



Date: 24 November 2021 (Wednesday)
Time: 09:00am to 12:30pm (HKT GMT+8)
Format: In-person at INNO² & Online via ZOOM
Venue: INNO², 2/F, Building 17W, Hong Kong Science Park
Co- Organisers: Hong Kong Science and Technology Parks Corporation,
 Centre for Chinese Herbal Medicine Drug Development Limited,
 Hong Kong Baptist University (HKBU),
 School of Chinese Medicine, HKBU

Supporting Organisations:
 Tang Center for Herbal Medicine Research, University of Chicago,
 University of Macau

RUNDOWN

08:45 – 09:00 am	Online and On-site registration Starts
09:00 – 09:05 am	Welcoming Remarks by Representative of Hong Kong Science & Technology Parks Corporation
09:05 – 09:10 am	Opening Remarks by Prof. BIAN Zhaoxiang <i>Director, Centre for Chinese Herbal Medicine Drug Development Limited</i>
09:10 – 09:40 am	Topic: New drug development in the U.S. – Including early clinical study preparation (IND and phase 1 trial protocol) By Prof. YUAN Chun-Su <i>Cyrus Tang Professor, Department of Anesthesia and Critical Care Director, Tang Center for Herbal Medicine Research Pritzker School of Medicine, University of Chicago</i>
09:40 – 10:10am	Topic: Plants that Heal – Introduction to Herbal Medicines and Botanical Drugs By Dr. DOU Jinhui <i>Founder, Mustang Peak Health, USA</i>
10:10 – 10:40am	Topic: 中華醫藥傳承創新與國際拓展的探索 (Language: Putonghua) By Prof. WANG Yitao <i>Chair Professor of Pharmacology Director, State Key Laboratory of Quality Research in Chinese Medicine University of Macau</i>

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

10:40 – 11:10am	Topic: Chinese Herbal Medicine as Gut Microbiota-Targeted Therapeutics By Dr. LAM Yan Yan <i>Assistant Professor, Centre for Chinese Herbal Medicine Drug Development Limited</i>
11:10 – 11:40am	Topic: Chinese Herbal Medicine targeting on macrophage: A potential therapeutic for inflammatory disease By Dr. TAN Hor Yue <i>Assistant Professor, Centre for Chinese Herbal Medicine Drug Development Limited</i>
11:40am – 12:10pm	Topic: From Traditional Wisdom to Innovative Drugs By Prof. BIAN Zhaoxiang <i>Director, Centre for Chinese Herbal Medicine Drug Development Limited</i>
12:10 – 12:30 pm	Panel Discussion

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

ABSTRACTS & SPEAKER PROFILES

Topic: From Traditional Wisdom to Innovative Drugs

By Prof. BIAN Zhaoxiang

Director, Centre for Chinese Herbal Medicine Drug Development Limited

Abstract

Chinese Herbal Medicines have been used in China for over 2000 years. It has been playing an important role in the protection of health, prevention of diseases. The latest Chinese Pharmacopeia (Version 2020) has documented 2,711 Chinese Herbal Medicines which have been widely used in China to treat different diseases. The accumulated wisdom and well-documented literature of Chinese Herbal Medicines are the treasure for developing new remedies from botanical to chemical drugs. Artemisinin is a herbal compound from the Chinese Herbal Medicine *Artemisia annua*. Artemisinin-based combination therapies are now standard treatment worldwide for *P. Falciparum* malaria as well as malaria due to other species of plasmodium. The speaker will share his experience and challenge encountered when developing the herbal medicine-based new drugs, and the Centre's teaming of talents to work together for developing the best Chinese herbal drugs for the world.



Prof. Bian Zhaoxiang

Director
Centre for Chinese Herbal Medicine
Drug Development Limited

Speaker biography

Prof. Bian Zhaoxiang is the Director of Centre for Chinese Herbal Medicine Drug Development. The Centre is part of the Health@InnoHK Cluster funded by the Innovation and Technology Commission (ITC).

He is a leading expert in Chinese Medicine clinical studies, a respected scientist in the field of gut dysbiosis, and an ardent advocate for incorporating Chinese Medicine into the holistic healthcare system. His research focuses on the digestive diseases, especially colorectal cancer, irritable bowel syndrome (IBS), functional constipation (FC), inflammatory bowel disease (IBD) and related new drug discovery. In collaboration with the

Chinese University of Hong Kong (CUHK), Prof. Bian's research team has successfully developed a pharmaceutical drug (JCM16021 for Irritable Bowel Syndrome (IBS)) which is the first Traditional Chinese Medicine (TCM) drug in Hong Kong that has obtained Clinical Trial Certificates from China, and is the only one that is now in Phase II clinical trials.

