



Our Journey Continues: Welcome to the GP-TCM RA Newsletters!



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Time flies. Since the GP-TCM Newsletter was first launched in October 2007, almost 10 years have passed! Many of us have witnessed its birth and its revival under the current title: <u>http://www.gp-tcm.org/news-list/</u>

The Newsletters are near and dear to our hearts because it is such an essential channel to share and to disseminate, and ultimately to achieve the objectives of our young organisation: <u>http://www.gp-tcm.org/about/objectives/</u>

Thus, we are delighted being appointed, at the latest BoD teleconference, Editor-in-chief and Deputy Editor-in-chiefs of your Newsletters.

The BoD have also agreed that all the current Editorial Board Members, including all current and past BoD members, Interest Chairs and Co-Chairs, Web Master and invited experts will be invited to stay and help developing the future of the Newsletters.

As Editor-in-chief, Qihe will take overall responsibility for the development and release of the Newsletters. Deputy Editor-in-chiefs will assist with the following labour divisions.

- Pierre will bring in information on the Pharmacology & Toxicology Interest Group and from the EU (in the context of Brexit);
- Yuan Shiun will bring his collations from Taiwan and on Chinese materia and medica into the leadership;
- Both Pierre and Yuanshiun will also bring insights from their experiences in the EDQM TCM Working Party.

Here is our plan:

- We will strive for monthly publications in quality;
- The structure of the Newsletters will stay, highlighting European-Chinese collaboration, good practices, latest developments in TCM and its research, omics and systems biology in progress, TCM funding and meeting opportunities in Europe and China, as well as other recommended readings and events.
- Reports on the latest developments in TCM research, particularly on evidence-based TCM, will be promoted. This will need support from GP-TCM RA Interest Groups, BoD and everyone of you.

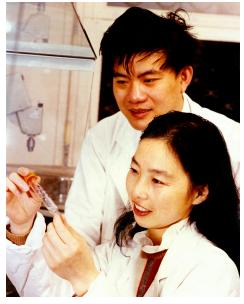
This is your newsletter. We need contributions from you to fulfil our objectives. Our *Sounding Board* column is a standing feature reserved for members to comment on the contents of past Newsletter contents, pose questions, raise hypotheses, share perspectives, seek collaborations and publish any other features from you and your part of the world.

We are keen to appoint a few more TCM scientists into our Editorial Board, including a Deputy Editorin-chief from Mainland China, to promote reports on the state of the art of TCM research and to help collate information from Mainland China. Informal discussions can be made with anyone of us. We look forward to hearing from you and hope you enjoy reading this newsletter!



Special Features

1. Zhu Chen, Sai-Juan Chen. Poisoning the Devil. Cell 9 February 2017;168:556-560. "Our sight was caught by the subject line of an email we received on March 12, 2016: "American Society of Hematology (ASH) Ernest Beutler Lecture and Prize." It came from Charles Abrams, President of the ASH Society, congratulating Zhu Chen for being the recipient of the 2016 Ernest Beutler Lecture and Prize together with our close collaborator Hugues de Thé for their contributions to finding a cure for acute promyelocytic leukemia (APL). More than a decade ago, Beutler, ex-president of ASH and a respectable pioneer in hematology, had visited our institute and was very encouraging and supportive of our work. Thus, being awarded with this prestigious prize meant a lot for us. Later, as we prepared for the lecture, our thoughts went back to another ASH Annual Meeting, one that happened 20 years ago, where Zhu presented our findings on how arsenic, a notorious poison, can be used to treat APL ... "



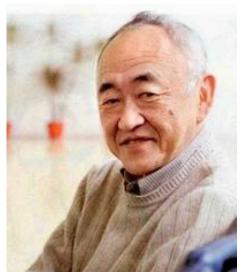
http://www.cell.com/cell/fulltext/S0092-8674(17)30114-9?elsca1

WeChat introduction of this paper (中文):药死病魔(陈竺、陈赛娟夫讲述三氧化二砷治疗白血病) <u>http://mp.weixin.qq.com/s?__biz=MzA3MzQyNjY1MQ==&mid=2652452242&idx=1&sn=54e9bdca269</u> 153c07672c6ce923fa749&chksm

2. **GP-TCM RA Honorary Member Prof. Yung-Chi Cheng wins innovation award for startup.** The biotechnology startup Yiviva develops therapeutics inspired by botanical medicines, to treat chronic diseases and cancer. Based on research from Yung-Chi Cheng, professor of Pharmacology at Yale University and Co-Specialty Chief Editor of specialty section Ethnopharmacology in Frontiers in Pharmacology, the startup won the latest Innovation Award at the sixth US-China Health Summit in Xi'an, China. The main substance developed by Yiviva, called YIV906, is a herbal mixture based on a 1800-year old traditional Chinese medicine formula. "Our new paradigm for drug discovery is to revisit history and rediscover new medicines," Prof. Cheng explains. "Chinese medicine happens to have many of the polychemical, poly-target, holistic characteristics we are interested in."

The development of YIV906 is based on patented research from Prof. Cheng's lab. In various clinical studies, YIV906 has shown to increase the safety and efficacy of a broad spectrum of cancer treatments. Moreover, it may reduce the harmful side effects of chemotherapy. The company is currently setting up Phase II clinical trials in both China and the US.

The US-China Health Summit brings together policymakers, academics, and industry professionals



for direct dialogues and discussions on the rapidly transforming global health sector. This 6th Summit was themed "Health for all through innovation" with a special focus on 'Healthy China'. Participants discussed among others on innovative healthcare delivery models, cutting edge medical and health technology, and precision and holistic medicine.

