

The August 2019 Newsletter of The GP-TCM Research Association



Editorials



Let Traditional Wisdom Inspire: A Nephrologist's View



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Acute kidney injury (AKI) and chronic kidney disease (CKD) are interconnected conditions. They cause end-stage kidney failure, which needs expensive and painful treatments such as dialysis and renal transplantation. The incidence of AKI is on the rise and mortality associated with AKI is high¹. Data from the USA, for instance, indicate that burden of CKD increased 53% from 2002 to 2016, outpacing any other noncommunicable diseases² and by 2030, the burden of end-stage kidney disease will once again increase 29-68%³. Indeed, CKD is predicted to become a top-5 cause of mortality by 2040 worldwide⁴.

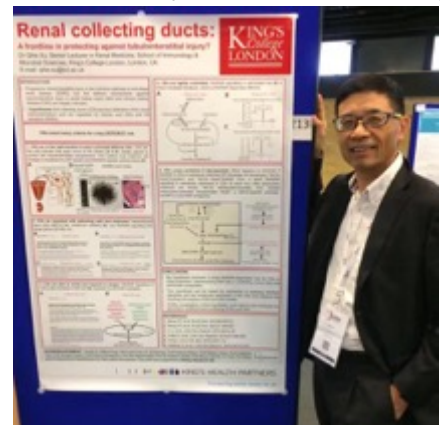
As a nephrologist and a renal scientist for thirty years, I have been frustrated by the fact that existing strategies are failing to prevent AKI, to stop AKI transition to CKD and to prevent CKD progression to end-stage kidney disease.

"Modern medicine can learn from traditional practices", concluded the FP7 GP-TCM consortium, EU's first Coordination Action on modernisation of TCM⁵. As the PI of the project, I have been invited to contribute a TCM-inspired Special Article to *Nephron*⁶, in which I propose that innovation in nephrology can be catalysed by the wisdom from *Yellow Emperor's Inner Canon*: "When there is sufficient protective *qi* inside, pathogenic factors have no way to hurt the body; when pathogenic factors cause damage, the internal *qi* must be deficient." Herein, *qi* means the internal mechanisms of the body that defend against attack⁶.

I propose that deficient understanding of renal defence mechanisms is a key blind spot in modern nephrology and the collecting duct meets many criteria as a critical renal protector against injury: It's ideally located to protect the entire kidney; it has specialised defending cells, molecules and signalling; it senses and responds to danger; and it appears to be a convergence point of regulation by mediators of AKI and CKD. Hence, AKI/CKD must be considered in light of not only attacks to nephrons, but also changes of defence mechanisms in the collecting duct⁶. To protect endogenous defence and to normalise repressed defence can then be developed as novel strategies for prevention and treatment of AKI/CKD, as the Nobel-Prize winning cancer immunotherapies do⁷.

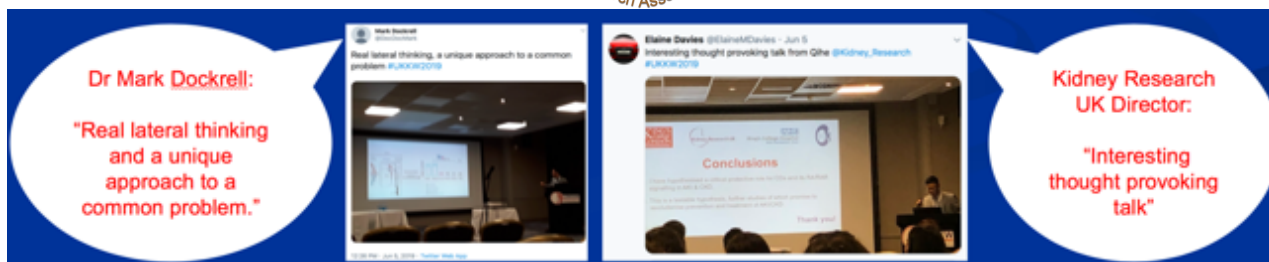
Nephron is the original journal of nephrology that has been published continuously ever since 1964 and was the original official journal the International Society of Nephrology⁸. An invited TCM-inspired Special Article by the journal indicates that, if properly communicated, a TCM-inspired innovation can be welcomed internationally and this, in turn, may make a special contribution in forging tomorrow's medicine.

After publishing my hypothesis as a poster at the UK Kidney Week (UKKW) 2018, the hypothesis was chosen as the theme of a standalone 60-minute session at the UKKW June 2019 in Brighton. Commenting on my talk, Mrs Elaine Davies, Research Director of Kidney Research UK, twitted: "Interesting thought, provoking talk", followed by Dr Mark Dockrell, a renal scientist: "Real lateral thinking and a unique approach to a common problem".



Qihe first published his hypothesis as a poster at UKKW2018

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The Xu's hypothesis was well received at the UKKW2019 in Brighton

"A hypothesis is only as good as the experiments you can design to test it," advised Prof. Sir Robert Lechler, Senior Vice-President of King's College London and President of the Academy of Medical Sciences. I have designed a series of exciting proof-of-concept and translational studies and devised novel tools to enable these experiments⁶. I cordially invite talented students and fellows to join me at King's College London in an epic effort to develop novel diagnosis measures on the defending capacity of the kidney and novel, TCM-inspired, science-based means to "tonify" the kidney so as to prevent and treat AKI and CKD.

What are the implications of my hypothesis to future R&D of TCM and Chinese materia medica? Despite differences between the function-oriented concept of "kidney" in TCM and the anatomical kidney, many functions of the TCM "kidney" have been scientifically proven as functions of the anatomical kidney: regulating water homeostasis, governing the bone through modulating vitamin D activation, controlling hematopoiesis through producing erythropoietin and serving as "the fountain of youth" by producing the anti-ageing hormone Klotho. What are the impacts of "kidney"-tonifying TCM drugs on functions of the anatomical kidney? Can some "kidney"-tonifying TCM drugs boost defence of the anatomical kidney and thus play important roles in AKI/CKD prevention and treatment?

To the wider biomedical and pharmaceutical community, what are the implications of the hypothesis? "Given that non-immune defence mechanisms are generally overlooked in modern medicine, it is hoped that this Special Article will inspire not only nephrologists, but also other physicians and medical scientists alike, to perceive health and disease in light of the balance and imbalance between attack and defence," as I concluded in the *Nephron* article.



The *Nephron* Special Article and this editorial are dedicated to the late Prof. Peter Hylands, co-founder of King's Centre for Integrative Chinese Medicine and the founding Treasurer of GP-TCM RA, for "his irreplaceable mentorship, invaluable collaboration and inspirational encouragement and support"⁶. I had talked with Peter for a number of times on this hypothesis and he had always been highly supportive of publishing it to enhance awareness, arouse interest and build collaboration. A Memorial in celebration of Peter's great academic and non-academic contributions will be held at King's College London on 9th October. Should you wish to attend, please do let me know.

Finally, to read the *Nephron* paper, please visit: <https://www.karger.com/Article/FullText/502452>

References:

1. Mehta RL, et al. *Lancet* 2015;385:2616-2643
2. Bowe B, et al. *JAMA Netw Open*. 2018;1: e184412
3. McCullough KP et al. *J Am Soc Nephrol* 2019;30:127-135
4. Foreman KJ, et al. *Lancet* 2018;392:2052-2090
5. <https://cordis.europa.eu/project/rcn/90960/brief/en>
6. Xu Q. *Nephron* 2019, DOI: 10.1159/000502452.
7. Sanmamed MF, Chen L. *Cell* 2018;175:313-26
8. Fine LG. *Nephron Exp Nephrol* 2003;93:e1-e2

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Special Features

- 1. Burns C. Peter Hylands (1946–2019).** *The Pharmaceutical Journal*, 23 July 2019, Vol 303, No 7927, online | DOI: 10.1211/PJ.2019.20206809. As the first pharmaceutical scientist member of the Royal Pharmaceutical Society, Peter Hylands' respected and varied career specialised in natural products research... Hylands had a deep interest in traditional Chinese medicine, working with colleagues at KCL's Centre for Integrative Chinese Medicine and others as part of a project to investigate the constituents of Chinese medicines. As part of this, he led a large piece of work investigating the use of "omics" in Chinese medicine...



