



Good Practice in Traditional Chinese Medicine Research Association 中医药规范研究学会



September-October 2023 Newsletter

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The highlights of the 11th Annual Meeting of The Good Practice in Traditional Chinese Medicine Research Association and AGM



Jess Kit Ieng Kuok

GP-TCM RA Newsletter Executive Editor

After enduring the challenges and limitations imposed by the COVID-19 pandemic, the 11th Annual Meeting of The Good Practice in Traditional Chinese Medicine Research Association was successfully held in Leiden, Netherlands on 18-20 September 2023. This year, our Annual Meeting was organised by the local host, Dr. Mei Wang (President-Elect) and Prof. Robert Verpoorte. As a general practice, the BoD members (coming from different parts of the world) took this opportunity to hold a face-to-face BoD meeting just the day (17 September) before our Annual Meeting. During the face-to-face BoD, 17 members participated, and several items have been discussed including the future development of GP-TCM RA. The 1.5-hour BoD meeting was followed by a dinner gathering.



Face-to-face BoD meeting in Leiden on 17 September 2023



GP-TCM RA BoD members (2023-2024) and IG Chairs & co-chairs.

The two-and-a-half-day Annual Meeting took place at the Fletcher Wellness-Hotel Leiden from 18-20 September. A total of 57 participants coming from different countries (Belgium, China (including Hong Kong SAR and Macau SAR), Germany, Netherlands, Norway, Poland, Singapore, Switzerland, Taiwan, United Kingdom) attended the conference, together with 18 poster presentations. The Annual Meeting invited a total of 4 keynote lectures given by Prof. Jürg Gertsch (University of Bern, Switzerland), Prof. Hongxi Xu (Shanghai University of Traditional Chinese Medicine, China), Prof. Tjalling Erkelens, (Bedrocan, The Netherlands) and our President Prof. Clara Lau (The Chinese University of Hong Kong, Hong Kong SAR, China). In addition, the 7 Interests Groups organised a total of 25 lectures, hot topics under Quality Control (chairperson: Prof. Rudolf Bauer & Prof. Monique Simmonds), Pharmacology & Toxicology (chairperson: Prof. Lie-Fen Shyur and Prof. Qihe Xu), Clinical Studies (chairperson: Prof. Lidan Zhong), Regulatory Aspects (chairperson: Dr. Mei Wang & Prof. Li-Ping Qu), Acupuncture-Moxibustion and Meridians (chairperson: Prof. Nicola Robinson & Prof. Jianping Liu), Publication (chairperson: Prof. Rob Verpoorte) and Good Clinical Practice Guidelines (chairperson: Prof. Chris Kam-Wa Chan) were being covered and extensively discussed throughout the two and a half days.



Group Photo with speakers and conference participants on the 11th Annual Meeting of The Good Practice in Traditional Chinese Medicine Research Association



Prof. Jürg Gert presented the first keynote lecture on “The challenge of pharmacodynamics in herbal drug research: proof of concept in pharmacological models”



Prof. Hongxi Xu gave a keynote lecture on “Phytochemical analysis, bioassays and the identification of drug lead compounds from medicinal plants”



Prof. Tjalling Erkelens, Bedrocan, presented keynote lecture on “Cultivation of Cannabis sativa L. and production of standardized cannabis flos as pharmaceutical raw material in a controlled environment”



Prof. Clara Bik-San Lau, gave a keynote lecture on “Modernization of traditional Chinese medicines - from a pharmacognosy perspective”



IG chairs and co-chair during different IG sessions. From left to right, Prof. Rudolf Bauer hosting the Quality Control IG, Prof. Lie-Fen Shyur at the Pharmacology & Toxicology IG session, Prof. Lidan Zhong hosting the Clinical Studies IG lecture, Dr. Mei Wang & Prof. Li-Ping Qu hosting the Regulatory Aspects IG session.



Acupuncture - Moxibustion and Meridians IG session chair, co-chairs and speakers during the panel discussion session. From left to right, Dr. Chris Kam-Wa Chan, Dr. Stephen Birch, Prof. Jianping Liu and Prof. Nicola Robinson



Publication IG panel discussion, from left to right Prof. Rob Verpoorte, Dr. Sander C. Hille and Dr. Harald J. van Mil,



Dr. William Cho gave a lecture during the Good Clinical Practice Guidelines IG session

Furthermore, the AGM was held in the afternoon on Day 2 (19 September). During the AGM, Prof. Clara Lau gave the President's report, she introduced the objectives and mission of GP-TCM RA and the latest membership statistic updates, as well as the GP-TCM RA Newsletters – editorial board (2023-2024). Prof. Simon Ming Yuen Lee then presented the Secretary-General's report and Dr. Tai-Ping Fan presented the Treasurer's report. Additionally, it was announced in the AGM that the 12th Annual meeting would be held in Macau, China possibly in the summer of 2024 (exact date to be confirmed) will be hosted by Prof. Simon Lee (Secretary-General).



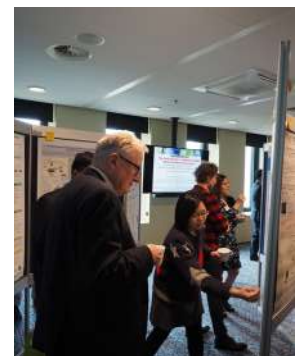
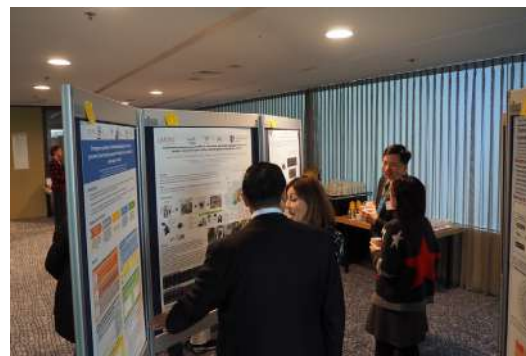
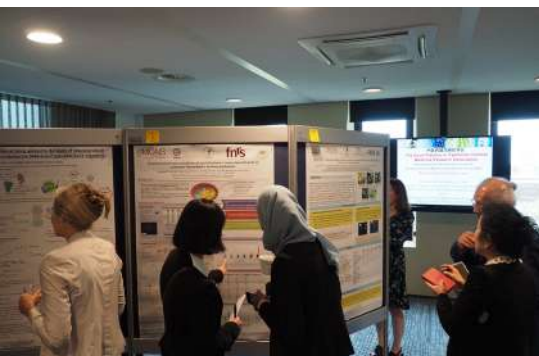
Left, Dr. Tai-Ping Fan gave the Treasurer's report at the AGM.



Right, Prof. Simon Ming Yuen Lee presented the Secretary-General's report at the AGM



Right, Prof. Clara Bik-San Lau, gave the President's report at the AGM



During the poster viewing session, poster presenters are eager to exchange their research outcomes with other conference participants and their peers



At the end of day two, the conference dinner took place at the Hortus botanicus Leiden, before the dinner Prof. Paul Keßler (Director of the Hortus botanicus Leiden) provided a guided tour around the Hortus botanicus Leiden for our dinner participants.



Prof. Paul Keßler, Director of the Hortus botanicus Leiden welcomed us with a brief history about the Hortus botanicus Leiden – the oldest botanic garden in The Netherlands.



Regardless of the rain, everyone joined the guided tour around the Hortus botanicus Leiden before dinner



Everyone enjoying the conference dinner.



On the last day of the conference (20 September), during the 2-minute flash poster presentations, 9 abstracts were selected to give 2-minute flash poster presentations. The conference was successfully completed with awards presentation with book awards given to the 9 selected abstracts and Poster Award (in honour of our late Treasurer, Professor Peter Hylands of King's College London, UK) Peter Hyland's award to Prof. Pierre Duez, Dr. Meng-Ting Chang and Dr. Grace G.L. Yue.

The meeting flyer (with the logos of sponsors)



Prof. Pierre Duez receiving the Peter Hyland's Poster award

Dr. Meng-Ting Chang receiving the Peter Hyland's Poster award with supervisor Prof. Lie-Fen Shyr



Dr. Grace G.L. Yue. receiving the Peter Hyland's Poster award



Finally, GP-TCM RA President, Prof. Clara Lau thanked this year's Annual Meeting Platinum sponsor: Purapharm (Hong Kong) and Yifang Pharmaceuticals, Bronze sponsor: Zhong Hua International Trading (Netherlands), Phoenix Medical (UK) and SU biomedicine and Book sponsor: Taylor and Francis at the closing ceremony to mark the end of the 11th Annual Meeting of The Good Practice in Traditional Chinese Medicine Research Association.



