

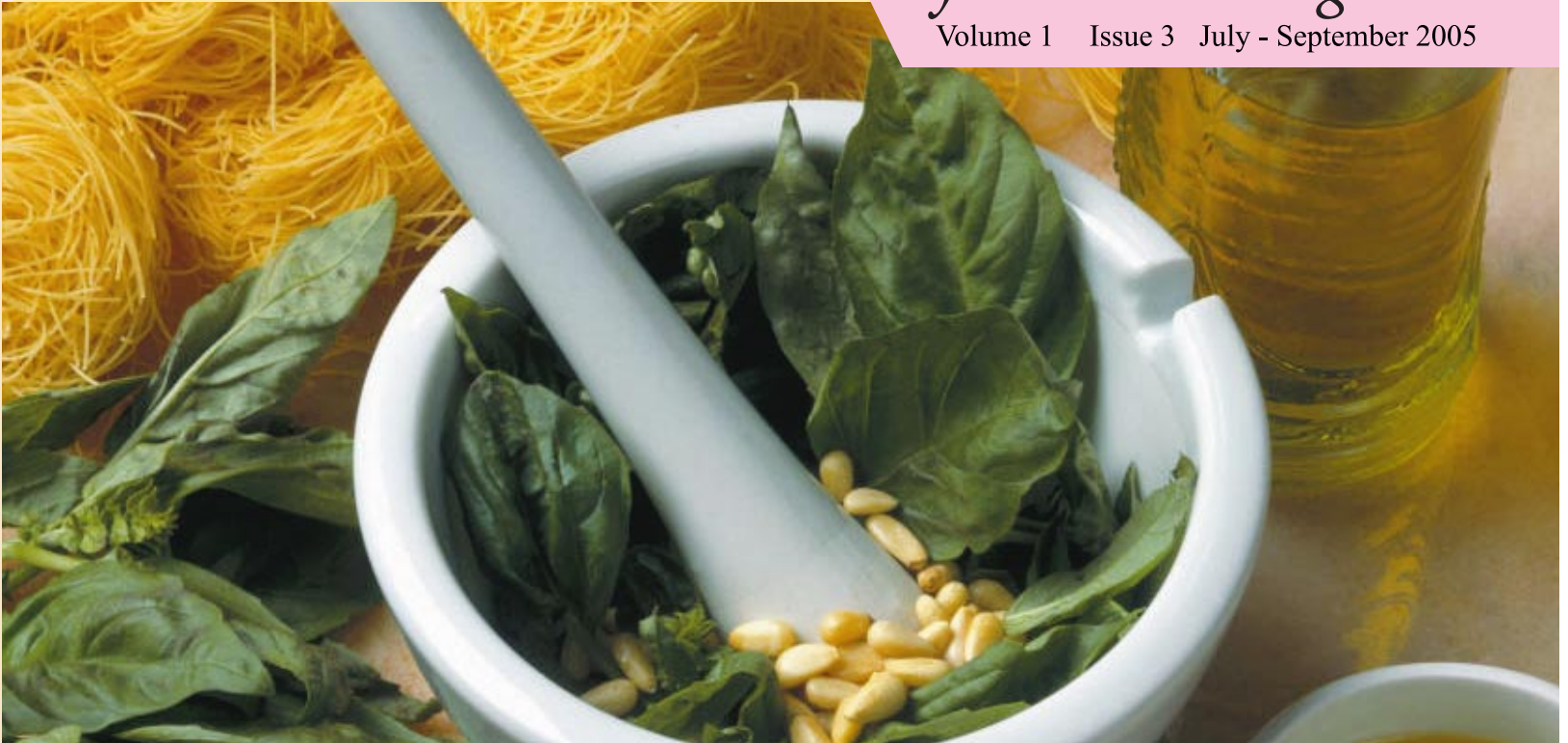
AMMM

ASSOCIATION OF MANUFACTURERS OF AYURVEDIC MEDICINES



Āyurveda Heritage

Volume 1 Issue 3 July - September 2005



P R E S I D E N T ' S M E S S A G E



Āyurvedic medicines use different kinds of raw materials, which come from the plants, metals, minerals and from the animal origin. Roughly 90% of the Āyurvedic medicines are made from herbal material. Almost all OTC products are herbal in nature. The physicians in ancient times felt that plant materials had to be used in large volume to achieve proper therapeutic efficacy and that plant based medicines were slower in activity and hence, a need for low dose and relatively fast acting medications was felt. It was *Nagarjuna*, who incorporated the use of metals in Āyurvedic medicines in 800 A.D. Since then, the use of metals in Āyurveda has become common to treat difficult disorders with the additional benefits of very low dosages of these metallic preparations and their faster activity. On closely observing the process of conversion of a metal into a bio-acceptable form as being done in the preparation of Herbometallic preparations, one would observe that ancient Āyurvedic Physicians had a great understanding of the chemistry of metals. The metals like gold, silver, tin, zinc, lead, arsenic and mercury are all used after the processes of *Śodhana* (purification) and *Māraṇa* (oxidation). *Śodhana* is primarily, the processing of the metals/minerals with different herbal juices and milk etc. The process of *Māraṇa* involves repeated incineration of the metal with the specific herbs, following certain temperature patterns. Sometimes the metals are burnt even 100 times as per instructions of Āyurvedic classical textbooks and also to achieve the proper therapeutic potency in them. These processes ensure the safety of the use of metals for medicinal purposes and reduce the particle size of heavy metals to a great extent.

It is hypothesized that some organo-metallic compounds are made which are non toxic and better assimilable to the system. In light of the globalization of Āyurveda, the business activity in Āyurvedic raw materials and finished products has increased many folds and doubts about sustainability of the plant material has created a place for use of metals in Āyurvedic practice whose quality and safety have to be revalidated.

Recently we have come across a negative propaganda even on the use of the Āyurvedic medicinal plants because of the presence of some heavy metals in minute traces. A study conducted in the Harvard Medical School followed by a warning issued by the Health Canada and the warning by MHRA (U.K.) appears to be a totally unnecessary negative publicity to Āyurveda and its products.

The question is, "Is this an effort to check the growing popularity of Āyurveda?" The strict parameters for the traces of metals in Pharmaceutical products, which are synthetically made, cannot be applied on natural materials. We need to set new standards and parameters for Āyurvedic plant based medicines. Our Association is ready to share the knowledge with any of the industry members and research institutions to face this current challenge and ensure the quality of Āyurvedic products sold within and outside the country. Department of AYUSH, Government of India has also issued certain directives for self-regulations on heavy metals related issues, which should be incorporated into the Quality Parameters of Āyurvedic manufacturing units. I wish you all the best to handle these new challenges effectively.

(Honored with Padamshree) Vaivdya Devender Triguna

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Food for Soul

Don't measure yourself
by what you have
accomplished, but by
what you should have
accomplished with your
ability. - John Wooden

MESSAGE



Dr. D. C. Katoch*
Deputy Adviser



GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
DEPTT. OF AYURVEDA, YOGA & NATUROPATHY,
UNANI, SIDDHA AND HOMOEOPATHY (AYUSH)
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MESSAGE

Truth is always one. There maybe different interpretations of the same phenomenon but the eternal fact, which owing to limitation of the available knowledge may not be explainable with cause-effect correlation, is never more than one. It is true for *Āyurveda* too. The fundamentals and principles of drug manufacturing in *Āyurveda* are the conclusions drawn by our sages and seers on the basis of constant observations and practice that have withstood the test of time. The need today is to make optimal use of available technology for creating internationally acceptable objective evidence of safety and efficacy of *Āyurvedic* formulations, which have taken the world by storm.

I wish AMAM success in their efforts to promote the cause of *Āyurveda*.

(Dr. Dinesh Chand Katoch)

*Dr. D.C. Katoch is a very dynamic Deputy Adviser (*Āyurveda*), in the Department of AYUSH, Ministry of Health and Family Welfare. He did his Post graduation from National Institute of *Āyurveda*, Jaipur and has more than 21 years of Clinical experience. His interest and experience in Cardiovascular diseases and their treatment is immense. He has presented many scientific papers in National and International Conferences and is representing *Āyurveda* in several Government Committees and Beneficiary Schemes.