<https://www.pharmaceutical-journal.com/opinion/peter-hylands-19462019/20206809.article>

- 2. Appointment of new Treasurer**
Since our treasurer Prof. Peter Hylands passed away in June this year, the BoD has been actively looking for a replacement. We are pleased to announce that the BoD has recently approved for our Past-President Dr. Tai-Ping Fan to take up the role of the Treasurer with immediate effect. We thank Tai-Ping for his continuous commitment and support towards our Association.



Aiping Lu and Clara Lau, President and Secretary-General of GP-TCM RA

New Treasurer's introduction can be found here:

<http://www.gp-tcm.org/about/bod-members/>

- 3. Warmest congratulations go to Prof. Rudolf Bauer, Founding President and BoD Member of the GP-TCM RA for being awarded The 2019 ASP Varro Tyler prize.** Rudi, Professor of pharmacognosy at University of Graz, Austria, received this prestigious award at the 2019 annual meeting of the American Society of Pharmacognosy in Madison, WI. His award lecture was entitled *The Echinacea Story: A Scientific Life Dedicated to a North American Medicinal Plant*.



- 4. Dr Feng Yibin Group from the LKS Faculty of Medicine, The University of Hong Kong reported a new mechanism of obesity-induced insulin resistance and uncovered veil of anti-diabetic Miao medicine.** The article entitled *SBP2 deficiency in adipose tissue macrophages drives insulin resistance in obesity* has been published in *Science Advances* (Aug, 2019)

<https://advances.sciencemag.org/content/5/8/eaav0198>

https://www.hku.hk/press/news_detail_19793.html

https://www.toutiao.com/i6726836424722612748/?tt_from=weixin&utm_ (中文)



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5. The 18th Meeting of The Consortium for Globalization of Chinese Medicine (CGCM)



Written by Prof. Clara Bik-San Lau, Deputy Secretary General and Executive Council Member of CGCM; part of photos were provided by Prof Rudolf Bauer. Associate Director of the Institute of Chinese Medicine and State Key Laboratory of Research on Bioactivities and Clinical Applications of Medicinal Plants, The Chinese University of Hong Kong
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Every August, one of the important TCM event that one should not miss is the Annual Meeting of The Consortium for Globalization of Chinese Medicine (CGCM). This year, the 18th Meeting of CGCM is hosted by Shanghai University of Traditional Chinese Medicine, and the 3-days (8-10 August) meeting took place at Crowne Plaza Shanghai Pujiang, Shanghai.

Over 420 participants, including 61 Travel Grant awardees, from different parts of the world (Australia, Austria, Beijing, Hong Kong, Japan, Korea, Macau, Malaysia, Netherlands, Shanghai, Taiwan, Thailand, United Kingdom, USA, etc.) all attended the meeting, together with 4 exhibitors. The Meeting started with the official Opening Ceremony, followed by Opening Remarks on “Prospect of the Role and What It Takes to Meet Unmet Future Clinical Needs Based on Traditional Medicine” chaired by Prof. Kaixian Chen of Shanghai University of Traditional Chinese Medicine and Prof. Ping-Chung Leung of The Chinese University of Hong Kong.

Unlike previous years’ meetings, special sessions were scheduled in the morning straight after the Opening Remarks, focusing on the situation and prospect of i) TCM research & development in Shanghai, and ii) research and development of TCM resources in Southwest region, as well as discussion on a proposal to initiate worldwide examination center of herb identity and safety, while the 8 Regional Reports were presented by various regional coordinators in the Day-1 afternoon.



Prof. Jianguang Xu of Shanghai University of Traditional Chinese Medicine (left), Prof. Ping-Chung Leung of The Chinese University of Hong Kong (middle), and Prof. Yung-Chi Cheng of Yale University, the chairman of CGCM (right) gave opening remarks.



Honorable guests officiated the Opening Ceremony of the 18th Meeting of CGCM

Same as previous meetings, different topics running in 3 parallel sessions were scheduled from the afternoon of Day 1 to the morning of Day 3. These topics include Regulation and Interregional Collaborations in Academia, Government and Industry, Natural Products (Biological Activity; Cancer, Virus and Immunoregulation; Identification, Biotransformation, Metabolism), Polychemical Activities and Mechanism Study (Cancer, Immunomodulation and Inflammation; Neurological Diseases; Metabolic, Renal and Cardiovascular Diseases), Clinical Investigation, Resources (Cultivation and Manufacture; Quality Control), Acupuncture and Massage, Bioinformatics: “Omics” Approach and Data Analysis, TCM Diagnosis and Preventive Medicine. Among these topics, there were more than 350 submitted abstracts for poster presentations, and some of them have been selected by the panel for brief oral presentations and discussion.

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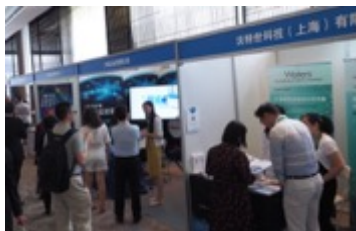


Photo of the exhibition

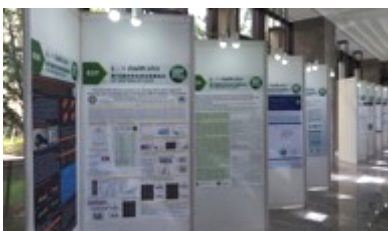


Photo taken at the posters

As usual, the Council lunch meeting was scheduled on Day 1, continued on Day 2, during which various issues regarding the Consortium (including financial position of the Foundation, membership updates and new membership applications, ways forward, etc.) have been thoroughly discussed.



Lunch meeting of Council members

The CGCM banquet is always one of the highlights of the Meeting, with delicious local food and wine, musical/dance performances and martial arts by the local students, and social gatherings, followed by the group singing by our Chairman and CGCM members as a happy finale of the evening.



Group photo taken at the CGCM banquet

The important issues and discussion highlights of the Meeting were summarized on the afternoon of Day 3 during the Summary Reports of Discussion Sessions chaired by the Secretary-General and Deputy Secretary-General, Prof. Lixing Lao and Prof. Clara Lau, respectively. All these reports can be found on the CGCM website. The Meeting concluded with the Closed-Door Session during which the potential sites of the next CGCM Meeting have been discussed. Despite the typhoon approaching Shanghai, some of the members stayed on to join the visit to the Shanghai Museum of TCM and Innovation Center for TCM in the campus of Shanghai University of TCM.

For more details, please kindly refer to the CGCM 2019 website: <http://www.cgcm2019.com/web/en/> and CGCM website: <http://www.tcmmedicine.org/en/default.asp>



Visit to the Shanghai Museum of TCM (Left); group photo of Professors Jianguang Xu, Yungchi Cheng, Rudolf Bauer and Kaixian Chen (Middle); and group photo of past and current GP-TCM RA BoD members and IG Chairs who attended the meeting (Right)

6. TCM Modernisation & Internationalisation: Start from the Greater Bay Area. Reported by Dr Ning Wang, University of Hong Kong.



The opening ceremony was officiated by Prof. Hon Sophia Chan Siu Chee, JP, Secretary for Food and Health, the Government of the Hong Kong SAR; Yang Sheng, National Medical Products Administration; Margaret Fong, Executive Director, HKTDIC; Vivien Chou, President, Modernized Chinese Medicine International Association; Harry Yeung, Founding Council Member, Modernized Chinese Medicine International Association and Co-Chairman, ICMCM 2019; Professor Yibin Feng, Associate Director of School of Chinese Medicine, University of Hong Kong, and Co-Chairman, ICMCM 2019 and industry representatives.

