

# European Herbal & Traditional Medicine Practitioners Association

# THE CORE CURRICULUM FOR HERBAL & TRADITIONAL MEDICINE

**Producing Safe and Competent Practitioners** 

**SECOND EDITION** 

October 2007

Written by the Education Committee of the European Herbal & Traditional Medicine Practitioners Association 2006

Edition Two of the Core Curriculum, September 2007, replaces anything previous and contains changes introduced during recent years. Further revisions have been made following a peer review of Ayurveda and a review undertaken by a sub committee of the Education Committee of clinical outcomes and associated minimum clinical hours.

Next review date: Summer 2009

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#### Introduction

This document contains the common core curriculum of the European Herbal & Traditional Medicine Practitioners Association Education Committee. It is the result of wide consultation between the various traditions to determine the shared components of herbal and traditional medicine practice and the content necessary to provide education and training in those components. This Core Curriculum is applicable to all education/training programmes offering study of herbal and traditional medicine.

In addition, there are separate modules which identify the requirements of each specific traditional form of practice, formally referred to as the 8<sup>th</sup> Elements included in Module 8A-D.

The Core Curriculum is part of a wider process of accreditation and forms the skeleton around which the delivery of a programme leading to the practice of herbal and traditional medicine should take place. As such it delineates the minimum outcomes that should be achieved by students. In terms of content, institutions are encouraged to go beyond those specified here in the detailed delivery of the programmes they offer.

It is recognised that each institution would wish to retain its own identity and unique emphasis. The Core Curriculum therefore aims at making the requirements specific, while retaining the flexibility for each institution to incorporate the contents into its own curriculum design. The Accreditation Board encourages institutions to develop programmes within the framework of the Core Curriculum and to justify its approach against its requirements. Note however, that in all cases, the <u>majority</u> of programme content must reflect the specific tradition being accredited.

The demanding of minimum programme-content requirements is part of a process of accreditation by which the EHTPA can ensure competent, safe, effective practitioners aware of the breadth and limitations of herbal and traditional medicine practice.

#### **Contents**

The Core Curriculum consists of the following nine modules:

Module 1. **Human Sciences** Module 2. Nutrition Module 3. Clinical Sciences Module 4. Plant Chemistry and Pharmacology Module 5. Pharmacognosy and Dispensing Practitioner Development and Ethics Module 6. Module 7. Practitioner Research Module 8. Tradition specific curriculum content \* Module 9. Clinical Practice

\* Module 8 identifies tradition specific content which must be included by any given institution into their chosen curriculum. Mandatory curriculum content for each tradition is produced by the appropriate professional body/ies. The tradition specific content for Ayurvedic, Chinese, Tibetan and Western medicine are appended here.

#### **Study Time**

The following table gives the *minimum* number of hours to be incorporated into the programme to be accredited.

| MODULE                              | HOURS |
|-------------------------------------|-------|
| Human Sciences                      | 250   |
| Nutrition                           | 80    |
| Clinical Sciences                   | 350   |
| Plant Chemistry and Pharmacology    | 80    |
| Pharmacognosy and Dispensing        | 100   |
| Practitioner Development and Ethics | 150   |
| Practitioner Research               | 150   |
| Clinical Practice                   | 500   |
| The Specific Herbal Tradition       | 1,150 |
| TOTAL                               | 2,810 |

Within these minimum totals, the relationship between contact hours and home-study hours will depend on the design of the programme and the previous learning and experience of the students. It is for each institution to justify in educational terms the hours allocated within modules and teaching/learning approaches used.

In the case of the clinical-practice module, it is required that 50% or more of the module hours will be spent on clinical work in direct proximity to patients. Remaining clinical hours may consist of case discussions, elaborating diagnoses, researching treatments, writing up cases, and other clinically relevant activities. Note that all clinical practice hours must be undertaken in an approved clinical learning environment, under the direction of the Clinic Supervisor and directly relate to the achievement of the clinical module learning outcomes.

#### Levels

Each module of the Core Curriculum is assigned a minimum level using a taxonomy of assessment domains. The use of minimum levels allows institutions some flexibility in curriculum design and in the educational nature of their programmes. The levels refer to the National Qualifications Framework of the Quality Assurance Agency.

#### Assessment

Each institution is required to present an assessment strategy for the programme as a whole, alongside a detailed account of the assessment process for each module.

The EHTPA does not impose any particular assessment techniques but will seek evidence from the institution to ensure that:

- Module learning outcomes are assessed;
- Assessment techniques reflect the academic level of each module;
- A variety of strategies are used;
- Both formative and summative assessment is incorporated within modules;
- Practice is underpinned by relevant theory;
- Students failing to progress satisfactorily are identified and remedial help given;
- Only safe competent practitioners complete the programme;
- Clinical progression from novice to competent practitioner can be demonstrated;
- Assessment is carried out by suitably qualified and experienced assessors.

Students are expected to develop the ability to deal confidently with the complexities and contradictions that arise in clinical practice. Students must show awareness of the ethical dilemmas which may occur in their work, and must be able to formulate solutions to these.

Documentation for the assessment of practice should clearly demonstrate that clinical skills are performed consistently and with confidence. <u>Criteria</u> for success and failure should be made explicit. By the end of their supervised clinical practice students must be able to demonstrate that they are ready to practise herbal medicine independently.

Please note: External Examiners are required to comment upon both academic and clinical outcomes and standards achieved.

## Module 1: Human Sciences

**Minimum Hours: 250** 

#### **Aims**

To provide an integrated programme in those aspects of normal anatomy, physiology and biochemistry that are essential for understanding the causes, mechanisms, clinical features and diagnosis of disease as understood by biomedicine.

To provide a foundation for the core syllabus for clinical sciences.

Minimum Level: 4 (HE certificate)

#### **Learning Outcomes**

By the end of the programme, the student will be able to:

- 1. Explain the fundamental biochemical and physical terms related to the human body.
- 2. Describe the components of normal cells and their functions.
- 3. Explain the cellular basis of genetics and the patterns of inheritance.
- 4. Describe the structure and functions of the tissues of the body.
- 5. Demonstrate knowledge of the underlying concepts of the essential metabolic processes in the body, their integration and control.
- 6. Explain the structure and function of the physiological systems of the body.

#### **Outline of Syllabus Contents**

- 1. Structure and functions of the cells and their components.
- 2. Structure and functions of tissues: epithelium, connective, membranes.
- 3. Structure and functions of biomolecules: carbohydrates, lipids, proteins, co-factors, enzymes.
- 4. The metabolism of carbohydrates, lipids and proteins including control and integration.
- 5. Structure and functions of the musculoskeletal system: bones, joints, muscles, ligaments.
- 6. Structure and functions of the nervous system: central and peripheral systems, autonomic nervous system, sense organs.
- 7. Structure and functions of the endocrine system: hypothalamus and the pituitary gland, thyroid gland and adrenal glands, feedback control.
- 8. Structure and functions of lymphatic system: the lymphoid tissues and lymphatic circulation, natural (innate) resistance to disease, immunity.
- 9. Structure and functions of the cardiovascular system and in addition components of blood and blood clotting.
- 10. Structure and functions of the respiratory system.
- 11. Structure and functions of the digestive system.
- 12. Structure and functions of the genito-urinary system and in addition prenatal and postnatal growth and development.

## **Indicative Reading**

Tortora, Gerard J. et al., 2006. *Principles of Anatomy and Physiology*, 11<sup>th</sup> edition, + CD Rom. John Wiley and Sons.

Maribe, Elaine, editor, 2005. *Essentials of Human Anatomy and Physiology*, + CD. Addison-Wesley.

Moore Dalley, 2005. Clinically Oriented Medicine. Lippincott, Williams, Wilkey

Edwin R. Chilvers, et al, 2002. *Davidson's Principles and Practice of Medicine* 19<sup>th</sup> edition. Churchill Livingston.

Richarson, Haynes, Straus, Glazniou, 2005. *Evidence Based Medicine*. London: Churchill Livingston.

# Module 2: Nutrition Minimum Hours: 80

# Out of Date. Refer to Appendix 1, page 110 for current version Aims

To provide a comprehensive understanding of the foundations of nutrition and diet as a means for the maintenance of good health and treating disease. Included in this would be an understanding of the effects of food and diet on specific body systems and disease processes whilst underscoring the holistic aspects of this type of approach.

To provide a perspective on the possible interactions between foods, herbal supplements and drugs, with an emphasis being placed on the safe limitations of their usage including nutrient/drug/herb and food interactions.

To allow practitioners to use an understanding of nutrition as an essential part of their existing discipline.

**Minimum Level**: 4 (HE certificate)

#### **Learning Outcomes**

By the end of the programme the student will be able to:

- Describe the structural characteristics and function of a range of key macronutrients and micronutrients.
- 2. Describe processes involved in the catabolism of food components.
- 3. Explain terms used in Western nutrition and dietetics.
- 4. Discuss the effects of food additives, processing and drugs on nutrition.
- 5. Evaluate dietary assessment methodologies.
- 6. Discuss the similarities and differences between different dietary approach.
- 7. Demonstrate knowledge of the underlying concepts of dietary needs at different stages of development.
- 8. Discuss relationships between diet and disease.
- 9. Recommend and justify suitable diets for individual cases.

#### **Outline of Syllabus Contents**

- 1. Structural characteristics and function of polysaccharides, proteins, enzymes, nucleic acids and lipids. The nature and importance of essential amino and fatty acids in the diet.
- 2. Metabolic routes used in catabolism of components of foods.
- 3. Energy value of foods.
- 4. The importance of physiological systems in nutrition.
- 5. Terms used in Western dietetics to include: RDA, RDI, DRV, EAR, LRNI, RNI, safe intakes, BMR, BMI, PAL and bioavailability.
- 6. Government papers on diet and nutrition. Methods for assessing biochemical and clinical nutritional nutritional
- 7. The nature, occurrence, role and effects of deficiency of micro nutrients.
- 8. Nutrition at cellular level. The importance of fibre and water in the diet.
- 9. The effects of drugs, alcohol, smoking and food additives on nutrition.

#### Out of Date. Refer to Appendix 1, page 110 for current version

- 10. Dietary assessment methodologies such as weighed dietary and portion records, questionnaires and surveys, food tables.
- 11. Diet as prevention culture and cuisine.
- 12. Types of food, preparation, storing.
- 13. Effect of environment, age, work on nutrition.
- 14. Comparative philosophies of nutrition: Western scientific, naturopathic, macrobiotic, traditional Chinese medicine, Ayurveda, etc.
- 15. Diets for individual specific cases.

#### **Indicative Reading**

Hunt, S.M et al, 1980. Nutrition: Principles and Clinical Practice, John Wiley and Sons

Zeman, Frances J., and Nev, Denise, 1990. Clinical Nutrition and Dietetics. Macmillan.

Balch, P., and Balch, J., 2001. *Prescription for Nutritional Healing*. Avery (Penguin) New York.

Werbach, Melvyn R , 1996. *Nutritional Influences on Illness, A Sourcebook of Clinical Research.*, Third Line Press.

Pitchford, Paul, 2002 *Healing with Wholefoods, Oriental Traditions and Modern Nutrition*. North Atlantic Books.

Ballentine. Rudolph M.., 2008. *Diet and Nutrition*. Himalayan Institute Press. ISBN 0-89389-048-0

Newman-Turner, R., 1984. Naturopathic Medicine. Harper Collins. ISBN 0-7225-0785-2

Lindlahr. Henry, M.D., 1975, 1984, 1997. *Natural Therapeutics*.. (Volume 1: Philosophy ISBN 0-85207-159-0, Volume 2: Practise.. ISBN 0-85207-148-5, Volume 3: Dietetics ISBN 0-85207-154-X.). Saffron-Walden: C.W. Daniel.

Johns, Timothy, 1990. The Origins of Human Diet and Medicine. University of Arizona Press

Zimmermann, Michael, 2001. Burgerstein's Handbook of Nutrition: micronutrients in the prevention and therapy of disease. Thieme.

### **Module 3: Clinical Sciences**

Minimum Hours: 350

#### **Aims**

To provide an integrated programme in clinical sciences aimed at outlining the common diseases, their causes, mechanisms, clinical features and diagnosis.

To provide experience of case-history taking and physical examination.

To provide students with a foundation from which to compare and contrast this knowledge with their own approach to medicine and to communicate effectively with practitioners of orthodox medicine.

To enable students to develop an understanding of the limits of their own medical capabilities and thereby enhance the skills of appropriate referral.

Minimum Level: 5 (HE diploma)

#### **Learning Outcomes**

By the end of this programme, the student will be able to:

- 1. Evaluate the diagnostic techniques and clinical applications in orthodox medical practice and compare and contrast them with their own medical equivalent.
- 2. Analyse the distribution of disease in the community and the approach to prevention from the orthodox and holistic points of view.
- 3. Explain how normal cell and tissue structure and function can change to produce genetic changes, abnormal cell growths, tissue injury, inflammation and repair.
- 4. Demonstrate a knowledge and critical understanding of the general nervous, endocrine and metabolic responses to ageing, stress and tissue injury.
- 5. Apply the underlying concepts and principles of infection and the ways in which alterations in natural and acquired defences (immunity) can lead to disease.
- 6. Discuss the consequences of changes in the circulation, resulting from vascular narrowing and obstruction, fluid excess and loss and organ failure.
- 7. Demonstrate a knowledge and critical understanding of diseases leading to the differential diagnosis of common symptoms and signs affecting the covering and support systems of the body (skin, joints and bone), control systems (nervous and endocrine systems) and maintenance systems (cardiovascular, respiratory, gastrointestinal and urinary systems).
- 8. Interpret basic pathology laboratory data and results of investigative procedures.
- 9. Demonstrate a knowledge and critical understanding of the actions and side-effects of the major classes of orthodox drugs and how to access drug information (use of National Formularies etc.).

#### **Outline of Syllabus Contents**

#### 1. The orthodox medical model:

Causes and mechanisms of disease, describing diseases, the principles of differential diagnosis.

#### 2. Disorders of cells:

Genetic diseases. Disorders of cell growth; abnormal growth, benign and malignant tumours. Cancer, epidemiology, clinical effects, principles of treatment. Blood-cell disorders.

#### 3. Local response to tissue injury:

Acute and chronic tissue injury, inflammation and its complications.

#### 4. General response to tissue injury:

Fever, neuro-endocrine and metabolic response, role of the immune system, psychological factors, shock, post-operative trauma.

#### 5. Disturbance of body response:

Excessive immune response: hypersensitivity (allergy), auto-immune diseases. Immune deficiency: AIDS, cancer immunology.

#### 6. Infectious diseases:

Principles of infection. Microbial classification. Septicemia and pyrexia of unknown origin. Common bacterial, viral and fungal diseases.

#### 7. Circulatory disorders:

Atheroma, atherosclerosis, thrombosis, embolism, infarction, shock, haemorrhage, oedema, organ failure, clotting disorders.

#### 8. Symptoms and signs related to diseases of the various body systems:

Common skin signs; eczema/dermatitis, psoriasis, acne, skin infections and infestations, melanoma. Joint pain; rheumatoid arthritis, osteoarthritis, osteomalacia, ankylosing spondylitis, gout. Soft-tissue disorders. Bone pain and fractures; osteoporosis, osteomalacia, Paget's disease, Hypercalcaemia.

#### 9. Symptoms and signs related to diseases of control systems:

Nervous system: paralysis and coma (stroke, cerebral haemorrhage, metabolic disorders), convulsions and epilepsy, disorders of the central nervous system, facial pain and facial weakness (trigeminal neuralgia, shingles, cluster headache, Bell's palsy), motility disorders (Parkinson's disease, cancer, endocrine disorders, peripheral nerve disorders), dementia, Alzheimer's disease.

**Special Senses**: ageing effects on vision, impaired vision, ageing effects on hearing and balance, ear infection, tinnitus, nasal problems, polyps, sore throat, sinusitis, allergies, tonsillitis, swollen glands.

**Endocrine Disorders**: underactive and overactive thyroid, adrenal failure, adrenal overactivity (Cushing's disease), pathological effects of steroid therapy, diabetes, hypoglycemia.

#### 10. Symptoms and signs related to diseases of maintenance systems:

Heart and lungs: chest pain, breathlessness, wheezing and pleural signs, cough with sputum (with or without haemoptysis), palpitations, cyanosis and clubbing of the fingers.

**Gastrointestinal tract**: abdominal pain and abdominal obstruction, jaundice, altered bowel habit (diarrhoea and constipation), rectal bleeding, nausea and vomiting, weight loss, difficulty in swallowing, hiatus hernia, peptic ulcer, stomach cancer, inflammatory bowel diseases, irritable-bowel syndrome, diverticular disease, large-bowel cancer, hernias, appendicitis, peritonitis, gall stones, hepatitis, cirrhosis, pancreatitis.

**Genito-Urinary tract**: urinary frequency and dysuria, increased urine output (polyuria) and decreased urine output (oliguria), haematuria, kidney failure, nephritis, nephrotic syndrome, urinary stones, prostatic enlargement, cancers of the urinary tract and male reproductive organs, impotence, sterility, urinary tract infection.

**Heart and blood vessels**: angina, myocardial infarction, heart failure, hypertension, abnormal heart rhythms, peripheral vascular diseases.

**Lungs**: chronic bronchitis and emphysema, asthma, lung cancer, pneumonia, tuberculosis, lung collapse, lung fibrosis, upper-respiratory tract infections.

#### 11. Disorders of growth and reproduction:

Abnormalities of menstruation, menopausal problems, pelvic inflammatory disease and vaginal discharges.

Non-malignant conditions: uterine fibroids, cysts, endometriosis.

Cancers of the reproductive system: cervix, endometrium, ovary, testicular, prostate, breast lumps and breast cancer.

Sexually transmitted diseases.

#### 12. Tests in Clinical Sciences:

Pathology tests on body fluid: blood, urine, cerebospinal fluid, faeces. Investigative tests: X-ray, CT, MRI. Physical examination: cardiovascular, respiratory, abdominal, neurological.

#### 13. Pharmacology and therapeutics:

Key concepts, major categories of drugs, accessing information on drug actions and side-effects, drug management issues, liaison with patient and GP.

#### **Indicative Reading**

Gascoigne, Stephen. 2001. Clinical Medicine Guide - a holistic perspective. Jigme Press.

Gascoigne, Stephen. 1995. *Manual of Conventional Medicine for Alternative Practitioners*. Jigme Press.

Hopcroft, Keith and Forte, Vincent, 2003. Symptom Sorter. Radcliffe.

Merck Manual of Medicinal Information
Online at: http://www.merck.com/mrkshared/mmanual/sections.jsp

Zatouroff, M.,1996. General Medicine: Physical Signs in General Medicine. Mosby.

Epstein, Owen, Perkin, G. David, Cookson, John, de Bono, David P., 2003. *Clinical Examination*. Mosby.

Mims, Cedric A., Dockrell, Hazell, Goering, Richard, and Roitt, Ivan M., 2004. *Medical Microbiology*. Mosby

Bickley Lynn S., 2002. *Bates' Guide to Physical Examination and History Taking*. Lipincottt, Williams, Wilkey.

McGee, S., 2007. *Evidence-based Physical Diagnosis*. W.B. Saunders Co. ISBN – 0721686931 2001

Gascoigne. Stephen, The Prescribed Drug Guide - a holistic approach.

Dethlefsen, Thorwald and Dahlke, Rudiger, 2004. *The Healing Power of Illness*s. New York: Vega Books. ISBN 1-85230-123-6

Seller RH, 2000. Differential Diagnosis of Common Complaints. W. B. Saunders Co.

Swartz, M. H., 2002. *Textbook of Physical Diagnosis.* W.B. Saunders Co. ISBN: 072169411X

# Module 4: Plant Chemistry & Pharmacology

Minimum Hours: 80

#### **Aims**

To ensure that practitioners are familiar with the main chemical constituents of the most common herbal and traditional medicines, the effects they have on the human body, and their reactions with orthodox drugs.

Minimum Level: 5 (HE diploma)

#### **Learning outcomes**

By the end of this programme the students will be able to:

- 1. Have a detailed knowledge of the nature and properties of plant substances.
- 2. Evaluate simple chemical identification tests and separation techniques and understand the value and uses of more sophisticated techniques.
- 3. Demonstrate a detailed knowledge and critical understanding of the pharmacological effects of the major groups of plant compounds used in their practice
- 4. Demonstrate a detailed knowledge and critical understanding of the mode of action of common medicinal plants. Evaluate the limitations of plant biochemistry as an explanatory model for herb actions.
- 5. Use a range of established techniques to undertake information searches and evaluate current information on plant biochemistry and phytopharmacognosy.

#### **Outline of Syllabus Contents**

1. The chemical and physical structure, properties and functions of the main classes of secondary plant chemicals, including:

terpenes, mono-, sesqui-, di-, tri-terpenes, steroids and carotenoids.

fatty acids, triglycerides, waxes, alkanes, polyacetylenes.

alkaloids, non-protein amino acids, amines.

purines and pyrimidines, chlorophyll.

carbohydrates - mono-, oligo- and poly-saccharides, gums, sugar alcohols and cyclitols. phenols and phenolic acids, phenylpropanoids and coumarins, quinones, flavonoids, tannins.

sulphur compounds (sulphides, thiophenes, glucosilinates). cyanogenic compounds.

- 2. The dynamics and kinetics of medicinal substances upon the human body remedy absorption, distribution, metabolism, excretion, and sensitivity.
- 3. The toxicology of commonly used medicinal plants: side effects, cautions and contraindications.
- 4. Known and possible comparisons and interactions of orthodox drugs with herbal medicines, dietary modification, etc.
- 5. Synergistic and reductionist models of medicinal plant activity.

#### **Indicative Reading**

Brinker, Francis, 2001 *HerbContra-indications and Drug Interactions*, 3rd edition. Sandy, Oregon: Eclectic Medical Publications

Bruneton, Jean, 1999. *Pharmacology, Phytochemistry, and Medicinal Plants*. Intercept Scientific. (out of print; for college libraries)

Buhner, Stephen Harrod, The Secret Teachings of Plants - the intelligence of the heart in the direct perception of nature.

Buhner, Stephen Harrod, The lost language of plants - the ecological importance of plant medicines for life on earth.

Mills, S. and Bone, K., 2005. *The Essential Guide to Herbal Safety.* London: Elsevier/Churchill Livingston.

New Guide to medicines and drugs. The British Medical Association. ISBN 0-7513-2737-9

Pengelly, A., 2004. The Constituents of Medicinal Plants. CABI Publishing

Raney, Dale et al., *Pharmacology*, 5<sup>th</sup> edition. London: Churchill-Livingston

Schultes, Richard Evans, et al, edited by William A.R. Thomson, 1978. *Medicines From the Earth, A Guide to Healing Plants*. Alfred Van Der Marck Editions/ MaGraw-Hill, Maidenhead

Waller, D.; Renwick, A.G.; Hillier, K., 2001 *Medical Pharmacology and Therapeutics*. W.B. Saunders Co.

Wohlmuth H, and Leach L., 2001. *Plants and Plant Forms - an illustrated guide*. Lismore. MacPlatypus Productions.

# Module 5: Pharmacognosy & Dispensing

**Minimum Hours: 100** 

#### Aims

To ensure the safety of herbal and traditional medicine practice by enabling practitioners to evaluate quality control and quality-assurance processes for herbal and traditional medicines.

To ensure a good understanding of the processes by which herbal medicines are grown, harvested, stored and processed.

To enable practitioners to read and evaluate technical material published on herbal medicines in pharmacopoeias, monographs etc.

To ensure adequate knowledge of the legal requirements relating to herbal and traditional medicine practice.

To acquire the necessary skills for the running of a herbal and traditional medicine dispensary.

Minimum Level: 5 (HE diploma)

#### **Learning Outcomes**

By the end of the programme, students should be able to:

- 1. Demonstrate a detailed knowledge and critical understanding of the processes and issues of Quality Assurance in relation to herbal and traditional medicines.
- 2. Demonstrate a detailed knowledge and critical understanding of the identifying characteristics of commonly used herbal and traditional medicines.
- 3. Explain the botanical terms used to describe herbs, including Latin terms for parts of plants.
- 4. Demonstrate a detailed knowledge and critical understanding of dispensary skills.
- 5. Demonstrate a detailed knowledge and critical understanding of the legislation relating to the sourcing, purchasing, storage, labelling and dispensing of herbal and traditional medicine.
- 6. Compare and contrast the different forms of administration of herbs.
- 7. Demonstrate a detailed knowledge and critical understanding of the procedures for interacting with pharmacists, licensing authorities, medical profession and toxicologists and the identification, prevention, minimisation and reporting of adverse incidents relating to prescribing.

#### **Outline of Syllabus Contents**

**Quality Assurance** - source and growing environment, harvesting, processing, storage and packaging of herbs. Possible sources of contamination, including aflatoxins, heavy metals and pesticides. Batch numbers and records.

**Quality Control** - macroscopic identification, microscopic examination, chromatography (TLC, GC, HPLC), spectroscopy, water or ethanol soluble contents, presence of foreign matter and microbial contamination, DNA analysis, volatile oil determination, water content, ash value etc., as methods for differentiating good quality herbs from poor or substitute herbs and for identifying adulterants. Quality control and standardisation.

Botanical terms used to describe herbs.

Identifying characteristics of commonly used herbs, common fakes and substitutes.

**Dispensary skills** – accurate identification of herbs, dispensing (accurate weighing and measuring, containers etc.), labelling of stock and dispensed items (legal requirements, clarity, additional written and verbal advice, patient identification), posology (dosage, contraindications, record keeping, adverse reactions and incompatibilities between herbs), quality control in the dispensary, storage in the dispensary (shelf life, expiry dates, stock rotation, storage conditions, appropriate containers), processing in the dispensary, confidentiality and communication skills for dispensary staff, hygiene, ordering and stocktaking, information and updating on herb regulations.

**The law and herbal medicine** - relevant UK and European legislation; labelling; adverse event reporting systems; restricted substances; endangered species and CITES; etc.

**Health and safety** - the practice premises.

**Forms of administration of herbal and traditional medicine** - internal (decoctions, infusions, powders, tinctures, capsules, tablets, etc.) and external (creams, ointments, lotions, liniments, poultices etc.). Choosing between different forms of administration.

#### **Indicative Reading**

Bone, Kerry, 2003. A Clinical guide to blending liquid herbs. London: Churchill Livingston.

\*Green, James, 2000. *Herbal Medicine-Maker's Handbook: A Home Manual*. Berkeley, CA.: Crossing Press

Heinrich, Michel, 2004. *Fundamentals of Pharmacognosy and Phytotherapy*. London: Churchill Livingston

Mills, S.; Bone, K. 2000. *Principles and Practice of Phytotherapy.* London: Churchill Livingston.

