

The June 2019 Newsletter of The GP-TCM Research Association A Special Edition in Honour of Professor Peter Hylands



Editorial

In memoriam Peter John Hylands (1946-2019)



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“No sustainable funding and personnel, and with high-level of complexity, herbal medicine is an extremely risky area of research. I have been in the industry of herbal R&D for more than 20 years, but frankly speaking, there has been little success,” he quipped.

As a new lecturer and a nephrologist proposing a collaborative grant application on anti-fibrotic herbs, I was amazed by his frankness when I visited Professor Peter Hylands for the first time in 2006, when he was the newly appointed Head of Pharmacy Department at King's College London.

Having agreed on the risks and difficulties ahead, we nonetheless worked together with others, including experts at the Royal Botanic Gardens, Kew, and won a two-year research grant on anti-fibrotic and profibrotic herbal medicines from Kidney Research UK, the only grant of its kind in the history of the charity. With this funding, we trained a PhD student from Beijing and identified a number of herbal compounds and extracts used in traditional Chinese medicine (TCM) that had reproducible anti-fibrotic and profibrotic activities^{1,2}.

Through this project, we recognised that there was a staggering lack of collaboration in the area of TCM research. Peter encouraged me to lead a consortium to bid for the EU's first EU-China Coordination Action on TCM research. I can remember the encouragement that Peter gave me as I sat long in the evening with Tai-Ping Fan and Monique Simmonds finalising the proposal for submission. Together, we assembled a multi-talented team from across Europe and China and developed a robust proposal. On Valentine's Day 2008, we became the only winning team out of the 13 bidding consortia. Peter took on the tasks of being Chairman of the Technological Advisory Committee and Chair of the *In-vitro* Pharmacology Work Package. Of course, Peter was the most appropriate person to lead the *In-vitro* Pharmacology Work Package because his work using *in-vitro* models for studies of plants has been very influential, with some papers cited more than 300 times^{3,4}.

Concluding “modern medicine can learn from traditional practice”⁵, the FP7 GP-TCM Consortium (2009-2012) have been widely acclaimed as a great success. The consortium published widely and one of the publications on the state of the art of omic and systems studies of TCM was led by Peter. In 7 years, this work has been cited over 120 times⁶ and “Omic in Progress”, a standing column of this newsletter, is a legacy resulting from Peter's excellent work.



The June 2019 Newsletter of The GP-TCM Research Association

A Special Edition in Honour of Professor Peter Hylands



Peter was a pioneer in the use of omics in TCM research. His original publications on metabolomic and metabonomic studies of herbal products have been highly cited^{7,8} and he has filed a series of patents on integrated omics technology for quality control of complex herbal products (GB00/00428 in 2003 and its counterpart international patents). Peter was keen to understand the chemical basis of TCM. He developed Chem-TCM, a 21st century TCM database, which has been licensed to Tim Tec LLC (<http://www.chemtcm.com>), and he supported the bioinformatic analysis of such databases^{9,10}.



Prof. Ed Byrne, President of King's College London thanked Peter for his huge contribution to the university (2018)

A medicinal chemist by training, Peter was a leader in studies of the biosynthesis of taxol. His 1996 PNAS publication on this has been cited over 330 times¹¹. The most cited work Peter ever published was a collaboration with Mrs Debs Hylands, his beautiful and devoted wife. This research was in collaboration with clinicians who conducted a double-blind placebo-controlled trial to demonstrate the clinical efficacy of feverfew as a prophylactic treatment of migraine. Published in the BMJ in 1985, this work has been cited over 440 times¹².

Peter was not only an excellent scientist but also led the pharmacy teaching programme at King's College London, UK, training future pharmacists and pharmaceutical scientists to serve future clinical needs. In recognition to his huge contributions, King's decided to name our Clinical Pharmacy Skills Suite after Professor Peter Hylands in 2018.

Peter was also a visionary leader. He and his colleagues were the founders of the Institute of Pharmaceutical Science (IPS) at King's, which brought all pharmaceutical research scattered across different campuses under one umbrella. This significantly increased the visibility of King's in the pharmaceutical community and, during Peter's tenure as Head of IPS, King's had been consistently ranked a top-15 institution in Pharmacy & Pharmacology worldwide, with the highest ranking of top-4, making it among the very best in the world.

To the GP-TCM and GP-TCM RA international community, Peter was best known as a pioneer and a supporter of the modernisation of TCM, as well as a beloved international teacher, mentor and leader.

He had 20 years of experience playing leading roles in the industrial sector of herbal medicine, and had widely advised the TCM industry on modernisation and quality control. Peter was the founder and senior officers of Oxford Natural Products plc, HJ International Ltd and PHYTOpharmaceuticals Inc. When at Xenova Ltd, he provided consultancy to the



Peter lectured at Guiyang Medical University (2016)

The June 2019 Newsletter of The GP-TCM Research Association A Special Edition in Honour of Professor Peter Hylands



TCM industry to help the industry meet GAP and GMP standards for entry to the European market. Apart from having worked full time in France and the United States, Peter had undertaken consultancies and lectured in Australia, Brazil, Colombia, Croatia, Egypt, Ghana, Guyana, India, Japan, Namibia, North Korea, South Korea, Sri Lanka, Tanzania, Thailand, Trinidad, Turkey, Ukraine and Zimbabwe, and had good professional contacts in Chile, China (including Taiwan, Hong Kong and Macao), Indonesia, Malaysia, Nigeria, the Philippines, Vietnam and the Middle East.



