

The July 2018 Newsletter of The GP-TCM Research Association



Editorial

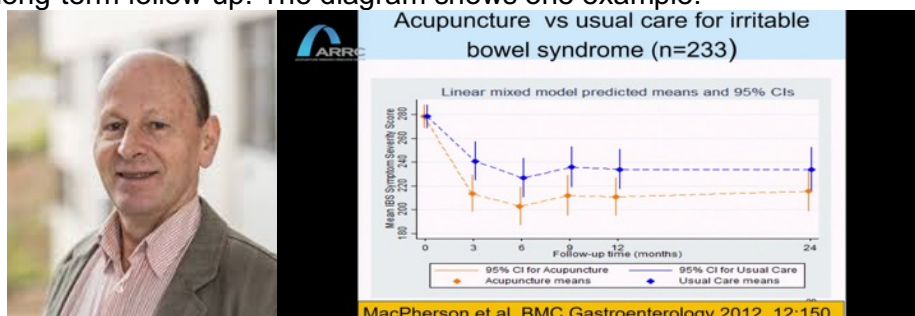


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Will research help to establish acupuncture as a NHS healthcare option in the UK?

There is only one professor of acupuncture in the UK — Hugh MacPherson (plus one for TCM and one for East Asian medicine) but he has been productive and successful with funding, so we have large, high quality randomised controlled trials (RCTs) for low back pain (published 2006), irritable bowel syndrome (IBS) (2012), depression (2013) and neck pain (2015). With these RCTs MacPherson aimed to provide evidence to support acupuncture as a healthcare option for the NHS in the UK, and the populations, interventions and outcomes measures were chosen with this in mind. The primary comparison was always with usual care, sometimes also with other active treatments, but never sham acupuncture. Participating practitioners followed their normal, varied, individualised approaches in order to get good external validity.

In all four trials acupuncture was superior to usual care, and the short-term advantages held up well through to the long-term follow-up. The diagram shows one example.



Hugh MacPherson is a professor of acupuncture research at the University of York (**Left**);
MacPherson's research on acupuncture for IBS (**right**).

What did NICE (National Institute for Health and Care Excellence), the foremost UK body producing clinical guidelines for the NHS, make of this research? In 2009 it recommended acupuncture for low back pain and cited MacPherson's research as providing the most compelling evidence. Fast forward to 2016 and they removed this recommendation – and even pointed out flaws in MacPherson's study. For IBS, NICE ruled against acupuncture in their 2008 guideline, i.e. prior to MacPherson's results, and they still rejected it in the surveillance reviews that came afterwards. It was a similar story with osteoarthritis. MacPherson didn't run a trial for this but he was in the network meta-analysis (NMA) team that showed acupuncture to perform well in relation to exercise and other non-pharmacological treatments. NICE's 2014 guideline endorsed exercise but not acupuncture.

Now we come to depression, where NICE has recently produced a second draft but is yet to publish their final guideline. Here they used a NMA to compare the different options, an approach that should have favoured acupuncture, as it gets away from the usual focus on sham and placebo. Unfortunately, though perhaps not surprisingly (as there is an obvious pattern emerging here), acupuncture was excluded from the NMA and hence ended up being rejected in the usual way. The acupuncture studies reviewed, 7 out of 12 of which were Chinese, were deemed too different from those of other treatments to be included, and not generalisable to the UK.



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The reasoning given for this was neither clear nor convincing.

What about neck pain? As yet there is no NICE guideline for generalised neck pain (which is perhaps a blessing). In general we find that 'the goal posts get moved' when it comes to NICE's interpretation of acupuncture evidence. The demand for statistical superiority over sham evolved into clinical superiority over sham, which effectively knocks out anything with sham data, but leaves other physical (and psychological) therapies unscathed.

In this situation it is hard to see how any kind of research input will convince NICE, despite the increasing weight of good quality evidence, over an increasing range of conditions. Still, all is not 'doom and gloom'. In Birch's accompanying editorial we see that a preliminary search has yielded dozens of examples where the NHS's own guidelines, both national and regional, do recommend acupuncture. This is for various different illnesses, including many that NICE has ruled against (as those above).