"They were looking for early-stage companies, future innovators that can have an impact in the U.S. and China," Peikwen Cheng, a co-founder of Yiviva, explains. "The recognition of our company's drug development technology at the US-China Health Summit says something about the value our work has. We are accelerating discovery by learning from traditional medicines—using modern science to develop poly target botanical medicines to address complex diseases."

http://yaledailynews.com/blog/2016/10/25/yale-biotech-startupreceives-innovation-award/



Report from the GP-TCM RA

The 32nd GP-TCM RA BoD Teleconference was held on Friday 3 February 2017. Chaired by Tai-Ping Fan (President), the t/c was attended by Clara Lau (Secretary-General), Aiping Lu (President-Elect), De-an Guo (Past President), and BoD members Rudolf Bauer, Abraham Chan, Monique Simmonds and Qihe Xu. Apologies were received from Peter Hylands (Treasurer), Pierre Duez, Rob Verpoorte and Vivian Wong, but they all contributed their ideas by e-mail before the t/c. For technical reasons, Thomas Efferth missed the t/c. The t/c approved minutes of the 31st BoD Meeting and welcomed new BoD members Clara Lau, Abraham Chan and Qihe Xu. Appointments of Secretary-General (Clara Lau), Treasurer (Peter Hylands), Editor-in-chief of Newsletters (Qihe Xu), Co-chair of Quality Control Interest Group (Kelvin Chan) and Co-chair of Acupuncture IG (Nicola Robinson) were approved. President's visions on improving services to members, closer ties with sister organisations, more industrial partners, engaging all the 23 TCM universities and colleges in China and developing new links with the Indian sub-continent and Central and Eastern European Countries were received by the Board. Important issues on establishing a Secretariat in Hong Kong was favoured by the Board and would be followed up in the future for details. Due to conflicting meetings in China and venue availability at Kew, the BoD agreed that the GP-TCM RA Annual Meeting initially proposed to be held at Kew in 2017 would be postponed to 2018. As 2018 will mark the 500th anniversary of the birth of Li Shizhen, the BoD agreed that the meeting at Kew would favorably consider cooperation with sister organisations in celebrating the work and life of Li Shizhen and his masterpiece Compendium of Materia Medica. It

GP-TCM RA Newsletter Core Leadership Meeting was held as a Skype teleconference on Thursday 23rd February 2017. Chaired by Qihe Xu and attended by Pierre Duez and Yuan-Shiun Chang, the t/c agreed on the principles of future newsletters: timeliness (monthly plus special issues if necessary) and quality. The current format and columns would be maintained and it was deemed highly desirable to keep future issues within the limits of 15 pages and 10MB, and to increase reports on interest group activities, evidencebased TCM and in the "Sounding Board" column. Labour division among the core leadership group and the internal procedures to mobilise contributions were agreed.

was agreed that Chairs of GP-TCM RA Interest Groups did not necessarily be BoD members and the

BoD agreed to nominate senior members for Qihuang Prize subject to their own consent.

European Reports

1. European Research Area (ERA) Progress Report 2016 Published The European Commission has published its latest European Research Area Progress Report, which summarises the state of play of ERA and the progress on ERA implementation over the period 2014-2016. For the first time, progress on ERA has been measured for each country on each of the six ERA priorities, on the basis of the ERA Monitoring Mechanism, a set of 24 core indicators jointly defined by Member States, research stakeholders and the Commission.



The report also provides a first insight into the development of the ERA priorities, their link to the ERA Roadmap 2015-2020 and the main areas targeted in the ERA National Action Plans. The document is accompanied by a Staff Working Document and the report 'Data gathering and information for the 2016 ERA monitoring' by Science-Metrix, which provides quantitative data on a set of indicators with additional policy relevant qualitative information. The overall conclusions of the report confirm that ERA has made strong progress over the last years. All headline indicators show progress over time according to the EU-28 averages, although large disparities, both in performance levels as in growth rates between countries, still exist.

In conclusion, the European Research Area (ERA) Progress Report 2016 shows strong progress over the last years on all priorities. This was made possible due to a true partnership among Member States, Associated Countries, the Commission and research stakeholder organisations. Focus should now turn towards reinforced implementation to deliver on all ERA priorities and tackle the large disparities between countries. This is the Member States' responsibility, with monitoring and policy support from the Commission.



You can download the documents here: http://ec.europa.eu/research/era/eraprogress en.htm

2. ERC Proof of Concept 2016 Results Announced The ERC has published the results of the 2016 Proof of Concept Grants call third cut-off date and overall results for all Proof of Concept deadlines in the 2016 call. The ERC Proof of Concept scheme is designed to "maximise the value of the excellent research that the ERC funds, by funding further work (i.e. activities which were not scheduled to be funded by the original ERC frontier research grant) to verify the innovation potential of ideas arising from ERC funded projects." Only PIs who have an on-going ERC frontier research grant or have a grant that ended less than 12 months before the opening date of the call are eligible. Project must draw substantially on their ERC funded research, and the funding provided is directed to cover activities at the very early stage of turning research outputs into a commercial or socially valuable proposition, i.e. the initial steps of pre-competitive development. Proof of concept grants are a maximum of €150,000 funding for a period of up to 18 months.

https://erc.europa.eu/sites/default/files/press_release/files/erc_pr_poc_2016_third_results.pdf

3. The UK Government has published a white paper on "The United Kingdom's exit from and new partnership with the European Union". The paper follows through the twelve principles set out in the recent Prime Minister's speech. Chapter ten - entitled "Ensuring the United Kingdom remains the best place for science and innovation" provides some more details relevant to EU funding, including on Horizon 2020. The paper states that the Government "will seek agreement to continue to collaborate with our European partners on major science, research, and technology initiatives."

Reference is also made to the HM Treasury announcement on EU funding, which also applies to Horizon 2020 and provides an underwrite for payments also for projects which continue beyond the UK's departure from the EU. The paper also repeats the message that UK businesses and universities should continue to bid for competitive EU funding while the UK is still an EU Member State.

The High-Level Stakeholder Working Group on EU Exit, Universities, Research and Innovation, which Government established to engage with stakeholders. is mentioned. Research Councils are represented in this group.

Furthermore, the paper makes reference to EU space programmes and the UK's role in European and international research on nuclear fusion, as well as to Euratom which remains an important priority.

https://www.gov.uk/government/publications/the-united-kingdoms-exit-from-and-new-partnership-withthe-european-union-white-paper

4. The European Commission pledged to invest €8.5 billion into research and innovation during 2017, following an update to the Work Programme of Horizon 2020 - the main EU's research and innovation funding programme.

