INTRODUCTION

Traditional Chinese Medicine (TCM) is based on the idea that a healthy body contains three mystical sounding components: life force (qi), female and male energy (yin and yang) and the five elements — wood, fire, earth, metal and water. TCM experts said that these forces flow around our body in energy channels called meridians. If the energy gets out of balance, the channels become blocked and we fall ill.

By looking at our lifestyle and diet, the TCM physician can start to unblock them by prescribing herbal treatments and stimulating energy points around our body with acupuncture or massage.1

SOME COMMONLY USED TCM

Ginseng, Panax Ginseng, Ren Shen

Meridian: Heart, Lung and Spleen

It replenishes and supplements the original qi, and supplements the lung yin. It is also considered as the herb of eternal life and the elixir of life among the Chinese. The fundamental value of this herb lies in its extraordinary ability to promote and correct the body’s chemical imbalance. Various scientific studies have shown that ginseng acts on the pituitary glands and stimulates the adrenal glands, thus increasing the body’s resistance to the ill effects of stress. Ginseng also stimulates the hypothalamus in the brain to secrete substances that stimulate cell growth and healing in the sex organs. The value of ginseng is determined by the origin, age and how the herb is processed.2

Chinese Caterpillar Fungus, Cordyceps sinensis, Dong Chong Cao

Meridian: Lung and Kidney

According to the revised compendium of Materia Medica by Wu Li Lo, it is beneficial to the lungs and kidneys and is known to relieve dyspnea, eliminate phlegm and stop bleeding. Those with shortness of breath and coughs with blood-tinged sputum will find this herb useful.2 It is a mushroom that has a rich 2000-year-old history. It grows mainly on the Qinghai-Tibetan plateau at altitudes above 14,000 feet, and takes five to seven years to complete its life cycle and produce the natural product. It is also referred to as “winter worm, summer grass” as it grows by infecting the worm of the green bat moth with its spores in the winter.

* This article was contributed by Dr Hooi Hoon Ang of the Universiti Sains Malaysia, Penang, Malaysia.
Through the absorption of nutrients inside the body of the worm, the mycelia fungus is able to grow out from the spores. The worm dies when its body becomes filled with mycelia. As spring comes, mycelia will grow out of the body from the worm’s head. The protruded mycelia stem can grow from between 4 to 10 cm, and the end of the stem is oval-shaped. The plant is picked when fully grown in the summer. Extracts of this unique herb improves oxygen consumption, reduces fatigue and increases vitality and natural resistance to diseases.3

Chinese Angelica, *Angelica sinensis*, Tang Kuei

Meridian: Liver, Heart and Spleen

It is considered the queen of woman’s herbs. It is deemed one of the most balanced *yin* tonics. It has the ability to strengthen and invigorate the entire female reproductive system and is therefore used in every type of menstrual disorder. In addition, it activates the blood circulation, disperses cold, moistens the large intestine and promotes bowel movement.2

Chinese Yam, *Dioscorea opposita*, Wai Saan

Meridian: Spleen, Lung and Kidney

It strengthens the spleen and stomach, and is recommended for those with poor appetite, fatigue, loose stools and spontaneous sweating. It replenishes the lung *yin* and kidney *yin*, and also invigorates the kidney *yang*.2

SAFETY OF TCM

The use of potent and toxic medicinal materials in Chinese medicinal prescriptions

Chinese medicinal herbs are often prescribed in composite formula (*Fu-Fang*), according to Chinese medicinal principles of diagnosis and treatment. It is an approach of combining processed poisonous/toxic herbs with non-toxic herb, thus neutralizing or reducing the toxicity of the poisonous/toxic herbs. The different characteristics of herbs in a given prescription rectifies the hyper- or hypo-activity of *yin* and *yang* in the unwell body, consequently curing the disease causing the imbalance of *yin* and *yang*, and restoring health.

Authenticity or poor quality of herbs

Some species of plants with similar Chinese names but differing in their indication and toxicity cannot be used interchangeably. A classical example is the substitution of *Aristolochia fangchi* (Guang fang ji) instead of Chinese medicinal herb *Stephania tetrandra* (Han fang ji). Although both have similar names and clinical indications in TCM, *Aristolochia fangchi* has been found to cause renal failure and urothelial carcinoma.4,5

Another example is when Chinese herbal medicines are deliberately substituted with cheaper herbs for economic reasons, as in the case of fake *Cordiceps sinensis* on the market. The plants *Stachys gaobombcis* and *Stachys sieboldii* produce tubers that look like worms. Another imitation is a processed
product made from molded maize, wheat powder and plaster. This imitation is yellowish in color and has a smooth surface.