The British Acupuncture Council gives small research grants for its members. In 2017 five projects of up to £10k each were funded. The amount of money available is much too small for large, high quality RCTs, so instead the focus was on proof-of-concept studies for developing local acupuncture services that could be taken to the NHS and/or expanded in size or geographical spread. One of these, on Posttraumatic Stress Disorder (PTSD) in military veterans, was presented at the GPTCM-RA meeting. The data pre- and post-treatment (a course of 6 sessions) for the PTSD CheckList (PCL) outcome measure are shown below.

	Pre-test (n=26)	Post-test (n=21)	Post-test (n=26)	ITT
PCL mean score	64	28	35	
PCL≥50 (%)	90	0	19	
Reliable clinical improvement (%)		81	65	

1. Intention to treat analysis using last value carried forward (i.e. the pre-treatment value for the drop-outs)
2. PCL score range is 17-85
3. A score of at least 50 indicates caseness, using a conservative threshold
4. An improvement of 20 PCL points indicates clinically important change, using the most conservative threshold

This was an uncontrolled study and the standardised effect size of 2.68 has to be seen in that light, but it compares well against other studies on PTSD, including those with psychological interventions using a similar design. We don't know how much of the very substantial response was due to placebo effects and a large portion may be located specifically in the one acupuncturist who provided the treatment; nevertheless we believe that the results can provide a springboard for both service development and further research. Whether this may lead onto take-up by the NHS is yet to be seen.

Special Features

1. The 6th GP-TCM RA Annual Meeting was successfully held at Royal Botanical Gardens Kew and London South Bank University, UK, 4-6 July 2018. On 4 July morning, the Opening ceremony was chaired by Prof Monique Simmonds, Deputy Director of Science (RBG Kew) and addressed by Dr Tai-Ping Fan, President GP-TCM RA (Cambridge



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University). The scientific programme was opened by a Keynote lecture chaired by Prof Peter Hylands, (King's College London) and delivered by Prof De-an Guo (Shanghai Institute of Materia Medica) entitled 'Setting the scene: To provide an overview of the challenges and opportunities facing TCM'. This was followed by a session chaired by Prof Rudolf Bauer (Graz University), which was dedicated to GP-TCM RA Interest Groups, including a talk by Prof Gerhard Franz (Universität Regensburg), Chair of Regulatory Aspects Interest Group, Prof Kelvin Chan (Liverpool John Moores University), Chair of Quality Control Interest Group, Prof Pierre Duez (Université de Mons), Chair of the Pharmacology and Toxicology Interest Group, Prof Nicola Robinson (LSBU), Chair of Acupuncture Interest Group and Prof Zhaoxiang Bian (Hong Kong Baptist University), Chair of Clinical Studies Interest Group. During lunch break, a workshop on 'writing scientific papers' was chaired by

Prof Rob Verpoorte (Leiden University), Chair of TCM Scientific Writing & Publication Interest Group.

The 4th July afternoon was dedicated to a session for the Regulatory Aspect Interest Group chaired by Prof Gerhard Franz, featuring a keynote lecture by Co-Chair Dr Mei Wang (Leiden University) entitled 'Challenges and opportunities for TCM in Europe' and a talk by Dr Melanie Pires (Medicines and Healthcare products Regulatory Agency, London). This was followed by a 2-min poster presentation session chaired by Prof Rob Verpoorte, Annual General Meeting and a fabulous conference dinner.



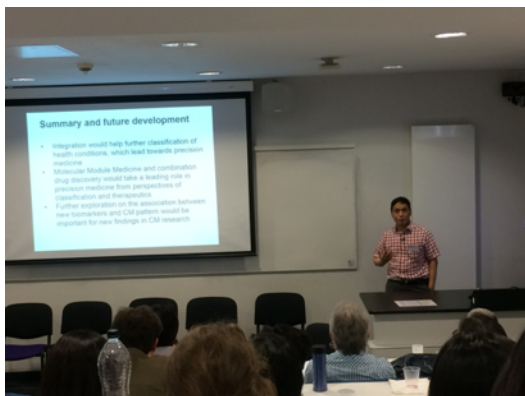
The 5th July started with a special session in celebration of the 500th anniversary of Li Shizhen's birth in 1518. Chaired by Dr Qihe Xu (King's College London), a beautifully illustrated keynote lecture was delivered by Prof Zhongzhen Zhao (Hong Kong Baptist University), entitled '*From Li Shizhen to now and our future*'. This was followed by a session dedicated to the Pharmacology and Toxicology Interest Group chaired by Prof Pierre Duez, featuring a keynote lecture by Prof Clara Lau (The Chinese University of Hong Kong) entitled 'New concept of 'good practice' on pharmacological research – exploration of beneficial herb-drug combined efficacies' and talks by Prof Gert Laekeman (KU Leuven, Belgium) and Dr Andreas Bender (Cambridge University). The morning was complete with a Session 5: Quality Control Interest Group chaired by Prof Kelvin Chan, featuring a keynote lecture by Prof Pang Chui Shaw (Chinese University of Hong Kong) entitled 'Use of DNA techniques in the identification of granule extracts' and talks by Prof Shao-Ping Li (University of Macau) and Prof Lie-Fen Shyur (Agricultural Biotechnology Research Center, Academia Sinica, Taiwan).