Updated Work Programme introduces important novelties, such as:

- The introduction of open research data in all new Horizon 2020 calls.
- The EU's response to the refugee crisis € 11 million will be dedicated to new research to understand migration and develop effective policies for managing the influx and integrating migrants in society (research into migration).

European Commission will invest in 50 calls for 2017 in Horizon 2020, structured in the classic three pillars:

Science Excellence:

 o Almost €1.8 billion – corresponding to around 1000 grants - will be available through European Research Council (ERC) calls, and more than 10.000 fellows will benefit from high-quality training and career development opportunities abroad thanks to Marie Skłodowska-Curie actions.

○ €291 million is available to foster new pan- European Research Infrastructures.

Industrial Leadership:

o A major ICT call (€625 million) will support Europe's position in key areas such as electronics,



computing, networking, robotics and photonics. It includes a special Digital Security call (\in 56 million), which will allow the implementation of the recently signed public-private partnership on cybersecurity.

• Calls for several contractual PPPs working in areas such as: factories of the future, energy-efficient buildings, sustainable process industries, green vehicles (with €133 million call including around €20 million for the development of a new generation of cells and their integration in competitive batteries), photonics, robotics, high-performance computing, 5G, big data and also cybersecurity.

- Public-Private Partnerships (PPPs) in fields such as: innovative medicine, fuel cells and hydrogen, electronics, aeronautics, rail transport and bio-based industries.
- o Around €1.45 billion of the total funding in the Work Programme 2017 will go to Small and Medium-sized Enterprises (SMEs), including €438 million through a dedicated instrument which should benefit over 1000 highly innovative SMEs.

Societal Challenges:

- A call on personalised medicine (€332 million) will boost European industry and the so-called silver economy.
- The €280 million sustainable food security call will ensure food and nutrition security. €4 million will support the policy development and implementation of the European Commission's FOOD 2030 initiative.
- The Energy calls in 2017 will dedicate more than €84 million for developing energy storage systems improving the flexibility of the energy grid to integrate an increasing share of renewables.
- The Mobility for Growth call (€227 million) will strengthen transport's role as the artery of the single market.
- The new 'Closing the water gap' topic with a budget of €10 million in the 'Greening the economy' call will reduce fragmentation of water research and innovation efforts across Europe and contribute to the implementation of the Sustainable Development Goals (SDGs) as well as the conclusions of the COP21 Paris Agreement on climate change.
- The €11 million package of migration actions aims to bring together pertinent research communities to map, assemble and synthesise current migration research studies in Europe.
- o The fight against crime and terrorism part of the Security calls, has a budget of €49 million.
- International cooperation calls and targeted initiatives will help boost research and innovation cooperation with countries outside Europe and effectively tackle common societal challenges.

This also includes support for a range of cross-cutting initiatives in 2017 such as:

- Industry 2020 in the Circular Economy (€325 million) which will contribute to boosting and renewing Europe's industrial capacities while ensuring sustainability;
- Smart and Sustainable Cities (€115 million) to better integrate environmental, transport, energy

and digital networks in the EU's urban environments;

• Technologies and standards for automatic driving (over €50 million);

• Internet of Things (€37 million) to foster the take-up of digital technologies in Europe.

If you want to know more, do not hesitate to consult the Zabala OPEN CALLS CALENDAR 2017 http://www.zabala.es/newsletters/docs/ZABALA_HORIZONT E2020_fechasdecierre_2016-2017_EN.pdf

5. The European Commission has published scoping papers for the Horizon 2020 work programmes 2018-2020. These papers outline the main priorities over the next three years for each part of Horizon 2020 and will form the basis for the development of the work programmes. 17 thematic scoping papers and one overarching document have been





published. The scoping papers are working documents not formally endorsed by the Commission, the adoption and publication of the 2018-2020 work programme is expected in October 2017. https://ec.europa.eu/programmes/horizon2020/en/what-work-programme。#Article

6. **Opportunities from Newton Fund:** The Newton Fund builds scientific and innovation partnerships with 16 partner countries to support their economic development and social welfare, and to develop their research and innovation capacity for long-term sustainable growth. It has a total UK Government investment of £735 million up until 2021, with matched resources from the partner countries. The Newton Fund is managed by the UK Department for Business, Energy and Industrial Strategy (BEIS), and delivered through 15 UK Delivery Partners, which include the Research Councils, the UK National Academies, the British Council, Innovate UK and the Met Office.

- Newton International Fellowships: The Academy of Medical Sciences is offering Newton International Fellowships to support early career postdoctoral researchers from China to undertake research in a UK institution for two years. This Fellowship covers clinical or patient oriented research. The competition closes 22nd March 2017. See <u>here</u> for more details and eligibility: <u>https://acmedsci.ac.uk/grants-and-schemes/grant-schemes/newton-internationalfellowships</u>
- Newton Advanced Fellowships: Newton Advanced Fellowships provide established Chinese researchers with an opportunity to develop the research strengths and capabilities of their research group through training, collaboration and reciprocal visits with a partner in the UK. The fellowships are offered in partnership between the Royal Society and the Chinese Academy of Sciences. The competition closes 23rd March 2017. See here for more details and eligibility: https://royalsociety.org/grants-schemes-awards/grants/newton-advanced-fellowships/

7. Joint Statement of the 4th meeting of the UK-China High-Level People to People **Dialogue.** On 6 December 2016, the 4th meeting of the UK-China High Level People to People Dialogue was held in Shanghai, China. Joint statement of the meeting published in both English and Chinese can be found here.

https://www.gov.uk/government/publications/joint-statement-of-the-4th-meeting-of-the-uk-china-highlevel-people-to-people-dialogue

China and EU-China Cooperation Reports

1. Development Plan of the Belt and Road for Traditional Chinese Medicine (2016-2020) : Development Plan of the Belt and Road for Traditional Chinese Medicine (2016-2020) (hereinafter referred to as 'The Plan') was jointly issued by the State Administration of traditional Chinese medicine and the National Development and Reform Commission (NDRC). The Plan will facilitate TCM cooperation and development in countries along the initiative's route. According to the Plan, China will build 30 centers for traditional Chinese medicine (TCM) around the world, formulating 20 international standards of TCM, registering 100 kinds of TCM products and setting up 50 exchange and cooperation bases of TCM by 2020.



