt Lake campus of NIH and put into use.

The construction and installation of 15 - persons lift in the Hospital block and 08 persons lift in the Academic Block were also completed in the year 2011-12 by NPCCL and put into use. The construction of four storied hospital extension building is in progress. The construction work of new Academic-cum-Library building (04 storied in Phase-I) is completed by NPCCL, a PSU under the Ministry of Water Resources which has started the work on 3.11.2009 except lift installation, overhead tanks etc. due to pending decision for the continuation of 2nd Phase (2nd floor) and 3rd phase (2nd floor) construction of eight storied Academic cum Library building in one go. The matter has been taken up with competent authority. During the year 2011-12, renovation work like roof treatment of NIH building, OPD renovation, construction of OPD Shed etc. has been awarded to NPCCL with the approval of competent authority.

Library & Information Services:

This Division has more than 20000 documents (macro & micro) including rare homoeopathy treatises. There are 1042 bound journals, 61 periodicals are subscribed regularly and 43 periodicals have been received as gift. It provides various services i.e. Documentation, Reference, Referral, CAS, SDI, Document Delivery, Internet etc. to the in-house readers. Book Bank service was established in 2003-04. The Department of LIS also provides Information support to the Interns, PG students and the Homoeopathic fraternity as a whole.

Publication: The Institute publishes quarterly "Bulletin of the National Institute of Homoeopathy" incorporating scientific articles.

G. STANDARDISATION OF ASU & H DRUGS:

Laying down the Pharmacopoeial standards for Ayurveda, Siddha and Unani medicine, both for single and compound drugs, is essential, as Pharmacopoeial standards are important and are mandatory for the implementation of the drug testing provisions

under the Drugs and Cosmetics Act, 1940 and Rules there under. These standards are also essential to check samples of drugs available in the market for their safety and efficacy. Government of India had taken up the task of developing Pharmacopoeial standards through Pharmacopoeia Committees.. Four different Pharmacopoeia Committees are working for preparing official formularies/ pharmacopoeias of Ayurveda, Siddha, Unani and Homoeopathy drugs. These committees are engaged in evolving uniform standards for preparation of drugs of and in prescribing working standards for single drugs as well as compound formulations. Standards for around 40% of the raw materials and around 15% of formulations have been published by these Pharmacopoeial committees. In Ayurveda, 5 volumes of Pharmacopoeia and 3 volumes of Formularies have been published.

Drug Control Cell (AYUSH) is working in the Department to deal with the matters pertaining to Drug Quality Control and the regulation of Ayurveda, Siddha and Unani drugs under the provisions of the Drugs and Cosmetics Act, 1940 and Rules, 1945. The Cell is looking after the activities of Ayurveda, Siddha, Unani Drug Technical Advisory Board (ASUDTAB) and Ayurveda, Siddha, Unani Drugs Consultative Committee (ASUDCC). Besides, Pharmacopoeial Laboratory for Indian Medicine (PLIM) and Homoeopathic Pharmacopoeia Laboratory (HPL) are Standard-setting-cum-Drug-Testing-Laboratories at National level functioning at Ghaziabad (Uttar Pradesh). A public sector undertaking 'Indian Medicines Pharmaceutical Corporation Limited (IMPCL)' is engaged in manufacturing and marketing of Ayurveda and Unani products.

(i) Pharmacopoeial Laboratory for Indian Medicine (PLIM), Ghaziabad:

Pharmacopoeial Laboratory for Indian Medicine (PLIM) is a subordinate office of the Ministry of Health & Family Welfare (Department of AYUSH), Govt. of India. It is located at Central Govt. Enclave, Kamla Nehru Nagar, Ghaziabad-201 002 (U.P.). The laboratory was established in the year 1970 as a Pharmacopoeial Standards Setting Cum Drugs Testing Laboratory at National Level for Indian Medicines which includes drugs of Ayurveda, Unani and Siddha systems (Website: www.plimism.nic.in). the laboratory is also notified as Central Drugs Laboratory for drug testing and quality control. The main objectives of establishing

Pharmacopoeial Laboratory for Indian Medicine (PLIM) are as under:

- Pharmacopoeial standardization of single drugs and compound formulations to be incorporated in Ayurveda, Unani and Siddha Pharmacopoeia.
- Validation of Pharmacopoeial standards, done elsewhere, for updation of standards.
- Analysis of survey, official and legal samples received from Drug Control Authorities.
- To act as Central Drugs laboratory for Ayurveda, Unani and Siddha drugs under the provisions of the Drugs & Cosmetics Act, 1940.
- Collection of genuine crude drug samples from different Agro-climatic zones of the country for pharmacopoeial standardisation.
- Development maintenance of medicinal plants Garden of pharmacopoeial drugs.
- Preservation of authentic specimen of drugs and medicinal plants in museum and herbarium for reference.
- Availability and repository of Botanical and Phytochemical reference standards.
- R & D work on pharmacopoeial and quality control thrust areas.
- Training Programmes for Drugs Inspectors/Drug Analysts and analystes working in ASU pharmaceutical industry.
- Supporting structure of Pharmacopoeial Commission for Indian Medicine.

The PLIM has a Museum & Herbarium housing 750 herbarium specimens and more than 2000 exhibits of raw material used in the Ayurveda, Unani and Siddha formulations. The laboratory also imparts training to Drug Control Authorities and Quality Control Personnel from Government laboratories and private manufacturers. The Department of AYUSH publishes the worked-out standards in the form of monographs for the Ayurveda, Unani and Siddha Pharmacopoeia of India. The laboratory has worked out pharmacopoeial standards of single plant drugs which have been incorporated in various volumes of Ayurveda, Unani and Siddha Pharmacopoeia. The laboratory has also contributed for TLC Atlas and Macroscopy and microscopy Atlas of Ayurvedic pharmacopoeial drugs. So far eight volumes of Ayurvedic Pharmacopoeia of India (Part I, Single drugs), six volumes of Unani Pharmacopoeia India (Part I, Single drugs) and two volumes of Siddha Pharmacopoeia of India

(Part I, Single drugs) have been published and are official for regulatory frame work.

(ii) Homoeopathic Pharmacopoeia Laboratory (HPL), Ghaziabad:

Homoeopathic Pharmacopoeial Laboratory was established in 1975, as a National Laboratory for the purpose of laying down standards and testing for identity, purity and quality of Homoeopathic medicines (website : www.hplism.org). The Laboratory also functions as a Central Drug Laboratory for the testing of Homoeopathic Medicines under Rule 3A for the Drugs and Cosmetics Act. The Department of Science and Technology has recognized HPL as a Scientific and Technological Institution. The main objectives of establishing Homoeopathic Pharmacopoeia Laboratory are as under:

- Laying down of standards for identity and purity of Homoeopathic Drugs and finding out indigenous substitutes for foreign Drugs.
- Verification of Pharmacopoeial standards, done elsewhere, for adoption or improvement or updation of standards.
- Testing of samples of Homoeopathic Drugs, referred by Drug Control Authorities, Port Authorities, State Government etc., for identity and quality under different provisions of Drugs and cosmetics act and rules.
- Maintaining medicinal plants garden with preference to plants used in Homoeopathy alongwith cultivation and introduction of medicinal plants.
- Survey and collection of samples of Homoeopathic Drugs for verification of quality and adulteration trends of drugs marketed.
- Survey and collection of Medicinal Plants.
- Imparting orientation in methods of standardization, identification and testing of Homoeopathic Drugs and application of various provision of Drugs Act to all India State / Central Government Drug Authorities, Drug inspectors, Drug Analysts, Pharmacists etc.

Standards worked out by the HPL laboratory are published in the Homoeopathic Pharmacopoeia of India (HPI). So far 9 Volumes of Homoeopathic Pharmacopoeia of India have

been published covering 919 monographs on homoeopathic drugs and publication of 10th volume of HPI is under progress covering 101 monographs on homoeopathic drugs. A small herbarium and museum of medicinal plants and an experimental garden of medicinal plants including some rare and very important exotic plants are being maintained for the purpose of standards reference material so as to utilize for verification and comparative studies of standards. The Laboratory also maintains a seed bank of important exotic homoeopathic medicinal plants.