Sponsor representatives at the exhibition booth, left Yifang Pharmaceuticals (Platinum Sponsor) and right Taylor and Francis (Book Sponsor)



New members of GP-TCM RA (September-October 2023)

Ordinary Members

Diogo De Brito Calado	Tianjin University of TCM, China
William Chi-Shing Cho	Queen Elizabeth Hospital, Hong Kong SAR
Chunmei Jin	Johannes Gutenberg University of Mainz, Germany

Student Members

Ho Ting Shiu	University of Hong Kong, Hong Kong SAR
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Current Corporate Members

Dalian Fusheng Natural Medicine Development Co. Ltd., China	 大连富生天然药物开发有限公司 DALIAN FUSHENG NATURAL MEDICINE DEVELOPMENT CO., LTD
Hutchison Whampoa Guangzhou Baiyunshan Chinese Medicine Co. Ltd., China	 广州白云山和记黄埔中药有限公司
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PuraPharm International (H.K.) Ltd., Hong Kong SAR, China	 PuraPharm
Shanghai Hutchison Pharmaceuticals, China	 Shanghai Hutchison Pharmaceuticals 上海和黄药业

Current Institutional Members

Chengdu University of Traditional Chinese Medicine, China	
China Medical University, Taichung, Taiwan (Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources)	
Heilongjiang University of Chinese Medicine, China	
Hong Kong Baptist University, Hong Kong SAR, China (School of Chinese Medicine)	 香港浸會大學 HONG KONG BAPTIST UNIVERSITY
Institute of Chinese Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China	 中醫藥研究所 Institute of Chinese Medicine
Shaanxi University of Technology	
Zhejiang Chinese Medical University, China (School of Pharmaceutical Sciences)	
Zhengzhou University of Industrial Technology, China	

i TCM improves outcomes in heart failure with reduced ejection fraction (HFrEF), Medscape Medica

News > Medscape Medical News > Conference News > ESC 2023

Medscape

Traditional Chinese Medicine Improves Outcomes in HFrEF

Ted Bosworth
August 26, 2023

When added to guideline-directed therapies for heart failure with reduced ejection fraction (HFrEF), a traditional Chinese medicine called qiliqiangxin reduced the composite endpoint of cardiovascular death and heart failure hospitalization by more than 20%, results of a large placebo-controlled trial show.

"The risk reductions in both cardiovascular death and heart failure hospitalization were substantial, clinically important, and consistent across all subgroups," reported Xinli Li, MD, PhD, First Affiliated Hospital, Nanjing Medical University, China.

Qiliqiangxin, a commonly used therapy in China for cardiovascular disease, is not a single chemical entity but a treatment composed of 11 plant-based substances that together are associated with diuretic effects, vasodilation, and "cardiotonic" activity, Li said. He also cited studies showing an upregulation effect on peroxisome proliferator-activated receptor γ peroxisome proliferator-activated receptor coactivator 1- α .

The results were presented August 26 at the European Society of Cardiology (ESC) 2023 Congress.

News and photo adapted from link below: <https://www.medscape.com/viewarticle/995876?form=fpf>

ii A blueprint for fostering research and innovation

DISCOVER HKBU

A blueprint for fostering research and innovation

28 Sep 2023



Professor Lyu Aiping, the newly appointed Vice-President (Research and Development) and Dean of the Graduate School at HKBU, outlines his goals for fostering transdisciplinary research collaborations and consolidating the University's position as a catalyst for innovation.

News and photo adapted from link below:

<https://www.hkbu.edu.hk/en/whats-new/discover-hkbu/2023/sep-2023/a-blueprint-for-fostering-research-and-innovation.html>



Three key transdisciplinary research areas @HKBU:

1. Combining Chinese medicine with modern medicine and systems biology to open new pathways for exploration and innovation in future medical development;
2. Combining creative arts with artificial intelligence and data science to provide new impetus for artistic creation and development;
3. Combining the humanities and social sciences with contemporary big data analysis technology to create new models for intelligent social development.

Having learnt about Prof Lyu's vision from some other sources, but this concise report shows clearly how the GP-TCM RA's 3I's principles, of which Prof Lyu is a co-proposer, can be nicely applied to catalyse innovation: integrity, integration and innovation: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3689083/>

doi: 10.1186/1472-6882-13-132



iii News at a glance: China's S&T clusters, abundant fairy circles, and Arecibo's next chapter

Science

News at a glance: China's S&T clusters, abundant fairy circles, and Arecibo's next chapter

The latest in science and policy

28 Sep 2023:00 PM ET By Science News Staff

INNOVATION

China leads in number of S&T clusters



A version of this story appeared in *Science*, Vol 381, Issue 6665.

In another sign of China's growing research clout, the country now leads in a top 100 ranking of metropolitan areas based on their science and technology productivity. The annual Global Innovation Index, curated by the World Intellectual Property Organization, ranks these S&T clusters based on numbers of patent applications and scientific papers produced by their inventors and scientists. In 2022, China's 24 clusters in the top 100 beat the 21 from the United States, the second most. "Vibrant local clusters are critical hubs of national competitiveness," and the new ranking suggests the United States has been slipping, says Mark Muro, a regional innovation specialist at the Brookings Institution. The ranking's top cluster is the Tokyo-Yokohama region, followed by Shenzhen-Hong Kong-Guangzhou, Seoul, Beijing, Shanghai-Suzhou, and San Jose-San Francisco. The clusters in Cambridge, England, and San Jose-San Francisco have the most intensive science and technology activity, a measure that accounts for the region's population.



News and photo adapted from link below:

<https://www.science.org/content/article/news-glance-china-s-s-t-clusters-abundant-fairy-circles-and-arecibo-s-next-chapter?utm>

iv Botanists fight removal of plant specimens from one of the world's most spectacular gardens

Science

Botanists fight removal of plant specimens from one of the world's most spectacular gardens

Transfer of 7 million dried samples to distant site will hamper research, scientists say

11 Oct 2023:00 PM ET By Erik Stokstad

The herbarium at Royal Botanic Gardens, Kew may be the largest and most significant plant collection in the world. It contains more than 7 million specimens dried and pressed on paper sheets; laid end to end, they would extend three times the length of the United Kingdom. The research at Kew, in southwest London, is equally impressive, says Barbara Thiers, who for many years directed the herbarium at the New York Botanical Garden. "What Kew does is immensely important and immensely influential."

A version of this story appeared in *Science*, Vol 382, Issue 6667.

News and photo adapted from link below:

<https://www.science.org/content/article/botanists-fight-removal-of-plant-specimens-from-one-of-worlds-most-spectacular-gardens>



v

The list of practical cooperation deliverables was released in The Third Belt and Road Forum for International Cooperation, with many deliverables related to traditional Chinese medicine

第三届“一带一路”国际合作高峰论坛务实合作项目清单发布, 多项与中医药相关

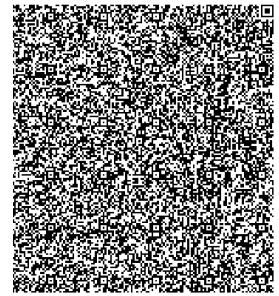
中国中医 2023-10-19 16:39 发表于北京

作者: 中国中医药报记者 王迪

近日, 第三届“一带一路”国际合作高峰论坛主席声明发布。据悉, 在高峰论坛期间形成了 458 项成果各国政府金融机构地方政府、企业商定一系列务实合作项目、双边合作协议等, 主席国就此汇总后形成了务实合作项目清单(以下简称《清单》), 共 369 项, 其中, 多项与中医药相关。

《清单》明确, 中国国家中医药管理局与新加坡卫生部签署中医药合作计划书(2023-2027); 在埃塞俄比亚等国举办“一带一路”中医药针灸风采行活动; 在泰国、柬埔寨建设中医药中心; 发布《共建“一带一路”中医药领域国际合作发展报告(2023)》等。

News and photo adapted from link below:



Details on List of Practical Cooperation Deliverables of the Third Belt and Road Forum for International Cooperation:

<http://www.beltandroadforum.org/english/n101/2023/1020/c127-1273.html>

vi

An important breakthrough in the treatment of acute myocardial infarction with traditional Chinese medicine! Professor Yang Yuejin's team recently published their research findings in The Journal of the American Medical Association (JAMA)

中医药治疗急性心梗的重要突破! JAMA 杂志刊发阜外医院杨跃进教授团队 CTS-AMI 研究

原创 文韬 中国循环杂志 2023-10-25 20:58 发表于北京

2023 年 10 月 24 日, 国际医学顶级杂志《美国医学会杂志(JAMA)》(IF 120.7) 在线和印刷版同步发表了阜外医院杨跃进教授团队的 CTS-AMI 研究结果。

该研究历时 5 年, 为随机、双盲、安慰剂对照的多中心临床研究。

研究发现, 对于急性 ST 段抬高的心肌梗死(STEMI) 患者, 在西医标准治疗(包括再灌注治疗和最佳药物治疗) 基础上, 通心络可显著改善临床预后, 30 天和 1 年时主要不良心脑血管事件发生风险显著降低, 主要是心源性死亡的减少。

JAMA | Original Investigation

Traditional Chinese Medicine Compound (Tongxinluo) and Clinical Outcomes of Patients With Acute Myocardial Infarction: The CTS-AMI Randomized Clinical Trial

Yuejin Yang, MD, PhD; Xiangdong Li, MD, PhD; Guihao Chen, MD, PhD; Ying Xian, MD, PhD; Haitao Zhang, MD, PhD; Yuan Wu, MD; Yanmin Yang, MD; Jianhua Wu, MD; Chunrong Wang, MD; Shenghu He, MD; Zhong Wang, MD; Yixin Wang, MD; Zhiqiang Wang, MD; Hui Liu, MD; Xiping Wang, MD; Minzhou Zhang, MD; Jun Zhang, MD, PhD; Jia Li, MD; Tao An, MD; Hao Guan, MD; Lin Li, MD; Meixia Shang, MD; Chen Yao, MD; Yaling Han, MD, PhD; Boi Zhang, MD; Runtin Gao, MD; Eric D. Peterson, MD, MPH; for the CTS-AMI Investigators

IMPORTANCE Tongxinluo, a traditional Chinese medicine compound, has shown promise in in vitro, animal, and small human studies for myocardial infarction, but has not been rigorously evaluated in large randomized clinical trials.