After a lunch break, in which a workshop on Guidance Best Practice and Reference Resources: 'Medicinal plant names' was chaired by Dr Bob Allkin (RBG Kew). This was followed by two afternoon sessions focused on Conservation and Sustainable Supply chaired by Prof Vivian Wong (University of Hong Kong), featuring a keynote lecture by Dr Christine Leon (RBG Kew) entitled 'A sustainable future for TCM plants and materia medica. Is it achievable?' and talks by a colleague of Prof. Cheng Peng (Chengdu University of TCM, Chengdu, China) and Dr Anastasiya Timoshyna (TRAFFIC, Cambridge). The second session of the afternoon "From plants to products" was chaired by Dr Tai-Ping Fan and featured two lectures, one by Mr Abraham Chan (PuraPharm International Hong Kong) entitled 'Opportunities for companies in the area of TCM – China: Modernization of Chinese Medicine'

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and the other by Mr Andrew Gallagher (Phynova, UK), entitled 'Phynova case study: Modern healthcare solutions from ancient remedies'. After a refreshment break, the meeting was closed with an "Actions going forward" session chaired by Prof Monique Simmonds with all Interest Group chairs and keynote speakers as panellists.



The final day of the meeting (6th July) was focused on clinical and acupuncture studies and was hosted by Prof Nicky Robinson at the London South Bank University. Prof. Paul Ivey Pro Vice-Chancellor Research and Engagement, Prof Warren Turner, Dean & Pro Vice-Chancellor Health and Social Care, Prof Lesley Haig, Head of Allied Health Sciences addressed the conference at a "Welcome to LSBU" session. This was followed by Acupuncture Interest Group and Clinical Studies Interest Group chaired by Prof Nicola Robinson (Professor of Traditional Chinese Medicine and Integrated Health, LSBU, and Chair of Acupuncture Interest Group), featuring a keynote lecture by Dr Stephen

Birch (Kristiania University College, Oslo, Norway) entitled 'The effectiveness of acupuncture: evidence of extensive real-world clinical interpretations and applications' and talks by Mr Mark Bovey (British Acupuncture Council, UK, see editorial) and Dr John Hughes (Royal London Hospital for Integrated Medicine, University College London). featuring talks by Mr Ian Appleyard (LSBU, London) and Prof Jianping Liu (Beijing University of Chinese Medicine, China, and Co-Chair of Acupuncture Interest Group), followed by a panel discussion entitled 'Lessons learned from conducting Chinese acupuncture trials' and 'Where next? What evidence is good enough?' After lunch break, Clinical Studies Interest Group was co-chaired by Prof Zhaoxiang Bian (HKBU) and Prof Myeong Soo Lee (Korea Institute of Oriental Medicine, South Korea), featuring keynote lectures by Prof Lixing Lao (The University of Hong Kong, Co-Chair of the Acupuncture Interest Group) entitled 'Challenges and opportunities in Chinese medicine clinical trials' and by Prof Aiping Lyu (HKBU) entitled 'Disease diagnosis in western medicine and pattern classification in Chinese medicine: integration and beyond'. The afternoon session featured talks by Dr Jue Zhou (Zhejiang Gongshang University, Hangzhou, China) and Dr Martin Logue (University of Southampton), as well as a panel debate entitled "What are the opportunities for international collaborations in Clinical Studies?" The meeting was concluded with thanks to the organisers and speakers from Dr Tai-Ping Fan. A summary of the next steps from each of the Special Interests Groups will be shared in a future Newsletter.