The Plan will play an important role in the development of TCM. Five cooperation priorities are proposed: policy coordination, resource sharing, people-to-people bonds, technology connectivity and unimpeded trade. They refer to promoting intergovernmental cooperation, sharing the TCM services with countries along the Belt and Road, strengthening culture exchange, promoting the innovation of TCM and developing TCM services.

In order to ensure the implementation of the Plan, four measures are proposed: perfecting policy mechanism, increasing financial support, strengthening the construction of talent team and strengthening implementation.



'The Plan' entitled in Chinese《中医药"一带一路"发展规划(2016-2020 年)》(附全文)(中文) can be found from the following link:

http://mp.weixin.qq.com/s?__biz=MzA5Nzc0NDkxOQ==&mid=2649649922&idx=2&sn=dd8b00736ab be264b26be39485b04ed0&chksm

2. Kaihua Chen. Integrating into the global innovation network, China and UK can be great partners. Sience-of-Science WeChat article. Published on 8th Fe. 2017. (融入布局全球创新网络,中国与英国可共谋大事 (中文):

http://mp.weixin.qq.com/s?__biz=MzI1MTQ5MzIxNA==&mid=2247483958&idx=1&sn=74848fb15506 3d6cf06d1e928ceead89&chksm

3. China issues plan to prevent chronic diseases. 中国发布防治慢性病中长期规划 (2017—2025 年): BEIJING, Feb. 14 (Xinhua) -- China's State Council has published a medium and long-term plan to prevent and treat chronic diseases in the next five to 10 years. The plan, made public on Tuesday, aims to improve people's health, lower the onset risks of high-risk populations, and improve the patient quality of life. The plan made lowering the premature mortality of major chronic diseases a core target, saying that by 2020 and 2025 the premature mortality rate of cardiovascular disease, as well as cancer and chronic respiratory diseases among the groups aged between 30 and 70 will drop by 10 percent and 20 percent, respectively, compared with 2015. The plan put forward eight areas to be improved, including health education, standard diagnosis and treatment, health insurance and aid policies.

http://english.gov.cn/policies/latest_releases/2017/02/14/content_281475567482818.htm http://www.gov.cn/zhengce/content/2017-02/14/content_5167886.htm (中文)

4. China's top 10 exporters of TCM decoction pieces and branded TCM products.

<u>http://mp.weixin.qq.com/s/WTmmT_8Pjq-Zn6QTPJwhyw (</u>中文) http://mp.weixin.qg.com/s/8tjoT9BPPxyUf5mu4AKmrw (中文)

5. **China whips up an innovation storm with new model.** Having cornered the global market on low-cost, high volume manufacturing, China can now conquer the world in terms of innovation, a Cambridge academic believes.

http://www.businessweekly.co.uk/news/manufacturing/china-whips-innovation-storm-new-model

Omics in Progress

1. He Y, et al. Improved regulatory element prediction based on tissue-specific local epigenomic signatures. www.pnas.org/cgi/doi/10.1073/pnas.1618353114



Accurate enhancer identification is critical for spatiotemporal transcriptional understanding the regulation during development as well as the functional impact of disease-related noncoding genetic variants. Computational methods have been developed to predict the genomic locations of active enhancers based on histone modifications, but the accuracy and resolution of these methods remain limited. Here, we present an algorithm, regulatory element prediction based on tissuespecific local epigenetic marks (REPTILE), which integrates histone modification and whole-genome cytosine DNA methylation profiles to identify the precise location of enhancers. We tested the ability of REPTILE to identify enhancers previously validated in reporter assays. Compared with existing methods, REPTILE shows consistently superior performance across diverse cell and tissue types, and the enhancer locations are



significantly more refined. We show that, by incorporating base-resolution methylation data, REPTILE greatly improves upon current methods for annotation of enhancers across a variety of cell and tissue types. REPTILE is available at https://github.com/yupenghe/REPTILE/ https://github.com/yupenghe/REPTILE/ https://github.com/yupenghe/REPTILE/ https://github.com/yupenghe/REPTILE/

www.pnas.org/cgi/doi/10.1073/pnas.1618353114

PNAS:研究团队开发出了能描绘出基因组功能区域的新工具

http://mp.weixin.qq.com/s?__biz=MzIxMjM0NDQ4MA==&mid=2247484261&idx=1&sn=f07589055251 8a26714b32b22ca4e232&chksm (中文)

2. Jocelyn Kaiser. A yellow light for embryo editing. Science 2017;355:675. Editing the DNA of a human embryo could be ethically allowable in limited circumstances, says a report released this week by a committee convened by the U.S. National Academy of Sciences and the National Academy of Medicine in Washington, D.C. Such experiments "might be permitted, but only following much more research" on risks and benefits, and "only for compelling reasons and under strict oversight," the group concludes. Those situations could be limited to couples who both have a serious genetic disease and for whom embryo editing is only option for having a healthy biological child. Some researchers are pleased, saying the report is consistent with previous conclusions that altering the DNA of human eggs, sperm, or early embryos—known as germline editing—could be permissible. But others see the report as lowering the bar for embryo editing.