Tyler, Varro E., Brady, Lynn R., Robbers, James E. 1981 *Pharmacognosy*. Philadelphia: Lea and Febiger.

\*Waller, D.; Renwick, A.G.; Hillier, K. 2001 *Medical Pharmacology and Therapeutics*. WB Saunders Co.

\*Pengelly, A., 2004. The Constituents of Medicinal Plants. CABI Publishing.

Evans, William Charles, 2002. *Trease and Evans Pharmacognosy* Edinburgh; New York: W.B. Saunders Co.

# Module 6: Practitioner Development & Ethics Minimum Hours: 150

Note that until such time as a unified code of ethics and conduct is established for all EHTPA member associations, this module will inevitably need to vary to reflect the specific codes of ethics and conduct for the relevant professional association(s).

#### **Aims**

To support student self-development leading to effective communication (including listening and counselling skills, and empathy) within the therapeutic relationship, and within their professional lives as a whole, e.g. in liaising with GPs, etc.

To support the development of reflective practice - the practitioner as a life-long learner; and an understanding of how personal and psychological factors influence the therapeutic relationship.

To ensure that students are familiar with the ethical, legal and professional foundations of good practice, and are able to apply these principles appropriately.

Minimum Level: 6 (HE honours)

#### **Learning Outcomes**

By the end of the module students will be able to:

- 1. Demonstrate a comprehensive knowledge of understanding of the role of self, personality and psychological factors in personal development and in establishing an effective therapeutic relationship and environment.
- 2. Understand, and evaluate, the fundamental principles of medical ethics. Discuss moral, ethical and legal obligations to patients and the public in general, their profession and fellow practitioners, other health-care professionals, and staff they employ.
- 3. Practise in accordance with the relevant legal framework, code of ethics, conduct and Health & Safety legislation.
- 4. Demonstrate a comprehensive understanding of their limits of competence and when and how to make referrals.
- 5. Investigate and critically evaluate sources of advice, guidance and continuing professional education which will enable them to grow and develop as professional herbal practitioners.
- 6. Identify and appraise the sources of advice, guidance and continuing professional education to set-up and operate a successful practice.
- 7 Demonstrate a critical awareness of legal and ethical issues and requirements relating to children and vulnerable adults.
- 8 Demonstrate a critical awareness of the impact of their practice on the environment.

#### **Outline of Syllabus Contents**

- 1. Individual and cultural prejudices, personal areas of strength and weakness, health beliefs, the ability to give and receive feedback, the ability to self-assess.
- 2. The patient/practitioner relationship communication skills to include models of conscious and unconscious communication, building empathy, transference and counter-transference, setting boundaries, proper professional conduct, beginning and endings in a therapeutic relationship, dealing with sensitive issues such as bereavement and loss. Consent (including minors) justification for treatment and the patient's right to refuse, assault, issues of power and control.
- Confidentiality confidentiality and the law, Data-protection act, situations in which
  patient information may be disclosed, sources of legal help and advice; confidentiality
  within the practice, other staff, making and storing case notes, patient access to their
  own notes
- 4. Referrals patient care when the practitioner is absent.
- 5. Relationships between practitioners: communication, courtesy, professional and ethical conduct; disputes and complaints procedure; transfer and referral of patients, case histories and patient notes.
- 6. Supervision, mentoring and personal support for the practitioner; continuing professional education; boundaries of the therapeutic space; safeguarding the legitimate needs of the practitioner.
- 7. Professional misconduct: complaints, disciplinary procedure, advice and guidance, insurance.
- 8. Prescribed conduct regarding: abortion, venereal disease, notifiable diseases, consent and supervision of minors and vulnerable adults, procedures for the intimate examination of a patient of the opposite sex, notification of adverse events.
- 9. Small Business and practice management to include producing a Business Plan, advertising standards: methods and wording, creating expectation and making claims; the use of titles "doctor, nurse and medical practitioner". Providing an appropriate environment to practise. Fees, charges and prescription costs fairness, clarity and communication. Taxation, insurance and Health & Safety issues

#### **Indicative Reading**

Burnard, P., 1997. *Effective Communications Skills for Healthcare Professionals*, 2nd Edition. Cheltenham: Nelson Thorne

Dimond, B. 1998. *The Legal Aspects of Complementary Therapy Practice*. London: Churchill Livingston.

Wright, S.G., and Adams, J., 2000. *Right Relationship & Spirituality in Healthcare*. London: Churchill-Livingston.

Annie Mitchell & Maggie Cormack, *The Therapeutic Relationship in Complementary Health Care*. London: Churchill Livingston.

Dixon M, Sweeney K., 2000. *The Human Effect in Medicine: theory, research and practice*. Radcliffe Medical Press.

Hargie O., Saunders C., Dickson D., 1994. *Social Skills in Interpersonal Communication*. Routledge.

Skovholt, T.M., 2000. The Resilient Practitioner: burnout prevention and self-care strategies for counsellors, therapists, teachers and health professionals. Allyn and Bacon. ISBN – 0 205306 11 X

# **Module 7: Practitioner Research**

**Minimum Hours: 150** 

#### Aims

To enable practitioners to develop an orientation towards continuous professional development, recognising that learning is a life-long process, and that part of this process is concerned with the ability to frame enquiry within the context of personal practice, reflecting and analysing in a systematic and critical way

To introduce the principles and practice of research as a system and critical process of enquiry in the context of health care in general and herbal and traditional medicine in particular

**Minimum Level**: 6 (HE diploma/honours)

#### **Learning Outcomes**

By the end of the programme the student will be able to:

- 1. Demonstrate the skills of finding, reviewing and critically analysing relevant research literature.
- 2. Evaluate research methodology within a range of different research paradigms.
- 3. Demonstrate practical skills in research design, operation and data analysis.
- 4. Develop a research proposal, including appropriate methodology and consideration of the ethical and legal issues.
- 5. Discuss, collaborate on and disseminate research with other herbal practitioners and in the wider healthcare field.
- 6. Be aware of the value of research for their own practice and understand the importance of audit.

#### **Outline of Syllabus Contents**

- 1. The research culture within herbal and traditional medicine strengths and weaknesses, keeping up with the field, continuous professional development, using research evidence to inform clinical practice. Audit techniques.
- 2. The epistemology of research: positivist v. interpretative studies, quantitative and qualitative work, co-operative enquiry, action research, ethnography, evidence-based medicine, phenomenology. The value and limitations of a particular approach to a given research
- 3. Research skills: types of controlled trials, outcome measures, survey and interview techniques, case studies, discourse analysis and personal narrative, introduction to statistics, audit techniques.
- 4. Designing a research question and develop a research proposal.
- 5. Ethical and legal issues in research, including negotiating access, informed consent, working with patients within the established health authority.

#### **Indicative Reading**

\*Bowling, Ann. 2002 Research Methods in Health, Investigating Health and Health Services. Buckingham: The Open University

\*Bell, Judith. 2005. Doing your research project: a guide for first time researchers in education, health and social science. Maidenhead: The Open University.

St George, David, Research into complementary and alternative medicine, biomedical science or the holistic paradigm, 2 DVD Presentation. Journal of Contemplative Science. http://www.herbalmedicine.org.uk/journal/journal

\*Lewith G., Jonas W.B., Walach H, 2002. *Clinical Research in Complementary Therapies:* principles, problems and solutions. W.B. Saunders Co. ISBN: 0443063672

# **Module 8: Tradition Specific Curriculum Content Minimum Hours: 1150**

The Core Curriculum below describes the common content that all EHTPA accredited programmes must meet.

The tradition specific material needed to meet the requirements for accreditation is described in the 8th Module.

For an individual programme to be accredited it must meet all the requirements of the Core Curriculum plus the requirements of the relevant tradition specific 8th Module

Detailed tradition specific 8th Module content is presented here for the following:

- Ayurvedic Medicine;
- Chinese Herbal Medicine;
- Tibetan Herbal Medicine;
- Western Herbal Medicine.

Modules for other traditions of herbal medicine are still in preparation and will be published at a later date.

# **Ayurvedic Medicine**

#### Introduction

The Core Ayurvedic Curriculum with the Common Core Curriculum can be used as a guideline for institutions that are intending to provide courses in traditional Ayurvedic medicine, or are running courses of such intent and seeking accreditation for professional registration with a future regulatory council of traditional medicines.

The following are the minimum requirements for all training courses providing Ayurvedic medical education and training at a professional level for the future regulatory framework in the UK. The nature of the Ayurvedic profession dictates that the standards of all training programmes should be set at a higher education or equivalent level and must be comparable at least to a Bachelor degree.

This document results from wider consultation with Ayurvedic professionals, medical practitioners, and patients in the UK and abroad. The framework for the Core Ayurvedic Curriculum is a simplified version of the Ayurvedic curricula recommended by the Central Council for Indian Medicine (CCIM), Department of Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH) of the Indian Ministry of Health and the Ministry of Indigenous Medicine in Sri Lanka.

It is this core curriculum that ensures the professional standards of traditional Ayurvedic medical education and training are met in the UK and abroad. Traditional Ayurvedic medical practices in the UK play a major role in Europe, largely due to legal regulations imposed by the EEC. Therefore, this document also provides a protocol for any future curriculum version for the education and training of traditional Ayurvedic practitioners in Europe, and perhaps in the West.

#### **CURRICULUM CONTENT**

## **SECTION A: Theories, Methods, Diagnosis, Treatment**

Part I Ayurvedic Fundamental Principles
Part II Ayurvedic Pharmacology and Pharmacy
Part III Ayurvedic Pathology and Therapeutics

Part IV Ayurvedic Internal Medicine
Part V Ayurvedic Specialist Medicine

**SECTION B: Materia Medica** 

**SECTION C:** Supervised Clinical Practice

**Indicative Reading** 

# **SECTION A: Theories, Methods, Diagnosis, Treatment**

#### 1. Ayurvedic Fundamental Principles

#### **Description:**

This module explores the basic concepts underpinning Ayurveda at the cosmic and physical levels, the relationship of energy and matter (mahabhutas); and the functional principles (doshas) and structural elements (dhatus and malas) of the human body. Students will be able to assess the individual constitution and explore the concept of health and health promotion. This module will also introduce the students to the Sanskrit language to enable them to comprehend and define the terminology of Ayurveda.

This module consists of the following components:

- a. History of Ayurveda;
- b. Sanskrit (including textual study of Astanga Hrdaya);
- c. Padartha Vijnana; and
- d. Rachana & Kriya Sharira

#### **Learning Outcomes:**

- 1. Outline the similarities and differences between the theory of Pañca-mahabhutas and modern science.
- 2. Explain the formation, characteristics and functions of the tri-doshas, sapta dhatus and malas in the body.
- 3. Explain the Ayurvedic concepts of Guans, Dravya, Samanya, Visesha, Samavaya, Agni, Ama and Srotas.
- 4. Explain the relationship between Atma, Prana and Manas.
- Compare and contrast the modern and Ayurvedic views of lifestyle in the promotion of physical and mental health.
- 6. Explain the cosmic influence as a life force and relate it to the human life form.
- 7. Discuss the effects of seasonal variations on the maintenance of health.
- 8. Determine the doshic constitution of an individual and prescribe lifestyle choices to maintain balance.
- 9. Discuss the effects of massage, yoga, meditation and other non-invasive modes of therapy on a person's mental and physical health.
- 10. Explain key terms used in the first chapter (sutrasthana) of Astanga Hrdyam.

#### 2. Ayurvedic Pharmacology and Pharmacy

#### **Description:**

This module explores the principles of pharmacology, pharmacodynamics, and physiochemical and medicinal properties of raw materials used in Ayurvedic medicine to include herbal (plant), mineral, metal and animal origins. It also deals with the pharmaceutical procedures used in the preparation of Ayurvedic medicines with special reference to issues surrounding toxicity and safe prescription, as well as methods of preparation and dispensing of compound Ayurvedic medicines taking into account the legal and ethical aspects regarding labelling and patient information.

This module consists of the following components:

- a. Dravyaguna Vijnana;
- b. Ayurvedic Materia Medica;
- c. Bhaisajya Kalpana and Rasa Shastra;
- d. Agada Tantra and Vyavahara Ayurveda.

#### **Learning Outcomes:**

- 1. Discuss the concepts and principles of Dravyaguna vijyana and Bhaisajya kalpana.
- 2. Make decisions on the use of commonly used Ayurvedic raw materials and compound preparations based on their energetics and actions.
- 3. Discuss the usage, contra-indications, precautions and dosage of commonly used Ayurvedic herbs and compound medicines.
- 4. Evaluate the rationale for the combination of herbs in certain prescriptions, giving examples of incompatibilities and enhancements.
- 5. Evaluate issues relating to the toxicity and safe use of herbs and compound medicines.
- 6. Evaluate and discuss issues relating to the quality control of Ayurvedic herbs and compound medicines.
- 7. Discuss issues related to current legislation on herbal products with regards to quality assurance, labelling and dispensing, with reference to UK and EU law and regulations.
- 8. Prepare pharmaceutical standard monographs of commonly used Ayurvedic herbs and compound medicines.
- 9. Justify the selection of drugs used in Ayurvedic compound formulations with reference to their indications, contra-indications and precautions for use.
- 10. Demonstrate a critical understanding of the processing of various categories of Ayurvedic medicines, including those containing toxic herbs, with reference to their safe use.
- 11. Demonstrate a critical understanding of the processing of non-herbal Ayurvedic medicine, with reference to their legal status and safe use.
- 12. Explain terminology used in the Ayurvedic pharmacology, material medica and pharmacy.

## 3. Ayurvedic Pathology and Therapeutics

#### **Description:**

This module explores the root causes of disorders in the mind-body physiology and examines the stages of their pathogenesis. It provides an integrated approach to the understanding of common diseases and the principles of management. It enables the students to analyse the disrupted doshas and to suggest remedies to preserve the integrity of the doshas, dhatus and malas of the body and mind. This module will also introduce the students to the reading of Charaka Samhita to enable them to comprehend and define the Ayurvedic concepts used in this module.

This module consists of the following components:

- a. Swasthavrtta and Yoga;
- b. Roga vijnana and Vikruti Vijnana;
- c. Textual study of Charaka Samhita;
- d. Introduction to Kayachikitsa.

#### **Learning Outcomes:**

- 1. Critically discuss the factors which produce a constitutional imbalance or roga.
- 2. Critically examine the role of the mind and body in the process of disharmony or disease.
- 3. Discuss the term 'Nidan-panchak' and relate it to modern concepts of aetio-pathology.
- 4. Discuss the concept of disease causation and pathogenesis according to Ayurveda and modern science.
- 5. Identify marma points and demonstrate their use in Ayurvedic treatment.
- 6. Discuss the distribution of disease in the community, and the approach to prevention according to Ayurveda and modern points of view.
- 7. Diagnosis imbalances in the homeostasis of dosha, dhatu and mala in the body-mind physiology.
- 8. Compare and contrast the modes of samana and sodhana cikitsa.
- 9. Devise a treatment plan based on the fundamental principles of cikitsa, to correct abnormal states of dosha, dhatu, mala, agni, ama and srotas.
- 10. Evaluate the prognosis of physical disorders related to each of the doshic imbalances.
- 11. Reflect on the appropriateness of treatment plans with reference to a patient's case history and diagnosis.
- 12. Explain key Ayurvedic concepts of Charaka Samhita.

#### 4. Ayurvedic Internal Medicine

#### **Description:**

This module explores the necessary knowledge and skills required to practise Ayurvedic Internal Medicine (Kayachikitsa) including pañcakarma, rasayana and vajikarna. It also develops the student's knowledge, understanding and skills of a wide range of Ayurvedic treatment modalities, based on Ayurvedic principles and bio-medical sciences. Recognising medical emergencies and their limitations within Ayurveda is an important aspect of this module.

This module consists of the following components:

- a. Advanced Kayachikitsa;
- b. Pañcakarma;
- c. Rasayana and Vajikarna;
- d. Manasa Roga and Vedic Healing.

#### **Learning Outcomes:**

- Critically examine the different groups of Shamana and Shodana therapies and discuss their therapeutic indications.
- 2. Choose the most appropriate method of pañcakarma taking into account the contra-indications and legal and ethical issues relating to Kayachikitsa and pañcakarma.
- 3. Critically evaluate the suitability of pañcakarma therapies for a variety of conditions drawing on a detailed knowledge of Ayurveda principles and biomedical sciences.
- 4. Design, implement and review a treatment plan for a client with specified pathology using Ayurvedic medicines, Pañcakarma, Rasayana and Vajikarna therapies.
- 5. Interpret basic medical investigations and refer patients for medical examination and treatment where appropriate.
- 6. Recognise medical emergencies, and pathologies beyond their competence (or legal status) to treat, reviewing the range of referral options available and acting appropriately.
- 7. Synthesise information from a number of sources in order to gain a coherent understanding of theory and practice of Ayurvedic internal medicine.
- 8. Utilise problem-solving skills to solve unfamiliar problems in a clinical setting.
- 9. Demonstrate effective verbal and written communication by presenting information in a form that is appropriate for both professionals and non-professionals to understand.
- Keep appropriate and professional case records documenting initial presentation, diagnosis, treatments prescribed and carried out and the evaluation of therapeutic responses.
- 11. Perform Ayurvedic diagnosis and treatment procedures.
- 12. Work effectively within a multi-disciplinary and multi-professional teams involved in the management of patients with reference to Ayurvedic (Sanskrit) texts and current research.

#### 5. Ayurvedic Specialist Medicine

#### **Description:**

This module explores the necessary knowledge and skills required for the practice of Ayurvedic specialist medicine, including, Prasuti Tantra, Stree Roga, Kaumarabhritya, and Shalya-Shalakya, within the UK. context. It also develops the student's knowledge, understanding and skills of a wide range of Ayurvedic treatment modalities, based on Ayurvedic principles and bio-medical sciences. Recognising medical emergencies and their limitations within Ayurveda is an important aspect of this module. This module also discusses the scope of Ayurvedic practice in the UK.

#### **Learning Outcomes:**

- 1. Explain in detail the choice of approaches to managing menstrual disorders, as well as the pathological changes in the female reproductive system that occur in illness or injury, in order to prescribe appropriate treatment.
- 2. Prescribe Ayurvedic treatment to ensure optimum maternal and foetal health during pregnancy, and to deal with minor disorders associated with pregnancy.
- 3. Discuss in detail the care and management of babies and children according to Ayurvedic principles and current scientific thinking.
- 4. Evaluate on the basis of clinical data whether surgical intervention is necessary in the management of wounds, ulcers, abscesses and tumours, and apply the Ayurvedic approach if appropriate.
- 5. Discuss in detail the limitations of, and the ethical and legal constraints to, Ayurvedic surgery and the importance of professional judgement.
- 6. Evaluate on the basis of clinical data when Ayurvedic intervention is necessary for the management of ENT and eye disorders.
- 7. Design, implement and review a plan of treatment using Marma points taking into account the contraindications, precautions and its limitations.
- 8. Synthesise information from a number of sources in order to gain a coherent understanding of theory and practice of surgical techniques in Ayurveda.
- 9. Demonstrate effective verbal and written communication by presenting information in a form that is appropriate for both professionals and non-professionals to understand.
- 10. Utilise problem-solving skills to solve unfamiliar problems in a clinical setting.
- 11. Keep appropriate and professional case records documenting initial presentation, diagnosis, treatments prescribed and carried out and the evaluation of therapeutic responses.
- 12. Perform Ayurvedic diagnosis and treatment procedures.
- 13. Work effectively within a multi-disciplinary and multi-professional teams involved in the management of patients with reference to Ayurvedic (Sanskrit) texts and current research.

# **SECTION B: Materia Medica**

The Ayurvedic materia medica comprises herbal, mineral, metal and animal substances. Graduates are expected to be familiar with the basic pharmacological principles that underpin the therapeutic use of these four groups of substances.

However, as current UK and EU legislation restricts the use of Ayurvedic therapeutics to mainly herbal substances, foremost importance for Ayurvedic practitioners in this country is a profound knowledge and understanding of medicinal plants and their use.

Each educational institution should cover a minimum of 200 herbs, to be drawn from the approved list below. Each institution should define, at its discretion, at least 100 herbs as 'essential' to be learned in depth, and in addition at least 100 herbs as 'useful'.

**Essential**: students should have mastery of these herbs. Without using a textbook, graduates should be familiar with their name, category, properties, actions and indications, dosage, contra-indications, main combinations, appropriate methods of preparation and differences between members of the same category.

**Useful**: students should have a basic understanding of herbs in this group. The level of knowledge should be such that, without recourse to a textbook, graduates should be familiar with their name, category, main actions, indications and differences between members of the same category. Any further information about these substances can be drawn from textbook sources.

## **List of Ayurvedic Medicinal Plants**

| No. | Sanskrit Name | Botanical Name                        |
|-----|---------------|---------------------------------------|
| 1   | Adhah puşpī   | Trichodesma indicum, (Linn) R. Br.    |
| 2   | Adhaki        | Cajanus cajan, (Linn) Mills.          |
| 3   | Agaru         | Aquilaria agallocha, Roxb             |
| 4   | Agastya       | Sesbenia grandiflora, Pers.           |
| 5   | Agni manthā   | Premna integrifolia, Linn.            |
| 6   | Ahi phēna     | Papver somniferum, Linn.              |
| 7   | Ajmodā        | Apium graveolens, Linn.               |
| 8   | Ākārkarabha   | Anacyclus pyrethrum, DC.              |
| 9   | Ākhuparnī     | Ipomoea reniformis, Chois.            |
| 10  | Akşotaka      | Juglans regia, Linn.                  |
| 11  | Āmalakī       | Emblica officinalis, Gaertn.          |
| 12  | Amarvallī     | Cuscuta reflexa, Roxb.                |
| 13  | Amlavetasa    | Garcinia pedunculata, Roxb.           |
| 14  | Amlikā        | Tamarindus indica, Linn.              |
| 15  | Āmra          | Mangifera indica, Linn.               |
| 16  | Āmra haridra  | Curcuma amada, Roxb.                  |
| 17  | Ankota        | Alangium Salvifolium, (Lin. f.) Wang. |
| 18  | Apāmārga      | Achyranthes aspera, Linn.             |
| 19  | Aparājitā     | Clitoria terneata, Linn.              |

| 20 | Āragvadha     | Cassia fistula, Linn.                       |
|----|---------------|---|
| 21 | Aralu         | Ailanthus excelsa, Roxb.                    |
| 22 | Araņya jīraka | Centrotherum anthelminticum, (Linn) Kurtze. |
| 23 | Ārdraka       | Zingiber officinale, Roscoe.                |
| 24 | Arişţaka      | Sapindus trifoliatus, Linn.                 |
| 25 | Arjuna        | Terminalia arjuna, (Roxb) Wight & Arn.      |
| 26 | Arka          | Calotropis giganticea, R. Br.               |
| 27 | Aśmantaka     | Ficus rumphii, Blume.                       |
| 28 | Aśoka         | Saraca asoca (Roxb) De Wilde.               |
| 29 | Asţisamhāraka | Vitis quadrangularis, Linn.                 |
| 30 | Aśvagandha    | Withania somnifera, Dunal.                  |
| 31 | Aśvagola      | Plantago ovata, Forsk.                      |
| 32 | Aśvakarņa     | Dipertocarpus turbinatus, Gaertn. f.        |
| 33 | Aśvattha      | Ficus religiosa, Linn.                      |
| 34 | Atasī         | Linum usitaissimum, Linn.                   |
| 35 | Ati balā      | Abutilon indicum, (Linn.) Sw.               |
| 36 | Ativişā       | Aconitum heterophyllum, Wall. ex Royle.     |
| 37 | Āvartakī      | Cassia auriculata, Linn.                    |
| 38 | Āvartanī      | Helicteres isora, Linn.                     |
| 39 | Ayapānam      | Eupatorium triplinerve, Vahl.               |
| 40 | Babbūla       | Acacia arabica, Wild.                       |
| 41 | Badara        | Zizyphus mauritiana, Lamk.                  |
| 42 | Bākucī        | Psoralea corylifolia, Linn.                 |
| 43 | Bakula        | Mimusops elingi, Linn.                      |
| 44 | Balā          | Sida cordifolia, Linn.                      |
| 45 | Bañgā         | Canabis sativa, Linn.                       |
| 46 | Bhallātaka    | Semecarpus anacardium, Linn.                |
| 47 | Bhandīra      | Clerodendrum infortunatum, Linn.            |
| 48 | Bhārńgī       | Clerondendron serratum, Spreng.             |
| 49 | Bhŗńgarāja    | Eclipta erecta, Linn.                       |
| 50 | Bhūmyāmlakī   | Phyllanthus niruri, Sensu Hook. f.          |
| 51 | Bhūrja        | Betula utilis, D. Don.                      |
| 52 | Bīja pūraka   | Citrus medica, Linn.                        |
| 53 | Bījaka        | Pterocarpus marsupium, Roxb.                |
| 54 | Bilva         | Aegle marmelos, Corr.                       |
| 55 | Bimbī         | Coccinia grandis, (Linn) Voigt.             |
| 56 | Bola          | Commiphora myrrh, Nees.                     |
| 57 | Brāhmī        | Bacopa moniera, (Linn.) Pennell.            |

| 58 | Bŗhatī           | Solanum indicum, Linn.                    |
|----|------------------|---|
| 59 | Cakramarda       | Cassia tora, Linn.                        |
| 60 | Cakşuşya         | Cassia absus, Linn.                       |
| 61 | Campaka          | Michelia champak, Linn.                   |
| 62 | Cañcu            | Corchorus fascicularis, Lam.              |
| 63 | Candana          | Santalum alba, Linn.                      |
| 64 | Cańdraśūra       | Lepidium sativum, Linn.                   |
| 65 | Cāñgērī          | Oxalis corniculata, Linn.                 |
| 66 | Cauhāra          | Artimisia maritime, Linn.                 |
| 67 | Cavya            | Piper chaba, Hunter.                      |
| 68 | Chatraka         | Agaricus campestras, Linn.                |
| 69 | Chikkikā         | Centipeda minima, (L.) Willd.             |
| 70 | Chukra           | Rumex vesicarius, Linn.                   |
| 71 | Ciribilva        | Holoptelea integrifolia, (Roxb) Planch.   |
| 72 | Citraka mūla     | Plumbago zeylanica, Linn.                 |
| 73 | Coraka           | Angelica glauca, Edgw.                    |
| 74 | Dādima           | Punica granatum, Linn.                    |
| 75 | Damanaka         | Artemisia vulgaris, Linn.                 |
| 76 | Danti mūla       | Baliospermun montanum, Muell-Arg.         |
| 77 | Dāru haridrā     | Berberis aristata, DC.                    |
| 78 | Devadāru         | Cedrus deodara, Roxb.–Loud                |
| 79 | Dhāmārgava       | Luffa aegyptica, Mill ex Hook. f.         |
| 80 | Dhanvana         | Grewia tiliaefolia, Vahl.                 |
| 81 | Dhānyaka         | Coriandrum sativum, Linn.                 |
| 82 | Dhātakī          | Woodfordia floribunda, Salisb.            |
| 83 | Dhattūra         | Dhattura metel, Linn.                     |
| 84 | Dhava            | Anogeissus latifolia, (Roxb. ex DC) Bedd. |
| 85 | Drākşa           | Vitis vinifera, Linn.                     |
| 86 | Droņa puşpī      | Leucas cephalotus, Spreng.                |
| 87 | Dugdhaphenī      | Taraxacum officinale, Weber.              |
| 88 | Duralabha        | Fagonia cretica, Linn.                    |
| 89 | Dūrvā            | Cynodon dactylon, Pers.                   |
| 90 | Dvīpāntara vacā  | Smilax glabra, Roxb.                      |
| 91 | Ēla              | Elettaria cardamomum, Maton.              |
| 92 | Ēraņda           | Ricinus communis, Linn.                   |
| 93 | Eraņda karkatī   | Carica papaya, Linn.                      |
| 94 | Gambhārī         | Gmelina arboria, Linn.                    |
| 95 | Gandha prasāranī | Paederia foetida, Linn.                   |

