

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 3529 hospitals with about 70897 beds, 25074 dispensaries, 7.87 lakhs doctors, 501 educational institutions with admission capacity of about 26790 UG students and 2384 PG students and 8644 drug-manufacturing units under AYUSH systems. Under NRHM, AYUSH facilities have been co-located with 240 District hospitals, 1716 CHCs and 8938 PHCs.

A. AYUSH SYSTEMS

i) Ayurveda:

Ayurveda is a classical system of medicine originating from the Vedas, founded around 5000 years ago in India, and currently recognized and practiced in India and many subcontinent countries. It is one of the oldest medical systems in the world. Ayurveda is science of life (Ayu +Veda) that takes an integrated view of the physical, mental, spiritual and social

aspects of human beings, each impinging on the others.

Ayurveda was referred to in the Vedas (*Rigveda* and *Atharvveda*) and around 1000 B.C. the knowledge of Ayurveda was comprehensively documented in Charak Samhita and Sushruta Samhita. According to Ayurveda, health is considered as a pre-requisite for achieving the goals of life - *Dharmas* (duties), *Arth*(Finance), *Kama*(Action) and *Moksha* (Salvation). 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 harmony between universe and man, a healthy balance between macrocosm and the microcosm. Ayurveda believes in the theory of Tridosha: Vata (ether + air), Pitta (fire) and Kapha (earth + water). These three Doshas are physiological entities in living beings. The mental characters of men are described by Satva, Rajas and Tamas. Ayurveda aims to keep these structural and functional entities in a state of equilibrium which signifies good health (Swastha). Any imbalance due to internal or external factors causes disease and the treatment consists of restoring the equilibrium through various techniques, procedures, regimen, diet and medicine.

The treatment in the Ayurveda system is holistic and individualized having two components; preventive and curative. The preventive aspect of Ayurveda is called Svasth-Vritt and includes personal hygiene, regular daily and seasonal regimen, appropriate social behaviour and Rasayana Sevana, i.e., use of rejuvenative materials/food and rasayana drugs. The curative treatment consists of three major categories of procedures, Aushadhi(drugs), Anna(diet) and Vihara (Life style as described in Ayurveda). Ayurveda largely uses plants as raw materials for the manufacture of drugs, though materials of

animal, marine origin, metals and minerals are also used. Ayurvedic medicines are safe and have little or no known adverse side-effects.

Initially Ayurveda developed into eight distinct specialities, i.e., Kayachikitsa (Internal Medicine), Kaumar Bhritya (Pediatrics), Graha Chikitsa (Psychiatry), Shalakyā (Eye and ENT), Shalya Tantra (Surgery), Visha-Tantra (Toxicology), Rasayana (Geriatrics) and Vajikarna (Science of virility).

During the last 50 years of development in the teaching and training in Ayurveda, 14 more specialities are added and twenty two specialties have now been developed. These are Ayurveda Sidhanta (Fundamental Principles of Ayurveda), Ayurveda Samhita, Rachna Sharira (Anatomy), Kriya Sharira (Physiology), Dravya Guna Vigyan (Materia Medica and Pharmacology), Ras-Shashtra (Pharmaceuticals using minerals and metals), Bhaishajya Kalpana (Pharmaceuticals), Kaumar Bhritya - Bala Roga (Pediatrics), Prasuti -Tantra evum Stri Roga (Obstetrics and Gynaecology), Swasth-Vritta (Social and Preventive Medicine), Kayachiktisa (Internal Medicine), Rog Nidan avum Vikriti Vigyan (Pathology), Shalya Tantra (Samanya)(Surgery), Salya Tantra . Kshar Karma avum Anushastra Karma (Kshars Karma and Para-surgical procedure), Shalakyā Tantra -Netra Roga, Shalakyā Tantra . Shiro-Nasa-Karna Avum Kantha Roga (ENT), Shalakyā Tantra . Danta Avum Mukha Roga (Dentistry), Manovigyana avum Manas Roga (Psychiatry), Panchakarma, Agad Tantra avum Vidhi Vaidyaka (Toxicology and Jurisprudence), Sangyahaarana (Anaesthesiology) and Chhaya avum Vikiran Vigyan (Radiology).

Ayurveda provides a host of treatments for complex diseases. Traditional and time-tested systems of Ayurveda for holistic healing are available

around the country. During recent years, Kshar Sutra and Panchakarma have become more popular among the public. **Panchakarma** is a unique therapeutic procedure for the radical elimination of disease-causing-factors and to maintain the equilibrium of *doshas*. The Panchakarma therapy minimizes the chances of recurrence of the diseases and promotes positive health by rejuvenating the vital body systems. **Kshar Sutra** is an Ayurvedic para-surgical intervention using a medicated thread, which is extremely effective in the treatment of fistula-in-ano and conditions which demand gradual excision of overgrown soft tissues like polyps, warts, non healing chronic ulcers and sinuses and papillae without need of hospitalization, antibiotics or general anesthesia.

(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 (Avicena) (980-1037 AD), and in Al-Havi by Razi (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 Rheumatic Arthritis, Jaundice, Filariasis, 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 - Pharmacotherapy, Dietotherapy, Regimental Therapy and Surgery. Regimental 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. 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, seven Post graduate specialties have been developed (i) Kulliyat (Fundamentals of Unani System of Medicine) (ii) Ilmul Adviya (Pharmacology) (iii) Amraz-e-Niswan (Gynaecology) (iv) Amraz-e-Atfal (Paediatrics) (v) Tahafuzzi-wa-Samaji-Tib

(Social and Preventive Medicine) (vi) Moalejat (Medicine) and (vii) Jarahiyat (Surgery). National Institute of Unani Medicine is established in Bangalore to impart good P.G. education in Unani System.

