

## Review Article

# MAPPING OF GLOBAL REGULATORY REQUIREMENTS FOR TRADITIONAL MEDICINE/COMPLEMENTARY AND ALTERNATIVE MEDICINE(TM/CAM)

George Mathew<sup>\*1</sup>, Joseph Lincy<sup>2</sup>, Kumar Sandeep<sup>3</sup>, Mathew Deepthi<sup>4</sup>

1-Professor, Department of pharmacology, Pushpagiri College of Pharmacy, tiruvalla

2-Professor, Department of Pharmaceutical chemistry, Pushpagiri College of pharmacy, tiruvalla

3-Master in Pharmacy in Pharmaceutics in Jaipur National University,Jaipur

4-Assistant Professor,Department of pharmaceutics,Pushpagiri College of Pharmacy,tiruvalla

Corresponding Author: George Mathew

### ABSTRACT:

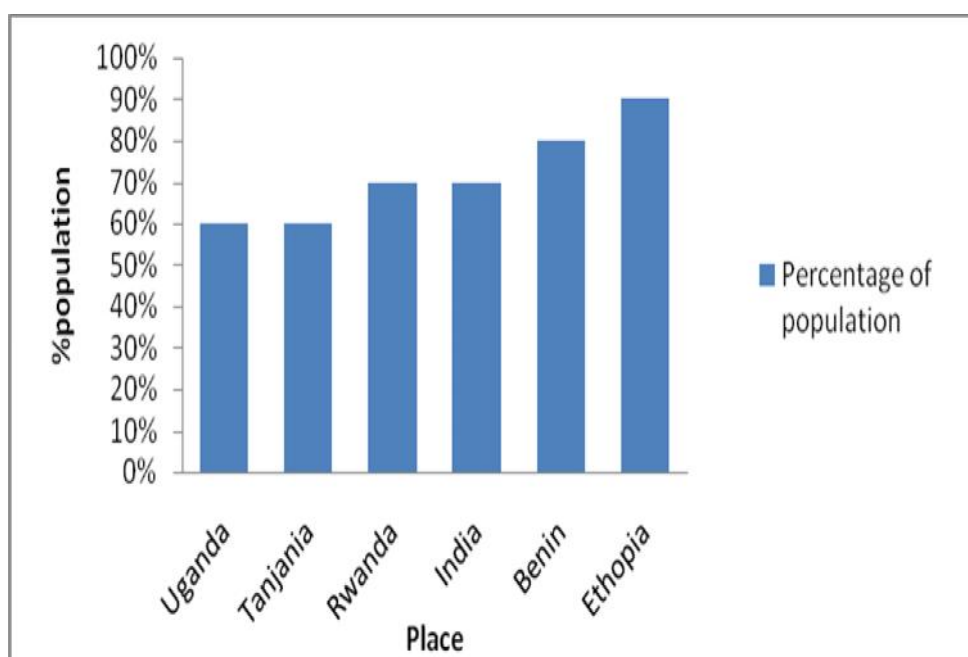
Certain forms of traditional, complementary and alternative medicines play an increasingly important role in health care and health sector reform globally, hence the safety and efficacy, as well as the quality control, of traditional medicine and complementary and alternative medicines have become important concerns for both health authorities and the public. Therapies and theories of TM/CAM differ from country to country and region to region. There is a lack of common standards and understanding and appropriate methods for evaluating traditional medicine to ensure the safety, efficacy and quality control of TM/CAM. Therefore sharing national experience and information is crucial. Countries face major challenges in the development and implementation of the regulation of traditional, complementary/alternative medicines. These challenges are related to regulatory status, assessment of safety and efficacy, quality control, safety monitoring and lack of knowledge about TM/CAM within national drug regulatory authorities. Traditional Medicine(TM) and complementary & alternative medicines (CAM) are attracting more & more attention within the context of health care provisions & health sector reforms. Use of Traditional medicine remains widespread in developing countries, while use of CAM is increasing rapidly in developed countries.

**Key word:** Global requirements, traditional medicine, complementary and alternative medicine

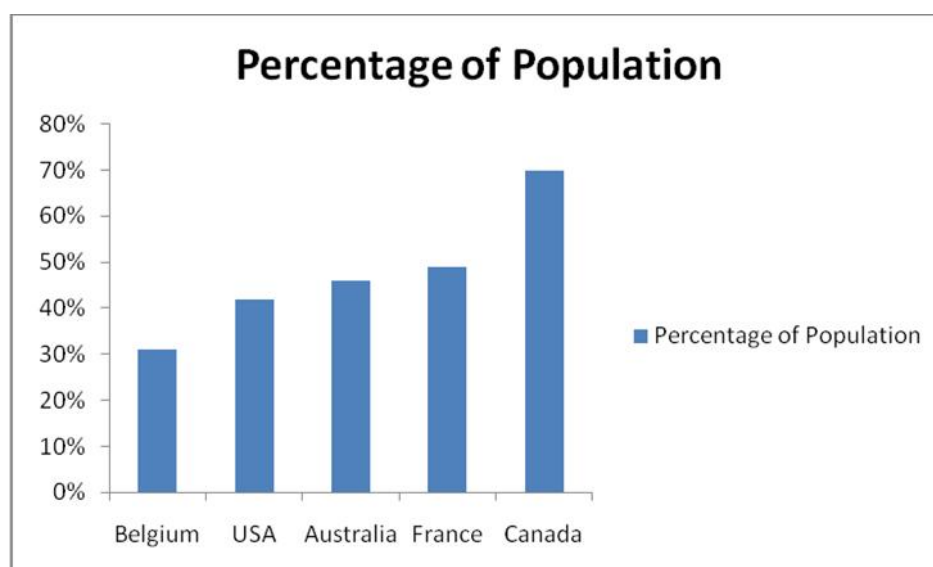
### INTRODUCTION

Certain forms of traditional, complementary and alternative medicines play an increasingly important role in health care and health sector reform globally, hence the safety and efficacy, as well as the quality control, of traditional medicine and complementary and alternative medicines have become important concerns for both health authorities and the public. Therapies and theories of TM/CAM differ from country to country and region to region. There is a lack of common standards and understanding