| 96  | Gāngerukī    | Grewia populifolia, Vahl.                   |
|-----|--------------|---|
| 97  | Giri parpaţī | Podophyllum hexandrum, Royle.               |
| 98  | Gojivhā      | Onosma bracteatum, Wall.                    |
| 99  | Gōkşura      | Tribulus terrestris, Linn.                  |
| 100 | Gorakşa      | Dlabergia lanceolaria, Linn.                |
| 101 | Gorakşamajjā | Aerva lanta, (Linn) Juss.                   |
| 190 | Guda śarkarā | Grewia hirsute, Vahl.                       |
| 103 | Gudūcī       | Tinospora cordifolia, Willd Meirs.          |
| 104 | Guggulu      | Commiphora mukul, Hook.                     |
| 105 | Guñjā        | Abrus precatorius, Linn.                    |
| 106 | Hamsarāja    | Adiantum lunulatum, Burm. f.                |
| 107 | Hapuşā       | Juniperus communis, Linn.                   |
| 108 | Haramala     | Paganum harmal, Linn.                       |
| 109 | Haridrā      | Curcuma longa, Linn.                        |
| 110 | Haridru      | Adina cordifolia, Hook. f.                  |
| 111 | Harītakī     | Terminalia chebula, Retz.                   |
| 112 | Hijjala      | Baringtonia acutangula, Gaertn.             |
| 113 | Hińgu        | Ferula asafoetida, Linn.                    |
| 114 | Hinsrā       | Capparis sepiaria, Linn.                    |
| 115 | Hŗtpatrī     | Digitalis purpurea, Linn.                   |
| 116 | lkşvāku      | Lagenaria siceraria, Standle.               |
| 117 | Indravārunī  | Citrulus colocynthis, Schard.               |
| 118 | lńgudī       | Balanites aegyptica, (Linn.) Dell.          |
| 119 | Irimeda      | Acacia farnesiana, Willd.                   |
| 120 | Jambū        | Eugenia jambolana, Lam.                     |
| 121 | Jaţāmansī    | Nordostachys jatamansi, Dc.                 |
| 122 | Jātī         | Jasminum grandiflorum, Linn.                |
| 123 | Jātīphala    | Myristica fragrans, Houtt.                  |
| 124 | Jayanti      | Sesbania aegyptica, Pers.                   |
| 125 | Jayapāla     | Croton tiglium, Linn.                       |
| 126 | Jheņdū       | Tagetus erecta, Linn.                       |
| 127 | Jīmutaka     | Luffa echinata, Roxb.                       |
| 128 | Jīraka       | Cuminum cyminum, Linn.                      |
| 129 | Jīvantī      | Leptadenia reticulate, (Retz.) Wight & Arn. |
| 130 | Jūphā        | Hyssopus officinalis, Linn.                 |
| 131 | Jyōtişmatī   | Celastrus paniculata, Willd.                |
| 132 | Kadali       | Musa paradisiacal, Linn.                    |
| 133 | Kadamba      | Anthocephalus indicus, A. Rich.             |

| 134 | Kākamacī     | Solanum nigrum, Linn.                     |
|-----|--------------|---|
| 135 | Kākodumbara  | Ficus hispida, Linn.                      |
| 136 | Kālamegha    | Andrographis paniculata, (Burm. f.) Wall. |
| 137 | Kamala       | Nelumbo nucifers, Gaertn.                 |
| 138 | Kampillaka   | Mallotus philippinensis, Muell Arg.       |
| 139 | Kāñchanāra   | Bauhinia variegate, Linn.                 |
| 140 | Kāndīra      | Ranunculus sceleratus, Linn.              |
| 141 | Kańkōla      | Piper cubeba, Linn.                       |
| 142 | Kankushtha   | Garcinia morella, Desr.                   |
| 143 | Kaņţakārī    | Solanum xanthocarpum, Sachrd & Wendl.     |
| 144 | Kapikacchu   | Mucuna prurita, Hook.                     |
| 145 | Karamarda    | Carissa congesta, Linn.                   |
| 146 | Karañja      | Pongamia pinnata, (Linn.) Merr.           |
| 147 | Kāravellaka  | Momordica charantia, Linn.                |
| 148 | Karavīra     | Nerium indicum, Soland.                   |
| 149 | Karīra       | Capparis deciduas, Edgew.                 |
| 150 | Karkaţaśŗńgī | Pistacia intererima, Stew. ex. Brandis.   |
| 151 | Karmaranga   | Averrhoa carambola, Linn.                 |
| 152 | Kārpāsa      | Gossypium herbaceum, Linn.                |
| 153 | Karpūra      | Cinnamomum camphora, Nees & Eberm.        |
| 154 | Kāśa         | Saccharum spontaneum, Linn.               |
| 155 | Kāsamarda    | Cassia occidentalis, Linn.                |
| 156 | Kāsani       | Chicorium intybus, Linn.                  |
| 157 | Kaśeruka     | Scirpus grosus, Linn.                     |
| 158 | Kāşţa dāru   | Polyalthia longifolia, Benth & Hook.f.    |
| 159 | Kataka       | Strychnos potatorum, Linn. f.             |
| 160 | Kaţphala     | Myrica nagi, Thunb.                       |
| 161 | Katu vīrā    | Capsicum annum, Linn.                     |
| 162 | Kaţukī       | Picrorrhiza Kurroa, Royle ex Benth.       |
| 163 | Kaţutumbī    | Lagenaria leucantha, (Duch.) Rusby.       |
| 164 | Kebuka       | Costus speciosus, Koen. ex Retz.          |
| 165 | Ketakī       | Pandanus tectorius, Soland ex Parkino.    |
| 166 | Khadira      | Acasia catechu, Willd.                    |
| 167 | Kharjūra     | Phoenix sylvestris, Roxb.                 |
| 168 | Khatmī       | Althaea officinalis, Linn.                |
| 169 | Khūbakalā    | Sisymbrium irio, Linn.                    |
| 170 | Kirātatikta  | Swertia chirata, Buch-Ham.                |
| 171 | Kīţamārī     | Aristalochia bracteolate, Lamk.           |
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| 172 | Kokilākşa      | Astercantha longifolia, Nees.            |
| 173 | Kośāmra        | Schleichera trijuga, Willd.              |
| 174 | Kośātakī       | Luffa acutangulata, (Linn.) Roxb.        |
| 175 | Kṛṣṇa bīja     | Ipomoea hederacea, Linn-Jacq.            |
| 176 | Kṛṣṇa jīraka   | Carum carvi, Linn.                       |
| 177 | Kukundara      | Blumea lacera, D.C.                      |
| 178 | Kulattha       | Dolichos biflorus, Linn.                 |
| 179 | Kumārī         | Aloe vera, Linn.                         |
| 180 | Kumbhīka       | Careya arborea, Roxb.                    |
| 181 | Kumuda         | Nymphea alba, Linn.                      |
| 182 | Kuńkuma        | Crocus sativus, Linn.                    |
| 183 | Kupīlu         | Strychnos nux-vomica, Linn.              |
| 184 | Kuśa           | Desmostachya bipinnata, Stap. f.         |
| 185 | Kūşmāņda       | Benincasa hispida, Thum.                 |
| 186 | Kuşţha         | Saussurea lappa, C.B. Clarke.            |
| 187 | Kuţaja         | Holarrhena antidysentrica, Wall. ex. DC. |
| 188 | Lajjālu        | Mimosa pudica, Linn.                     |
| 189 | Lāńgalī        | Glosiosa superba, Linn.                  |
| 190 | Latā karañja   | Caesalpinia bonduc, Roxb.                |
| 191 | Latā kastūrī   | Hibiscus abelmoschus, Linn.              |
| 192 | Lavańga        | Syzygium aromaticum, Merr perry.         |
| 193 | Lodhra         | Symplocos racemosa, Roxb.                |
| 194 | Madana phala   | Randia dumetorum, Lam.                   |
| 195 | Madayantikā    | Lawsonia inermis, Linn.                  |
| 196 | Madhūkā        | Madhuka indica, Jf. Gmel.                |
| 197 | Madhuyaşţi     | Glycerrhiza glabra, Linn.                |
| 198 | Mahābharī vacā | Alpinia galangal, Willd.                 |
| 199 | Makhāna        | Euryale ferox, Salisb.                   |
| 200 | Mamīra         | Thalictrum foliolosum, Dc.               |
| 201 | Māmsarohiņi    | Soymida febrifuga, A. Juss.              |
| 202 | Māna kanda     | Alocasia indica, Scholt.                 |
| 203 | Maņdūka parņī  | Centella asiatica, (Linn.) Urban.        |
| 204 | Mañjişţa       | Rubia cordifolia, Linn.                  |
| 205 | Marica         | Piper nigrum, Linn.                      |
| 206 | Mārkaņdikā     | Cassia angustifolia, Vahl.               |
| 207 | Maşa parņī     | Teramus labialis, Spreng                 |
| 208 | Māyāphala      | Quercus infectoria, Roxb.                |
| 209 | Mayūrśikhā     | Adiantum caudatum, Linn.                 |
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| 210 | Medaśāka        | Litsea chinensis, Lam.                     |
|-----|-----------------|--|
| 211 | Meşa śrngī      | Gymnema sylvestre, R. Br.                  |
| 212 | Methikā         | Trigonella foenum-graecum, Linn.           |
| 213 | Miśreyā         | Foeniculum vulgare, Mill.                  |
| 214 | Mucakunda       | Pterospermum diversifolium, Blume.         |
| 215 | Mudga parņī     | Phaseolous trilobus, Ait.                  |
| 216 | Mūlaka          | Raphanus sativus, Linn.                    |
| 217 | Muņdī           | Sphaeranthus indicus, Linn.                |
| 218 | Mūrvā           | Marsdenia tenacissima, Wight & Arn.        |
| 219 | Muśalī          | Asparagus adscendens, Roxb.                |
| 220 | Mustaka         | Cyperus rotundus, Linn.                    |
| 221 | Nādī hiñgu      | Gardenia gummifera, Linn.F.                |
| 222 | Nāga dantī      | Croton oblongifolus, Roxb.                 |
| 223 | Nāgabalā        | Sida veronicaefolia, Lam.                  |
| 224 | Nāgadamanī      | Crinum asiaticum, Roxb.                    |
| 225 | Nāgakesar       | Mesua ferrea, Benth- Hook.                 |
| 226 | Nala            | Arundo donax, Linn.                        |
| 227 | Nīlī            | Indigofera tinctoria, Linn.                |
| 228 | Nimba           | Azadirachta indica, Linn.                  |
| 229 | Nimbuka         | Citrus limetta, Wight & Arn.               |
| 230 | Nirguņdī        | Vites negundo, Linn.                       |
| 231 | Nirvişā         | Delphinium denudatum, Wall. ex. Hook. f.   |
| 232 | Padmaka         | Prunus cirasoidus, D. Don.                 |
| 233 | Palāndu         | Allium cepa, Linn.                         |
| 234 | Palāśa          | Butea monosperma, Lam-Kutze.               |
| 235 | Panasa          | Artocarpus integrifolia, Linn. f.          |
| 236 | Pārasīka yavānī | Hyocyamus niger, Linn.                     |
| 237 | Pāribhadrā      | Erithrina variegate, Linn.                 |
| 238 | Pārijāta        | Nyctanthus arbortristis, Linn.             |
| 239 | Pārīşa          | Thespesia populnea, (Linn) Soland ex Corr. |
| 240 | Parņa bīja      | Kalanchoe pinneta, Pers.                   |
| 241 | Parņa yavānī    | Coleus aromaticus, Benth.                  |
| 242 | Parpata         | Fumaria parviflora, Lamk.                  |
| 243 | Parūşaka        | Grewia asiatica, Linn.                     |
| 244 | Pāşāņabheda     | Bergenia lingulata, (Wall.) Engl.          |
| 245 | Pāţalā          | Stereospermum suaveolens, Dc.              |
| 246 | Pātāla garudī   | Cocculus hirsutus, (Linn.) Diels           |
| 247 | Pāthā           | Cissempelus pareira, Linn.                 |

| 248 | Potālo         | Triphoconthon digina Poyh            |
|-----|----------------|--------------------------------------|
|     | Paţōla         | Trichosanthes dioica, Roxb.          |
| 249 | Patrāńga       | Caesalpinia sappan, Linn.            |
| 250 | Pīlu           | Salvadora persica, Linn.             |
| 251 | Pippali        | Piper longum, Linn.                  |
| 252 | Piśāca kārpāsa | Abroma augusta, Linn. f.             |
| 253 | Pīta mūlā      | Rueum emodi, Wall.                   |
| 254 | Plakşa         | Ficus lacor, Buch-Ham.               |
| 255 | Priyāla        | Buchanania latifolia, Roxb.          |
| 256 | Priyańgu       | Callicarpa macrophylla, Vahl.        |
| 257 | Prşni parnī    | Ureria picta, Desv.                  |
| 258 | Pūga           | Areca catechu, Linn.                 |
| 259 | Punarnavā      | Boerhavia diffusa, Linn.             |
| 260 | Punnāga        | Calophyllum inophyllum, Linn.        |
| 261 | Puşkara mūla   | Inula racemosa, Hook. f.             |
| 262 | Pūtīhā         | Mentha piperata, Linn.               |
| 263 | Putrañjīevaka  | Putranjiva roxburghii, Wall.         |
| 264 | Rājikā         | Brassica juncea, Linn.               |
| 265 | Rakta chanda   | Pterocarpus santalinus, Linn. f.     |
| 266 | Rakta ņiryāsa  | Daemenorops draco, Blume.            |
| 267 | Rāsnā          | Alpinia officinarum, Hance.          |
| 268 | Rasōna         | Allium sativum, Linn.                |
| 269 | Rohişa         | Cymbopogon schoenanthus, Linn.       |
| 270 | Rohītaka       | Tecomella undulate, G. Don.          |
| 271 | Rumī mastagī   | Pistacia lentiscus, Linn.            |
| 272 | Sahadēvī       | Vernonia cineria, Len.               |
| 273 | Sailēya        | Parmelia perlata, Ach.               |
| 274 | Saireyaka      | Barleria prionitis, Linn.            |
| 275 | Śaivāla        | Ceratophyllum demersum, Linn.        |
| 276 | Śāla           | Shorea robusta, Gaertn.              |
| 277 | Śālaparņī      | Desmodium gangeticum, D.C.           |
| 278 | Śallakī        | Boswellia serrata, Roxb.             |
| 279 | Śālmalī        | Bombax malabaricum, Schott and Endl. |
| 280 | Śamī           | Prosopis cineraria, (Linn.) Druce.   |
| 281 | Śaņa puşpī     | Crotalaria verrucosa, Linn.          |
| 282 | Śańka puşpī    | Convolvulus pluricaulis, Chois.      |
| 283 | Sapta cakra    | Salacia reticulate, Wight.           |
| 284 | Saptaparņa     | Alstonia scholaris, R. Br.           |
| 285 | Śara           | Sacchrum munja, Roxb.                |
|     |                |                                      |