(iii) Siddha:

The Siddha System is one of the oldest systems of medicine in India and is practiced in the Tamil speaking parts of India and abroad. The term Siddha means 'achievements' and Siddhars were saintly persons who achieved results in medicine. Eighteen Siddhars were said to have contributed towards the development of this medical system. Siddha literature is in Tamil and it is largely therapeutic in nature.

The Siddha system of Medicine emphasizes that medical treatment is oriented not merely to disease but has to take into account the patient, the environment, age, sex, race, habits, mental frame, habitat, diet, appetite, physical condition, physiological constitution, etc. This means the treatment has to be individualistic and ensures a low probability of incorrect diagnosis or treatment. The diagnosis of diseases in Siddha involves identifying its causes through the examination of pulse, urine, eyes, study of voice, colour of body, tongue and the status of the digestive system. The system has developed a rich and unique treasure house of drug knowledge in which use of metals and minerals is liberally made. Siddha medicines containing mercury, silver, arsenic, lead and sulphur have been found to be effective in treating certain infectious diseases including venereal diseases. The Siddha system is effective in treating chronic cases of liver, skin diseases especially "Psoriasis", rheumatic problems, anemia, prostate enlargement, bleeding piles and peptic ulcer.

During the last four 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 an apex institute having six specialties in post-graduate teaching and training. These are Maruthuvam (General Medicine), Sirappu Maruthuvam (Special Medicine), Kuzhanthai Maruthuvam (Paediatrics), Gunapadam (Pharmacology), Noi Nadal (Pathology) and Nanju Nool and Maruthuva Neethinool (Toxicology).

(iv) Yoga:

YOGA refers to traditional physical and mental disciplines originating in India. The word "Yoga" came 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 Patanjali in systematic form. It consists of eight components namely, restraint, observance of austerity, physical postures, breathing exercise, restraining of sense organs, contemplation, meditation and Samadhi. These steps in the practice of Yoga have the potential to improve social and personal behavior and to improve physical health by encouraging better circulation of oxygenated blood in the body, restraining the sense organs and thereby inducing tranquility and serenity of mind. The practice of Yoga has also been found to be useful in the prevention of certain psychosomatic disorders/diseases and improves individual resistance and ability to endure stressful situations. Yoga is a promotive, preventive and curative intervention. A number of postures are described in Yogic works 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 strain and 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 restrains the sense organs but also controls the nervous system. Yoga today is no longer restricted to hermits, saints, sages and it has taken its place in everyday life and has aroused a world-wide awakening and acceptance.

(v) Naturopathy:

Naturopathic medical system is rooted in the healing wisdom of many culture and times. The principles and practices of Naturopathy are integrated in the life style of Indians which continue to grow and evolve, incorporating elements that advance knowledge of mechanism of Natural healing and therapeutics.

Naturopathy is a cost effective drugless, non-invasive therapy involving the use of natural materials in its treatment based on the theories of vitality, toxemia, self healing capacity of the body and the principles of healthy living. Naturopathy is not only a system of treatment but also a way of life. Naturopathy is a system of medicine widely practiced, globally accepted and recognized by WHO. Naturopathy is a system of man living in harmony with constructive principles of Nature on the physical, mental, moral and spiritual planes. It has great promotive, preventive, curative as well as restorative potential.

Naturopathy is a scientific system of healing stimulating the body's inherent power to regain health with the help of five great elements of nature . Earth, Water, Air, Fire and Ether. Naturopathy 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 very effective in chronic, allergic and stress related disorders. The theory and practice of Naturopathy are based on a holistic view point. The advocates of Naturopathy pay particular attention to 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. Homoeopathy can also be useful for de-addiction from drugs, tobacco and alcohol. 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:

"Sowa-Rig-pa", commonly known as Tibetan or Amchi medicine, is the traditional medicine of many parts of the Himalayan region. *Sowa-Rig-pa* (Bodh-Kyi)

means science of healing and the practitioners of this medicine are known as *Amchi* (superior to all).

In India, this system of medicine has been popularly practiced in Ladakh and Paddar-Pangay regions of Jammu and Kashmir, Himachal Pradesh, Arunachal Pradesh, Sikkim, Darjeeling-Kalingpong (WB) and now 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 principles which are systematically enumerated and logically framed, based on an understanding of the body and its relationship to the environment. It uses diagnostic techniques based on the creativity, insight, subtlety and compassion of the medical practitioner and it embraces the key Buddhist principles of altruism, karma and ethics. According to the Amchi system, proper alignment of the 3 humors, 7 bodily constituents and 3 excretions in the state of equilibrium constitute a healthy body. Any disequilibrium in any of these energies constitutes a state of disorder or ill-health. Tibetan medical theory states that everything in the universe is made up of the five proto-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) is one of the three principle energies of the body which 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, faces, foetus, menstruation, spitting, burping, speech, gives clarity to sense organs, sustains life by means of acting as a medium between mind and body.

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, promotes bodily heat, gives lustre to body complexion and provides courage and determination.

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 bodily joints, generates tolerance and lubricates the body.

The diagnostic techniques include visual observation, touch and interrogation. Therapy under this system is divided into treatment by herbs, minerals, animal organs, spring and mineral water, moxibustion and by mysticism and spiritual power. This system of medicine is practiced in Ladakh (J&K), Lahaul (Himachal Pradesh), Arunachal Pradesh, Sikkim and some other regions of the Himalayas. Tibetan medicines take various forms, from decoctions, powders, general pills, precious pills, and syrups, and are prescribed in small doses.