KEY TO TRANSLITERATION

VOWEL

अ	=	a	ऋ	=	r̄
आ	=	ā	ए	=	e
इ	=	i	ऐ	=	ai
ई	=	ī	ओ	=	o
उ	=	u	औ	=	au
ऊ	=	ū	अं	=	am̐
			अः	=	aḥ

CONSONANT

क	=	Ka	ध	=	dha
ख	=	kha	न	=	na
ग	=	ga	प	=	pa
घ	=	gha	फ	=	pha
ङ	=	ṅa	ब	=	ba
च	=	ca	भ	=	bha
छ	=	cha	म	=	ma
ज	=	ja	य	=	ya
झ	=	jha	र	=	ra
ञ	=	ña	ल	=	la
ट	=	ṭa	व	=	va
ठ	=	ṭha	श	=	śa
ड	=	ḍa	ष	=	ṣa
ढ	=	ḍha	स	=	sa
ण	=	ṇa	ह	=	ha
त	=	ta	क्ष	=	kṣa
थ	=	tha	त्र	=	tra
द	=	da	ज्ञ	=	jña

TOP NEWS STORIES

NEW ADVANCES IN 'INTEGRATED MEDICINE'

The Pioneer, July 25, 2005

What if Allopathy, Homeopathy and *Āyurvedic* treatments worked together in an integrated way to help you recover much sooner than usual from your ailments? Experts call this "integrated medicine", an emerging new discipline in India.

"The time has come to tell our own systems- Allopathic, Homeopathic and *Unāni* to integrate themselves and produce the best results in the public health care system," said Mrs. Uma Pillai, Secretary, Dept. of AYUSH, Ministry of Health and Family Welfare, while speaking in a seminar on "New Advances in Integrated Medicine", organized by the Escorts Heart Institute and Research Centre (EHIRC).

She also said that in joint collaboration with the Indian Council of Medical Research and Council of Social and Industrial Research (CSIR), a 75 crores project is being taken up by the Ministry to find out the remedies through integrated medicine in twelve diseases including Malaria, Joint disorder, Prostate, Diabetes and others.

KERALA DC ASKS 20 ĀYURVEDA UNITS TO CLOSE FOR NOT COMPLYING WITH SCHEDULE T PROVISIONS

Pharma Biz, May 16, 2005

The Kerala drug control department has asked 20 *Āyurveda* drug manufacturing units in the state to close down for not implementing the mandatory GMP norms as per Schedule T of the Drugs and Cosmetics Act.

Out of the 1000 odd *Āyurvedic* drug-manufacturing units in the state, so far only 290 manufacturers received the GMP certification. Most other manufacturers are in the process of implementing the process, and the department reckons to offer some more time for them to get the certification. At least 100 to 200 units have complied with the norms, but are yet to receive the certification.

BILL TO REGULATE PHARMACY EDUCATION IN ĀYURVEDA

The Hindu, June 24, 2005

The Union Cabinet on Thursday approved, among other things, the introduction of a Bill to regulate the education and practice of pharmacy in *Āyurveda* and other indigenous systems of medicine to ensure that there is no compromise in the quality of drugs. The legislation will set out the norms to ensure that the manufacturing units and retail outlets employed only institutionally qualified personnel with adequate knowledge and expertise.

DEPARTMENT OF AYUSH TO DEVELOP 'CENTRE OF EXCELLENCE' IN EACH STATE

Pharmabiz, July 09, 2005

The Department of *Āyurveda*, *Yogā*, *Unāni*, *Siddhā* and Homeopathy (AYUSH) of the Central Government is planning to set up at least one Centre of Excellence in every state as

part of the efforts to improve the standards of ISM hospitals and research centres in the country.

The department would make the centers pivotal to co-ordinate the research and clinical activities of other ISM hospitals and research initiatives in each of the states. Already 10 centers from ten states have been identified and notified as Centre of Excellence, said Mrs. Uma Pillai, Secretary, Department of AYUSH, in Chennai.

HIMACHAL PRADESH TO EXPLORE HERBAL, ĀYURVEDIC POTENTIAL

The Hindu, July 26, 2005

The State Department of *Āyurvedic* Medicines in Himachal Pradesh has planned to spend Rs 62 lakh for the propagation of high-valued medicinal plants after making a full use of its varied agro-climatic conditions.

For tapping the herbal potential of the State, the *Āyurvedic* Department had established herbal gardens, under different Agro-Climatic zones in the State. Herbal Garden of Jogindernager in Mandi district has been developed in 24 acres of land where more than 217 species of medicinal plants of different varieties have been propagated for demonstration proposes.

USE BIOINFORMATICS TO BOOST TRADITIONAL MEDICINES: KALAM

Business Standard, August 6, 2005

President A P J Abdul Kalam called upon scientists of the Centre for DNA Fingerprinting and Diagnostics (CDFD) to find ways through Medical Bioinformatics to systematically prove the benefits of Traditional Medicines and get necessary approvals so that they can be used across the globe.

Inaugurating the euro 5-million CDFD-SUN Centre of Excellence in Medical Bioinformatics at CDFD, the President said that particularly in the herbal area there are potential applications for developing multiple products for nutrition, prevention and cure of diseases.

Even though India ranks among the top few nations in having a rich Bio-diversity, its share in global herbal product market is very minimal, he said. According to Kalam, of the \$61-billion global herbal market, China has a share of \$6 billion while India's share is not even \$1 billion.

CLINICAL TRIALS MAY BE OUTSOURCED TO INDIA

Deccan Herald, August 6, 2005

If you are suffering from a disease that has no cure, you can check out what's happening in the clinical research scene in the country and decide to participate in any of the related clinical trials. Investigators, regulators and sponsors too would find the information they are looking for. Thanks to the newly constituted Indian Society for Clinical Research (ISCR). With delay in patient recruitment and completion of clinical trials in the West, there has been talk of outsourcing more than 30 percent of trials to India, China and eastern Europe. With cheaper costs and a large population of patients, India has an advantage. The revenue the country stands to gain from clinical trials that run into billions of dollars.

DIALYSIS WITH HERB EXTRACTS FOUND EFFECTIVE IN TREATING HEPATITIS

The Hindu, August 8, 2005

Dialysis with a combination of herbs has proven to be effective in the treatment of acute Hepatitis B viral infection in research undertaken at a Chennai hospital.

When the extracts of the combination of herbs, the principal plant being 'Tulsi' accompanied by *Neem* and *Phyllanthus*, was infused into patients using the same dialysis procedure adopted for those with renal failure, the patients recorded substantial drop in viral load. At the completion of the dialysis sessions phased over a period of over six months the patients had eliminated the Hepatitis B virus from the body.

"The research combined ancient *Āyurvedic* healing principles with the dialysis procedures of modern medicine in an immunologic setting," said P. Ravichandran, Chief Nephrology consultant, Kidney Diseases and Institute of Organ Transplantation, St. Thomas Hospital. The dosage of herbal medicine for each dialysis session was determined by an *Āyurvedic* physician at the hospital.

KERALA TO BRING LEGISLATION TO CHECK MISUSE OF ĀYURVEDA

New Kerala.com, August 11, 2005

The Kerala Government will bring in legislation to check immoral activities and exploitation under the cover of *Āyurveda*-tourism, Tourism Minister K C Venugopal told the State Assembly. The legislation would be implemented jointly by Health and Tourism Departments, he said, replying to questions by Mr N. Rajan (CPI) and others. As the government wanted to ensure quality of *Āyurveda* it would take stringent action to close down such centres, he said.

RASĀYANA APPROACH EFFECTIVE TO REDUCE OPHTHALMIC DISEASES

Pharma Biz, August 26, 2005

Clinical studies in *Rasāyana* therapy have proved that certain drugs used for treating ophthalmic diseases are effective in tackling senile problems of the eye and have a significant role in managing age related ophthalmic conditions, said experts. In the seminar on management of geriatric disorders in *Āyurveda* and *Siddhā* conducted by Dr. A Lakshmipathi Research Centre for *Āyurveda*, a branch of CCRAS, experts from Central Research Institute for *Āyurveda* said that clinical studies were conducted on certain *Āyurvedic* formulations and Herbo-mineral compounds to study the efficacy in age-related macular degeneration, age-related cataract, diabetic retinopathy and chronic simple glaucoma.

INDIA PRESSING FOR CHANGES IN TRIPS TO CHECK BIO-PIRACY

The Economic Times, August 26, 2005

In a bid to protect its wealth of indigenous knowledge and check bio-piracy, India and other developing nations are pressing for amendments in the TRIPS agreement, including disclosure of source and country of origin of biological resource and Traditional Knowledge.