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Co-Chairman and the Keynote Speaker Dr. Yibin Feng spoke on "Future of Herbal Medicine and Drug Discovery"

On August 15-16, 2019, the 15th International Conference of Modernization of Chinese Medicine and Health Products was successfully held at the Hong Kong Convention and Exhibition Centre in Hong Kong S.A.R. This event was co-organized by Hong Kong Trade Development Council (HKTDC) and Modernized Chinese Medicine International Association Ltd (MCMIA), with an attendance of over 200 academic and industrial professionals of healthcare.

The open ceremony was officiated by guests of honor and industry representatives. The scientific programme was led by the keynote speech delivered by Mr Yang Sheng,

Associate Director of National Medical Products Administration. Mr Yang spoke on "Overview and recent development of regulatory issues on Chinese Medicine products in China", where he introduced the recent government effort on issuing regulation and rules to supervise the research & development of Chinese Medicine-related products in China. At the second keynote speech, Dr Yibin Feng, Associate Professor and Associate Director (Education), School of Chinese Medicine, The University of Hong Kong discussed on the topic "Future of Herbal Medicine and Drug Discovery". As the co-chairperson of the Organizing and Executive Committee of the conference, he also welcomed all the speakers and audience to attend the conference.

The two-day conference continued with 4 parallel sessions with speakers Mainland China, Japan, Korea, Macau S.A.R. and Hong Kong S.A.R.. Academics and industry shared their experience in the research and practice about internationalization and modernization of Chinese Medicine. An adjunct symposium, The 15th International Postgraduate Symposium on Chinese Medicine, was particularly held to foster young talents in Chinese Medicine research.

For photos of the symposium, please visit:

http://exh.hktdc.com/2019/efairdaily/multi_fair_aug/day2.html

For media enquiry, please contact: Dr. Feng Yibin (yfeng@hku.hk)

7. The Experimental Pharmacology Branch of the Chinese Society of Chinese Medicine held its 15th Academic Meeting in Guangzhou 20-22 August 2019. At the meeting, Professor Hongxi Xu (Shanghai) was re-elected Chairman of the Branch; Prof. Hong Nie (Guangzhou), Prof. Xuanbin Wang (Shiyan) and a few other experts were elected Vice-Chairpersons. The meeting received 230 abstracts and more than posters showcased achievements from young investigators in the field. Invited speakers include Prof Yung-Chi Cheng (New Haven), Prof. Xiaohu Xiao (Beijing), Prof. Shilin Chen (Beijing), Prof. Xiaoxin Zhu (Beijing), Prof. Ping Liu (Beijing), Prof. Na Lin (Beijing), Prof. Kan Ding (Shanghai), Prof Hongxi Xu (Shanghai), Prof Ronghua Zhang (Guangzhou), Prof Peiqing Liu (Guangzhou), Prof. Hong Nie (Guangzhou).



http://tech.southcn.com/t/2019-08/22/content_188748688.htm (中文)

www.gp-tcm.org/news-list/

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8. Prof. Zhongzhen Zhao's Travel Notes: Yunnan, Qinghai and Tibet (Written by Zhongzhen Zhao; translated by Elizabeth Qi; adapted and edited by the Editor) On July 18, 2019, the 7th International Forum of Chinese Medicine Western Learning and the World Herbs Tour Exhibition of the Belt and Road World were held at Yunnan University of TCM.

An Investigation of Yunnan Do you recognize 早虫 (ga za)? This is the Cantonese diction for 蟑螂 or cockroach. Cockroaches are generally not welcomed in any household, and there is a variety of insecticides available to get rid of cockroaches. Even so, cockroaches thrive everywhere and in every environment. Cockroaches have another nickname *Xiaoqiang*, or the little strong one, which



originated from a line in a popular Hong Kong movie starring Stephen Chow. Since the movie release in 1993, the nickname stuck humorously and in exasperation.

In the *Compendium of Materia Medica* (*Bencao gangmu*),

cockroaches, aka 大蜚蠊 (*dà fēi lián*), are recorded to increase blood circulation. Cockroaches have existed on this planet far earlier than humans have, and they're considered the most resilient species. Arriving in Yunnan Tengchong, Prof Zhongzhen Zhao of Hong Kong Baptist University visited a cockroach farm and even snacked on some crispy fried cockroaches. These fried treats were crispy on the outside and tender inside; much tastier than the fresh cockroaches eaten in certain parts of the world. As the saying goes, everything can be a treasure, and it is very applicable here. Cockroaches are the main ingredient in which *Xinmailong* (心脉隆) Injections were developed from; a benefit to humanity that most wouldn't have thought of! Insect-based Chinese medicine is not well researched, and animal-based medicinals are also an area of further research and development.

Yunnan: Investigation of Sanqi. Ginseng and Sanqi (*Notoginseng Radix et Rhizoma*) are both of the *Araliaceae* family; one is distributed in the northern part of the motherland while the other is stationed in the southwestern border, respectively. Natives and those familiar with herbs have also given them the names: Northern Ginseng and Southern Sanqi.

In the realm of traditional Chinese medicine, sanqi has risen in popularity. In history, the recorded use of sanqi has been relatively short. The first records were found in the Ming Dynasty in *Jin Ping Mei*, which recorded medicinals used by ethnic groups such as the Yi people. Sanqi gradually spread with migration, civilian communication, military expeditions, and merchant trading.



Bencao Gangmu, written by Li Shizhen in the Ming Dynasty, recorded sanqi as a treatment to all blood illnesses. Zhao Xuemin of the

Qing Dynasty also recorded in *Bencao Gangmu Shiyi* that sanqi is the best blood supplementing medicinal. After this, sanqi became the go to medicinal for all blood-related illness from surgery to blood stasis and circulation. With its remarkable efficacy, sanqi became the golden standard for blood conditions.

Sanqi, also known as Tianqi, was historically produced in the area of Tianzhou, Guangxi with a cultivation history of hundreds of years. In recent years, the largest production area has shifted to Wenshan, Yunnan, and they've realized a complete system of scientific research and standard management for sanqi.

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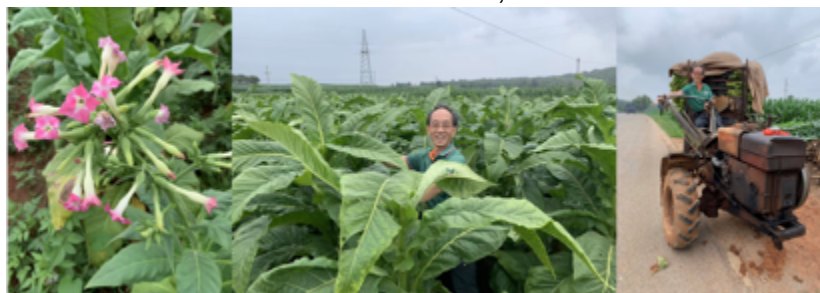
Sanqi is a very particular plant, choosing to grow only with specific soil qualifications, climate, and vegetation. Only Yunnan and Guangxi provinces provide the distinct environment required for its growth, and historically, medicine men have traveled to both these provinces in search of sanqi. The cultivation for sanqi are the same as ginseng, requiring timed relocation and other well-developed cultivation techniques.

In Chinese, sanqi can also be literally translated into 'three seven'. With these two numbers in mind, here are some interest factoids that relate to the name (consulted with Dr. Xin): The most suitable environment is at an altitude of 2100 meters with a temperature between 7 and 30 degrees Celsius. The best harvesting time is after 3 years. Three-year-old sanqi generally has 3 to 5 palm-shaped compound leaves with 7 small leaves each. Sanqi grows best with 3 part sun and 7 part shade.

Nowadays, the demand for sanqi both in China and worldwide can no longer be met simply by one farmer or one village of farmers. Currently, the cultivation scale of sanqi in Yunnan is approximately 560,000 square meters with annual output at about 25,000 tons.