| 286       Sarala       Pinus-cedrus deodar, Roxb. Sargent.         287       Šarapuńkhā       Tephrosia purpurea, Linn.         288       Sārivà       Hemidesmus indicus, R. Br.         289       Sarja       Vateria indica, Linn.         290       Sarpagandhā       Rauwolfia serpentine, Benth ex Kurza         291       Sarşapa       Brassica campestris, Linn.         292       Sata puşpā       Anethum sowa, Kurtz.         293       Satavarī       Asparagus racemosus, Willd.         294       Śaṭḥī       Hedychlum spicatum, Hamilit ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Śigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Śirişa       Albizzia lebbek, Benth.         300       Sitāphala       Anona squamosa, Linn.         301       Śleṣmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorba nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Śrirāstaka       Crinum lattrolium, Linn.         305       Sudaršana       Crinum lattrolium, Linn.         306       Sudaršana       Crinu  | 255 |                  |  |
|--|-----|------------------|--|
| 288       Sarivā       Hemidesmus indicus, R. Br.         289       Sarja       Vateria indica, Linn.         290       Sarpagandhā       Rauwolfia serpentine, Benth ex Kurza         291       Sarşapa       Brassica campestris, Linn.         292       Sata puşpā       Anethum sowa, Kurtz.         293       Satāvarī       Asparagus racemosus, Willd.         294       Satţhā       Hedychium spicatum, Hamilit ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Sigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Širispā       Dalbergia sissoo, Roxb.         299       Širīşa       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Sleşmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Šṛrigātaka       Trapa bispinosa, Roxb.         305       Suddāma       Ruta graveolens, Linn         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioi  | 286 | Sarala           | Pinus-cedrus deodar, Roxb. Sargent.        |
| 289       Sarja       Vateria indica, Linn.         290       Sarpagandhā       Rauwolfia serpentine, Benth ex Kurza         291       Sarşapa       Brassica campestris, Linn.         292       Sata puşpā       Anethum sowa, Kurtz.         293       Satāvarī       Asparagus racemosus, Willd.         294       Saṭhī       Hedychium spicatum, Hamilt ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Śigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Śirīşa       Albizzia lebbek, Benth.         300       Stlāphala       Anona squamosa, Linn.         301       Śleṣmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerfolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Śṛrigātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūr                                     |     |                  |  |
| 290       Sarpagandhā       Rauwolfia serpentine, Benth ex Kurza         291       Sarşapa       Brassica campestris, Linn.         292       Sata puşpā       Anethum sowa, Kurtz.         293       Satāvarī       Asparagus racemosus, Willd.         294       Sathī       Hedychium spicatum, Hamilt ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Sigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Širīşa       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Śleşmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Srīrgātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūrapa       Amorphophallus campanulatus, Roxb.         310 <td></td> <td></td> <td>·</td> |     |                  | ·  |
| 291       Sarşapa       Brassica campestris, Linn.         292       Śata puṣpā       Anethum sowa, Kurtz.         293       Śatāvarī       Asparagus racemosus, Willd.         294       Śaṭhī       Hedychium spicatum, Hamilt ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Śigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Śirīṣa       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Śleṣmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Śṛrigātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Sudaršana       Crinum latifolium, Linn.         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surañjāna       Colchicum luteum, Baker.         311       <                                 |     | -                | Vateria indica, Linn.                      |
| 292       Sata puṣpā       Anethum sowa, Kurtz.         293       Satavarī       Asparagus racemosus, Willd.         294       Saṭhī       Hedychium spicatum, Hamilt ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Sigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Sirispa       Dalbergia sissoo, Roxb.         299       Sirīga       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Śleṣmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Śrigātaka       Trapa bispinosa, Roxb.         305       Sudarśana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surañjāna       Colchicum luteum, Baker.         311       Svarņa                                     | 290 | Sarpagandhā      | Rauwolfia serpentine, Benth ex Kurza       |
| 293       Satāvarī       Asparagus racemosus, Willd.         294       Saṭhī       Hedychium spicatum, Hamilt ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Sigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Sińsipā       Dalbergia sissoo, Roxb.         299       Sirīga       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Śleṣmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Śriŋātaka       Trapa bispinosa, Roxb.         305       Sudarśana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surañjāna       Colchicum luteum, Baker.         311       Svarņakṣīrī       Euphorbia thomsoniana, Boiss.         312  | 291 | Sarşapa          | Brassica campestris, Linn.                 |
| 294       Śaṭhī       Hedychium spicatum, Hamilt ex Smith.         295       Satyānāsī       Argemone mexicana, Linn.         296       Śigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Śinśipā       Dalbergia sissoo, Roxb.         299       Śirīṣa       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Śleşmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Srīgātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Sudaršana       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surarjājana       Colchicum luteum, Baker.         311       Svarņakṣīrī       Euphorbia thomsoniana, Boiss.         312       Śyōnāka       Oroxylum indicum, Vent.         313       <                                 | 292 | Śata puşpā       | Anethum sowa, Kurtz.                       |
| 295       Satyānāsī       Argemone mexicana, Linn.         296       Šigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Širispa       Dalbergia sissoo, Roxb.         299       Širīşa       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Šleşmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Šrīgātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surafijāna       Colchicum luteum, Baker.         311       Svarņakşīrī       Euphorbia thomsoniana, Boiss.         312       Syōnāka       Oroxylum indicum, Vent.         313       Tagara       Valeriana wallichi, DC.         314       Taila parņī<                                     | 293 | Śatāvarī         | Asparagus racemosus, Willd.                |
| 296       Sigru       Moringa oleifera, Lam.         297       Silhaka       Altingia excelsa, Noronha.         298       Śińśipā       Dalbergia sissoo, Roxb.         299       Śirīşa       Albizzia lebbek, Benth.         300       Sītāphala       Anona squamosa, Linn.         301       Śleşmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Śrſngātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surafijāna       Colchicum luteum, Baker.         311       Svarņakşīrī       Euphorbia thomsoniana, Boiss.         312       Śyōnāka       Oroxylum indicum, Vent.         313       Tagara       Valeriana wallichi, DC.         314       Taila parŋī       Eucalyptus globules, Labill.         315       Tāla<                                     | 294 | Śaţhī            | Hedychium spicatum, Hamilt ex Smith.       |
| 297 Silhaka Altingia excelsa, Noronha.  298 Śińśipā Dalbergia sissoo, Roxb.  299 Śirīṣa Albizzia lebbek, Benth.  300 Sītāphala Anona squamosa, Linn.  301 Śleṣmātaka Cordia dichotoma, Forst. f.  302 Snuhī Euphorbia nerifolia, Linn.  303 Soma Ephedra gerardiana, Wall.  304 Śṛṅgātaka Trapa bispinosa, Roxb.  305 Sudarśana Crinum latifolium, Linn.  306 Suddāma Ruta graveolens, Linn  307 Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  308 Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  309 Sūraṇa Amorphophallus campanulatus, Roxb.  310 Surañjāna Colchicum luteum, Baker.  311 Svarṇakṣĩrī Euphorbia thomsoniana, Boiss.  312 Śyōnāka Oroxylum indicum, Vent.  313 Tagara Valeriana wallichi, DC.  314 Taila parṇī Eucalyptus globules, Labill.  315 Tāla Borassus flabellifera, Linn.  316 Tālamūlī Curculigo orchioides, Gaertn.  317 Talispatrī Abies webbiana, Lindle.  318 Tāmraparṇa Nicotiana tobacum, Linn.  319 Taruṇī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tējōvhā Zantho-xylon alatum, Roxb.   | 295 | Satyānāsī        | Argemone mexicana, Linn.                   |
| Sirişa Dalbergia sissoo, Roxb.  299 Śirīşa Albizzia lebbek, Benth.  300 Sītāphala Anona squamosa, Linn.  301 Śleṣmātaka Cordia dichotoma, Forst. f.  302 Snuhī Euphorbia nerifolia, Linn.  303 Soma Ephedra gerardiana, Wall.  304 Śṛṅgātaka Trapa bispinosa, Roxb.  305 Sudaršana Crinum latifolium, Linn.  306 Suddāma Ruta graveolens, Linn  307 Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  308 Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  309 Sūraṇa Amorphophallus campanulatus, Roxb.  310 Surañjāna Colchicum luteum, Baker.  311 Svarṇakṣīrī Euphorbia thomsoniana, Boiss.  312 Śyōnāka Oroxylum indicum, Vent.  313 Tagara Valeriana wallichi, DC.  314 Taila parṇī Eucalyptus globules, Labill.  315 Tāla Borassus flabellifera, Linn.  316 Tālamūlī Curculigo orchioides, Gaertn.  317 Talispatrī Abies webbiana, Lindle.  318 Tāmraparṇa Nicotiana tobacum, Linn.  319 Taruṇī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tejōvhā Zantho-xylon alatum, Roxb.  | 296 | Śigru            | Moringa oleifera, Lam.                     |
| Sirīşa Albizzia lebbek, Benth.  Anona squamosa, Linn.  Sleşmātaka Cordia dichotoma, Forst. f.  Luphorbia nerifolia, Linn.  Soma Ephedra gerardiana, Wall.  Soma Ephedra gerardiana, Wall.  Sudaršana Crinum latifolium, Linn.  Sudama Ruta graveolens, Linn  Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  Suranja Amorphophallus campanulatus, Roxb.  Colchicum luteum, Baker.  Suranjana Colchicum luteum, Baker.  Suranja Svarņakşīrī Euphorbia thomsoniana, Boiss.  Coxylum indicum, Vent.  Tajia parnjī Eucalyptus globules, Labill.  Tala Borassus flabellifera, Linn.  Talamūlī Curculigo orchioides, Gaertn.  Abies webbiana, Lindle.  Tarunjī Rosa centifolia, Linn.  Tarunjī Rosa centifolia, Linn.  Tarunjī Rosa centifolia, Roxb.  Zantho-xylon alatum, Roxb.  Zantho-xylon alatum, Roxb.  | 297 | Silhaka          | Altingia excelsa, Noronha.                 |
| 300 Sītāphala Anona squamosa, Linn. 301 Śleṣmātaka Cordia dichotoma, Forst. f. 302 Snuhī Euphorbia nerifolia, Linn. 303 Soma Ephedra gerardiana, Wall. 304 Śṛṅgātaka Trapa bispinosa, Roxb. 305 Sudarśana Crinum latifolium, Linn. 306 Suddāma Ruta graveolens, Linn 307 Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud. 308 Sura punnāga Ochrocarpus longifolia, Benth & Hook. f. 309 Sūraṇa Amorphophallus campanulatus, Roxb. 310 Surañjāna Colchicum luteum, Baker. 311 Svarṇakṣīrī Euphorbia thomsoniana, Boiss. 312 Śyōnāka Oroxylum indicum, Vent. 313 Tagara Valeriana wallichi, DC. 314 Taila parṇī Eucalyptus globules, Labill. 315 Tāla Borassus flabellifera, Linn. 316 Tālamūlī Curculigo orchioides, Gaertn. 317 Talispatrī Abies webbiana, Lindle. 318 Tāmraparṇa Nicotiana tobacum, Linn. 319 Taruṇī Rosa centifolia, Linn. 320 Tavaksīrī Curcuma angustifolia, Roxb. 321 Tējovhā Zantho-xylon alatum, Roxb.   | 298 | Śińśipā          | Dalbergia sissoo, Roxb.                    |
| 301       Śleşmātaka       Cordia dichotoma, Forst. f.         302       Snuhī       Euphorbia nerifolia, Linn.         303       Soma       Ephedra gerardiana, Wall.         304       Šṛṅgātaka       Trapa bispinosa, Roxb.         305       Sudaršana       Crinum latifolium, Linn.         306       Suddāma       Ruta graveolens, Linn         307       Sugandha vāstūka       Chenopodium ambrosioides, Bert. ex. Steud.         308       Sura punnāga       Ochrocarpus longifolia, Benth & Hook. f.         309       Sūraņa       Amorphophallus campanulatus, Roxb.         310       Surañjāna       Colchicum luteum, Baker.         311       Svarņakşīrī       Euphorbia thomsoniana, Boiss.         312       Šyōnāka       Oroxylum indicum, Vent.         313       Tagara       Valeriana wallichi, DC.         314       Taila parņī       Eucalyptus globules, Labill.         315       Tāla       Borassus flabellifera, Linn.         316       Tālamūlī       Curculigo orchioides, Gaertn.         317       Talispatrī       Abies webbiana, Lindle.         318       Tāmraparṇa       Nicotiana tobacum, Linn.         320       Tavaksīrī       Curcuma angustifolia, Roxb.         321                            | 299 | Śirīşa           | Albizzia lebbek, Benth.                    |
| Sunhī Euphorbia nerifolia, Linn.  Soma Ephedra gerardiana, Wall.  Sringātaka Trapa bispinosa, Roxb.  Sudaršana Crinum latifolium, Linn.  Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  Suranja Amorphophallus campanulatus, Roxb.  Suranjāna Colchicum luteum, Baker.  Suranjāna Colchicum luteum, Baker.  Suranjakşīrī Euphorbia thomsoniana, Boiss.  Svarņakşīrī Eucalyptus globules, Labill.  Tajara Valeriana wallichi, DC.  Tajamūlī Curculigo orchioides, Gaertn.  Talispatrī Abies webbiana, Lindle.  Tārunjī Rosa centifolia, Linn.  Tarunjī Rosa centifolia, Roxb.  Zantho-xylon alatum, Roxb.  Tejpatra Cinnamomum tamala, Nees.   | 300 | Sītāphala        | Anona squamosa, Linn.                      |
| Soma Ephedra gerardiana, Wall.  304 Śṛṅgātaka Trapa bispinosa, Roxb.  305 Sudarśana Crinum latifolium, Linn.  306 Suddāma Ruta graveolens, Linn  307 Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  308 Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  309 Sūraṇa Amorphophallus campanulatus, Roxb.  310 Surañjāna Colchicum luteum, Baker.  311 Svarṇakṣīrī Euphorbia thomsoniana, Boiss.  312 Śyōnāka Oroxylum indicum, Vent.  313 Tagara Valeriana wallichi, DC.  314 Taila parṇī Eucalyptus globules, Labill.  315 Tāla Borassus flabellifera, Linn.  316 Tālamūlī Curculigo orchioides, Gaertn.  317 Talispatrī Abies webbiana, Lindle.  318 Tāmraparṇa Nicotiana tobacum, Linn.  319 Taruṇī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tējōvhā Zantho-xylon alatum, Roxb.  322 Tejpatra Cinnamomum tamala, Nees.  | 301 | Śleşmātaka       | Cordia dichotoma, Forst. f.                |
| 304ŚṛṅgātakaTrapa bispinosa, Roxb.305SudarśanaCrinum latifolium, Linn.306SuddāmaRuta graveolens, Linn307Sugandha vāstūkaChenopodium ambrosioides, Bert. ex. Steud.308Sura punnāgaOchrocarpus longifolia, Benth & Hook. f.309SūraṇaAmorphophallus campanulatus, Roxb.310SurañjānaColchicum luteum, Baker.311SvarṇakṣīrīEuphorbia thomsoniana, Boiss.312ŚyōnākaOroxylum indicum, Vent.313TagaraValeriana wallichi, DC.314Taila parṇīEucalyptus globules, Labill.315TālaBorassus flabellifera, Linn.316TālamūlīCurculigo orchioides, Gaertn.317TalispatrīAbies webbiana, Lindle.318TāmraparṇaNicotiana tobacum, Linn.319TaruṇīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.  | 302 | Snuhī            | Euphorbia nerifolia, Linn.                 |
| Sudarśana Crinum latifolium, Linn.  Sudama Ruta graveolens, Linn  Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  Suraņa Amorphophallus campanulatus, Roxb.  Suraņijāna Colchicum luteum, Baker.  Syōnāka Oroxylum indicum, Vent.  Syōnāka Oroxylum indicum, Vent.  Taila parņī Eucalyptus globules, Labill.  Tāla Borassus flabellifera, Linn.  Tālamūlī Curculigo orchioides, Gaertn.  Talispatrī Abies webbiana, Lindle.  Tāruņī Rosa centifolia, Linn.  Taruņī Rosa centifolia, Linn.  Taruņī Curcuma angustifolia, Roxb.  Tejpatra Cinnamomum tamala, Nees.   | 303 | Soma             | Ephedra gerardiana, Wall.                  |
| 306SuddāmaRuta graveolens, Linn307Sugandha vāstūkaChenopodium ambrosioides, Bert. ex. Steud.308Sura punnāgaOchrocarpus longifolia, Benth & Hook. f.309SūraņaAmorphophallus campanulatus, Roxb.310SurañjānaColchicum luteum, Baker.311SvarņakṣīrīEuphorbia thomsoniana, Boiss.312ŚyōnākaOroxylum indicum, Vent.313TagaraValeriana wallichi, DC.314Taila parņīEucalyptus globules, Labill.315TālaBorassus flabellifera, Linn.316TālamūlīCurculigo orchioides, Gaertn.317TalispatrīAbies webbiana, Lindle.318TāmraparņaNicotiana tobacum, Linn.319TaruņīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.  | 304 | Śŗńgātaka        | Trapa bispinosa, Roxb.                     |
| Sugandha vāstūka Chenopodium ambrosioides, Bert. ex. Steud.  Sura punnāga Ochrocarpus longifolia, Benth & Hook. f.  Amorphophallus campanulatus, Roxb.  Colchicum luteum, Baker.  Suranakṣīrī Euphorbia thomsoniana, Boiss.  Syōnāka Oroxylum indicum, Vent.  Tagara Valeriana wallichi, DC.  Talia parnī Eucalyptus globules, Labill.  Borassus flabellifera, Linn.  Curculigo orchioides, Gaertn.  Talispatrī Abies webbiana, Lindle.  Tāunnī Rosa centifolia, Linn.  Taunsī Curcuma angustifolia, Roxb.  Zantho-xylon alatum, Roxb.  Tejpatra Cinnamomum tamala, Nees.  | 305 | Sudarśana        | Crinum latifolium, Linn.                   |
| 308Sura punnāgaOchrocarpus longifolia, Benth & Hook. f.309SūraņaAmorphophallus campanulatus, Roxb.310SurañjānaColchicum luteum, Baker.311SvarņakşīrīEuphorbia thomsoniana, Boiss.312ŚyōnākaOroxylum indicum, Vent.313TagaraValeriana wallichi, DC.314Taila parŋīEucalyptus globules, Labill.315TālaBorassus flabellifera, Linn.316TālamūlīCurculigo orchioides, Gaertn.317TalispatrīAbies webbiana, Lindle.318TāmraparņaNicotiana tobacum, Linn.319TaruņīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.  | 306 | Suddāma          | Ruta graveolens, Linn                      |
| 309 Sūraṇa Amorphophallus campanulatus, Roxb. 310 Surañjāna Colchicum luteum, Baker. 311 Svarṇakṣīrī Euphorbia thomsoniana, Boiss. 312 Śyōnāka Oroxylum indicum, Vent. 313 Tagara Valeriana wallichi, DC. 314 Taila parṇī Eucalyptus globules, Labill. 315 Tāla Borassus flabellifera, Linn. 316 Tālamūlī Curculigo orchioides, Gaertn. 317 Talispatrī Abies webbiana, Lindle. 318 Tāmraparṇa Nicotiana tobacum, Linn. 319 Taruṇī Rosa centifolia, Linn. 320 Tavaksīrī Curcuma angustifolia, Roxb. 321 Tējōvhā Zantho-xylon alatum, Roxb. 322 Tejpatra Cinnamomum tamala, Nees.  | 307 | Sugandha vāstūka | Chenopodium ambrosioides, Bert. ex. Steud. |
| 310 Surañjāna Colchicum luteum, Baker. 311 Svarņakşīrī Euphorbia thomsoniana, Boiss. 312 Śyōnāka Oroxylum indicum, Vent. 313 Tagara Valeriana wallichi, DC. 314 Taila parņī Eucalyptus globules, Labill. 315 Tāla Borassus flabellifera, Linn. 316 Tālamūlī Curculigo orchioides, Gaertn. 317 Talispatrī Abies webbiana, Lindle. 318 Tāmraparņa Nicotiana tobacum, Linn. 319 Taruņī Rosa centifolia, Linn. 320 Tavaksīrī Curcuma angustifolia, Roxb. 321 Tējōvhā Zantho-xylon alatum, Roxb. 322 Tejpatra Cinnamomum tamala, Nees.  | 308 | Sura punnāga     | Ochrocarpus longifolia, Benth & Hook. f.   |
| Svarŋakşīrī Euphorbia thomsoniana, Boiss.  Syōnāka Oroxylum indicum, Vent.  Tagara Valeriana wallichi, DC.  Lucalyptus globules, Labill.  Tāla Borassus flabellifera, Linn.  Curculigo orchioides, Gaertn.  Talispatrī Abies webbiana, Lindle.  Tāmraparņa Nicotiana tobacum, Linn.  Taruņī Rosa centifolia, Linn.  Tavaksīrī Curcuma angustifolia, Roxb.  Tējōvhā Zantho-xylon alatum, Roxb.  Tejpatra Cinnamomum tamala, Nees.   | 309 | Sūraņa           | Amorphophallus campanulatus, Roxb.         |
| 312ŚyōnākaOroxylum indicum, Vent.313TagaraValeriana wallichi, DC.314Taila parŋīEucalyptus globules, Labill.315TālaBorassus flabellifera, Linn.316TālamūlīCurculigo orchioides, Gaertn.317TalispatrīAbies webbiana, Lindle.318TāmraparŋaNicotiana tobacum, Linn.319TaruŋīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.   | 310 | Surañjāna        | Colchicum luteum, Baker.                   |
| 313TagaraValeriana wallichi, DC.314Taila parņīEucalyptus globules, Labill.315TālaBorassus flabellifera, Linn.316TālamūlīCurculigo orchioides, Gaertn.317TalispatrīAbies webbiana, Lindle.318TāmraparņaNicotiana tobacum, Linn.319TaruņīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.  | 311 | Svarņakşīrī      | Euphorbia thomsoniana, Boiss.              |
| 314 Taila parņī Eucalyptus globules, Labill.  315 Tāla Borassus flabellifera, Linn.  316 Tālamūlī Curculigo orchioides, Gaertn.  317 Talispatrī Abies webbiana, Lindle.  318 Tāmraparņa Nicotiana tobacum, Linn.  319 Taruņī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tējōvhā Zantho-xylon alatum, Roxb.  322 Tejpatra Cinnamomum tamala, Nees.  | 312 | Śyōnāka          | Oroxylum indicum, Vent.                    |
| 315 Tāla Borassus flabellifera, Linn.  316 Tālamūlī Curculigo orchioides, Gaertn.  317 Talispatrī Abies webbiana, Lindle.  318 Tāmraparņa Nicotiana tobacum, Linn.  319 Taruņī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tējōvhā Zantho-xylon alatum, Roxb.  322 Tejpatra Cinnamomum tamala, Nees.  | 313 | Tagara           | Valeriana wallichi, DC.                    |
| 316TālamūlīCurculigo orchioides, Gaertn.317TalispatrīAbies webbiana, Lindle.318TāmraparņaNicotiana tobacum, Linn.319TaruņīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.   | 314 | Taila parņī      | Eucalyptus globules, Labill.               |
| 317 Talispatrī Abies webbiana, Lindle.  318 Tāmraparņa Nicotiana tobacum, Linn.  319 Taruņī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tējōvhā Zantho-xylon alatum, Roxb.  322 Tejpatra Cinnamomum tamala, Nees.   | 315 | Tāla             | Borassus flabellifera, Linn.               |
| 318TāmraparņaNicotiana tobacum, Linn.319TaruņīRosa centifolia, Linn.320TavaksīrīCurcuma angustifolia, Roxb.321TējōvhāZantho-xylon alatum, Roxb.322TejpatraCinnamomum tamala, Nees.   | 316 | Tālamūlī         | Curculigo orchioides, Gaertn.              |
| 319 Taruņī Rosa centifolia, Linn.  320 Tavaksīrī Curcuma angustifolia, Roxb.  321 Tējōvhā Zantho-xylon alatum, Roxb.  322 Tejpatra Cinnamomum tamala, Nees.  | 317 | Talispatrī       | Abies webbiana, Lindle.                    |
| 320 Tavaksīrī Curcuma angustifolia, Roxb. 321 Tējōvhā Zantho-xylon alatum, Roxb. 322 Tejpatra Cinnamomum tamala, Nees.   | 318 | Tāmraparņa       | Nicotiana tobacum, Linn.                   |
| 321 Tējōvhā Zantho-xylon alatum, Roxb. 322 Tejpatra Cinnamomum tamala, Nees.   | 319 | Taruņī           | Rosa centifolia, Linn.                     |
| 322 Tejpatra Cinnamomum tamala, Nees.  | 320 | Tavaksīrī        | Curcuma angustifolia, Roxb.                |
|  | 321 | Tējōvhā          | Zantho-xylon alatum, Roxb.                 |
| 323 Tila Sesamum indicum, DC.  | 322 | Tejpatra         | Cinnamomum tamala, Nees.                   |
|  | 323 | Tila             | Sesamum indicum, DC.                       |

| 324 | Tila parni   | Cleome gyanadra, Briquet.                  |
|-----|--------------|--|
| 325 | Tinduka      | Diospyros tomentosa, Roxb.                 |
| 326 | Tiniśa       | Ougeinia dalbergioides, Benth.             |
| 327 | Tintidika    | Rhus parviflora, Roxb.                     |
| 328 | Tōdarī       | Lepidium iberis, Linn.                     |
| 329 | Trapuşa      | Cucumis sativus, Linn.                     |
| 330 | Trāyamāna    | Gentiana Kurroa, Royle.                    |
| 331 | Trivŗt       | Operculina ipomoea, Linn.                  |
| 332 | Tulasī       | Ocimum sanctum, Linn.                      |
| 333 | Tūta         | Morus alba, Linn.                          |
| 334 | Tuvaraka     | Hydnocarpus wightana, Blume.               |
| 335 | Twak         | Cinamonum zeylonica, Blume.                |
| 336 | Udumbara     | Ficus racemosa, Linn.                      |
| 337 | Unnāva       | Zizyphus sativa, Gaertn.                   |
| 338 | Upakunčikā   | Nigella sativa, Linn.                      |
| 339 | Uśāvā        | Similax zeylanica, Linn.                   |
| 340 | Uśīra        | Vetiveria zizanioides, L. Nash.            |
| 341 | Uţańgaņa     | Blepharis edulis, Pers.                    |
| 342 | Vacā         | Acorus calamus, Linn.                      |
| 343 | Vamśa        | Bambusa arundinaceae, Willd.               |
| 344 | Vana palāndu | Urginea indica, Kunth.                     |
| 345 | Vanapsa      | Viola odorata, Linn.                       |
| 346 | Vandāka      | Dendrophthoe falcate, Linn.                |
| 347 | Vārāhī kanda | Dioscoria sativa, Linn.                    |
| 348 | Varuņa       | Crataeva nurvala, Roxb.                    |
| 349 | Vāsā         | Adhatoda vasica, Nees.                     |
| 350 | Vata         | Ficus bengalensis, Linn.                   |
| 351 | Vātāda       | Prunus amygdalus, Beill.                   |
| 352 | Vatsanābhī   | Aconitum ferox, Wall.                      |
| 353 | Vibhītakī    | Terminalia belerica, Roxb.                 |
| 354 | Vidańga      | Embelia ribes, Burm. f.                    |
| 355 | Vidārī kanda | Pueraria tuberose, DC.                     |
| 356 | Vīkañkata    | Flacourtia ramontchi, L. Herit.            |
| 357 | Vīrataru     | Dichrostachys cinerea, (Linn) Wight & Arn. |
| 358 | Vŗddhadāru   | Argyria speciosa, Sweet.                   |
| 359 | Vrukshāmla   | Garcinia indica, Chois.                    |
| 360 | Vyaghranakhī | Capparis zeylanica, Linn.                  |
| 361 | Yavānī       | Trachispermum amami, Linn. Sprague.        |

| 362 | Yavāsa  | Alhaji mourorum, (Bieb) Desv. |
|-----|---------|-------------------------------|
| 363 | Yuthicā | Jasminum auriculatum, Vahl.   |

# **SECTION C: Supervised Clinical Practice**

#### **Description:**

This module consolidates the competencies achieved in the Ayurvedic undergraduate programme and enables the graduates to gain experience in clinical placements within Ayurvedic settings. The specific aim is of developing the graduate's ability to produce a detailed management plan appropriate for the patient. During this module graduates will also be introduced to research and clinical audit procedures for treatment progress, a key requirement for professional development in independent practice. They will also learn to use the clinic's treatment database as a tool for evaluating treatment options.

This module provides an excellent opportunity to work with an Ayurvedic physician in the traditional setting. This unique experience will facilitate students to become safe and competent practitioners of Ayurvedic medicines. The students' practice during their hospital internship in India/Sri Lanka will offer them opportunities to integrate and synthesise their previous learning in a different environment, cultural expectations and values of Ayurvedic medicine. This is the final stage of the students' preparation to become competent and safe practitioners of Ayurvedic medicine.

The 1000 hours are made up of 500 Core Clinical practice hours from the 9<sup>th</sup> Module together with 200 further Core Clinical practice hours to meet the above additional learning outcomes and an additional 300 hours in support of clinical practice.

#### **Learning Outcomes:**

On completion of this module, the successful student will be able to:

- 1. Independently examine and diagnose patients and formulate an appropriate treatment plan.
- 2. Interpret basic medical investigations and refer patients for medical examination and treatment where appropriate.
- Critically discuss the advantages and disadvantages in given cases (both clinically and in terms of patient management) of combining Ayurvedic and bio-medical treatment approaches and to evaluate differentially their respective outcomes.
- 4. Keep appropriate and professional case records documenting initial presentation, diagnosis, treatments prescribed and carried out and the evaluation of therapeutic responses.
- 5. Critically interpret and prioritise information obtained from patients and significant others, recognising its limitations.
- 6. Perform main Ayurvedic diagnosis and treatment procedures.
- Work effectively within a multi-disciplinary and multi-professional teams involved in the management of patients with reference to Ayurvedic (Sanskrit) texts and current research.

# Indicative Reading

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# **Chinese Herbal Medicine**

These guidelines cover the following areas:

- Aims
- Outcomes
- Curriculum content
- · Means of assessment
- Notes on terminology

#### **AIMS**

The aim of Professional Entry Level education shall be to produce a practitioner of Chinese herbal medicine who can practise independently and who is a caring, safe, competent and effective.

The integration of theory and clinical practice during the educational programme, should encourage the development of reflective, evidence based practice delivered by a research-minded practitioner with qualities of integrity, humanity, caring, trust, responsibility, respect and confidentiality.

#### **OUTCOMES**

Upon satisfactory completion of the prescribed educational programme and subsequent qualification, a practitioner shall be able to:

- 1. take a patient's case history, to include information about:
  - a. the patient's presenting condition
  - b. predisposing, precipitating and maintaining factors
  - c. the patient's medical, psychological, social & family history
- interpret information gained whilst taking the patient's case history in order to determine possible diagnoses for further investigation
- 3. safely conduct the necessary diagnostic procedures, including:
  - a. pulse reading
  - b. tongue examination
  - c. body palpation
- 4. apply knowledge of anatomy, physiology, pathology and clinical medicine in order to interpret the results of diagnostic procedures competently
- 5. apply knowledge of current and traditional Chinese medicine in order to make an appropriate differential diagnosis based upon their findings

- 6. integrate patterns of disharmony with aetiological factors and pathological processes, and identify how these different aspects interconnect.
- 7. demonstrate awareness of limitations with regard to competence
- 8. apply knowledge of the medical sciences in order to recognise clinical situations where herbal treatment may be:
  - a. inappropriate
  - b. contraindicated
  - c. inadequate when used on its own
- 9. communicate with and make the appropriate referral to registered medical or other health care practitioners when necessary
- 10. elucidate a treatment principle and methods, and design an appropriate treatment based upon the use of Chinese herbal medicine when it is safe so to do
- 11. dispense Chinese herbal medicine, demonstrating competence in appropriate practical skills
- 12. apply knowledge pertaining to the safe storage of herbs, and legal requirements related to this, to clinical situations
- 13. succinctly and clearly communicate findings, diagnosis, treatment plan and prognosis to the patient in such a way that the patient's own needs, expectations and culture are taken into consideration.
- 14. identify key lifestyle factors which are:
  - a. causing the patient's condition
  - b. limiting their potential for recovery
- 15. discuss key lifestyle factors with the patient and where possible encourage the patient to help himself/herself.
- 16. specify the roles of all forms of prescribed medication in the overall management of a patient's condition and identify which medications:
  - a. should be maintained at constant levels
  - b. can be reduced slowly and
  - c. can be stopped immediately without risk to the patient
- 17. liaise with the patient and where appropriate with the patient's medical practitioner with regard to any proposed changes in the management of the medication
  - a. systematically and accurately record all relevant information and details of herbal formulae prescribed at every session
  - b. maintain and store these records for future reference and in accordance with statutory requirements
  - c. make these records available to their patients
- 18. monitor a patient's condition as a result of treatment, re-evaluate diagnostic information and differential diagnosis as necessary, and modify and implement new treatment strategies as the patient's condition changes over time.

- 19. evaluate and take account of any ethical considerations which might affect the practitioner/patient relationship. Such considerations include:
  - a. issues relating to age, gender or race.
  - b. issues arising out of prejudice or ignorance
  - c. issues relating to confidentiality
  - d. the impact of the practitioner's personality and circumstances (both physical and emotional)
  - e. issues of a financial nature
- 20. specify rare but sometimes serious adverse events when using herbal medicines, demonstrating knowledge of the relevance of
  - a. previous occurrences
  - b. debates about their causes
  - c. the role of liver function testing
- 21. identify signs and symptoms of possible adverse reactions and be able to respond appropriately in order to minimise harm to the patient
- 22. ensure compliance with requirements for the notification of adverse events
- 23. demonstrate knowledge of the requirements of the professional Codes of Ethics and Practice of the European Herbal & Traditional Medicine Practitioners Association, and the legal framework governing the practice of herbal medicine in the UK.
- 24. demonstrate possession of the attitudes and skills which are necessary for life long learning and professional development, and awareness that they are essential to continuing effective practice of Chinese herbal medicine.
- 25. critically read, evaluate and, if appropriate, apply the findings of significant research findings to the practice of Chinese herbal medicine
- 26. keep abreast of significant research and professional issues and their recognise their relevance to patient care/professional development.

## **CURRICULUM CONTENT**

The curriculum content comprises:

SECTION A: Theories, methods, diagnosis, treatment

Part I General Background

Part II Physiology Part III Aetiology

Part IV Pathology: Patterns of Disharmony

Part V Methods of Examination

Part VI Principles and Methods of Treatment

Part VII Differentiation and Treatment of Common Diseases

SECTION B: Materia Medica

Part I General Background Part II Individual Herbs

SECTION C: Formulae

Part I General Principles: Composing and Modifying Formulae

Part II Model Formulae

Means of Assessment

Exemptions

Notes on Terminology

Indicative Reading

### SECTION A: THEORIES, METHODS, DIAGNOSIS, TREATMENT

# **PART I: General Background**

### 1 History and Fundamental Characteristics of Chinese Medicine

- (a) Stages of development and literary landmarks; the importance of a historical understanding of Chinese medicine and the relationship between TCM and Western medicine in modern China
- (b) Holism: seeing patterns of disharmony
- (c) Medicine East and West: key contrasts

## 2 The Philosophical Setting

- (a) Yin-Yang Theory
  - (i) The concept of Yin-Yang and the basic aspects of the Yin-Yang relationship: Yin and Yang are divisible but inseparable (*yin yang ke fen er bu ke li*), rooted in each other (*yin yang hu gen*), mutually counterbalancing (*yin yang zhi yue*).
  - (ii) The medical applications of Yin-Yang.
- (b) Five Phase or Five Elements (Wu Xing) Theory
  - (i) The concept of the Five Phases/Elements; the Five Phase relationships of engendering  $(sheng)^1$ , restraining  $(ke)^2$ , rebellion  $(wu)^3$  and overwhelming  $(cheng)^4$ .
  - (ii) The medical applications of the Five Phase concept.

