

**International Conference of the Modernization of  
Chinese Medicine & Health Products**  
國際現代化中醫藥及健康產品會議

**The Inheritance and Innovation of Traditional Chinese Medicine**  
中醫藥的傳承與創新

**Event Report**

**Heavy-weighted Speakers Gathering at the Conference**

Dr Libby LEE Ha Yun, Under Secretary for Health, HKSAR and Prof Huang Luqi, Vice Commissioner, National Administration of Traditional Chinese Medicine were the Guests of Honour of the Conference. They both delivered welcome remarks at the ceremony.

The ICMCM 2023 was once again held in a hybrid format, featuring 18 speakers from the UK, Canada, Singapore, Japan, Korea, Vietnam, Taiwan, Mainland China and Hong Kong. Speakers shared their latest research findings on Chinese Medicine pre-clinical studies and discussed success cases in the product commercialization of Chinese Medicine.

**Session 1: Keynote Speech**

1. Prof Huang Luqi, Vice-Commissioner of the National Administration of Traditional Chinese Medicine, President of China Academy of Chinese Medical Sciences, Academician of Chinese Academy of Engineering (Mainland China)
2. Prof. LYU, Aiping, Chair Professor of Chinese Medicine; Vice-President (Research and Development), Hong Kong Baptist University (Hong Kong)
3. Prof. XU Hongxi, Principle Chair Professor, Shanghai University of Traditional Chinese Medicine (Mainland China)

**Session 2: From CM Pre-Clinical Studies to New CM Products**

4. Prof. Clara Bik San Lau, Associate Director of Institute of Chinese Medicine, The Chinese University of Hong Kong (Hong Kong)
5. Dr Liping Zhou, Research Assistant Professor, The Hong Kong Polytechnic University (Hong Kong)
6. Prof. Linda Zhong, Director of Biomedical Sciences and Chinese Medicine; Director of NTU Chinese Medicine Clinical Centre, Nanyang Technological University, Singapore (Singapore)
7. Dr. Shen Jiangang, Professor, School of Chinese Medicine, The University of Hong Kong (Hong Kong)

**Session 3: R&D on Chinese Medicines**

8. Dr. Yan-Fang XIAN, Assistant Professor, School of Chinese Medicine, The Chinese University of Hong Kong (Hong Kong)
9. Prof. Xuanbin WANG, Director, Renmin Hospital and Hubei Key Laboratory of Wudang Local Chinese Medicine Research, Hubei University of Medicine (Mainland China)

10. Prof. Ikuro ABE, Professor, The University of Tokyo (Japan)
11. Prof Xin Wang, Professor of Molecular Cardiology, The University of Manchester, UK (The United Kingdom)

#### **Session 4: Product Commercialization & Successful Cases Sharing**

12. Dr Hou Joon Hyuk, Director, Basic technology research Team, R&D center, Korean Ginseng Corp. (Korea)
13. Dr. Jung Chao, Associate Professor, China Medical University (Taiwan)
14. Mr. Lam Yu, Senior Vice President of LKK Health Products Group; Chief Executive Officer of Infinitus Global; Vice Chairman of Infinitus (China) (Mainland China)
15. Ms Vivien Chou, Director, Integrated Chinese Medicine Holdings Ltd. & Winsor Health Products Ltd. (Hong Kong)
16. Dr Roy Chan MD, Medical Director, East Medicine Limited (Canada)
17. Assoc. Prof. Trinh Thi Dieu Thuong, Dean & Director, Faculty of Traditional Medicine, University of Medicine and Pharmacy at Ho Chi Minh City, University Medical Center Ho Chi Minh City, Third Branch (Vietnam)
18. Prof. Tsim Wah Keung Karl, Chair Professor and Director, Center for Chinese Medicine, Hong Kong University of Science and Technology (Hong Kong)

#### **Engaging Hybrid Solutions for Chinese Medicine Professionals**

The Conference was conducted in a hybrid format, running simultaneously in physical and virtual formats, to offer greater convenience and flexibility to Chinese Medicine Practitioners and Healthcare Professionals who might not be able to attend the event physically for two whole days.

To facilitate knowledge exchanges and interactions between audience and speakers both online and in-person, online audience were encouraged to raise questions via Zoom, while a digital polling software, 'Pigeonhole', was used once again to collect onsite questions.