The entire plant is a treasure from its stems to leaves to flowers. Sanqi has great potential in solving issues in medicine with further research and development.

Tobacco in Yunnan. In current times, tobacco is a well-known and easily recognized plant around



the world, regardless if one partakes in smoking or not. When Columbus discovered the New World 600 years ago, can you imagine his curiosity when he saw a native swallowing clouds and what sort of spark that would lead? From South America, tobacco was brought back to Spain and widely

gained popularity in Europe. As a common plant to grow in the colonies, tobacco slowly spread all over the world. Even though Li Shizhen did not record tobacco in 1593, *Diannan Bencao* by Lanmao in around 1436 had recorded a description of "wild smoke": astringent in taste, numbing, and warm in property; warned of very poisonous nature; treated skin papules caused by heat toxins, ulcers all over the back...only treatable with this medicine.

Nicotiana tabacum L. first spread to Luzon (present-day Philippines) and was officially introduced to the Ming Dynasty in 1575. Italian missionary Matteo Ricci brought snuff to Guangdong in 1579 and gradually became a fashion item. Prof Zhao said that he had not done in-depth research on the specific tobacco mentioned in *Diannan Bencao* so it may be a different species, and there are various opinions on this matter.

While inspecting the fields of Yunnan, the red soil in the area is indeed suitable for growing tobacco. The tobacco leaves were large with sticky glandular hairs. Other than just smoking, the entire plant can also be used as an insecticide. In medicine, tobacco can often be used to numb pain, promote sweating, sedate, or induce vomiting.

The history of tobacco is the human exploration of nature. There may be many more harms or benefits to be found in tobacco, but for now, the road to a complete understanding is still one to walk.



Another significant gain from Yunnan, Prof Zhao has identified the source of *Diannan Bencao*. After the publication, only manuscripts existed, and not until the Guang Xu period (1875-1908) were there printed versions. At the time, the carvings on the printing block were incorrect, and the book title became *Diannan Caoben*. This wasn't corrected until a later time. After reading through the Guang Xu period print, Prof Zhao found that it was indeed the *Diannan Bencao*.

The Silk Road: Qinghai (Part 1): Qinghai is the source of the Three Rivers: Yangtze River, Yellow River, and Lancang River. This place is also known as the water tower of Asia and the mother river of the Chinese nation.

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Since ancient times Xining has been a battleground for military strategists. The unique geographical position bestowed Xining as an important point of exchange for cultural and commercial trade between East and West, linking the East and West.

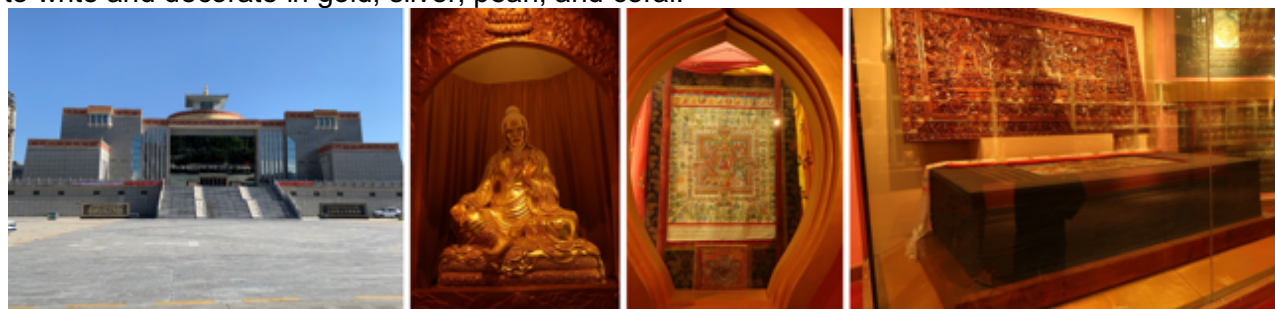
With an altitude of 3,500 meters, Riyue Mountain is located in the southwest of Wuyuan County. Historically, the Silk Road Qinghai portion, Tangfan Ancient Road, and the Ancient Tea Horse Road all passed through the mountains that separated ancient Tibet and Tang Dynasty. Even today, Riyue Mountain is considered the gateway to Qinghai.

In the Tang Dynasty, Princess Wencheng travelled Tibet to marry King Songtsen Gampo, and she is remembered through fond legends and stories. There are many monuments dedicated to Princess Wencheng, such as statues, the Princess Temple, and the Looking Back Stone.



The Silk Road: Qinghai (Part 2): The Qinghai Tibetan Medicine and Culture Museum officially opened to the public in 2006. The building is magnificent and divided into two museums with nine categories, including the history of Tibetan medicine, Mantang, and Tibetan medicine specimens.

Sibu Yidian (四部医典) was written in the 8th century AD by the famous Tibetan medical doctor Yuthok Yontan Gonpo. In total, there are four parts to the book with 156 chapters. In 1546, the *Sibu Yidian* hit the printing press for the first time. Most of classic Tibetan medicinal texts were hand-copied, carved into wood, and even handwritten in gold ink. The *Sibu Yidian* exhibited in the museum weighed 1.5 tons. The book was crafted by famous artists that used traditional Tibetan techniques to write and decorate in gold, silver, pearl, and coral.



The fourth floor of the South Hall was all Tibetan art and paintings with a 618-meter-long and 1,500 square meter color drawing, using natural pigments and technical skill. This picture depicted the Tibetan view of the universe with their origin story for humanity as well as Tibetan history, religion, medicine, art, folk custom, etc. This painting is an encyclopedia of Tibetan culture of impressive artistry and size that it definitely should be included in the Guinness Book of World Records.

Trip to Tibet

The Qinghai-Tibet high-speed railway seems to speed along a road built in the



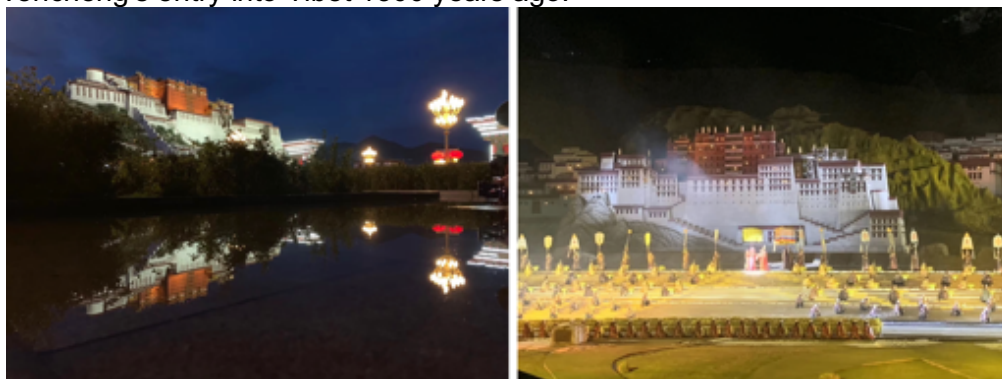
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skies. The train passed through miles of uninhabited lands and the all-year-round snow-capped Tanggula Mountain. Even so, it is still possible to catch the sight and snap a picture of Tibetan antelope as the train continues its trek on the roof of the world.



For Professor Zhao, the last trip to Tibet had been 20 years ago, and the change has been astronomical. Only the Potala Palace seemed to be untouched by time. At night, under the starry sky of the plateau sanctuary, guests could enjoy a beautiful stage reenactment of the story of Princess Wencheng's entry into Tibet 1300 years ago.



Tibetan medicine is an intangible cultural heritage, and Professor Zhao visited some of the inheritors of this medicine in Lhasa. He experienced their traditional diagnosis; unlike traditional Chinese medicine pulse diagnosis, Tibetan medicine pulse diagnosis utilizes six fingers. He went Barkhor to search for Tibetan yinchen and looked for precious medicinals, such as *Fritillariae Cirrhosae Bulbus* (chuanbeimu) and *Cordyceps* (dongchong xiacao), at traditional trading markets.