and appropriate methods for evaluating traditional medicine to ensure the safety, efficacy and quality control of TM/CAM. Therefore sharing national experience and information is crucial. Countries face major challenges in the development and implementation of the regulation of traditional, complementary/alternative medicines. These challenges are related to regulatory status, assessment of safety and efficacy, quality control, safety monitoring and lack of knowledge about TM/CAM within national drug regulatory authorities. Traditional Medicine(TM) and complementary & alternative medicines (CAM) are attracting more & more attention within the context of health care provisions & health sector reforms. Use of Traditional medicine remains widespread in developing countries, while use of CAM is increasing rapidly in developed countries. Countries in Africa ,Asia, and Latin America Chiefly use traditional medicine(TM) to help meet some of their primary health care needs. Even industrialized countries are turning towards TM for health care purposes. TM, thus has not only maintained its popularity in all regions of the developing world, its use is rapidly spreading in industrialized countries which is exemplified from following facts.



**Figure No.1.** Use of TM is extensive in some developing countries



**Figure No.2. Percentage of population which has used CAM at least once in selected developed countries**

The popularity of these medicines can be attributed to many factors such as lower cost, higher accessibility in comparison to modern system of medicine. Further people have perception that traditional system of medicine /complementary and alternative system of medicine having long term usage(age tested) and therefore a safer with less side effects in comparison with the modern system of medicine.[1,2]

#### **TM/CAM in India [3,4]**

In India Traditional Medicine (TM)/Complementary and alternative medicine (CAM) are regulated under Drug and Cosmetic Act 1940 and Rules 1945. For the regulation of TM/CAM AYUSH department is responsible and it covers six main Indian therapies, which are ayurveda, Yoga, Unani for or in the diagnosis, Sidha, Homeopathy and Naturopathy.

#### **TM/CAM in Europe[5]**

Herbal medicinal products fall within the scope of the European Directive 2001/83/CE that foresees that marketing of each medicinal product requires and authorisation to be granted on the basis of results of tests and experimentation concerning quality,safety,and efficacy.

#### **TM/CAM in Malaysia [7]**

The registration and licensing of TM/CAM is legislated through the control of Drugs and Cosmetics Regulations 1984. Regulation for traditional medicines, including herbal medicines and dietary supplements formed part of the Control of Drugs and Cosmetics Regulations in 1984.

**TM/CAM in Australia [6]**

In Australia, Medicinal products containing herbs, vitamins, minerals and nutritional supplements, homeopathic medicines and certain aromatherapy products are referred to as complementary medicines. These are regulated as medicines under the Therapeutic Goods Act 1989. Complementary medicines comprise traditional medicines including traditional Chinese medicines, Ayurvedic medicines, and Australian indigenous medicines.

**TM/CAM in Canada [8]**

The Natural Health Products Directorate (NHPD), a part of the Health Products and Food Branch of Health Canada, is the regulating authority for natural health products for sale in Canada. Products considered to be natural health products are regulated as over-the-counter self-medications under the Natural Health Products Regulations which came into effect in January 2004. These regulations cover all aspects of manufacturing and sale of natural products including the required license, importing, clinical and laboratory studies, labeling and claims.

**TM/CAM in USA [9]**

Complementary and alternative medicine, as defined by NCCAM, is a group of diverse medical and health care systems, practices and products that are not presently considered to be part of conventional medicine. The list of what is considered to be CAM changes continually, as those therapies that are proven to be safe and effective become adopted into conventional health care and as new approaches to health care emerge.

**COUNTRIES PERSPECTIVE****INDIAN PERSPECTIVE**

In India, Traditional Medicine (TM/COMPLEMENTARY & ALTERNATIVE MEDICINE) are regulated under Drug and Cosmetic Act 1940 and rules 1945. For the regulation of TM/CAM AYUSH department is responsible and it covers six main Indian therapies, which are Ayurveda, Yoga, Unani, Siddha, Homeopathy and Naturopathy. Ayurveda, Unani, Siddha, Yoga and Naturopathy come under TM category and Homeopathy comes under CAM category. "Ayurvedic, Siddha or Unani drug" includes all medicines intended for internal or external use, treatment, mitigation or prevention of disease or disorder in human beings or animals, and manufactured

exclusively in accordance with the formulae described in the authoritative books of Ayurvedic, Sidha, and Unani system of Medicine.[10]

**REGULATORY CLASSIFICATION:**

**TRADITIONAL MEDICINE(TM)**

- AYURVEDIC MEDICINE
- SIDHA MEDICINE
- UNANI MEDICINE

**COMPLEMENTARY & ALTERNATIVE MEDICINE (CAM)**

- Homeopathic Medicine

Other herbal medicines are regulated under modern system of medicine

**REGULATORY REQUIREMENT FOR REGISTRATION OF TM/CAM**

In India the TM/CAM can be registered under following categories:

**Classical Ayurvedic,Sidha & Unani Product:**

Classical Ayurvedic medicines are those medicines which contain ingredients which are listed in respective Authoritative books and also the formulation is listed in these authoritative books.

**Proprietary Ayurvedic,Sidha & Unani Product:**

Proprietary ASU medicines are those medicines which contain ingredient which are listed in respective Authoritative books but their composition, manufacturing process and formulation complies with in house specification & has in house composition and manufacturing process.