"Our view is to get these basic principles incorporated in the basic law so that they become mandatory with principles, modalities could differ from country to country," Anthony de Sa, Joint Secretary, Department of Commerce said at an UNCTAD seminar on Trade-Related Intellectual Property

ĀYURVEDA ABROAD

INDIA ASKS EU TO DEFER THMPD DIRECTIVE TILL FORMATION OF WORKING GROUP

Pharma Biz, August 29, 2005

The Central Government has asked the European Union to defer the implementation of its directive on Traditional Herbal Medicinal Products (THMPD) until all the practical difficulties THMPD is to create for Indian *Āyurvedic* exporters are solved through a Working Group Mechanism.

The government felt that the entire *Āyurvedic* exports to EU would get stuck if the provisions of THMPD were implemented without any change. The government accepted the suggestions of the EU for creation of a Working Group to solve the practical problems and wanted the implementation to be deferred till the constitution of the Working Group.

INDIA MAKES AVAILABLE TKDL DATA IN 11 COUNTRIES

Pharma Biz, September 5, 2005

The government has commenced steps to prevent patenting of Indian Systems of Medicine (ISM) in other countries by making available the Traditional Knowledge Digital Library (TKDL) data in 11 countries, including the US and the UK. The government is also planning to support cultivation and export of herbal plants, in order to strengthen Indian Systems of Medicines.

The government is facing difficulties to prevent issuance of bogus patents for drugs in Indian Systems of Medicine from foreign countries, which are mainly submitted by Non Residential Indians, said Dr. Anbumani Ramdoss, Union Minister for Health and Family Welfare, in a press conference at Chennai. Translating data of Indian Medicines into various languages is on progress and registering Indian Systems of Medicine in these countries will help to prevent such bogus patents. The Central Government has already commenced submission of translated data for registration in English, German, French, Japanese and Spanish.

ANCIENT INDIAN HEALTH PRACTICE FINDS NICHE IN PRESENT-DAY

IC Wales, July 11, 2005

An ancient Indian health practice is being touted as the latest thing for the health-conscious after attracting a host of celebrity devotees. Madonna and Sting, Cindy Crawford, Gwyneth Paltrow and Jemma Kidd are all reported to be fans of *Āyurveda*.

DON'T GO EASY ON TURMERIC: IT PREVENTS AND CURES CANCER

India-West, July 14, 2005

The medicinal use of Turmeric has been documented in *Āyurveda*, a 5,000-year-old system of medicine that has its origins in India. Researchers at the University of Texas have concluded that Curcumin, the dye that lends Turmeric its yellow color, can block the biological pathway to melanoma and other cancers. Dr. Bharat Aggarwal, who headed the 12-member team of researchers at University of Texas's M.D. Anderson Cancer Center, told India-West in a telephone interview that his clinical research has made available not only "the master switch to turn off cancer, but also a cure for it."

ĀYURVEDIC MEDICINES AND HEAVY METALS ISSUE

Prof (Dr.) K. R. Kohli M.D(Ay), Ph.D

The developments related to the spread of Indian systems of medicine happening at the global level are no doubt encouraging for Āyurveda. Āyurveda is making its presence felt in the West. We have inherited Āyurveda from the ancient Āyurveda scholars. Āyurveda is imbibed in our culture but the same is not true for Western culture. Hence a few rumblings, few negative statements and a few studies to resist or restrict the fast expanding base of Āyurveda will be quite natural. We have a history of uninterrupted practice of these systems of medicine for last several thousands of years and confirming the safety of our traditionally being used products hence is not mandatory. The western medical science on the contrary adopts the procedure of toxicological studies and testing of every consumable material for Heavy Metals, Aflotoxins and the Pesticide content in products to ensure the safety of the products. We know Āyurveda is safe, but any new user country must test it before using it on their populations. The negative publicity came as a result of just one study, which does not appear to be very well planned. Such negative publicity should not deter us from our plans to globalize Āyurveda and other Indian systems of medicine. Our traditional medicines and their practice will have to enter into these newer markets only after a tough scrutiny so that people of the nations can consume them with out any doubts about safety of these products in mind. Hence we take these developments in US, Canada and UK as the acid test for Āyurveda. Āyurveda has survived for more than 5000 years and will continue to do so more effectively with newer challenges coming in its effort to globalize.

The chronology of the events is that in December 2004, a group of doctors from Harvard Medical School under the leadership of Dr. Saper picked up a few samples of Herbal Medicinal Products (HMP) from different stores and tested them for the presence of Heavy metals like Hg, Pb, As and Cd. Out of the 70 products of 27 Āyurvedic & Unāni Companies (26 Indian and One from Pakistan) tested they came across 14 which had high heavy metal content. Out of these 14, four were known to be made from Mercury and other metals (like *Mahalakṣmi Vilāsa Rasa*) and it was just 8 out of these 70, which were found to be containing higher than prescribed levels of heavy metals in them. How many in our country know of this fact? Further, a few of the products, which were said to be free from heavy metals in one study in US, were said to be culprits in the other similar study in Canada. This highlights one point that there is an ambiguity in the testing methods.

These recent rumblings on the Herbal medicinal products have necessitated for us to educate to the west the principles and methods of making Āyurvedic and Unāni preparations. This need was never felt so strong earlier.

The issue of heavy metals in HMP's can be classified in two broader categories viz.

1. Heavy Metals in pure Herbal preparations
2. Heavy Metals in Herbomineral preparations

Heavy Metals in pure Herbal preparations

In Āyurvedic classics clear guidelines have been given for collection of the Raw materials in certain time, season and about the maturity of the plant. In principle the pure herbal preparations should be free from all contaminants of whatsoever nature. But era of industrialization has seen a rapid growth of industries that lead to increased levels of the pollutants in the environment, which has affected soil and water conditions. The wildly growing herbs are still spared from this phenomenon to some extent but they too are now getting affected.

There are certain plant species, which are having affinity to absorb certain traces of metals from the soil. It has been seen that around more than 60 plant species have a natural tendency to absorb traces of metals from the soil which could be taken as a natural ingredient; may be important for therapeutic efficacy. Such trace levels of heavy metals in plant, which are present because of the affinity of the plant, are not likely to have any toxic effects. Here trace metal might be working as an active ingredient in the plant material.

Conclusions drawn on the basis of incomplete and incorrect inferences of any study will always be questioned.

The JAMA article is another example of not only incomplete but also of a superficial method of drawing inferences on a system of medicine, which has stood the test of time. Hundreds of safety/toxicity studies conducted by the University research and by Āyurvedic Industry in India have proved beyond doubt the safety of the Āyurvedic preparations.

Most of the drugs of western medicine are toxic but still find a respectable place in the prescription of the doctors. Every other day we find one or the other drug of modern medicine being discarded after it has been used for decades just because it was found toxic in nature. Thousands must be dying because of the side effects and toxicity of the allopathic medicines and materials but they go unnoticed. An isolated incident of Āyurvedic medicine is highlighted beyond the proportions to blame the whole system with out proper investigation in to the facts.

Heavy Metals in Herbomineral preparations

The Herbomineral Āyurvedic preparations just form around 5% of total Āyurvedic medicines. They essentially contain minerals and metals as integral part of the formulations. They are being used with an intention to give therapeutic efficacy to the product for a designated illness. In the practice of Āyurveda where the metallic drugs are used, first they are

made bio-compatible in a particular chemical form, which has been designed in ancient *Āyurveda* classics through the specific processes of *Śodhana* and *Māraṇa*. These *Āyurveda* detoxification processes remove the toxic potentials from metals and impart them the therapeutic efficacy of a very high grade. The basic reason for their inclusion into medicine was for a very potent efficacy in small dosage forms for specific disorders that were otherwise not curable by pure herbals alone. **A considerable reduction in the particle size of the metals and metallic compounds on one hand and change in the structure of the metal after several processes of *Śodhana* and *Māraṇa* render these preparations an element of safety, which is not expected in metals that have not undergone these processes.** Hence a person who is unaware of such processes would never be able to think of these issues.

Most of the minerals/metals are used only after they are converted into *bhasma* and the process is called *Māraṇa*.

Māraṇa process is primarily heating at high degree of temperature depending on the material being burnt. This process is repeated several times, occasionally several hundred times as well.

Māraṇa converts the substances into fine particles so that they can be properly digested and easily absorbed in appropriate amount into the human body and mix (assimilated) with dhatus (body components). Proper assimilation allows for their desired effect to take place without any harmful side effects. *Māraṇa* process is also used to increase the therapeutic property of the drugs and some times even new properties are introduced in

the metals/minerals compounds as a result of these processes. Although this is a hypothesis, which many metallurgists also support, it is worth mentioning that the process of *Śodhana* and *Māraṇa* converts the metals and minerals to organometallic compounds, which are better assimilated in the human system with hardly any side effects or toxic effects.