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 Drugs Administration

C. NATIONAL MEDICINAL PLANTS BOARD (NMPB):

India has unique distinction of possessing large varieties of medicinal plants, knowledge associated with them and vast network of infrastructure required for their promotion, propagation, testing etc. It is one of the 17 mega bio-diversity rich countries and has 7% of the world's bio-diversity. It has 15 Agro-Climatic zones and medicinal plants are distributed across all biogeographic regions, diverse habitats and landscapes. It has one of the oldest, richest and most diverse cultural traditions, associated with the use of medicinal plants. World Health Organization (WHO) has estimated that approximately 80% of the world population relies on traditional medicines which are mostly plant-based drugs. Indian systems of medicine use various raw materials of which medicinal plants constitute 90% of the raw drug material. About 3000 plants species are reported to be used in the codified Indian

Systems of medicines like Ayurveda (900 species), Siddha (800 species), Unani (700 species) and Amchi (300 species). The rest of the species are used in local health traditions and with folk systems of medicine. Medicinal plants thus contribute an important component of the plant resource wealth of our country. In addition to their use in the preparation of Tradition medicines, the medicinal plants are being used in preparation of various pharmaceuticals and health products under the modern medicine system.

A study on demand and supply of medicinal plants in India conducted by National Medicinal Plants Board (NMPB), thorough F.R.L.H.T., during year 2007-08. Study reveals that 960 species of medicinal & aromatic plants are under trade, out of which 178 species are high in demand i.e., more than 100 MT in demand. The annual demand of botanical raw drugs in our country has been estimated at 3,19,500 MT for the year 2005-06.

Estimated Annual Demand of Botanical Raw Drug* (Dry Wt. in MT) for 2005-06

Herbal industry	Rural industry	Exports	Total
1,77,000	86,000	56,500	3,19,500

Whereas, Annual Trade value corresponding to the trade of Rs. 3,19,500 MT of botanical raw drug of the country was estimated Rs. 1,069 Crore for the year 2005-06, as follows:

Estimated Annual Trade value of Botanical Raw Drug (Rs. In Crores) for 2005-06

Herbal industry	Rural industry	Exports	Total
627.90	86.00	354.80	1068.70

Most of them are collected from forests or wild sources but presently number of species become endangered and threatened in their natural habitat. As a

result, it is getting difficult to meet out the demand sustainably from natural sources.

Keeping in view, the need for availability of authentic raw drugs and the vast potential of herbal product/herbal drugs and the role of India could play in the global market, Government of India has taken a lead by establishing National Medicinal Plants Board (NMPB) under Department of AYUSH, Ministry of Health & Family Welfare, Government of India. NMPB is an apex national body which coordinates all matters relating to medicinal plants in the country. The Board was established in November 2000, acts as advisory body to the concerned Ministries, Departments and Agencies in strategic planning of medicinal plants related initiatives and to plan and provide financial support to programmes relating to conservation, cultivation and also all round development of 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.

Functions of the NMPB

- I. Assessment of demand/supply position relating to medicinal plants both with 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, inventorisation 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 inventorisation, 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 supplement 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.

Schemes of NMPB

National Medicinal Plants Board had been implemented a Central Sector Scheme for promotional activities and contractual farming during 10th plan.

At present, NMPB is implementing a Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants and Centrally Sponsored Scheme of National Mission on Medicinal plants with more focused approach considering the experience gained, during 11th plan.

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

This scheme was approved by 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 as follows:-

Objectives of the Scheme

- 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.
- Promote R&D for domestication of wild medicinal plants, development of agro-techniques and post harvest management storage and processing.
- 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.
- Develop, implement and support certification mechanism for quality standards, Good Agriculture Practices (GAP), Good Collection Practices (GCP), and Good Storage Practices (GSP).
- Promote sustainable harvesting protocols of medicinal plants from forest areas and certification thereof.
- Survey, inventorisation and documentation of endangered medicinal plants through periodic surveys and inventorisation.
- Creating Gene banks/ Seed orchards to create an authentic source of seed and germ plasm for future.
- Promote capacity building and human resources 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 level.
- Information, Education and Communication through organization of seminars, trainings and exposure visits within the country and abroad.
- To 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 Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants:

1. *In-situ* Conservation including Resource Augmentation . 27400 ha.
2. Creation of 38 MPCAs in an area of 5400 ha.
3. Creation of 206 Herbal Gardens in an area of 1850 ha.
4. Creation of 1350 School Herbal Gardens
5. Set up 23 Facilitation centres in State Agriculture technical information relating to medicinal plants, cultivation, markets, technology and extension
6. Supported R&D projects relating to - Bio Activity Guided Fractionation (BAGF) trials, phytochemical studies, development of micro, clonal and vegetative propagation, post harvest technology and technology dissemination, extension & sustainable harvesting.
7. Launched of National Campaign on Amla in 18 States - Andhra Pradesh, Madhya Pradesh, Gujarat, Chhattisgarh, Kerala, Maharashtra, West Bengal, Uttar Pradesh, J&K, Karnataka, Uttarakhand, Meghalaya, Tripura, Sikkim, Arunachal Pradesh, Mizoram, Orissa & Nagaland through SMPBs.
8. Special projects were sanctioned on RET species viz. Guggal, Dashmool, Saraca asoca, in the state of Gujarat, Rajasthan, Haryana, Karnataka, Orissa, Maharashtra, Kerala.

(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

The objectives of the scheme are as follows:

- Support cultivation of identified medicinal plants through their integration in the farming system and offer an option of crop diversification and enhance income of farmers.
- Cultivation of medicinal plants following the Good Agricultural and Collection Practices (GACPs) for availability of quality raw material
- Support setting up 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.
- Support cultivation mechanism for quality standards, Good Agriculture Practices (GAPs), Good Collection Practices (GCPs), and Good Storage Practices (GSPs).
- Adopt a Mission mode 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 would adopt an end-to-end approach covering production, post harvest management, processing and marketing. This will 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 a alternative crops to the farmers and 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 Help 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 two tier structure . National and 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.