#### **Abstracts of Selected Presentations**

##### **Prof. LYU, Aiping, Chair Professor of Chinese Medicine; Vice-President (Research and Development), Hong Kong Baptist University (Hong Kong)**

In China, we have systematic western medicine, and more importantly we have unique, comprehensive Chinese medicine systems, and two medical systems integration creates another unique medical system, integrative medicine, which definitely takes an important role in China health care currently. From perspective of systems science, the two medical systems could create novel systems when they interacts fully with increasing information collected. In that sense, the integrative medicine would produce a novel medicine, the future medicine. The key element in medical science is classification: to classify the patients with information collected from 4 diagnostics in Chinese medicine, to classify the patients with the information collected from biomedical diagnostic in western medicine, and in the future medicine, how to classify the patients? Novel classification, at least, will be partially relying on omics data, and which may lead to big change in therapeutics. The novel therapeutics would be kinds of combination therapy, and how to maximize or synergize the combination? In the

combinations, how the interaction takes? What about the dynamics in the interactions. These 3 issues, classification, combination and dynamics, will be discussed.

**Prof. Clara Bik San Lau, Associate Director of Institute of Chinese Medicine, The Chinese University of Hong Kong (Hong Kong)**

Chinese herbal medicines (CHM) are widely consumed by cancer patients and well accepted as complementary and alternative treatment, especially in Chinese community worldwide. In the last two decades, our research group has made great attempt to illustrate the potential adjuvant values of CHM in conventional cancer management. This talk will cover the research development of two anti-cancer herbs: a) the therapeutic value of the herb *Patrinia villosa* which has been commonly used in colon cancer patients has been scientifically verified in preclinical studies, justifying its clinical use; b) a new therapeutic value has been discovered for the well-known medicinal plant *Andrographis paniculata* in esophageal cancer management. Details of our research findings will be presented.

**Dr Liping Zhou, Research Assistant Professor, The Hong Kong Polytechnic University (Hong Kong)**

In traditional Chinese medicine (TCMs), problems of menopause is believed to be associated with kidney deficiency. Kidney-tonifying TCMs have been commonly used for delay and intervention of aging-associated disorders in various forms, like formula (Danggui Buxue Tang, Erxian Decoction), herbal preparation (*Herba Epimedii*, *Rhizoma Drynariae*), functional food and bioactive compounds (Ginsenoside Rg1 and Icaritin). However, lack of scientific evidence hinders the clinical application and global acceptance of TCM usage. Our work systemically understand the beneficial actions of TCMs from the aspect of modern pharmaceutical research, trying to figure out their efficacies, to identify their bioactive ingredients, to assess their disease effects, to address the mechanism of their actions and to study the drug-herb interactions.

**Prof. Linda Zhong, Director of Biomedical Sciences and Chinese Medicine; Director of NTU Chinese Medicine Clinical Centre, Nanyang Technological University, Singapore (Singapore)**

Long COVID, also known as post-acute sequelae of SARS-CoV-2 infection (PASC), refers to a condition where individuals experience persistent symptoms and complications beyond the acute infection of COVID-19. This emerging health challenge has gained significant attention due to its impact on the quality of life and can last weeks, months, or years. While conventional medical approaches have focused on managing specific symptoms, Chinese medicine offers an alternative perspective and set of interventions that target the underlying imbalances within the body.

Chinese medicine views the body as an interconnected network of channels and organs. The treatment approach involves personalized herbal formulations, acupuncture, dietary adjustments, and lifestyle modifications. Recently published clinical studies have shown evidence regarding the potential use of Chinese medicine in alleviating symptoms associated with Long COVID, such as fatigue, dyspnea, cognitive impairment, sleep disturbances, and musculoskeletal pain.

The mechanisms underlying the effectiveness of Chinese medicine in Long COVID are multifaceted. Chinese herbal formulas, such as Qingfei Paidu Decoction and Lianhua Qingwen Capsules, have shown efficacy in reducing inflammation, modulating immune response, and

promoting respiratory recovery. Acupuncture, a key component of Chinese medicine, has been shown to modulate the autonomic nervous system, enhance microcirculation, and regulate immune function, which can aid in the recovery from Long COVID.

While the clinical evidence and mechanisms supporting the use of Chinese medicine in Long COVID are encouraging, further research is warranted to validate these findings and optimize treatment strategies. Large-scale randomized controlled trials, incorporating standardized diagnostic criteria and outcome measures, are needed to establish the efficacy and safety of Chinese medicine interventions. In addition, studies investigating the long-term effects and cost-effectiveness of Chinese medicine in Long COVID management are crucial for comprehensive evaluation and integration into mainstream healthcare.