Another report showed that misidentification of Chinese herbal medicine, lemon grass tea, has caused undesirable effects.

The consequence of processing of crude herbs
All Chinese medicinal herbs are processed or prepared fresh after collection with appropriate procedures before use. Certain processing changes the effects of some herbs.

For example, raw *Radix Rehmanniae* is mainly used to purge heat or cool the blood and promote the generation of body fluids. However, *Radix Rehmanniae Preparata* has a warm property and is especially effective for enriching blood. After processing, the therapeutic effects of some herbs will be enhanced. For example, *Rhizoma corydalis* processed with vinegar has a greater analgesic effect. If the supplied herbs in the market of developed countries have not been processed properly, this could lead to toxicity, especially so when used without *Fu-Fang*.

Quantity of Chinese medicinal herbs prescribed
This refers to the dosage of each herb used in the *Fu-Fang* and depends on how well trained and experienced is the practitioner who prescribes. General guidelines are listed in each of the monographs of Chinese medicinal herbs and composite formulae as reference for use. Therefore, overdosing should be avoided.

Interactions of Chinese medicinal herbs and orthodox drugs
Among them are, interaction of ginseng with phenelzine and other monoamine inhibitors, thus causing a central nervous system stimulant effect. The anticoagulant effect of warfarin was decreased when ginseng was taken simultaneously.

Presence of heavy metals, pesticides and orthodox drugs in herbal products
A review article with 58 references reported excessive toxic heavy metals and undeclared drugs present in Chinese proprietary medicines (CPM) in Singapore between 1990 and 1997. Lead, arsenic, mercury and any undeclared drugs have been detected in the CPM using ICP/MS and atomic absorption spectrophotometer. A database for the CPM was established and used to educate the public, herbal industry and medical professional.

In addition, *Lonicera japonica Thunberg* dry flowers, *Radix Glycyrrhiza uraleensis* and *Radix Morinda officinalis* were reported to contain heavy metals whilst nine heavy metals were present in 42 Chinese herbal medicinal plants.
RECOMMENDATIONS

The best practice for Chinese medicine requires understanding both the TCM and modern orthodox medicines. In addition, there is a need to establish a quality testing system for raw herbs and their preparations and herbal products. This would detect any mislabeling or misidentification and the presence of undeclared components. Besides these, herbal dispensers should have an adequate qualification for dispensing, which includes the knowledge of Chinese medicine and modern pharmaceuticals.

REFERENCES


Dr Hooi Hoon Ang earned her B Pharm (Hons) from Universiti Sains Malaysia, with the Malaysian Pharmaceutical Society Gold Medal Award, for being the best overall graduating pharmacy student in 1988. Later, she pursued her studies in the same university, where she was awarded her PhD. Subsequently, she joined a private pharmaceutical firm, and later became a lecturer in the above university. She was promoted to Associate Professor in early 2002.

Dr Ang has successfully investigated the numerous and interesting biological activities of medicinal plants, namely, Eurycoma longifolia Jack (commonly known as Tongkat Ali) besides revealing many pure compounds with unique and interesting structural features. To date, she has successfully published more than 300 scientific publications in international refereed journals, conferences, seminars, workshops, symposiums, both locally and abroad.

Thus, this have earned Dr Ang more than 100 local and international honors and awards, and currently, she is holding five Malaysian's records, in the Malaysia Book of Records. In recognition of her meritorious achievements, Dr Ang was successfully featured in more than 60 local and international biographical works viz. India, Malaysia, United Kingdom and the United States of America.

Dr Ang was also appointed as the editor-in-chief, Who’s Who Among The Outstanding Young Malaysians, a maiden biographical book in early 2003. This book was successfully published and launched in Penang in January 2004.

Contact Details:
Dr Hooi Hoon Ang
Address: School of Pharmaceutical Sciences,
Universiti Sains Malaysia,
Minden, 11800, Penang,
Malaysia
Tel: +60 04 653 3888 (ext. 2264)
Email: hhang@usm.my