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.

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.

Implementing Agencies

The scheme is being implemented in states through State Horticulture Missions designated as Mission Directors as well as Member Secretary of the State Level Steering Committee. In some cases, State Govt. has also nominated State Medicinal Plants Boards as Implementing Agencies. Out of 26 States, where Scheme is being implemented presently, 19 Mission Directors are the Director, Horticultures and remaining 7 are CEOs of SMPBs and other Herbal Boards. (List of implementing agencies/ Horticulture Mission Directors . Annexure I)

Prioritized species of Medicinal Plants

Board has also prioritized 116 important species of medicinal plants, which has great potential in cultivation, marketing & trade and formulation of 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 that a need was felt to develop agro-techniques for some of the important medicinal plants by involving the R&D institutions and universities in the country. (List of prioritised species of medicinal plants . Annexure II)

Achievements of the Mission Scheme

- National Mission on Medicinal Plants is being implemented in 26 States covering 499 districts.
- Establish 781 model and small nurseries for production of quality planting material of medicinal plant species.
- Promoting cultivation of commercially important 116 medicinal plants species.
- Support cultivation over an area of 72909 ha.
- Support for creation of post- harvest infrastructure by setting up 34 drying shed /storage godown.
- Establishment of 6 processing units for value addition and market development.
- Promoting 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 maintenance of nucleus centre and day-to-day activities including the monitoring of sanctioned projects. At present 35 State Medicinal Plants Board are working in different state to implement

the schemes of NMPB. (List of State Medicinal Plants Board . Annexure III)

(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.

iii) N.E Resource Centre:

NMPB has engaged M/s Council for Economic and Social Research (CESR), New Delhi as AYUSH Resource Centre for North Eastern States to coordinate with State Govts. for sensitizing and helping them for implementation of schemes of D/o AYUSH. The Resource Centre has been located at Central Institute of Tribal Medicine Borsojai (Bhetapara), Beltola, Guwahati, Assam. The Resource centre has been working in close coordination with concerned department of State Governments, resource persons and NGOs in the region.

(iv) 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 University and R&D Institutions. These centres are to act as one stop shop for growers and other stake holders and would be required to work in close coordination with SMPBs. In all 23 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. (List of Facilitation centres . Annexure IV)

(v) Herbal Garden network of India:

NMPB has sanctioned a project entitled %Networking of Herbal Gardens for quality planting material supply in India 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 MAP.

Projects will undertake the following activities:

- Identify the locations of herbal gardens in India
- Construct an 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 will be 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.

(vi) 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.

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

Information regarding quantum of raw material consumed for preparation of medicines by ASU industry is felt required for planning of developmental activities. The Department of AYUSH has issued notification making mandatory for ASU Industry to provide this information to NMPB or an agency appointed by it by 30th June of every year. The work was initiated for identification of agency to collect, compile and maintain the information in respect of all ASU Industry units.

(viii) 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.

(ix) 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.

(x) 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.

Conclusion

India has unique distinction of possessing large varieties of medicinal plants, medicinal systems based on the plants and culture of using them. There is global resurgence of use of medicinal plants. Moreover, medicinal plants sector has potentiality to create and sustain large numbers of sustainable livelihood systems. To boost the medicinal plants sector of India there is need for comprehensive and multi pronged integrated strategy for effective conservation and cultivation of medicinal plants, sustainable collection,

processing, marketing, exports and sustainable utilization of traditional knowledge based on medicinal plants. In this context, NMPB and its schemes are playing vital role to facilitate and strengthen the position of the country in this sector by tapping the potential of the sector.

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 and Siddha (CCRAS):

The Central Council for Research in Ayurveda and Siddha an apex body for the formulation, coordination and development of research in Ayurveda and Siddha on scientific lines was established in 1978 (website : www.ccras.nic.in),. The research

activities of the CCRAS are carried out through 35 Institutes/Centres/Units located all over India and also through collaborative studies with various ISM Institutions/Hospitals and premier modern medicine institutions and Hospitals. These units include 10 Central Research Institutes, 14 Regional Research Institutes, 2 Siddha Clinical Research Units, 2 Drug Research Institutes, a Sowa-Rigpa (Amchi) Research Centre, an Ayurvedic Research Unit at Bangalore, the Dr. A. Lakshmiapati Research Centre for Ayurveda at Chennai, Indian Institute of History of Medicine at Hyderabad, Survey of Medicinal Plants Unit at Palamkottai, RSCA in Department of Pharmacology of Gujarat Ayurved University and Tribal Health Care Research Project at Car Nicobar. The CCRAS has 23 hospitals and 4 dispensaries existing in its various units (Annexure-III). The Council also finances research studies in Ayurveda, Siddha and the allied sciences. The emphasis is on finding effective and low cost remedies for various diseases through systematic research. The research activities of the Council include clinical and fundamental research, drug research, literary research and family welfare research. The Council has now also stepped into the field of Nutraceutical and Cosmeceutical research. The main objectives of the CCRAS are the following:

- Formulation of research Programme and projection in Ayurveda and Siddha in a scientific manner.
- Undertaking scientific research in Ayurveda and Siddha in a time bound and cost-effective manner.
- Literature Research, Standardisation of Drugs, Pre-clinical and clinical research, RCH research, Nutraceutical and Cosmeceutical research.
- The Coordination, aiding and promotion of research within units of CCRAS and with other sister Councils/Organizations.

- Printing, publishing and exhibiting research achievements/articles/research journals to propagate research outcomes for other stakeholders.
- Providing consultancy services for research projects/drug development.
- Modernization of equipment used in Ayurveda in collaboration with other technical organizations.

