

# UK-CGCM 2023-2024 Report

**Regional Co-ordinator:**

**Professor Tai-Ping Fan, University of Cambridge**

**Retired in 2020**

**Currently Dean of School of Health Sciences, Fuyao University of  
Science & Technology, Fuzhou, China since April 2024**

**Proposed new regional co-ordinator:**

**Dr Qihe Xu, King's College London**

# UK-CGCM

- 1) **Bradford University**
- 2) **Brunel University London**
- 3) **Cambridge University**
- 4) **King's College London**
- 5) Liverpool John Moores University
- 6) Nottingham University
- 7) **Oxford University**
- 8) Royal Botanic Gardens, Kew
- 9) **UCL School of Pharmacy**
- 10) University of Westminster
- 11) **The UK Centre of Chinese Medicine (CCMUK)**

# Mission & Goals of UK-CGCM

- To advance the field of Chinese herbal medicine to benefit human kind through **joint efforts of the academic institutions, industries and regulatory agencies throughout the UK.**
- To develop **platform technologies** required for advancing Chinese herbal medicine by joint efforts.
- To facilitate the interaction and collaboration among different institutes in advancing Chinese herbal medicine by **sharing information.**
- To promote a **high quality evidence-based research** and develop Chinese herbal medicine internationally.
- To assist industry with the development of **new products and their regulatory acceptance.**

## **Professor Ian Sutherland:** **“We are what we share”**



- Brunel’s Advanced Bioprocessing Centre (ABC) is the lead global centre on the extraction and scale-up of active compounds from natural products and Chinese Herbal Medicines (CHMs).
- Although it has been a relatively quiet year, Brunel has been actively collaborating with Chicago University on developing affordable Countercurrent Chromatography Equipment using 3D printing techniques.
- We have also joined a consortium with Tai-Ping Fan in Cambridge/Fuyao University of Science & Technology and a new company interested in developing novel immune modulators from mixture of medicinal plants. This work is still awaiting intellectual property agreement being put in place and so no details are available at this stage.
- Our research on CCC technology has been dormant for a while, while we have been developing a new academic Chemical Engineering Course.



**Prof. Tai-Ping Fan, PhD FRSA**

tpf1000@icloud.com



**UNIVERSITY OF  
CAMBRIDGE**

University of Cambridge (1986 - 2020)

Dean of School of Health Sciences, Fuyao University of Science & Technology, Fuzhou, China since April 2024



- Treasurer of Good Practice in TCM Research (GP-TCM RA; 2019 – present)
- Executive Deputy Editor-in-Chief, *Journal of Traditional Chinese Medical Sciences*
- International Advisory Board of International Conference on Genomics (ICG)
- Keynote “Impact of Bacterial Metabolism of DOPA and Dopamine on Human Health” in ICG-19 (18 May 2024)

9 publications since last CGCM meeting including

- Advances and perspectives on pharmacological activities and mechanisms of the monoterpene **borneol**. Hu X, Yan Y, Liu W, Liu J, Fan T, Deng H, Cai Y. *Phytomedicine*. 2024 Jun 26;132:155848.
- **Borneol exhibits extensive pharmacological activities including anti-inflammatory effects, analgesia, antioxidation, and has the property of crossing biological barriers and treating CVDs. The intrinsic molecular mechanisms are involved in multiple components, such as regulation of various key factors (including TNF- $\alpha$ , NF- $\kappa$ B, IL-1 $\beta$ , malondialdehyde), inhibiting transporter protein function, regulating biochemical levels, and altering physical structural changes. In addition, this review describes the pharmacological effects of borneol ester and the combination of borneol with nanomaterial.**

# King's Centre for Integrative Chinese Medicine

Dr Qihe Xu: [qihe.xu@kcl.ac.uk](mailto:qihe.xu@kcl.ac.uk)

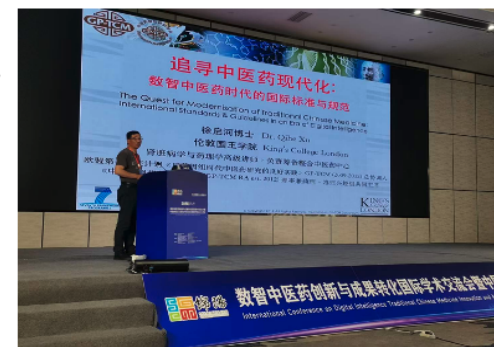


## PUBLICATIONS

- **Fermented *Ophiocordyceps sinensis* mycelium products for preventing contrast-associated acute kidney injury: a systematic review of randomized controlled trials.** Pu F, Li T, Shen C, Wang Y, Tang C, Zhang X, Yan L, Xu Q, Liu J. *Ren Fail* 2024;46:2300302.
- **Single-cell RNA sequencing data locate ALDH1A2-mediated retinoic acid synthetic pathway to glomerular parietal epithelial cells.** Liu W, Fermin D, Xu A, Kopp J, Xu Q. *Exp Biol Med.*, in press.