## **PART II: Physiology**

#### 1 The Fundamental Substances

- (a) Qi: Qi as a central concept in Chinese philosophy and medicine; the sources of Qi; the functions of Qi; the forms of Qi : Organ (zang fu), Channel (jing), Nutritive ying)<sup>5</sup>, Protective (wei), Gathering (zong)<sup>6</sup>
- (b) Blood (xue): sources and functions; relationship to Qi and to the Zang Fu
- (c) Essence ( jing): characteristics and functions
- (d) Spirit (*shen*)<sup>7</sup>: characteristics and manifestations
- (e) Body Fluids (*jin ye*): comprising thinner fluids (*jin*) and thicker fluids (*ye*); characteristics and functions

## 2 The Internal Organs (zang fu)

- (a) Differences between the Zang Fu in Chinese Medicine and the anatomical organs of Western medicine
- (b) The Five Yin Organs (*wu zang*): the functions of the Heart (*xin*)/ Pericardium (*xin bao*); the Liver (*gan*); the Spleen (*pi*); the Lungs (*fei*); the Kidneys (*shen*); the relationships between the Zang
- (c) The Six Yang Organs (*liu fu*): the functions of the Gall Bladder (*dan*); Stomach (*wei*); Small Intestine (*xiao chang*); Large Intestine (*da chang*); Bladder (*pang guang*); Triple Burner (*san jiao*); their relationships with the Zang.
- (d) The Extraordinary Organs (*qi heng zhi fu*)<sup>8</sup>: the functions of the Brain (*nao*); Marrow (*sui*); Bone (*gu*); Vessels (*mai*); Uterus (*zi gong*); Gall Bladder (*dan*)

# 3 The Channels (jing)<sup>9</sup> and Network Vessels (luo mai)<sup>10</sup>

- (a) The functions of the channels; the distinction between channels (*jing*) and network vessels (*luo mai*)
- (b) The channel system: the twelve regular channels (shi er jing mai); the eight extraordinary channels (qi jing ba mai); the channel divergences (jing bie); the channel sinews (jing jin); the cutaneous regions (pi bu); the relationship between the channels and the Zang Fu

# **PART III: Aetiology**

- **(1) External: The Six Pathogenic Factors** (*liu xie*)<sup>11</sup>: Wind (*feng*), Cold (*han*), Heat (*re*) or Fire (*huo*), Dampness (*shi*), Dryness (*zao*), (Summer-) Heat (*shu*); the relationship between the Normal or Upright (*zheng*) Qi and Pathogenic or Evil (*xie*) Qi
- (2) Internal: The Seven Emotions  $(qi \ qing)^{12}$ : Joy (xi), Anger (nu), Worry  $(you)^{13}$ , Pensiveness  $(si)^{14}$ , Sadness  $(bei)^{15}$ , Fear (kong), Fright (jing)
- (3) Not External, not Internal (bu nei wai yin):
  - (a) diet
  - (b) imbalances of work and rest
  - (c) sexual excesses
- (4) Miscellaneous factors: including trauma, burns, bites, parasites

## PART IV Pathology: Patterns of Disharmony

### Identifying patterns (bian zheng) according to:

(1) The Eight Principles (*ba gang*): patterns of the Interior (*li*) and Exterior (*biao*); Cold (*han*) and Heat (*re*); Deficiency (xu)<sup>16</sup> and Excess (shi)<sup>17</sup>; Yin and Yang.

## (2) Qi, Blood, Body Fluids:

- (a) Qi: Qi Deficiency (qi xu), Qi Sinking (qi xian)<sup>18</sup>, Qi Stagnation (qi yu)<sup>19</sup>, Qi Counterflow (qi ni)<sup>20</sup>
- (b) Blood (*xue*): Blood-Deficiency (*xue xu*), Blood Stasis (*xue yu*), Blood Heat (*xue re*)
- (c) Body Fluids (*jin ye*): oedema (*shui zhong*)<sup>21</sup>; distinction between Thin Mucus (*yin*)<sup>22</sup> and Phlegm (*tan*); Phlegm Patterns (*tan zheng*) including Phlegm-Heat (*tan re*), Damp-Phlegm (*shi tan*), Cold-Phlegm (*han tan*), Wind-Phlegm (*feng tan*), Qi-Phlegm (*gi tan*).

## (3) Pathogenic Factors:

- (a) Wind Patterns (feng zheng): Wind-Cold (feng han), Wind-Heat (feng re), Wind-Dampness (feng shi)
- (b) Damp Patterns (*shi zheng*): Cold-Dampness (*han shi*), Damp-Heat (*shi re*)
- (c) Cold Patterns (han zheng): Excess Cold (shi han). Deficiency Cold (xu han)
- (d) Heat/Fire Patterns (re-/huo zheng): Excess Heat (shi re), Deficiency Heat (xu re)
- (e) Summerheat Patterns (shu zheng)
- (f) Dryness Patterns (zao zheng)

#### (4) The Internal Organs:

Patterns of the Heart/Pericardium, Lung, Liver, Spleen, Kidney; Patterns of the Stomach, Small Intestine, Large Intestine, Gall Bladder, Bladder, Triple Burner.

- **(5) The Six Stages** (*liu-jing*): in accordance with the theory of Injury by Cold: Greater Yang (*tai yang*), Yang Brightness (*yang ming*), Lesser Yang (*shao yang*), Greater Yin (*tai yin*), Lesser Yin (*shao yin*), Absolute Yin (*jue yin*)<sup>23</sup>
- **(6) The Four Levels**: in accordance with the theory of Warm Diseases: Defense aspect (*wei fen*), Qi aspect (*qi fen*), Nutritive aspect (*ying fen*), Blood aspect (*xue fen*)

#### **PART V** Methods of Examination

### (1) Looking

- (a) The Shen (including facial expression, look and shine of the eyes, clarity of thought)
- (b) Physical shape and movement
- (c) Facial colour
- (d) Tongue
- (e) Other external manifestations: eyes, nose, ears, mouth/lips/teeth/gums, throat, limbs (including index finger in infants), skin

## (2) Listening & Smelling

- (a) Sound of the voice; breathing; cough
- (b) Body odours (including stools, urine and other discharges)

### (3) Asking

- (a) Sensations of cold and hot
- (b) Sweating
- (c) Headaches and dizziness
- (d) Pain/aching/numbness: in whole body, joints, back, limbs
- (e) Chest and abdomen: including epigastric and lower abdominal fullness and pain, oppression of the chest, palpitations, shortness of breath, hypochondriac pain
- (f) Stools and urine
- (g) Thirst, appetite and diet, tastes in the mouth, nausea/vomiting
- (h) Ears and eyes: including tinnitus, hearing loss; pain or pressure in the eyes, blurred vision, floaters
- (i) Sleep
- (j) Vitality
- (k) Mental-emotional state
- (I) Gynaecological: cycle, periods, discharges
- (m) Paediatric: including special events during pregnancy, traumas at birth, breast-feeding and weaning, vaccinations
- (n) Medical history
- (o) Medication

## (4) Touching

- (a) The **pulse**: method of palpation; levels of pressure; pulse-positions; pulse qualities including: Floating (*fu*), Sinking or Deep (*chen*), Slow (*chi*), Rapid (*shuo*), Empty (*xu*), Full (*shi*), Thin or Thready (*xi*), Wiry or Stringlike (*xian*), Slippery (*hua*), Tight (*jin*), Flooding (*hong*), Soggy (*ru*) or Soft (*ruan*), Choppy (*se*), Knotted (*jie*), Interrupted (dai), and Hurried (*cu*); integration of positions and qualities.
- (b) **Palpating** the skin, the hands and feet, the epigastrium and abdomen.

## **PART VI** Principles and Methods of Treatment

## (1) Principles of Treatment (zhi ze)

- (a)
- Treating in accordance with the season, the locality, and the individual. Supporting the Upright  $(zheng)^{24}$  Qi and expelling the Evil (xie) Qi. Treating the manifestation  $(biao)^{25}$  and the root (ben). (b)
- (c)
- Straightforward treatment (zheng-zhi) and paradoxical treatment (fan-zhi). (d)
- (2) Methods of Treatment (zhi fa): the Eight Methods (ba fa)<sup>26</sup>: Sweating (han), vomiting (tu), Draining Downward (xia), Harmonising (he), Warming (wen), Clearing (qing), Reducing (xiao), Tonifying (bu); applications, variations, contraindications.

#### **PART VII Differentiation and Treatment of Common Diseases**

The differentiation of diseases adopted here is based mainly on categories used in the Chinese medicine tradition. In all cases where these are employed, the Pinyin version is added in order to remove any uncertainty about which Chinese term is being translated.

The Chinese medicine categories are generally distinct from modern biomedical concepts. At the same time, an understanding of those concepts and how they relate to the categories of Chinese medicine is an essential element in professional entry training in Chinese herbal medicine. They are brought together here in two ways:

- (a) by listing a number of biomedical disease categories in brackets after the Chinese medicine category. Because of the lack of direct correspondence, this procedure is bound to be more or less artificial. For example, irritable bowel syndrome is placed in brackets after 'abdominal pain'. IBS is not of course characterised simply by abdominal pain, but also by abnormality in the bowel pattern. The point of the reference is only to indicate the context in which it might be appropriate to study IBS. Some Chinese medicine disease categories (for example 'cough', 'epigastric pain', 'painful obstruction') are very broad. They incorporate many Chinese medicine differentiations, and may be associated with a range of biomedical disease concepts.
- (b) by adopting modern terms in most cases as the headings for broad sub-categories of disease.

Two important further points should be made. First, the purpose in drawing up this list is not to suggest that there is only one appropriate way of categorising diseases, but to indicate the range of common diseases that educational institutions are expected to cover. The outline here provides one possible structure, but we recognise that this is provisional in nature and that it will be subject to future refinement in the light of continuing debate about the development of Oriental medicine in the West.

Second, it is understood that in the case of some of the disorders listed (eg diabetes, epilepsy, HIV) Chinese herbal medicine may not be regarded as a first line treatment but as a supportive one.

### **INTERNAL MEDICINE** (nei ke)

### Respiratory

- Common cold (gan mao)
- Cough (ke sou)
- Wheezing (xiao) and dyspnoea (chuan) (including asthma, bronchitis, emphysema)
- Pulmonary consumption (*fei lao*)

#### Gastro-Intestinal

- Epigastric pain (wei tong) (including gastritis, gastric and duodenal ulcer)
- Vomiting (ou tou)
- Stomach reflux (fan wei)
- Constipation (bian bi)
- Abdominal pain of digestive origin (*fu tong*) (including Irritable Bowel Syndrome)
- Diarrhoea (xie xie) (including Crohn's and ulcerative colitis)
- Haemorrhoids (zhi chuang)
- Hiccough (e ni)
- Oesophageal constriction (ye ge)

## Liver and Gall Bladder

- Jaundice (huang dan)
- Lateral costal pain (xie tong) (including gall stones and cholecystitis)
- Hepatitis B & C

## Neurological

- Headache (tou tong)
- Dizziness and vertigo (xuan yun)
- Wind Stroke (*zhong feng*) (including CVA, Bell's Palsy)
- Facial pain (*mian tong*)
- Epilepsy (xian)
- Multiple sclerosis

## Cardiovascular

- Chest pain (xiong tong) and chest painful obstruction (xiong bi) (including angina)
- Coronary heart disease
- Arrhythmia
- Hypertension
- Varicose veins

#### **Urinary and Genital**

- Painful Urination patterns (*lin zheng*)
- Urinary blockage (*long bi*)
- Impotence (yang wei)
- Male infertility

#### Musculo-skeletal and rheumatological

- Low back pain (*yao tong*)
- Painful obstruction patterns (bi zheng) (including osteoathritis and rheumatoid arthritis)
- Atrophy Syndrome (*wei*) (including myasthenia gravis)
- Trauma

#### Ear, Nose and Throat

- Tinnitus and deafness (er ming er long)
- Purulent ear (*ting er*) (including otitis media)
- Nasal congestion (bi yuan) (including sinusitis, rhinitis)
- Nosebleed (bi niu)
- Sore swollen throat (yan hou zhong tong) (including tonsillitis, pharyngitis)
- Loss of voice (shi yin)

## **Eye Disorders**

- Sore, red and swollen eyes (mu chi zhong tong)
- Stye (zhen yan)
- Tearing patterns (liu lei zheng)

#### Fluid and Blood Disorders

- Water swelling (shui zhong) (including oedema of various aetiologies)
- Sweating (han)
- Phlegm (tan) disorders (the role of Phlegm in a broad range of diseases)
- Blood stasis (yu xue) (the role of Blood stasis in a broad range of diseases)

#### **Mental and Emotional**

- Insomnia (*bu mei*)
- Palpitation (xin ji) (including anxiety states)
- Depression patterns (yu zheng)
- Mania and withdrawal (dian kuang)

## Oncology

- Basic theory
- Supportive treatments

### **Metabolic disorders**

- Diabetes
- Thyroid disease

## Immune deficiency and auto-immune disorders

- Chronic Fatigue Syndrome
- Lupus erythematosus
- HIV and AIDS

### GYNAECOLOGY (fu ke ji bing)

- Menstrual irregularity (yu jing bu tiao)
- Uterine bleeding (beng lou)
- Amenorrhoea (bi jing)
- Dysmenorrhoea (tong jing)
- Leukorrhoea (dai xia)
- Pre- and post-menopausal patterns (jing jue qian hou zhu zheng)
- Infertility (bu yun)
- Abdominal masses (zheng jia)
- Uterine prolapse (zi gong tuo chi)
- Premenstrual syndrome
- Endometriosis
- Pelvic inflammatory disease
- Polycystic ovaries

#### **Obstetrics**

- Precautions in using herbs during pregnancy
- Morning sickness (ren chen e zhu)
- Threatened miscarriage (xian zhao liu chan)
- Difficult delivery (nan chan)
- Insufficient lactation (*ru shao*)
- Postnatal depression

## PAEDIATRICS (xiao er za bing)

- Infantile diarrhoea (xiao er xie xie)
- Infantile convulsions (xiao er jing feng)
- Enuresis (*yi niao*)
- Mumps (zha sai)
- Measles (ma zhen)
- Respiratory infections
- Catarrh
- Ear infections
- Abdominal pain

## **DERMATOLOGY** (pi fu ke)

- Eczema
- Psoriasis
- Seborrhoeic dermatitis
- Acne vulgaris
- Herpes zoster
- Herpes simplex
- Rosacea
- Urticaria
- Alopecia
- Discoid Lupus

## **SECTION B: MATERIA MEDICA**

#### PART I GENERAL BACKGROUND

## (1) The Historical Development of Chinese Herbal Knowledge

## (2) The Identification, Harvesting and Storage of Chinese herbs

(This will be dealt with in detail in the module on 'Pharmacognosy and Dispensing')

## (3) The Preparation and Treatment of Chinese Herbs

(This will be dealt with in detail in the module on 'Pharmacognosy and Dispensing')

# (4) The Natures & Properties of Chinese Herbs

- (a) Four Energies & Five Flavours
- (b) Ascending, Descending, Floating & Sinking
- (c) Tonifying & Draining
- (d) Targeting of Channels
- (e) Categories

# (5) The Utilisation of Chinese Herbs

- (a) Combining herbs
- (b) Contraindications
  - (i) Symptomatic contraindications
  - (ii) Contraindicated combinations
  - (iii) Contraindications for pregnant women
  - (iv) Contraindicated food and drink
- (c) Dosage
  - (i) As determined by the nature of the herbs
  - (ii) As determined by the combination and the type of prescription
  - (iii) As determined by the disease situation, the constitution and age of the patient
- (d) Administration

Safety issues surrounding the use of Chinese herbs, including quality assurance and control, relevant legislation, reporting of adverse events, and the role of blood testing, are essential parts of a training in Chinese herbal medicine, and will be covered in detail in the module on Pharmacognosy and Dispensing.

#### **PART II INDIVIDUAL HERBS**

Considering the diversity of teaching methods, and not wishing to promote an educational regime based upon the memorisation of large quantities of information at the expense of an understanding of what was retained, but bearing in mind that certain information such as commonly used herbs should be at the graduate's fingertips, it is appropriate for herbs to be categorised under two group headings: **Essential** and **Useful**.

**Essential**: students should have mastery of herbs in this group. Without using a textbook the graduate should expect to be familiar with: the name, category, properties (Four *Qi* and Five Tastes), actions and indications, dosage, contra-indications, main combinations, differences between members of the same category, appropriate methods of preparation.

**Useful**: students should have an understanding of herbs in this group. The level of knowledge should be such that, without recourse to a textbook, the student should be familiar with: the name, category, main actions and indications, differences between members of the same category. Any further information about these substances can be drawn from textbook sources.

Each educational institution should cover a minimum of 200 herbs, to be drawn from the approved list below. Each institution should define, at its discretion, 70-100 herbs as Essential herbs to be learned in depth. These must include herbs from each category in the list.

Please note that the legal position of some of the items in the materia medica below is affected by international agreements or UK law. These items are marked by asterisks in the following way:

- \* Affected by the Convention on International Trade in Endangered Species, allowed if traded with the appropriate trade permits (if an item is banned entirely under CITES restrictions, this is indicated in the text and included for study purposes).
- \*\* Non-plant materials, included here for study purposes. Under UK law, non-plant traditional medicines fall outside the remit of the licensing exemption granted to herbs by the 1968 Medicines Act.
- \*\*\* Restricted under SI 2130 Schedule 111, 1974, included here for study purposes
- \*\*\*\* Banned for use in unlicensed medicines by Act of Parliament. Included for study purposes.

#### Herbs that:

## Resolve the Exterior (jie biao yao)

### Warm, acrid herbs that resolve the exterior

Gui Zhi (Ramulus Cinnamomi Cassiae)

Ma Huang (Herba Ephedrae)

Fang Feng (Radix Ledebouriellae Divaricatae)

Jing Jie (Herba seu Flos Schizonepetae Tenuifoliae)

Qiang Huo (Rhizoma et Radix Notoptergygii)

Zi Su Ye (Folium Perillae Frutescentis)

Xi Xin (Herba cum Radice Asari)

Bai Zhi (Radix Angelicae Dahuricae)

Sheng Jiang (Rhizoma Zingiberis Officinalis Recens)

#### Cool, acrid herbs that resolve the exterior

Bo He (Herba Menthae Haplocalycis)

Sheng Ma (Rhizoma Cimicifugae)

Ju Hua (Flos Chrysanthemi Morifolii)

Chai Hu (Radix Bupleuri)

Ge Gen (Radix Puerariae)

Sang Ye (Folium Mori Albae)

Chan Tui (Periostracum Cicadae)\*\*

Niu Bang Zi (Fructus Arctii Lappae)

### Clear Heat (qing re yao)

#### Drain Fire (xie huo yao)

Shi Gao (Gypsum)\*\*

Zhi Mu (Rhizoma Anemarrhenae Asphodeloidis)

Zhi Zi (Fructus Gardeniae Jasminoidis)

Xia Ku Cao (Spica Prunellae Vulgaris)

Dan Zhu Ye (Herba Lophatheri)

Lu Gen (Rhizoma Phragmitis Communis)

Tian hua fen (Radix Trichosanthis Kirilowii)

### Cool Blood (liang xue yao)

Sheng Di Huang (Radix Rehmanniae Glutinosae)

Mu Dan Pi (Cortex Moutan Radicis)

Chi Shao Yao (Radix Paeoniae Rubrae)

Xuan Shen (Radix Scrophulariae Ningpoensis)

Di Gu Pi (Cortex Lycii Radicis)

Zi Cao (Radix Arnebiae seu Lithospermi)

Shui Niu Jiao (Cornu Bubali)\*\*

Bai Wei (Radix Cynanchi Baiwei)

### Clear Heat and Dry Dampness (ging re zao shi yao)

Huang Qin (Radix Scutellariae Baicalensis)

Huang Bai (Cortex Phellodendri)

Huang Lian (Rhizoma Coptidis)

Long Dan Cao (Radix Gentianae Longdancao)

Ku Shen (Radix Sophorae Flavescentis)

## Clear Heat and Resolve Toxin (qing re jie du yao)

Jin Yin Hua (Flos Lonicerae Japonicae)

Lian Qiao (Fructus Forsythiae Suspensae)

Pu Gong Ying (Herba Taraxaci Mongolici cum Radice)

Bai Xian Pi (Cortex Dictamni Dasycarpi Radicis)

Tu Fu Ling (Rhizoma Smilacis Glabrae)

Ban Lan Gen (Radix Isatidis seu Baphicacanthi)

Bai Hua She She Cao (Herba Hedyotidis Diffusae)

Da Qing Ye (Folium Daqingye)

Zi Hua Di Ding (Herba cum Radice Violae Yedoensitis)

# Clear Heat and Resolve Summerheat (qing re jie shu yao)

Qing Hao (Herba Artemesiae Annuae)

Bai Bian Dou (Semen Dolichoris Lablab)

Yin chai hu (Radix Stellariae Dichotomae)

## Precipitants (xia yao)

## Attacking Precipitants (gong xia yao)

Da Huang (Radix et Rhizoma Rhei)

Mang Xiao (Mirabilitum)\*\*

## Moist Precipitants (run xia yao)

Huo Ma Ren (Semen Cannabis Sativae)

Yu Li Ren (Semen Pruni)

## Transform Dampness (hua shi yao)

Cang Zhu (Rhizoma Atractylodis)

Huo Xiang (Herba Agastaches seu Pogostemi)

Sha Ren (Fructus Amomi)

Hou Po (Cortex Magnoliae Officinalis)

Bai Dou Kou (Fructus Amomi Kravanh)

Cao Guo (Fructus Amomi Tsao-ko)

Pei Lan (Herba Eupatorii Fortunei)

#### Drain Dampness (li shi yao)

Fu Ling (Sclerotium Poriae Cocos)

Ze Xie (Rhizoma Alismatis Orientalis)

Yi Yi Ren (Semen Coicis Lachryma-jobi)

Mu Tong (Caulis Mutong)\*\*\*\* (All forms of Mu Tong banned)

Che Qian Zi (Semen Plantaginis)

Hua Shi (Talcum)\*\*

Yin Chen Hao (Herba Artemesiae Yinchenhao)

Bi Xie (Rhizoma Dioscoreae Hypoglaucae)

Zhu Ling (Sclerotium Polypori Umbellati)

Jin Qian Cao (Herba Lysimachiae)

Di Fu Zi (Fructus Kochiae Scopariae)

Han Fang Ji (Radix Stephaniae Tetrandae)\*\*\*\* (All forms of Fang Ji banned)

# Dispel Wind and Eliminate Dampness (qu feng chu shi yao)

Du Huo (Radix Angelicae Pubescentis)

Qin Jiao (Radix Gentianae Qinjiao)

Wei Ling Xian (Radix Clematidis)

Cang Er Zi (Fructus Xanthii Sibirici)

Mu Gua (Fructus Chaenomelis)

Hai Feng Teng (Caulis Piperis Futokadsurae)

Sang Zhi (Ramulus Mori Albae)

Sang Ji Sheng (Ramulus Sangjisheng)

Xi Xian Cao (Herba Siegesbeckiae)

Wu Jia Pi (Cortex Acanthopanacis Gracilistyli Radicis)

# Transform Phlegm, Suppress Cough and Calm Wheezing

### Dispel Cold and Transform Phlegm (qu han hua tan yao)

Ban Xia (Rhizoma Pinelliae Terenatae)

Jie Geng (Radix Platycodi Grandiflori)

Tian Nan Xing (Rhizoma Arisaematis)

Xuan Fu Hua (Flos Inulae)

Bai Jie Zi (Semen Sinapis Albae)

## Clear Heat and Transform Phlegm (qing re hua tan yao)

Qian Hu (Radix Peucedani)

Zhe Bei Mu (Bulbus Fritillariae Thunbergii)

Chuan Bei Mu (Bulbus Fritillariae Cirrhosae)

Zhu Ru (Caulis Bambusae in Taeniis)

Gua Lou (Fructus Trichosanthis)

Gua Lou Ren (Semen Trichosanthis)

Kun Bu (Thallus Algae)

## Suppress Cough and Calm Wheezing (zhi ke ping chuan yao)

Kuan Dong Hua (Flos Tussilaginis Farfarae)

Bai Bu (Radix Stemonae)

Su Zi (Fructus Perillae Frutescentis)

Xing Ren (Semen Pruni Armeniacae)

Sang Bai Pi (Cortex Mori Albae Radicis)

Zi Wan (Radix Asteris Tatarici)

Pi Pa Ye (Folium Eriobotryae Japonicae)

#### Regulate Qi (li qi yao)

Chen Pi (Pericarpium Citri Reticulatae)

Qing Pi (Pericarpium Citri Reticulatae Viride)

Zhi Shi (Fructus Immaturus Citri Aurantii)

Mu Xiang (Radix Saussureae Lappae)\* (All trade in this form of Mu Xiang banned)

Xiang Fu (Rhizoma Cyperi Rotundi)

Zhi Ke (Fructus Citri Aurantii)

Chuan Lian Zi (Fructus Meliae Toosendan)

Da Fu Pi (Pericarpium Arecae Catechu)

Wu Yao (Radix Lynderae Strychnifoliae)

## Disperse Food and Guide Out Stagnation (xiao shi dao zhi yao)

Shen Qu (Massa Fermenta)
Shan Zha (Fructus Crataegi)
Lai Fu Zi Semen Raphani Sativi)
Gu Ya (Fructus Oryzae Sativae Germinatus)
Mai Ya (Fructus Hordei Vulgaris Germinatus)
Ji Nei Jin (Endothelium Corneum Gigerae Galli)\*\*

## Invigorate Blood (huo xue yao)

Dan Shen (Radix Salviae Miltiorrhizae)
Tao Ren (Semen Persicae)
Hong Hua (Flos Carthami Tinctorii)
Chuan Xiong (Radix Ligustici Chuanxiong)
Chuan niu xi (Radix Achyranthis Bidentae)
Huai Niu Xi (Radix Cyathulae Officinalis)
Yu Jin (Tuber Curcumae)
Yan Hu Suo Rhizoma Corydalis Yanhusuo)
Ji Xue Teng (Radix et Caulis Jixueteng)
Yi Mu Cao (Herba Leonuri Heterophylli)
San Leng (Rhizoma Sparganii Stoloniferi)
Mo Yao (Myrrha)
Ru Xiang (Gummi Olibanum)
E Zhu (Rhizoma Curcumae Ezhu)
Ze Lan (Herba Lycopi Lucidi)

### Stop Bleeding (zhi xue yao)

Ai Ye (Folium Artemisae Argyi)
San Qi (Radix Notoginseng)
Pu Huang (Pollen Typha)
Di Yu (Radix Sanguisorbae Officinalis)
Da Ji (Herba seu Radix Cirsii Japonici)
Xiao Ji (Herba Cephalanoplos)
Ou Jie (Nodus Nelumbinis Nuciferae Phizomatis)
Ce Bai Ye (Cacumen Biotae Orientalis)
Xian He Cao (Herba Agrimoniae Pilosae)
Bai Mao Gen (Rhizoma Imperatae Cylindricae)

# Warm the Interior (wen li yao)

Rou Gui (Cortex Cinnamomi Cassiae)
Fu Zi (Radix Lateralis Aconiti Carmichaeli Praeparata)\*\*\*
Gan Jiang (Rhizoma Zingiberis Officinalis)
Wu Zhu Yu (Fructus Evodiae Rutaecarpae)
Ding Xiang (Flos Caryophylli)

### Tonify Qi (bu qi yao)

Ren Shen (Radix Ginseng)

Dang Shen (Radix Codonopsitis Pilosulae)

Bai Zhu (Rhizoma Atractylodis Macrocephalae)

Huang Qi (Radix Astralagi Membranaceus)

Shan Yao (Radix Dioscoreae Oppositae)

Da Zao (Fructus Zizyphi Jujubae)

Tai Zi Shen (Radix Pseudostellariae Heterophyllae)