Programme of the meeting can be found here:

<http://www.gp-tcm.org/wp-content/uploads/2018/01/FINAL-Full-programme-2018.06.20-LR-EH.pdf>

Gallery of the meeting at Kew and the conference dinner::

https://photos.google.com/share/AF1QipNJ59eXQIbRIiD3bipAeY7LjXaBMgCaBfvzZD4Td0Apa4K5ifTzsr3YrdhF_tleyA?key=eGRjNHAwZURIR2ptczJSSVBiM0liWFE0bWNSdktB

https://photos.google.com/share/AF1QipNcFcie9aJ-NfkQUH_-g2lqK9dO-CutXNifmixU_CV-UF_chZm3KhZztsZsPI08ig?key=Y2pETGtBV0w0aEdHNmhDaVBzbF8zelhHVDN6Y2pn

[UF_chZm3KhZztsZsPI08ig?key=Y2pETGtBV0w0aEdHNmhDaVBzbF8zelhHVDN6Y2pn](https://photos.google.com/share/AF1QipNcFcie9aJ-NfkQUH_-g2lqK9dO-CutXNifmixU_CV-UF_chZm3KhZztsZsPI08ig?key=Y2pETGtBV0w0aEdHNmhDaVBzbF8zelhHVDN6Y2pn)

2. The 43rd GP-TCM RA BoD meeting was held on 3 July 2018 (Tuesday, 6.30 pm – 7.45 pm UK time) in the Royal Botanical Gardens Kew, London, UK. Chaired by Dr Tai-Ping Fan



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(President), the meeting was attended by Prof Clara Lau (Secretary-General), Prof Peter Hylands (Treasurer), Prof Monique Simmonds, Mr Abraham Chan, Prof Rudolf Bauer, Prof Pierre Duez, Prof Rob Verpoorte, Prof Vivian Wong and Dr Qihe Xu. Apologies were received from Prof Aiping Lu (President-Elect), Prof Thomas Efferth and Prof De-an Guo (Past-President). At the meeting, the minutes of the 42nd BoD meeting was approved without amendment. Matters arising from the 42nd BoD skype call, including update on Charity Commission Annual Return, update on revision of Bylaws, Data protection, Treasurer updates and continued Secretariat support were discussed.

3. The 2018 GP-TCM RA Annual General Meeting (AGM) was held 4 July 2018 (5:40 pm – 7:15 pm UK time) at The Lady Lisa Sainsbury Lecture Theatre, Jodrell Laboratory, Royal Botanic Gardens, Kew, London, UK. Chaired by Dr. Tai-Ping Fan, President of the GP-TCM RA.

The meeting was attended by members and other attendees of the 6th GP-TCM RA Annual Meeting. The meeting received President's report by Dr Tai-Ping Fan, Secretary-General's report by Prof Clara Lau and Treasurer's report by Prof Peter Hylands. An amendment of



the Bylaws was tabled for discussion and some more new revisions were agreed. Finally, future activities such as GP-TCM RA-sponsored webinars, workshops and training courses, as well as possible venues for the 7th & 8th Annual meeting in 2019 and 2020 were discussed.

4. Summary to Discussions of The Regulatory Aspect Interest Group



Prof. Dr. Gerhard Franz and Dr. Mei Wang, Co-Chairs of the GP-TCM RA Regulatory Aspect Interest Group

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During the 6th annual meeting of GP-TCM RA at Kew, within the Regulatory Aspect Interest Group, the following important target including TCM Herbal Products in the Definition of the EMA are discussed:

- Treating / preventing of diseases in human beings by using of TCM is important but cannot be fully covered by present EU legislation traditional Herbal Medicinal products (tHMPs) system;
- Modern Chinese materia medica (CMM) for treatment of serious diseases should be considered as new drug development;
- Inducing the establishment of TCM herbal drug monographs of efficacy and safety of Herbal medicinal products (HMPs) for Community Monographs for well-established and traditional HMPs and establishing cooperation with European Society for Cognitive Psychology (ESCO). So far no CMM has been considered;
- Elaboration of more monographs on TCM herbal drugs for the European Pharmacopoeia, adding the missing items which are needed by the TCM practitioner on the working programme of the TCM Working Party;
- Following European Guidelines: GACP, Test procedures and acceptance criteria for Herbal Drugs, -preparations and HMPs;
- Clarifying the actual legal situation for CMM Granules in the European market. At this moment, there is a challenge for the status of Quality Requirements for Granules, in fact for TCM Granules,