## ACADEMIC CITIZENSHIP

- **BoD & Pharm & Tox Interest Group Co-Chair, The GP-TCM Research Association.**
  - At the 2023 & 2024 annual meetings in Leiden and Macao, Qihe co-chaired the abstract evaluation & poster award selection committees and the Pharma & Tox session.
- **Five invited talks in Leiden, London, Bo'ao, Mianyang and Beijing: four on integrative medicine R&D international standards & guidelines; the other on R&D of herbal antifibrotics.**
  - *International Standards & Guidelines in Integrative Medicine Research & Development.* The 4th International Forum of Integrative Medicine in Nephrology & Andrology, Beijing, Oct. 2024.
  - *The Quest for Modernisation of Chinese Medicine: International Standards and Guidelines in the Era of Digital Intelligence.* Mianyang, Sichuan, Jun. 2024.
  - *Harmony without being uniform: International Guidelines & Standards in R&D of Traditional Medicine.* Chinese Medicine and Human Health Conference, London, UK, Oct. 2023.
  - *International Guidelines in Traditional Medicine Research: Opportunities & Challenges in Real-World Studies.* Bo'ao Summit on Real-World Studies. Bo'ao, Hainan, Oct. 2023.
  - *Proteomics enables a systems view on TGF- $\beta$ 1-induced fibrogenesis and the pharmacology & toxicology of herbal antifibrotics.* The 11th GP-TCM RA Annual Meeting, Leiden, Sept. 2023.





UK Centre of Chinese Medicine

英国中医药中心

George He MMedSci FRSM ceo@ccmuk.org

## Conference & Publication

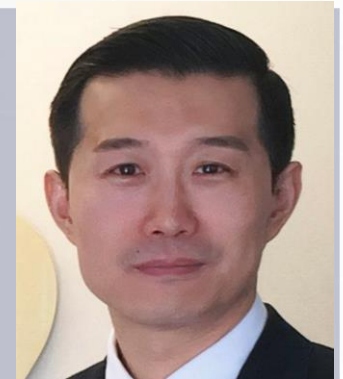
- Chinese Medicine & Human Health Conference 2023 in London
- European Journal of Chinese Medicine Volume 2023

## High Education Standards

- Partner with Shanghai University of Traditional Chinese Medicine to establish a three-year postgraduate degree program of Chinese medicine in the UK, under accreditation procedure with EHTPA;
- Collaborate with China Medicine University to promote their international training program in the UK and Europe.

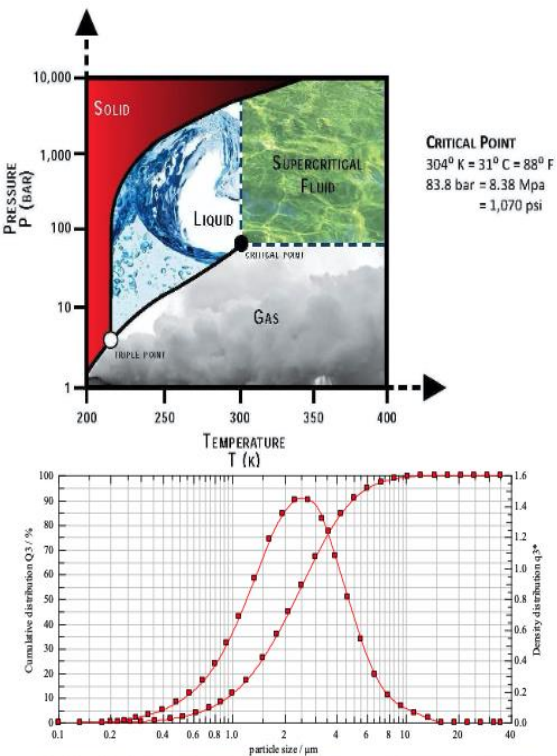
## Networking

- Liaise with BSI to participate in the ISO TC/249 working group.
- Presentation at IASTAM & ASHM 2024.