Peter with other members of the Founding Board of Directors of the GP-TCM RA, in Leiden (2012)

Peter has been the Treasurer and Member of the Board of Directors and Executive Council of the GP-TCM RA, ever since the founding of the Association in 2012. He oversaw the finance of the Association and has advised us at every key step of our development.

As Treasurer, he attended many face-to-face meetings and teleconferences. He only missed meeting when he had other critical appointments. For example, during the restructuring of King's College London in 2014, when he had to fight very hard to protect his staff from being made redundant. He attempted a few times to give up the Headship of the Pharmacy Teaching Department, but realised the importance of this role. It was hard to find a successor for the demanding task, although he wanted to devote more time to developing the research and teaching programme of the King's Centre for Integrative Chinese Medicine (CICM) initiative and pursuing his other interests. Despite the many hardships and amount of stress he was under from time to time, he rarely complained.

His ability to make light of mishaps is illustrated by events associated with him missing the 3rd GP-TCM RA Annual Meeting in Nanjing in 2014, due to flight diversions. He contributed a special article "Treasurer's Travels" to our newsletter, acclaimed "a journey to remember" and signed off by claiming himself as "Your jet-lagged Treasurer".

<http://www.gp-tcm.org/wp-content/uploads/2014/09/July-August-2014-NL-v23-lower-resolution.pdf>

After stepping down from the highly demanding management posts at King's, Peter had many important plans, at King's, in Beijing, and beyond. He loved (the hardship and fun of) travels and had very much enjoyed his last trip to Hong Kong, where he met old friends and new ones, and he was looking forward to the next GP-TCM RA Annual Meeting to be held in Daegu, in July.

Treasurer's Travels

Prof. Peter J Hylands
Treasurer of the GP-TCM RA

Head, Institute of Pharmaceutical Science, King's College London

I had planned to have a really enjoyable, unusually relatively slow-paced visit to various colleagues in southern China in July, culminating in the 4th Board of Directors' face-to-face meeting coinciding with the 3rd Annual Meeting of the GP-TCM RA and the 5th Annual Conference of the TCM Pharmaceutical Analysis Speciality Committee of the WFCMS in Nanjing. Because of pressure of work at King's College London, I could in the end only attend the Nanjing meeting but little did I know what was in store!

I flew KLM as I usually do, and duly took off from Amsterdam on Wednesday 16 July at 17.30 European time. After flying for nearly 5 hours (almost half way to Shanghai) the captain explained that the aircraft had developed a serious electrical problem and rather than land in a remote Siberian airport where it may not have been repairable, he had decided to go back to the Netherlands. So after more than nine hours in the air, we landed again at Amsterdam. The airline put us up in an airport hotel (arriving at 4.30am on Thursday) and after a couple of hours' sleep, I went back to the airport to be told that I had been rebooked on a flight to Shanghai via Beijing. However it turned out that this had been



**The June 2019 Newsletter of
The GP-TCM Research Association
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However, it was not to be. After battling with a lung infection for three weeks, he sadly did not win. Once again, he will be absent from our annual meeting. Imagining I could still invite him to write a special feature to tell us his wishes, I am sure he would still make a concise, witty, apologetic and funny one.

He wanted to share more of his love of China with Debs and was hoping to bring her Beijing, where she had never visited. He also wanted to spend more time with his daughter Kate and son Jonty, and their families. He would want his colleagues at King's College London as well as the GP-TCM RA to take care of themselves and encourage us to do our best.

Peter John Hylands, born on 1st August 1946, passed away on 10th June 2019, aged 72.



He was an English gentleman, a husband, a father, a Big Brother, a teacher, a mentor, a scientist, an enabler, a pioneer and a visionary. A personality to remember!

References

1. Hu Q, Noor M, Wong YF, Hylands P, Simmonds MSJ, Qing Xu, Jiang D, Hendry BM, Xu Q. *In vitro* anti-fibrotic activities of herbal compounds and herbs. *Nephrol Dial Transplant*. 2009; 24:3033-3041.
2. Xu Q, Feng Y, Duez P, Hendry BM, Hylands PJ. The hunt for anti-fibrotic and pro-fibrotic botanicals. *Science* 2014; 346 (6216 Suppl), S19-S20.
3. Houghton PJ, Hylands PJ, Mensah AY, Hensel A, Deters AM. *In vitro* test and ethnopharmacological investigations: wound healing as an example. *J Ethnopharmacol*. 2005; 100:100-7.
4. Houghton P, Fang R, Techatanawat I, Steventon G, Hylands PJ, Lee CC. The sulphorhodamine (SRB) assay and other approaches to testing plant extracts and derived compounds for activities related to reputed anticancer activity. *Methods*. 2007;42:377-87.
5. <https://cordis.europa.eu/project/rcn/90960/brief/en> (Accessed on 12th June 2019)
6. Buriani A, Garcia-Bermejo ML, Bosisio E, Xu Q, Li H, Dong X, Simmonds MS, Carrara M, Tejedor N, Lucio-Cazana J, Hylands PJ. Omic techniques in systems biology approaches to traditional Chinese medicine research: present and future. *J Ethnopharmacol*. 2012;140:535-44
7. Wang Y, Tang H, Nicholson JK, Hylands PJ, Sampson J, Holmes E. A metabonomic strategy for the detection of the metabolic effects of chamomile (*Matricaria recutita* L.) ingestion. *J Agric Food Chem*. 2005;53:191-6.
8. Wang Y, Tang H, Nicholson JK, Hylands PJ, Sampson J, Whitcombe I, Stewart CG, Caiger S, Oru I, Holmes E. Metabolomic strategy for the classification and quality control of phytomedicine: a case study of chamomile flower (*Matricaria recutita* L.). *Planta Med*. 2004;70:250-5.
9. Ehrman TM, Barlow DJ, Hylands PJ. Virtual screening of Chinese herbs with Random Forest. *J Chem Inf Model*. 2007;47:264-78.
10. Paoletta S, Steventon GB, Wildeboer D, Ehrman TM, Hylands PJ, Barlow DJ. Screening of herbal constituents for aromatase inhibitory activity. *Bioorg Med Chem*. 2008;16(8):8466-70.
11. Eisenreich W1, Menhard B, Hylands PJ, Zenk MH, Bacher A. Studies on the biosynthesis of taxol: the taxane carbon skeleton is not of mevalonoid origin. *PNAS* 1996;93:6431-6.
12. Johnson ES, Kadam NP, Hylands DM, Hylands PJ. Efficacy of feverfew as prophylactic treatment of migraine. *Br Med J (Clin Res Ed)*. 1985;291:569-73