In conclusion, Chinese Medicine could offer a promising therapeutic approach for the management of Long COVID. The clinical evidence highlights its potential in alleviating symptoms, improving quality of life, and reducing complications associated with Long COVID. However, further research is required to validate these findings and facilitate the integration of Chinese medicine into mainstream medical practices for Long COVID management.

**Dr. Shen Jiangang, Professor, School of Chinese Medicine, The University of Hong Kong (Hong Kong)**

Tissue plasminogen activator (t-PA) is the only FDA approved drug for acute ischemic stroke, but its use is limited with the restrictive time window within 4.5 hours and the hemorrhagic transformation (HT). Free radicals, including reactive oxygen species (ROS) and reactive nitrogen species (RNS), play important roles in thrombolysis-mediated cerebral ischemia-reperfusion injury. Peroxynitrite is a representative RNS with higher cytotoxic effects. Peroxynitrite could increase blood brain barrier (BBB) disruption and aggravate ischemic brain damage. We have explored the molecular targets of RNS in mediating the BBB disruption and brain damage in experimental rat models of cerebral ischemia-reperfusion injury. We found that RNS down-regulated caveolin-1 (Cav-1) in the ischemic brains. Importantly, the loss of Cav-1 activated nitric oxide synthase (NOS), amplified RNS production and activated matrix metalloproteinases (MMP), subsequently inducing the BBB disruption and aggravating cerebral ischemia-reperfusion injury. The feedback interaction of RNS/Cav-1/MMPs provides an amplifying mechanism for aggravating ischemic brain damage. Moreover, we found that 3-nitrotyrosine, the footprint marker of peroxynitrite, could be an important plasma biomarker for the BBB disruption and hemorrhagic transformation in ischemic stroke patients with thrombolytic treatment. Thus, RNS/Cav-1/MMPs signaling pathway could be an important therapeutic target for protecting the BBB integrity and preventing the hemorrhagic transformation in the ischemic stroke with delayed t-PA treatment. Subsequently, we tested the efficiency and safety of Angong Niuhuang Pill (AGNHP), a classic traditional Chinese medicine prescription for acute stroke and trauma brain injury, on reducing the BBB permeability and preventing the t-PA-induced hemorrhagic transformation. AGNHP revealed to scavenge RNS, inhibit MMPs activation and reduced the BBB damages and hemorrhagic transformation in ischemic stroke animal model with delayed t-PA thrombolytic treatment. Therefore, AGNHP could be a promising adjunct therapeutic strategy for preventing thrombolysis-mediated BBB disruption, preventing t-PA-induced hemorrhagic transformation and reducing the mortality rates against cerebral ischemia-reperfusion injury via targeting the RNS/Cav-1/MMP signaling pathway. Traditional Chinese Medicine could be an important source to reduce hemorrhagic transformation and improve outcome in ischemic stroke with t-PA treatment.

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**Prof. Xuanbin WANG, Director, Renmin Hospital and Hubei Key Laboratory of Wudang Local Chinese Medicine Research, Hubei University of Medicine (Mainland China)**

Flavonoids and saponins are important bioactive compounds that have attracted wide research interests. This review aims to summarise the state of the art of the pharmacology, toxicology and clinical efficacy of these compounds.

Keywords: flavonoids; saponins; pharmacology; clinical efficacy; toxicology; drug interaction.

**Prof. Ikuro ABE, Professor, The University of Tokyo (Japan)**

$\beta$ -NAD is a pivotal metabolite for all living organisms and functions as a diffusible electron acceptor and carrier in the catabolic arms of metabolism. Furthermore,  $\beta$ -NAD is involved in diverse epigenetic, immunological, and stress-associated processes, where it is known to be sacrificially utilized as an ADP-ribosyl donor for protein and DNA modifications, or the generation of cell-signaling molecules. Here, we report the function of  $\beta$ -NAD in secondary metabolite biosynthetic pathways, in which the nicotinamide dinucleotide framework is heavily decorated and serves as a building block for the assembly of a novel class of natural products. The gatekeeping enzyme of the discovered pathway (SbzP) hereby catalyzes a sophisticated, pyridoxal phosphate (PLP)-dependent (3+2)-annulation reaction between  $\beta$ -NAD and S-adenosylmethionine (SAM), generating a 6-azatetrahydroindane scaffold. Members of this novel family of  $\beta$ -NAD-tailoring enzymes are widely distributed in the bacterial kingdom and encoded in diverse biosynthetic gene clusters. The findings of this work set the stage for the discovery and exploitation of  $\beta$ -NAD-derived natural products.