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it should meet the Quality Requirements of the European Pharmacopoeial Extract Monograph. For example, it should meet the following requirements:

- **Identity**
 - TLC/HPTLC fingerprint
 - HPLC-fingerprint
 - DNA-identification
- **Purity Tests**
 - Mycotoxins
 - Heavy metals
 - Pesticides
 - Microbiological contamination
 - Irradiation
 - Solvent residues
- **Assay**
 - Quantification of toxic constituents
 - Quantification of active markers
 - Labelling



Since TCM Granules (vs. TCM herbal drugs) have a rising share in the EU market (30-40% in Germany, Switzerland ca. 80%), TCM Granules at the moment in the EU are unregulated products for pharmaceutical and medical use. A comparable quality between commercial Granules and the corresponding TCM herbal drug is rather doubtful. As there is no specific quality monographs for Granules exist in the actual European Pharmacopoeia: Therefore our special interest group propose: Establishment of monographs for TCM Granules in the European Pharmacopoeia is absolutely necessary in order to follow the actual market situation in Europe.

5. Key Points for the Conservation and Sustainable Sourcing of TCM plant species



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TCM's plant species are under threat in the wild as never before. If the future of plant-based TCM is to be safe-guarded then the conservation and sustainable sourcing of these plants needs urgent attention. Decades of habitat loss and unsustainable levels of wild-harvesting in China has seen as many as 30% of TCM-Pharmacopoeia plant species threatened with extinction.

Suggested Key Components of a strategic, innovative and a rigorously enforced sustainable sourcing programme for TCM Plant Species:

- Research and implement *Good Practices in Sustainable Herbal Sourcing (GP-SHS)* notably by uniting behind 'FairWild' certification of TCM herbs in China
- *Conserve maximum genetic diversity of each TCM plant species*, eg by establishing protected medicinal plant 'hot-spots' of species diversity, seed-banking and re-establishing TCM species in the wild.
- *Identify alternative species with similar clinical activity* using ethnopharmacological, chemotaxonomic and phylogenetic methods.
- *Investigate alternative sustainable sources of TCM species*, eg by using alternative technologies (tissue culture, micropropagation, fermentation etc.) and/or sourcing TCM plants from other countries (such as BRI countries)
- *Establish a multi-sectoral global herbal TCM think-tank to address collectively the above priorities* embracing expertise from governments, industry, academia and conservation GOs and NGOs.

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Note: This short summary is based on a ppt presentation given at the GP-TCM RA Annual Meeting, Kew, UK, 4-6 July 2018.

Now 6. “Future Trends in Global Healthcare – Fusion of Traditional Medicines and Modern Technologies” Forum of the 3-day First Cambridge Belt-and-Road Initiative International Conference was held in Cambridge on 7 July 2018. Chaired by Dr Tai-Ping Fan (University of Cambridge) and Prof Peter McNaughton (King’s College London), 14 experts from across the globe presented their latest results in the R&D of TCM and



other traditional medicines, as well as exploring how modern diagnostics and technologies can be harnessed to help policy makers, clinicians, scientists and other stakeholders work together to translate the ancient art of healing to evidence-based system of healthcare and wellness.

- Prof Zhongzhen Zhao (Hong Kong Baptist University) *The Compendium of Materia Medica (Bencao Gangmu) and other ethnic herbal medicines*
- Prof Bipin Nair (Amrita University, India) *Natural products from India as novel drug leads - old wine in a defined new bottle*
- Prof Pierre Duez (University of Mons, Belgium) *Traditional African Medicine: validation and modernization*
- Prof Cheng Peng (Chengdu University of TCM, China) *Conservation and sustainable supply of medicinal plants*
- Prof Xuesong Liu (Zhejiang University, China) *Exploration and practice for the advanced pharmaceutical technologies in the whole industrial chain of botanical drugs*
- Prof Gerhard Franz (University of Regensburg, Germany) *Regulation of Chinese and other herbal medicines in Europe*
- Prof Ka-Kit Hui (UCLA Center for East-West Medicine, USA) *Integrative East-West Medicine: a commitment to advancing healthcare*
- Dr Jacopo Lucci (Natural Bio-Medicine SpA, Aboca Group, Italy) *A new way of treating: Natural products in the age of Systems Medicine*
- Prof Lie-Fen Shyur (Agricultural Biotechnology Research Center, Academia Sinica, Taiwan) *Phytomedicine polypharmacology: Uncovering novel molecular insights of phytoagents for cancer therapy*
- Dr Shifeng Cheng (Beijing Genomics Institute, Shenzhen, China) - *TCM-phylogenomics in bioprospecting and TCM cohort big data in human gut microbiome and blood metabolites*