**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



Special Features

1. Memorable moments with Professor Peter Hylands - A 26-page special supplement of the June 2019 Newsletter, including photos of Peter at GP-TCM and GP-TCM RA events since 2009. It can be downloaded from the GP-TCM RA website:

https://drive.google.com/file/d/1unWrMQULARUof19pQwfxFUO2uwYEcy_B/view

2. In memoriam Peter John Hylands (1946-2019). Professor Peter Hylands's Obituary (The Editorial, pages 1-4 of this newsletter) can also be downloaded as a standalone piece from the GP-TCM RA website: <http://www.gp-tcm.org/2019/06/obituary-prof-peter-hylands/>

3. Warmest congratulation to Prof. Rudolf Bauer, Founding President and BoD member of the GP-TCM RA, who received an honorary doctorate from University of Helsinki on 24th May 2019. Rudi has studied the chemistry of natural compounds, as well as their pharmacodynamic and pharmacokinetic characteristics. His particular focus has been on factors related to the quality control and standardisation of plant-based drugs and pharmaceutical products. Bauer has also developed quality criteria for pharmaceutical agents, aids and products used in Chinese medicine. In his research, Bauer has extensively investigated the development of a drug based on plant metabolomics. He has been an important liaison and promoter in the establishment of international research and teaching contacts at the University of Helsinki.

<https://www.helsinki.fi/en/news/teaching-studying-at-the-university/honorary-doctors-of-the-faculty-of-philosophy-2019>
<https://fil-promootio2019.helsinki.fi/en/honorary-doctors/>



4. Exploring the Bencao Wold, Advancing Bencao in the World New Book Press Conference – A Series of Hundreds about Traditional Chinese Medicine. The new book press conference for *A Series of Hundreds about Traditional Chinese Medicine* was held in Beijing, China with Zhao Zhongzhen, the Associate Dean of the Chinese Medicine School at Hong Kong Baptist University, and Xu Wenbing, Head of Beijing Houpu Chinese Medicine Academy on June 7th, 2019.

As a leading world bencao researcher, Prof. Zhao Zhongzhen of Hong Kong Baptist University expressed at the press conference: "I hope this series, *Hundreds about Traditional Chinese Medicine*, can become the encyclopedia for bencao knowledge. To allow more people to understand Chinese medicine in a simpler and more straightforward way, grasp basic Chinese medicine concepts, and learn about the rational science behind Chinese medicine application. Let Chinese medicine truly support our health."

A series of *Hundreds about Traditional Chinese Medicine* has 9 volumes in total and will be published through Chinese Medicine Publishing House. The volumes include *Illustrated Explanation of One Hundred Chinese Materia Medica*, *Illustrated Chinese Medicinal Formulae*, *One Hundred Proprietary Chinese Medicine*, and *Commonly Used Herbal Medicinal Plants in Lingnan Region*. Designed to be easily understood, the books describe identification methods, clinical applications, compatibility rules, and principles of



The June 2019 Newsletter of The GP-TCM Research Association A Special Edition in Honour of Professor Peter Hylands



Chinese medicine, culminating over 30 years of the author Zhao Zhongzhen's research. Parts of the series has been translated into English, German, etc. and has been distributed in various countries around the world.

Decades of Prof. Zhao's research and academic thought consolidated the *Traditional Chinese Medicine Culture Tree* exhibited at the event site. In the picture, Chinese medicine culture is compared to a deeply-rooted and fruit-laden tree. This traces the development of Chinese medicine culture in detail, detailing its tenacity and inheritance. The publication of this series exemplifies the spirit of the *Traditional Chinese Medicine Culture Tree* and furthers the legacy of Chinese medicine, growing the tree with every person who reads and learns.



5. HKBU's Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine now open for nominations. Established by the School of Chinese Medicine at Hong Kong Baptist University (HKBU) in 2011, the biennial Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine aims to recognise scientists and scholars with groundbreaking and internationally recognised achievements in advancing the internationalisation of Chinese medicine or Chinese medicine research. The Fifth Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine is now accepting nominations until 3 July 2019.

With its rapid development in different parts of the world, traditional Chinese medicine is playing an increasingly important role in the health care systems of many countries. HKBU therefore established the Award with a view to fostering the development as well as the internationalisation and modernisation of Chinese medicine for the benefit of the global community.

