EVIDENCE TO IMB/SCHMP RE CHINESE HERBAL MEDICINE
From IRCHM and EHPA. 30/07/01

1. Levels of evidence in support of TCM claims.
Chinese herbal medicine (CHM) has been practised for more than five thousand years. For at least the last fifteen hundred years, CHM has been highly systematised since Chinese herbal medicine was an integral part of the Chinese Imperial system that accounted for the flowering of one of the greatest civilisations of the world.

The seventh-century physician Sun Si Miao knew about the treatment of thyroid disorders with seaweeds and animal thyroid extracts, and warned that cholera might be water borne (in removing the handle of the Broad St water pump, John Snow made the same connection in 1854) whilst an effective type of inoculation was practised in China at least 200 years before Jenner introduced the practice into western medicine, a practice attested to by the famous Cambridge Sinologist, Joseph Needham, in his article “China and the Origin of Immunology” (1). The ability of Chinese doctors to evaluate the actions and indications of their plant medicines should not be underestimated. Over the course of thousands of years, the clinical experience of highly skilled Chinese physicians was refined, honed and recorded in thousands of Chinese medical texts.
This, we submit, is traditional medicine at its best to which the term “anecdotal evidence” seems wholly inadequate. How accurate the observations of Traditional Chinese Medicine (TCM) doctors have been can be measured by the hundreds of scientific monographs on Chinese herbal medicines published in the last few years that bear witness to the fact that what Chinese doctors said about the medicinal properties of their plant medicines has almost always been proved to be scientifically substantiated. (2,3,4,5)

For example, research into the Chinese herb, Artemesia annua, (Qing Hao) (6) used in China for a thousand years for the treatment of malaria, has led directly to the manufacture of one of the most effective treatments for malaria currently available.

Traditional Chinese doctors have used the Chinese plant Ma Huang (Ephedra sinica), the source of the bronchodilator ephedrine, for more than 2,000 years. The famous Chinese herbal, the Ben Cao Gang Mu by Li Shi Zhen published in 1596 discussed the medicinal action of Ginkgo, including an illustration of the foliage and fruit. The Chinese use of the seeds and leaves of this for the treatment of asthma and frost bite have been validated by the modern scientific discovery of PAF inhibitory effects of ginkgolides (7) and the vasodilatory and antioxidant effect of the Ginkgo flavone glycosides (8).

Chinese herbal medicine (CHM) has only come to widespread public attention in the West in the last fifteen or so years. Unsurprisingly, therefore, to date there have been relatively few medical trials to evaluate Chinese herbal treatment. Traditionally, plants are mixed together in prescriptions of up to a dozen or more plants.
From a drug development point of view, these complex herbal mixtures do not lend themselves to scientific investigation, as they comprise an orchestra of chemicals that often defies identification of a single isolated constituent that might form the basis of a new pharmaceutical preparation. Nevertheless, there is an increasing body of scientific evidence published in reputable medical journals to indicate that Chinese herbal therapy is indeed effective and safe.

Current medical literature contains a number of well-conducted clinical trials proving the efficacy of CHM (6,9,10,11,12,13) and describing the underlying bio-medical processes at work (14,15,16,17). This kind of evidence provides ample support for traditional strategies of treating disease. Ongoing research in Japan, China, Taiwan, Korea and Vietnam continues to validate these traditional procedures (18 and see Addendum). In the West, medical ignorance and disregard of CHM has led to limited research resources and lack of access to large numbers of patients presenting with the same condition, restricting CHM to a few but extremely positive studies (11,12) that give an account of randomised double blind clinical control trials carried out by doctors at Great Ormond Street, The Royal Free and Middlesex Hospitals to assess the efficacy of CHM treatment of atopic eczema.

**Summary**

Severe and widespread atopic eczema often fails to respond adequately to currently available therapies. Following the observation of substantial benefit in patients receiving oral treatment with daily decoctions of traditional Chinese medicinal plants, we undertook a placebo-controlled double-blind trial of a specific preparation formulated for widespread non-exudative atopic eczema. Forty-seven children were given active treatment and placebo in random order, each for 8 weeks, with an intervening 4-week wash-out period. Thirty-seven children tolerated the treatment and completed the study. Response to active treatment was superior to response to placebo, and was clinically valuable. There was no evidence of haematological, renal or hepatic toxicity. These findings anticipate a wider therapeutic potential for traditional Chinese medicinal plants in this disease, and other skin diseases.
These doctors commented in their *Lancet* paper (12), that the CHM treatment “affords substantial clinical benefit in patients whose atopic dermatitis had been unresponsive to chemical therapy.” In further validation of traditional treatment using Chinese herbal medicine more recent research published in JAMA in 1998 (9) showed that CHM was effective for the treatment of IBS. Interestingly, this study (which was also an RCT) indicated that when the treatment was individualised patients tended to do better in the long term.