OBJECTIVE To investigate whether Tongxinluo could improve clinical outcomes in patients with ST-segment elevation myocardial infarction (STEMI).

DESIGN, SETTING, AND PARTICIPANTS Randomized, double-blind, placebo-controlled clinical

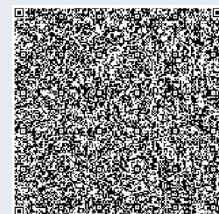
Visual Abstract

Editorial page 1529 and

Editor's Note page 1546

Supplemental content

News and photo adapted from link below:



i The Chinese Medicine and Human Health Conference 2023 was held in Royal Society of Medicine, London, on 7th and 8th October 2023. The meeting was jointly organised by Shanghai University of Traditional Chinese Medicine, a Founding Institution Member of the GP-TCM RA, and the UK Centre of Chinese Medicine founded by Mr George He, Managing Director of Pheonix Medical Ltd., who is a GP-TCM RA Life Member.


The Chinese Medicine & Human Health Conference 2023




The Chinese Medicine and Human Health Conference 2023

The Chinese Medicine and Human Health Conference 2023 took place on 7th and 8th October 2023 in London, serving as a collaborative effort between the UK Centre of Chinese Medicine and the Shanghai University of Traditional Chinese Medicine.

During the inaugural ceremony, the Executive Director of the UK Centre of Chinese Medicine (CCMUK), George He and Michael McIntyre, representing the CCMUK advisory board, delivered addresses to the assembled audience. George He emphasised the increasing significance of Chinese medicine’s evolution within the globalised landscape of recent decades. He also acknowledged the industry’s struggles in areas such as supply chain management, quality control, and professional advancement. In response to these challenges, CCMUK was founded in April 2023 as a non-profit organisation with a dedicated mission to serve as an unbiased platform for advancing Chinese medicine. Its enduring vision encompasses the enhancement of standards and credibility, the amplification of societal benefits, the consolidation of its presence, and the promotion of sustainable growth. CCMUK is firmly committed to elevating educational standards, refining clinical practices, ensuring product quality, and pursuing recognition within the broader legal framework of the UK and Europe.



From left to right: George He - Executive Director of CCMUK; Michael McIntyre - CCMUK Advisor

Following this, Professor Ji Guang, President of the Shanghai University of Traditional Chinese Medicine, provided an overview of the university's mission. He stressed the need for collaboration between Chinese and conventional medicine to address challenges such as ageing population and chronic diseases. He called for removing prejudices against traditional medicine and emphasised that clinical efficacy lies at the heart of traditional Chinese medicine's legacy. He advocated for scientific evidence-based research to elevate traditional Chinese medicine to new heights, offering more effective treatments. Given the shared global health challenges we face, he reiterated the importance of unity and cooperation.



The Chinese Medicine & Human Health Conference 2023



Professor Ji Guang - President of the Shanghai University of Traditional Chinese Medicine

The conference featured representatives from various organisations, including the Acupuncture Association of Chartered Physiotherapists (AACP), the Acupuncture Society (AS), the Association of Traditional Chinese Medicine and Acupuncture (ATCMA), the British Acupuncture Council (BACc), the British Medical Acupuncture Society (BMAS), The Federation of Traditional Chinese Medicine Practitioners (FTCMP), The Registered Chinese Herbal Medicine (RCHM), the GP-TCM Research Association (GP-TCM RA), and the Royal Botanic Gardens. Additionally, experts from academic institutions such as King's College London, Imperial College London, Cambridge University, University College London, Southampton University, and Lincoln College attended, along with around 120 professionals from Cyprus, Denmark, France, Ireland, Spain, and the UK. Furthermore, 296 professionals worldwide participated virtually, making this event one of the most popular in the UK's TCM community in recent years. It underscored the industry's recognition and support for CCMUK's work and highlighted the common goal of advancing and developing the Chinese medicine field.

Representatives from organisations:



From left to right: Diana Lacraru (AACP), Dean James (AS), Hui-Jun Shen (ATCMA)



From left to right: Jennifer Norton (BACc), Dr Federico Campos (BMAS), Zan-Yu Chen (FTCMP)



The Chinese Medicine & Human Health Conference 2023



From left to right: Martin John (RCHM), Dr Tai-Ping Fan (GP-TCM RA), Dr Rui Fang (Royal Botanic Gardens)

Following the opening ceremony, CCMUK advisors and experts from the Shanghai University of Traditional Chinese Medicine delivered keynote presentations showcasing cutting-edge research and clinical findings in Chinese medicine. These presentations covered a wide range of topics, including traditional and innovative perspectives, and received enthusiastic applause from attendees.



From left to right: Prof. Ji Guang (SHUTCM), Dr Merlin Willcox, Dr Xiao-Yang Hu, Dr Qi-He Xu (all CCMUK Advisors)



From left to right: Charles Buck (CCMUK Advisor), Prof. Zhang Lei (SHUTCM), Zan-Yu Chen (CCMUK Advisor)



From left to right: Prof Chen Yue-Lai (SHUTCM), Amanda Shayle (CCMUK Advisor), Prof Shen Xue-Yong (SHUTCM)

On day two, masterclasses were conducted by experts such as Prof Chen Yue-lai, Dean of Longhua Hospital affiliated with Shanghai University of Traditional Chinese Medicine, Prof Xu Shi-fen, Director of the Acupuncture Department of the Municipal Hospital of Traditional Chinese Medicine affiliated with Shanghai University of Traditional Chinese Medicine, Prof Song Yu, Director of the Dermatology Department of Longhua Hospital Affiliated with Shanghai University of Traditional Chinese Medicine, and Prof Zhang Qin-hua, Director of the Obstetrics and Gynaecology Department and the Reproductive Department of Shuguang Hospital affiliated



The Chinese Medicine & Human Health Conference 2023



with Shanghai University of Traditional Chinese Medicine. These workshops focused on syndrome differentiation, treatment, and clinical experience related to common diseases in European TCM clinics, including urinary incontinence, allergic rhinitis, emotional conditions, skin disorders, and assisted reproduction. Attendees praised these masterclasses for their in-depth analysis of pathological causes and comprehensive diagnosis and treatment plans, benefiting greatly from the expert insights.



Day 2 of the masterclasses conducted by Prof Chen Yue-Lai, Prof Song Yu, Prof Xu Shu-Fen, and Prof Zhang Qin-Hua (from SHUTCM).

Happy delegates enjoyed the CCMUK conference, observing talks and meeting other delegates.





i

Researchers and regulators plan for a future without lab animals

nature medicine

News Feature | Published: 01 June 2023

Researchers and regulators plan for a future without lab animals

Nature Medicine 29, pages 2151–2154 (2023)

Sofia Moutinho

The US Food and Drug Administration has reduced requirements for preclinical animal testing, leading to a surge of interest in organoids, tissue chips and in silico testing.