Linzhi is a natural oxygen bar with rolling hills, snow-capped mountains, and clear lakes. Pea plants create a beautiful picture in front of the mature barley, and these plants were said to have been brought to the Tibet by Princess Wencheng. The Tibet Brahmaputra is the world's longest, deepest, and most spectacular canyon.



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European Reports

1. The Innovative Medicines Initiative (IMI2) has published preliminary information on future call topics in IMI2 2020 calls. All information is indicative and subject to change. Final information will be communicated after approval by the IMI Governing Board. The currently considered topics are as follows:

- Neurodegeneration and other neuroscience priorities: Digital endpoints and placebo effect in chronic pain;
- Infection control including vaccines: Development of innovative personalized diagnostics and patient-guided therapies for the management of sepsis-induced immune suppression;
- Big data, digital health, clinical trials and regulatory research: Data lakes
- Oncology: Prospective real-world clinical implementation of liquid biopsies; Tumour plasticity;
- Facilitating the translation of advanced therapies to patients in Europe: Optimising patient access to new therapies for rare diseases



https://www.imi.europa.eu/sites/default/files/uploads/documents/apply-for-funding/future-topics/FutureIMICallTopics_July2019.pdf

2. Kupferschmidt K. Europe abandons plans for 'flagship' billion-euro research projects. *Science* 14 May 2019.

<https://www.sciencemag.org/news/2019/05/europe-abandons-plans-flagship-billion-euro-research-projects>

https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-fet_en.pdf

https://mp.weixin.qq.com/s/B1zcECbnBCog_oRaFiPyMg (中文)

Reports on China and China's International Cooperation

1. Jin X. Can UK's choice of PM surprise China? *Global Times*. 2019/7/24. It came as no surprise - Boris Johnson, former foreign secretary of the UK, was elected leader of the country's ruling Conservative Party Tuesday and took over from Theresa May Wednesday to become Britain's new Prime Minister. What his China policy will look like is of concern to many Chinese observers. Given his notable tough stance on foreign policies, Johnson may not be friendlier than his two predecessors - David Cameron, whose government coined the notion golden era of China-UK relations, and May, who continued Cameron's cooperative attitude with China...

<http://www.globaltimes.cn/content/1159063.shtml?from=singlemessage&isappinstalled=0>

2. Successful bacteriophage and antibiotic cocktail therapy in Shanghai.

<http://www.sh.chinanews.com/ylyk/2019-07-25/60404.shtml?from=groupmessage&isappinstalled=0>

3. Waldman P. US targeting of Chinese scientists fuels brain drain. *Bloomberg.com* 18 July 2019. <https://www.bloomberg.com/news/features/2019-07-18/u-s-targeting-of-chinese-scientists-fuels-a-brain-drain>

<https://mp.weixin.qq.com/s/7ryFnuKxlg-HpTt9RvU96A> (中文)

4. Shanghai in spotlight: 3 ground-breaking clinical trials published in NEJM by scientists from the city. https://mp.weixin.qq.com/s/t-fsIRSTow7VV_EhoOVvg (中文)

- Chen Z et al. **Tofacitinib in Amyopathic Dermatomyositis–Associated Interstitial Lung Disease.** *N Engl J Med* 2019; 381:291-293. <https://www.nejm.org/doi/full/10.1056/NEJMc1900045>
- Chen N, et al. **Roxadustat Treatment for Anemia in Patients Undergoing Long-Term Dialysis.** *N Engl J Med*. 2019 Jul 24. doi: 10.1056/NEJMoa1901713. [Epub ahead of print] <https://www.nejm.org/doi/full/10.1056/NEJMoa1901713>

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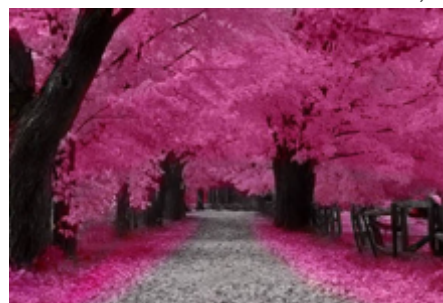
- Chen N, et al. **Roxadustat for Anemia in Patients with Kidney Disease Not Receiving Dialysis.** *N Engl J Med.* 2019 Jul 24. doi: 10.1056/NEJMoa1813599. [Epub ahead of print] <https://www.nejm.org/doi/full/10.1056/NEJMoa1813599>

5. Normile D. China's scientists alarmed, bewildered by growing anti-Chinese sentiment in the United States. *Science* 31st July 2019. ...One factor underlying U.S. suspicions, some academics say, is the outdated belief that scientific knowledge and expertise flow one way—from the United States to China. "That may have been the case years ago, but exchanges have gone from being asymmetrical to now having greater parity," says Denis Simon, an American who is executive vice chancellor at Duke Kunshan University near here... <https://www.sciencemag.org/news/2019/07/china-s-scientists-alarmed-bewildered-growing-anti-chinese-sentiment-united-states?utm>

6. Huang K. Prevalence, risk factors, and management of asthma in China: a national cross-sectional study. *Lancet.* 2019 Jun 20. pii: S0140-6736(19)31147-X. Asthma is prevalent but largely undiagnosed and undertreated in China. It is crucial to increase the awareness of asthma and disseminate standardised treatment in clinical settings to reduce the disease burden. <https://www.ncbi.nlm.nih.gov/pubmed/31230828>

7. Lanese N. First Human–Monkey Chimeras Developed in China. *The Scientist* 5th August 2019: <https://www.the-scientist.com/news-opinion/first-humanmonkey-chimeras-developed-in-china--66231>

8. Wang Y et al. Prevention and control of obesity in China. *Lancet Glob Health.* 2019;7:e1166. Obesity has become a global public health crisis, and China has the largest number of affected people worldwide, with about 46% of adults and 15% of children being obese or overweight. Increasingly Chinese society is making efforts to address the rising obesity and chronic disease epidemic. In this context, in 2015, two of us (YW and YY) initiated a project that aimed to synthesise existing evidence in the field and help enhance obesity and chronic disease prevention and control efforts in China. Approximately 30 international and domestic experts with expertise in diverse fields ranging from public health to medicine worked closely during 2015–19 and developed a seven-chapter, 246-page report, published in April... [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(19\)30276-1/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(19)30276-1/fulltext)



9. Editorial. Improving occupational health in China. *Lancet* 2019; 394:443. China has the largest working population in the world—about 776 million in 2018, and most workers spend half their lives working. The Chinese Government prioritised occupational health in the action plan of Healthy China 2030 as one of its 15 major health projects. Last week, the National Health Commission (NHC) announced the latest official data on the country's occupational health status and unveiled China's strategy to address the challenges in occupational health. More than 975 000 cases of occupational illness occurred in 2018, and 90% of reported occupational diseases were pneumoconiosis. Of those sampled in 2018, about 12 million businesses presented occupational health risks, with more than 200 million workers exposed to multiple risks, including dust, chemicals, and poison. However, the actual burden of occupational diseases in China is likely to be underestimated... <http://www.ecns.cn/news/2019-07-31/detail-ifzmnmiq8702457.shtml> [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31799-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31799-4/fulltext)

10. Myers S. All natural products imports from China face higher tariffs. *Naturalproductsinsider.com* 6th August 2019. President Donald Trump said the next wave of tariffs, bringing all imports from China under punitive tariffs, will take effect Sept. 1 if trade negotiations don't improve... <https://www.naturalproductsinsider.com/regulatory/all-natural-products-imports-china-face-higher-tariffs>

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Acupuncture, TCM and Other Traditional Medicine

Now 1. Cavin CRP. **The History of Traditional Chinese Medicine in Britain, c.1750-2018.** *Chinese Medicine and Culture*. 2018;1:108-111.
<http://www.cmaconweb.org/article.asp?issn=2589-9627;year=2018;volume=1;issue=3;spage=108;epage=111;aurlast=Cavin;type=0>