Āyurvedic Metallic/herbo-metallic preparations metals are not present in elemental form. They are in the form of compound form and their fate in the body will not be the same as it is for elemental form of heavy metals. The Physico-chemical state of the heavy metals in the form of *Āyurvedic* medicine is totally different from the known Physico-chemical forms of that metal. Although the known form which popularly being investigated is toxic, the same cannot be said true about the *Āyurvedic* medicine. Therefore mere presence of a chemical compound of metallic origin has nothing to do with the toxicity of the finished product for the sophisticated manufacturing process to which it is subjected ensures that deep changes are taking place - and the finished form after reaction with several organic and inorganic material of herbal origin is finally responsible for action.

Therefore there is a dire need to continue intensive research in this field to prove the point of view of *Āyurveda* to the western world as well. It is this changed form, which makes it safe for human use and that is the reason that even in the toxicity studies conducted on animals at various institutes have demonstrated that these Metallic preparations are absolutely safe and non-toxic in nature.

Ancient Wisdom

परीक्षकारिणो हि कुशला भवन्ति । च० सू० १०/१९

Wise Investigators: Those alone are wise who act after Investigation. This ancient wisdom from *Caraka saṁhitā* is relevant at every step i.e; for physician in treating his patients and also for the health related industry especially for experimental and clinical investigations. (*Caraka saṁhitā: Sūtrasthāna*, Chapter 10, Śloka 5)

रजस्तमोभ्यां निर्मुक्तास्तपोज्ञानबलेन ये । येषां त्रिकालममलं ज्ञानमव्याहृतं सदा ॥

आप्ताः शिष्टा विबुद्धास्ते तेषां वाक्यमसंशयम् । सत्यं, वक्ष्यन्ति ते कस्मादसत्यं नीरजस्तमाः ॥ च० सू० 11/18-19

Āptopdeśa: Those who are free from *rajasa* and *tamasa* and endowed with strength of penance and knowledge, and whose knowledge is defectless, always uncontradicted and true universally in past, present and future, are known as *āpta* (who have acquired all the knowledge), *śiṣṭa* (expert in the discipline) and *vibuddha* (enlightened); their word is free from doubt and is true because being devoid of *rajasa* and *tamasa*, how they can speak a lie. (*Caraka saṁhitā: Sūtrasthāna*, Chapter 11, Śloka 18-19)

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REGULATORY REQUIREMENTS FOR HERBAL PRODUCT REGISTRATION (EXPORTS)

Dr Ajay K.Tripathi; B.A.M.S. (Gold Med.); M.S. (Ay.)

With the increase in demand of Herbal Medicinal Products (HMP's) all across the world, there is a lot of scope for the herbal drug manufacturers. Folk medicinal practices have the knowledge, which flows from generation to generation and is mostly confined among tribal communities. India is uniquely placed with rich heritage of Traditional medicine and Folk Medicine that too in the form of codified knowledge and well established systems of principles and practice. This is right time to take initiative to fulfill the global demand with herbal products, which are with proven efficacy over centuries and propagate them as better alternate for the healthcare.

Exports of Indian Traditional medicine (*Āyurveda*, *Unāni* and *Siddhā*) products and services offer huge potential, considering that over 80% of the world population relies on the traditional systems of medicines to meet their primary healthcare needs. World demand for herbal products has been growing at a rate of 10% -15% per annum. The medicinal plants related trade in India alone is approximately Rs 5.5 billion. Global markets for herbal products, which include medicines, health supplements, herbal cosmetics, are estimated at around US\$ 62 billion. Out of this, the market for herbal medicine alone is estimated at around US\$ 5 billion and is expected to reach US\$ 16 billion by 2005. The global herbal product markets are mainly in Europe and North America, which together account for 63% of the world market. China is the major exporter of traditional medicine to the world market. India needs to organize itself well to get any significant share in this growing market segment.

For any product meant for human consumption there are three issues that are of utmost importance-

1. Quality
2. Safety
3. Efficacy

If *Āyurvedic* drug manufacturers are following stringent GMP norms and are confident about quality of their products, they can venture into exports. The standard set of documents required for product registration varies from country to country, as they are specific to the regulatory requirement of the importing countries. The following are mandatory requirements for most of the countries-

1. Company Registration
2. Manufacturing License
3. Good manufacturing Practices certificate

Apart from these legal documents issued from the regulatory authorities (In India) the following product related information may be required to be submitted in the dossier format.

Summary of Product Characteristics (SPC)

The Summary of Product Characteristics (SPC) is a statement of specific product information and sets out the agreed position of the medicinal product, which has developed during the assessment period. It is the definitive statement between Competent Authority (regulatory body of importing country) and the company as a registration holder.

The SPC includes the name of the product, strength, pharmaceutical form, quantity of active ingredients, posology, method of administration, indications, contraindications, excipients, shelf life and any special warnings and precautions for use etc. A draft SPC must be submitted as part of the registration dossier.

Quality of the Products

One would need to provide a technical dossier covering the quality of herbal ingredients and the finished herbal product. There are a number of quality issues that one would have to consider thoroughly if one wishes to be successful in his application for a traditional use registration.

The quality dossier will need to include details of all the necessary physio-chemical, biological and microbiological tests.

All raw materials used in the product should undergo validated parameters to ensure sustainable product characteristics. For Plants and plant products they must follow API (*Āyurveda Pharmacopoeia of India*) or else established pharmacopoeia standards.

The Finished products should essentially contain stability data to ensure uniform quality of the product throughout shelf life.

Safety

The application will need to be accompanied by a bibliographic review of safety data together with an expert report. Additional safety data may also be submitted if requested. The regulatory body will be providing further guidance on compiling bibliographic safety data, the presentation of the data, the content of the Expert Report and who would be regarded as an 'expert'. In the meantime, key review documents and any information on existing licensed products can be assembled.

The safety data primarily consists of toxicity reports. The raw materials as well as the finished products must be free from the pollutants and contaminants like Heavy metals, Pesticides, Aflotoxins and radioactivity.

Efficacy: Traditional use

Application will need to be accompanied by bibliographic or

expert evidence that the medicinal product or a corresponding product has been in medicinal use, this may be in the form of classical references or clinical trials.

Patient information

One will need to submit a dummy or mock-up label and patient information leaflet (PIL). The label requirements of the product are based on regulations of each country. Label claims to be drafted very carefully and claim support data must be available for the verification of the regulatory authorities. We must be very careful in the making of label as its manufacturers direct interaction with consumer. The label ideally contains product name, Address of the manufacturer, indications of the product, Dosage form, Composition (ingredient list-quantitative), manufacturing License no., Storage conditions and shelf life, date of manufacturing, date of expiry and batch no.

The PIL (Patient information leaflet)

Ideally it should contain product composition, indications, dosage in detail, any dietary restrictions, side effects, adverse reactions, interactions with other drug, if safe for pregnancy and lactation, if product safe for children. The information must be given in such manner that common person can understand about the product.

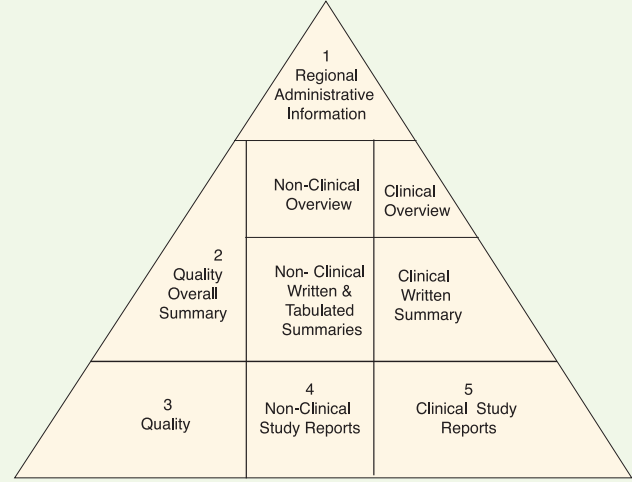
For European Union and United Kingdom, Traditional medicines can be registered under THMP (Traditional Herbal Medicine Product) and Common Technical Document format can be used for submission of the product registration document.

Common Technical Document is made up of five modules as follows-

1. Administrative Information
2. CTD: Summaries

3. Quality
4. Non Clinical study Reports
5. Clinical study reports

Diagrammatic representation of CTD triangle:-



This is important to note that in the more regulated markets like USA and Canada, where there is no separate provision for the Traditional Medicine registration, all Herbal drugs are treated as drugs and their registration requirements are identical to the pharmaceutical products. However there is one category where herbal products can be sold is, as Dietary supplements. For the Supplements, registration procedures are less stringent but quality and safety issues remain same and manufacturer is liable to insure product safety.