第五届张安德中医药国际贡献奖

传统中医药在世界各地急促发展，在多个国家的医疗保健制度中所扮演的角色日趋重要。香港浸会大学中医药学院自2011年起设立中医药国际贡献奖，目的是借表彰在推动中医药国际化或在中医药研究领域取得具突破性及获国际认可的成就的科学家和学者，促进中医药的现代化和国际化，同时亦推动中医药的发展，惠泽全球。

承蒙张安德慈善基金会慷慨捐款，香港浸会大学中医药学院得以设立此奖项，特以「张安德中医药国际贡献奖」命名，以彰善举。奖项每两年颁发一次，每届颁发奖项给一至二名学人。每届奖金总额为港币五十万元。

Nominations from individual scholars and local and nonlocal academic institutions such as universities and research institutes, or relevant departments/councils or academic

**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



societies at or above the provincial/ministerial level in Mainland China, are welcome.

A distinguished Panel of Adjudicators comprising renowned scholars and scientists in related fields will select the awardee(s) on the basis of the nominees' contributions to the Chinese medicine sector, achievements in advancing the internationalisation of Chinese medicine, and academic/professional influence in the international arena.

The Fifth Award carries a monetary prize of HK\$500,000. In the event of the conferment of more than one award, the prize money will be shared equally between the awardees. It is expected that the awardees will be selected by the end of 2019 and the award presentation cum lecture by the awardee(s) will be held in 2020.

Details of the Award and nomination form are available at <http://scm.hkbu.edu.hk/cm-award>. For enquiries, please contact the Award Secretariat (telephone: (852)3411-2077; fax: (852)3411-2902; email: scm@hkbu.edu.hk).

Media enquiries: Kathy Lau of HKBU School of Chinese Medicine (3411 2132) or Mavis Wong of Communication and Public Relations Office (3411 7964).



6. Latest research progresses at the Nobel-winning Tu Youyou Group on artemisinin-resistance and an artemisinin derivative for treatment of lupus.

https://mp.weixin.qq.com/s/FNKTYuGVrRFtfr_LsZVFsq (中文)

<https://page.om.qq.com/page/O5b0owhcG3QoJ10jqVGpz2Rg0> (中文)

https://www.nejm.org/doi/10.1056/NEJMp1901233?url_ver=Z39.88-2003&rfr

European Reports

1. On 22nd July, London will be the world's first National Park City.

<https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/london-national-park-city>

2. Petition: Keep the EU and UK collaborating in science

<https://www.openpetition.eu/petition/online/keep-the-eu-and-uk-collaborating-in-science-dealforscience>

3. World Report: UK and Germany dissociate from WHO drug pricing resolution.

Lancet 2019;393:2287. After the adoption of the resolution by consensus, Germany, the UK and Hungary went on the record saying they were dissociating themselves from the resolution, arguing it "was rushed through" and faulting the "serious governance concerns". Julian Braithwaite, the UK's ambassador to the UN in Geneva, declared: "...we believe that more time should have been allowed to enable all involved the time to carefully consider the potentially far-reaching implications of the resolutionThe UK is left with no option but to disassociate ourselves from this resolution."

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31329-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31329-7/fulltext)

4. Study shows that clinical research in England is 'thriving'. *European Pharmaceutical Review*. 20 May 2019. Research shows that the NHS continues to provide the optimum environment for the life sciences industry to deliver research. The study, by the National Institute for Health Research and covering the period April 2018 to March 2019, shows that across the board, clinical research in England is thriving.

<https://www.europeanpharmaceuticalreview.com/news/88533/clinical-research-england-thriving/?utm>

**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



5. Schiermeier Q. Why Europe is a great career destination for many. *Nature* 2019;569:589-591. Language, cultural differences and expense are common downsides, but there are opportunities to learn new techniques, work in diverse settings and polish confidence. <https://www.nature.com/articles/d41586-019-01570-3>

6. 3rd EU Health Programme – 2019 Call for Project Grants open. Two areas are covered:

- Rare disease registries for the European Reference Networks
- Stakeholder actions to implement the EU guidelines on prudent use of antimicrobials in humans

The submission opening is **21 May 2019** and the deadline for submission is **10 September 2019**.
http://ec.europa.eu/chafea/health/newsroom/news/14052019-01/index_en.htm

7. MSCA Innovative Training Networks 2019 Results Published. The European Commission has published the call results for the Marie Skłodowska-Curie Actions 2019 call for Innovative Training Networks (ITN). 128 projects are to be funded, involving 1,389 organisations in 56 countries. In total, 1,565 proposals were submitted to the 2019 ITN call, which results in an overall success rate of 8.2%.

https://ec.europa.eu/research/mariecurieactions/news/1800-phd-candidates-receive-funding_en

8. The European Commission has published its 2019 European Innovation Scoreboard, which provides a comparative analysis of innovation performance in EU countries, other European countries, and regional neighbours. It assesses relative strengths and weaknesses of national innovation systems and helps countries identify areas they need to address.

https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en

https://ec.europa.eu/growth/industry/innovation/facts-figures/regional_en

The country profile for the United Kingdom is available here:

<https://ec.europa.eu/docsroom/documents/35917>

9. The future of science in Europe. *Nature* 2019;569:469. On the eve of the European Union's parliamentary elections, a special issue examines the prospects for science across the region. <https://www.nature.com/articles/d41586-019-01540-9?WT>

10. EDITORIAL. What Europe is getting right about research. *Nature* 2019;569:455. The European Union's cross-border collaborative programmes offer lessons for the rest of the world.