Nature News: *Sara Reardon.* US science advisers outline path to genetically modified babies http://www.nature.com/news/us-science-advisers-outline-path-to-genetically-modified-babies-1.21474 *Lancet* Editorial entitled Safeguarding the future of human gene editing. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30389-6/fulltext

3. Whole-genome landscape of pancreatic neuroendocrine tumours published in *Nature*. The genomes of 102 primary pancreatic neuroendocrine tumours have been sequenced, revealing mutations in genes with functions such as chromatin remodelling, DNA damage repair, mTOR activation and telomere maintenance, and a greater-than-expected contribution from germ line mutations.

http://www.nature.com/nature/journal/vaop/ncurrent/full/nature21063.html?WT.ec_id=NATURE-20170216&spMailingID

4. Ledford H. **Broad Institute wins bitter battle over CRISPR patents** *Nature* 2017; 542:401. The US Patent and Trademark Office issues a verdict in legal tussle over rights to genome-editing technology.

http://www.nature.com/news/broad-institute-wins-bitter-battle-over-crispr-patents-1.21502?WT.ec_id

5. Willyard C. An epigenetics gold rush: new controls for gene expression. *Nature* 2017; 542:406-408. How rediscovered chemical tags on DNA and RNA are shaking up the field. http://www.nature.com/news/an-epigenetics-gold-rush-new-controls-for-gene-expression-1.21513?WT.ec_id

6. Chi KR. **The RNA code comes into focus.** *Nature* 2017; 542:503–506. As researchers open up to the reality of RNA modification, an expanded epitranscriptomics toolbox takes shape. <u>http://www.nature.com/nature/journal/v542/n7642/full/542503a.html?WT.ec_idobID</u>

TCM Research in Progress

1. Zhao L, et al. The Long-term Effect of Acupuncture for Migraine Prophylaxis: A Randomized Clinical Trial. JAMA Intern Med. 2017 Feb 20. doi: 10.1001/jamainternmed.2016.9378. OBJECTIVE: To investigate the long-term effects of true acupuncture compared with sham acupuncture and being placed in a waiting-list control group for migraine prophylaxis.

DESIGN, SETTING, AND PARTICIPANTS: This was a 24-week randomized clinical trial (4 weeks of treatment followed by 20 weeks of follow-up). Participants were randomly assigned to true acupuncture, sham acupuncture, or a waiting-list control group. The trial was conducted from October 2012 to September 2014 in outpatient settings at 3 clinical sites in China. A total of 249



participants 18 to 65 years old with migraine without aura based on the criteria of the International Headache Society, with migraine occurring 2 to 8 times per month.

INTERVENTIONS: Participants in the true acupuncture and sham acupuncture groups received treatment 5 days per week for 4 weeks for a total of 20 sessions. Participants in the waiting-list group did not receive acupuncture but were informed that 20 sessions of acupuncture would be provided free of charge at the end of the trial.

MAIN OUTCOMES AND MEASURES: Participants used diaries to record migraine attacks. The primary outcome was the change in the frequency of migraine attacks from baseline to week 16. Secondary outcome measures included the migraine days, average headache severity, and medication intake every 4 weeks within 24 weeks.

RESULTS: A total of 249 participants 18 to 65 years old were enrolled, and 245 were included in the intention-to-treat analyses. One hundred eighty-nine (77.1%) were women. Baseline characteristics were comparable across the 3 groups. The mean (SD) change in frequency of migraine attacks differed significantly among the 3 groups at 16 weeks after randomization (P < .001); the mean (SD) frequency of attacks decreased in the true acupuncture group by 3.2 (2.1), in the sham acupuncture group by 2.1 (2.5), and the waiting-list group by 1.4 (2.5); a greater reduction was observed in the true acupuncture than in the sham acupuncture group (difference of 1.1 attacks; 95% CI, 0.4-1.9; P = .002) and in the true acupuncture was not statistically different from the waiting-list group (difference of 0.7 attacks; 95% CI, -0.1 to 1.4; P = .07).

CONCLUSIONS AND RELEVANCE: Among patients with migraine without aura, true acupuncture may be associated with long-term reduction in migraine recurrence compared with sham acupuncture or assigned to a waiting list.

2. American College of Physicians issues guideline for treating nonradicular low back pain: *Treatment recommendations include massage, acupuncture, spinal manipulation, tai chi, and yoga.* <u>https://www.eurekalert.org/pub_releases/2017-02/acop-aco020717.php</u> <u>https://www.ncbi.nlm.nih.gov/pubmed/28192789</u> <u>http://annals.org/aim/article/2603231/noninvasive-treatments-acute-subacute-chronic-low-back-pain</u>

3. Interpretation on *The Strategic Plan for Development of TCM (2016-2030)* by Mr SANG Binsheng, Director-General, Department of Policy and Supervision, State Administration of TCM. 国家中医药管理局政策法规与监督司司长**柔滨生**解读《中医药发展战略规划纲要(2016-2030

年)》

http://mp.weixin.qq.com/s?__biz=MjM5NDkzNzc1Nw==&mid=2670589883&idx=1&sn=c50f4d52273b 6d13901370728c05a6f8&chksm (中文)

4. Song HP, Li P, et al. Advances in key Technologies for discovering bioactive

components of Chinese medicines. World Science & Technology – Modernisation of Traditional Chinese Medicine. 2017.

宋慧鹏、李萍等。 中药活性成分发现关键技术研究进展。

世界科学技术中医药现代化 2017

http://mp.weixin.qq.com/s?__biz=MjM5NDkzNzc1Nw==&mid= 2670589911&idx=1&sn=d0973ebdea7e3f742636ca1d6b7b12 41&chksm (中文)

Other Recommended Readings

1. **The Best of Cell 2016:** Featured articles in 2016 include genome engineering with CRISPR, disease modeling with organoids, an examination of the cellular phase of





Alzheimer's, and breaking cryo-EM resolution boundaries to facilitate drug discovery, that have helped drive science forward in recent years. To read these articles and those collections in the past few years, please visit:

http://www.cell.com/bestof?hsCtaTracking=8418e369-8c1f-4728-8553-974743f69819%7C99b893a8-448b-487d-a0f4-741d2c936c97&utm_campaign=Best+of+Cell+Press+2016&utm_medium

²2.Akst J. **Plants' Epigenetic Secrets**. *The Scientist* Feb. 2017. Unlike animals, plants stably pass on their DNA methylomes from one generation to the next. The resulting gene silencing likely hides an abundance of phenotypic variation...

http://www.the-scientist.com/?articles.view/articleNo/48087/title/Plants--Epigenetic-Secrets/