For any more specific information, the Chief Editor of 'Āyurveda Heritage' the official Newsletter of AMAM may please be requested.

INFOLINE

Classical Texts of Āyurveda included in Schedule- I, of Drugs & Cosmetics Act, 1945

The First Schedule

- | | | | |
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| 1. Ārogya Kalpadruma | 16. Kupi Pakva Rasāyana | 29. Sarvaroga Chikitsā Ratnam | 43. Kāśyapa Saṁhitā |
| 2. Arka Prakāśana | 17. Nighantū Ratnākara | 30. Sarvayoga Chikitsā Ratnam | 44. Bhela Saṁhitā |
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| 11. Bhāva Prakāśa | 26. Rasendra Sāra Saṁgraha | 39. Bāsava Rajeeyam | 53. Rasamañjari |
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| 13. Caraka Saṁhitā | 28. Sahasrayoga | 41. Yoga Tarangiṇi | 54-B Āyurveda Sāra Saṁgraha |
| 14. Cakra Datta | | 42. Yoga Cintāmaṇī | |
| 15. Gada Nigraha | | | |

MEDOVAHASROTODUṢṬI AND HYPERCHOLESTEROLEMIA

Dr Preeti Kachroo Bhagat B.A.M.S , CFN

Introduction

Medovahasrotoduṣṭi and *medovṛdhī* are the two terms used interchangeably for lipid disorders and obesity respectively. Through this article an effort is being made to deal only with the Hypercholesterolemia part and obesity is being intentionally left out.

Hypercholesterolemia or the presence of abnormal amount of cholesterol in the cells and plasma of the blood, is also associated with the risk of heart disease. A normal blood cholesterol levels is 150 - 240 mg per deciliter of blood (mg/dL), however serum cholesterol levels less than 200 mg/dL are considered to be ideal. Blood cholesterol is considered to be borderline when it is in the range of 200 to 239 mg/dL. Elevated cholesterol level is 240 mg/dL or above. This elevated blood cholesterol is considered to be hypercholesterolemia. Elevated levels of circulating cholesterol cause deposits to form inside blood vessels. These deposits, called plaque, are composed of fats deposited from the bloodstream. When the deposits become sufficiently large, they block blood vessels and decrease the flow of blood. These deposits result in thickening and narrowing of blood vessels leading to disease called atherosclerosis, which ultimately leads to impairment of blood supply to the system. Recent reviews indicate that 80% to 90% of patients who develop clinically significant Coronary Heart Disease (CHD) and more than 95% of patients who have experienced a fatal CHD event had at least 1 of the major cardiac risk factors-smoking, Diabetes Mellitus, Hypertension and Hypercholesterolemia. (Canot 2003) Eating too many foods rich in saturated fats has been associated with the development of degenerative diseases, including heart disease. Polyunsaturated fatty acids, are considered good for

health. Omega-3s (and omega-6s) are termed essential fatty acids (EFAs) because they are critical for good health. However, the body cannot make them on its own. For this reason, omega-3s must be obtained from food, thus making outside sources of these fats “essential.” Omega-3s is primarily found in cold-water fish and omega-6s, another type of polyunsaturated fatty acids obtained from grains, most plant-based oils, poultry, and eggs.

Āyurveda recognized this disease thousands of years ago and referred it as a ‘*Medovaha srotoduṣṭi*’. The *Āhara rasa*, is cause of obesity /emaciation. Indulgence in *kapha* predominant diet leads to ‘*Āma*’ which ultimately gets associated with *madhura* and *snigdha rasadhātu* (primary nutrient) and gets distributed all over body. Furthermore *āma rasa* gets accumulated and produces *medas*.

तत्र श्लेष्मलाहारसोर्वेनो ध्यशनशीलस्यात्यायाममनो
दिवास्वप्नरतस्य चाम एवाञ्जरसो मधुरतरश्रुव
शरीरमनुकामन्नतिस्नेहान्मेदो जनयति ।
तदतिस्थौल्यमापादयति ॥ सु० सू० १७/७

Medovaha srotas get obstructed due to *srotoduṣṭi*. Where *duṣṭi* leads to impairment of functional integrity of the *srotas*, leading to its inability to perform its normal functions. Obstruction of *srotas* leads to obstruction to the normal flow of *doṣas* and *poṣaka dhātus* (nutrients). The *doṣas* thus retained interact with *duṣyas* of the affected region. This site of interaction is the region where the process of disease is primarily initiated.

Causes of *medovaha srotoduṣṭi* as described in ancient texts are : अन्व्यायाम (lack of exercise), दिवास्वप्न (Day sleep), मेद्यानां (Excessive consumption of sweet and fatty diet) and वारुण्य अतिसेवनात् (Excessive consumption of alcohol).

अवयायामदिवास्वप्नामेद्यानां चातिभक्षणात् ।

मेदोवाहीनि दुष्यन्ति वारुण्याच्चातिसेवनात् ॥ च० वि० स्था० अ० ५ / १६

Besides *Caraka Samhitā*, the classical text ‘*Bhāva Prakāśa*’ also expresses the same opinion.

मेदसा ऽऽवृतमार्गत्वात्पुष्यन्त्यन्ये न धातवः ।

मेदस्तु चीयते तस्मादशः सर्वकर्मसु ॥ मा० प्र० म० ख० स्थौल्याधिकार

Increase of *meda* is associated with complications like Diabetes Mellitus, Fever, Liver diseases etc. Modern science also recognizes diet, exercise, smoking, alcohol, and certain illnesses as the factors affecting the levels of both types of cholesterol (LDL and HDL). Eating a high fat diet will increase one’s level of LDL cholesterol. Exercising and reducing one’s weight will both increase HDL cholesterol and lower LDL cholesterol.

The most common cause of elevated serum cholesterol is eating foods that are rich in saturated fats or contain high levels of cholesterol. Elevated cholesterol also can be caused by an underlying disease that raises blood cholesterol levels such as Diabetes Mellitus, Renal disease, Liver disease, or Hypothyroidism. It also can be caused by an inherited disorder

Products rich in Omega 3 fatty acids:-

- all fish, higher in fatty fish such as mackerel, salmon, sardines anchovies, albacore, tuna and herring
- green leafy vegetables like spinach, kale, purslane, mustard greens, collards, etc
- soy & tofu
- nuts such as flax seed, walnuts, pumpkin seeds, Brazil nuts, sesame seeds,
- cooking oils such as flax seed oil, canola oil, soybean oil, hampseed oil, wheat germ oil
- some eggs such as omega-3 enhanced eggs
- many commercial food products such as bread and baked goods

Products rich in Omega 6 fatty acids:-

- Corn, safflower, sunflower, soybean, cottonseed oils, Flaxseed oil, hempseed oil, grapeseed oil, olive oil, olives, borage oil, evening primrose oil, black currant seed oil, chestnut oil,
- flaxseeds, hempseeds, pumpkin seeds, pine nuts, pistachio nuts, sunflower seeds (raw),

in which cholesterol is not metabolized properly by the body. Obesity, which generally results from eating a diet high in fat, also can lead to elevated cholesterol levels in the blood. This is because obesity itself leads the body to produce excessive amounts of cholesterol.

The aetiology, pathogenesis and the principles of management, described in *Āyurvedic* texts resembles a lot with the modern concepts.

As per *Āyurveda Kṣudraśwāsa* (Shortness of breath), *Nidrā* (Extra sleep), *Sweda* (Excessive sweat), *Kṣudhā & Pipāsā* (Excessive hunger and thirst), *Daurgandhya* (Bad smell), *Daurbalya* (General weakness), *Alpamaithuna* (Reduced sexual indulgence) are the symptoms of *Medoroga*.

धुद्रश्चासतृषामोहस्वप्नप्रकथनसादनैः ।

युक्तः क्षुत्स्वेददौर्गन्धैरल्पप्राणोऽल्पमैथुनः ॥

भा० प्र० म० ख० स्थौल्याधिकार/ मा० नि० मेदोरोगनिदानम ०३

Management

गुरु चातर्पणं चेष्टं स्थूलानां कर्षणं प्रति । च० सू० २१/१९

As per the *Caraka Saṁhita*, physician should adopt the *Guru apatarpaṇa cikitsā* for treating the *Sthūla puruṣa*. Besides this other treatment modalities are single drug and compound drugs as given below:-

CHECK LIST FOR LOWERING CHOLESTEROL

It's easy to lower your blood cholesterol, if you follow the following steps. Just eat more foods low in saturated fat and cholesterol and cut down on high-saturated fats. Other guidelines are:

- Watch your caloric intake by eating a wide variety of foods low in saturated fat and cholesterol.
- Eat fish, poultry without skin and leaner cuts of meat instead of fatty ones.
- Eat fat-free or 1% milk dairy products rather than whole-milk dairy products.
- Eat at least five servings of fruits and vegetables every day.
- Eat six or more servings of cereals, breads, pasta and other whole-grain products.
- Enjoy 30–60 minutes of vigorous activities on most of the days of the week.
- Maintain a healthy weight.