<https://www.nature.com/articles/s41591-023-02362-z>

ii

Astragaloside IV derivative HHQ16 ameliorates infarction-induced hypertrophy and heart failure through degradation of lncRNA4012/9456

Journal: *Signal Transduction and Targeted Therapy*

Detail: <https://doi.org/10.1038/s41392-023-01660-9>

Signal Transduction and Targeted Therapy

www.nature.com/sigtrans

ARTICLE OPEN

Astragaloside IV derivative HHQ16 ameliorates infarction-induced hypertrophy and heart failure through degradation of lncRNA4012/9456

Jingling Wan¹, Zhen Zhang¹, Chenhan Wu¹, Saisai Tian¹, Yibei Yang¹, Ge Jin¹, Qingyan Sun², Pin Wang³, Xin Luan⁴, Yili Yang⁵, Xuelin Zhan⁶, Lingyu Linda Ye⁷, Dayue Daren Duan^{2,4,5}, Xia Liu^{1,8} and Weidong Zhang^{1,8*}

Reversing ventricular remodeling represents a promising treatment for the post-myocardial infarction (MI) heart failure (HF). Here, we report a novel small molecule HHQ16, an optimized derivative of astragaloside IV, which effectively reversed infarction-induced myocardial remodeling and improved cardiac function by directly acting on the cardiomyocyte to reverse hypertrophy. The effect of HHQ16 was associated with a strong inhibition of a newly discovered Egr2-affiliated transcript lnc9456 in the heart. While minimally expressed in normal mouse heart, lnc9456 was dramatically upregulated in the heart subjected to left anterior descending coronary artery ligation (LADx) and in cardiomyocytes subjected to hypertrophic stimulation. The critical role of lnc9456 in cardiomyocyte hypertrophy was confirmed by specific overexpression and knockout in vitro. A physical interaction between lnc9456 and G3BP2 increased NF- κ B nuclear translocation, triggering hypertrophy-related cascades. HHQ16 physically bound to lnc9456 with a high-affinity and induced its degradation. Cardiomyocyte-specific lnc9456 overexpression induced, but knockout prevented LADx-induced, cardiac hypertrophy and dysfunction. HHQ16 reversed the effect of lnc9456 overexpression while lost its protective role when lnc9456 was deleted, further confirming lnc9456 as the bona fide target of HHQ16. We further identified the human ortholog of lnc9456, also an Egr2-affiliated transcript, lnc4012. Similarly, lnc4012 was significantly upregulated in hypertrophied failing hearts of patients with dilated cardiomyopathy. HHQ16 also specifically bound to lnc4012 and caused its degradation and antagonized its hypertrophic effects. Targeted degradation of pathologically increased lnc4012/lnc9456 by small molecules might serve as a novel promising strategy to regress infarction-induced cardiac hypertrophy and HF.

Signal Transduction and Targeted Therapy (2023)8:414

<https://doi.org/10.1038/s41392-023-01660-9>

INTRODUCTION

Ventricular remodeling post-myocardial infarction (MI) is the most common cause of heart failure (HF). The loss of myocardium results in an abrupt increase in the loading that initiates a neurohormonal cascade and induces a unique pattern of cardiac remodeling characterized by the signal dilatation and remote non-infarcted cardiac hypertrophy. The remote hypertrophy parallels cardiac dysfunction during post-MI remodeling and is an independent risk factor for the development of HF.^{1–3} The restoration of myocyte size and chamber geometry to a more normal level is associated with an improvement of cardiac function, as well as many beneficial changes in molecular, metabolic, and extracellular matrix properties of the myocardium. This process is called remodeling reversibility, representing a promising treatment for the post-MI HF.⁴

In the past decades, numerous clinical studies have shown that the regression of reactive cardiac hypertrophy of adverse remodeling with existing pharmacological (ACE inhibitors,

β -blockers, calcium-channel blockers, ARBs, SGLT2 antagonists, etc.) or surgical therapies (aortic valve replacement, cardiac resynchronization therapy and left ventricular assist device therapy) is unequivocally linked to improved cardiac function and outcomes in both ischemic (post-MI) and non-ischemic HF populations.^{5–10} Patients without hypertrophy regression after HF therapies have a poor quality of life and increased mortality compared to those who have reverse remodeling.^{11–13} Experimental studies in infarction-induced cardiac remodeling and HF also showed consistent results,^{14–17} further supporting the benefits from hypertrophy inhibition in MI-induced HF. Therefore, targeting at hypertrophy regression may be a potential therapeutic strategy for ventricular remodeling and HF.

The infarction-induced cardiac hypertrophy is triggered mainly by the local or systemic neuroendocrine hormones such as angiotensin II (Ang II), endothelin 1 (ET-1) or catecholamine, which activates the membrane-bound receptors and stimulates multiple downstream

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These authors contributed equally: Jingling Wan, Zhen Zhang

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Detail:

<https://www.nature.com/articles/s41392-023-01660-9>

Astragali Radix is a commonly used traditional Chinese medicine in clinical practice to treat chronic heart failure. The main active ingredient of Astragali Radix has been confirmed to be astragaloside IV. Over the last decade, scientific evidence has shown that astragaloside IV significantly reversed the adverse remodeling in experimental chronic HF, with the direct target and effect obscure. Therefore, astragaloside IV might provide valuable candidate compounds for new drug development. In this report, the authors led by Prof Weidong Zhang, a member of the GP-TCM RA, optimized a novel small molecule derivative of astragaloside IV named HHQ16, which effectively reverses post-myocardial infarction remodeling and improves cardiac function via directly acting on the cardiomyocyte to produce anti-hypertrophic effect. They also discovered a new HHQ16-regulated Egr2-affiliated transcript lnc9456 and its human ortholog lnc4012 in the hypertrophied failing hearts of patients with dilated cardiomyopathy, and provided novel mechanistic insights into the roles of lnc4012/lnc9456 in the development of cardiac hypertrophy and heart failure. HHQ16 effectively reversed infarction-induced hypertrophy and heart failure by targeted degrading lnc4012/lnc9456 with high-affinity binding and antagonizing their effects on G3BP2/NF- κ B signaling. Targeted degradation of pathologically increased lnc4012/lnc9456 by small molecules might serve as a novel promising strategy to regress, possibly not merely myocardial infarction-induced cardiac hypertrophy and heart failure.



iii

The status of the human gene catalogue

nature medicine

News Feature | Published: 04 October 2023

The status of the human gene catalogue

Nature 622, 41–47 (2023)

DOI: <https://doi.org/10.1038/s41586-023-06490-x>

Paulo Amaral, Silvia Carbonell-Sala, Francisco M. De La Vega, Tiago Faial, Adam Frankish, Thomas Gingeras, Roderic Guigo, Jennifer L. Harrow, Artemis G. Hatzigeorgiou, Rory Johnson, Terence D. Murphy, Mihaela Pertea, Kim D. Pruitt, Shashikant Pujar, Hazuki Takahashi, Igor Ulitsky, Ales Varabyou, Christine A. Wells, Mark Yandell, Piero Carninci & Steven L. Salzberg

Abstract

Scientists have been trying to identify every gene in the human genome since the initial draft was published in 2001. In the years since, much progress has been made in identifying protein-coding genes, currently estimated to number fewer than 20,000, with an ever-expanding number of distinct protein-coding isoforms. Here we review the status of the human gene catalogue and the efforts to complete it in recent years. Beside the ongoing annotation of protein-coding genes, their isoforms and pseudogenes, the invention of high-throughput RNA sequencing and other technological breakthroughs have led to a rapid growth in the number of reported non-coding RNA genes. For most of these non-coding RNAs, the functional relevance is currently unclear; we look at recent advances that offer paths forward to identifying their functions and towards eventually completing the human gene catalogue. Finally, we examine the need for a universal annotation standard that includes all medically significant genes and maintains their relationships with different reference genomes for the use of the human gene catalogue in clinical settings.

Details: <https://www.nature.com/articles/s41586-023-06490-x>

iv

Traditional Chinese Medicine Meets Evidence-Based Medicine in the Acutely Infarcted Heart



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Editorial

October 24/31, 2023

Traditional Chinese Medicine Meets Evidence-Based Medicine in the Acutely Infarcted Heart

Richard G. Bach, MD¹

JAMA. 2023;330(16):1529-1530. doi:10.1001/jama.2023.20838

Over the past 40 years, outcomes for patients experiencing acute ST-segment elevation myocardial infarction (STEMI) have improved dramatically, fueled by therapeutic interventions proven effective and safe by rigorous clinical trials.¹ Those often landmark clinical trials arose from the transformational concept that treatment should be guided by the results of simple, adequately powered, placebo-controlled, randomized clinical trials that test the effects of single pharmaceutical-grade agents or devices for the outcomes of interest. And the advances they afforded to clinical practice arguably represent some of the most important achievements of modern evidence-based medicine. Despite those advances, patients with STEMI still have a high risk of morbidity and mortality, and no major advances in STEMI therapeutics have emerged in more than a decade.

Photo and text adapted from link below: <https://jamanetwork.com/journals/jama/article-abstract/2811037>



Traditional Chinese Medicine Compound (Tongxinluo) and Clinical Outcomes of Patients With Acute Myocardial Infarction



This Issue Views 2,781 Citations 0 Altmetric 165

Original Investigation

October 24/31, 2023

Traditional Chinese Medicine Compound (Tongxinluo) and Clinical Outcomes of Patients With Acute Myocardial Infarction

The CTS-AMI Randomized Clinical Trial

Yuejin Yang, MD, PhD¹; Xiangdong Li, MD, PhD¹; Guihao Chen, MD, PhD¹; et al

JAMA. 2023;330(16):1534-1545. doi:10.1001/jama.2023.19524

Abstract

Importance: Tongxinluo, a traditional Chinese medicine compound, has shown promise in in vitro, animal, and small human studies for myocardial infarction, but has not been rigorously evaluated in large randomized clinical trials.