Gan Cao (Radix Glycyrrhizae Uralensis)

# Tonify Yang (bu yang yao)

Xu Duan (Radix Dipsaci Asperi)

Du Zhong (Cortex Eucommiae Ulmoidis)

Bu Gu Zhi (Fructus Psoraleae Corylifoliae)

Tu Si Zi (Semen Cuscutae Chinensis)

Rou Cong Rong (Herba Cistanches Deserticolae)

Lu Rong (Cornu Cervi Parvum)\*\*

Yi Zhi Ren (Fructus Alpiniae Oxyphyllae)

Gou Ji (Rhizoma Cibotii Barometz)\*

Ba Ji Tian (Radix Morindae Officinalis)

Yin Yang Huo (Herba Epimedii)

Dong Chong Xia Cao (Cordyceps Sinensis)

Xian Mao (Rhizoma Curculiginis Orchioidis)

## Tonify Blood (bu xue yao)

Dang Gui (Radix Angelicae Sinensis)

Bai Shao Yao (Radix Paeoniae Lactiflorae)

He Shou Wu (Radix Polygoni Multiflori)

Shu Di Huang (Radix Rehmanniae Glutinosae Conquitae)

Long Yan Rou (Arilllus Euphoriae Longanae)

E Jiao (Gelatinum Corii Asini)\*\*

#### Tonify Yin (bu yin yao)

Mai Men Dong (Tuber Ophipogonis Japonici)

Tian Men Dong (Tuber Asparagi Cochinchinensis)

Sha Shen (Radix Adenophorae seu Glehniae)

Nu Zhen Zi (Fructus Ligustri Lucidi)

Shi Hu (Herba Dendrobii)\*

Bai He (Bulbus Lilii)

Gou Qi Zi (Fructus Lycii)

Gui Ban (Plastrum Testudinis)\*\* (CITES: trade allowed with appropriate trade permits)

Bie Jia (Carapax Amydae Sinensis)\*\*

Yu Zhu (Rhizoma Polugonati Odorati)

Han Lian Cao (Herba Ecliptae Prostratae)

Hei Zhi Ma (Semen Sesami Indici)

Huang Jing (Rhizoma Polygonati)

### Stabilise and Bind (gu se yao)

Wu Wei Zi (Fructus Schisandrae Chinensis)
Shan Zhu Yu (Fructus Corni Officinalis)
Lian Zi (Semen Melumbinis Nuciferae)
Fu Pen Zi (Fructus Rubi Chingii)
Ma Huang Gen (Radix Ephedrae)
Qian Shi (Semen Euryales Ferocis)
Fu Xiao Mai (Semen Tritici Aestivi)
Rou Dou Kou (Semen Myristicae Fragrantis)
Wu Mei (Fructus Pruni Mume)

# Calm the Liver and Extinguish Wind (ping gan xi feng yao)

Gou Teng (Ramulus cum Uncis Uncariae) Tian Ma (Rhizoma Gastrodiae Elatae)\* Bai Ji Li (Fructus Tribuli Terrestris) Shi Jue Ming (Concha Haliotidis)\*\* Jiang Can (Bombyx Batrycatus)\*\* Di Long (Lumbricus)\*\*

# Calm the Spirit

# Nourish the Heart and Calm the Spirit (yang xin an shen yao)

Yuan Zhi (Radix Polygalae Tenuifoliae) Suan Zao Ren (Semen Zizyphi Spinosae) Bai Zi Ren (Semen Biotae Orientalis) He Huan Pi (Cortex Albizziae Julibrissin) Ye Jiao Teng (Caulis Polygoni Multiflori)

#### Settle the Spirit (zhen an yao)

Long gu (Os Draconis)\*\*

Mu li (Concha Ostreae)\*\*

Ci shi (Magnetitum)\*\*
Zhen zhu mu (Concha Margaritaferae)\*\*

#### Open the Orifices (kai giao yao)

Shi Chang Pu (Rhizoma Acori Graminei) Bing Pian (Borneol) An Xi Xiang (Benzoinum)

## **SECTION C: FORMULAE**

#### PART I GENERAL PRINCIPLES: COMPOSING AND MODIFYING FORMULAE

- (1) Internal Structure of Chinese Herbal formulae
  - (a) Principles of formula-building
  - (b) Principles of herb combination
- (2) Adjustment of Formulae to Fit the Individual Case
  - (a) Adding and deleting herbs
  - (b) Altering herb combinations
  - (c) Altering dose ratios
- (3) Categories of Formula
  - (a) Pre-modern categorisations
  - (b) Modern categorisations
- (4) Types of formulation (decoctions, powders, pills, soft extracts, special pills, tinctures) This will be dealt with in detail in the module on 'Pharmacognosy and Dispensing'
- (5) Preparation and Administration
  This will be dealt with in detail in the module on 'Pharmacognosy and Dispensing'

#### PART II MODEL FORMULAE

The distinction between **Essential** and **Useful** applied in the case of individual herbs should also be applied to the study of formulae.

**Essential** formulae: these should comprise 30 to 50 formulae which are to be mastered so that the student, without recourse to a textbook, has knowledge of: the category (e.g. Releases the Exterior, Invigorates Blood); ingredients and dosage; indications for dosage; contra-indications; major modifications; differences in properties and usage between formulae in the same category.

**Useful** formulae: students should have an understanding of formulae in this group, such that, without recourse to a textbook, students will be familiar with: the category; main ingredients; indications for usage; differences in properties and usage between formulae in the same category.

Educational Institutions should cover a minimum of 100 formulae in total.

#### **MODEL FORMULAE**

Please note: asterisks against a formula indicate:

- Contains non-plant ingredient included for study purposes.
- \*\* Contains endangered plant ingredient only available under special licence -

included for study purposes.

\*\*\* Contains herb banned in unlicensed medicines under UK law – included for study purposes.

In these cases ingredients may be substituted or omitted as appropriate.

#### Formulas that:

## Resolve the Exterior (jie biao ji)

Ma Huang Tang - Ephedra Decoction

Gui Zhi Tang - Cinnamon Twig Decoction

Yin Qiao San - Honeysuckle & Forsythia Powder

Sang Ju Yin - Mulberry Leaf & Chrysanthemum Decoction

Xiao Qing Long Tang - Minor Bluegreen Dragon Decoction

Ren Shen Bai Du San - Ginseng Powder to Overcome Pathogenic Influences

Ge Gen Tang - Kudzu Decoction

Cang Er Zi San - Xanthium Powder

Chai Ge Jie Ji Tang - Bupleurum and Kudzu Decoction to Release the Muscle Layer

## Clear Heat (qing re ji)

Bai Hu Tang - White Tiger Decoction\*

Ma Xing She Gan Tang - Ephedra, Apricot Kernel, Gypsum & Licorice Decoction\*

Huang Lian Jie Du Tang - Coptis Decoction to Relieve Toxicity

Long Dan Xie Gan Tang - Gentiana Longdancao Decoction to Drain the Liver\*\*\*

Qing Hao Bie Jia Tang - Artemesia Annua and Soft-shelled Turtle Decoction\*

Yu Nu Jian - Jade Woman Decoction\*

Xie Bai San - Drain the White Powder

Shao Yao Tang - Peony Decoction\*\*

#### Drain Downward (xie fa ji)

Da Cheng Qi Tang - Major Order the Qi Decoction\* Xiao Cheng Qi Tang - Minor Order the Qi Decoction

Tiao Wei Cheng Qi Tang - Regulate the Stomach and Order the Qi Decoction\*

Ma Zi Ren Wan - Hemp Seed Pill

#### Harmonise (he ji)

Xiao Chai Hu Tang - Minor Bupleurum Decoction

Xiao Yao San - Rambling Powder

Si Ni San - Frigid Extremities Powder

Ban Xia Xie Xin Tang - Pinellia Decoction to Drain the Epigastrium

### Expel Dampness (qu shi ji)

Wu Ling San - Five-Ingredient Powder with Poria

Zhu Ling Tang - Polyporus Decoction

Wu Pi San - Five Peels Powder

Ping Wei San - Calm the Stomach Powder

Huo Xiang Zhen Qi San - Agastache Powder to Rectify the Qi

Ba Zheng San - Eight-Herb Powder for Rectification

Er Miao San - Two-Marvel Powder

Fang Ji Huang Qi Tang - Stephania and Astragalus Decoction \*\*\*

## Warm the Interior (wen li ji)

Li Zhong Wan - Regulate the Middle Pill

Zhen Wu Tang - True Warrior Decoction\*\*\*

Dang Gui Si Ni Tang - Dang Gui Decoction for Frigid Extremities\*\*\*

Wu Zhu Yu Tang - Evodia Decoction

Da Jian Zhong Tang - Major Construct the Middle Decoction

Xiao Jian Zhong Tang - Minor Construct the Middle Decoction

### Tonify (bu ji)

Si Jun Zi Tang - Four-Gentlemen Decoction

Liu/Xiang Sha/Liu Jun Zi Tang - Six Gentlemen Decoction et al.

Bu Zhong Yi Qi Tang - Tonify the Middle a & Augment Qi Decoction

Ba Zhen Tang/Yi Mu Ba ZhenTang - Eight-Treasure Decoction et al.

Shi Quan Da Bu Tang - All-Inclusive Great Tonifying Decoction

Liu Wei Di Huang Tang - Six-Ingredient Deocotion with Rehmannia

(Zhi Bai Di Huang Tang/Qi Ju Di Huang Tang/Du Qi Wan/Mai Wei Di Huang Tang)

You Gui Wan - Restore the Right (Kidney) Pill\*\*\*

Zuo Gui Wan - Restore the Left (Kidney) Pill

Jin Gui Shen Qi Wan - Kidney Qi Pill from the Golden Cabinet\*\*\*

Er Xian Tang - Two-Immortal Decoction

Si Wu Tang - Four-Substance Decoction

(Tao Hong Si Wu Tang/Qin Lian Si Wu Tang)

Zhi Gan Cao Tang - Honey-Fried LicoriceDecoction

Gui Pi Tang - Restore the Spleen Decoction

Dang Gui Shao Yao San - Tangkuei & Peony Powder

Shao Yao Gan Cao Tang - Peony & Licorice Decoction

Shen Ling Bai Zhu San - Ginseng, Poria, & Atractylodes Macrocephala Powder

Ren Shen Yang Rong Wan - Ginseng Decoction to Nourish the Nutritive Qi

Dang Gui Bu Xue Tang - Dang Gui Decoction to Tonify the Blood

Sheng Mai San - Generate the Pulse Powder

Yi Wei Tang - Benefit the Stomach Decoction

Yi Guan Jian - Linking Decoction

#### Transform Phlegm (hua tan ji)

Er Chen Tang - Two-Cured Decoction

Wen Dan Tang - Warm the Gallbladder Decoction

Zhi Sou San - Stop Coughing Powder

Ban Xia Bai Zhu Tian Ma Tang - Pinellia, Atractylodes Macrocephalea, and Gastrodia Decoction\*\*

Bei Mu Gua Lou San - Fritillaria and Trichosanthes Fruit Powder

### Regulate Qi (li qi ji)

Ban Xia Hou Po Tang - Pinellia and Magnolia Bark Decoction Yue Ju Wan - Escape Restraint Pill Su Zi Jiang Qi Tang - Perilla Fruit Decoction for Directing Qi Downward Ding Chuan Tang - Arrest Wheezing Decoction Ju Pi Zhu Ru Tang - Tangerine Peel and Bamboo Shaving Decoction

### Invigorate Blood (huo xue ji)

Xue Fu Zhu Yu Tang - Drive Out Stasis in the Mansion of Blood Decoction (and variants) Gui Zhi Fu Ling Wan - Cinnamon Twig and Poria Pill Wen Jing Tang - Warm the Menses Decoction Dan Shen Yin - Salvia Decoction Tao He Cheng Qi Tang - Peach Pit Decoction to Order the Qi

### Calm the Spirit (an shen ji)

Tian Wang Bu Xin Dan - Heavenly Emperor's Special Pill to Tonify the Heart\*\*\* Suan Zao Ren Tang - Sour Jujube Decoction Gan Mai Da Zao Tang - Licorice, Wheat, Jujube Decoction

### Extinguish Wind (xi feng ji)

Tian Ma Gou Teng Yin - Gastrodia & Uncaria Decoction\*\*

Du Huo Ji Sheng Tang - Angelica Pubescens and Sangjisheng Decoction

Juan Bi Tang - Remove Painful Obstruction Decoction

Xiao Feng San - Eliminating Wind Powder\*

Di Huang Yin Zi - Rehmannia Decoction

## Disperse Food and Guide Out Stagnation (xiao shi dao zhi ji)

Bao He Wan - Preserve Harmony Pill
Mu Xiang Bing Lang Wan - Aucklandia & Betel Nut Pill\* and \*\*\*

## Stabilise and Bind (gu se ji)

Yu Ping Feng San - Jade Windscreen Powder Si Shen Wan - Four-Miracle Pill Gu Jing Wan - Stabilise the Menses Pill\* Suo Quan Wan - Shut the Sluice Pill

# Stop Bleeding (zhi xue ji)

Jiao Ai Tang - Ass-Hide Gelatin and Mugwort Decoction\*

#### Moisten Dryness (run zao ii)

Xing Su San - Apricot Kernel and Perilla Leaf Powder Mai Men Dong Tang - Ophiopogonis Decoction

#### Open the Orifices (kai qiao ji)

Di Tan Tang - Scour Phlegm Decoction

# Expel Parasites (qu chong ji)

Wu Mei Wan - Mume Pill

#### **MEANS OF ASSESSMENT**

As part of the process of accreditation, educational institutions should present a full course description including an assessment strategy indicating how each part of the curriculum is assessed. The means of assessment should be appropriate to the nature of the learning involved. In the past too much emphasis had been placed upon assessment by conventional written examination, with the result that undue attention has been focussed on memorisation, rather than the understanding and application of the underlying principles. Educational institutions are therefore encouraged to include, in addition to conventional exams, both formative and summative assessment that incorporates methods such as:

- (1) Case histories
- (2) Open book exams, which go some way to reproducing the conditions of clinical practice, and allow the student to go into greater depth
- (3) Assignments/research projects, which allow the student to go beyond what the college can teach and also promote research-mindedness

Educational institutions are encouraged to develop and use teaching materials which will complement and enhance existing textbooks.

#### **EXEMPTIONS**

Educational institutions should provide a coherent policy with regard to exemptions for prior learning. Educational institutions must satisfy themselves, that candidates who are exempted from parts of their curriculum have covered the required material and achieved the required learning outcomes. Automatic exemption in basic Chinese medicine theory and diagnosis should be possible only where students have satisfied the requirements laid down by the British Acupuncture Council.

# **NOTES ON TERMINOLOGY**

This curriculum contains terms which have been differently translated in different English-language texts on Chinese Medicine. In deciding on terminology we have sought guidance from N. Wiseman and F.Ye, *A Practical Dictionary of Chinese Medicine* (Paradigm Publications 1998) and from a number of texts which are likely to appear on the reading list of any Professional Entry course on Chinese Herbal Medicine: T. Kaptchuk, *Chinese Medicine* (Rider 1983); G. Maciocia, *The Foundations of Chinese Medicine* (Churchill Livingston 1989); D. Bensky and A. Gamble, *Chinese Herbal Medicine: Materia Medica* (Eastland Press 1993) and *Chinese Herbal Medicine: Formulas and Strategies* (Eastland Press 1990).

No one usage is likely to satisfy everyone. In order to reduce the scope for ambiguity, the Pinyin versions of all Chinese terms have been added in italics, except in a very few cases where a Chinese term appears on its own without translation (eg Qi, Yin Yang). In addition, by way of illustration, footnotes to some of the terms have been added indicating an alternative translation.

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<sup>1-4</sup> Cf respectively 'generating', 'controlling', 'insulting', 'over-acting' (Maciocia)
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- <sup>5</sup> Cf 'construction Qi' (Wiseman)
- <sup>6</sup> Cf 'Qi of the chest' or 'ancestral Qi' (Kaptchuk)
- <sup>7</sup> Cf 'mind' (Maciocia)
- <sup>8</sup> Cf 'curious organs' (Kaptchuk)
- 9 Cf 'meridians' (Kaptchuk)
- <sup>10</sup> Cf 'minor meridians' (Kaptchuk)

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<sup>12</sup> Cf 'affects' (Wiseman)
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- <sup>13</sup> Cf 'anxiety' (Wiseman)
- <sup>14</sup> Cf 'thought' (Wiseman)
- <sup>15</sup> Cf 'sorrow' (Wiseman)
- <sup>16</sup> Cf 'vacuity' (Wiseman)
- <sup>17</sup> Cf 'repletion' (Wiseman)
- <sup>18</sup> Cf 'gi fall' or 'center gi fall' (Wiseman)
- <sup>19</sup> Cf 'depression' (Wiseman)

<sup>&</sup>lt;sup>11</sup> Xie: Wiseman gives 'evil', 'evil qi', 'disease evil', 'pathogen' as synonyms: 'pathogenic factor' is used here because of its familiarity. The terms *liu yin* (The Six Excesses [Wiseman]; the Six Pernicious Influences [Kaptchuk]) and *liu qi* (The Six Qi) are sometimes used to refer to the same external causes of disease.

<sup>&</sup>lt;sup>20</sup> *qi ni*: cf 'rebellious Qi' (Maciocia); Wiseman translates *wu* in the Five Phases as 'rebellion', *ni* as 'counterflow'--Wiseman's version has been adopted here.

- <sup>21</sup> shui zhong: literally 'water swelling'
- <sup>22</sup> Cf 'phlegm-rheum' (Wiseman)
- <sup>23</sup> Cf 'Reverting Yin' (Wiseman); 'Terminal Yin' (Maciocia)
- <sup>24</sup> Cf 'right' (Wiseman)
- <sup>25</sup> Cf 'tip' (Wiseman)
- 26 *ba fa*: the translations of the eight terms are taken from Bensky; Wiseman has, respectively, 'sweating', 'ejection', 'precipitation', 'warming', 'clearing', 'dispersing', 'supplementation'

## **INDICATIVE READING**

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# **TIBETAN HERBAL MEDICINE**

The Tibetan herbal medicine core curriculum covers

• Aims

- Learning Outcomes
- Curriculum Content
- · Materia Medica
- Pharmacy and Clinical Training
- Assessment
- Indicative Reading

#### Aims

The aim of a qualification as a Practitioner of Traditional Tibetan Medicine (TTM) is to be someone who can:

- 1. practise with compassion and treat all patients equally
- 2. maintain and establish respect and harmonious relations with fellow practitioner
- 3. maintain an open mind and be willing to facilitate the exchange of knowledge between different health systems
- 4. display an attitude of service to patients, which takes precedence over material gain
- 5. practise continuous effort to gain further learning and experience as aids to professional growth
- 6. display an appropriate theoretical knowledge and clinical competence through the study and mastery of the traditional mainstay of Tibetan medical studies, i.e. the compendium of instructions known as the *rgyud bzhi* or Fourfold Medical Treatise, taught through its major commentaries
- 7. display great concern for the purity and efficacy of medicines, according to traditional Tibetan guidelines for recognising, selecting, gathering, drying, storing, purifying and processing the raw materials used to prepare the medicines and according to the regulations in force in this country and its accepted standards of good practice
- competently use pre-prepared or personally compounded formulae of the various material medica to suit the patient's condition, in a way which removes or minimises any possible side effects and treats the patient as a whole, rather than treating just the presenting symptoms
- 9. practise compassion, humility and the other noble human qualities outlined in the "Ethics and Behaviour" chapter of the *rgyud bzhi* in his or her service to others to eradicate the suffering of sentient beings, promote longevity and increase spiritual welfare

## **Learning Outcomes**

Upon completion of training, the Practitioner of Traditional Tibetan Medicine (TTM) shall be able to do the following.

- 1. Offer diagnosis and treatment based upon the holistic approach of TTM, in which the mind and body are recognised as being interdependent.
- 2. Offer diagnosis based upon visual and tactile observation and questioning, as follows:

#### Visual observation

Based upon a general appreciation of the patient's complexion, appearance and comportment; brief examination of the eyes and ears; and a more detailed examination of the tongue and of a urine sample. Urine examination is further divided into eight sections.

- a. Advice regarding procedures to be followed the night before urine examination
- b. Time of examination
- c. Appropriate container in which to check the urine of the patient
- d. Changes of urine as it cools
- e. How to recognise a healthy person's urine
- f. How to recognise a diseased person's urine
- h. How to recognise a dying person's urine
- i. How to recognise the urine of someone under severe mental disturbance

#### Tactile observation

Takes the form of a general physical check and pulse reading. Pulse reading is divided into thirteen sections, which the practitioner has to know.

- a. Procedures to be followed the night before reading
- b. Correct time of pulse reading
- c. Correct vessels for pulse reading
- d. Extent of pressure applied by the fingers of the practitioner to read the pulse
- e. How to read each specific type of pulse
- f. How to distinguish the three "constitutional" pulse types
- q. How to interpret the pulse according to the four seasons and the five elements
- h. About the presence of "extraordinary pulses"
- i. How to distinguish between the various healthy and diseased pulses
- j. How to distinguish between general and specific pulses
- k. How to detect death pulses
- I. How to detect the effect of severe mental disturbance in the pulse
- m. About the "lifespan pulses"

# Questioning

Means enquiring about the case history of the patient, as well as about signs, symptoms and the evolution of the illness presenting. The practitioner shall maintain and keep in confidence all records in relation to the patient.

## 3. Offer four areas of treatment to the patient.

#### Advice on diet

The practitioner will advise the patient on diet according to each individual bodily constitution based on the *nyes pa gsum* 1. All food and drink counselled should be based on the six primary tastes generated by the five elements and the three post-digestive effects. Advice is given to the patient on how to avoid incompatible foods and to consume food and drink in the right quantities.

#### Advice on conduct

The practitioner will advise the patient on the ways in which one can live more healthily and to improve life expectancy. S/he will also know the positive and negative influences exerted by being at odds or in harmony with family and society, or with one's own or the more widely recognised moral values, and will assess how, if at all, a patient can be tactfully and skilfully counselled so as to reduce the stress and illness that past and present behaviour may be causing.

The practitioner should advise the patient on seasonal conduct and the relationship between the five internal elements and the five external elements, advising on correct behaviour according to the four seasons. The practitioner should advise on "occasional conduct" and the thirteen natural functions of the body, which should neither be over-used or suppressed.

## Prescription of medicines

The practitioner has to take ten factors into consideration before prescribing medicine.

- Analysis of which of the seven bodily constituents and three eliminating functions are affected
- Geographic factors
- Seasonal factors
- Bodily constitution
- Factors relating to age
- Condition of the disease
- · Location of the disease
- Metabolism of the patient
- Strength of the patient
- Eating habits of the patient

The practitioner has to identify and know the taste, potency and post-digestive effect of each individual medicine and their ingredients in order for the medicine to be correctly prescribed.

## Other treatments

Other treatments, such as massage, herbal baths, application of warm herbal packs to critical points on the body etc., as outlined in the fourth section of the Fourfold Treatise (see below) and as appropriate according to the regulations on such treatments in place nationally.

#### 4. Promote preventive medicine

Most diseases are seen in TTM as originating from what are known as primary causes and secondary conditions. One should avoid reinforcing secondary conditions liable to bring the nyes pa gsum into imbalance. The practitioner has to advise the patient with regard to appropriate and moderate use of mind, body, speech and the five senses and encourage the patient to follow instructions on best diet and conduct.

5. Bring into balance by either lifestyle and diet counselling or by medication the nyes pa gsum as far as possible.

The medication should not be excessive, deficient or inappropriate with respect to the *nyes* pa gsum.

- 6. Clearly categorise diseases into easily curable, difficult to cure, rarely curable and incurable.
- 7. *Know the various signs of approaching death*, according to the Fourfold Treatise categorisations of definite, indefinite, imminent etc.
- 8. Strive to care for the patient's welfare in an unbiased and open-minded way. Should her/his own own skill, or TTM in general, be unable to cure the patient, the practitioner should recommend unhesitatingly recourse to another system of treatment.

#### **Curriculum Content**

The core curriculum laid out in this document is based upon the common ground of study in the major teaching institutions for Tibetan medicine in Dharamsala (India), Lhasa (Tibetan Autonomous Region of China) and Xining (Quighai, China).

What follows is a section-by-section description of the Fourfold Treatise, showing the main subjects studied during the four years. The Fourfold Treatise does not include training in *rtsis* (literally "calculations"), which traditionally existed as a training in its own right in Tibet and concerns a detailed study of all possible rhythms and movements in nature, including the human body. It is particularly concerned with the relation between the individual and the environment, studied through their mutual dependence and interaction, and is used, among other things, to determine the timing and suitability of treatments.

Tibet was traditionally a very religious country. The physician, who strove to lead an exemplary moral and ethical life, enjoyed a highly respected status and often gave counsel. The making and giving of medicines was treated as a sacred task, as was most of the healing art. Traditional studies included a component of spiritual training, mainly concerned with the doctor's own moral and ethical values, the treatment of the patient and the preparation of medicines. As TTM training reaches a wider world, and people of other faiths or no faith wish to study its science, it is appropriate for a religious component to be offered as an option and not a requirement. However, the altruism, respect for others etc. which form part of the physician's ethical and moral training are an integral part of the core curriculum 2.

#### Overall Synopsis of the Fourfold Treatise

#### Structure

The work consists of Four Treatises, divided into 156 chapters.

#### 4 Treatises:

|                          | Subdivisions  | Chapters          |
|--------------------------|---------------|-------------------|
| The root treatise        | 6 chapters    | 6                 |
| The explanatory treatise | 11 points     | 31                |
| The instruction treatise | 15 sections   | 92                |
| The final treatise       | 4 compendiums | 27                |
|                          | ·             | (25+2 concluding) |
|                          |               | 156               |

#### 1. The root treatise

This is a very condensed outline of the whole work which, when memorised, gives all the keys and instant access to the theory developed in the other parts.

## 2. The explanatory treatise

It provides the detailed explanation of the medical theory in 11 points.

#### 3. The instruction treatise

Comprises the bulk of the work and presents the aetiology and modes of treatment of the various diseases.

## 4. The final treatise

It provides the theoretical background for the techniques of diagnosis, explains the different sorts of medicinal preparations and their processing and the various kinds of external treatments.

#### Detailed Structure and Subdividions of the Four Treatises

THE FIRST TREATISE: 6 chapters

Chapter 1 gleng gzhi

Presentation of the circumstances of this teaching

Chapter 2 gleng slong

Exposition: overall synopsis of the four treatises

Chapter. 3 gzhi

Normal physical condition viewed as the basis of illness

Chapter 4 ngos 'dzin

Diagnosis and symptoms of disorders

Chapter 5 gso thabs

Treatment, as diet, behaviour, medication and other therapies

Chapter 6 rtsis kyi le'u
The tree metaphor
3 roots
9 stems

## THE SECOND TREATISE: Classified into 11 points covering 31 chapters

#### **Points Chapters**

# 1. bshad pa'i sdom Summary general outline of the work

**OBJECT OF TREATMENT** 

Point 2: the body Point 3: illness.