Saundarya Prasādhana

Skin Moisturizer:

Make a paste by mixing 1 tablespoonful of orange juice and 1 tablespoonful of lemon juice in a cup of yogurt. Apply it on face as a mask and keep it on for 15 minutes. Then clean your face with water or wet tissue. This mask enhances the complexion and face glow.

Skin Nourishment : Face mask

Keep a teaspoonful of black gram (*Urada dāla*) and 6-7 almonds overnight. Grind them into a fine paste and apply this mask on face, wait for half an hour and wash it off. This mask nourishes the facial skin and also enhances the complexion.

1. Single drug (*Ekdavya cikitsā*)

- *Vidanga*
- *Pippalī*
- *Kamboja (Garcinia)*
- *Śuddha Guggulu*
- Honey, hot water consumption
- *Śudha Śilajit*
- *Āmalaki powder*

Many of these above given herbs have been scientifically proven for their efficacy as cholesterol lowering agent. *Āmalaki (Emblica officinalis)* was found to significantly lower the cholesterol content in aorta and liver of rabbits as compared to the control group.

2. Compound drugs (*Bahudavya cikitsā*)

- *Navaka guggulu*
- *Triflā guggulu*
- *Tyūṣṇādī guggulu*
- *Vidangādyā lauha*
- *Lauha rasāyana*
- *Amṛtādī guggulu*

Role of Diet, Routine and Exercise:

Bhaiṣajya Ratnāvali, the classical ayurvedic text mentions the diet and lifestyle for managing *medovṛdhī* conditions. Physical activity, change of routine and light diet like barley is good for health. Besides change in lifestyle, *Āyurveda* has mentioned use of medicated and fragrant pastes for checking body odour.

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4. *Caraka Saṁhita, Vīmana sthāna*
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FUN LINE

Mother:-Your father has another job.

Son:- What is that

Mother:-He has 500 men under him. He is cutting the grass at the cemetery.

"The doctor said he would have me on my feet in two weeks."

"And did he?"

"Yes, I had to sell the car to pay the bill."

Patient to eye doctor: " I'm very worried about the outcome of this operation, doctor. What are the chances? "

Eye doctor to patient: " Don't worry you won't be able to see the difference.



Guggulu (Commiphora mukul Hook. Ex Stocks) A Drug With Potential Hypolipidaemic Properties

Dr. G.P. Kimothi, PhD

Biological source:

Commiphora mukul Hook.ex Stocks, family Burseraceae

Geographical Source:

It is widely distributed in northwest, western India, particularly in Rajasthan, Gujarat, Maharashtra¹.

Vernacular Names:

Sanskrit	: Guggulu, Devadhupa
Hindi	: Gugal
Bangāli	: Mukul
Gujarāti	: Gugāli
Telgu	: Gukkulu
Tamil	: Gukkulu, Kungiliyam

Morphological Characters:

Woody shrub to small tree, branches spiny, ascending, leaves 1-3 foliate; leaflets sessile to subsessile, terminal ones the largest, rhomboid to ovate in shape, irregularly toothed in margin. Flowers small brownish pinkish, fascicled, unisexual, calyx with glandular hairs forming cylindrical cup. Petals 4-5, thrice as long as sepals. Stamens 8-10, Sigma inconspicuously bilobed. Drupe red, ovate- acuminate in shape. The oleo gum resin exudes from the stem of *C.mukul*.²⁻³

Parts Used:

Gum Resins

Properties in Ayurveda:

Rasa	: Tikta, Kaṭu, Madhura, Kaṣāya
Guṇa	: Tikṣna, Laghu, snigdha, sāra
Vīrya	: Uśana
Vipāka	: Kaṭu
Karma	: Tridośahara

Guggulu in Āyurvedic Literature as a 'Medohara':

Mahaṛṣhi Caraka has described Guggulu as the best drug for *medoroga* (Lipid lowering) and *vāta śāmaka* (rheumatic conditions). Due its *rūkṣa*, *viśada* and *uṣṇa guṇa*, Guggulu acts on the *āvarṇa* conditions prevailing due to vitiated *medodhātu* and other *doṣa* and *dhātus*. As per *Āyurvedic* literature *guggulu* is highly effective in other disease conditions like *Kuṣṭha* (leprosy and other skin diseases) *Īndralupta* (alopecia), *Kiṭibha* (psoriasis) *Bhagaṇḍara* (fistula), *Arśa* (piles), *Apacī* and *Pāmā* (Skin disorders), *Śweta pradara* (leucorrhoea) and other abnormal discharges of vagina. In the *Pīnasa roga* (chronic rhinitis), it has been recommended as an ingredient of snuff powder of the treatment. *Caraka* has recommended the drug in *Rasāyana Cikitsā* (rejuvenation therapy), where *Śilājīta* and *Guggulu* are used along with cow milk.⁴

Principal Constituents:

The gum resin *C. mukul* contains 4-5 % foreign impurities, 3.2% gum, and 19.5% mineral matter consisting chiefly of silicon dioxide, calcium, magnesium, iron and aluminum. It also contains 1.4 to 1.5% essential oil. The essential oil is found to contain 6.4% myrcene, 11% dimyrcene, and some other polymercene.⁵

Guggulu has been found to be a complex mixture of a variety of organic compounds and inorganic ions. On steam distillation it yields an essential oil, which conventionally, segregates into hexane-soluble (9 to 11%), ethyl acetate-soluble (32 to 35%), and ethyl acetate insoluble (54 to 59%) portions. Hexane and ethyl soluble fraction are found to be a complex blend of steroidal ketones, alcohols and aliphatic triols. Many of these alcohols occur as ester of ferulic acid. A number of steroids have been isolated and characterized⁶.

The structure elucidation of steroidal constituents, viz., Z-guggulsterone and E-guggulsterone, I, II and III have been established.^{7 & 8}

Medicinal Properties and Uses:

Guggulu is well known as an *Āyurvedic* drug and has been widely used in the treatment of various type of arthritis. Traditional usage of the gum resin has been described in the treatment of rheumatism, neurological disorder, obesity and related disorders, scrofula, syphilis, skin and urinary disorders. The gum is also used as an astringent, antiseptic, aperitif, carminative, diaphoretic, diuretic, emmenagogue, expectorant, stomachic, alterative, uterotonic and sedative. It is also used in the treatment of bronchitis, catarrh, gingivitis, inflammation, pyorrhoea, sores, tonsillitis, hysteria and mania. Fumes from burning *guggulu* have also been recommended for hay fever, nasal catarrh, laryngitis, bronchitis and phthisis.⁹

Pharmacological /Clinical Studies

Anti-inflammatory activity

Pharmacological studies:

The petroleum ether extract of the gum resin at a dose of 200 and 500mg/kg PO significantly inhibited carrageenan-induced rat paw oedema¹⁶.