Objective: To investigate whether Tongxinluo could improve clinical outcomes in patients with ST-segment elevation myocardial infarction (STEMI).

Design, setting, and participants: Randomized, double-blind, placebo-controlled clinical trial was conducted among patients with STEMI within 24 hours of symptom onset from 124 hospitals in China. Patients were enrolled from May 2019 to December 2020; the last date of follow-up was December 15, 2021.

Interventions: Patients were randomized 1:1 to receive either Tongxinluo or placebo orally for 12 months (a loading dose of 2.08 g after randomization, followed by the maintenance dose of 1.04 g, 3 times a day), in addition to STEMI guideline-directed treatments.

Main outcomes and measures: The primary end point was 30-day major adverse cardiac and cerebrovascular events (MACCEs), a composite of cardiac death, myocardial reinfarction, emergent coronary revascularization, and stroke. Follow-up for MACCEs occurred every 3 months to 1 year.

Results: Among 3797 patients who were randomized, 3777 (Tongxinluo: 1889 and placebo: 1888; mean age, 61 years; 76.9% male) were included in the primary analysis. Thirty-day MACCEs occurred in 64 patients (3.4%) in the Tongxinluo group vs 99 patients (5.2%) in the control group (relative risk [RR], 0.64 [95% CI, 0.47 to 0.88]; risk difference [RD], -1.8% [95% CI, -3.2% to -0.6%]). Individual components of 30-day MACCEs, including cardiac death (56 [3.0%] vs 80 [4.2%]; RR, 0.70 [95% CI, 0.50 to 0.99]; RD, -1.2% [95% CI, -2.5% to -0.1%]), were also significantly lower in the Tongxinluo group than the placebo group. By 1 year, the Tongxinluo group continued to have lower rates of MACCEs (100 [5.3%] vs 157 [8.3%]; HR, 0.64 [95% CI, 0.49 to 0.82]; RD, -3.0% [95% CI, -4.6% to -1.4%]) and cardiac death (85 [4.5%] vs 116 [6.1%]; HR, 0.73 [95% CI, 0.55 to 0.97]; RD, -1.6% [95% CI, -3.1% to -0.2%]). There were no significant differences in other secondary end points including 30-day stroke; major bleeding at 30 days and 1 year; 1-year all-cause mortality; and in-stent thrombosis (<24 hours; 1-30 days; 1-12 months). More adverse drug reactions occurred in the Tongxinluo group than the placebo group (40 [2.1%] vs 21 [1.1%]; P = .02), mainly driven by gastrointestinal symptoms.

Conclusions and relevance: In patients with STEMI, the Chinese patent medicine Tongxinluo, as an adjunctive therapy in addition to STEMI guideline-directed treatments, significantly improved both 30-day and 1-year clinical outcomes. Further research is needed to determine the mechanism of action of Tongxinluo in STEMI.

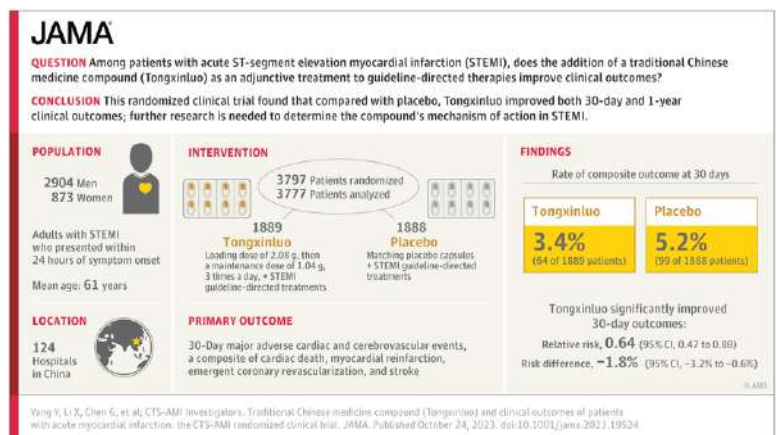


Photo and text adapted from link below: <https://jamanetwork.com/journals/jama/article-abstract/2811016>

A selection of recently published papers
in *Frontiers in Pharmacology*

 **Journal: *Frontiers in Pharmacology***

Yao-Shan of traditional Chinese medicine: an old story for metabolic health

Detail: <https://www.frontiersin.org/articles/10.3389/fphar.2023.1194026/full>

Efficacy and safety of traditional Chinese medicine adjuvant therapy for severe pneumonia: evidence mapping of the randomized controlled trials, systematic reviews, and meta-analyses

Detail: <https://www.frontiersin.org/articles/10.3389/fphar.2023.1227436/full>

Deciphering the toxicity-effect relationship and action patterns of traditional Chinese medicines from a smart data perspective: a comprehensive review

Detail: <https://www.frontiersin.org/articles/10.3389/fphar.2023.1278014/full>

**Traditional Chinese Medicine in the treatment of hemorrhoids
—a review of preparations used and their mechanism of action**

Detail: <https://www.frontiersin.org/articles/10.3389/fphar.2023.1270339/full>

i

Journal: *Frontiers in Pharmacology*

Topic	Women in Ethnopharmacology: 2023
Deadline	19 November 2023(Manuscript)
Details	https://www.frontiersin.org/research-topics/55735/women-in-ethnopharmacology-2023
Editor(s)	<p>Valentina Echeverria Moran Bay Pines VA Healthcare System, Veterans Health Administration, United States</p> <p>Marilena Gilca Carol Davila University of Medicine and Pharmacy, Bucharest, Romania</p> <p>Irene Villasenor University of the Philippines Diliman, Quezon City, Philippines</p> <p>Pollyanna Francielli de Oliveira Federal University of Alfenas, Alfenas, Brazil</p> <p>Shan-Yu Su China Medical University (Taiwan), Taichung, Taiwan</p> 

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Journal: *Frontiers in Pharmacology*

Topic	Traditional Processing Methods in Ethnopharmacology: Enhancing Therapeutic Effects and Unveiling Mechanisms of Action
Deadline	Manuscript Summary Submission Deadline 14 January 2024 Manuscript Submission Deadline 03 May 2024
Details	https://www.frontiersin.org/research-topics/60726/traditional-processing-methods-in-ethnopharmacology-enhancing-therapeutic-effects-and-unveiling-mechanisms-of-action
Editor(s)	<p>Lingyun Zhong Jiangxi University of Traditional Chinese Medicine, Nanchang, China</p> <p>Qianfeng Gong Jiangxi University of Traditional Chinese Medicine, Nanchang, China</p> <p>José Carlos Tavares Carvalho Universidade Federal do Amapá, Macapá, Brazil</p> <p>Bey Hing Goh Sunway Biofunctional Molecules Discovery Centre (SBDMC), School of Medical and Life Sciences, Sunway University, Bandar Sunway, Malaysia</p>

Topic	Insights in Ethnopharmacology: 2023
Deadline	06 February 2024(Manuscript)
Details	https://www.frontiersin.org/research-topics/59100/insights-in-ethnopharmacology-2023
Editor(s)	<p>Javier Echeverria University of Santiago, Santiago, Chile</p> <p>Michael Heinrich School of Pharmacy, Faculty of Life Sciences, University College London, London, United Kingdom Chinese Medicine Research and Development Center, China Medical University Hospital, Taichung, Taiwan</p> <p>Cheorl-Ho Kim Department of Biological Sciences, College of Science, Sungkyunkwan University, Suwon, Republic of Korea Samsung Advanced Institute for Health Sciences & Technology, Sungkyunkwan University, Jongno-gu, Republic of Korea</p> <p>Hung-Rong Yen China Medical University (Taiwan) & China Medical University Hospital, Taichung, Taiwan</p> <p>Aiping Lyu Hong Kong Baptist University, Hong Kong, SAR China</p>





iv

Journal: *Frontiers in Pharmacology* 

Topic	Traditional Medicines and Natural Products for Gut-X Axis: Pharmacology, Toxicology and Microbiology in the Context of Drug Discovery and Herbal Medicine Use - Volume II
Deadline	Manuscript Summary Submission Deadline 14 November 2023 Manuscript Submission Deadline 14 March 2024
Details	https://www.frontiersin.org/research-topics/59578/traditional-medicines-and-natural-products-for-gut-x-axis-pharmacology-toxicology-and-microbiology-in-the-context-of-drug-discovery-and-herbal-medicine-use---volume-ii
 Editor(s)	<p>Yi Wu Nanjing Agricultural University, Nanjing, China</p> <p>Na Sun University of Houston, Houston, United States</p> <p>Xiaoxiao Yang Hefei University of Technology, Hefei, China</p> 

v

Journal: *Frontiers in Pharmacology* 


Topic	Reviews in Ethnopharmacology: 2023
Deadline	21 January 2024(Manuscript)
Details	https://www.frontiersin.org/research-topics/57987/reviews-in-ethnopharmacology-2023
 Editor(s)	<p>Irina Ielciu University of Medicine and Pharmacy Iuliu Hatieganu, Cluj-Napoca, Romania</p> <p>Rajeev K. Singla West China Hospital, Sichuan University, Chengdu, China</p> <p>Hanganu Daniela University of Medicine and Pharmacy Iuliu Hatieganu, Cluj-Napoca, Romania</p> <p>Michel Frederich University of Liège, Liège, Belgium</p>



澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU

Full/Associate/Assistant Professor in Chinese Medicine,
Institute of Chinese Medical Sciences. University of Macau, China

i

 Details: https://career.admo.um.edu.mo/icms_cm_faa_07_2022/



香港中文大學
The Chinese University of Hong Kong


Research Assistant(s), Institute of Chinese Medicine,
The Chinese University of Hong Kong

ii

 Details: https://cuhk.taleo.net/careersection/cu_career_non_teach/jobdetail.ftl?job=210002PD&tz=GMT%2B08%3A00&tzname=Asia%2FMacau

Postdoctoral Fellow(s), Institute of Chinese Medicine,
The Chinese University of Hong Kong

iii


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香港浸會大學
HONG KONG BAPTIST UNIVERSITY

Post-Doctoral Research Fellow,
Centre for Chinese Herbal Medicine Drug Development,
School of Chinese Medicine, Hong Kong Baptist University

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 Details: https://hro.hkbu.edu.hk/index.php?page_id=6&job_id=6742&f=job_details



Student's Corner

Postgraduate Opportunities

Opportunities in Europe

Germany



https://academicpositions.com/ad/cologne-graduate-school-ageing-research-cga/2022/12-fully-funded-phd-positions/181690?utm_source=facebook&utm_medium=cpc&utm_campaign=scm-cga-092022+med-hi



<https://www.humboldt-foundation.de/en/apply/sponsorship-programmes/humboldt-research-fellowship>



<https://www.daad.de/en/study-and-research-in-germany/>



Postgraduate Opportunities

Opportunities around the world

Gratz - Austria



<https://agristok.net/2022/09/03/phd-fully-funded-position-in-plant-molecular-biology-at-university-of-graz-in-austria/>

International



https://jobs.msd.com/gb/en/job/R197090/Scientist-Medicinal-Chemistry/?utm_source=linkedin&utm_campaign=job-share&utm_medium=social-share

Denmark



<https://www.dtu.dk/om-dtu/job-og-karriere/ledige-stillinger/job?id=d2e2591d-1d14-43ff-8557-6e6ce0fc3a58>



Postgraduate Opportunities

Opportunities around the world

Australia



University of Melbourne

<https://lnkd.in/dxjXv-JJ8>



Ireland



Irish Research Council

<https://research.ie/funding/>

Singapore



<https://lnkd.in/dra7MV8>



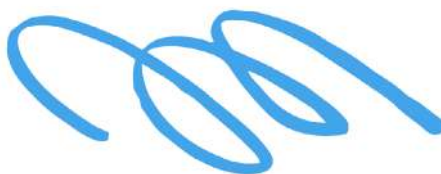
Scientists wanting to go into business – fully Undergraduate/ Postgraduate/ PhD graduate degrees in Management – Basic degree multi centre with significant funding

- VERY INTERESTING PROGRAMME

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Intellectual property



https://micheonip.com/intellectual-property-non-disclosure-agreement/?utm_campaign=Michelson&20Institute%20for%20intellectual%20Property&utm_content=212335938&utm_medium=social&utm_source=linkedin&hss_channel=lcp-42772499

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- <https://www.youtube.com/watch?v=sHhGY4c61v4>
- <https://www.youtube.com/watch?v=33R43YF9DzI>



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Information and resources from the National Center for Complementary and Integrative Health, U.S. National Institutes of Health (NIH).

- www.nccih.gov

GREAT SELECTION OF WEBINARS

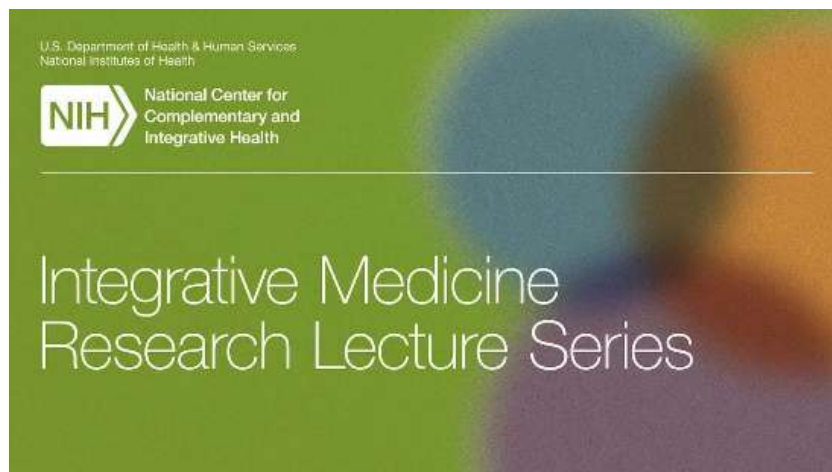
- <https://www.herbalgram.org/news/webinar-page/>



KEEP AN EYE ON

<https://www.pharmacognosy.us/>

<https://www.herbalgram.org>



<https://www.nccih.nih.gov/news/events/imlectures?nav=li>



Great Selection of Webinars - From the Sustainable Herbs Programme

Botanical Supply Sustainability in the Time of COVID

- <https://vimeo.com/457513678>

Plants, People & Culture: The Science of Ethnobotany

- <https://vimeo.com/460565477>



The Business Case for Sustainability

- <https://vimeo.com/465447452>

Cross-cultural Understanding of Local Herbal Knowledge and Chinese traditional Daodi Materia Medica

- <https://vimeo.com/668389245>

Sourcing Botanicals and Quality Control: A Conversation with Michael Heinrich and Anthony Booker

- <https://vimeo.com/642467580>

Introducing the WildCheck Report: Assessing Risk & Opportunities of Trade in Wild Plant Ingredients

- <https://vimeo.com/704246800>

Certifications as a Path to Sustainability? A Conversation about the Opportunities and Limits of Certification

- <https://vimeo.com/540314958>



AND MANY MORE

<https://vimeo.com/457513678>



Buchi Mini series of webinars – covering Drug Discovery Using Natural Resources



 The speaker: Prof. Dr. Elfahmi

There is a separate registration requirement for each webinar.

https://cloud.infohub.buchi.com/drug-discovery/with-prof-elfahmi?utm_source=email&utm_medium=email&utm_campaign=gl-2022-webinars-mini-webinars-with-prof-elfahmi&utm_term=.mc=34316261&utm_campaign=gl-2022-webinars-mini-webinars-with-prof-elfahmi&cloudpage_id=4865&cloudpage_id2=&cloudpage_id3=



● Episode 1: Drug Discovery and Development Workflow

Discover four essential steps in drug discovery and development: literature review & preliminary screening, biology development, physiochemical & pharmaceutical development. Gain a process overview for the isolation of active compounds from plants using bioactivity-guided fractionation.



● Episode 2: Concentration of Natural Products

Explore the workflow for processing of natural compounds: sampling & crushing, extraction & concentration; fractionation & purification; structure identification and product packaging. Learn about extract/fraction concentration through solvent removal by rotary evaporation. Find challenges and solutions to efficiency, foaming, bumping, plus optimization tips for temperature difference, pressure values, flask size, rotation speed and condenser loading.



● Episode 3: Purification Techniques for Natural Products

Learn fundamentals and protocols for relevant methods, including liquid-liquid fractionation (phase separation), winterization, microporous resin chromatography, flash and vacuum liquid chromatography, radial chromatography, crystallization, preparative column chromatography. See it in action with a case study on the purification of asiaticoside & madecassoside from *Centella asiatica*.



● Episode 4: Past, Present and Future of Herbal Medicines

Gain a comprehensive overview of the history of plant use in drugs and pharmacy, including milestones in the development of herbal medicines. See current global use, benefits and challenges facing alternative or traditional medicine. Look into the future of herbal medicine development with predictions on how this branch will develop.





International Conferences

Conference information

 Lots of interesting and relevant conferences to be found at these links.