TREATMENT
Point 4: lifestyle
Point 5: diet

Point 6: medicines

Point 7: external treatments

MEANS OF TREATMENT

When in good health

Point 8: health preservation and longevity

When sick

Point 9: diagnosis

Point 10: methods and means of treatment

THE ONE WHO TREATS

Point 11: the qualities required in a doctor

#### 2. The Body 2-7

chags tshul Formation of the body (embryology)
'dra dpe Metaphors for the body
gnas lugs Nature of the body (quantitative anatomy dealing with the proportion of bodily
constituents, nerves and blood vessels and other important channels in the body)
lus kyi mtshan nyid Characteristics (physiology)
dbye ba Types of physical constitutions
'jig Itas Signs of death

#### 3. Illness 8-12

(Aetiology )
nad kyi rgyu Causes of illness 8
nad kyi rkyen Contributing factors of illness 9
nad 'jugs tshul Mode of inception of illness (Pathophysiology) nad kyi mtshan 10
nyid Characteristics of illness 11
nad kyi dbye ba Classification of diseases 12

#### 4. Behaviour 13-15

rgyun spyod Usual behaviour dus spyod Seasonal behaviour gnas skabs spyod lam Occasional behaviour

#### 5. Diet 16-18

zas tshul Survey of foods and their nutritionalvalue zas sdom pa Dietary restrictions zad tshod ran pa The right amount of food and drink to ingest

#### 6. Medicines 19-21

sman gyi ro "Taste" and "post-digestive taste" 19 sman gyi nus pa "Potency" ("Taste- derived"potency) This chapter outlines the theory of the six basic "tastes" and eight fundamental "potencies" which give each substance its own properties. This is the basis for compounding medicines in order to achieve the desired curative effect." 20a

Intrinsic potency": the Materia Medica 3 The actual Treatise gives a basic list of over 300 products with their medicinal properties, also the much larger pharmacopoeia of TTM is also studied in famous commentaries such as Shel gong (Crystal Mirror) and Shel 'phreng (Crystal rosary) 20b

sman gyi sbyar thabs The compounding of medicines (principles) 21

#### 7. Instruments (used in external treatments) 22

cha byad Surgical and medical instruments

## 8. Health preservation 23

mi na gnas Remaining healthy (preventive medicine)

#### 9. Diagnosis 24-26

nyes pa dngos ston Diagnosing the actual condition of the patient ngan gyo skyon brtag Diagnosing by indirect questioning: gaining the patient's confidence spang blang ma bzhi Four criteria to investigate whether a disease can be treated or not

#### 10. Treatment of illness 27-30

gso tshul spyi General method of treatment khyad par gso thabs Specific methods of treatment gso thabs gnyis Common means of treatment gso thabs dngos Specific means of treatment

#### 11. The doctor's qualities 31

gso ba po sman pa This outlines the professional qualities and ethical standards required of a doctor

## THE THIRD TREATISE: Classified into 15 sections covering 92 chapters

NOTE: Please, consider the following English translations of diseases as PROVISIONAL. 4

Request for the teaching 1

Section 1 Disruption of the Three Nyes pa

Rlung disorders - diagnosis and treatment 52

Mkhris pa disorders - diagnosis and treatment 3

Bad kan disorders - diagnosis and treatment 4

'dus nad Combination of all threediagnosis and treatment 5

## Section 2 "Cold" Diseases ("Consumptive" Disorders)

ma zhu ba Digestive problems 6
skran Tumours 7
skya rbab Oedema, 1st stage 8
'or Oedema, 2nd stage 9
dmu chu Oedema, advanced stage 10
gchong chen Chronic metabolic disorder resulting in wasting of zad byed bodily constituents
11

#### Section 3 "Hot" Diseases (Fevers, Inflammations, Infectious Diseases)

tsha ba spyi Survey of hot disorders in general 12 gal mdo Clarification of possible errors about hot and cold diseases 13 ri thang "Borderline situations" ("Nyes pa" reactions mtshams following the treatment of a fever) 14 ma smin tsha ba Immature fever 15 rgyas tshad Fully developed fever 16 stongs tshad Empty fever 17 gab tshad Hidden or latent fever 18 rnying tshad "Old" fever (chronic) 19 rnyogs tshad "Turbid" fever 20 'gram tshad Post-traumatic fever 21 'khrugs tshad "Disturbing" fever 22 rims tshad Contagious diseases 23 'brum pa Pox-type diseases (smallpox etc.) 24 rgyu gzer Infectious disease of intestines 25 gag Ihog Infectious disease of throat and of muscle tissues (could include diptheria) 26 cham pa Common cold and influenza 27

#### Section 4 Diseases of the Upper Part of the Body

mgo nad Head 28
mig nad Eyes 29
rna nad Ears 30
sna nad Nose 31
kha nad Mouth 32
lba ba Goitre and throat diseases 33

#### Section 5 Visceral Diseases

snying nad Heart 34 glo nad Lungs 35 mchin nad Liver 36 mcher nad Spleen 37 mkhal nad Kidneys 38 pho ba' nad Stomach 39 rgyu ma'i nad Small intestine 40 long nad Large intestine 41

#### Section 6 Sexual Diseases

pho mtshan nad Male genital disorders 42\* mo mtshan nad Female genital disorders 43\*

\* Notifiable diseases will be reported to Department of Public Health.

#### Section 7 Miscellaneous Diseases

skad 'gags Problems of voice production 44 vi ga 'chus pa Loss of appetite (all forms) 45 skom dad Intense chronic thirst 46 skyigs bu Hiccups 47 dbugs mi de Breathing difficulties (all forms, can include asthma) 48 glangs thabs Sharp abdominal pains of infectious origin (includes colic) 49 srin nad Infections/inflammations (micro-organisms normally present in the body become pathogenic) 50 skyugs Vomiting 51 'khru nad Diarrhoea 52 dri ma 'gag Constipation 53 qchin 'qaqs Urinary retention (12 different sorts of disorders: partial or total retention. reduced amount of urine, with or without pain and inflammation, etc.) 54 gchin snyi Polyuria (20 sorts of disorders: excessive production of urine, with or without inflammation of urethra, possible presence of pus, blood, sperm, etc. including diabetes) 55 tshad 'khru Infectious diarrhoea 56 dregGout 57 grum bu Rheumatic diseases (osteoarthritis) 58 chu ser nad "Chu-Ser" disorders (Skin affections of various sorts due to serous fluid dysfunction; also includes a patholology close to rheumatoid arthritis) 59 rtsa dkar nad Neurological disorders 60 pags nad Dermatological diseases 61 phran bu'i nad Miscellaneous minor disorders 62

#### Section 8 Endogenous Sores/Swellings

'bras nad Swellings, tumours (Also various kinds of cysts and growths) 63 gzhang 'brum Haemmorrhoids 64 me dbal "Fire tongues": (Burn-like blisters, mostly on the skin but can also be internal, could include erysipelas) 65 sur ya "Surya" swellings Blood clots obstruct the lumen of vessels supplying the lungs, the liver, the kidneys, the stomach or the large intestine, and this causes swelling around the affected organ. 66 men bu'i nad Swelling of glands 67 rligs rlugs Swelling of scrotum and testicles 68 rkang 'bam Swelling of lower limbs 69 mstan bar rdol Anal fistula (possibly) 70

#### Section 9 Children's Diseases (Paediatrics)

byis pa nyer spyod Child care 71
byis nad Children's diseases 72
byis pa'i gdon Disturbances in children caused by negative influences in their environment
73

Section 10 Women's Diseases (Gynaecology)

mo nad spyi General disorders 74 mo nad bye brag Specific disorders 75 mo nad phal ba Common disorders 76

Section 11 Disorders due to "Malevolent Influences" (Neurology and Psychiatry)

This section presents a mixture of disorders: some that are mostly of a neurological nature, with or without some degree of mental illness, and some which correspond to various forms of mental illness. The person thought themselves to be under the influence of malevolent forces, as was often the case at the time (demons, elementals, etc.) Each chapter outlines specific physiological and behavioural symptoms, diagnosis and treatment.

Every practitioner was exposed to Buddhist philosophy and psychology; this clearly demarcates the view that perception depends on the observer and there is no "objective reality". Instead the practitioner would have considered patients disturbed who insisted on seeing themselves to be under demonic or other malign influence (as is the case with paranoid patients in the modern world, although it may take on a modern tinge, for example having electric shocks sent through the body).

These perceptions of demonic influences would have been consistent with local folk understanding. Patients exhibiting such thinking were seen to be the influence of negative emotional states on the mind (i.e. to poison the mind stream).

Buddhism sees thought, emotions and biophysical aspects of the mind as inseparable. Emotions such as jealousy and rage were seen to unbalance and disturb the mind, at all levels, be this thinking, feeling or indeed in its physical manifestation. From a Buddhist perspective such emotions arise from an ego centred approach to the world. Belief in an independent ego was seen as a conceptual misunderstanding, which was seen to underlie such negative emotional states of mind. The ego and its demand for gratification were described as the "ultimate demon". Training practitioners of Tibetan Medicine, in Tibet, would have been exposed to such teachings. For example in commentary by Patrul Rinpoche, a famous meditation master of the XIX Century in Tibet:

The many spirits means concepts. The powerful spirit means belief in a self.

Again Milarepa (1052-1135), one of the founding fathers of Buddhism in Tibet:

Take a demon as a demon and it will harm you; take a demon as your own mind and you'll be free of it  $\varepsilon$ 

byungs po'i nad "Elementals' influence " Various patterns of mental disturbance accompanied by physiological manifestations and erratic behaviour, possibly referring to mood, psychotic disorders etc. 77

*smyo* "Insanity-makers" Physical signs and disturbed behaviour akin to bipolar affective disorders 78

brjed "Making one forget" Neurological disorder possibly akin to dementia. 79 gza' "Planetary influence" Neurological disorders - include strokesleading to hemiplegia and/or epilepsy 80

klu gdon nad "Naga influence" This relates mostly to the leprosy 81

# Section 12 Wounds and Injuries

rma spyi General 82 mgo'i rma Head wounds 83 ske'i ma Neck wounds 84 byang khog ma Abdominal wounds 85 yan lag rma Limb wounds 86

## Section 13 Poisons

sbyar dug Specially formulated poisons 87 gyur dug Food poisoning 88 dngos dug Natural poisons 89 Section 14 Geriatricsbcud Ien Revitalisation treatment 90 Section 15 Virility/Fertility Treatmentro tsa Virility 91 bu med btsal Woman's fertility treatment 92 THE FOURTH TREATISE: known also as the 4 compendiums: pulse, urine, medicinal treatment, external treatment, 27 chapters

#### 1. Diagnosis

Through examination of pulse and urine rtsa Pulse 1 chu Urine 2

## 2. "Calming" medicinal treatment

thang decoctions 3
phye ma powders 4
ril bu pills 5
Ide gu pastes 6
sman mar medicinal butters 7
thal sman "calcinates" 8
khanda extracts 9
sman chang medicinal brews 10
rin po che preparations based on precious stones or substances 11
sngo sbyor herbal preparations 12

#### 3. "Cleansing" medicinal treatment

Preparation for the 5 "Works" snum 'chos Lubrication (oil therapy) 13

The Five Works:

bshal 1 purgatives 14 skugs 2 emetics 15 sna sman 3 cleansing via the nose 16 'jam rtsi 4 gentle enema 17 ni ru ha 5 forceful enema 18

Extra-powerful supplement to the 5 "Works": rtsa sbyong "channel" cleansing 19

## 4. Gentle and forceful external treatments

gtar 1 bloodletting 20\*
bsreg 2 moxibustion 21\*
dugs 3 hot/cold applications 22
lums 4 baths/steam baths 23
byug pa 5 ointments Extra-powerful supplement to the 5 external treatments: 24
thur dpyad minor surgery 25\*
mjug don + yongs gtad + 2 extra chapters of conclusion and entrustment 26,27

<sup>\*</sup> These would not be practiced in any country where the law forbids TM practitioners from undertaking such procedures or where they would be precluded by cultural constraints.

## **Materia Medica**

The traditional Tibetan Materia Medica contained certain ingredients which, at the time of writing, are not allowed under current UK law or under international convention 7. This includes the use of certain toxic herbs and the use of mineral and animal ingredients. The curriculum is tailored to meet UK legal requirements and therefore covers only the herbal part of the traditional materia medica. The most common herbal components of TTM are listed (not exhaustively) below. Research is required to finalise identification of the Latin recognitions. The following are offered as current identifications.

| Tibetan<br>Transliteration | Latin Recognition               | Tibetan<br>Transliteration                | Latin Recognition                         |
|----------------------------|---------------------------------|---|---|
| A bhi kha                  | Fritillaria delavayi            | Btsod                                     | Rubia cordifolia                          |
| A 'bras                    | Mangifera indica                | btsong sgog                               | Allium cepa                               |
| A byag                     | Chrysanthemum tatsiniensis      | 'bu su hang                               | Medicago archiducis                       |
| A ga ru                    | Aquilaria sinensis              | bya pho tsi                               | Ceratostigma griffithii<br>C.B. Clarke    |
| A krong                    | Thalictrum aquilegifolium Loeog | bya rgod spos                             | Delphinium brunonianum                    |
| A krong 2                  | Arenaria Kansuensis<br>Maxim    | bya rgod spos                             | Delphinium chrysostrichum                 |
| A ru ra                    | Terminalia chebula              | bya rgod sug pa                           | Anemone trullifolia                       |
| A sho                      | Mirabilis himalaica             | bya rog nyung<br>ma                       | Lancea tibetica Hook                      |
| A wa                       | Lloydia                         | byi bzung                                 | Arctium lappa                             |
| Ar nag                     | Aquilaria agallocha             | byi rug                                   | Elscholtzia calyocarpa<br>Diels           |
| Aug chos                   | Incarvillia compacta            | byi shang dkar<br>mo                      | Stellaria yunnanensis                     |
| Autpal                     | Meconopsis torquata             | byi tang ka                               | Embelia laeta                             |
| ba lu                      | Rhododendron primulaeflora      | byis tsher                                | Xanthium sibericum                        |
| ba ru ra                   | Terminalia bellerica            | <i>byi'u la phug</i><br>Torularia humilis | <i>byi'u la phug</i> Torularia<br>humilis |
| ba sha ka                  | ba sha ka                       | byi'u srad                                | Polygala sibirica                         |
| 'bam po                    | Pleurospermum                   | chu ma rtsi 1                             | Rheum pumilum Maxim                       |
| beedurya 'dra              | Saussurea hieraciodes           | chu ma rtsi 2                             | Polygonum hookeiri<br>Moisn.              |
| bo te                      | Prunus sp.                      | chu rtsa                                  | Rheum spiciforme<br>Royle                 |
| 'bra go                    | Phoenix dactylifera             | chu rug                                   | Cardamine macraphylla Willd.              |
| bra ma                     | Caragana brevifolia             | chu sho                                   | Acalypha australis                        |
| brag Icam                  | Sedum tartarinowii              | da lis                                    | Rhododendrom anthopodon                   |
| brag lcam 2                | Bergenia ciliata                | 'dam bu ka ra                             | Catabrosa aquatica                        |
| brag sgog                  | Allium sativum (wild)           | dar shing                                 | Lepidium apetalum -wood                   |
| brag skya ha bo            | Corralodiscus kingianus         | dar ya kan                                | Lepidium apetalum                         |
| 'bri mog                   | Onosma hoolerii                 | dbyi mong                                 | Clematis rhederianum                      |
| 'bri ta sa 'dzin           | Lagotis brachystachya           | de ba                                     | Corydalis melanochlora                    |
| 'bri ta sa 'dzin 2         | Fragaria orientalis             |   |   |
| 'brug shing                | Euonymas monbeigii              |   |   |

| T1 (            | 11.00                           | T-11 (          | 11 6 5 6                  |
|-----------------|---------------------------------|-----------------|---------------------------|
| Tibetan         | Latin Recognition               | Tibetan         | Latin Recognition         |
| Transliteration |                                 | Transliteration |                           |
| dgu thub/rgu    | Peucedanum                      | go bye          | Semiecarpus               |
| thub            | praeruptorum Dunn.              |                 | anacardius L.             |
| dngul sha ma    | No currently accepted           | go snyod        | Carum carvi               |
|                 | Latin recognition               |                 |                           |
| dngul tig       | Cerastium arvense               | gres ma         | Iris nepalensis (anthers) |
| dong ga         | Cassia fistula                  | gro ma          | Potentilla fulgens        |
| dpa' bo chen po | Panax ginseng C A May           | gser me         | Herpetospermum            |
|                 |                                 |                 | pendiculosum              |
| dpa' bo dkar po | Phytolacca acinosa              | gser phud       | Luffa cylindrica          |
|                 | esculenta                       |                 |                           |
| dpa' rgod       | Curcuma zedoaria                | gser tig        | Saxifraga montana         |
| dpa' ser        | Phytolacca acinosa Roxb.        | gu gul          | Commiphora mukul          |
| drag spos       | Lepisorus soulieanus            | gur gum         | Crocus sativus            |
| 'dre sha ma     | Lycium chinense                 | gur tig         | No currently accepted     |
| are ona ma      | Lyolam official                 | gunug           | Latin recognition         |
| dug nyung       | Chamaeneriom                    | gya' kyi ma     | Chrysoplenium             |
| dag nyang       | angustifolium                   | gya kyima       | carnosum Hook             |
| dug srad        | Astralagus strictus             | gyar mo thang   | Primula fasciculata       |
| dur ba          |                                 |                 |                           |
|                 | Cynodon dactylon                | gyer ma         | Scrophularia dentata      |
| dur byid        | Euphorbia fischeriana           | gyer shing pa   | Schrophularia dentata     |
| dva ba          | Arisaema sp.                    | gza' dug        | gza' dug                  |
| dza ti          | Myristica ficafragrans          | gze ma          | Tribulus terrestris       |
| ga bra          | Rubus subomatus and other Rubus | hong len        | Lagetis yunnanensis       |
| ga bur          | tiger camphor=blumea            | ja shing        | No currently accepted     |
|                 | balsamifera and crystal         | , , ,           | Latin recognition         |
|                 | camphor=cinnamomum              |                 | 3 1 3                     |
|                 | camphorum                       |                 |                           |
| ga bur tis lo   | No currently accepted           | 'jam 'bras      | Caesalpina crista L.      |
| J               | Latin recognition               | <b>,</b>        | Guodaipina onota E.       |
| ga dur          | Bergenia purpurascens           | 'jib chen       | Dracocephalum             |
| ga aa,          | (Hook f et Thoms)               | Jio Grion       | heterophyllum Benth.      |
| gandha bhadra   | Cnaphalium affine               | 'jib chen 2     | Salvia Przewalskii        |
| ganana bnaara   | Griaprianam annie               | JID OHOH E      | Maxim.                    |
| gang ga chung   | Gentiana urnula                 | ka bed          | Curcurbita pepo           |
| ge sar gsum     | Bombas malabaricum:             | ka ko la        | Amomum tsao-ko            |
| ge sar gsum     | 1. stamen                       | Na No Ia        | Amomum tsao-ko            |
|                 | 2. calyx                        |                 |                           |
|                 | 3. corolla                      |                 |                           |
| gla ba srad ma  | Hedysarum                       | ka randza       | Caesalpinia crst L.       |
|                 |                                 |                 | Rubus niveus Thumb.       |
| gla sgang       | Cyperus scariosus               | kanda ka ri.    |                           |
| glang ma        | Salix thompsoni                 | kham bu         | Prunus sp.                |
| glang sna       | Pedicularis longiflora          | 'khan pa        | Artemisi sieversiana      |
| gnyan 'dul ba   | No currently accepted           | khrog chung ba  | Lepidium apetalum Willd.  |
|                 | Latin recognition               |                 |                           |
| gnyan thub pa   | No currently accepted           | khu byug pa     | Cypripedium tibeticum     |
|                 | Latin recognition               |                 |                           |

| Tibetan<br>Transliteration | Latin Recognition   | Tibetan<br>Transliteration | Latin Recognition                          |
|----------------------------|---|----------------------------|--|
| khur mong                  | Taraxacum tibeticum   | mon cha ra                 | Quercus (acorns)                           |
| khyi shing                 | No currently accepted<br>Latin recognition  | mtshe ldum                 | Ephedra equisetina                         |
| khyung sder<br>dkar po     | po Uncaria scandens<br>(Smith) Hutch  | myong tsi spras            | Coptis teetoides                           |
| khyung sder<br>smug po     | Saussurea stella Manim  | na le sham                 | Piper nigrum                               |
| klung sho                  | Rumex nepalensis  | na rams                    | Triglochia maritimum                       |
| kon pa gab<br>skyes        | Saussurea bodiueri  | nad ma                     | Cynoglossum wallichii                      |
| ku sha                     | Poa sp.   | nags ma' thang<br>chu      | No currently accepted<br>Latin recognition |
| ku shu                     | Malus sp.   | nye shing                  | Asparagus filicinus                        |
| kyi Ice dkar nag           | nag Gentiana straminea Marin (light form) and G. crassicaulis Duthie ex Burkill (dark form) | 'o se                      | Pyrus pashia                               |
| la la phud                 | Foeniculum vulgare  | 'od Idan                   | Saxifraga egregia                          |
| lca ba                     | Angelica sinensis   | nim pa                     | Azedirachta indica                         |
| lcags kyu                  | Corydalis sp.   | 'ol mo se                  | Sinopodophyllum<br>hexandrum               |
| lcags tig                  | Gentianopsis grandis  | 'om bu                     | Myricaria garmanica                        |
| lcam pa                    | Malva verticillata  | pa to la                   | Bletilla striata                           |
| Icang ma                   | Salix sp.   | pad rtsa                   | Nelumbo nucifera<br>Gaertn                 |
| lcum rtsa                  | Rheum officinale Baill.   | par pa ta                  | Hypecoum leptocarpum                       |
| ldum nag                   | No currently accepted<br>Latin recognition  | phur mong                  | Artemisia nestita                          |
| le brgen                   | Targetes erecta   | pi pi ling                 | Piper longum                               |
| li shi                     | Eugenica aromatica  | pri yang ku                | Dracocephalum tanguticum                   |
| lug chung                  | Heteropapus crenatifolius   | pu shel                    | Dendrobium nobile                          |
| lug mig                    | Aster himalyicus  | pushkar mu la              | Inula racemosa                             |
| lug mur                    | Phlomis younghusbandii  | ra mnye                    | Polygonatum cyrrhifolia                    |
| lug ngal                   | Corydalis adunca  | ram bu                     | Polygonum viviparum                        |
| lug sho                    | Oxyria dygina   | re lcag                    | Stellera chamaejasmae                      |
| lung tang                  | Sapindus mukorsii   | re ral                     | Dryanaria sinica                           |
| ma gal                     | Populus daviana   | re skon                    | Corydalis hendersonii                      |
| ma nu                      | Inula racemosa Hook   | rgu drus                   | Corydalis dasyptera                        |
| ma ru rtse                 | Butea monosperma  | rgun 'brum                 | Vitis vinifera                             |
| mchin pa zho<br>sha        | Entada scandens   | rgya men                   | Papaver sp.                                |
| mdzo mo shing              | Caragana tibetica   | rgya sgog                  | Alium sativum (lower altitude)             |
| me tog ser chen            | Ixeris sp.  | rgya sho                   | Rumex crispus L.                           |
| mkhal zho                  | Canavalia Gladiata  |                            |  |

| Tibetan<br>Transliteration | Latin Recognition  | Tibetan<br>Transliteration | Latin Recognition                            |
|----------------------------|--|----------------------------|--|
| rgya shug 'bras<br>bu      | Juniperus formosana<br>Hayata  | shang tsher                | Orobanche alsatica                           |
| rgya skyegs                | Lacifer lacca Kerr   | shel ta                    | Pinus tabulaeformis (resin)                  |
| rgya spos                  | Delphinium chysotrichum  | Shing kun                  | Ferula asafoetida                            |
| ri sgog                    | Allium atrosanguinium  | Shing mngar                | Gylcerrhiza uralensis                        |
| ri sho                     | Ligularia vigaurea   | Shing tsha                 | Cinnamomum cassia                            |
| rta lpags                  | Lamiophlomis rotata  | sho mang                   | Rumex nepalensis                             |
| rta rmig                   | Viola biflora  | shu dag                    | Acorus calamus                               |
| rtsa mkhris                | Saussurea graminea   | shu mo za                  | Trigonella foenum graecum                    |
| Rtsad                      | Pleurospermum sp.  | shu ti                     | Mentha arvense                               |
| ru rta                     | Vladmiri souliei   | shug tsher                 | Juniperus formosana                          |
| rug sgog                   | Allium prattii   | ske tshe                   | Sinapsis sp.                                 |
| se 'bru                    | Punica granatum (seeds only)   | skyer ba                   | Berberis wood                                |
| se rgod                    | Rosa sertata   | skyer me                   | Berberis jamesiana (flower)                  |
| se yab                     | Chaenomeles speciosa   | skyi 'brum                 | Sophora Davidii                              |
| seng ge 'jigs<br>med       | Silene sp.   | skyu ru ra                 | Phyllantus emblica                           |
| seng Ideng                 | Rhamnella gilgitica  | sle tres                   | Tinospoa sinensis                            |
| sga chung                  | No currently accepted<br>Latin recognition   | Smag                       | Metroxylum sago                              |
| sga sho                    | Cremanthodium sp.  | sman sga                   | Alpinia officinalis                          |
| sga skya                   | Zingiber officinalis Rose  | smug chung 'den<br>yon     | Meconopsis henricii                          |
| sga tig                    | Androsace aizoon Duly var. coccinea Franch.  | smug cu gang               | Schizostachyum chinense                      |
| sga tsha                   | No currently accepted<br>Latin recognition   | sne'u 1                    | Chenopodium album                            |
| sgang thog pa              | Sisymbrium<br>heteromallum   | sne'u 2                    | Amaranthus caudatus                          |
| sgog skya                  | Alium sativum  | sngon bu                   | Cyananthus sherifii                          |
| sgron shing                | Pinus tabulaeformis, but also P. massoniana, P. yunnanensis, P. densata, P. griffithii, P. smithiana, P. armandi | snya lo                    | Polygonum<br>polystachium                    |
| sha la yu ring             | Cremanthodium sp.  | snyi ba                    | Codonopsis convulvlacae                      |
| Shang dril                 | Primula sikkimensis  | snying zho                 | Choerospondia axillaris (Roxb.) Burtett Hill |
| shang len smug<br>po       | Eryophyton wallachii   | so cha                     | Randia dumetorum                             |

| Tibetan                 | Latin Recognition                          | Tibetan           | Latin Recognition                          |
|-------------------------|--|-------------------|--|
| Transliteration         |  | Transliteration   |  |
| so ra                   | Abelmoschu moschatus                       | tang ku 2         | Sinolimprichtia alquina                    |
| sog ka                  | Capsella bursa pastoris                    | tha ram           | Plantago depressa                          |
| spa 'brum               | No currently accepted<br>Latin recognition | thal rdor         | Cassia tora                                |
| spa yag                 | Lancia tibetica                            | thang khrag       | Abies spectabilis?                         |
| Spang rgyan<br>dkar     | Gentiana szechenyii                        | thang phrom       | Przewalskia tangutica<br>Maxim             |
| Spang rgyan<br>dkar 2   | Gentiana algida                            | ti mu sa          | No currently accepted<br>Latin recognition |
| Spang rgyan<br>nag po   | Gentiana veitchiorum                       | tig ta            | Swerta chirayita                           |
| Spang rgyan<br>sngon po | Gentiana stipitata                         | til               | Sesamum indicum                            |
| Spang rtsi              | Pterocephalus hookerii                     | tsam pa ka        | Oroxylum indicum                           |
| spen dkar               | Potentilla glabra                          | tsan dan          | Santalum album                             |
| Spor                    | Sedum sp.                                  | tsar bong         | Artemisia desertorum                       |
| spra thog               | Leontopodium franchetii                    | tsher sngon       | Meconopsis horridula                       |
| spru ma                 | Heracleum wallachii                        | tsi tra ka        | Capsicum frutescens                        |
| Spyang dug pa           | Cirsium souliei                            | 'u su             | Coriandrum sativum                         |
| Spyang tsher            | Morina kokonorika Hao                      | yo 'bog           | Ulmus                                      |
| sra 'bras               | Syzgium cumini                             | yog mo            | Rabdosia rubescens                         |
| srad ma rigs            | Astralagus sp.                             | yu gu shing       | Senecio soliagineous                       |
| srin shing              | Daphne tangutica                           | yu mo 'de'u 'byin | Paraquilegia microphya                     |
| sro lo                  | Pegaeophyton scapiflorum                   | yung ba           | Curcuma longa                              |
| srog shing              | No currently accepted<br>Latin recognition | zangs rtsi dkar   | Galium aparin                              |
| srub ka                 | Anemone rivularis                          | zangs rtsi nag    | Artemisia hedinii                          |
| stabs seng              | Fraximus saureolans                        | zangs tig         | Swertai mussofi                            |
| stag ma' me<br>thog     | Rhododendron arboreum                      | zhim thig le 1    | Lagopsis supina [Steph]                    |
| stag sha                | Oxytropis chiliophylla                     | zhim thig le 2    | Phlomis betonicoides Diols                 |
| stang ri zil ba         | No currently accepted<br>Latin recognition | zhim thig le 3    | Salvia roborowskii                         |
| star bu                 | Hippophae rhamnoides                       | zhim thig le 4    | Nepeta coerusens                           |
| star ga                 | Juglans regia                              | zhim thig le 5    | Stachys. sp                                |
| su mi                   | Corydalis yanhusuo                         | zhim thig le 6    | Galeopsis bifida Boenn.                    |
| sug pa                  | Solms-Laubachia earycarpia                 | zhim thig le 7    | Stachys kouyangensis (Vaniot)              |
| sug smel                | Elettaria cardamomum                       | zhim thig le 8    | Lamium amphexicaule                        |
| tang ku                 | Ledabouriella seseloides                   | zhim thig le 9    | Salvia wardii                              |
| zhu mkhan               | Skimia multinerva                          | zla gor zho sha   | Entada phaseoloides                        |
| zin tig                 | Ajuga lupulina                             | zva' 'drum        | Urtica triangularis                        |
| zir dkar                | Cuminum cymnum                             | zva phyi A yas    | Urtica tibetica                            |
| zir nag                 | Nigella glandulifera                       |                   | 2.334 455404                               |