If it is accepted that the definition of research evidence extends beyond western medical journals, then the evidence base for CHM is supported by many thousands of Chinese and Japanese research papers (see Addendum) that make use of collected case histories and outcome studies to demonstrate the efficacy of CHM. All in all, this amounts to a very considerable body of evidence substantiating the knowledge and skills of physicians trained in TCM and the efficacy of their *materia medica*. A cursory review of CHM on Medline produces over 300,000 references.

References
(3) Chinese Drugs of Plant Origin, Tang and Eisenbrad, Springer-Verlag, 1992
Addendum

We include here a sample of two studies that have been translated from Chinese sources and a brief summary of a selection of research developments into CHM currently in process around the world.

**Treatment of 60 patients with Ulcerative colitis with Chinese Medicine**

*Zhong yi za zhi (The Journal of Chinese Medicine)*


60 patients (42 men, 18 women; age range 18-65 years; average age 42.2) with UC where treated with Chinese medicine for a period of 20-60 days. Duration of illness was as follows:

1-5 years 26 cases
6-10 years 15 cases
11-15 years 19 cases

results were compared with a comparable patients treated with Salbutamol (1g, 4 times a day), pain killers and anti-spasmodic medicines.

**Results:**

**TCM group: 60 cases**

40 cases: clinical cure (all clinical symptoms & signs; clear for 6 months, colonoscopy examination normal)

13 cases: effective response (all clinical symptoms & signs; colonoscopy examination reveals only mild inflammation)

5 cases: showed improvement reduction in clinical s/s, colonoscopy examination reveals only mild inflammation

2 cases: No change.

**Salbutamol group: 26 cases**

8 cases: clinical cure.
8 cases: effective response
7 cases: showed improvement
3 cases: No change

Statistical analysis reveals significantly better results with TCM (P<0.01)

180 Cases of Diabetes Mellitus treated with Chinese Medicine
Si Chuan journal of TCM, 1994, 12(4). 22-23

180 cases, 111 men, 19 women. Ages ranged from 38 years to 80 years.
Shortest duration of illness 3 months, longest 24 years.
25 cases were considered to be mild effected, 74 cases medium severity, 81 cases were severely effected.

Results:

Clinical cure (Blood sugar level less than or equal to 5.8 mmol/L, urinary sugar negative) 39 cases, 21.7%.

Clear improvement (Blood sugar level less than or equal to 6.6% mmol/L, urinary sugar negative) 65 cases, 76.1%.

Improvement (Clear improvement in clinical symptoms, Blood sugar level less than or equal to 8.0 mmol/L, urinary sugar negative or (+)) 32 cases 17.8%

No change 44 cases 24.4%.

Examples of CHM Research Developments

ANAEMIA
The US Office of Alternative Medicine has approved a new study to investigate the effects of a Chinese herbal prescription (Marrow Plus: a Blood and Qi, Kidney and Spleen tonifying formula) in the treatment of mild-to-moderate anaemia. The principal investigator is Donald Abrams, MD, oncologist and director of the AIDS Unit at San Francisco General Hospital. Forty subjects will take the medicine for 12 weeks and will be evaluated both by Western and Chinese medical criteria.

HERPES SIMPLEX
The combination of various Chinese herbs with proven antiherpes simplex virus type 1 (HSV-1) action combined with acyclovir has been found to have a stronger anti-HSV-1 action than either the herbs or acyclovir alone. They reduced virus yields in the brain and skin more strongly than acyclovir alone, and exhibited stronger anti-HSV-1 activity in the brain than in the skin, in contrast to acyclovir treatment by itself. (Antiviral Research. 1995;27(1-2):19-37).

CHINESE HERB RESEARCH TAKES OFF IN THE US
Pfizer Inc., a US pharmaceutical firm, is to screen traditional Chinese medicines in its Connecticut laboratories, linking up with the China Academy of Traditional Medicine in Beijing. In another development, the US government’s Office of Alternative Medicine is funding double-blind studies of traditional Chinese herbal prescriptions for menopausal hot flushes. Meanwhile Dr. John Koo M.D., associate professor and vice chairman of the Department of Dermatology, University of California recently visited China to interview dermatology specialists about Chinese herbal treatment for chronic psoriasis. Based on his visit, he believes that Chinese herbal medicine holds “intriguing possibilities”. 
CANCER

Breakthrough research into the use of Chinese herbs in the treatment of oestrogen-related cancers was presented to the American Association of Pharmaceutical Scientists Annual Conference by Dr. David Yang, Director of Pharmaceutical Development at the Department of Nuclear Medicine, University of Texas. Three herbs were found to have anti-inflammatory and anti-cancer effects in animals and humans: Huang Quin (Radix Scutellariae Baicalensis), Zi Cao (Radix Lithospermi seu Arnebiae) and Bai Hua She She Cao (Herba Oldenlandiae Diffusae). The study was aimed at determining the oestrogen-receptor (ER) affinity of these herbs for their potential use in the treatment of ER-mediated diseases such as breast cancer, endometriosis, meningioma, and ovarian and uterine cancers. All herbs were found to have significant inhibition to ERs in in vitro tests. The long-term goals of the study are both to prevent ER (+) disease by pretreating healthy women and to improve the therapy of ER (+) diseases, especially in women with breast cancer which affects 175,000 women annually in the US, of whom 44,000 will die each year.