3. Henry BA. **Can Plants Learn to Associate Stimuli with Reward?** *The Scientist* Feb. 2017. A group of pea plants has displayed a sensitivity to environmental cues that resembles associative learning in animals...

http://www.the-scientist.com/?articles.view/articleNo/48028/title/Can-Plants-Learn-to-Associate-Stimuli-with-Reward-/

4. Henry BA. How Trees Lift Water? The Scientist Feb. 2017. A maple branch and shattered equipment led to the cohesion-tension theory, the counterintuitive claim that water's movement against gravity involves no action by trees...

http://www.the-scientist.com/?articles.view/articleNo/48072/title/19th-Century-Experiments-Explained-How-Trees-Lift-Water/

⁴5. Major breakthroughs in ageing research published in leading journals in 2016 (*Nature* 成果入选《科学》十大突破!这 25 项"衰老"研究你知道吗?)

http://mp.weixin.qq.com/s?__biz=MzIyNDA0NTAzNA==&mid=2650966417&idx=3&sn=6f29c60f6f0e0 5acc5607b4e44e47df5&chksm (中文)

6. **Herbal products to be tested for toxic alkaloids.** Transitional recommendations for risk management and quality control have been published by the European Medicines Agency. According to published contamination data, all herbal products containing specific plant species (Hyperici herba, Passiflorae herba, Matricariae flos, Alchemillae herba, Liquiritiae radix, Melissae folium, Menthae piperitae folium, Salviae folium, Taraxaci herba cum radice and Thymi herb) will need to undergo testing for pyrrolizidine alkaloids, known genotoxic and hepatotoxic agents.

http://www.ema.europa.eu/docs/en_GB/document_library/Public_statement/2016/06/WC500208195.p

Switzerland's medicine regulatory body Swissmedic has implemented the recommendations: http://www.swissinfo.ch/eng/weed-contamination_herbal-products-to-be-tested-for-toxicalkaloid/42949050?from=groupmessage&isappinstalled=0

7. Could a coffee a day keep inflammasome away? Inflammasomes, protein complexes that regulate expression of interleukin-1 (IL-1) family cytokines, are central to the regulation of a broad variety of inflammatory disease processes, from autoimmunity to cancer to infection. Animal models have suggested increased inflammasome activation with age, but data in humans are limited. A recent report by Furman *et al.* gives credence to inflammasome activation as a driving factor in age-related hypertension... Interestingly, caffeine was found to be negatively associated with both inflammatory gene modules, and low expressors of the modules had higher serum levels of caffeine and its metabolites. In vitro, caffeine abolished the positive effect of adenine and N4A on IL-1 β expression. Epidemiologic studies have been mixed with regard to the effects of coffee and caffeine on cardiovascular outcomes. However, the specific effects on the inflammasome suggested by this study motivate attention in future trials to the inflammasome as a correlative measure to cardiovascular outcomes.

http://www.nature.com/nm/journal/v23/n2/abs/nm.4267.html

http://mp.weixin.qq.com/s?__biz=MzAwMDA5NTIxNQ==&mid=2649959314&idx=6&sn=72084a2d10f 8f363628f3eb5979475fb&chksm



8. Altman N, Krzywinski M. **Interpreting P value**. *Nature Methods* 2017; 12: 213-214. A P value measures a sample's compatibility with a hypothesis, not the truth of the hypothesis. http://www.nature.com/nmeth/journal/v14/n3/full/nmeth.4210.html?WT.ec_id

9. Postdocs, What Would You Tell Your Younger Self? - *Cell* 2017;168:745-8. http://www.cell.com/cell/pdf/S0092-8674(17)30194-0.pdf

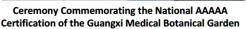
Cell 话题: 博士后们, 你会对年轻时候的自己说些什么?

http://mp.weixin.qq.com/s?__biz=MzIxMjA0NzU0OA==&mid=2650981615&idx=1&sn=51acbade39f47 cde874c4c4c2537ac6d&chksm (中文)

Meeting Reports

¹ 1. Spring Brings New Flowers for Materia Medica Culture – a report on the First Forum of Materia Medica Culture and the Inauguration of the Nationally-Certified AAAAA Status of the Guangxi Medical Botanical Garden" (Zhaoyu Dai reports; translated by Eric Brand) On February 17th-19th 2017, while the northern part of the country remained shrouded in ice and snow, spring was already in the air in Nanning; the plants and trees were flourishing and the flowers were as red as fire. In commemoration of 500 days before the 500th anniversary of Li Shizhen, the Guangxi Medical Botanical Garden and Hong Kong Baptist University launched the "First Forum of Materia Medica Culture and the Inauguration of the Nationally-Certified AAAAA Status of the Guangxi Medical Botanical Garden". Held at the world's largest botanical garden dedicated to medicinal plants, the forum was an impressive event dedicated to the "transmission of materia medica culture, building a healthy China". Over 200 Chinese and foreign scholars were in attendance, including experts from Taiwan, Hong Kong, Macao, and 12 overseas nations. More than 500 guests attended the opening ceremony, including over 200 scientists, teachers and students from the Guangxi TCM University and over 80 high-level artists and performers.



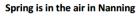




Visiting scholars from across China and abroad

Assembly of distinguished scholars at the materia medica study group





To commemorate the 500 anniversary of Li Shizhen in 2018, Hong Kong Baptist University launched a "Materia Medica Cultural Project" beginning in 2014, featuring academic forums, publications, and a multimedia outreach through movies and television. Thanks to the hard work of colleagues around the world, the once obscure topic of materia medica has become a hot trend, with interest brewing worldwide.



In the middle of this lively event, the new book "Zhongzhen Discusses Materia Medica" was officially launched. "Zhongzhen Discusses Materia Medica" represents the first talk show television series by a Chinese medicine expert. In a lively multimedia format, Professor Zhao Zhongzhen shares his rich knowledge gained through decades of research and expeditions around the world; in the brief period of a few months, the series has attracted over 10 million views. To satisfy the interests of the audience, the book "Zhongzhen Discusses Materia Medica" was published in a traditional Chinese version on the basis of the talk show, and a simplified Chinese version will soon be published by the China Traditional Chinese Medicine Publishing House. At the same time, an online platform for materia medica culture will be launched.