**Modern drug (other than in Schedule C, C1&X):**

Herbs which are not listed in the 54 Authoritative books and regulated under Modern drugs and manufacturing license is granted in Form -25.

**Homeopathic Medicine:**

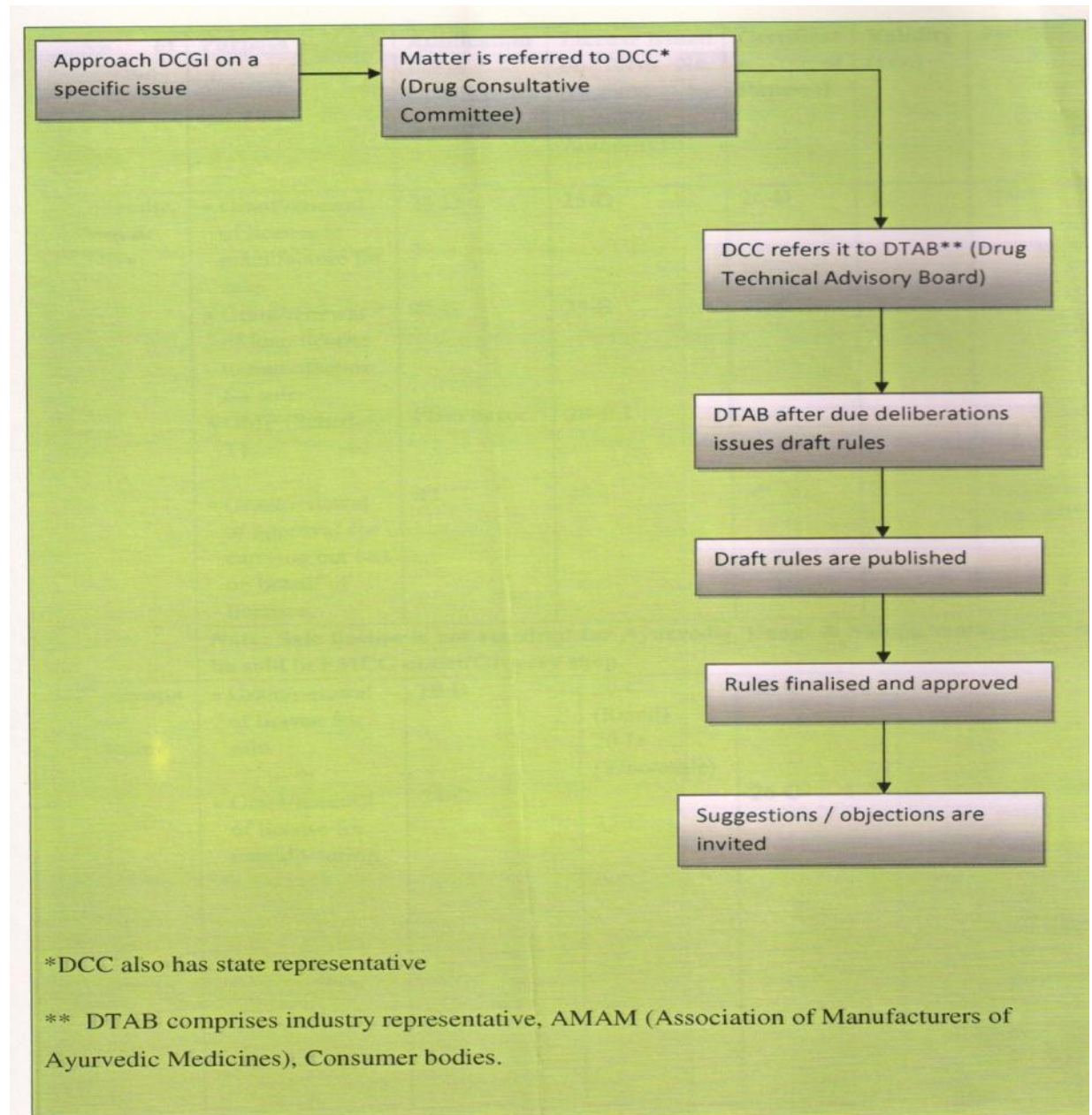
When a drug product qualify then definition of Homeopathic medicine as given in Rule 2dd of Drugs and Cosmetic Act 1940.

**New Homeopathic Medicine**

The drug which qualify the definition of New Homeopathic medicine as given in Rule 30AA of Drugs & Cosmetic Act and Rules 1945.To import a New Homeopathic medicine,the importer have to submit the requirements mentioned in schedule D1 & D11.

Regulatory Process

Figure no.3



**Licensing Requirements for Manufacture,sale and Distribution 1****Table no-1**

Class of Medicine	Purpose	Applicati on Form	License issued on Form No.(Grant ed by Licensing Authority)	Certifica te of Renewal	Validity(yr s)	Fee(Rs)
Ayurvedic,Un ani & Siddha	Grant/renewal of license to manufacture for sale	24-D	25-D	26-D	3	101000
	Grant/renewal of loan license to manufacture for sale.	25-E	25-E	26-E	3	600
	GMP(schedule T)	Plain Paper	26-E-1	-	-	-
	Grant/renewal of approval for carrying out test on behalf of licensee	47	48	49	3	Inspection Fee-6000
	Note:Sale license is not required for Ayurvedic,unani & Siddha medicine,so can be sold in FMCG outlet/Grocery shop.					
Homeopathic Medicine	Grant/renewal of license for sale	19-B	20C(Retail ) 20D(Whol e sale)	20-E	5	250
	Grant/renewal of license for manufacturing	24-C	25-C	26-C	5	200+100(Inspecti on fee) 50(Inspection for renewal of license

**Sale and Distribution:**

For sale and distribution of Ayurvedic,Siddha and Unani medicines sale-license is not required so can be sold in grocery shop/FMCG outlets.In case of Homoeopathic



medicine, sale license is required and medicines are sold in specific pharmacy outlets. In most of the cases doctors prescribe and give homeopathic medicine to their patient.