Now 2. Xu Z. **History of Traditional Chinese medicine in Japan.** *Elephantia WeChat* 22nd July 2019. <https://mp.weixin.qq.com/s/4ZdXuG02MijUz6Hz5DOz1w> (中文)

Now 3. Zhu Z-N et al. **The Mutational Features of Aristolochic Acid-Induced Mouse and Human Liver Cancers.** *Hepatology* 2019; <https://doi.org/10.1002/hep.30863>. This study provides the documented evidence for aristolochic acid-induced liver cancer with the featured mutational processes during malignant clonal evolution, laying a solid foundation for the prevention and diagnosis of AA-associated human cancers, especially liver cancers.
<https://aasldpubs.onlinelibrary.wiley.com/doi/abs/10.1002/hep.30863>
<https://mp.weixin.qq.com/s/gbFZQv6reNROlhGSvDAEBg> (中文)

Comments by Yang Luan: <https://mp.weixin.qq.com/s/Lxy4yDwD1G7WAjHH7PJ79Q> (中文)

Now 4. **Sichuan published development plan for Chinese medicinal material industry (2018-2025)** <https://mp.weixin.qq.com/s/2za2XNhDF0CD9eXjYF-2pA> (中文)

Now 5. **The splendid achievements in the seventy-year promotion and development of Chinese medicine in China (Part 1).** *GuoYiJianGangLianMeng WeChat*. 26 July 2019.
<https://mp.weixin.qq.com/s/aeTgHW6zbFTjmSW4qYKprA> (中文)

Now 6. Wen-Yue JIANG, Zhao-Lin LU. **A neglected master on integrative medicine: Wei-Ju ZHU.** *JOURNAL OF CHINESE INTEGRATIVE MEDICINE* 2006;(3):243-246. Wei-ju Zhu is one of the great pioneers who have successfully integrated TCM and modern medicine to achieve great clinical efficacy and reputation. His thoughts deserve greater appreciation...
https://caod.oriprobe.com/articles/10462933/A_neglected_master_on_integrative_medicine_Wei_Ju.htm
<https://mp.weixin.qq.com/s/PPSjg80mYw9tjiVzwcFOKw> (中文)

Now 7. Zhao L, et al. **Acupuncture as Adjunctive Therapy for Chronic Stable Angina: A Randomized Clinical Trial.** *JAMA Intern Med*. 2019 Jul 29. doi: 10.1001/jamainternmed.2019.2407. A randomised controlled clinical trial of 398 participants concluded that acupuncture is efficacious as an adjunctive treatment to antianginal therapy in alleviating angina.
<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2739058>
https://mp.weixin.qq.com/s/EDRAx7g5dDXvW_vUIFn49w (中文)

Discussions in the New York TCM Forum WeChat Group:

https://mp.weixin.qq.com/s/ERtRYG68R8_jN9jJE7-yyQ (中文)

An analysis of this paper was published in the *medicalstat* WeChat platform:

<https://mp.weixin.qq.com/s/rs3K7rCAZr4BAOqpFMsnWA> (中文)

Now 8. Liu Y, et al. **Acupuncture therapy for the treatment of stable angina pectoris: An updated meta-analysis of randomized controlled trials.** *Complement Ther Clin Pract*. 2019 Feb;34:247-253.

METHODS: Seven databases were searched ranging from 1959 to February 2018. Quantitative analysis of randomized controlled trials (RCTs) was performed by RevMan 5.3 software and STATA 12.0 program, and Cochrane criteria for risk-of-bias was used to assess the methodological quality of the trials.

CONCLUSION: Acupuncture therapy may improve anginal symptoms and ECG results in patients with stable angina pectoris, and can serve as an adjunctive treatment for this condition.

<https://www.sciencedirect.com/science/article/pii/S1744388118302780>



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9. Yu Y, et al. Traditional Chinese Medicine Use in the Treatment of Acute Heart Failure in Western Medicine Hospitals in China: Analysis From the China PEACE Retrospective Heart Failure Study. *J Am Heart Assoc* 2019;8(15): e012776.

In a nationally representative sample of patients hospitalized with acute heart failure in China, three fourths received TCM. Nearly all hospitals used TCM, although use varied substantially by hospital. Although TCM was not used in lieu of evidence-based therapies for heart failure, a signal for harm was observed with the most commonly used TCM. In particular, in-patient bleeding (OR, 1.39; 95% CI, 1.03-1.88) and mortality (OR, 1.36; 95% CI, 1.04-1.79) were higher in patients treated with *Salvia miltiorrhiza*, although not with other TCMs.

<https://www.ncbi.nlm.nih.gov/pubmed/31364457>

https://mp.weixin.qq.com/s/WZ83l7Bo1j_ovYE5GX-y1Q (中文)



10. The Standing Committee of People's Congress of Hubei approved a bill and issued May 26, Li Shizhen's birthday as a legal anniversary.

<https://mp.weixin.qq.com/s/ONvhJ73nAV8KI1E2piVeNA> (中文)

<http://www.hppc.gov.cn/2019/0802/30636.html> (中文)

11. Ríán W. Manville RW, Abbott GW. Cilantro leaf harbors a potent potassium channel-activating anticonvulsant. *FASEB J* 2019; doi: 10.1096/fj.201900485R. Herbs have a long history of use as folk medicine anticonvulsants, yet the underlying mechanisms often remain unknown. Neuronal voltage-gated potassium channel subfamily Q (KCNQ) dysfunction can cause severe epileptic encephalopathies that are resistant to modern anticonvulsants. Here we report that cilantro (*Coriandrum sativum*, 芫荽, 香菜), a widely used culinary herb that also exhibits antiepileptic and other therapeutic activities, is a highly potent KCNQ channel activator.....

<https://www.fasebj.org/doi/pdf/10.1096/fj.201900485R>

https://mp.weixin.qq.com/s/GkQBYqW3qgTCKbK_G1VN6w (中文)

12. TCM Master Deng Tietao on Astragalus radix

<https://mp.weixin.qq.com/s/TeukcxQr65VK-pawQGDxPA> (中文)

https://mp.weixin.qq.com/s/SXDBYbCUvD0QuOXV_wQEvQ (中文)

13. Cui J, et al. Tongue coating microbiome as a potential biomarker for gastritis including precancerous cascade. *Protein & Cell* 2019;10:496-509. The development of gastritis is associated with an increased risk of gastric cancer. Current invasive gastritis diagnostic methods are not suitable for monitoring progress. In this work based on 78 gastritis patients and 50 healthy individuals, we observed that the variation of tongue-coating microbiota was associated with the occurrence and development of gastritis. Twenty-one microbial species were identified for differentiating tongue-coating microbiomes of gastritis and healthy individuals. Pathways such as microbial metabolism in diverse environments, biosynthesis of antibiotics and bacterial chemotaxis were up-regulated in gastritis patients. The abundance of *Campylobacter concisus* was found associated with the gastric precancerous cascade. Furthermore, *Campylobacter concisus* could be detected in tongue coating and gastric fluid in a validation cohort containing 38 gastritis patients. These observations provided biological evidence of tongue diagnosis in traditional Chinese medicine, and indicated that tongue-coating microbiome could be a potential non-invasive biomarker, which might be suitable for long-term monitoring of gastritis.

<https://link.springer.com/article/10.1007/s13238-018-0596-6>

<https://mp.weixin.qq.com/s/7h2EzTfmZqCBUCsqJ3sOAA> (中文)

14. Modernisation of Chinese Medicine: China's Ministry of Science & Technology Call for National Key Projects. The total budget will be 530 million Chinese Yuan for this special call.