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

The Central Council for Research in Unani Medicine was established in 1979 to initiate, aid, conduct, develop and co-ordinate scientific research in Unani system of medicine (website: www.ccrum.info). The CCRUM, Headquarters is in New Delhi.

The research programme of the Council comprises clinical research, drug research, literary research, survey and cultivation of medicinal plants programme. These research activities are being carried out through a network of 22 Institutes/Units functioning in different parts of the country. These include two Central Research Institute of Unani Medicine (CRIUM), eight Regional Research Institute of Unani Medicine (RRIUM), two Regional Research Centres (RRC), five Clinical Research Units (CRU), a Drug Standardisation Research Institute (DSRI), a Drug Standardisation Research Unit (DSRU), a Unani Medical Centre (UMC), a Literary Research Institute of Unani Medicine (LRIUM) and a Chemical Research Unit.

Main Objectives of the Council are as follows:

- Formulation of aims and patterns of research on scientific lines in Unani Medicine.
- To undertake research on 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 in different aspects, fundamental and applied, of Unani medicine, and to promote and assist the institutions of research for the study of diseases, their prevention, cause and remedy.
- To finance enquiries and researches for the furtherance of the objectives of the CCRUM
- 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.

(iii) 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 around 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), Bangalore; Dr. RML Hospital, New Delhi; Krishnamacharya Yoga Mandiram, Chennai and Vivekananda Yoga Anusandhan Sansthan, Bangalore etc. are involved in conducting Clinical Research in the field of Yoga with the 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, University College of Medical Sciences and CCRYN and also Pt. B. D. Sharma Post Graduate Medical Institute, Rohtak.

The Council's first publication 'Yogic & Naturopathic Treatment for Common Ailments' has become very popular among practitioners of Yoga and Naturopathy and the general public. Six Yoga Classes for the local public, six days a week are being conducted at the Council Headquarters, Janakpuri, New Delhi. Council is running Yoga fitness classes for Government employees at Udyog Bhavan, New Delhi. The Council has the following objectives:-

- Formulation of aims 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 of 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.
- National Awards for Yoga, Naturopathy Eminent and Young Scientist.
- Scholarships for Ph.D. Fellows.
- Research Monographs Published:
 - (i) Coronary Atherosclerosis Reversal Potential of Yoga Life Style Intervention
 - (ii) Clinical Research Profile
 - (iii) Yoga and Biofeedback for the treatment of Irritable Bowel Syndrome
 - (iv) Research Methodology in Naturopathy & Yoga
 - (v) Yoga for Computer Related health Problems
 - (vi) Yogic Relaxation in the Management of Ulcerative Colitis
 - (vii) Uni-nostril Yoga breathing and Obesity: A study of efficacy & Mechanisms
 - (viii) Effect of Asans and Pranayams on Neurological, Neuromuscular & Cardio-Respiratory functions in Healthy Human Volunteers
 - (ix) Autonomic Function Tests in Epilepsy: Effect of Hetha Yoga
 - (x) Assessment of the efficacy of Vipasana Meditation on various age groups: A polysomnographic and endocrine function evolution.

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

Homoeopathy is one of the most popular Traditional/ Complementary systems of Medicine. The Government of India, recognized the mass acceptance of the system in the country, established the Central Council for Research in Indian Medicine and Homoeopathy in 1969. To streamline research in Homoeopathy, the Government of India established the Central Council for Research in Homoeopathy as an autonomous organization at New Delhi in 1978 (Website: www.ccrhindia.org). Over the years, CCRH had branched into 51 subordinate Institutes/Units functioning in different parts of the country. As a result of re-organization of the Council, a number of Units have been merged with other Institutes making it a total of 25 Institutes/Units and 02 Extension units, upto March 2008. The total comprises of 02 Central Research Institute, 01 Homoeopathic Drug Research Institute, 07 Regional Research Institutes, 10 Clinical Research Units (03 in general areas and 07 in tribal areas), 01 Drug Proving Research Units, 02 Drug Standardization Units, 01 Survey of Medicinal Plants and Cultivation Unit, 01 Homoeopathic Treatment Center and 02 Extension Units. The Council has I.P.D facilities at 04 centers and O.P.D services at 21 centers.

Out of the units mentioned above, the units of the Council that are not directly dealing with the patients are Drug Proving Extension Unit of RRI (H), Puri, Survey of Medical Plants & Collection Unit (H), Ooty, Drug Standardization Unit (H), Ghaziabad and Drug Proving Research Unit (H), Kolkata.

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 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, Yoga, 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 290 and 185 colleges/institutions have been permitted by CCIM and CCH respectively to undertake UG /PG courses and these colleges are affiliated with 57 recognized universities through out 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-VIII) 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 from time to time. The main objects of the Central Council are as under:-

- To Prescribing minimum standards of education in Indian Systems of Medicine viz. Ayurveda, Siddha and Unani Tibb.
- To Advising 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 Maintaining a Central Register of Indian Medicine and revise the Register from time to
- To Prescribing Standards of Professional Conduct, Etiquette and Code of Ethics to be observed by the practitioners.

- To considering and furnishing the recommendation to Government of India on the proposal received from various institutions from Government of India for establishment of new colleges of Indian Systems of Medicine, to increase intake capacity in Under-graduate, Post-graduate and to start new post-graduate or additional subjects.

Since its establishment in 1971, the Central Council has been framing and implementing various regulation including the Curricula and Syllabus in Indian Systems of Medicine viz. Ayurveda, Siddha and Unani Tibb at Under-graduate level.

(a) Regulation of Medical Education:

The Central Council of Indian Medicine, with the previous sanction of the Central Government as required under Section-36 of the Indian Medicine Central Council Act, 1970 and after obtaining the comments of the State Governments as required under Section 22 of the said Act has prescribed courses for Under-Graduate and Post-Graduate education in Ayurveda, Unani & Siddha through the following Regulations.