<https://www.nature.com/articles/d41586-019-01561-4?WT>

Reports on China and China's International Cooperation



1. Waldman P. The U.S. Is Purging Chinese Cancer Researchers From Top Institutions. *Bloomberg Businessweek*. 13 June 2019. The NIH and the FBI are targeting ethnic Chinese scientists, including U.S. citizens, searching for a cancer cure. Here's the first account of what happened to Xifeng Wu.

<https://www.bloomberg.com/news/features/2019-06-13/the-u-s-is-purging-chinese-americans-from-top-cancer-research>

2. US-China Tensions Leave Some Researchers on Edge. *The Scientist* 2019 June 7. Changing policy has left academics uncertain about what is legal for foreign involvement in research, and increased hostility and bureaucracy have led students and scholars to seek opportunities elsewhere. <https://www.the-scientist.com/news-opinion/how-tensions-between-the-us-and-china-affect-scientists--65986>

3. Lee K. How China became a cigarette superpower. *Lancet* 393:2190-1. Among the most striking public health conundrums today is how little we know about the world's largest producer and

**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



consumer of cigarettes. China is home to an estimated third of the world's smokers—more than 300 million people who collectively consume around 40% of the world's cigarettes. The China National Tobacco Corporation and its administrative arm, the State Tobacco Monopoly Administration, supply an estimated 2600 billion cigarettes annually to meet this enormous demand. The rest are locally manufactured, imported, or smuggled international brands of leading transnational tobacco companies. The human cost in China from this vast tobacco market is an estimated 1.2 million deaths each year (about 12% of all deaths) and is predicted to rise to 2 million deaths by 2020...

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31187-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31187-0/fulltext)

4. Sachs J. China is not the source of our economic problems - corporate greed is. CNN May 27, 2019. China is not an enemy. It is a nation trying to raise its living standards through education, international trade, infrastructure investment, and improved technologies. In short, it is doing what any country should do when confronted with the historical reality of being poor and far behind more powerful countries. Yet the Trump administration is now aiming to stop China's development, which could prove to be disastrous for both the United States and the entire world...

<https://mp.weixin.qq.com/s/uYiYv-l65riOHMgsUAPog> (中文)

5. 2019 Call for Proposals Under the EU-China Co-funding Mechanism Launched. The Chinese Ministry of Science and Technology (MOST) has published its sixth call (first in 2019) for proposals under the EU-China Co-funding Mechanism for Research and Innovation to support Chinese researchers in Horizon 2020. For the period 2018-2020, MOST intends to reserve an annual budget of up to 200 Million RMB, and the EC intends to reserve a budget of up to 100 Million Euro in Horizon 2020 calls targeting cooperation with China.

http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020_localsupp_china_en.pdf

http://www.most.gov.cn/mostinfo/xinxifenlei/fgzc/gfxwj/gfxwj2019/201904/t20190423_146203.htm

6 As growth slows, the spectre of local-government debt looms once more. *Economist* 2019; 20th June. The central government urges spending, but regions are burdened by debt.

<https://www.economist.com/finance-and-economics/2019/06/22/as-growth-slows-the-spectre-of-local-government-debt-looms-once-more>

Acupuncture, TCM and Other Traditional Medicine

1. EDITORIAL. Break with tradition. *Nature* 2019;570:5. The World Health Organization's decision to include traditional Chinese medicine in its global diagnostic compendium could backfire. "Collecting more evidence on TCM requires sustained and rigorous basic and clinical research to separate out harmful practices, those that have promise and those that have merely a placebo effect. That work is all the more urgent now."

<https://www.nature.com/articles/d41586-019-01726-1>

2. Hunt K, Chinese medicine gains acceptance by WHO but it has many critics. CNN May 26, 2019. Herbal remedies have been used by healers around the world for centuries to prevent and treat disease. But it's in China that the practice has been most extensively used and documented. Advocates have campaigned to integrate Traditional Chinese Medicine into mainstream global health care and those long-standing TCM efforts have paid off: The World Health Assembly, the governing body of the World Health Organization, on Saturday formally approved the latest version of its influential global compendium, which includes a chapter on traditional medicine for the first time...

<https://edition.cnn.com/2019/05/24/health/traditional-chinese-medicine-who-controversy-intl/index.html>



**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



<https://udn.com/news/amp/story/6809/3833888> (中文)

3. Doan UV et al. Datura and Brugmansia plants related antimuscarinic toxicity: an analysis of poisoning cases reported to the Taiwan poison control center. Clin Toxicol (Phila). 2019;57:246-253.

<https://www.tandfonline.com/doi/full/10.1080/15563650.2018.1513527>

4. TCM hand diagnosis: <https://mp.weixin.qq.com/s/P8VmelzoSamBOxpcB0elxA> (中文)

5. TCM tongue diagnosis: <https://mp.weixin.qq.com/s/Su1BxCLaGG7I3Aljtx5lvw> (中文)
https://mp.weixin.qq.com/s/9cUKDTFFDvtXw4UT_4ZZUA (中文)

6. Han J et al. Systematic Overview of Aristolochic Acids: Nephrotoxicity, Carcinogenicity, and Underlying Mechanisms. Front. Pharmacol., 11 June 2019 | <https://doi.org/10.3389/fphar.2019.00648>.

