

Meeting Report

12th International Congress of Oriental Medicine

Main Themes

Oriental Medicine and Biotechnology in the Post-Genomic Era

WHO's Traditional Medicine Strategy 2002–2005 Date: November 6–9, 2003

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It was indeed an extremely well organized Congress; almost a full week filled with a multiplicity of organizational details accompanied by food, flowers and elegance coupled with the warmth of the Taiwanese organizers, although a few of us from northern climes were sweltering in the warm and humid weather. (Martin Richardson, Oxford University Press, England; Emiko Okudo, Oxford University Press, Tokyo, in charge of the publisher's booth, displaying our new journal *Evidence-based Complementary and Alternative Medicine (eCAM)*; Edwin Cooper, Editor-in-Chief; Nobuo Yamaguchi, Managing Editor; Patty Willis, Administrator). We found it especially warm at the lunches provided as voluminous buffets, served under lovely tents. It was indeed a community affair in which everyone literally dug in with chopsticks to partake of exotic foods.

The opening ceremony held the night before had all the trappings of a usual gala—a live rock music band such as La Bamba, folk dancers from the highlands of Taiwan, graceful swan dancers and even the Flamenco, performed by superb Taiwanese artists, that was as authentic as if we were in southern Spain. Other hints of a real gala included multiple lights, large screen video of VIP tables and one that attracted the most attention—the Mayor of Taipei, who welcomed the delegates in the best of spoken English. This was followed by a monstrous buffet. Numerous excursions were designed to highlight Taiwanese culture. **A. Taipei City Tour** included a visit to (1) Martyrs' Shrine, (2) National Palace Museum, (3) Chiang Kai-Shek Memorial Hall, (4) Chinese Temple, (5) The Presidential Office (pass by) and (6) Handicraft Center. **B. Culture Tour** included a visit to (1) Lungshan Temple, (2)

Pao-An Temple and (3) National Taiwan Junior College of Performing Arts (Chinese Opera Performance). **C. Wulai Aboriginal Village Tour** including (1) Push-car Ride, (2) Wulai Waterfall, (3) Aborigine Folk Dance, (4) Swallow Lake (pass by) and (5) Chieftain Statue. **D. Folk Arts Tour** included a visit to (1) Sanhsia Tsu Shih Temple, (2) Old Street Scene in Sanhsia, (3) Yingko's Pottery Factory and Show Room and (4) Pottery Street in Yingko. **E. Taroko Marble Gorge Tour**. **F. Taipei Night Tour** including (1) Mongolian Bar-BQ Dinner, (2) Lungshan Temple, (3) Hwashi Night Market and (4) Panoramic View from the Taipei Observatory. **G. East Coast and Taroko Gorge National Park Tour**.

The enormous efforts that went into the organization of the event were all clearly evident, especially Supervisors: Department of Health, Executive Yuan; Institute for Biotechnology and Medicine Industry, National Science Council and the Taipei City Government; Sponsors: China Medical University, Chinese Traditional Medicine Research and Development Fund, Committee on Chinese Medicine and Pharmacy, Department of Health, Council of Agriculture, National Research Institute of Chinese Medicine, National Union of Chinese Medical Doctors Association and ROC Chinese Medicines Association. There was a vast representation of people on the Organizing Committee, Executive Committee and Committee Members. There were numerous organizations and support and interest groups as well. Finally, there was widespread representation on the ISOM Organization.

The conference included Lectures, Oral Presentations and Posters and Exhibitions in Chinese, English, Japanese and Korean (simultaneous translations were provided). The first day of the Congress opened with three superb Plenary Lectures that set the stage for the later scholarly and research oriented presentations.

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Venue: Chih-De Building, Medical Research Building, Jie Shou Memorial Hall, Taipei Veterans General Hospital.

URL: <http://www.nricm.edu.tw/icom12/>

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Oral Presentations and Poster Sessions

There were more than 100 oral presentations covering (1) oriental medicine analyzed from several viewpoints: education, policy, current trends and molecular biology (first session chaired by E. L. Cooper, Editor-in-Chief, *eCAM*, and J. F. Liao); (2) acupuncture and moxibustion medicine (second session chaired by N. Yamaguchi, Managing Editor, *eCAM*); (3) basic research on medicinal herbs; (4) phytopharmaceutical industry and research applications and (5) alternative medicines, comparison between western and oriental medicine. There were 82 posters covering the following topics: (1) Phytochemistry, (2) Syntheses, (3) Herbal analysis, (4) Herbal Preparations and (5) Acupuncture.