**Prof Xin Wang, Professor of Molecular Cardiology, The University of Manchester, UK (The United Kingdom)**

Group I p21-activated kinases (Paks) are members of the serine/threonine protein kinase family. Paks are encoded by three genes (Pak1-3) and are involved in the regulation of various biological processes. Pak1 and Pak2 are key members, sharing 91% sequence identity in their kinase domains. Recent studies have shown that Pak1/2 protect the heart from various types of stress. Activated Pak1/2 participate in the maintenance of cellular homeostasis and metabolism, enhancing the adaptation and resilience of cardiomyocytes to stress. The protective roles of Paks against the occurrence of cardiovascular disease and the development of Pak-targeting therapeutic approaches, including natural product derivatives and small molecular compounds, will be presented in this talk.

**Dr Hou Joon Hyuk, Director, Basic technology research Team, R&D center, Korean Ginseng Corp. (Korea)**

We are exposed to various microorganisms and viruses, and our immune system protects the body from these pathogens. Traditional medicines have been used since ancient times to strengthen the immune system and protect our body from diseases. Recently, research is underway to find pharmacological mechanisms or active ingredients of medicines that have been traditionally used through various research methods.

Ginseng is a traditional medicine that is typically used to strengthen the immune system. Recent research has reported that red ginseng improves resistance to diseases and microbial

attacks by keeping the immune system durable. In particular, recently published studies on the effects of vaccines have highlighted that in addition to immune system enhancements red ginseng also contributes to the effectiveness of externally administered vaccines. This is due to the positive effect of ginseng on various cells related to human immunity.

However, our research confirms that ginseng has a wide range of effects not only on immune cells but also on the various cells and microbiomes that make up our bodies. For example, it helps skin cells proliferate, resists pathogenic bacteria invading through wounds, regulates the microbiome in the body, and inhibits the negative effects of harmful strains. It is worth mentioning that this effect of ginseng is not the result of an active ingredient, but the effect obtained by taking the extract in the traditional way has also been confirmed.

The effects of many traditional medicines, including ginseng, have been objectively identified, which is expected to be helpful for the treatment and prevention of many diseases that cannot be solved by existing synthetic medicines.

**Dr. Jung Chao, Associate Professor, China Medical University (Taiwan)**

Using ethnopharmacy approach, systematically explore the inheritance of traditional Chinese medicine knowledge in Taiwan, and select potential drugs for development. "Taiwan Indigo Naturalis (Qingdai) Research" currently transfers technology to a spin-off company of China Medical University, obtains a drug production license, and wins the National Innovation Award. It is an example of "inheritance research-innovative research and development".

Keywords: ethnopharmacy, Indigo Naturalis (Qingdai), field investigation, inheritance of traditional medical knowledge, industrial application

**Mr. Lam Yu, Senior Vice President of LKK Health Products Group; Chief Executive Officer of Infinitus Global; Vice Chairman of Infinitus (China) (Mainland China)**

How to promote the modernization and internationalization of traditional Chinese medicine (TCM) is a major issue in the inheritance and innovation of TCM. As an enterprise, it can play a unique role. Being a company committed to advocating the premium Chinese health regimen, and researching in the health regimen field for 31 years, Infinitus has been exploring and promoting the modernization and internationalization of TCM. This speech will share one of the most important inspirations of Infinitus in promoting the modernization and internationalization of TCM over the years: E+W → W (East + West → World), that is "Eastern Wisdom + Western Methodologies, and Connect to the World". Mainly include: Building on the health regimen and adhering to the positioning of Chinese herbal health products; facilitating the modernization of TCM by leveraging Eastern wisdom, Western methodologies, and technological advancement; upholding the quality concept of "100-1=0" and helping upgrade the entire industry chain of TCM; develop unique health regimen concepts and stay committed to promoting Chinese health culture; integrate resources among the industry, universities, research institutes, and the media to propel industry development.

**Ms Vivien Chou, Director, Integrated Chinese Medicine Holdings Ltd. & Winsor Health Products Ltd. (Hong Kong)**

To share the business stories behind Essence of Mushroom (Yunzhi) by Winsor Health Products and I'm-Yunity from lab prototypes to successful products with the audience. To analyze challenges faced by Chinese Medicine in aspects of commercialization, industrialization, standardization and internalization.