Traditional medicine Conferences in 2023

- <https://waset.org/traditional-medicine-conferences-in-2023>

Phytochemistry Conferences

- <https://waset.org/phytochemistry-conferences>






Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

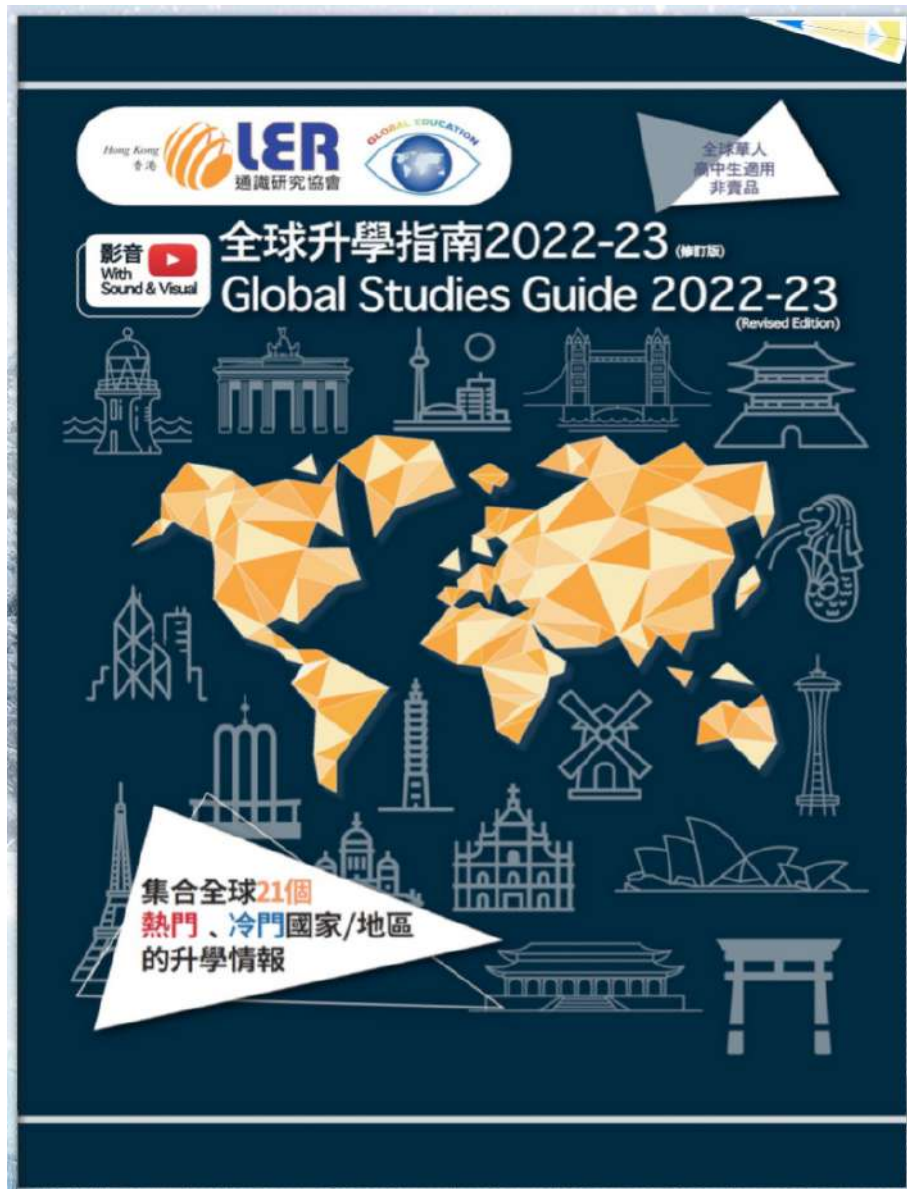
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China Scholarship Council (CSC) – Trinity College Dublin Joint Scholarship Programme

 Details: <https://www.tcd.ie/study/international/scholarships/Postgraduate/csc.php>



i Global Studies Guide 2022-23



Details: <https://online.fliphtml5.com/pwsrn/pjso/>



香港中文大學中醫學院

School of Chinese Medicine
The Chinese University of Hong Kong

ii



PhD in Chinese Medicine
School of Chinese Medicine,
The Chinese University of Hong Kong

Details: <http://www.scm.cuhk.edu.hk/en-gb/programs/research-master-doctoral-program/phd-in-chinese-medicine>



香港浸會大學

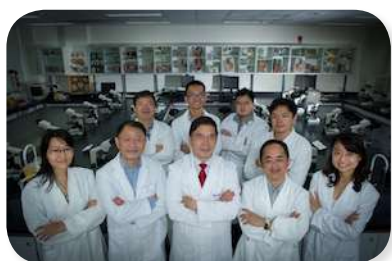
HONG KONG BAPTIST UNIVERSITY



中醫藥學院

School of
Chinese Medicine

iii



Doctor of Philosophy (PhD) in Biomedical Sciences/
Chinese Medicine/ Translational Medicine/
Pharmacy in Chinese Medicine
School of Chinese Medicine, Hong Kong Baptist University

Details: https://scm.hkbu.edu.hk/en/education/research_postgraduate_programmes/index.html#list/0



LKS Faculty of Medicine

The University of Hong Kong
香港大學李嘉誠醫學院



中醫藥學院

iv



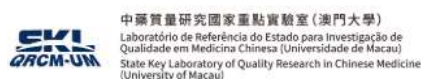
PhD in Chinese Medicine
School of Chinese Medicine, The University of Hong Kong

Details: <https://scm.hku.hk/Views/Programme/English-MPhilPhD.html>



澳門大學

UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU



中藥質量研究國家重點實驗室 (澳門大學)

Laboratório de Referência do Estado para Investigação de
Qualidade em Medicina Chinesa (Universidade de Macau)
State Key Laboratory of Quality Research in Chinese Medicine
(University of Macau)

中華醫藥研究院

Instituto de Ciências Médicas Chinesas
Institute of Chinese Medical Sciences

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Doctoral Degree in Biomedical Science
Institute of Chinese Medical Sciences, University of Macau

Details: <https://sklqrcm.um.edu.mo/doctoral-degree-in-biomedical-science/>

i Zihe DING won the first prize award in the International Conference on Natural Products and the 3rd Wudang International Traditional Chinese Medicine Forum

The International Conference on Natural Products and the 3rd Wudang International Traditional Chinese Medicine Forum was held in Wudang, Hubei, China, on August 21st to 25th, 2023. Mr. Zihe DING, the PhD student from China Academy of Chinese Medical Sciences won the first prize award after his captivating presentation titled "*Iron-mediated Metabolic Shifts Shape the Efficacy and Toxicity of Tripterygium Glycosides Tablets against Rheumatoid Arthritis*" in the session of the Young Scientist Contest.

Tripterygium Glycosides Tablets (TGTs), derived from *Tripterygium wilfordii* Hook F (*TwHF*), are the marketed drugs for treating rheumatoid arthritis (RA) in China. However, it is still unclear in its toxicity as well as the mechanisms. Under the support by his supervisor, Prof. Na LIN, DING combined the strategy of the clinical multi-omics data mining with multi-level biological verification analysis, and found the regulation of "iron-lipid" metabolism pathways and the "efficacy/toxicity" relationship mechanism during the treatment of RA using TGTs. This breakthrough study provides experimental evidence for enhancing the efficacy and reducing the toxicity of *Tripterygium wilfordii* Hook F (*TwHF*).

In recent years, Ms. Na LIN, the Chief Professor of China Academy of Chinese Medical Sciences, leads a research team in the field of clinical traditional Chinese medicine, recognized as a high-level key discipline by the State Administration of Traditional Chinese Medicine. They have achieved many milestone results in the research of rational clinical use of traditional Chinese medicine. The research team collaborated with experts from various fields related to rheumatoid arthritis and immune disorders nationwide to compile the "Guidelines for the Use of Tripterygium Glycosides Tablets/Tripterygium Tablets in the Treatment of Rheumatoid Arthritis" and have received the First Prize for Scientific Progress from the China Association of Traditional Chinese Medicine and the Chinese Association of Integrative Medicine. Recently, their research work on the common "immune-metabolic" regulation mechanisms and effect substances in the treatment of rheumatoid arthritis and diabetic nephropathy with TGTs has been funded by a key project of the National Natural Science Foundation of China. These efforts contribute significantly to the clinical application, teaching, and scientific research of *TwHF*.



Mr. Zihe DING (Right) and his supervisor Prof. Na LIN (Left).



Mr. Zihe DING won the first prize award in the Young Scientist Contest Session.

ii Mr. Mu-Yang Huang achieved the first prize in the Young Scientist Contest Session in the International Conference on Natural Products and the Third Wudang International Traditional Chinese Medicine Forum

Mr. Mu-Yang Huang is a senior Ph.D student from Prof. Jin-Jian Lu's laboratory, University of Macau. Recently, he participated in the International Conference on Natural Products and the Third Wudang International Traditional Chinese Medicine Forum, where he achieved the first prize in the Young Scientist Contest Session. During the conference, he delivered a presentation entitled "Ginsenoside Rh2 enhanced anti-PD-L1 immunotherapy by improving tumor microenvironment" to experts and scholars in the field of traditional Chinese medicine, sharing their team's latest discoveries on novel strategy to enhance cancer immunotherapy by using natural product.