Prof. Bian is keen on the design, implementation and reporting of clinical trials with Chinese Medicine. He saw the imperative need for conducting clinical trials with military precision. He initiated and is currently Director of the Hong Kong Chinese Medicine Clinical Study Centre, the only Research Centre focusing on Chinese Medicine clinical trials in Hong Kong. He also established the Chinese EQUATOR



Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Centre which is devoted to enhancing the quality and transparency of clinical research in Chinese Medicine.

Prof. Bian joined Hong Kong Baptist University in 2001. In addition to the above, he is currently the Associate Vice President (Chinese Medicine Development), Tsang Shiu Tim Endowed Professor in Chinese Medicine Clinical Studies, Director and Chair Professor, Clinical Division of the School of Chinese Medicine, Hong Kong Baptist University.

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Topic: New drug development in the U.S. – Including early clinical study preparation (IND and phase 1 trial protocol)

By Prof. YUAN Chun-Su

Professor, Department of Anesthesia and Critical Care, University of Chicago

Abstract

In this presentation, Prof. Yuan will discuss new drug development in the U.S. based on his own experience from the clinical development of methylnaltrexone (Relistor®) started at the University of Chicago. As we know, discovery of novel bioactive compounds is the initial step of drug development. Over half of the drugs developed in the past several decades are natural products, their derivatives, or their synthetic/semisynthetic analogues. During the development of a new drug with identified unmet medical needs, research is first conducted in animal models. Certain pharmacology and toxicology studies must be completed to assess the new compound and its potential effects in the body prior to human clinical trial. The primary goal of clinical trials is to establish objective evidence of safety and effectiveness of the drug being evaluated. In this talk, current status of botanical drug development in the U.S. will be briefly presented. Prof. Yuan will also discuss how to compare early clinical studies for novel bioactive compounds and botanical drugs, including Investigational New Drug (IND) application and Phase 1 trial protocol preparation.



Prof. Yuan Chun-Su

Cyrus Tang Professor
 Department of Anesthesia and Critical Care
 Director, Tang Center for Herbal Medicine Research
 Pritzker School of Medicine, University of Chicago

Speaker biography

Prof. Yuan Chun-Su is the Cyrus Tang Professor in the Department of Anesthesia & Critical Care, Pritzker School of Medicine, and Director of the Tang Center for Herbal Medicine Research, University of Chicago. Prof. Yuan went to the U.S. from Shanghai, China in 1980 to enter a Ph.D. program at the University of Arizona. In 1983, he passed the U.S. medical board exams for foreign physicians, and started his medical practice in the U.S. Since 1994, Prof. Yuan has been at the University of Chicago conducting clinical trials for new drug development, especially methylnaltrexone for opioid bowel dysfunction. Based on his group's study, the

University of Chicago licensed methylnaltrexone to pharmaceutical industry in 2001. This novel compound, its expanded indication and oral formulation were approved by the United States Food and Drug Administration (FDA) in 2008, 2014 and 2016, respectively. By 2020, this drug was approved for use in over 60 countries worldwide. Prof. Yuan's another major field of investigation is complementary and integrative medicine, especially natural product research. He has over 300 publications related to new drug development and botanical studies. In addition, Prof. Yuan is serving as the Editor-in-Chief of the *American Journal of Chinese Medicine*.

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Topic: Plants that Heal – Introduction to Herbal Medicines and Botanical Drugs By Dr. DOU Jinhui

Founder, Mustang Peak Health, USA

Abstract

Many of the oldest herbs, such as Ephedra, Licorice, Astragalus, Ginseng, and Rhubarb, are still widely used in classic formulas (e.g., decoctions, pills, powder), capsules and injectable formulations not only in China but other parts of the world.

Artemisinin from *Artemisia annua* and As₂O₃ from Arsenolite are two of the most important new chemical drugs from Chinese herbs for the treatment of malaria and acute promyelocytic leukemia (APL) respectively.