(iii) Indian Medicines Pharmaceutical Corporation Limited (IMPCL), Mohan (Almora):

Indian Medicines Pharmaceutical Corporation Limited (IMPCL) is a Government of India Enterprise under the administrative control of the Department of AYUSH to manufacture and market Ayurvedic and Unani products (website:www.impclmohan.nic.in). The Company, which is a 'MINI RATNA', ISO 9001:2008 accredited and GMP certified was incorporated in 1978 and had started commercial production in 1983. The primary objective of the company is to manufacture and supply authentic quality Ayurvedic and Unani products.

The formulations are tested in its competent in-house QC Laboratory as also in National Accredited laboratories before release.

The Uttarakhand based company is expanding its capacity under 3rd Phase modernization and aim with Eu GMP certification.

Beside supply of medicines to C.G.H.S., C.C.R.A.S., State Government, Autonomous bodies etc., the Company is gearing up to enter in the open market. Since 1986-87, the company has maintained a profit earning trend and Net Worth of the company is positive. Company manufactures entire dosage forms of the Ayurvedic and Unani medicines.

The major products of IMPCL are M-Liv Syrup, M-Vasaco Syrup, M-Shankhapushpi Syrup, M-Tribhuvan Mishran, Chavanaprasha, Brahmasayana, Vasavaleha, Ashokarishta, Ashwagandhadyarishta, Dashmularishta, Drakshasava, Lohasava, Punarnavasava, Khadiradi Gutika (Mukhroga), Chitrakadi Gutika, Lashunadi Vati, Avipattikar, Choorna, Bhaskar Lavan Choorna, Dadimashtak Choorna, Hingwashtak Choorna, Mahanarayan Taila, Panchguna Taila, Yograj Guggulu, Araq-e-Ajeeb,

Jawarish Jalinoos, Sharbat-e-Zufamurakkab, Sharbat-e-Buzorrimotadil etc.

H. MAINSTREAMING OF AYUSH IN THE HEALTH CARE SYSTEM UNDER NATIONAL RURAL HEALTH MISSION (NRHM):

The National Policy on Indian Systems of Medicine and Homoeopathy, 2002 envisaged integration of AYUSH Systems into the health care delivery system and the national health programmes ensuring optimal use of the infrastructure of hospitals, dispensaries and physicians. Mainstreaming of AYUSH is one of the strategies envisaged under National Rural Health Mission (NRHM) with the objective of providing accessible, affordable and accountable quality health services to the poorest household in the remotest rural regions.

Within the communities in India this have been an age old tradition with wide acceptance of AYUSH System of medicine which can play an important role in the prevention and mitigation of diseases .The potential of these systems have not been fully realized in public health care. There is a need for service integration by providing the best and unique from each system to patients as a complementary therapy and an alternative choice of treatment. There is an important role for the AYUSH practitioners in the delivery of health services.

Under NRHM, AYUSH Doctors and facilities are being co-located in PHCs, CHCs and District Hospitals. Total functional integration between the AYUSH dispensaries/hospitals and the health care facilities under the allopathic system is also envisaged so that the entire spectrum of treatments is made available to the public. The mainstreaming of AYUSH under NRHM is mainly based on the following aspects:

- AYUSH systems of medicine are well accepted by community, particularly in rural areas. These medicines are economical, comparatively safe, efficacious and easily available and can be prepared from locally available resources.
- Integration of AYUSH systems including infrastructure, man-power and medicine to strengthen the public health care delivery system at all levels and promote AYUSH medicines at grass root level

with different national health programmes.

- Utilization of services of AYUSH doctors after appropriate training and orientation towards providing advocacy, counseling and dissemination upto village.

The Department of AYUSH has been providing substantial financial assistance to the states for opening of AYUSH wings in District Hospitals (DH)/Community Health Centres (CHCs)and Primary Health Centres(PHCs).The Department is also providing financial assistance to the state for upgrading existing exclusive AYUSH hospitals and dispensaries and setting up of Programme Management Unit (PMU) at state level.

The Department of AYUSH has implemented a new component during 2011-12 in the existing scheme of Centrally Sponsored Scheme of Development of AYUSH hospitals & dispensaries for providing financial assistance for setting up of 50 bedded integrated AYUSH hospitals in Tripura,Mizoram,Manipur,Himachal Pradesh,Jammu Kashmir & Uttarakhand and 10 bedded integrated AYUSH hospitals in Assam, Meghalaya, Nagaland, Sikkim & Arunachal Pradesh.