### **Advertising 10**

Advertising of TM/CAM is similar to that of conventional pharmaceuticals and is regulated under the Schedule-J of Drugs and Cosmetics Rule 1945 and the Drug and Magic Remedies Act 1954 of Drugs and Cosmetics Act 1940

### **European Perspective**

Herbal medicinal products fall within the scope of the European Directive 2001/83/EC that foresees that marketing of each medicinal product requires an authorisation to be granted on the basis of results of tests and experimentations concerning quality, safety and efficacy.

### **Regulatory Classification[ 24]**

Table no-2

Category	Subcategory	Legal basis	Main characteristics
HMP with MA	Full dossier new MA, (DCP, MRP, CP)	§8(3) directive 2001/83/EC	Full CTD including safety /efficacy data
Bibliographic application (well established use), (MRP, DCP)		§10a directive 2001/83/EC WEU defined by Annex 1 of 2001/83/EC amended by 2003/63/EC	No individual but bibliographic safety/efficacy data (mixed applications possible)
HMP with simplified registration	Registration as Traditional herbal medicinal product (THMP)	§16a directive 2001/83/EC amended by 2004/24/EC	Full quality part, safety replaced by expert statement, efficacy replaced by traditional use (30/15 years)
Homeopathic MP Anthoposophic MP (treated legally as Homeopathic according directive 92/73/EEC)		§ 14-15 directive 2001/83/EC	Simplified registration, no individual safety/efficacy data
HP outside medicine legislation	Food supplements Cosmetic Products consumer goods	E.g. 178/2002/EC for demarcation foodstuffs-MP, 2002/46/EC for food supplements: Cosmetic Directive 76/768/EEC+93/35/EEC	Mainly notification only



**GMP Requirements:**

The compliance with GMP(including Directive 2003/94/EC) will be required.GMP will also apply to herb active ingredients used as active substances.There will be a requirement to hold a manufactures Licence and/or WholesaleDealers Licence as Appropriate.

**Labelling Requirements:**

In addition to the provisions laid down in articles 54-65 of Directive 2001/83/EC,any labelling and user package leaflet shall contain a statement to the effect that:

- The product is a traditional herbal medicinal product for use in specified indications exclusively based upon longstanding use
- The user should consult a doctor or a qualified health care practitioner if the symptoms persist during the use of the medicinal product or should adverse effects not mentioned in the package leaflet occur.

**Australian Perspective**

In Australia, medicinal products containing herbs, vitamins, minerals, and nutritional supplements, homeopathic medicines and certain aromatherapy products are referred to as complementary medicines. These are regulated as medicines under the Therapeutics Goods Act1989.Complementary medicines comprise traditional medicines, including traditional Chinese medicines, Ayurvedic medicines and Australian indigenous medicines.

**Registration of Complementary Medicine[11]**

Complementary medicine in Australia can be registered under following categories depending upon the rules applied:

a) As Registered medicine (AUST-R)

b) As Listed medicine

A) Registered Complementary medicine

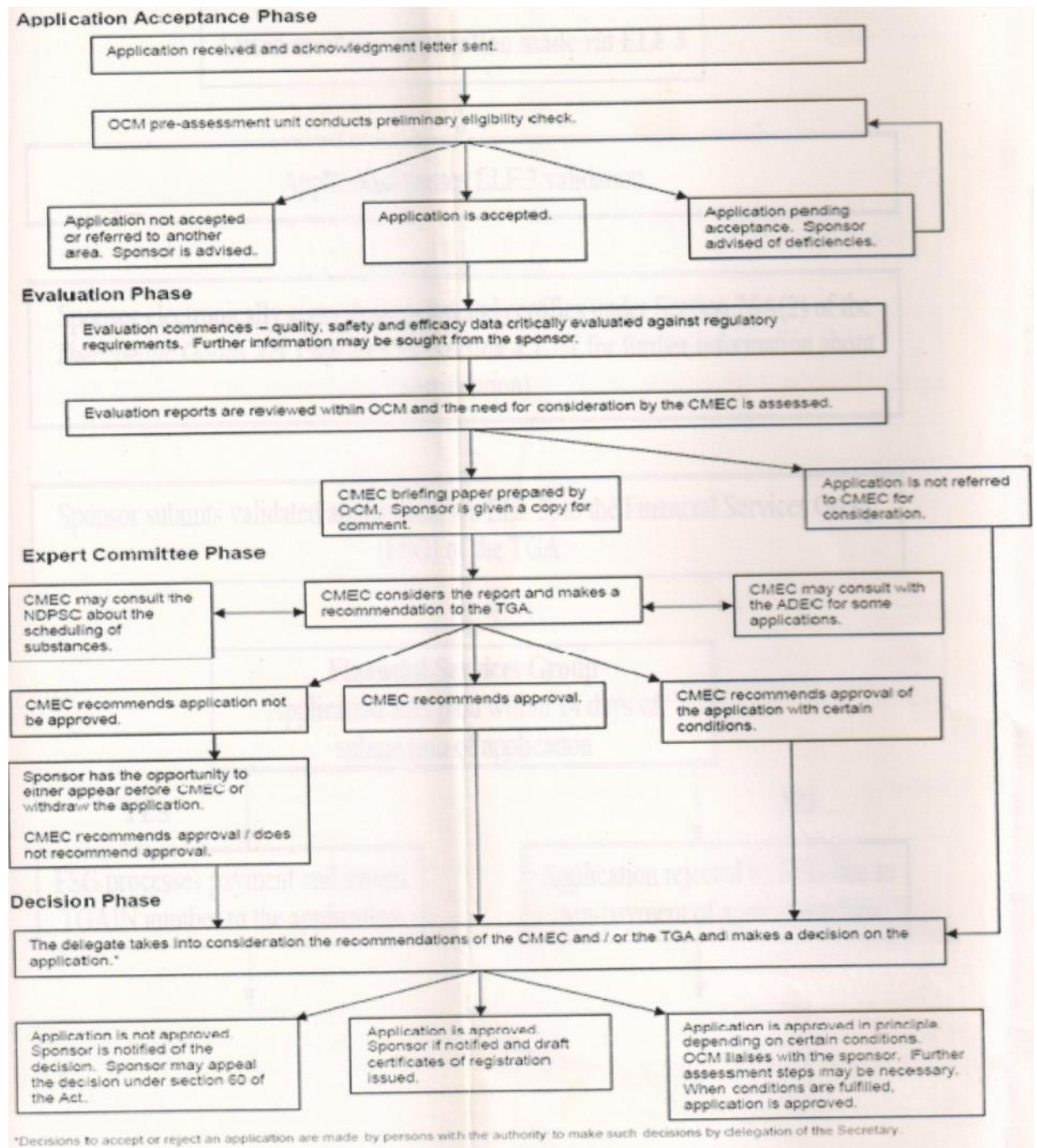
- Registration is similar to modern medicine
- The licensing and audit of manufactures
- Pre-market assessment of the products
- Post market activities