LIVER CANCER

Japanese researchers in Osaka report that Shosaikoto (Xiao Chai Hu Tang/Minor Bupleurum Decoction) in combination with conventional medicines, was able to reduce the incidence of liver cancer in Japanese patients with cirrhosis of the liver. After five years, 102 of 130 patients using the herbal medicine were still living, compared with 89 of 130 patients given only conventional medicine (Cancer September 1, 1995).

BREAST CANCER

Researchers are setting up a study aimed at determining the effectiveness of Chinese herbal medicines in alleviating the side effects of breast cancer chemotherapy. “Ultimately, we would like to develop a model in which we integrate the parts of herbal therapies that are safe and effective with those that we know are effective in standard conventional therapy, such as chemotherapy”, explained the director of clinical research of the Carol Franc Buck Breast Care Center at the University of California, San Francisco. Nearly two thirds of breast cancer patients in the San Francisco Bay area say they have used various alternative therapies in conjunction with their cancer treatments. Based on their review of textbooks and interviews with herbalists, the research team have developed their own special herbal formula, made up of 21 herbs. The powdered formula is mixed with hot water and taken as a kind of tea. The remedy is aimed at alleviating some of the fatigue, nausea, vomiting, blood disorders, and psychological symptoms associated with chemotherapy. During the study, approximately 60 women with breast cancer will be asked to drink either the tea or an inactive placebo tea for a 6-month period, beginning 2 weeks before their first chemotherapy session. Only women designated to receive the commonly used chemotherapy regimen of Adriamycin plus Cytoxan will be included in the trial.

LEUKEMIA

Scientific investigation of the Chinese herb Qing Dai (Indigo naturalis), discovered a hitherto unknown molecule, now used in the treatment of leukemia.

(Yao Zhu Chen: Science, Vol.49, No 2, 43, Shanghai, 1997).
2. The question of claims. How should they be worded?

CHM may be delivered in a number of forms such as dried herbs for decoction, concentrated powders, tinctures and classical formulations prepared as patent medicines that are manufactured in China, Taiwan or more lately within the EU itself.

Since Chinese herbs are not part of the Irish herbal tradition, it may be argued that the majority are unsuitable for over-the-counter sale as the public will have little or no knowledge of their application. Some Chinese herbs such as ginseng are a legitimate part of the OTC herbal supply and it may well be that a few other well-known Chinese herbal tonics and patent medicines may be suitable for OTC sale. Nevertheless, it would appear in the public interest that the vast majority of herbs comprising the Chinese materia medica (whether in dried, concentrated powder or tincture form) should be reserved for use by trained herbalists. In the UK this is currently being discussed as deliverable by limiting the right to prescribe herbs for medicinal purposes on a one to one basis without the need for a medicines licence (enshrined in Section 12.1 of the 1968 Medicines Act) to trained (and soon to be State registered) herbalists. This same approach is also being followed by the UK MCA with regard to Chinese patent formulae which are likely to be made available to herbal practitioners via “specials licenses”, rather than designating them suitable for OTC sale. We would ask the IMB to give serious consideration to similar solutions to this issue.

Clearly, if such an approach were taken with regard to CHM, then the wording of packets of herbs, powders and Chinese patent medicines could be limited to their contents, dosage and usual warnings about keeping out of reach of children, etc. As practitioners are trained in the use of these medicaments, there would be no need to include any information detailing the actions and indications of a herb or a patent medicine.

3. The Scope of Traditional Medicines Legislation

The traditional Chinese materia medica comprises about three thousand medicinal substances about 1,000 of which are now in regular use. Around 90% of these are herbal remedies, the other approximately 10% being medicinal substances of animal or mineral origin. Given that QA and safety issues are properly addressed, the Chinese herbal tradition would clearly be diminished if such animal and mineral medicinal substances were not covered by the scope of any traditional medicines legislation.

We therefore ask that this legislation be framed in such a way to take account of the need for the full expression of this aspect of traditional Chinese medicine.

Michael McIntyre 30/7/01

ENDS
The need for individualisation of remedies

The need for individualisation of patent medicines is apparent if one looks at the wide range of indications of a particular prescription e.g. Six-Ingredient Pill with Rehmannia. The broad-ranging indications of this formula should only apply to a pattern of disharmony in which the Kidney Yin is deficient. One of the chief markers signalling this pathology is red tongue with no coat.

Patients suffering a quite different disharmony, Kidney Yang Deficiency, might show the same symptoms as those for the Kidney Yin pattern e.g. low back pain, but would have quite different clinical signs e.g. a pale, swollen tongue.

Incorrect administration of this Chinese patent formula based on the symptom low back pain would almost certainly make the patient’s condition worse.