Hypolipidaemic activity:

Pharmacological studies:

The effect of guggulsterone (mixture of Z and E-guggulsterone isomers) on biogenic monoamine levels and dopamine β-hydroxylase activity of the rat brain and heart was studied. Guggulsterone administration to rats led to an inhibition of brain dopamine β-hydroxylase activity with marked

stimulation of heart both *in vitro* and *in vivo*. Catecholamine levels were also similarly inhibited by guggulsterone whilst serotonin and histamine contents were enhanced in the brain but decreased in the heart. The results confirmed that alterations in biogenic amines dopamine β -hydroxylase activity might be one of the possible mechanisms of the antilipaemic effect of guggulsterone.¹⁰

The incorporation of the gum resin of *Commiphora mukul* (2%) in the adulterated (1% cholesterol) diet of Wistar rats lowered the serum cholesterol, liver cholesterol, serum triglycerides and serum phospholipids by 36%, 60%, 49% and 8%. The study compared the effect with those of *Śilājīta*, which lowered the above parameters in 39%, 55%, 47% and 25% respectively.¹¹

The petroleum ether soluble portion and alcoholic extracts of the gum resins lowered the serum cholesterol in hypercholesterolaemic chicks, rabbits and domestic pigs.¹²

The alcoholic extract and a pure steroid of *guggulu* also lowered serum cholesterol in Triton-treated rats. The steroid fraction of *Guggul* also lowered LDL cholesterol by 65%, triglycerides by 39% phospholipids and non-etherified fatty acids by 42.9% as compared to clofibrate (which lowered the same parameters by 47.6%, 51%, 41.7% and 31% respectively). This also lowered LDL cholesterol (76.1%) and VLDL cholesterol (40.6%) significantly. The ratio of HDL cholesterol to total cholesterol in the steroid-treated monkeys was significantly higher at all intervals, as compared with the initial values.¹³

Clinical studies

A clinical trial with purified *Guggul* was carried out on 35 patients in order to assess its efficacy, dose development, resistance development and side effect. The result revealed that the gum resin has digestive and analgesic action¹⁴. Purified gum resins at a dose of 4.5 g daily, in two divided doses, were administered for 16 weeks. Serum triglyceride and serum cholesterol levels were lowered at the end of the eighth and fourth week, respectively. Significant lowering of VLDL and LDL was observed. However, a gradual increase in HDL cholesterol was also seen¹⁵.

Fibrinolytic activity

In a study 21 patients with ischaemic heart disease were compared with 27 controls. *Guggul* gum (1.2 g) increased the fibrinolytic activity in the patients with heart disease, without any effect on platelet aggregation. A significant prolongation in clotting time with changes in plasma fibrinogen level, were observed.

Anti obesity activity

In a clinical trail, 22 patients with hypercholesterolaemia

associated with obesity, ischaemic heart disease, hypertension and diabetes were administered oral *Commiphora mukul* at 6.12 grams, in three divided doses for 15 days to one month. Decrease in the levels of serum cholesterol and serum lipid phosphorus was noted. The body weight was also significantly reduced^{17 & 18}.

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FUN LINE

I never know what to do with my hands when I'm talking."

"How about covering your mouth?"

Doctor: I have some bad news and some very bad news.

Patient: Well, might as well give me the bad news first.

Doctor: The lab called with your test results. They said you have 24 hours to live.

Patient: 24 HOURS! That's terrible!! WHAT could be WORSE? What's the very bad news?

Doctor: I've been trying to reach you since yesterday.

KNOWLEDGE FLOW – ACADEMIA TO INDUSTRY

A review of University Dissertations/Thesis on–*Medoroga*

‘Clinical study of the effect of *Amṛtādi Guggulu* in *Sthaulya* (Obesity)’

Dr. Podar S. S., Dr. P. S. Tathed, Dept. of Kāyacikitsā, R. A. Podar Medical College, Mumbai (2003)

Abstract: Obesity is posing as an automation hazard. New entries of automatic gadgets and remote controlled machines in the world have reduced physical activities in day to day business. Luxuries have made life more sedentary. With the advancement in technologies man has become more stationary. Fast food is adding unburned calories in body, which in turn are increasing adipose tissue to make a person obese. The causes of obesity in today’s world are faulty and irregular dietary habits, excess of *Madhura* (sweet), *Snigdha* (oily and fatty), *Gūru* (heavy), *Śeeta* (cold) type of diet, lack of physical activity, daytime sleeping, excessive consumption of alcohol, stress free life. For present study the author has selected a classical preparation — *Amṛtādi Guggulu* from *Bhaiṣajya Ratnāvali*, *Sthaulya Adhikāra*. Twenty subjects suffering from *Sthaulya* were included in the study. The present study shows marked reduction in weight with average weight reduction by 4.4 kg in 6 weeks. Abdominal girth, waist to hip ratio showed marked reduction. Symptoms such as dyspnoea on exertion, polydipsia, excessive sweating also showed reduction in many subjects. Hypertensive patients showed significant fall in average blood pressure. Total Cholesterol levels before and after treatment showed impressive reduction and assured its role in hypercholesterolemia.

‘Clinical study of the effect of *Rasāñjana* in *Sthaulya* (Obesity)’

Dr. P. U. Jane, Dr. S. B. Joshi, Dept. of Kāyacikitsā, R. A. Podar Medical College, Mumbai (1987)

Abstract: *Sthaulya*, a disease included in the *Aṣṭauninditiyās*, is a challenge to treat. It is included in the *Bṛmhāṇa Janya Vyādhis*, the disease caused due to over nutrition. Due to over nutrition to *Meda Dhātu* (adipose tissue), other tissues in the body are malnourished. This gives rise to *Daurbalya* (weakness) and makes the person susceptible for many other diseases. In the present study single drug was administered to twenty patients divided in two groups, receiving normal diet and restricted diet respectively. The drug used was *Rasāñjan Ghanavafī* – a classical-*Āyurvedic* remedy prepared by treating *Dāru Haridrā* (*Berberis aristata*) with *Ajā Dugdha* (goat milk). The study shows reduction in weight by 1.4 kg and 1.2 kg in 10 days in two groups receiving restricted and normal diet respectively. Symptomatic improvement was seen in knee joint pain, dyspnoea on exertion, heaviness, weakness, excessive and foul smelling sweating.

‘Clinical study of the effect of *Lekhana Basti* in *Sthaulya* – Obesity’

Dr. Vasant B. Valleppawar, Dr. B. D. Gharjare, Dept. of Kāyacikitsā, R. A. Podar Medical College, Mumbai (1999)

Abstract: Obesity is defined as the presence of abnormal, large amount of adipose tissue, greater than 25% of total body weight for male and greater than 30% of total body weight for females. The causes of obesity are nutritional imbalance, physical inactivity, genetic or iatrogenic. Obesity is posing a great threat to human life for its strong relationship with other devastating diseases such as diabetes, hypertension, cardiovascular disorders, respiratory disorders, gastro-intestinal diseases and impotency. The contents of this *Bastī* are as follows –

- | | | | | |
|--------------------|---------------------|------------------|-----------------|----------------------|
| 1. <i>Triphalā</i> | 2. <i>Gomūtra</i> | 3. <i>Madhū</i> | 4. <i>Uṣaka</i> | 5. <i>Yavaḥsāraa</i> |
| 6. <i>Saindhav</i> | 7. <i>Shilājatu</i> | 8. <i>Kāśīśā</i> | 9. <i>Hingu</i> | |

Number of *Bastī* sittings was 30 in each subjects and number of subjects included in the study were also 30. The results showed significant reduction in weight with average 7.5 kg weight loss in 3 months. Reduction in waist to hip ratio was also significant. Marked relief in symptoms such as heaviness, joint pain, polydipsia, excessive sweating, drowsiness, weakness and dyspnoea was also seen.

A M A Z I N G F A C T S

HEART



- ★ On an average an adults heart pumps about 15,000 litres of blood each day.
- ★ The human heart creates enough pressure when it pumps blood, that it could squirt blood 30 feet.
- ★ The human heart continues to beat even though it is taken out of the body or cut into pieces.
- ★ Our heart beats 60 to 100 times a minute.
- ★ In lifetime, the human heart pumps about 100 million litres of blood
- ★ Heart pumps between 70ml and 100ml of blood with each beat.
- ★ Heart circulates 5 to 6 litres of blood around the body per minute and about 13 litres per minute during vigorous exercise.
- ★ Heart will beat more than 2.5 billion times during an average lifetime.

UPCOMING EVENTS

SEPTEMBER 2005

ĀROGYA 2005

(23-27th September, 2005)

Hall NO. 12 & 12 A, Pragati Maidan, New Delhi

The seminar will Display and Sale of AYUSH medicines, Herbal Products & Medicinal Plants. It will also have free Health Check up, lectures and Counseling by specialists of *Āyurveda*, *Unāni*, Homoeopathy, *Siddhā*, *Yogā* and Naturopathy. Besides these *Prakṛti Parīkṣā and Nāḍi Parīkṣā (pulse diagnosis)*.

Organised by: Department of *Āyurveda*, *Yogā* & Naturopathy, *Unāni*, *Siddhā* & Homoeopathy (AYUSH), Ministry of Health & Family Welfare (Govt. of India)

Contact:- Shri Amrit Singh, Deputy General Manager, Deputy General Manager (Marketing)
India Trade Promotion Organisation, Pragati Maidan, New Delhi, Tel-Fax. 23371582

Indian Pharmaceutical Association 2005

(30th September to 1st October, 2005)

The Hyatt Regency, Mumbai

This convention is useful for Small and medium management of small and medium pharma companies who work in areas of R& D, Marketing administration, Business Development, Drug Delivery and Patents.