Herbal products could also be further studied as the United States Food and Drug Administration (FDA) regulated botanical drugs, with the drug product derived from either a single herb or multi-herb combinations. Currently, two botanical drugs, Veregen (from green tea originated from China for the treatment genital warts) and Mytesi (aka Fulyzaq from *Croton lechleri* sap, a herb from Peru, for the treatment of HIV/AIDS related diarrhea) were approved in 2006 and 2012, respectively. A few phase-3 trials have been completed with NDA/BLA and submitted to the FDA.

Herbal medicines have been used for symptom management for Covid-19 with “3 formulas and 3 approved drugs” in China, with positive results reported. Some of those products and other herbal medicines are currently studied in the United States under Investigational New Drugs (INDs). Artemisia extract was reportedly to be active against Covid-19 infections as well.

Chinese Herbal Medicines and other traditional herbal medicine products could be used in their original forms as sources of purified drugs, and could be further studied as new botanical drugs in China and other parts of the world.

Speaker biography

After receiving his BS (Pharmacy) and MS (Pharmacognosy) degrees, Dr. Dou Jinhui became a faculty member at Beijing University of Chinese Medicine and taught pharmacognosy classes for 4 years. He went for his PhD studies at the University of Mississippi, supervised by Dr. James McChesney, a distinguished professor of Pharmacognosy. After graduation, Dr. Dou conducted research on immune-modulating natural products at the University of Kansas as a post-doc associate. He later became a Natural Product Scientist at NaPro BioTherapeutics in Boulder, Colorado, and worked on process development for paclitaxel API manufacturing and NDA/ANDA filings.



Dr. Dou Jinhui

Founder
Mustang Peak Health, USA

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Dr. Dou joined the United States Food and Drug Administration (FDA) in 2002 as a pharmacologist in the Center for Drug Evaluation and Research (CDER). He reviewed anti-infective and anti-inflammatory chemical drugs and botanical drugs in almost all the review divisions. He was a CDER and Agency expert, pharmacologist and pharmacognosist. He received numerous awards from CDER, FDA, and U.S. Department of Health & Human Services (HHS) for his distinguished contributions to the development of new guidance, policies, regulations and his scientific reviews of new drugs and combination products. After more than 15 years working at the FDA, Dr. Dou joined the private sector in 2017 to support various clinical development programs of different classes of new drug and biologic products, including anti-infective, oncology, and HIV/AIDS related products. He is currently the Chief Scientific Officer for Jiangsu Tripod Preclinical Research Laboratories in Nanjing, China.

Dr. Dou is a member of American Society of Pharmacognosy (ASP). His publications on lupin alkaloids, green tea, quassinoids, and proanthocyanidins come from his research activities or new drug review experience.

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Topic: 中華醫藥傳承創新與國際拓展的探索

By Prof. WANG Yi-tao 王一濤教授

Chair Professor of Pharmacology

Director, State Key Laboratory of Quality Research in Chinese Medicine

University of Macau

澳門大學講座教授

中藥質量研究國家重點實驗室主任

摘要：

2002 年澳門大學中華醫藥研究院創建，培養澳門首批國際化高端中華醫藥人才；2010 年科技部批准中國第一個中醫藥領域國家重點實驗室落戶澳門；2020 年特區政府批准澳門首個研發轉化平台澳門中藥研發中心。

20 年以來聚焦制約中華醫藥現代化、產業化和國際化的關鍵科學問題和技術瓶頸——中藥質量的安全、有效、穩定、可控和保障等五個關鍵屬性，在人才培養、學科建設、科技研發、產業轉化和國際拓展等方面進行開創性探索並取得引人矚目進展，成為澳門特區教育科技的創新亮點。



Prof. Wang Yitao

Chair Professor of Pharmacology
Director, State Key Laboratory of
Quality Research in Chinese Medicine
University of Macau

講者簡介：

王一濤教授曾任成都中醫藥大學副校長、中國中醫科學院副院長兼中藥研究所所長；首個國家 973 中醫藥項目首席科學家。香港科技大學中藥研究學科主任、中華醫藥研究院創院院長。創建首個中醫藥國家重點實驗室和澳門中藥研發中心。全球頂級中醫藥 SCI 期刊 CHINESE MEDICINE(IF 5.5) 主編。

發表 SCI 論文 515 篇 (200 餘篇 IF>5)，被引 23148 次，h-Index 80，發明專利 23 項，主編專著 10 餘部。培養博碩士 120 名 (8 名全球 2% 頂級科學家)，全球高被引科學家、2% 全球頂級科學家。