Aristolochic acids (AAs) are a group of toxins commonly present in the plants of genus *Aristolochia* and *Asarum*, which are spread all over the world. Since the 1990s, AA-induced nephropathy (AAN) and upper tract urothelial carcinoma (UTUC) have been reported in many countries. The underlying mechanisms of AAN and AA-induced UTUC have been extensively investigated. AA-derived DNA adducts are recognized as specific biomarkers of AA exposure, and a mutational signature predominantly characterized by A→T transversions has been detected in AA-induced UTUC tumor tissues. In addition, various enzymes and organic anion transporters are involved in AA-induced adverse reactions. The progressive lesions and mutational events initiated by AAs are irreversible, and no effective therapeutic regimen for AAN and AA-induced UTUC has been established until now. Because of several warnings on the toxic effects of AAs by the US Food and Drug Administration and the regulatory authorities of some other countries, the sale and use of AA-containing products have been banned or restricted in most countries. However, AA-related adverse events still occur, especially in the Asian and Balkan regions. Therefore, the use of AA-containing herbal remedies and the consumption of food contaminated by AAs still carry high risk. More strict precautions should be taken to protect the public from AA exposure. <https://www.frontiersin.org/articles/10.3389/fphar.2019.00648/full>



7. Peng H et al. Shang Zhijun, a famous contemporary philologist in herbal literature research. Chinese Journal of Medical History. 2019;49:34-7. Mr. Shang is a famous herbalist in contemporary China and he devoted his life to the research of herbal literatures. During his lifetime, he has compiled and published a total 19 herbal literatures, 33 works of herbal literature, 268 academic papers, and more than 20 million words of handwritten herbal transcripts. In the field of herbal literature research, he has achieved fruitful results that are highly recognized by the academic communities. The research results can be roughly summarized as four aspects: the establishment of a two-line research network of herbal formulae, the research and collection of lost herbal works, the collation of the survived ancient herbal works and the textual research of famous herbal works. Many of his research results on herbal literature have been included in the modern higher education professional textbooks, and his outstanding academic achievements have opened the door for later scholars, influencing many scholars both home and abroad.

<http://zhyszz.yiigle.com/CN112155201901/1123346.jhtml> (中文)

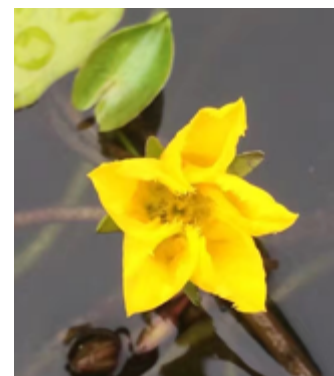
<https://mp.weixin.qq.com/s/2zvCPobeHTLtxTDUdE2QIQ> (中文)

**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



Omics in Progress

1. Liu X, et al. *Trans Effects on Gene Expression Can Drive Omnigenic Inheritance.* Cell. 2019;177:1022-1034.e6. Early genome-wide association studies (GWASs) led to the surprising discovery that, for typical complex traits, most of the heritability is due to huge numbers of common variants with tiny effect sizes. Previously, we argued that new models are needed to understand these patterns. Here, we provide a formal model in which genetic contributions to complex traits are partitioned into direct effects from core genes and indirect effects from peripheral genes acting in trans. We propose that most heritability is driven by weak trans-eQTL SNPs, whose effects are mediated through peripheral genes to impact the expression of core genes. In particular, if the core genes for a trait tend to be co-regulated, then the effects of peripheral variation can be amplified such that nearly all of the genetic variance is driven by weak trans effects. Thus, our model proposes a framework for understanding key features of the architecture of complex traits.



<https://www.sciencedirect.com/science/article/pii/S0092867419304003?via%3Dihub>

<https://mp.weixin.qq.com/s/7KmCPD0F46Rix9jdFjIKGg> (中文)

2. Shin JY, et al. *Epigenetic activation and memory at a TGFB2 enhancer in systemic sclerosis.* Sci Transl Med 2019;11: eaaw0790. Systemic sclerosis (SSc) is an autoimmune disease resulting in progressive fibrosis of connective tissue for which few therapies are available. Shin et al. found an enhancer whose epigenetic activation led to sustained up-regulation of TGFB2, but not other isoforms of TGFβ, in fibroblasts from patients with diffuse SSc. Constitutive activation of TGFβ2 signaling in patient fibroblasts resulted from NF-κB and BRD4 occupancy at the enhancer. Accordingly, treatment with the bromodomain inhibitor JQ1 repressed collagen synthesis and reversed fibrosis in patient skin explants. TGFβ2 signaling may thus be a key, potentially targetable mechanism of fibrosis in some patients with diffuse SSc.

<https://stm.sciencemag.org/content/scitransmed/11/497/eaaw0790.full.pdf>

3. Hunter DJ, Drazen JM. *Has the Genome Granted Our Wish Yet?* N Engl J Med 2019; 380:2391-2393. Eleven years ago, we suggested that physicians respond to a patient who asked whether to invest in a consumer genomewide genetic test by saying, “Not now — ask again in a few years.” Now that more than a few years have passed, would we still give the same advice? In fact, we would. <https://www.nejm.org/doi/full/10.1056/NEJMp1904511?query=TOC>

Other Recommended Readings

1. *Send thank-you notes to those who help you along the way.* Encouraging a culture of appreciation not only makes for a more pleasant working environment, it can also advance your career, says Abdullah Shihpar in this Nature Career article.

<https://www.nature.com/articles/d41586-019-01879-z>

2. *When English is not your mother tongue.* Drive for accessibility sees research relayed in regional tongues instead of English, says Chris Woolston & Joana Osório in a Nature Career special feature article, in which seven researchers discuss the challenges posed by science’s embrace of one global language.