<https://mp.weixin.qq.com/s/4-WziPS4WUCLvmLiqyTkCQ> (中文)

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15. Cheng Y et al. **Overseas Chinese Medical Centres: Status Quo and Thoughts.** BBTCML WeChat 3rd March 2019.
<https://mp.weixin.qq.com/s/TVii8UCgPofLRpxTHhIF5A> (中文)
16. **An Introduction to the Beijing Key Laboratory in Chinese Medicine Pharmacology.** China S&T Innovation Centre WeChat. 31st July 2019
<https://mp.weixin.qq.com/s/GrnkRkXsfvF6A22tYdDHuQ> (中文)
17. **Excerpts of New Exploration of *Treatise on Fabrile Diseases* by Ma Kanwen and Zhao Hongjun: Fundamental theories and formulations.**
https://mp.weixin.qq.com/s/UI_ofYe9rPqzAFhprwOpHw (中文)
https://mp.weixin.qq.com/s/V_DA2oi4LekreV3wmbkMEw (中文)
18. **The concept of “Damp” in TCM.** Jiankangyoudao999 WeChat. 10th August 2019.
<https://mp.weixin.qq.com/s/nJl3CTvMpcJP-djpRgcKrg> (中文)
19. **Top-10 Most famous TCM doctors in history**
https://mp.weixin.qq.com/s/bmu6Rt4ww2tdfbODzt_jWA (中文)
20. Wang J. **Polishing the TCM treasurer so as to better serve “Healthy China”.** People’s Daily. 14th August 2019.
<https://mp.weixin.qq.com/s/OGEDBN4PDt8-owT9hOdDVw> (中文)
21. Song Y et al. **XueBiJing Injection Versus Placebo for Critically Ill Patients With Severe Community-Acquired Pneumonia: A Randomized Controlled Trial.** *Crit Care Med.* 2019 Sep;47(9):e735-e743. **CONCLUSIONS:** In critically ill patients with severe community-acquired pneumonia, XueBiJing injection led to a statistically significant improvement in the primary endpoint of the pneumonia severity index as well as a significant improvement in the secondary clinical outcomes of mortality, duration of mechanical ventilation and duration of ICU stay.
<https://www.ncbi.nlm.nih.gov/pubmed/31162191>
- 
22. Yang M, et al. **Electro-Acupuncture Promotes Accumulation of Paclitaxel by Altering Tumor Microvasculature and Microenvironment in Breast Cancer of Mice.** *Front Oncol.* 2019;9:576. Results suggest that acupuncture intervention around the tumor area increases the local concentration of chemotherapeutic agents. The targeted effect of acupuncture is achieved by altering tumor microvasculature and microenvironment. Therefore, combined therapy of acupuncture with chemotherapeutic agents is promising in improving cancer treatment efficacy.
<https://www.frontiersin.org/articles/10.3389/fonc.2019.00576/full>
23. Liu Y. **10 Requirements to Doctors by Yellow Emperor’s Inner Canon.** ChangQingTengHuiKeShi WeChat. 16th August 2019.
<https://mp.weixin.qq.com/s/QzTX89LOEjUtTDWDMh0V-Q> (中文)
24. **Implications of HMRA approval of Chinese herbal products in the UK.**
<http://health.people.com.cn/n1/2019/0814/c14739-31295206.html> (中文)
Phynova Cold and Flu Relief Powder for Oral Solution THR 44590/0001:
F <http://www.mhra.gov.uk/home/groups/par/documents/websiteresources/con822268.pdf>
Phynova Joint and Muscle Relief Tablets THR 41783/0001
<http://www.mhra.gov.uk/home/groups/par/documents/websiteresources/con512962.pdf>
25. Lan KC, et al. **Robot-Controlled Acupuncture-An Innovative Step towards Modernization of the Ancient Traditional Medical Treatment Method.** *Medicines (Basel).* 2019. 6(3). pii: E87. <https://www.ncbi.nlm.nih.gov/m/pubmed/31405133/>

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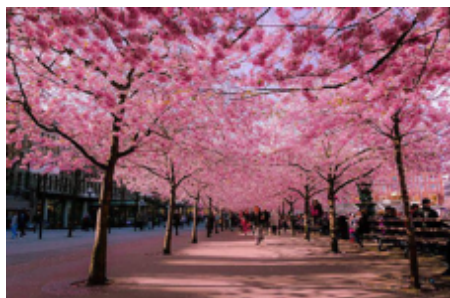


Omics in Progress

- Now** 1. Abudayyeh OO et al. **A cytosine deaminase for programmable single-base RNA editing.** *Science* 2019;365: 382-386. Programmable RNA editing enables reversible recoding of RNA information for research and disease treatment. Previously, we developed a programmable adenosine-to-inosine (A-to-I) RNA editing approach by fusing catalytically inactivate RNA-targeting CRISPR-Cas13 (dCas13) with the adenine deaminase domain of ADAR2. Here, we report a cytidine-to-uridine (C-to-U) RNA editor, referred to as RNA Editing for Specific C-to-U Exchange (RESCUE), by directly evolving ADAR2 into a cytidine deaminase. RESCUE doubles the number of mutations targetable by RNA editing and enables modulation of phosphosignaling-relevant residues. We apply RESCUE to drive β -catenin activation and cellular growth. Furthermore, RESCUE retains A-to-I editing activity, enabling multiplexed C-to-U and A-to-I editing through the use of tailored guide RNAs.
<https://science.sciencemag.org/content/365/6451/382?utm>
- Now** 2. Donnelly DP. **Best practices and benchmarks for intact protein analysis for top-down mass spectrometry.** *Nature Methods* 2019;16:587–594. The Consortium for Top-Down Proteomics presents a decision-tree-based guide to sample preparation and analysis protocols for researchers performing top-down mass-spectrometry-based analysis of intact proteins...
<https://www.nature.com/articles/s41592-019-0457-0>
- Now** 3. Masson GR. **Recommendations for performing, interpreting and reporting hydrogen deuterium exchange mass spectrometry (HDX-MS) experiments.** *Nature Methods* 2019;16:595–602. Members of the hydrogen deuterium exchange mass spectrometry (HDX-MS) community provide their 'best practices' recommendations for HDX-MS data collection, analysis and reporting...
<https://www.nature.com/articles/s41592-019-0459-y>
- Now** 4. **Steinegger M et al.** Protein-level assembly increases protein sequence recovery from metagenomic samples manyfold. *Nature Methods* 2019;16:603–6. The open-source de novo protein-level assembler, Plass (<https://plass.mmseqs.com>), assembles six-frame-translated sequencing reads into protein sequences. It recovers 2–10 times more protein sequences from complex metagenomes and can assemble huge datasets. We assembled two redundancy-filtered reference protein catalogs, 2 billion sequences from 640 soil samples (soil reference protein catalog) and 292 million sequences from 775 marine eukaryotic metatranscriptomes (marine eukaryotic reference catalog), the largest free collections of protein sequences.
<https://www.nature.com/articles/s41592-019-0437-4>
- Now** 5. High KA, Roncarolo MG. **Frontiers in Medicine: Gene Therapy.** *N Engl J Med* 2019; 381: 455-464. Gene therapy has provided treatment options for diseases that are beyond the reach of traditional approaches. Since 2016, between the European Medicines Agency (EMA) and the U.S. Food and Drug Administration (FDA), six gene therapy products have been approved: two chimeric antigen receptor T-cell products for B-cell cancers and four additional products for serious monogenic disorders, including β -thalassemia, a rare form of vision loss, spinal muscular atrophy, and a rare form of primary immunodeficiency. The first proofs of gene therapy are thus now market-approved pharmaceuticals. With more than 800 cell- and gene-therapy programs now in clinical development, including for previously untreatable diseases such as Duchenne's muscular dystrophy and Huntington's disease, it seems likely that more therapies will follow. Here, we review the field as it stands today, with a focus on monogenic diseases...
<https://www.nejm.org/doi/full/10.1056/NEJMra1706910?query=TOC>
- Now** 6. **Lancet publishes "Genomic medicine and pharmacogenomics" series** in August 2019. Genomic medicine, which uses DNA variation to individualise and improve human health, is the subject of this Series of papers. The idea that genetic variation can be used to individualise drug



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therapy—the topic addressed here—is often viewed as within reach for genomic medicine. We have reviewed general mechanisms underlying variability in drug action, the role of genetic variation in mediating beneficial and adverse effects through variable drug concentrations (pharmacokinetics) and drug actions (pharmacodynamics), available data from clinical trials, and ongoing efforts to implement pharmacogenetics in clinical practice.