Plenary Lectures

The three plenary lectures were designed to focus on the activities of the three countries from which most of the delegates had arrived: Taiwan, Japan and Korea. There were a few delegates from other countries, but their participation was negligible. Following are the excerpts as presented in the booklet that was a part of each delegate's satchel.

Traditional, Modern and Alternative Medicines

Chieh-Fu Chen, Director, National Research Institute of Chinese Medicine, Taiwan

Medicine, originally defined as a way of relieving pain or repairing the damage caused by injuries or diseases, has now expanded to embody ways of maintaining both physical and mental health. The history of medical practice is thus as old as that of the human race itself and in many ways, is closely intertwined with and reflects the physical and metaphysical evolution of the human race.

The physical evolution of man has a much longer history dating back to the Plesiadapiforms (65 000 000 BC) through the Proconsul (18 000 000 BC), Australopithecine (3 200 000 BC), *Homo habilis* (2 500 000–2 000 000 BC), *Homo erectus* (2 000 000–300 000 BC) and finally the *Homo sapiens* (500 000–300 000 BC). Modern men are considered descendants of the 'African Eve' who lived between 500 000–300 000 BC and early men living 70 000 years ago in Africa. In parallel, but less distinctly categorizable, is the evolution of intelligence, which in the final analysis is the unique element that separates and distinguishes man from all other animals. From the total preoccupation with survival and complete dependence on natural elements of the primitive man, down through the ages of progressive freedom from such preoccupations, man's needs have expanded to matters more sublime such as religion, art and music. Thus, civilization was born. Like other records, early history of medicine is fuzzy. However, eight species of medicinal plants including *Ephedra* were found buried beside a man in a cave found in Iraq that has been dated back to the Neanderthal age 60 000 years ago, providing early evidence of the use of medicinal plants.

The emergence of early civilizations along basins of major rivers is an evidence of the need for life sustaining natural elements such as water. The attitudes of the ancient man towards nature were characterized by respect, gratitude and fear. Thus, ancient Mesopotamians (5000–4000 BC) equated bodily functions and disease manifestations with the astrologic concepts of movements of the heavenly bodies. The development of medicines, often based on serendipity coupled with astute observations and acumen rather than hard facts—hence the sublime term 'the art of healing'—also shared certain parallels with the overriding principle of cosmic harmony. From the working of the heavenly bodies in the infinitely large universe to the elements that make up the individual man, the elements function harmoniously. Deviations from such harmony breed diseases of various degrees of severity.

The Code of Hammurabi (1900 BC) describes surgery as a common procedure. The discovery of Edwin Smith Papyrus (1700 BC, a copy of a 3000 BC manuscript) demonstrated the practice of surgery. Together with the Eber Papyrus (1553–1550 BC), which contains almost 1000 prescriptions, it is the forerunner of today's formulation prescriptions. The Hippocratic doctrine (460–377 BC) regards the body as being formed of four cosmic elements: air, earth, water and fire. Functionally, the working principles of the body are blood, phlegm, yellow bile and black bile. Together, they constitute the nature of the body. Disharmony of these elements gives rise to pain and diseases, while harmony results in good health. The basic concept of the therapy of Galen (130–201 AD) is *contraria contrariis curantur*. For instance, it recommends the application of heat for diseases rooted in coldness, and vice versa.

Records of ancient Hindu medicine are found in the *Atharva-Veda*, *Ayurveda*, *Charaka-Samhita* and the *Sushruta-Samhita*. In the latter two, the uses of 572 and 760 herbs are recorded, respectively. The fundamental principles of *Ayurveda* comprise the *panchamahabhutas*—the five great elements—and the *tridosas*. The *panchamahabhutas* involve the concept that man is composed of five *bhutas* (elements, represented respectively by ether or space, wind, fire, water and earth) and *mahat* (spirit). The *tridosas*, *vata* (ether and wind), *pitta* (bile, as represented by fire and water, the *Ayurvedic* heat humor) and *kapha* (phlegm or water and earth), regulate the body functions. Upsetting of the harmonious functioning of these five elements in the human body produces sickness, as manifested and diagnosable by various signs and symptoms. Each *dravya* (drug) has its special *rasas* (tastes). The aim is to rectify the excesses or deficiencies in the actions of these elements.