<https://www.nature.com/articles/d41586-019-01797-0>

3. Christel M. *Pharm Exec's Top 50 Companies 2019.* Pharmaceutical Executive. 2019; 39(6). Pharm Exec’s annual listing of the top global biopharma players reveals some interesting

**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



maneuvering of ranks, as companies focus on diversification, big-brand expansions, and positioning a new wave of products to compete in an advancing but complex future treatment market

<http://www.pharmexec.com/pharm-execs-top-50-companies-2019>

<https://mp.weixin.qq.com/s/fQ3Z7Wm5WU3JZDgurcKX6w> (中文)

4. Capes-Davis A et al. Cell Lines as Biological Models: Practical Steps for More Reliable Research. *Chem Res Toxicol* 2019; online published on June 15, 2019. <https://doi.org/10.1021/acs.chemrestox.9b00215>. Research in toxicology relies on in vitro models such as cell lines. These living models are prone to change and may be described in publications with insufficient information or quality control testing. This article sets out recommendations to improve the reliability of cell-based research.

<https://pubs.acs.org/doi/10.1021/acs.chemrestox.9b00215?ai=84320>

5. Rissmann R, Szabadi E. Spotlight Commentary: How to prove pharmacology of immunomodulatory drugs in a phase 1 trial? *Br J Clin Pharmacol.* 2019 Apr 25. doi: 10.1111/bcp.13928. [Epub ahead of print]

<https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1111/bcp.13928>

6. Akst J. Plant Species Lost at Alarming Rate. *The Scientist* 2019 June 11. The most extensive global survey of plant extinctions to date reveals cause for concern. The original report in *Nature Ecology & Evolution* says: "Most people can name a mammal or bird that has become extinct in recent centuries, but few can name a recently extinct plant. We present a comprehensive, global analysis of modern extinction in plants. Almost 600 species have become extinct, at a higher rate than background extinction, but almost as many have been erroneously declared extinct and then been rediscovered. Reports of extinction on islands, in the tropics and of shrubs, trees or species with narrow ranges are least likely to be refuted by rediscovery. Plant extinctions endanger other organisms, ecosystems and human well-being, and must be understood for effective conservation planning." <https://www.nature.com/articles/s41559-019-0906-2>

<https://www.the-scientist.com/news-opinion/study--plant-species-lost-at-alarming-rate-65995>

7. EDITORIAL. ICD-11. *Lancet* 2019;2393:2275. The International Classification of Diseases (ICD) is a health statistics coding tool that aims to describe an entity that is challenging to quantify and even more problematic to standardise—the human condition. The history of ICD dates back to 16th century England where deaths from distinctly medieval causes (scurvy, leprosy, and plague) were announced by the London Bills of Mortality on a weekly basis...Another new chapter focuses on traditional medicine, commonly used across many countries, including China, Japan, and the Republic of Korea. It is right that traditional medicine services are brought within the perimeter of mainstream medicine, although WHO's Director-General has made clear this chapter "does not refer to—nor endorse" any specific form of traditional medicine treatment.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31205-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31205-X/fulltext)

8. EDITORIAL. Plan S: The final cut. *Lancet* 2019;2393:2276. A consortium of research funders, Coalition S, has published its revised recommendations for accelerating the transition to open access for scientific publications. The fundamental principles of Plan S remain intact. No scholarly publication should be locked behind a paywall. Open access should be immediate, without embargoes. The preferred Creative Commons licence is CC BY. Funders will support open access fees at reasonable levels. Funders will not pay for publication in hybrid journals, unless they are part of transformative arrangements with clearly defined open access endpoints. The timeline for implementation has been extended by one year to 2021...We welcome the proposal from Coalition S regarding publication in



**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



hybrid journals (such as *The Lancet*)—namely, “the content to be made freely available at the point of publication either in the form of the Author-Accepted Manuscript (AAM) or Version of Record (VoR)”. <https://www.coalition-s.org/rationale-for-the-revisions/>
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31322-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31322-4/fulltext)

9. With No Open Access Deal, UC Breaks with Elsevier. After negotiating for eight months, the University of California becomes one of the first research institutions in the US to stop paying for access to the publisher’s journals.

<https://www.the-scientist.com/news-opinion/with-no-open-access-deal--uc-breaks-with-elsevier--65554>

10. Call for Opinions on Real-World Evidence-based Drug R&D by China’s Center for Drug Evaluation, National Medicinal Product Administration published on 29th May 2019.

<http://www.cde.org.cn/news.do?method=viewInfoCommon&id=314865> (中文)

<https://mp.weixin.qq.com/s/jZ-Yvg747i-XXqsKtPHTVw> (中文)

11. How to write plant names correctly?

https://mp.weixin.qq.com/s/0nsy3Lq_RKQFYBAan5p4HQ (中文)

<https://www.sciencedirect.com/science/article/pii/S0378874113009021?via%3Dihub>

12. Raber I et al. The rise and fall of aspirin in the primary prevention of cardiovascular disease. *Lancet* 2019;393:2155-67. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)30541-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30541-0/fulltext)

13. The Web of Science Group Releases 2019 Journal Citation Reports

<https://clarivate.com/blog/news/the-web-of-science-group%E2%80%AFreleases-2019-journal-citation-reports-revealing-the-worlds-most-influential-journals%E2%80%AF/>

Meeting Reports

1. The 5th World TCM Summer Summit was opened in Xi’an, China on 15th June 2019. Under the theme “Promoting Silk-road Spirits, Spreading TCM Culture, the meeting attracted more than 800 delegates from 30 countries.