榮獲國務院特殊津貼專家、國家科技二等獎、澳門教育功績勳章、澳門科技特別獎、省部級科技獎 10 餘項。

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Topic: Chinese Herbal Medicine as Gut Microbiota-Targeted Therapeutics

By Dr. LAM Yan Yan

Assistant Professor, Centre for Chinese Herbal Medicine Drug Development Limited

Abstract

It is now clear that gut microbial dysbiosis is integral to the pathophysiology of an array of human diseases. While we are starting to piece together what a healthy gut microbiota might look like, there have been limited progress in translating the microbiome research into clinical applications, particularly in how to effectively modulate the gut microbiota. Our research primarily focuses on positioning Chinese Herbal Medicine as gut microbiota-targeted therapeutics. There is now increasing evidence for Chinese Herbal Medicine and medicinal foods to benefit the gut microbiota. By elucidating the mechanisms by which botanical raw materials alter the gut microbiota structure and functions and identifying the bioactive compounds that mediate such effects, we see the potential for creating new Chinese herbal formulations that specifically target the gut microbial ecosystem. From a disease prevention and health maintenance perspective, Chinese medicinal foods could become a key component in microbiome nutrition that focus on maintaining a gut microbiota that best supports human health in the long-term.



Dr. Lam Yan Yan

Assistant Professor
 Centre for Chinese Herbal Medicine
 Drug Development Limited

Speaker biography

Dr. Lam Yan Yan is an Assistant Professor in the Centre for Chinese Herbal Medicine Drug Development of Hong Kong Baptist University. Her initial training was in nutritional biochemistry followed by professional qualification and practice in clinical dietetics in Australia. Pursuing a career in academic research, Dr. Lam completed her postgraduate training in Australia and the United States and secured her first faculty position at Rutgers University in New Jersey. Her broad research interest is to understand how diet impacts health, with the ultimate aim of developing evidence-based nutritional advice to improve metabolic wellbeing. Currently

Dr. Lam's research primarily focuses on gut microbiota-specific diagnostics and therapeutics. Since joining Hong Kong Baptist University in March 2021, she leads a program of work in elucidating the role of gut microbiota in gastrointestinal diseases and using Chinese Herbal Medicine and medicinal foods to create and maintain a healthy gut microbial ecosystem.

Thought-leadership Series:

Traditional Wisdom, Innovative Drugs

Topic: Chinese Herbal Medicine targeting on macrophage: A potential therapeutic for inflammatory disease

By Dr. TAN Hor Yue

Assistant Professor, Centre for Chinese Herbal Medicine Drug Development Limited

Abstract

Macrophages have a multi-faceted role in regulating inflammation; they do not only promote the elimination of pathogens and clearance of apoptotic cells but also further perpetuate tissue injury through persistent secretion of pro-inflammatory mediators. The heterogeneity of macrophage makes them a potentially therapeutic target for inflammatory disease. How the macrophage diversity can be targeted? How effective are current therapies in suppressing pro-inflammatory cytokine for inflammatory disease treatment? Our and other studies have postulated the potential use of Chinese Herbal Medicine (CHM) in modulating the immune populations phenotypes and functions. Will CHM become the emerging immuno-modulatory therapy for inflammatory disease? In this talk, Dr. Tan will review her and other studies on immunomodulatory effect of CHM particularly macrophages for inflammatory disease management.



Dr. Tan Hor Yue

Assistant Professor
Centre for Chinese Herbal Medicine
Drug Development Limited

Speaker biography

Dr. Tan Hor Yue, Hoey received her BSc degree in Biotechnology and MSc degree from the University of Tunku Rahman, Malaysia. She further completed her PhD degree in the School of Chinese Medicine, The University of Hong Kong, where she developed strong interest in research. After her PhD studies, she stayed at the same laboratory for her post-doctoral training. Currently, she is the Assistant Professor at the Centre for Chinese Herbal Medicine Drug Development, Hong Kong Baptist University. Her major research interest focuses on immune-targeted drug discovery from natural products as well as the cellular interactions and molecular mechanisms in the inflammatory microenvironment. Her

research works have been published in many high IF journals such as Hepatology, Cancer Letters, Pharmacological Research, Cell death and diseases, Molecular Cancer, and etc.