Under Graduate Course:

The Regulations of CCIM prescribing the Under Graduate education in Ayurveda, Unani and Siddha are as under:

1. Indian Medicine Central Council (Minimum Standards of Education in Indian Medicine) (Amendment) Regulations, 1989 further amended in 2005 for Ayurvedacharya (Bachelor of Ayurvedic Surgery) Course.
2. Indian Medicine Central Council (Minimum Standards of Education in Indian Medicine) (Amendment) Regulations, 1995 for Kamil-e-tib-o-Jarahat (Bachelor of Unani Surgery) Course.

3. 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.

Post Graduate Course:

The Regulations of CCIM prescribing the Post Graduate education in Ayurveda, Unani and Siddha are as under:

1. Indian Medicine Central Council (Post-Graduate Education) (Amendment) Regulation, 2005 for Ayurved Vachaspati M.D. (Ayurveda)

2. Indian Medicine Central Council (Post-graduate Unani (Education) Regulations, 2007 for Mahir-e-Tib (Doctor of Medicine) and Mahir-e-Jarahat (Master of Surgery).

3. Indian Medicine Central Council (Post-graduate Education) Regulations, 1979 further amended in 1986 for Siddha Maruthuva, M.D. (Siddha) course.

These courses are being imparted in Ayurved, Unani Siddha Colleges affiliated to 47 universities of the Country At present 251 Ay, 47 Unani and 09 Siddha colleges are running in various States of the Country.

The Central Council has also prescribed the following Regulations:-

1. Central Council of Indian Medicine (Election of President and Vice-President) Regulations, 1971.
2. Central Council of Indian Medicine (General) Regulation, 1976.
3. Central Council of Indian Medicine (Inspectors and Visitors) Regulations, 1977.
4. Central Council of Indian Medicine (Central Register of Indian Medicine) Regulation, 1979.
5. Practitioner of Indian Medicine (Standards of Professional

Conduct, Etiquette and Code of Ethics) Regulations, 1982.

6. Establishment of New Medical College opening of new or Higher Course Training and increase of admission capacity by a Medical College Regulation, 2003.

7. Indian Medicine Central Council (Permission of Existing Medical Colleges) Regulation, 2006.

As per the provision of Section 13 A of the IMCC Act, 1970, the Establishment of New Medical College, Opening of New or Higher Course of Study or training and increase of Admission Capacity by Medical Colleges Regulation, 2003. The Central Council visited 61 colleges of Ayurveda, 03 Unani and 01 Siddha and made recommendations for approval and disapproval to the Department of AYUSH.

(b) Central Register Of Indian Medicine:

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 contains the name 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.

(ii) Central Council of Homoeopathy (CCH):

The Central Council of Homoeopathy is a statutory body constituted by the Government of India under the provisions of Homoeopathy Central Council Act, 1973 (website: www.cchindia.com). The CCH is constituted of elected members from the State Boards/Councils of Homoeopathy

and from the University Faculties/Departments of Homoeopathy and of members nominated by the Central Government. Its main objectives are:

- Regulation of Homoeopathy medical education,
- 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.

(a) Regulation of Medical Education of Homoeopathy:

The Regulations of CCH prescribing Under Graduate degree course Bachelor of Homoeopathic Medicine and Surgery (BHMS) (5 & 1/2 years) and Post Graduate M.D (Homoeopathy) courses (3 years) in Homoeopathy are as under:

- Homoeopathy (Degree Course) Regulations 1983 further amended in 2003 for Under Graduate education Bachelor of Homoeopathy Medicine Surgery (BHMS)
- Homoeopathy (Post Graduate Degree Course) Regulation 1989, further amended in 2001 for Post Graduate Education in Homoeopathy, M.D. (Hom.).

The Homoeopathy Central Council Act, 1973 was amended in 2002 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 is now vested with the Central Government.

(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. 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 provisions of Homoeopathy Central Council (Registration) Regulations, 1982. As reported by State Governments, there are 2.18 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, Shalakya Tantra, Prasuti, Stri Roga and Agad Tantra with admission capacity of 5 students per subject. The Institute also grants regular Fellowships leading to the award of Ph.D.(Ayurved) in 9 Subjects, viz. Kaya Chikitsa, Shalya Tantra, Maulik Siddhanta, Rog Vigyan, Dravya Guna, Sharir Kriya, Panchakarma, Rasa Shastra and Bala Roga. 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. Besides, the Institute is involved in Clinical Research.

The Institute has 2 Hospitals with a Bed Strength of 241. It also has a separate fully equipped Panchakarma Hospital and also Speciality Clinics like Geriatrics & Dietetics, Nature Cure, Diabetic, Allergic, Child Mental Health 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. The Institute is in the active process of developing a unique and model Herbal Garden in an 8 hectares of land recently acquired.

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

The Rashtriya Ayurveda Vidyapeeth, New Delhi, an autonomous organization, registered under the Societies Act was established in 1988 (website: www.ravdelhi.nic.in). The RAV imparts practical training to Ayurvedic graduates and post graduates below the age of 45 years through the Guru-Shishya Parampara i.e. the traditional method of transfer of knowledge. The two-year

course of Member of Rashtriya Ayurveda Vidyapeeth (MRV) 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, are admitted for critical study on Samhita, related to their P.G. studies. In the one-year Certificate Course of Rashtriya Ayurveda Vidyapeeth (CRAV), candidates possessing Ayurvedacharya (BAMS) or equivalent degree are trained under eminent Vaidyas in some Ayurvedic clinical 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.