To expand "Zhongzhen Discusses Materia Medica", the Hong Kong TV station TVB is broadcasting a series of highly acclaimed short films titled "The World Discusses Materia Medica", which were previewed to the delight of the audience. With the feedback, support, and encouragement of experts and industry across the world, the series aims to use a popular style to promote the culture of Chinese medicine and disseminate knowledge about high quality herbal medicines. Featuring the renowned Hong Kong host Ms. Chen Fusheng, the series will grow from 80 episodes to 500 episodes, and will be broadcast across Hong Kong, mainland China, Taiwan, and overseas. In addition to Chinese, it will feature English subtitles.



Prof. Lu Aiping, Dean, School of Chinese Medicine, Hong Kong Baptist University, speaks at opening ceremony



A powerful performance commemorating materia medica culture



Academician Yao Xinsheng and Dr. Xie Zhiwei initiate the commemorative tree planting ceremony



A warm welcome at the materia medica cultural performance

"The First Forum of Materia Medica Culture and the 15th Meeting of the Materia Medica Study Group" was the core academic event of the weekend. The Chinese medical expert and academician Yao Xinsheng from the Chinese Engineering Institute took the stage to begin, and was followed by nearly 40 scholars from abroad who shared their views on the development of materia medica. This forum was based on the plans set in 2011 in Hong Kong at the founding of the Chinese materia medica study group. The organization's focus is to promote research and exchange on materia medica study group has organized many diverse meetings of high-level experts for academic exchange, and has given rise to a highly active WeChat group of 500 members.

The same evening, the "The First Forum of Materia Medica Culture Arts Performance" showcased colorful performances of song and dance, highlighting the minority cultures of Guangxi and the culture of Chinese medicine. Composed by Professor Zhao Zhongzhen and Director Lu Jun of the Chinese Cultural Research Institution, the "Song of Materia Medica" was performed in a moving rendition by



the Hong Kong singer Wu Xiangsheng, and followed up by the song "I am Chinese", leaving the audience feeling as one.

In this magnificent setting in Nanning, the worldwide influence of Li Shizhen and the "Compendium of Materia Medica" was evident. Before the conclusion of the forum, members reaffirmed their dedication to transmitting the culture of Chinese medicine with a series of activities to commemorate the 500th anniversary of Li Shizhen. By working together, the study of Chinese medicine can spread to reach the world, enriching humanity and blossoming around the planet.

Future Meetings

1. **Integrative Medicine China 2017**, China's biggest ever Integrative Medicine Conference, will be held in Xi'an, Shaanxi, on the 28-30 April 2017.

http://c.eqxiu.com/s/28KC6i2X?eqrcode=1&from=groupmessage&isappinstalled=0

2. The 10th International workshop Metabolomics Basics and Applications to Plant Sciences, Leiden, the Netherlands, May 1-5, 2017

www.plantsandmetabolomics.nl

3. The 16th Meeting of Consortium for Globalization of Chinese Medicine (CGCM) will be held in Guangzhou on August 18 - 20, 2017 (Friday-Sunday). This year's meeting is going to be organized by Guangdong Provincial Hospital of Chinese Medicine. The meeting provides a platform for regulatory-industrial-academic exchanges and potential research collaborations, on various frontiers of Traditional Chinese Medicine among our worldwide CGCM members and guests. You are cordially invited to attend the meetings and submit abstracts. Preliminary programme and more details will soon be announced on the CGCM website www.tcmedicine.org. Should you have any enquiries, please feel free to contact: centraloffice@tcmedicine.org

4. *The Lancet*–CAMS Health Summit 2017: a *Lancet* call for abstracts from China. Abstracts are invited from China for *The Lancet*–CAMS Health Summit 2017, to be held on Oct 13–14 2017 in Beijing. Submissions are invited from all aspects of health science including, but not limited to: translational medicine, clinical medicine, public health, global health, health policy, the environment and ecological systems and health, health professionalism, and medical education.

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30130-7/fulltext?elsca1=etoc

Invitation from Journals

1. Invitation from, and publication of the four issue of, *World Journal of Traditional Chinese Medicine* (WJTCM). WJTCM, ISSN 2311-8571, a new peer-reviewed journal (quarterly) launched in 2014, is the official journal of the World Federation of Chinese Medicine Societies (WFCMS) and the GP-TCM RA. **Aim &Scope:** Introduce clinical efficacy and mechanism of TCM to doctors and biomedical researchers around the world, so as to provide new ideas and methods for solving the complicated and difficult cases.

- WJTCM includes reviews and original articles focused on four aspects:
- Modern Research on Chinese Materia Medica: theories of processing, property, and compatibility of Chinese materia medica; safety of Chinese materia medica; active principles and mechanism and efficacy of crude drugs and Chinese compound formulas
- Research on TCM Theory: scientific connotation and biological foundation of TCM basic theories
- TCM clinical Research: disease and syndrome, TCM safety, efficacy evaluation, evidence-based and systematic evaluation
- Acupuncture and Moxibustion: effect mechanism of acupuncture and moxibustion, specificity of acupoint effect, acupoints compatibility, efficacy evaluation of acupuncture and moxibustion.

Submission to the Journal: All the articles can be submitted via ScholarOne: https://mc03.manuscriptcentral.com/wjtcm, Detailed information about requirements of manuscript and format can be found in "Instruction&Forms" by the above URL, or by accessing WJTCM home page www.wjtcm.org. All WJTCM articles will be published online via WJTCM website (www.wjtcm.org). PDF articles and electronic/online versions are freely available to global readers.