With the support by Prof. Jin-Jian Lu, Mr. Huang has been extensively involved in research related to natural products and anti-tumor immunity. He unveiled that platycodin D, a Chinese medicine-derived natural product, significantly reduced the expression of PD-L1 on the membranes of cancer cells. This reduction led to a decrease suppression on T cells by cancer cells, making platycodin D as a potential natural PD-L1 regulator. Shortly after the publication of this discovery, the findings were cited and reviewed in another article entitled "Proposed mechanisms for the extracellular release of PD-L1 by the anticancer saponin platycodin D". Lately, Mr. Huang is focusing on the identification of strategies to enhance cancer immunotherapy based on anti-PD-1/PD-L1 blockade. As mentioned above, the recent work has revealed that Rh2 could enhance the anti-cancer effects of PD-L1 antibodies by improving the tumor immune microenvironment. The combination treatment of Rh2 and anti-PD-L1 antibody further triggered the infiltration and activation of intratumoral CD8+ T cells by increasing the CXCL10 and M1-like macrophage.

Till now, Mr. Huang has published several SCI papers in the international authoritative academic journals including *Pharmacol Ther*, *Food Chem Toxicol*, *Chin Med*, etc.



Mr. Mu-Yang Huang won the first prize in the Young Scientist Contest Session.



Prof. Jin-Jian Lu (left) and Mr. Mu-Yang Huang (right).

Major achievements

Publications:

Huang MY, Jiang XM, Wang BL, Sun Y, Lu JJ*. Combination therapy with PD-1/PD-L1 blockade in non-small cell lung cancer: strategies and mechanisms. *Pharmacol Ther.* 2021, 219:107694.

Zhang LL, Huang MY (co-first), Yang Y, Huang MQ, Shi JJ, Zou L*, Lu JJ*. Bioactive platycodins from *Platycodonis Radix*: Phytochemistry, pharmacological activities, toxicology and pharmacokinetics. *Food Chem.* 2020, 327:127029.

Huang MY, Jiang XM*, Xu YL, Yuan LW, Cui GZ, Huang RY, Liu B, Wang YT, Chen XP, Lu JJ*. Platycodin D triggers the extracellular release of programmed death ligand-1 in lung cancer cells. *Food Chem Toxicol.* 2019, 131:110537.

Huang MY, Zhang LL, Ding J, Lu JJ*. Anticancer drug discovery from Chinese medicinal herbs. *Chin Med*, 2018, 13: 35.

Awards:

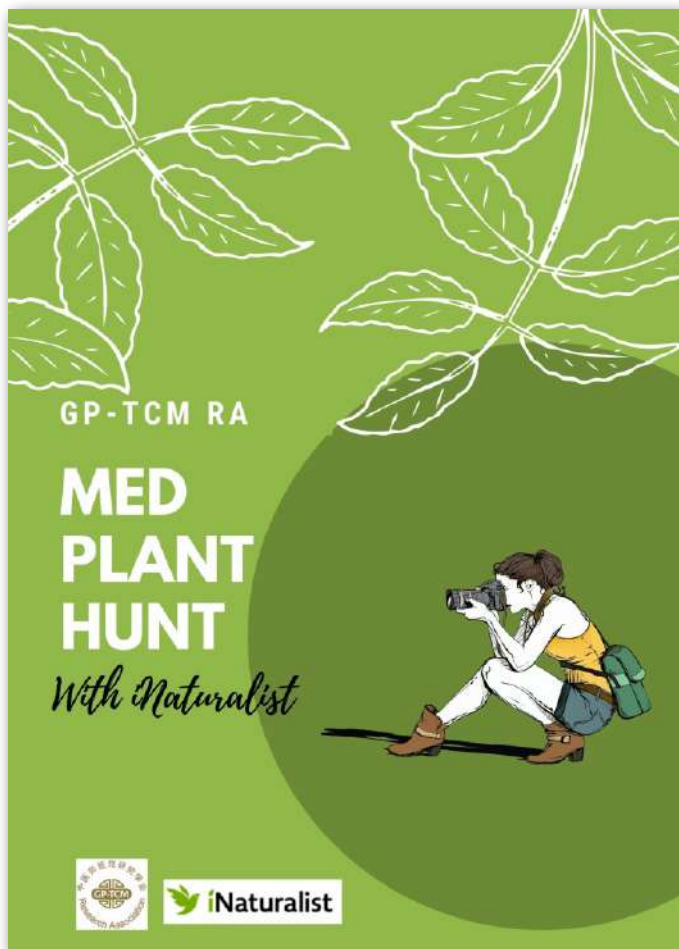
First Prize Award in Young Scientist Contest Session, the International Conference on Natural Products and the Third Wudang International Traditional Chinese Medicine Forum, Hubei, 2023.

Best Poster Award, 8th Macau Symposium on Biomedical Science, Macau, 2022.

Student and Young Scientist Oral Presentation Award, the 4th Sino-CPLP Symposium on Natural Medicine and Biodiversity Resources (SNMBR) & the International Forum on Research and Development of Traditional Chinese Medicine Industry (Macao), Macau, 2022.

Med Plant Hunt with iNaturalist

i



In order to promote conservation of wildlife, especially wild medicinal plant and TCM herbs, and their environment, a challenge on **“Med Plant Hunt”** is launched.

The aim of challenge is to encourage our members to identify and recognize the morphological features of living wild medicinal plant in nature.

Eligibility:

Med Plant Hunt is free and open to all GP-TCM RA members.

Entries must abide by the guidelines below.

Rules & Guidelines:

iNaturalist is a nature app to help you identify the animals and plants around you and provide a platform to connect you and experts to share about nature. Users can record and share their observations and the findings can enrich scientific data repositories like the Global Biodiversity Information Facility.

Create your own account and share your wild medicinal plant observation to mobile iNaturalist app or iNaturalist website.

How to enter:

1. Complete the registration form with iNaturalist user ID.
2. Make the observation of living wild medicinal plant around you with iNaturalist app/website.
3. With the submitted iNaturalist ID, your observation for entry will be automatically recorded and results will be announced in the coming issue of the newsletter.



How to join



Registration form



How to upload

For inquiries about Med Plant Hunt, please send email to

gptcm_medplanthunt@outlook.com





Med Plant Hunt with iNaturalist

i



Prizes:

- **Adventurous Observer: The highest number of observed species**
- **TCM Photographer: Best photo shoot**
- **Lucky Observer: Observe rare species**



The selected entries will be published on the next issue of the newsletter. An electronic certificate and a **complementary gift** (e.g. water bottle ideal for outdoor activities, sponsored by Macau Pharmacology Association) will be given.



澳門藥理協會

MED PLANT HUNT

With iNaturalist

Med Plant Hunt Registration Form

Name:

Email:

Affiliation:

Country or region:

iNaturalist account information

User name:

User email:

(Please send the form to gptcm_medplanthunt@outlook.com for registration)



Online registration



How to join



Registration form



How to upload



Scented Solomon's seal (*Polygonatum odoratum*, Liliaceae, 玉竹, left) and Siberian Solomon's seal (*Polygonatum sibiricum*, Liliaceae, 黄精, right)



A number of species in the genus *Polygonatum* have been used medicinally since Eastern Han Dynasty (25-220) and North and South Kingdoms (420-589). Among them, the dried rhizome (usually in long cylindrical shape) of scented Solomon's seal is officially known as Chinese medicinal *yuzhu* (polygonati odorati rhizoma), and dried rhizomes (usually in nodular and curved cylindrical shape) of Siberian Solomon's seal and another 2 species from the same genus are officially known as Chinese medicinal *huangjing* (polygonati rhizoma).

Sweet in taste and slightly cold in nature, *yuzhu* nourishes yin, moistens dryness, engenders fluids, and relieves thirst. It is indicated for syndromes of lung yin deficiency and stomach yin deficiency. *Yuzhu* is often used as an ingredient of some common traditional Chinese medicine formulas such as Modified Scented Solomon's Seal Decoction (*jia jian wei rui tang*) and Benefit the Stomach Decoction (*yi wei tang*).

Sweet in taste and neutral in nature, *huangjing* supplements qi, nourishes yin, fortifies the spleen, moistens the lung, and benefits the kidney. It is indicated for either qi deficiency or yin deficiency syndrome. It is also indicated for syndrome of both qi and yin deficiency. *Huangjing* can be decocted alone until it becomes a concentrated decoction for oral administration. As a matter of fact, *huangjing* has long been consumed as a nutritious food as well.

Attention should be paid that the genus *Polygonatum* is now included in Asparagaceae in Angiosperm Phylogeny Group (APG) IV system.


玉竹

强茎有节此由名
绿白黄花叶互生
药食同源庭院赏
山坡林下亦丰盈

黄精

节膨轮叶悦仙家
常见攀缘素伞花
九晒九蒸成大药
入方服久众人夸

The above colour photographs, English texts and Chinese poems are contributed by Prof **Hubiao Chen** (Hong Kong), Dr **Ping Guo** (Hong Kong) and Prof **Jiqing Liu** (Shenzhen), respectively. This column is advised by Prof **Zhongzhen Zhao** (Hong Kong).

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Scented Solomon's seal (*Polygonatum odoratum*, Liliaceae, 玉竹, left) and Siberian Solomon's seal (*Polygonatum sibiricum*, Liliaceae, 黄精, right)



The September-October 2023 Newsletter of GP-TCM Research Association



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