Supporting the Advancement  
of Chinese Medicine

# mSAS® Supercritical Crystallization Technology for the Development of Modern TCM Preparations – Dr Shao Qun



中药浸膏

mSAS®粉末颗粒

- Preparation of high-quality granules of TCM (simple or compound formulations) by one-step supercritical crystallization method (low-temperature, anaerobic preparation environment).
- Avoiding the drawbacks of traditional preparation methods that lead to oxidation, degradation, lattice damage, and poor stability of active ingredients in TCM granules
- Prepare TCM granules that better meet modern pharmaceutical requirements - with uniform particle size distribution, good flowability, easy dissolution, and low residual solvents.
- To lay a technical foundation for the development of high-end preparations of TCM patent medicines - inhalation administration, compound "microparticle" preparations, "taste masking microparticle" preparations, etc
- Developed corresponding industrial scale of GMP equipment.







UNIVERSITY OF  
OXFORD

## Dr Yu-Ling Ma 马玉玲

Oxford Chinese Medicine  
Research Centre



- Xin Su Ning (XSN 心速宁) is a China patented and certified herbal medicine used to treat premature ventricular contractions (PVCs) since 2005. It is derived from a classical TCM formula Huanglian Wen Dan Decoction formulated with 11 Chinese herbal medicines to treat cardiac ventricular arrhythmia.
- Wang T *et al.* (2019a) Ion Channel Targeted Mechanisms of Anti-arrhythmic Chinese Herbal Medicine *Xin Su Ning* *Front. Pharmacol.*, 6 Feb 2019 <https://doi.org/10.3389/fphar.2019.00070>
- Wang T *et al.* (2019b) A Network Pharmacology Study of the Multi-Targeting Profile of an Antiarrhythmic Chinese Medicine Xin Su Ning *Front. Pharmacol.*, 23 Sept 2019 <https://doi.org/10.3389/fphar.2019.01138>
- Ma Y *et al.* (2020) Investigation of the Cellular Pharmacological Mechanism and Clinical Evidence of the Multi-Herbal Antiarrhythmic Chinese Medicine Xin Su Ning *Front. Pharmacol.*, 6 May 2020 <https://doi.org/10.3389/fphar.2020.00600> XSN is an effective multicomponent antiarrhythmic medicine to treat PVC without adverse effect in patients, which is convincingly supported by its class I & III pharmacological antiarrhythmic mechanism of blocking hERG potassium channels and hNav1.5 sodium channel reported in our earlier publication and prolongs action potential (AP) duration both in ventricular myocytes and with computational simulation of human AP.
- Wang X *et al.* (2021) Xin Su Ning — A Review of Basic and Clinical Pharmacology Integrated With Traditional Chinese Medicine Antiarrhythmic Theory *Front. Pharmacol.*, 11 Nov 2021 <https://doi.org/10.3389/fphar.2021.657484>
- This article has been highly valued and featured online in Global SciCode: *The Power of Traditional Chinese Medicine in Cardiac Care*, calling them groundbreaking achievements, and setting a model for traditional drug research. <https://www.scipod.global/dr-yu-ling-ma-the-power-of-traditional-chinese-medicine-in-cardiac-care/>



University College London School of Pharmacy  
Pharmacognosy and Phytotherapy  
**Prof. Michael Heinrich**



- Since 2022 Michael Heinrich has been a Yushan Fellow at China Medical University (Taichung) establishing close collaborations with colleagues working on Chinese medicine at CMU and other Taiwanese universities

- Medicinal plants used by minority ethnic groups in China: Taxonomic diversity and conservation needs. R Yao, J Gao, M Heinrich, S Yu, T Xue, B Zhang, X Wei, Y Qi, W Gao. *Journal of Ethnopharmacology* 334, 118573
- Genetic diversity of food-medicinal *Lycium* spp. in China: Insights from chloroplast genome. R Yao, B Wang, M Heinrich, Q Wang, P Xia. *Chinese Herbal Medicines* (2024)
- Quality variation of *maidong* (*Ophiopogon japonicus* and *Liriope spicata*)—a HPTLC-based approach
- F Lei, M Heinrich, E Reich, C Weckerle. *Journal of Pharmaceutical and Biomedical Analysis* 241, 115990
- From the CONSORT to the ConPhyMP statement and beyond—how to ascertain best practice. M Heinrich, B Jalil. *Frontiers in Pharmacology* 14, 1338710
- Aristolochic acids and *aristolactams*. M Heinrich. *Encyclopedia of Toxicology*, 4th edition, 9 volume set
- Single botanical drugs in the Ayurvedic Pharmacopoeia of India—A quantitative ethnobotanical analysis. R Yao, M Heinrich, B Zhang, X Wei, Y Qi, W Gao. *Frontiers in Pharmacology* 14, 1136446
- Where to begin? The best publications for newcomers to ethnopharmacology B Jalil, F Schultz, M Heinrich. *Frontiers in Pharmacology*, Sect. Ethnopharmacology 14, 1141502 (10.3389 ...)