- Prof Kan Ding (Shanghai Institute of Materia Medica, Chinese Academy of Sciences, China): *The mechanism underlying anti-pancreatic cancer polysaccharides from herbal medicine*
- Dr Zhongzhao Teng (Radiology, University of Cambridge) *Stroke prevention: social challenge and imaging-based precise solution*
- Dr Yan Yan Shery Huang (Nanoscience Centre, University of Cambridge) *New tools in drug discovery 1 - 3D bioprinting and organ-on-chips*
- Dr Andreas Bender (Chemistry, University of Cambridge) - *New tools in drug discovery 2 - cheminformatics and bioinformatics*

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Together with Prof Monique Simmonds and Dr Christine Leon (Royal Botanic Gardens, Kew), Prof Kelvin Chan (Liverpool John Moore University, UK), Prof Vivian Wong (The University of Hong Kong), Prof Clara Lau (The Chinese University of Hong Kong), Prof Mei Wang, (Leiden University, the Netherlands), Prof Shaoping Li (University of Macau, China), Prof Chun-Tao Che (University of Illinois at Chicago, USA), Dr Kenny Kuchta (University Medical Center Göttingen, Germany) and Prof Xiang Zhang (Cavendish Laboratory, University of Cambridge), they had extensive discussions on the above topics, and proposed to establish a multi-sectoral global herbal think-tank. Synopsis of these talks and panel discussions will be featured in future editions of the GP-TCM RA Newsletter.

European Reports:

1. Horizon Europe - the next research and innovation framework programme. The Commission has published its proposal for Horizon Europe, an ambitious €100 billion research and innovation programme that will succeed Horizon 2020. How is Horizon Europe being designed, legal framework, factsheets, reports and timeline...

https://ec.europa.eu/info/designing-next-research-and-innovation-framework-programme/what-shapes-next-framework-programme_en

2. First Horizon Europe Draft Report Published.

The European Parliament's rapporteur on the Horizon Europe Regulation proposal, Dan Nica MEP from Romania, has published an initial Draft Report in 18th July 2018. The report includes a proposal for draft amendments to the European Commission's proposal for the Horizon Europe Regulation, as well as an outline of the main changes the rapporteur would like to see made. This is only the start of the process within the European Parliament. It is important to stress that the current draft is not a party position, but for now the report of a single MEP only and it is not an agreed EP position at this stage. The document kicks off proceedings of the European Parliament process and will be open for amendments from other MEPs over the summer. It is likely that thousands of amendments will be submitted. Whatever is finally agreed in the European Parliament will then be subject to further negotiations between the Council and the Parliament during the dialogues.

MEP Nica provides a detailed outline with his main points at the end of the report. These are:

- A more appropriate budget - *asking for €120 billion in constant rather than current prices.*
- Stronger fundamental and collaborative research.
- Reciprocity in international partnerships - *including a proposal to ask for reciprocal participation in third country funding schemes.*
- Stronger Intellectual Property Rules.
- First EU commercial exploitation principle for the EU funded projects.
- Synergies with other EU funds.
- Missions that deliver results for citizens.
- Equal pay for equal work - *including a proposal to widen the MSCA unit costs for personnel costs across the programme.*
- Anonymous evaluation needs to be done by independent experts.
- Simplification.
- Widening.
- Making the Union more attractive.

Regarding the rules for association, which are outlined in Article 12 of the Horizon Europe Regulation, the rapporteur is proposing a number of changes, including excluding associated countries who associate under "option d", which is the category the UK, but also Switzerland, is likely to fall under after Brexit from mono-beneficiary grants.