## **Pharmacy and Clinical Training**

Pharmacy and clinical training are covered in separate modules in the EHPA core curriculum and will be provided in those contexts. Pharmacy training will prepare the student to recognise the various materia medica; understand the different qualities of plants of the same species growing in different environments; know when Materia medica are collected according to their destined purpose, how the materia medica are collected in order to best preserve their properties, how they are transported and stored; and, understand the proper processing and preparation of the medicinal compounds according to the established rules and formulae. Traditional Tibetan Medical practitioners and manufacturers are aware of good manufacturing practice and are moving swiftly to make GMP the standard for all herbal remedies used. They are similarly aware of the need to have Government certified GMP(CGMP), in manufacturing and importing businesses handling and manufacturing such remedies.

Traditionally, TTM trainees would be immersed in a clinical environment throughout their training. In order to emulate this as far as possible, students are to be encouraged to use every opportunity to observe medical practice from the start.

#### Assessment

#### Study

The principal means of assessment should be by written and oral examination. Educational institutions should endeavour to formulate these exams so as to prioritise understanding of principles, rather than simple memorisation. Nonetheless, it has been traditional to learn certain parts of the main *rgyud bzhi* text by heart, as the knowledge contained should be at the practitioner's fingertips at all times, being the very essence of the theory. In view of this, institutions should carefully consider the weighting to be given to this aspect.

## Materia Medica Recognition and Pharmacy Training

This will be primarily subject to continued assessment during field trips and laboratory visits, with spot checks on field trips leading to points being subtracted from an overall total for wrong answers given. Written and oral examination on materia medica forms part of the general examination on study (above).

## Clinical Practice

Competence will be judged by continuous assessment by supervising physicians during clinical training. This will require the supervising physicians to maintain a record of diagnoses offered and treatment suggested by the student during clinical training. Not all cases need be recorded but should cases be selected, that selection must be made before the student is asked to diagnose and not in retrospect. At least twenty per cent of the student's cases should be followed for assessment. Clinical examination will form part of the end of year and final examinations. This aspect of the assessment will be a critical factor determining the candidate's suitability to proceed to the next year or to qualify.

#### Exemptions

Educational institutions should provide a coherent policy with regard to exemptions for prior learning. They must satisfy themselves that candidates who are exempted from parts of their curriculum have covered the required material and achieved required learning outcomes. After consultation with the world's major TTM teaching institutions clear guidelines on this issue will be set out by the UK governing body on TTM. The governing body will have the power to annul any granted exemption it deems unjustified.

## **Indicative Reading**

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# Footnotes to 8<sup>th</sup> Module, Tibetan Herbal Medicine

- This term refers to one of the fundamental principles of TTM, a field of study that is both vast and subtle. As there is nothing resembling this in modern allopathic medicine, it is impossible to find an adequate English translation and the westernised transcription of the Tibetan has been given here. A very approximate translation could give "agents" when they are in their healthy, unaltered state and pathologia when they have altered. (see OED).
- 2. Eminent authorities, such as HH the Dalai Lama and Prof Khenpo Troru Tsenam in Lhasa, have insisted that TTM stands perfectly in its own right as a medical system without the Buddhist element and that the prayerful, religious component is an "added value" but not a necessity. Therefore making these an option rather than a requirement seems to pose no problem to the main holders of the traditions. The time devoted to these is not included in the study hours cited above.
- 3. See list of principal herbs (not exhaustive) used in Materia Medica section below
- 4. Much long-term research is required to ascertain the exact nature of each illness categorised in the Tibetan medical system in order to find equivalences in the Western medical classification wherever possible, and to establish the right terminology. This work is presently underway. At this early stage, tentative equivalents are sometimes given in brackets as indications, without certainty.
- 5. (See the Note on Principles of TTM and terminology). This section shows disorders caused by the disruption of each one of the three Nyes Pa. These can be viewed as key pathologies since all illnesses are due to a disturbance of the basic balance between the three agents which make up the body and ensure the functioning of all body systems.

- \* Words of My Perfect Teacher by Patrul Rinpoche translated by Padmakara Transaltion Committee Harper Collins 1994
- 6. Words of My Perfect Teacher by Patrul Rinpoche translated by Padmakara Translation Committee, Harper Collins, 1994
- 7. Affected by the Convention on International Trade in Endangered Species, allowed if traded with the appropriate trade permits OR non-plant materials as, under UK law, non-plant traditional medicines fall outside the remit of the licensing exemption granted to herbs by the 1968 Medicines Act OR restricted under SI 2130 Schedule 111, 1974 OR banned for use in unlicensed medicines by Act of Parliament.

## **Western Herbal Medicine**

#### Introduction

It is appreciated that there are diverse interpretations and approaches possible within the term "Western Herbal Medicine" and it is not the intention of the EHTPA to limit or proscribe these approaches where they are clearly presented and substantiated. It is required however that each programme in Western Herbal Medicine makes clear its particular approach and rationale to students and does so in a critical and comparative way.

Students should be clear about the provenance of the approach as presented by the institution. The approach which informs the curriculum should be explicit, integrated throughout the course, justified, and referenced so that students are able to consider their clinical practice and underpinning theory from an informed perspective.

Areas of controversy or relatively recent innovation (e.g. combination of eastern and western approaches to understanding herbs) should be clearly identified as such. Although curriculum content may incorporate elements from other traditions, it should be clear that the core central tradition and the majority of course content is Western Herbal Medicine.

Examples of specific designations that may describe a particular approach may include, but not be limited to, *physiomedical*, *vitalistic*, *holistic*, *energetic*, *phytotherapeutic* and *biomedical*.

# A) Materia Medica

#### Aims

To ensure a sound knowledge and understanding of medicinal plants.

To encourage students to take a broad and continuing interest in medicinal plants and to appreciate issues surrounding their conservation and sustainability.

Minimum level: FIVE/SIX

## **Learning Outcomes**

By the end of the course the student will be able to:

- Recognise and identify a wide range of medicinal plants, both growing and dried; demonstrate knowledge of basic botany; explain the taxonomy and morphology of medicinal plants.
- 2. Classify plants according to their actions, e.g. as stimulants, astringents, etc.; relate the action of an individual herb to its indications in treatment.
- 3. Explain the pharmacological actions of medicinal plants on the body in health and disease and identify which specific tissues, organs and physiological systems are affected by administration of a given medicinal plant; describe the influence of plant remedies on the psycho-social and spiritual aspects of a patient's being.
- 4. Explain and justify the relative merits of whole plant preparations, standardised extracts and isolated plant constituents for application in holistic treatment.
- 5. State in detail the dosage range of the medicinal plants studied.
- 6. Describe in detail the contraindications and incompatibilities of the medicinal plants studied.
- 7. Apply relevant research skills so that he/she will be able to continue to learn more about the materia medica throughout their life of professional practice (as explained in Module 7 "Core Curriculum on Practitioner Research").
- 8. Demonstrate awareness of the role of rationality, intuition and experience in prescribing treatment.
- 9. Describe the relative merits of simples and/or complex herbal prescriptions.
- 10. Critically discuss the use of native versus foreign herbal remedies.
- 11. Identify conservation issues as they relate to herbal medicine. Highlight the merits of organic and wildcrafted herbs.

## Outline of Syllabus Contents

## 1 Materia medica

Materia medica is the core subject in medical herbalism along with therapeutics. This subject examines individual plant remedies and discusses the botanical, pharmacognostic, pharmacological and therapeutic aspects of each remedy, along with its indications in treatment, contraindications and incompatibilities, and posology, including dosage indications for elderly patients and children.

The plants are discussed from a traditional therapeutic aspect, and modern scientific research and clinical experience are used to supplement and extend the understanding of the plant as a medicinal remedy. Specific indications are studied, as are herb combinations, synergy, and information sources and literature on materia medica.

# 2 Botany

Botany is an important tool for the medical herbalist. The aim of this subject is to develop the students' skills in the use of botanical reference material, and in the field identification of plants. These skills are developed from teaching in plant taxonomy and morphology, and also the role played by taste, smell and touch in identifying plants. The course also includes an introduction to plant physiology.

#### 3 Environmental & Conservation

Discussion of issues surrounding the conservation and sustainability of medicinal plants. Discussion of the relative merits of global versus local herbalism. Have an understanding of the procedures used to ensure correct species identification on entry to, or in the UK.

# B) Therapeutics

#### Aims

To enable students to comprehend the clinical application of the herbal materia medica, using appropriate conventional and complementary diagnostic skills to select herbs and dietary regimes to treat a range of conditions in a holistic way.

To ensure that the student has sufficient knowledge of therapeutic skills to take individual responsibility for sensitive and competent patient care and throughout a course of treatment.

To impart knowledge of the historical antecedents of and innovations in, as well as current context for the practice of Western Herbal Medicine. To impart understanding of the philosophical and theoretical rationales pertaining to the delivery of herbal medicine, with primary focus on the ethos of the individual institution.

To impart knowledge and critical understanding of the rationales for supporting therapeutic modalities that may be employed alongside herbal medicine, according to an historical and theoretical basis.

To place Western Herbal Medicine in context vis-à-vis present-day complementary and mainstream medical practice, and to create awareness of other styles and traditions of herbal medicine that may operate side by side with the style being studied. To impart knowledge of the present-day social, political and legal context for herbal medicine.

To continue to develop research skills so that the student will be equipped to continue to add to their knowledge of materia medica and therapeutics throughout a lifetime of professional practice.

To expand students' awareness of the roles of rationality and intuition in prescription and treatment.

Minimum level: SIX of an undergraduate course.

## Learning outcomes

By the end of the course the student will be able to:

- 1. Give an account of the varying philosophical and theoretical bases for the practice of Western Herbal Medicine.
- 2. Refer to the historical and contextual aspects of herbal medicine, and differentiate their particular style from others in comparative study. Describe and justify the specific Western Herbal Medicine approach presented by the institution.
- 3. Determine a specific treatment strategy, selecting appropriate herbal prescriptions and dietary plans for a wide range of conditions, and having regard to the pattern of disharmony particular to the individual concerned.
- 4. Select for any particular disease or condition a range of possible herbal treatments, explaining the difference of approach in each case.
- 5. Adapt a prescription appropriately to respond to changing circumstances in the progress of an individual treatment.
- 6. Deal appropriately with adverse reactions, and recognise and respond to a healing crisis.
- 7. Give an account of factors involved in prognosis.
- 8. Identify and discuss the factors involved in selecting appropriate dosages of herbs and treatments for particular individuals and conditions, including dosages for the elderly, children and infants.
- 9. Demonstrate detailed knowledge of schedule III herbs, and of contraindications in pregnancy.
- 10. Recognise the limits of herbal treatment and his/her own ability: be able to refer when necessary.
- 11. Demonstrate an understanding of the professional and social context for their activities as a herbal practitioner in the Western tradition

## Outline of Syllabus Contents

## 1 Theory and Philosophy of Health and Disease

Study of the underlying philosophies, the historical traditions, theories and innovations currently acknowledged within, or affecting Western Herbal Medicine.

An overview of the history of herbal medicine, globally and in the UK, highlighting awareness of the differences and the links *between various styles and traditions*, and between the orthodox and the complementary theories of health and dis-ease, with specific reference to factors determining the evolution of a wide range of conditions, such as described in the syllabus of Core Curriculum no. 3, "Clinical Sciences".

Models for understanding the healing process within the individual patient, referenced to the particular approach to Western Herbal Medicine presented. (NB: These may include, but not be limited to, the concept of the *vis mediatrix naturae*, Hering's Law of Cure, the Biomedical model, or any other modern innovation, provided that all theories presented are referenced, coherent and well-founded). In-depth study of the particular tradition presented by the individual institution.

References in support of an institution's chosen paradigm may be drawn from, but not limited to, the indicative suggestions at the end of this document

# 2 Strategies

Application of the materia medica; specific herbal and nutritional protocols for the range of conditions specified, and how to respond to individual needs within the basic protocols. Appropriate dosage levels for various conditions and individuals, and how and why these may be varied according to the specific needs of each case. Treatment of multiple conditions: prioritising in selection of basic aims of treatment; understanding the importance of identifying the underlying pattern of disharmony as against treating specific symptoms.

Identifying response patterns in treatment; recognising side-effects and adverse reactions, and selecting appropriate responses to such eventualities; recognising and managing a healing crisis; assessment and management of individual progress during treatment; variation of herbal prescription according to individual response and level of treatment success; factors determining length of treatment to be undertaken.

## 3 Contingent Factors

Supporting therapies and the role they may play in successful treatment; if and when to refer, or recommend supplementary or alternative therapies; how to interact with other practitioners, including the medical profession.

# Assessment of the Core Curriculum (including Module 8)

Institutions should provide a detailed assessment strategy for both theory and practice and justify the assessment methodologies incorporated within it. Assessment of clinical practice could include a viva in addition to other assessment techniques.

Assessment outcomes should demonstrate progression from academic level 4, to level 5, to 6 and from novice to competent practitioner by the end of the programme.

# **Indicative Reading**

# **Background/Historical**

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Websites of Interest

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**Module 9: Clinical Practice** 

**Minimum Hours: 500** 

# **Outline of Syllabus Contents**

During clinical practice, students will develop the skills required of a herbal and traditional medicine practitioner. At first these skills will be practised with close supervision and support, but increasingly the students will be encouraged to formulate their own decisions regarding the diagnosis and treatment and the progress of the patient's healing and recovery.

## **Codes of Ethics and Practice**

The Codes of Ethics and Practice of the relevant professional body will apply throughout clinical practice. A Clinical Training Handbook must be provided for each student.

#### **Aims**

To develop in students the full range of clinical skills under the careful supervision of an experienced herbal and traditional medicine practitioner(s), including developing a herbal/traditional medicine treatment strategy, dispensing herbal medicines, dispensary management, health and safety aspects and practitioner development issues.

To motivate students to continue learning and studying by observing beneficial outcomes of treatment.

**Minimum Level**: 6 (HE honours degree)

# **Learning Outcomes**

## A. Reflective Practice

**Reflective Practice Standard 1** herbal practitioners recognise and understand that they always operate within a set of contexts influenced by legal, political, societal and cultural considerations, which will impact on their practice.

- Recognises the need to reflect on practical experiences and develop the skills of reflection
- 2. Competently reflects upon their own practice and demonstrates the ability to learn from reflection in order to identify their practical, personal and professional developmental needs

# B. Diagnosis and Treatment

**Diagnosis and Treatment Standard 1:** Herbal and traditional medicine practitioners gather information from patients using a variety of methods including case history, observation using all the senses, physical examination, constitutional assessment and, where appropriate, laboratory testing.

## Learning outcomes

- 1. are competent at gathering relevant information, using verbal and non-verbal communication, to build an accurate and holistic picture of the patient.
- 2. can undertake an accurate physical assessment of the patient.
- 3. must recognize the relevance of information from other diagnostic systems to their assessment of the patient.

**Diagnosis and Treatment Standard 2:** Herbal and traditional medicine practitioners aim to identify the underlying causes of illness and disease, using one or more of a variety of conceptual frameworks, according to their philosophical and therapeutic standpoint and experience.

## Learning outcomes

- demonstrates the ability accurately to draw on knowledge from a variety of different conceptual frameworks when determining the underlying causes and patterns of disease.
- 2. can form a valid initial working hypothesis based on their diagnostic framework in order to come to a safe and effective treatment rationale and plan.
- 3. can demonstrate the ability constantly to develop and modify their working hypothesis in the light of further information and/or changes in the patient's condition.

**Diagnosis and Treatment Standard 3:** Herbal and traditional medicine practitioners formulate and implement, in partnership with the patient, an herbal prescription and treatment plan, which meets the specific needs of the individual patient and aims to support the body's own homeostatic processes and healing ability, alleviate imbalances and restore health as far as is achievable for each patient.

#### Learning outcomes

- 1. can formulate safe and appropriate herbal prescriptions and treatment plans which relate to the interpretation and analysis of information gathered during the initial consultation, and the diagnostic hypothesis.
- 2. formulate a comprehensive herbal prescription and treatment plan and a considered prognosis that takes into account the whole person.
- 3. can dispense the herbal formula safely and accurately.
- 4. can communicate their findings with the patient effectively and agree a treatment plan/strategy, for which they obtain informed and valid consent.
- 5. can change and adapt the prescription and treatment plan appropriately, according to perceived changes and developments in the patient's condition or situation over time.
- 6. will recommend and promote appropriate self-help strategies in order to support the treatment plan and encourage the most effective improvement for the patient.

**Diagnosis and Treatment Standard 4:** Herbal practitioners maintain an up-to-date knowledge of the uses and effects of the more commonly used drugs; prescribed, over-the-counter (OTC) and recreational, and of the likelihood of interactions with herbal treatment. Herbalists are constantly aware of the potential for herb-drug interactions, and also for adverse reactions to herbal treatment, and document and report any such events, in order to enhance knowledge and awareness in both the herbal and the conventional medical professions.

## **Learning outcomes**

1. demonstrates an understanding that the potential for herb-drug and other interactions is always present and keeps this always in mind when assessing and prescribing.

#### C. Communications and interaction

**Standard Communications and Interaction 1:** Herbal and traditional medicine practitioners offer empathic, effective and ethical interaction and communication with patients, carers, colleagues and other healthcare professionals.

## **Learning Outcomes**

- 1. consistently establish and maintain rapport with patients, carers or prospective patients and also with colleagues and other healthcare professionals.
- 2. communicate and interact ethically with patients, carers, prospective patients and colleagues with clarity, sensitivity and empathy.
- 3. recognise, develop, maintain and use their power as an enabler of healing.

**Standard Communications and Interaction 2:** Herbal and traditional medicine practitioners provide relevant and appropriate information to patients, carers or prospective patients on aspects of diagnosis and treatment to enable informed choices to be made; and also to other healthcare professionals, members of the public, public bodies and organisations.

## **Learning Outcomes**

- clearly communicate their understanding of the possible combinations of aetiological and pathological factors involved in the development of ill health and disease, and their treatment plans for the patient.
- inform patients and prospective patients both preceding and after treatment of what to expect in coming for treatment, how to be best prepared for treatment and the effects of treatment(s).
- 3. are able to inform, instruct, advise and offer professional opinion to patients and /or carers, colleagues and other healthcare professionals about treatments and aspects of lifestyle which may be harmful or beneficial to the health of the patient.

# D. Safety

**Safety Standard 1:** Herbal and traditional medicine practitioners generate a safe environment for the patient and themselves.

## **Learning Outcomes**

- 1. should consistently demonstrate safe practice in all aspects of patient management and treatment
- 2. interact with other healthcare professional so that the patient's best interests are maintained.
- 3. keep appropriate accurate and confidential records of their practice and treatments
- 4. communicate with patients showing awareness of the emotional impact of that interaction on the patient and themselves
- 5. Maintain patient confidentiality
- 6. seek to maintain their own health and do so by setting appropriate boundaries and managing the environment in which they work and in the way they work

# E. Operate an effective, legal and professional practice

**Professional and legal Standard 1:** Herbal and traditional medicine practitioners operate an effective, legally and professionally sound practice

# **Learning Outcomes**

- 1. consistently practices in compliance with the law and with regulatory and professional body requirements
- 2. demonstrates a critical awareness of legal and ethical issues and requirements relating to children and vulnerable adults.

**Professional and legal Standard 2:** Herbal and traditional medicine practitioners ensure that the dispensing of the herbal and traditional medicine they prescribe is done in accordance with the current legal and regulatory requirements

#### **Learning Outcomes**

- 1. operates and manages their dispensary in compliance with the law
- 2. demonstrates and understands the implications of commissioning or purchasing herbal medicine from a third party

Appendix 1

Module 2: Diet and Nutrition (Revised April 2012)

**Minimum Hours: 80** 

Minimum Level: 4 (Certificate of Higher Education)

Aims

[Note: the number(s) in parentheses refer to the Learning Outcome(s) related to each aim.]

To provide an introduction to the use of food and eating patterns to promote health and prevent disease both from a Western public health and medical context and from the perspective of the discipline being studied. (1, 3, 4, 5)

To develop awareness of the possible interactions between foods, herbal supplements and drugs, the resulting limitations of use and the importance of safe practice within the discipline being studied. (2)

To prepare practitioners of Herbal & Traditional Medicine to advise on diet and health related nutrition within the limits of their competence and to recognise the need for referral for specialist dietary and/or nutritional advice. (1, 2, 3, 4, 5, 6)

## Learning Outcomes

At the end of the module the student should be able to:

- 1. Identify the need for, and functions of a range of key macronutrients and micronutrients and the metabolic processes involved.
- 2. Recognise the possible interactions between foods, additives, herbal supplements and drugs, and the dietary and nutritional effects of interactions.
- 3. Recognise the terminology used in Western dietetics and nutrition in the context of the similarities and differences between dietary approaches and assessment/diagnostic methods.
- 4. Discuss the health problems linked to inappropriate intake of key nutrients in individuals and populations of the Western world.
- 5. Describe dietary and nutritional needs at different stages of individuals' growth and development.
- 6. Provide appropriate and safe dietary and lifestyle advice to individuals within the context of practice as a (.....discipline....) practitioner.

#### Svllabus

[Note: the numbers in parentheses refer to the Learning Outcome(s) related to each part of the syllabus.]

Essential macro and micronutrients to include carbohydrates, lipids, proteins, minerals and vitamins. (1)

Introduction to metabolism, catabolism and anabolism. (1)

Relationships between physiological systems and nutrition. (2) The effects of drugs, alcohol, smoking and food additives. (2)

Current terms used in Western dietetics and nutrition. (3) Dietary assessment methodologies. (3)

Effect of activity levels, age, environment and gender on diet and nutrition. (4)

Stages of growth and development. (5) Effects of macro and micronutrients on health and disease. (5)

Patients' lifestyle choices and approaches to the management of choice. (5) Safety issues and consequences of advice. (5)

The role of dieticians, nutritional therapists and other health professionals. (6)

#### Indicative Reading

[Note: these texts and websites illustrate the threshold level of the module.]

#### Texts

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Newman-Turner R. Naturopathic Medicine. Wellingborough: Thorsons/Harper Collins; 1990.

Pitchford P. Healing with Wholefoods, Asian Traditions and Modern Nutrition. North Berkeley: Atlantic Books; 2002: 3rd revised edition.

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#### Websites

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British Nutrition Foundation, <a href="http://www.nutrition.org.uk">http://www.nutrition.org.uk</a> (accessed 26.2.12)

Scientific Advisory Committee on Nutrition, <a href="http://www.sacn.gov.uk">http://www.sacn.gov.uk</a> (accessed 26.2.12)

McCance & Widdowson's Composition of Foods Integrated Dataset (CoF IDS), <a href="http://tinyurl.com/6lnkzqg">http://tinyurl.com/6lnkzqg</a> (accessed 6.3.12)

Department of Health, http://www.doh.gov.uk (accessed 26.2.12)