B) Listed complementary Medicine

- Listed medicines may be supplied following application to the TGA by the sponsor
- Self certification by sponsor
- Validation by TGA that certain Key requirements of the legislations are being met.

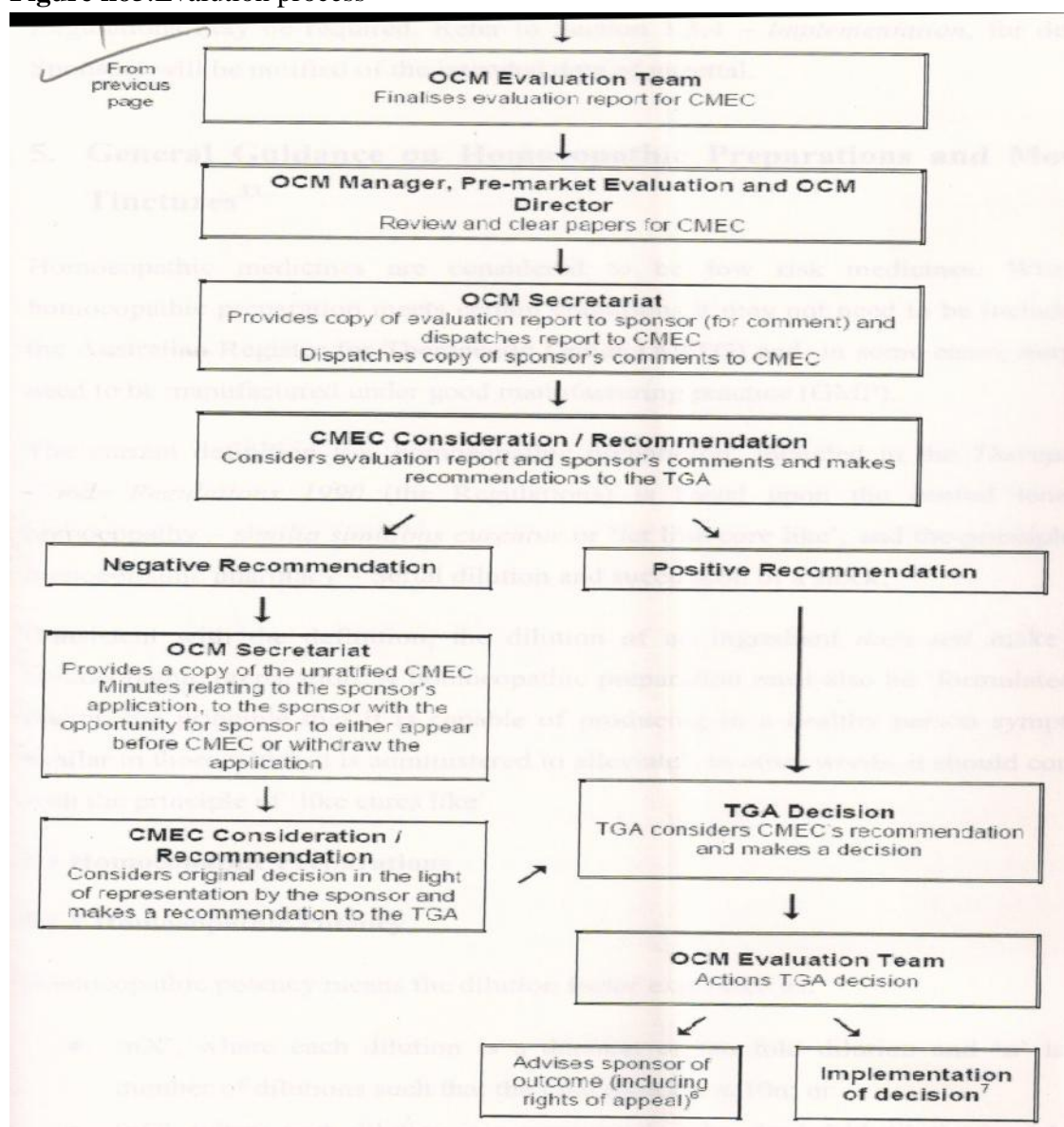
## Registration Process

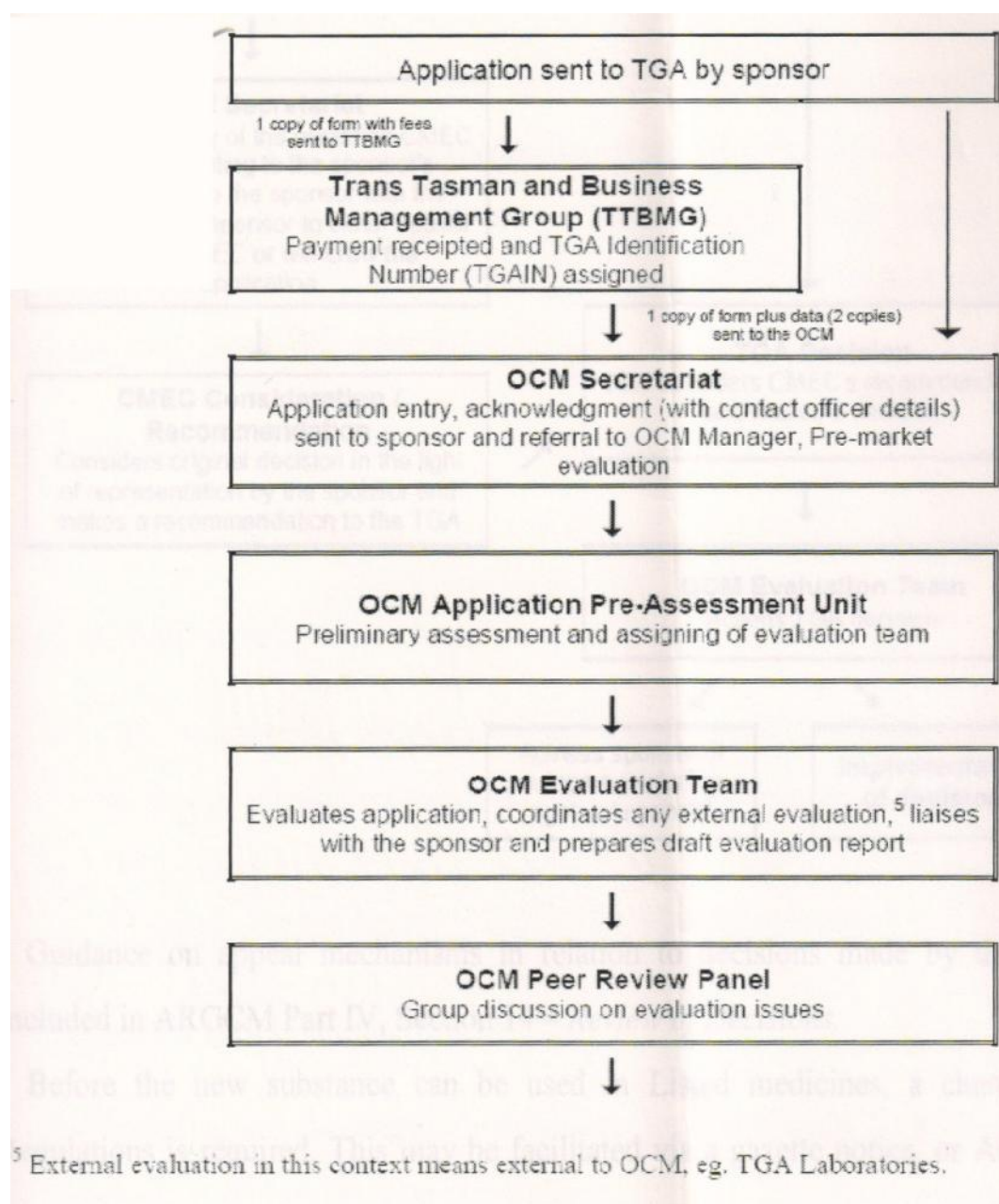
Figure No.4 Registration Process flow chart



**Evaluation Process of Complementary medicine[ 12]**

The following flow chart illustrates the stages through which an application for the evaluation of a new substance progresses within the Therapeutic Goods Administration (TGA). Applications for new substances evaluated through the office of Complementary Medicines (OCM/Complementary medicines Evaluation committee (CMEC)) route have taken approximately 8 months from the receipt of the application to review by CMEC.

**Figure no5:** Evaluation process



### Malaysian Perspective

National policy on TM/CAM, which was launched in the year 2001. The registration and licensing of TM/CAM, is legislated through the control of Drugs and Cosmetics Regulations 1984. Traditional medicines are allowed to be sold as over-the-counter medicines. Traditional and complementary Medicine practice together is other than



practice of medicine or surgery, by registered medical practitioners as defined in medical act 1971.[ 13 ]

**1. Regulatory Classification:**

Traditional/complementary medicine classified into

**Traditional Malay Medicine [14]**

Malay traditional medicine is a field of knowledge and practices which cover aspects of health and healing which was practiced from generation to generation.

**Traditional Chinese medicine[ 15]**

Traditional Chinese medicine has a history of over 4000 years in China and in recent times, it has expanded rapidly in most countries. There has been a similar increase in the practice of other aspects of Traditional Chinese medicine, including herbal medicine, therapeutic massage, manipulation, dietary therapy and exercise therapy.

**Traditional Indian medicine [6]**

The Indian system of medicine, prevalent about 1500 years over south-east Asia, comprises of 3 major systems namely Ayurveda, Siddha and Unani. Traditional Indian Medicine developed in a 3 phases: prehistoric or pre-vedic, vedic, ayurvedic. Records of ancient Hindu medicine are found in the Artharva-veda, Ayurveda, Charaka Samhita and Sushruta samhita

**Homeopathy[ 17]**

Homeopathy is derived from the Greek word “Homeos” meaning similar and “Pathos” meaning suffering. National centre of Complementary Alternative medicine defines the homeopathy as a system of medicine that is based on the Law of similar.