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The much discussed subject of "Widening" is very prominent in the report, including proposals to have more European geographical balance for evaluator panels and around equal pay for researchers.

<http://www.europarl.europa.eu/sides/getDoc.do?type=COMPARL&reference=PE-625.305&format=PDF&language=EN&secondRef=>

3. The Lancet. UK life science research: time to burst the biomedical bubble. *Lancet* 2018;392:187. In November, 2017, as part of her long-awaited industrial strategy, UK Prime Minister Theresa May committed to raise investment in research and development (R&D) to 2.4% of gross domestic product by 2027. Life sciences featured prominently in the industrial strategy, described as one of the dominant economic sectors in the UK. A new strategic funding agency—UK Research and Innovation (UKRI)—was created to oversee the allocation of these funds, bringing seven research councils together in a major shake-up of the UK's funding structure. But a report, *The Biomedical Bubble*, published on July 12 and written by Richard Jones and James Wilsdon for the innovation foundation Nesta, presents life sciences as a sector in a precarious situation. For Jones and Wilsdon, life science R&D is in a social, political, and epistemic biomedical bubble that sustains an industry that could now be on the verge of a crisis...

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)31609-X/fulltext?dgcid=raven_jbs_etoc_email](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31609-X/fulltext?dgcid=raven_jbs_etoc_email)

The Biomedical Bubble: This report sets out why and how the UK needs to escape the biomedical bubble if it is to realise the economic, social and health potential of new investment in research and development.

<https://www.nesta.org.uk/report/biomedical-bubble/>

Reports on China and Chinese-European Cooperation

1. Cyranoski D. China expands surveillance of sewage to police illegal drug use. *Nature* 2018;559:310-1. Privacy concerns and cultural differences make some researchers sceptical that the method could work in other countries.

https://www.nature.com/articles/d41586-018-05728-3?WT.ec_id



2. He FJ, et al. Action on salt in China. *Lancet* 2018; 392:7-9. Cardiovascular disease (CVD) is the major cause of death and disability, about 80% of which occurs in developing countries. Raised blood pressure from as low as 115/75 mm Hg is a risk factor for CVD. Excessive salt consumption is the leading cause of raised blood pressure. Salt intake among adults in most countries is about 10 g/day. WHO has recommended a 30% reduction by 2025 with a long-term target of less than 5 g/day. Many governments in high-income countries have started implementing action plans predominately by setting salt

reduction targets for processed food. The average daily salt consumption of the population has been reduced in Finland and the UK, accompanied by falls in population blood pressure and CVD mortality. Developing countries are, however, lagging behind. As the largest developing country, China comprises about 20% of the world population. Salt intake in China is high with daily average intake of 12–14 g. More than 244 million Chinese adults had hypertension and another 435 million had pre-hypertension in 2012 and raised blood pressure contributed to about 2.33 million CVD deaths. These figures are increasing rapidly because of the fast economic and epidemiological transition in China. Over 50% of the hypertensive individuals in China are unaware of their condition. A salt reduction strategy to lower population blood pressure is therefore important...

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)31138-3/fulltext?dgcid](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31138-3/fulltext?dgcid)

3. China's belt-and-road plans are to be welcomed—and worried about. *The Economist* July-August 2018. The "project of the century" may help some economies, but at a political cost. In our cover package this



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week we get to the bottom of China's Belt and Road Initiative. It is a vast project, encompassing ports, motorways and rail networks worth many billions of dollars. Countries eager for financing welcome the BRI as a source of investment in infrastructure. Others see it instead as a sinister project to create a new world order in which China is the pre-eminent power. Who is right?

<https://www.economist.com/leaders/2018/07/26/chinas-belt-and-road-plans-are-to-be-welcomed-and-worried-about>

4. Watts G. George F Gao: head of China CDC signals a more global outlook. *Lancet* 2018;392:274. Had the state bureaucracy been allowed to determine the career path of George F Gao (Gao Fu), the current Director-General of the Chinese Center for Disease Control and Prevention (China CDC) might now have been working not as one of his country's leading scientists but as a vet practising in Shanxi province near the border with Inner Mongolia. This was where Gao was born in 1961. In the China of that era, personal choice in education was not a priority; Gao was allocated a place to study veterinary medicine at Shanxi Agricultural University. He had other ideas. "I never ever wanted to become a vet", he says. So having finished his course he moved to Beijing Agricultural University to do a master's degree. He stayed on as a teaching assistant and lecturer in virology. "This changed my whole life...I transformed myself from a vet into an infectious disease researcher." The change was consolidated during a period spent abroad; when Gao returned home 13 years later, it was as a professor and Director General of the Institute of Microbiology of the Chinese Academy of Medical Sciences. The reluctant vet had indeed changed course.