WJTCM has successfully published 8 issues since 2015. Full-text PDF articles and electronic/online versions are freely available to global readers: www.wjtcm.org

The latest issue, i.e. the fourth issue, volume 2, can be found here: <u>http://www.wjtcm.org:8080/ch/index.aspx</u>

The GP-TCM RA Newsletter wishes to particular recommend you to read the following paper:

Kelvin Chan. The Evolutional Development of Traditional Chinese Medicine Outside the Chinese Mainland: Challenges, Training, Practice, Research, and Future Development. http://www.wjtcm.org:8080/ch/reader/view_abstract.aspx?file_no=20160026&flag=1

2. A Lancet call for papers. In September 2017, *The Lancet* will dedicate a weekly issue to health care and research in China to coincide with the centenary of Peking Union Medical College; it will be the journal's eighth such themed issue since 2008. The editors invite submissions of high-quality research from China—or from research teams working on health in China—for this issue in particular. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)32584-3/fulltext?elsca1=etoc

3. Invitation to contribute to an Acta Pharmacologica Sinica (APS, http://www.nature.com/aps) Special Issue on Fangiomics: Co-guest editors Professors Zhong Wang, Dayue Duan, Chunxiang Zhang and Yongyan Wang invite you to contribute to a special issue with the featured topic: "Fangjiomics: Rational Combination Therapy with Integrated Diverse Drug Profiles and its Implications in Precision Medicine". The journal APS is published in partnership with Nature Publishing Group (NPG), covering a broad scope of pharmacology and the related life sciences and bringing high-guality and cutting-edge research to international scientific community. All articles published in APS are free to access after an embargo period of 12 months (archived in PubMed Central). Authors in this special issue will NOT be charged publication fees. The use of combination drug therapy for complexity diseases is a common strategy in both Western and traditional Chinese medicine (TCM) although based on different rationales. The structural complexity of combination therapy is limitless. In clinical practice, however, most combination designs comprise the hierarchy or proportional architectures that lead to combination therapies with spatially homogeneous features. More advanced applications in drug combination therapy in the practice of precision medicine emphasize the integrated consideration of not only patient's health and disease conditions but also influences by environmental variations, which requires adaptive architectures of drug combination. This special issue of APS will summarize the application of Fangiomics strategy for the mechanistical design and identification of hierarchy and proportional combination therapies that exhibit spatially fangji's functionalities, including reviews in theory and methodology of Fangjiomics, research articles of Fangji's architectures, research article on relationship between Fangji and Zhenghou. The progress in combination therapies exhibit holistic holographic order, whereby the multi-dimensional pixilated function dictates the multi-dimensional drugs interior arrangement. Such an integrated combinational design thus opens a new avenue with unusual order and individualized adjustment for precision medicine.

Both reviews and original articles are welcome. Each article should be around 8000 words excluding references, and illustrated with figures. The manuscript should be ready for peer-review by the 15th April 2017. https://mc.manuscriptcentral.com/aphs

4. Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology) will publish a special Issue on "Chinese Integrative Medicine and Obstetrics & Gynaecology" in March 2017. JZUS-B, a monthly journal started in 2005, is an international peer-reviewed journal co-published by Springer & Zhejiang University Press. JZUS-B aims to present the latest developments and achievements in the broad area of Biomedicine, Biotechnology, and Biochemistry, and is indexed by SCI-E (2014 IF is 1.303), MEDLINE/PubMed, PMC, JST, CA, etc.

In this special issue, researchers in the fields of obstetrics, gynecology and Chinese integrative medicine are invited to share their perspectives on their most recent studies. Guest editors are Dr Fan QU, Zhejiang University, China; Professor Nicola ROBINSON, London South Bank University, UK; and Dr Paul J. HARDIMAN, University College London, UK.



For more information, please visit the journal's website <u>http://www.zju.edu.cn/jzus</u>. Questions please be addressed to: jzus lhf@zju.edu.cn

Sounding Board

1. Dr Lily Lai and Professor George Lewith from the University of Southampton in the UK have recently been successful in securing a NIHR School for Primary Care Research grant to evaluate the use of Chinese herbal medicine for polycystic ovary syndrome (PCOS). Dr Lai wrote: "This grant will be used to build on earlier work on Chinese herbal-prescribing in PCOS which was conducted as part of Dr. Lai's NIHR-funded doctoral work in the UK. In this present grant, Dr Lai and postdoctoral researcher Dr Xiao-yang Hu will use the nominal group technique with Chinese medicine practitioners to develop a standardised remedy for oligo- and amenorrhoea in PCOS. The safety and clinical effects of this remedy will then be evaluated amongst women with PCOS-related oligo- and amenorrhoea and which will take place within an observational study in the UK. If a promising response is observed, this will provide preliminary evidence of safety and clinical effect. Our hope is that this early data will assist us in obtaining subsequent funds to evaluate this remedy further within a randomised controlled trial in UK primary care." Please contact Dr Lai if you are interested in this research or wish to propose any collaborations: info@acupunctureandherbs.co.uk

2. This column publishes comments, views and proposals for collaborations or any other features from you and your part of the world. We look forward to hearing from you! Please address to Dr Qihe Xu (<u>qihe.xu@kcl.ac.uk</u>), Prof. Pierre Duez (<u>pierre.duez@umons.ac.be</u>) and Prof. Yuan Shiun Chang (yschang0404@gmail.com).

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Contributions from Mr Eric Brand (Hong Kong), Prof. Kelvin Chan (Sydney), Prof. Yuan Shiun Chang (Taichung), Dr. Zhaoyu Dai (Hong Kong), Prof. Pierre Duez (Mons), Dr. Tai-Ping Fan (Cambridge), Dr. Lily Lai and Prof. George Lewith (Southampton), Prof. Jianping Liu (Beijing), Prof. Olavi Pelkonen (Olu), Dr Fan Qu (Hangzhou), Prof. Zhong Wang (Beijing), Ms Hui Xu (Beijing), Prof. Rob Verpoorte (Leiden) and Dr. Qihe Xu (London) are gratefully acknowledged. Chinese paintings were snapshots of 《上善若水 第六季》 'The highest virtue is like water — the 6th season'. Authors of the paintings are: DENG Youhuai (邓由怀), LIU Hui (刘辉), WANG Weibao (王维宝) and YUAN Yi (袁艺).