**Registration and quality control of TM products :[18]**

The Malaysian government imposed the control of Drugs and Cosmetics Regulation 1984 in the year 1992, whereby all herbal products intended to be produced, imported and sold for human consumption must be registered with the Malaysian Ministry of Health in order to ensure and control the quality, safety and efficacy of the herbal products. Exceptionally, in some countries, herbal medicines may also contain, by tradition, natural organic or inorganic active ingredients which are not of plant origin. Currently every registered traditional medicine product bears the registration

number on its label or package, starting with PBKD or MAL and ending with T which denotes it is a traditional medicine product.

### **Canadian Perspective**

**The** Natural Health Products Directorate, a part of the Health Products and Food Branch of Health Canada, is the regulating authority for natural health products for sale in Canada. Products considered to be natural health products are regulated as the over the counter self medications under the Natural Health products Regulations (NHPR) which came

### **Requirements for product Registration [19]**

#### **1. Product Licensing**

All natural health products require a product license before they can be sold in Canada. Obtaining a license requires submitting detailed information on the product to Health Canada, include medicinal ingredients, source, potency, non-medicinal ingredients and recommended use.

#### **2. Site licensing [20]**

A system of site licensing requires that all Canadian manufacturers, packagers, labellers and importers of natural health products be licensed. Sites must have procedures in place respecting distribution records and product recalls and for the handling, storage and delivery of their products, and demonstrate that they meet good manufacturing practice requirements.

#### **3. Good manufacturing Practices [21]**

Good manufacturing practices (GMPs) for natural health products must be employed to ensure product safety and quality. This requires that appropriate standards and practices regarding product manufacture, storage, handling and distribution of natural health products be met.

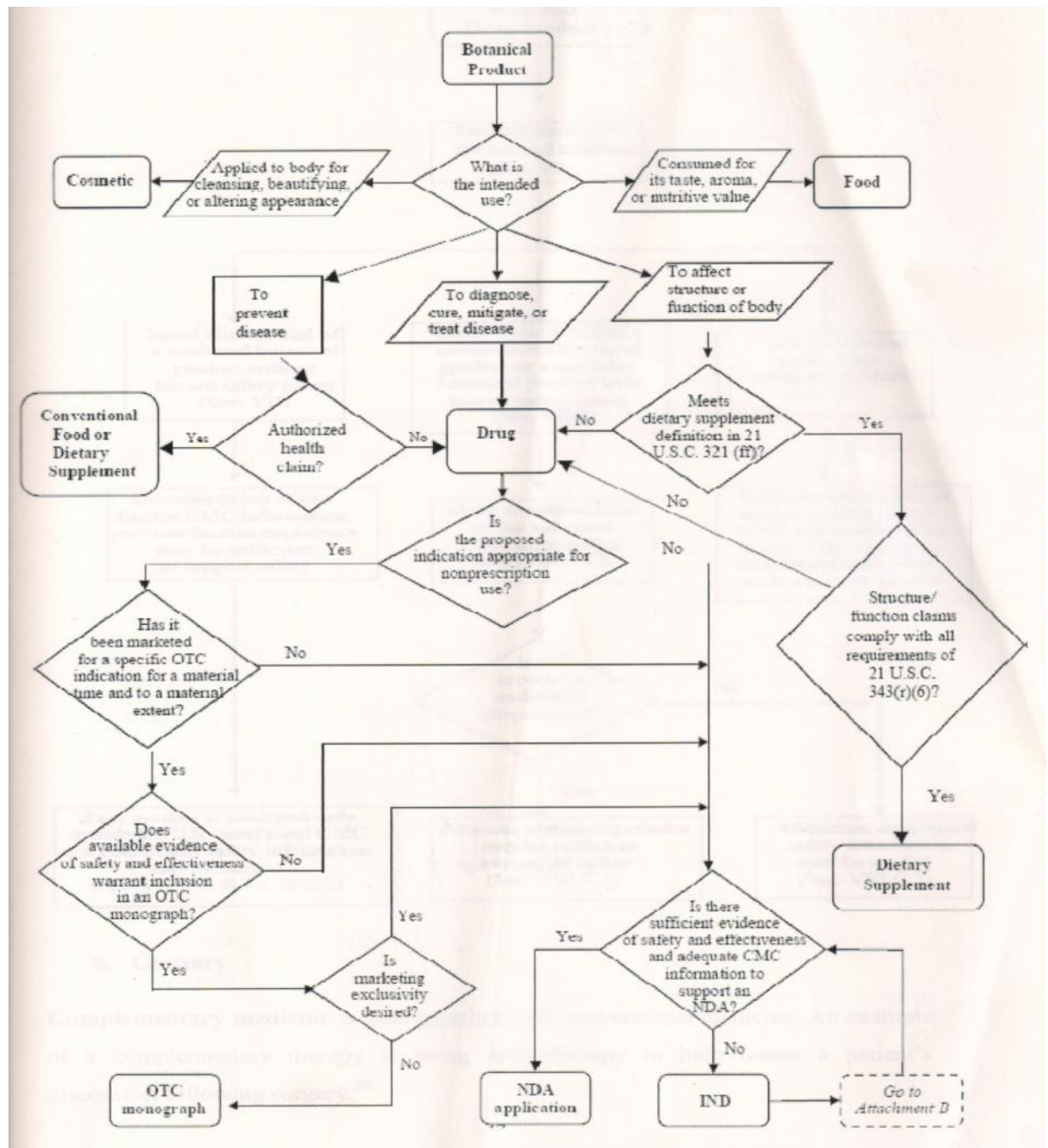
#### **4. Clinical Trials [22]**

A Clinical trial is an investigation of a natural health product that involves human subjects and is intended:

- To discover or verify the products clinical, pharmacological or pharmacodynamic effects
- To identify any adverse events that are related to its use; to study its absorption, distribution, metabolism and excretion

Regulatory Approaches for marketing Botanical Drug products[ 25,26]

Figure 6:Regulatory process



- To ascertain its safety or efficacy



**5. Labelling and Packaging[ 23]**

Standard labelling requirements are established to ensure consumers can make informed choices.