<https://mp.weixin.qq.com/s/oJhQ8f27K9YNAN4ykj-8PA>



The June 2019 Newsletter of The GP-TCM Research Association

A Special Edition in Honour of Professor Peter Hylands



2. The 19th International Congress of the International Society of Ethnopharmacology (ISE) was successfully held in Technische Universität Dresden, Dresden, Germany, June 12th to 14th 2019. In celebration of the 50th anniversary of the birth of Ethnopharmacology and 40th anniversary of the *Journal of Ethnopharmacology*, the conference brought together scientists from all over the world to discuss medicinal uses of plants in traditional societies. Over the span of three days, more than 50 speakers shared their research and insights. The topics ranged from neglected diseases to commercial globalization of traditional medicinal knowledge. Prof. Michael Heinrich of University College London School of Pharmacy, UK, began his presentation by posing a question: *What is the greatest challenge facing ethnopharmacology?* While celebrating the first fifty years, there needs to be an understanding of the challenges facing the next fifty. Prof. Heinrich then gave a quick overview of the past 50 years, giving historical context to the progress of ethnopharmacology, as well as an overview of the shift in research focuses within the *Journal of Ethnopharmacology* over the past 40 years. The next congress in 2020 will be held in Thessaloniki, Greece, and the venue for the 2021 congress was decided. The 2021 congress will be held in Taiwan at the China Medical University Campus in Taichung City. The dates are still provisional, but the focus and object is set to be “Ethnopharmacology: Translating and Integrating Traditional Medicine into Clinical Practice”.

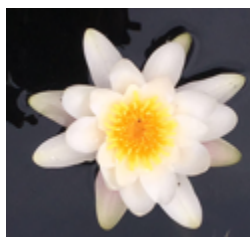


Invitation from Future Meetings

1. The 18th Meeting of Consortium for Globalization of Chinese Medicine (CGCM) will be held in Shanghai on August 8 - 10, 2019, the Meeting is organized by Shanghai University of Traditional Chinese Medicine, Shanghai. It provides a platform for regulatory-industrial-academic exchanges and potential research collaborations on various frontiers of TCM among worldwide CGCM members and guests. Please submit your abstract and register online by visiting the designated web site for 2019 CGCM: <http://www.cgcm2019.com/> Deadline for abstract submission for 2019 CGCM meeting has been extended to **June 30, 2019**. To support postgraduates to attend the 18th CGCM Meeting, up to **50 Travel Grants** are now open for application. Should you have any enquiries, please feel free to contact Meeting Secretariat by

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**The June 2019 Newsletter of
The GP-TCM Research Association
A Special Edition in Honour of Professor Peter Hylands**



the following emails. **Registration:** registration@cgcm2019.com;

Abstract

[:centraloffice@tcmedicine.org](mailto:centraloffice@tcmedicine.org);

Accommodation: hotel@cgcm2019.com

2. **2019 *The Lancet*–CAMS Health Conference: a call for abstracts.** The Chinese Academy of Medical Sciences (CAMS) and the *Lancet* family of journals invite abstract submissions for the 2019 *The Lancet*–CAMS Health Conference, to be held on Oct 19–20, 2019, in Chengdu, China. West China

Hospital, Sichuan University, will be the local co-organiser with CAMS in Chengdu. 2019 will mark the fifth collaborative conference between CAMS and the *Lancet* family of journals to support medical research in China.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)33176-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)33176-3/fulltext)

3. **The 16th World Congress of Chinese Medicine will be held in Budapest, Hungary, in November 2019:** World Congress of Chinese Medicine (WCCM), organized by World Federation of Chinese Medicine Societies (WFCMS), is a global academic event in the field of traditional Chinese medicine. It is convened annually and has been successfully organized 13 times in different countries. The 16th WCCM under the theme of the “Belt & Road TCM Academic Communications” will be held in Budapest, Hungary in November, 2019.

<https://www.medmeeting.org/MiniSiteEn/index/7888>

<https://a.eqxiu.com/s/1BpDHw7h> (中文)

4. **The 8th GP-TCM RA Annual Meeting will be held in Vytautas Magnus University, Kaunas, Lithuania.** More information will be published in the near future.

<https://www.vdu.lt/en/vmu-will-host-the-annual-meeting-of-traditional-chinese-medicine/>

5. **The 6th World TCM Summer Summit will be hosted by Hong Kong Registered Chinese Medicine Practitioners Association (HKRCMP).** For an introduction of HKRCMP and TCM in Hong Kong, please watch the film below.

https://drive.google.com/file/d/1KbPcYUMwS88YepXulryvfD_RPmPkyx7i/view

Invitation from Journals

1. **World Journal of Traditional Chinese Medicine: Sincere invitation for submissions.** World Journal of Traditional Chinese Medicine (ISSN 2311-8571, CN10-1395/R) is sponsored by WFCMS, and is the official journal of GP-TCM RA. WJTCM dedicates to report the research progress in clinical efficacy and action mechanism of Traditional Chinese Medicine, Chinese materia medica, acupuncture and moxibustion to doctors and biomedical researchers around the world, so as to provide new thoughts and methods for solving complex diseases and knotty diseases. To submit your manuscripts, or to read articles in the past issues, please visit: <http://www.wjtcn.net>

2. **Health-care reform in China: a *Lancet* call for papers.**

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)33054-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)33054-X/fulltext)

Sounding Board: This column is reserved for comments, personal views, proposals for collaborations or any other features from our readers across the world. We look forward to hearing from you! Please get in touch with your editors: Dr Qihe Xu (qihe.xu@kcl.ac.uk), Prof Pierre Duez (pierre.duez@umons.ac.be) and Prof Yuan Shiun Chang (yschang0404@gmail.com).

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Archives (2008-2019): www.gp-tcm.org/news-list/