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

The Institute for Post Graduate Teaching and Research in Ayurveda, Jamnagar established in 1956 by the Government of India, was put under the governance of the Gujarat Ayurved University, Jamnagar in 1965 (website: www.ayurveduniversity.com). It is now one of the constituents of the Gujarat Ayurved University. It is one of the oldest

Ayurveda Post Graduate teaching centres in the country. There are 9 teaching departments in the Institute with facilities for teaching and research in 13 specialties for a Post-Graduate degree (M.D.) and for a doctorate (Ph. D). The Institute is also conducting an M. Pharma (Ayurveda) and M. Sc.(Ayurvedic Med Plants) course under the Self Financing

Scheme. Besides, the institute is also conducting short duration course, like, three month Introductory Course of Ayurveda, four month training programme on Panchkarma, etc. for specific type of students (foreigners, etc.) from time to time. The main thrust areas of research were anemia, diabetes, obesity, spondylosis, hyperlipidemia, ageing, thalassemia, etc.

There are well equipped laboratories in the Institute viz. Pathology, Bio-chemistry, Pharmacology, Pharmacognosy, Modern Medicine, and Pharmaceutical Chemistry. Besides, the institute has a Nimi Agara (Ophthalmic O.T.) in Shalaky Department and a Family Planning Unit in Stri Roga and Prasuti Tantra Department and an IT centre also.

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

National Institute of Unani Medicine, Bangalore established in 1984 as an autonomous organization under Ministry of Health and Family Welfare, registered under the Societies Registration Act, is sought to be developed as a Centre of Excellence for the propagation of the Unani system of Medicine (website: www.nium.in). NIUM is a joint venture of the Government of India and the State Government of Karnataka. It is affiliated to Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka. The Institute is being developed as a model Post Graduate, teaching, training, and research institution in the Unani System. Post Graduate Courses in M.D. Unani are offered in four subjects, namely, Moalijat (Medicine), Ilmul Qablat wa Amraz-e-Niswan (Obstetrics and Gynecology), Hifzan-e-Sehat (Preventive and Social Medicine) and Ilmul Advia (Pharmacology). This Institute has a 100 bedded hospital, academic block, hostel building, administrative block, pharmacy and library.

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

National Institute of Siddha, Chennai established in 1998, 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, 1860. The Institute conducts Post Graduate courses in Siddha in six specialized branches of Siddha viz. Maruthuvam, Gunapadam, Sirappu Maruthuvam, Noi Nadal, Kuzhanthai maruthuvam and Nanju Noolum Maruthuva Neethi Noolum with 5 students in each branch. and provides medical care and conducts research to develop, promote and propagate the system. The Outdoor Patient Department (OPD), Indoor Patient Department and the Pathological laboratories are also functional in the institute.

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

Morarji Desai National Institute of Yoga (MDNIY), New Delhi is an autonomous organization registered under the Societies Registration Act, 1860 and fully funded by Department of AYUSH. MDNIY is the focal Institute for planning, training, promotion and coordination of Yoga Education, Training, Therapy and Research in all aspects (www.yogamdniy.com). 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 conducts one year regular Diploma in Yoga Sciences (DYSc.) for graduates and 3½ months Certificate in Yoga Science for target groups like Air Force, BSF etc. Besides, the Institute also runs one month Foundation Course in Yoga Science 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 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 also established four Yoga therapy and Research Lab and X-ray Unit programmes on different disorders. It has also established four Yoga Therapy and Research Centres in Govt./ Tertiary Hospitals of Delhi, besides establishing Yoga Centres at Nellore (A.P.) and Port Blair (A&N Islands). Four 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 and GAU, Jamnagar, Gujarat.

The Institute is also participating in National/ International events like Health exhibitions, Health Melas, Festivals, Seminars, Conferences etc. It is involved in propagation of Yoga through various print and electronic media. The Institute brings out Quarterly News Letter and a Quarterly Journal 'Yoga Vijnana' for disseminating

the knowledge of Yoga. It has brought out 10 disease-wise booklets for the benefit of the public and a Yoga manual for medical professional/Students is being published. It has taken up a project 'Introduction of Yoga in School Health' with the help of 6 leading Yoga Institutes of the Country. The TKDL (Yoga) project is housed in the MDNIY premises and the Institute is extending the technical inputs for the project.

(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 to cure chronic ailments, prevent diseases and promote healthy living (website: www.punenin.org). This institute sponsors Naturopathy Awareness Programmes and Camps through various Naturopathy hospitals and NGOs. The institute is conducting One-Year full-time 'Treatment Attendant Training Course' (TATC).

The NIN has an OPD clinic with free consultation services where various Naturopathy treatments are given to the patients at very subsidized rates. Free acupressure treatment is given to patient for six days in a week. The institute also conducts Yoga classes. A health shop is being run in the institute where natural food and drinks, 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. The Institute publishes 'Nisargopachar varta' - a bilingual magazine (English/ Hindi) every month. The NIN is running a Naturopathic Diet Centre for providing diet facilities to the general public and patients who visit this institute.

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

The National Institute of Homoeopathy was established on 10th December 1975 at Kolkata as an autonomous institution (website: www.nih.nic.in / <http://nih.net.in>) is affiliated to the West Bengal University of Health Sciences. This Institute is governed by the Ministry of Health and Family Welfare, Govt. of India, to be a model institution in Homoeopathy in the country.

Major **Aims and Objectives** of the NIH are Excellence in Homoeopathic Education, Outstanding patient care services and Need based Research.

Presently it conducts two regular **academic courses** in Homoeopathy. The undergraduate course is Bachelor of Homoeopathic Medicine & Surgery (BHMS). 83 students are admitted in the course. The post graduate course is the Doctor of Medicine in Homoeopathy . MD (Homoeopathy), in five subjects viz. Homoeopathic Philosophy (6 seats), Repertory (6 seats), Materia Medica (6 seats), Practice of Medicine (3 seats) and Pediatrics (3 seats). The Institute also regularly arranges Re-Orientation Training Program (ROTP) for Teachers and Continuing Medical Education (CME) programmes to the Physicians.