The central doctrine in Chinese medicine is that of the complementary *yin* and *yang* and again, the five elements as represented by metal, wood, water, fire and earth that function in harmony in health. Treatment of diseases or relief of symptoms include acupuncture, moxibustion, suction cupping and drugs from botanical, animal and mineral sources with different properties -t (4vt) and tastes (*). The treatment

philosophy is to rid the patients of external evils and rectify the excess or deficit in the elements.

Thus, different traditional medicines have their similarities: (1) Comparison between and integration of the microcosm and the macrocosm as in ancient Mesopotamia, Hindu and Chinese medicine. (2) The imbalance of cosmic elements within living organisms is the root cause of diseases and symptoms. (3) Use of natural substances to activate the inner spirit or restore the healthy balance of the elements.

The rise of Western medicine, with evidences based on physiological and biochemical observations, is less than one hundred years old. The idea of homeostasis as described by Claude Bernard in 1879 in his 'le milieu interieur' or by Cannon W.B. in 1929, emphasizes the importance of environmental stability and balance of elements within the body. Thus, imbalances in pH, electrolytes, actions of hormones, neurotransmitters, nutrition and cellular metabolism are at the root of diseases or discomfort in the body. The application of physical, psychological, surgical therapies and drug treatments is consistent with the principle of ridding the evils or restoring the harmony of elements as hypothesized in traditional Chinese medicine and other ancient medicines; only the mode of delivery has been changed. Today, the use of drugs has been refined to include purified natural products or synthetic organic compounds and surgeries are performed under aseptic conditions.

Modern science is skewed towards reductionism—breaking down organisms to the cellular, subcellular and molecular levels. Likewise, and in contrast to the holistic approach of ancient medicines, Western medicine focuses on the diseased parts and often suppression of symptoms, opting for immediate results rather than long-term fortification of the whole body. Although results are seen more immediately, the effects on long-term health, as well as those on certain diseases, particularly those of chronic nature, are less verifiable. Thus, 'alternative medicines', including homeopathy, naturopathy, mind-body interventions, diet/nutrition therapy, bioelectromagnetic therapy and herbal medicines etc. have all found their niches. Of these, oriental medicine holds the longest medical records...

The Responsibility and Role of Oriental Medicine in the Health of Human Beings in the Future

Che, Hwan Young, Former President of the Association of Korean Oriental Medicine and Vice Chairman of ISOM, Korea.

Introduction

Medicine has made remarkable developments in biotechnology, genetic engineering and quantum medicine—keeping pace with the scientific advancements in the fields of microphysics, super-microphysics and quantum physics. At this juncture, it would be meaningful to reflect on the essence of oriental medicine and its ultimate goal—contribution to hap-

piness and peace through promotion of health in addition to the advancement of medical science itself.

Trends in Bioindustry and Medical Science in Post-Genomic Era

With the human genome mapped, bioindustry—the promising knowledge-intensive industry in the 21st century—is facing a new phase. Industries utilizing genetic information of humans and other organisms have emerged as leading industries and various technological fields such as bioinformatics, functional genomics and micro array (DNA or protein chips) have rapidly come into the limelight. The healthcare industry, which has a 60 percent market share in bioindustry, attracts sizeable investment for R&D with various goals because it can benefit from genetic information and genetic recombinant technologies. However, there are some concerns that rapid development of bioindustry might create some unpredictable problems—medico-scientific or social.

Methodologies of Oriental Medicine and Post-Genomic Era

Western medicine has been systematized and methodologically developed into modern medicine based on the general principles of physiology and pathology. In case of Western medicine, the research subjects are numerous and unspecified individuals. Oriental medicine, on the other hand, has treaded the other path in terms of methodology; it gives importance to individual physiology and pathology that concerns the characteristics of each individual. Modern Western medicine has developed under the influence of reductionist thinking that analyzes the human body into smaller levels such as organ, tissue, cell and gene. Gene therapy is recognized as the most developed treatment in modern medicine. However, we should note that the treatments offered by Western medicine, including gene therapy and research of gene, are baser in their methodologies that primarily involve destroying or removing antigens or antigenic genes. The completion of gene base sequence information has reached a critical stage. However, considering that many geneticists do not recognize the function of a gene and the Genetic Predetermination theory, the Genome Project is not the only solution for the treatment of diseases.