**USA Perspective**

Complementary and alternative medicine, as defined by NCCAM, is a group of diverse medical and health care systems, practices and products that are not presently considered to be part of conventional medicine.

**Regulation of CAM under NCCAM[ 24]**

NCCAM classify the CAM medicine but the product can be register under the category(Drug and New-drug, Food, Food additive, Dietary Supplementary, cosmetic, Device , or as Biological product) depending upon the intended use of product. Botanical products, depending on the circumstances,may be regulated as drugs,cosmetics,dietary supplements,or foods. All four types of products are subjected to the Act 51.Regulatory requirements for registration of CAM are same as for conventional/modern pharmaceuticals.

**CONCLUSION**

The usage of Traditional Medicines/Complementary and Alternative Medicines has grown globally. Almost half of the population of many industrialized countries regularly uses some form of the CAM or the other. Nature has the cure for all diseases including the serious disease such as cancer, AIDS, and therefore research on TM/CAM will help us to get solution for such diseases. With strong regulation coming in place, TM/CAM will find a respectable status in the healthcare system providing health solution which does not have cure in the modern system of medicine. This will also opens up opportunities for the pharma companies to enter into development of research and technology based TM/CAM giving the patients the confidence for safe and effective medicines.

**REFERENCE**

1. Report of a WHO Global survey:National Policy on Traditional medicine and regulation of Herbal medicine,May-2005
2. WHO Traditional medicine strategy 2002-2005
3. <http://www.globinmed.com/IMR content/tcmHome.aspx>
4. Drug & Cosmetic Act 1940 and Rules 1945.
5. <http://cdsco.nic.in/html/copy%20of%201.%20D&CAct121.pdf>
6. M.Silano etal:The new European legislation on traditional herbal medicines:main features and perspectives,Fitotrpia75(004),107-116.
7. <http://www.tga.gov.au/cm/cmreg-aust.htm>

8. Presentation on Drug registration in Asean countries, Dr. G V R Joseph, Asst. Director, MHFW, Govt. of India.
9. [http://www.globinmed.com/IMR\\_content/regulationDetail.aspx?id=CTN00395](http://www.globinmed.com/IMR_content/regulationDetail.aspx?id=CTN00395)
10. 9. Get the Facts NCCAM. <http://cim.ucdavis.edu/clubs/camsig/whatiscam.pdf>
11. Drug & Cosmetics Act 1940 and Rules 1945.  
<http://cdsco.nic.in/html/copy%20of%201.%20D&CAct121.pdf>
12. 11. <http://www.tga.gov.au/cm/cmreg-aust.htm>
13. ARGCM Part III-Evaluation of Complementary medicine substances  
<http://www.tga.gov.au/docs/pdf/argcmp2.pdf>
14. 13. [http://tcm.moh.gov.my/modules/xt\\_conteudo/index.php?id=24](http://tcm.moh.gov.my/modules/xt_conteudo/index.php?id=24)
15. 14. [http://tcm.moh.gov.my/uploads/traditional\\_malay\\_medicine.pdf](http://tcm.moh.gov.my/uploads/traditional_malay_medicine.pdf)
16. [http://tcm.moh.gov.my/uploads/traditional\\_chinese\\_medicine.pdf](http://tcm.moh.gov.my/uploads/traditional_chinese_medicine.pdf)
17. [http://tcm.moh.gov.my/uploads/traditional\\_indian\\_medicine.pdf](http://tcm.moh.gov.my/uploads/traditional_indian_medicine.pdf)
18. 17. [http://tcm.moh.gov.my/uploads/homeopathy\\_edit.pdf](http://tcm.moh.gov.my/uploads/homeopathy_edit.pdf)
19. 18. Jamia Azdina Jamal, malay traditional medicine, tech monitor, 37-49, nov-dec 2006.
20. 19. [http://www.hc-sc.gc.ca/dhp-mps/alt\\_formats/hpfb\\_dgpsa/pdf/prodnatur/regularegle\\_over-apercu\\_eng.pdf](http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb_dgpsa/pdf/prodnatur/regularegle_over-apercu_eng.pdf)
21. 20. <http://www.hc-sc.gc.ca/dhp-mps/prodnatur/about-apropos/index-eng.php>
22. 21. <http://www.hc-sc.gc.ca/dhp-mps/prodnatur/legislation/docs/gmp-bpf-eng.php>
23. [http://www.hc-sc.gc.ca/dhp-mps/prodnatur/legislation/docs/clin\\_trials-essais\\_nhpps-eng.php](http://www.hc-sc.gc.ca/dhp-mps/prodnatur/legislation/docs/clin_trials-essais_nhpps-eng.php)
24. <http://www.hc-sc.gc.ca/dhp-mps/prodnatur/legislation/docs/labelling-etiquetage-eng.php>
25. Draft guidance on industry <http://www.fda.gov/OHRMS/DOCKETS/98FR/06D-0480-GLD0001.pdf>
26. <http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidance/UCM070491.pdf>