Pharmacogenomics:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31276-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31276-0/fulltext)

Opportunities, resources, and techniques for implementing genomics in clinical care:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31140-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31140-7/fulltext)

Genomic medicine for undiagnosed diseases

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31274-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31274-7/fulltext)

Other Recommended Readings

1. Hoofnagle JH, Björnsson ES. Drug-Induced Liver Injury — Types and Phenotypes. *N Engl J Med* 2019; 381:264-273.

https://www.nejm.org/doi/full/10.1056/NEJMra1816149?query=recirc_mostViewed_railB_article

<https://nejmqianyan.cn/article/YXQYra1816149?sg=AbW1NGsHw3NxPd6F> (中文)

2. A new way to stop cancer cells from killing their healthy neighbors. In a *Nature* paper by Maden E et al, online published on 24th July 2019, the authors show that two human Flower isoforms (hFWE1 and hFWE3) behave as Flower-Lose proteins, whereas the other two isoforms (hFWE2 and hFWE4) behave as Flower-Win proteins. The latter give cells a competitive advantage over cells expressing Lose isoforms, but Lose-expressing cells are not eliminated if their neighbours express similar levels of Lose isoforms; these proteins therefore act as fitness fingerprints. Moreover, human cancer cells show increased Win isoform expression and proliferate in the presence of Lose-expressing stroma, which confers a competitive growth advantage on the cancer cells. Inhibition of the expression of Flower proteins reduces tumour growth and metastasis, and induces sensitivity to chemotherapy. These results show that ancient mechanisms of cell recognition and selection are active in humans and affect oncogenic growth.

<https://medicalxpress.com/news/2019-07-cancer-cells-healthy-neighbors.html>

<https://mp.weixin.qq.com/s/tnsAXjowuTfg-K2Dz3MQHg> (中文)

<https://www.nature.com/articles/s41586-019-1429-3>

3. Levine AG. How to tell your adviser you're pursuing a nonacademic career. *Science* 22 July 2019. ... Some advisers view a desire to experiment with and pursue careers unfamiliar to them as truly “unholy”—something to be looked down upon; a sign of failure, sabotage, or abandonment; sacrilegious; and even blasphemous. Others simply don't know much about these options—most of them have spent their entire careers in academia, after all—and are not equipped to offer advice. If your adviser perceives career exploration beyond the academy as your first ingress into an escape of darkness, there are two important things to know. First of all,...

<https://www.sciencemag.org/careers/2019/07/how-tell-your-adviser-you-re-pursuing-nonacademic-career>

4. Ho J et al. Moving beyond P values: data analysis with estimation graphics. *Nature Methods* 2019;16:565–566. For at least 77 years, the limitations of null-hypothesis significance testing (NHST) have been discussed, without agreement on a suitable alternative. Estimation methods that estimate effect sizes and their uncertainty have great potential to shift the current data-analysis culture away from dichotomous thinking and toward quantitative reasoning. Although NHST limits the analyst to the ill-conceived question of “Does it?”, estimation instead draws the analyst's attention to the question of “How much?”—the very topic that defines quantitative research. Here we describe the estimation graphic, a plot that displays an experimental dataset's complete statistical information. We also introduce software that makes high-quality estimation graphics available to all.

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<https://www.nature.com/articles/s41592-019-0470-3>

5. Jain MK et al. Saving the Endangered Physician-Scientist — A Plan for Accelerating Medical Breakthroughs. *N Engl J Med* 2019; 381:399-402. Revitalizing the physician-scientist pipeline is of critical importance to overcoming current and future health challenges. ...

<https://www.nejm.org/doi/full/10.1056/NEJMp1904482>

<https://mp.weixin.qq.com/s/mCpOecFexzHkCroXI1rEA> (中文)

6. Sandle T. How to switch 'bad science' for 'good science'? There are many excellent science studies based on well-designed experiments and which make reasoned claims based on the assembled experimental data. While the majority of scientific findings and papers issued each year offer valid findings and make a contribution to the body of knowledge, there are, unfortunately, many cases of 'bad science' out there. Another concern is that outcomes from science papers are sometimes misinterpreted or they are overly exaggerated by the media. This is perhaps reflective of society increasingly seeking quick answers. The reality of science is that progress...

https://www.academia.edu/39886070/How_to_switch_bad_science_for_good_science

7. Stroke, as the top killer in China, highlighted by *Lancet* and *NEJM*

https://mp.weixin.qq.com/s/FHq7m3EQT_byQvRyi3fojA (中文)

- Zhou M et al. **Mortality, morbidity, and risk factors in China and its provinces, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017.** *Lancet*. 2019 Jun 24. pii: S0140-6736(19)30427-1. Age-standardised stroke, ischaemic heart disease, lung cancer, chronic obstructive pulmonary disease, and liver cancer were leading causes of mortality.

<https://www.sciencedirect.com/science/article/pii/S0140673619304271?via%3Dihub>

- GBD 2016 Lifetime Risk of Stroke Collaborators. **Global, Regional, and Country-Specific Lifetime Risks of Stroke, 1990 and 2016.** *N Engl J Med*. 2018 Dec 20;379(25):2429-2437. <https://www.ncbi.nlm.nih.gov/pubmed/30575491>

8. Rosshart SP et al. Laboratory mice born to wild mice have natural microbiota and model human immune responses. *Science* 2019;365:eaaw4361. Inbred laboratory mouse strains are used extensively in basic and translational immunology research. However, the commensal and pathogenic repertoire of resident microbes encountered in the wild is not replicated in a lab setting. This can substantially distort how the immune system develops and functions, leading to false assumptions of how our own "wild" immune system works. Rosshart et al. circumvented this dilemma by implanting lab-strain embryos into wild mice (see the Perspective by Nobs and Elinav). The resultant "wildlings" had a systemic immune phenotype and a bacterial, viral, and fungal microbiome much closer to those of their wild counterparts. In two preclinical experiments, where lab mice had previously failed to predict the human response to drug treatments, wildlings accurately phenocopied patient outcomes. <https://science.sciencemag.org/content/365/6452/eaaw4361.full>

<https://mp.weixin.qq.com/s/fWuRG7K4iP86srl6pbGTvQ> (中文)

9. Global warming: An inconvenient truth.

https://www.imdb.com/title/tt0497116/videooplayer/vi2897608985?ref=tt_ov_vi

<https://mp.weixin.qq.com/s/1cKybVVZOajcWRtGprdseg> (中文)

10. Chemistry Advancing Health from the Chinese Academy of Sciences

https://www.elsevier.com/promo/journal-authors/cas-article-selection-on-advancing-health?utm_campaign=STMJ_96023_SISSUE&utm

11. Director-General of WHO writes in *Lancet* on "Progress in beating the tobacco epidemic": [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31730-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31730-1/fulltext)
Tobacco (烟草) . WHO. 26th July 2019

<https://www.who.int/news-room/fact-sheets/detail/tobacco>

<https://www.who.int/zh/news-room/fact-sheets/detail/tobacco> (中文)

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Invitation from Future Meetings

1. The 2nd International Conference of Qi-Blood will be held at Peking University Health Science Center on September 13-15, 2019, in Beijing, China.

<http://q-b2019en.m-events.cn/>

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://mp.weixin.qq.com/s/SpqrG4XwKKmOJC1QRZ_dWg (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:

1. 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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<http://www.geimian.com/wx/38149.html>

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After all the hard work, take a rest. Here. Now.