Contact :- Mr T.B.Nair
Indian Pharmaceutical Association
Bombay college of Pharmacy, Kalina, Santacruz (East)
Mumbai-400098

57th Plenary Session of All Āyurvedic Conference
"Non toxic Effect of Āyurvedic Medicines- A global perspective"
(27th - 28th September, 2005)

Birla Auditorium, Statue Circle, Jaipur

This conference will have issues related to non-toxic effects of *Āyurvedic* medicines. The scientific conference will be parallelly supported by a "Grand *Āyurvedic* Exhibition" in which Indian *Āyurvedic* pharmacies will exhibit the time-tested effective products.

Contact :- Vaidya Ram Prasad Mishra
3240, M.I.Road , 5-Batti, Above Sanjaya Medicals, Jaipur
Tel: 0141-2374964

OCTOBER 2005

Indo-US Symposium on Scientific Approaches to Quality, Safety and Efficacy Assessment of Āyurvedic & Botanical Products. (3-6th October, 2005)

The importance of safety, quality and efficacy in medicinal products has universally been acknowledged. There is an increasing demand for herbal medicines in developing countries and the industrialized developed world is also looking for the standardized botanical products.

Contact :- India Habitat Centre, New Delhi
Dr. G.N.Qazi
Director, Regional Research Laboratory (CSIR),
Canal Road, Jammu Tawi-180001
Tel: 0191-2546368, Fax:- 0191-2548607
Email: qazi_gn@yahoo.com

International Conference on Drug Development from Medicinal Plants (Issues & Problems) (20-22nd October, 2005)

Symposium is focused on the data presentation of herbal medicine research for publication in journals/applications for patents. It will be beneficial for scientists in different disciplines of Pharmacy, Biotechnology and Life Sciences.

Contact: Prof. Grace Rathnam
C.L.Baid Mehta College of Pharmacy,
Jyothi Nagar, Thorapakkam, IT Highway, Chennai-600096
Tel: 91-44-24960151, Fax: 91-44-24960425
E mail: clbmfper_Chennai@rediffmail.com

NOVEMBER 2005

2nd International Āyurveda Congress
(11th -13th November, 2005)

Talkatora stadium, New Delhi

International Congress of *Āyurveda* is dedicated to propagating *Āyurveda* and has been making concerted efforts by way of National & International *Āyurveda* Congresses to achieve a confluence of the minds of the experts in the field, collate their wisdom and spread it among the practitioners and thus enable *Āyurveda* to achieve popularity among the populace.

Contact: The Conference Co-Ordinator
2nd International *Āyurveda* Congress – 2005,
No: 70, J-Block, 15th Main Road, Anna Nagar East,
Chennai – 600 102. Tamil Nadu, India.
Phone : 91-44-26163779, Email : ayurveda@cholayil.com

DECEMBER 2005

National Symposium on "Role of recent Advances in Āyurvedic Drug Standardization"
(16th -18th December, 2005)

The symposium will include plenary lectures on Modern approaches to Herbal Medicine, structural studies on new biologically Active Plant Products. The focus will be on new Analytical techniques in Standardization of Traditional Metallic preparations and on modern spectroscopic techniques in the Standardization of Herbal and Mineral preparations.

Contact :- Mr. V.P.Singh
Dept of Medicinal Chemistry, Faculty of *Āyurveda*
Institute of Medical Sciences, BHU, Varanasi-221005
Tel: 0542-2307547

'Vaidyaratnam' Global Summit on Āyurveda & Expo 05
(8th -11th December, 2005)

Thekkinkad Maidan

The summit will focus on how *Āyurveda* in the present times has tried to evolve a synthesis between traditional technology, with an integration of this life science with other Medical systems.

Contact :-
Vaidyaratnam Oushadhasala
Ollur, Thaikkattussery, Thrissur, 680322.Kerala
Tel:- 0487-2352338,2352398
Fax:- 0487-2355898
E mail: mail@vaidyaratnammoss.com
Website: www.vaidyaratnammoss.com

ABOUT OUR JOINT SECRETARY



Mr. Ajay Sharma, is the President and Director of Shree Baidyanath Āyurved Bhawan Private Limited. Under his leadership Baidyanath has entered into export markets for past 17 years. He is Vice- Chairman of Baidyanath Vishishit Parikshan Vaidya Samiti and 'Director' of Ramsey Pharma Pvt Ltd.

He is actively taking up issues, plaguing the Āyurveda Industry with the concerned departments. Strategically, chosen by the Association as a 3-member team taking up the issue of association with Ministry of Health. He was part of initial team to conceive the idea of 'Medicinal Board' which was accepted by the Government and currently is the biggest thrust area.

With his vast knowledge of Āyurveda his acumen for Āyurvedic business and his philanthropic nature devoted towards promotion and growth of Āyurveda gives him edge to contribute to any organization he is associated with.

Besides being active in Āyurvedic promotional activities, he is actively managing other areas too. He is the Joint Secretary of the Managing Committee of S. N. Joshi Senior Secondary School. He has dedicated his life to SHERPA, 'The Society for Hill Environmental Rehabilitation and Peoples Action.'

AMAM is proud to have him as a Joint Secretary.

MAKE US STRONG, BECOME OUR MEMBER

MEMBERSHIP FORM

CATEGORY OF APPLICANT (Please ✓ the appropriate category)

Affiliated Members

Institutional Members

Institutional Members

Industries involved in manufacture and sale of herbal products or extracts.

Affiliated Members

Regional or provincial Association of Manufacturers of Ayurvedic Medicines.

Name of Association/ Firm/Institution: _____ Mailing Address: _____

Registered Address: _____

Phone No.: _____ Fax: _____ Email ID: _____

Signature & date: _____

Please enclose the Bank Draft in favour of "Association of Manufacturers of Ayurvedic Medicines" payable at New Delhi as per relevant category mentioned below and send the complete form to AMAM's address.

(Bank Draft No. _____ Drawn on (Bank name) _____ dated _____ for Rs. _____)

FOR OFFICIAL USE ONLY

Application Received on _____ Members subscription Received _____ Discussed in the meeting of

Association. Dated _____ Membership No. Allotted _____

MEMBERSHIP FEE

A. Institutional Members

Turn over upto Rs. 10 Crores

Rs. 2500/year

Turn over Rs. 10 Crores and above

Rs. 10000/year

B. Affiliated membership for Organization/Federations

Rs. 10000/year

<input type="checkbox"/>	<input type="checkbox"/>
Approved / Rejected	
Pradeep Multani	
General Secretary	

may be enlarged and xeroxed

FEEDBACK - ON IIND ISSUE OF 'ĀYURVEDA HERITAGE'

(Apr. - Jun. 2005)

- ☐ ...it shall become the foremost publication of Āyurvedic healthcare industry....The various articles covering Diabetes are really very exhaustive and informative, hope that each issue shall be covering a disease. *Ramit gupta, Luxor Biotec Pvt Ltd*
- ☐ It is very informative, It is a welcome news to find the European Union is keenly interested in traditional medicines and laying down directives which will stand scrutiny by all concerned. *Dr. S. Farooq*



ALMONDS ARE GOOD FROM HEAD TO TOE. (AND SKIN, HAIR, HEART AND STOMACH IN BETWEEN).

If you don't believe us, ask the ancient Greeks, Romans, Egyptians, Chinese and Indians.

Over the centuries many wonderful virtues have been attributed to this humble nut. Whatever be the culture, this "fruit of health" was a must for its goodness and medicinal properties. But even among almond lovers what was prized the most was the sweet almond.



And the benefits of this fruit of Gods has continued down to modern times. Sweet almond, being rich in vitamins, minerals and carbohydrates keeps your body warm in winter. It also contains only 7% sugar. Its complex carbohydrates provide bulk and satiety value and take care of constipation and gastric problems. It also regulates blood cholesterol levels, news that'll bring about cheer to patients around the world.



Almonds also make great brain food. Sweet almond oil, when drunk with milk, has the ability to sharpen focus and enhance memory. It is a must for growing children as its high iron content strengthens a child's nervous system, keeping him alert and agile and being an excellent bone developer, helps him grow stronger.



When made into oil, it is the ultimate mantra for beauty conscious women. Being a good source of Vitamin E, it helps keep the skin soft and supple. Almond oil when massaged into the scalp

is a perfect cure for dandruff and keeps the hair manageable. No wonder then, it's a one-stop solution of total healthcare.



As an ancient writer put it, "*carrying a few almonds with you, could lead you to treasure*". We'd like to believe he meant the treasure of good health.



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