

# THE FUTURE OF TRADITIONAL CHINESE MEDICINE IN THE 21<sup>ST</sup> CENTURY

By Prof Yu Ren Cun

**T**raditional Chinese Medicine (TCM) as we know it today is the culmination of several thousand years of experience and wisdom accrued through battling illnesses. It has contributed greatly to the prosperity and progress of Chinese civilisation.

In China, TCM underwent phenomenal development in the latter half of the 20<sup>th</sup> century. In the field of medicine, whether in theory or practice, the standard of TCM has been elevated as a result of recent developments and I believe that TCM now co-exists on an equal footing with Western medicine. Numerous TCM Universities in China have produced talented graduates who possess the basic foundations of modern medical knowledge as well as holistic TCM principles and practice. These graduates now form a sizeable pool of research talent that stands shoulder to shoulder with those who are western-trained. Every province in China has her own TCM college and research facility that undertakes research in TCM as well as research in metabolic pathways using modern Chinese medicine methods. Staff at TCM hospitals in every Chinese city and province, as well as TCM departments in every large western hospital treats patients.

In China, after the initial call to train western doctors in TCM in the 1960s, several thousand doctors were dually-trained in a 3-year course. These graduates performed clinical research using combined TCM and western techniques, becoming experts in their respective fields and contributing greatly to progress in two-pronged



medical research. Some Chinese medical universities actively involved in this type of research have achieved success.

Insights garnered from clinical experience in TCM are unique in their theory and principles of practice. TCM's approach to differential diagnosis fully espouses the spirit of individualised treatment. TCM's treatment concept emphasises the relationships between one part of body and the whole person, between treatment and detoxification and the relationship between immediate treatment and long-term ameliorating treatment. To this day, TCM treatment concepts and principles lie at the core of the combined TCM and Western clinical practice. These principles include balancing the various organ systems and functions, not merely treating the diseased part; stabilising the internal milieu to achieve health.

The combination of TCM and Western medicine has led to some good results in treating certain chronic

diseases such as diabetes, coronary artery disease, cancers, renal diseases (for example, glomerulonephritis and other renal diseases). Research has shown that combination therapy works better than either TCM or Western medicine alone. For example, in cancer research, it has been shown that TCM in combination with surgery, chemotherapy, radiotherapy and biological therapy can result in better outcomes for patients because the treatments are potentially complementary. After years of research, Chinese scientists have proven that combining appropriate TCM herbs minimises the side effects and adverse reactions that occur with chemotherapy and radiotherapy. In addition, TCM herbs also increase cellular immunity. In clinical and animal experiments, TCM herbs have been shown to enhance the effectiveness of existing chemotherapy and radiotherapy regimens. These experiments have shown that the TCM-Western combination leads to long term good results in cancer patients by reducing toxicity and increasing efficacy.

In pharmaceutical research, everyone knows that Artemisinin (Qinghaosu) treats malaria; Arsenic trioxide treats Acute Myeloid leukaemia and Indirubin (the active ingredient derived from *Pulverata Levis*) treats Chronic Myelocytic Leukaemia. Danshentong and tetramethylpyrazine (TMPZ, derived from *Chuanxiong* – *Ligusticum Wallichii* Franchat) treats cerebrovascular and cardiovascular diseases. All these above medications are derived from Chinese herbs.

Research into the mechanisms in which TCM is effective have shown that when used in compound prescriptions,

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the effects are multi-pronged and display effectiveness in more than one way. For example in cancer research, one type of Chinese herb not only has direct cell-kill effects on cancer cells, it also suppresses DNA synthesis, arrests the cancer cell cycle and prevents certain genes from combining together, thereby causing the cancer cells to die. Certain supportive medications (for example, Astragalus membranaceus (Fisch.) Bunge; Fructus Ligustri Lucidi) improve the immune system and other biological cofactors and therein lies the strength of TCM. In areas such as AIDS prevention and SARS treatment, TCM was used in combination with western medicine.

We are coming to the close of the 1<sup>st</sup> decade in the 21<sup>st</sup> century and TCM is projected to develop even further. Advancements in proteomics, genomics, molecular biology and stem cell research have enabled even

more research directions for Modern TCM. Well-conducted research into the mechanism of action of TCM will give it scientific credence.

Combining TCM and modern western medicine's use of differential diagnosis will lead to a more holistic understanding of the patient's disease as well as objectivity, and enable the doctor to understand the underlying pathology and reasons for loss of homeostasis. TCM is unique in tailoring treatment to the individual. Modern western medicine now leans in this direction as well. Current targeted therapy is more specific. For example ER/ PR (oestrogen receptor / progesterone receptor) positive breast cancers are amenable to treatment with endocrine therapy. Another example is that HER-2/neu positive breast cancers can be treated with Herceptin (Trastuzumab). Cancer cells

that express EGFR (epidermal growth factor receptor) or VEGF-R (vascular endothelial growth factor receptor) can also be treated with specific targeted therapy.

TCM will continue to develop with current 21<sup>st</sup> century medical advancements and the practice of medicine in China will continue to modernise. The combination of TCM with western medicine will contribute greatly to global medicine. SMA



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