Return to Oriental Medicine

Traditional oriental medicine visualizes the human body as a biological form, a whole concept in which physical phenomena are unified with mental phenomena. It is a human-oriented medicinal system dealing mainly with life phenomena. On the other hand, Western medicine, even after the completion of the gene project, tends to lean towards mechanical philosophy treating a sick organ as a broken part of a machine and concentrating its treatment on the part itself, which excludes the mind and the spirit. In terms of herbal medicine, however, oriental medicine visualizes man as a

whole and stresses the theory of function of elements in pursuit of harmony with the human body. Therefore, development of medicines customized to individual gene type, though uncertain at the moment, may be an approach that resembles the philosophy of oriental medicine. Additionally, the theory of biophotons in the recently developed field of quantum medicine may provide an opportunity to explain, in modern scientific terms, the theory of *Qi* circulation of traditional oriental medicine.

Re-establishment of Methodology in Oriental Medicine Research

Oriental medicine can be adapted into a highly developed system of medicine in the 21st century by studying genome and quantum medicine on its philosophical ground. Completion of the Genome Project, R&D on the function of a gene and the applicability of oriental medicine approach in addition to an individual-centered methodology may mark a turning point in making many medical discoveries and developing oriental medicine without compromising on its theoretical value.

Conclusion: Responsibility and Role of Oriental Medicine in the Health of Human Beings in the Post-Genomic Era

Although gene therapy is feasible in the post-genomic era, there exist some concerns about its contrary results such as appearance of new diseases, due to mutations during gene recombination that threaten human health, and excessive commercialism. It can be inferred that such results are due to over emphasis on the methodology centered on materials. However, we must keep in mind that the study and application of the Genome Project and quantum medicine should be carried out on the groundwork philosophy of oriental medicine. Lastly, I would like to emphasize that research and application of the latest scientific advances under the major premise of oriental medicine is the mission and role expected of all the active scholars in this field.

Clinical Application and Research in Traditional Herbal Medicine in Japan

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Introduction and History of Japanese Kampo Medicine

Entering the 21st century, Kampo medicine of Japan is expanding its role gradually as a system of medicine united with Western medicine. The importance of evidence-based medicine (EBM) even in Kampo medicine has been recognized in recent years. I will explain the trends in the clinical study of Kampo in Japan through the recent history of about 140 years. Kampo medicine declined due to changes in the medical system during the Meiji era. However, after Dr Keijuro Wada asked *kainotettui* in Meiji 43 (1910) at the world, national support was gradually obtained. During the Showa era (1926–1989), significant developments in Kampo medicine were accomplished.

Kampo Medicine and Health Insurance

In Japan, the universal national health insurance system was initiated in Showa 36 (1961), which could be availed by all nationals. Herbal medicine was already set as the object of health insurance 1960 for pharmacy of Kampo drugs, and citizens could avail insurance benefits for undergoing Kampo treatment. This provided an opportunity that led to the launch of several Kampo extract granules for ethical use in the market in Showa 51 (1976). Thus, the Kampo medicine expanded rapidly and spread across the country.

EBM (evidence-based medicine) of Kampo Treatment and Introduction to Clinical Studies and Conclusion

Increase in medical expenses poses a serious problem in Japan as well as other countries. In order to utilize Kampo drugs through the health insurance system, the administration authorities and the medical community in Japan realized that it is necessary to prove that Kampo treatment is a useful medical technology, i.e., to establish EBM. Japan Society for Oriental Medicine released its 2002 interim report, The EBM in Kampo Treatment, in September, Heisei 14 (2003). The high clinical report of evaluation of 73 it is hung up over it. In the 21st century, Japanese researches in the field of Kampo medicine will be expected to clarify the effects of Kampo drugs in comparison with Western drugs. Moreover, the utility of Kampo treatment in the medical economy should also be objectively evaluated. It should also be proved that Kampo medicine is an effective approach in treating the illnesses characteristic of an aging society. The Japan Society for Oriental Medicine is confident that Kampo medicine will continue to progress in the future.



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