Research Programme:

Research Wing of NIH is entrusted with following clinical trials (5-research projects) in Homoeopathy: Thyroid dysfunction, Cancer, Psoriasis, Spondylosis and Allergic Rhinitis.

The **Hospital Services** in the NIH could be categorized broadly as follows: (i) Out Patient Services (OPD) (ii) In-Patient Services (IPD) (iii) Diagnostic Services (iv)

Laboratory Medicine (V) Yoga & Physiotherapy.

The Institute has a **100-bedded** modern hospital with a computerized patient care system for providing better quality treatment. The In-patient and Out-patient departments in the NIH provide subsidized and in some cases free medical services to patients. The Institute has a surgical and an obstetrical wing. New apparatus / instruments, such as Pulse Oxymeter, Diathermy, Portable X-ray and Endoscopy etc. have been introduced in these sections. Orthopaedic surgery has also been started. The Institute has a Labour room and undertakes antenatal / post-natal care of the mother and child and also giving clinical training to the Under-graduate students. There are Cardiology, ENT, Dental and Physiotherapy Departments in the OPD to give specialized consultations exclusively. The hospital bed strength is being increased to 250 numbers.

The institute is one of partner institutions in implementation of the flagship scheme of the Department of AYUSH on the National campaign in Homoeopathy for **HEALTHY MOTHER & HAPPY CHILD**. It also conducted an International Seminar on **Recent Advances in Homoeopathy** from 19-21 February, 2010.

A new academic cum library block is being constructed.

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 Sector 19, Central Govt. Enclave, Kamla Nehru Nagar, Ghaziabad-201 002 (U.P). This laboratory was established in the year 1970 as a Pharmacopoeial Standards Setting-cum-Drugs Testing Laboratory at National Level for Indian Medicines which include drugs of Ayurveda, Unani and Siddha systems (Website: www.plimism.nic.in). The laboratory is also notified as an appellate laboratory for drug testing and quality control. The main objectives of establishing Pharmacopoeial Laboratory for Indian Medicine are as under:

- Pharmacopoeial standardisation of single drugs and compound formulations to be incorporated in Ayurvedic, Unani and Siddha Pharmacopoeia.
- Validation of Pharmacopoeial standards, done elsewhere, for adoption or improvement or updation of standards.
- Appellate laboratory for Ayurvedic, Unani and Siddha drugs as per the Drugs & Cosmetics Act, 1940.
- Analysis of survey, official and legal samples received from Drug Control Authorities.
- Collection of genuine crude drug samples from different Agro-climatic zones of the country for pharmacopoeial standardization.
- Development and Maintenance 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 area.

- Training Programmes for drugs Inspectors/Drug Analysts and analysts working in ASU pharmaceutical industry.
- Supporting structure of Pharmacopoeial Commission for Indian Medicine.
- To harness information technology applications in information management with particular reference to ASU Drugs.

The PLIM has a Museum & Herbarium housing 750 herbarium specimens and 2000 exhibits of raw material used in the formulations of ISM drugs. The laboratory is imparting training to drug Control Authorities and Quality Control Personnel from Government laboratories and private manufacturers. The Department 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 volumes of Ayurvedic, Unani and Siddha Pharmacopoeia. The laboratory has also contributed for TLC Atlas of Ayurvedic pharmacopoeial drugs and Macroscopy and microscopy atlas of API. So far eight volumes of Ayurvedic Pharmacopoeia of India, six volumes of Unani Pharmacopoeia of India and one volume of Siddha Pharmacopoeia of India 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.
- Survey and collection of samples of Homoeopathic Drugs for verification of quality and adulteration trends of drugs marketed.
- Maintaining medicinal plants garden with preference to plants used in Homoeopathy alongwith cultivation and introduction of medicinal plants.
- Surveying and collecting 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). A small herbarium and museum of medicinal plants and an experimental garden of medicinal plants including some rare and very important exotic medicinal plants has been maintained for the purpose of verification and comparative studies of standards. The HPL maintains a

seed bank of important exotic medicinal plants.

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

Indian Medicines Pharmaceutical Corporation Limited 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 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 IMPCL products are mainly used in the Central Government Health Scheme (CGHS), Government Hospitals, dispensaries and by various AYUSH Research Councils. The company also sells its products to some State Governments and in the open market. The formulations are tested in its competent in-house QC Laboratory as also in National accredited laboratories before issue.

The major products of IMPCL are M-Liv Syrup, M-Vasako Syrup, M-Shankhapushpi Syrup, M-Tribhuvan Mishran, Chavanaprasha, Brahmrasayana, Vasavaleha, Ashokarishta, Ashwagandhadyarishta, Dashmularishta, Drakshasava, Lohasava, Punarnavasava, Khadiradi Gutika (Mukhroga), Chitrakadi Gutika, Lashunadi Vati, Avipattikar Choorna, Bhaskarlavan Choorna, Dadimashtak Choorna, Dashan Sanskar Choorna, Hingvashtak Choorna, Mahanarayan Taila, Panchguna Taila, Yograj Guggulu, Araq-e-Ajeeb, Jawarish Jalinoos, Shargat-e-Zufamurakkab and Sharbet-e-Buzoorimotadil.

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 households in the remotest rural regions.

Within the communities in India this have been an age old tradition and wide acceptance of AYUSH System of medicine and 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 medicines to strengthen the public health care delivery system at all levels and promote AYUSH medicines at grass root level with different national health programmes.
- Utilisation 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).