**Dr Roy Chan MD, Medical Director, East Medicine Limited (Canada)**

Auricularia auricula 黑木耳, an edible fungus has therapeutic benefit includes lowering cholesterol, blood sugar, platelets aggregation, without side effects.

Black Muer is a proprietary extract of Auricularia auricula polysaccharide distributed by Eastmedicine Ltd. Health Canada has licensed it with Natural Product Number (NPN 80000520).

Optum (www.optum.com) formerly known as Ingenix International, a division of United Healthcare (USA) conducted a multi-centre, randomized, double blind, placebo control, parallel group study following FDA guideline in 2001. Results confirmed efficacy in lowering total cholesterol, LDL & TC/HDL ratio ( $P < 0.0001$ ), and raising HDL ( $P = 0.002$ ) without side effect.

**Assoc. Prof. Trinh Thi Dieu Thuong, Dean & Director, Faculty of Traditional Medicine, University of Medicine and Pharmacy at Ho Chi Minh City, University Medical Center Ho Chi Minh City, Third Branch (Vietnam)**

During the peak of the COVID-19 pandemic in late 2021, both the world and Vietnam faced challenges in accessing treatment drugs and vaccines, particularly in low- and middle-income countries. At that time, herbal medicine formulations played a crucial role. To evaluate the efficacy of Shen Cao Gan Jiang Tang (SCGJT), an herbal formula consisting of Gān Cǎo, Gān Jiāng, and Rén Shēn, in treating non-severe COVID-19 patients, we conducted a multicenter, open-label, randomized controlled trial involving 300 patients. The findings of our study indicated that SCGJT improved overall symptoms, reduced the time for viral clearance and hospital discharge, and demonstrated safety.

**Prof. Tsim Wah Keung Karl, Chair Professor and Director, Center for Chinese Medicine, Hong Kong University of Science and Technology (Hong Kong)**

According to the forecast of economists, the pan-health industry will be the major industry worldwide in next decade. In developing the pan-health industry, Chinese medicine is one of the foci in China market. At present, the average market value of our national pan-health industry is around RMB 20 - 30 billion: the industrial parties are expecting hundred billion of RMB in coming 10 years. One of the common characteristics of these successful pan-health industrial parities are the application of natural products, especially the product development from traditional Chinese medicine (TCM) formulations; however, the industries in developing TCM products are facing a lot of challenges, including: (i) lacking of R & D units in supporting basic and applied research; (ii) having low value-added and insufficient quality control regulations; and (iii) lacking of market information on international pan-health industry and shortages of skillful technician. To tackle these problems, Center for Chinese Medicine and Shenzhen Research Institute of The Hong Kong University of Science and Technology have worked on two major areas: the mechanistic study on the formulation of TCM, as to develop a new generation of Chinese medicine, and the development of health products with the application of Chinese medicine.

**The 19th International Postgraduate Symposium on Chinese Medicine**

Entering its 19<sup>th</sup> edition, the captioned Symposium was held on the second day of ICMCM, gathering 10 postgraduate students from Hong Kong, Mainland China and Macau to share

their latest findings in Chinese Medicine. Their presentations were judged by professors from renowned institutions, such as, The Chinese University of Hong Kong, Hong Kong Baptist University, The University of Hong Kong, Nanyang Technological University, The Hong Kong Polytechnic University, The Hong Kong University of Science and Technology, and Shanghai University of Traditional Chinese Medicine.

### **Poster Session**

In addition to the main conference, a poster session was organised for the first time at ICMCM, displaying research findings in Traditional Chinese Medicine by researchers from global institutions. Located at the adjacent rooms of the conference, a total of 17 posters were featured and a total of 525 participants visited the poster session during the conference.

### **Conference Booklet**

To provide more details of the event and presentations to the audience, a supplementary conference booklet dedicated to ICMCM 2023 was compiled and distributed at the event both physically and digitally. With over 300 pages in total, the booklet includes abstracts of the presentations from the main conference, International Postgraduate Symposium, as well as the newly added poster sessions.

### **Well Recognised Event Approved by Attendees**

A post-event questionnaire was conducted with more than 300 participants responded. 93.5% respondents rated the ICMCM as above average to excellent and found it very helpful/ useful to their work.

For more information or any inquiries about the Conference, please contact [icmcm2023@hktdc.org](mailto:icmcm2023@hktdc.org) or (+852) 1830 668.

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