<https://www.thelancet.com/action/showPdf?pii=S0140-6736%2818%2931658-1>

5. An update on the Newton Fund in China, including several funding opportunities:

- Newton Advanced Fellowships: Royal Society, Academy of Medical Sciences, NSFC: <https://royalsociety.org/grants-schemes-awards/grants/newton-advanced-fellowships/>
- PhD Placements: British Council, China Scholarship Council: <https://www.britishcouncil.cn/en/programmes/education/higher/opportunities/phd>
- Newton Advanced Fellowships and Mobility Grants: British Academy, Fudan University, Peking University: <https://www.britac.ac.uk/newton-advanced-fellowships>
<https://www.britac.ac.uk/newton-mobility-grants>

TCM, Acupuncture and Other Traditional Medicine

1. The US FDA issued warning letter to American Chinese Medicine Association

<https://www.fda.gov/ICECI/EnforcementActions/WarningLetters/ucm612377.htm>

https://mp.weixin.qq.com/s/Hso_1E5i6EGY32LeHuOMEq (中文)

2. Professor Zhongzhen Zhao, Hong Kong Baptist University, shares two video links in celebration of the 500th Anniversary of Li Shizhen's birth: one is his *Yangtze River Forum* lecture and the other is part of his plenary lecture on 5th July at the GP-TCM RA Annual Meeting at the Royal Botanical Gardens Kew.

Yangtze River Forum lecture:
<https://www.youtube.com/watch?v=r1RbwlfTz8A&feature=youtu.be>

Video in honour of Li Shizhen:

<https://www.youtube.com/watch?v=H2ahEWqDc4I&feature=youtu.be>



3. Hershman DL, et al. Effect of Acupuncture vs Sham Acupuncture or Waitlist Control on Joint Pain Related to Aromatase Inhibitors Among Women With Early-Stage Breast Cancer: A Randomized Clinical Trial. *JAMA*. 2018;320:167-176.

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IMPORTANCE: Musculoskeletal symptoms are the most common adverse effects of aromatase inhibitors and often result in therapy discontinuation. Small studies suggest that acupuncture may decrease aromatase inhibitor-related joint symptoms.

OBJECTIVE: To determine the effect of acupuncture in reducing aromatase inhibitor-related joint pain.

DESIGN, SETTING, AND PATIENTS: Randomized clinical trial conducted at 11 academic centers and clinical sites in the United States from March 2012 to February 2017 (final date of follow-up, September 5, 2017). Eligible patients were postmenopausal women with early-stage breast cancer who were taking an aromatase inhibitor and scored at least 3 on the Brief Pain Inventory Worst Pain (BPI-WP) item (score range, 0-10; higher scores indicate greater pain).

INTERVENTIONS: Patients were randomized 2:1:1 to the true acupuncture (n=110), sham acupuncture (n=59), or waitlist control (n=57) group. True acupuncture and sham acupuncture protocols consisted of 12 acupuncture sessions over 6 weeks (2 sessions per week), followed by 1 session per week for 6 weeks. The waitlist control group did not receive any intervention. All participants were offered 10 acupuncture sessions to be used between weeks 24 and 52.

MAIN OUTCOMES AND MEASURES: The primary end point was the 6-week BPI-WP score. Mean 6-week BPI-WP scores were compared by study group using linear regression, adjusted for baseline pain and stratification factors (clinically meaningful difference specified as 2 points).

RESULTS: Among 226 randomized patients (mean [SD] age, 60.7 [8.6] years; 88% white; mean [SD] baseline BPI-WP score, 6.6 [1.5]), 206 (91.1%) completed the trial. From baseline to 6 weeks, the mean observed BPI-WP score decreased by 2.05 points (reduced pain) in the true acupuncture group, by 1.07 points in the sham acupuncture group, and by 0.99 points in the waitlist control group. The adjusted difference for true acupuncture vs sham acupuncture was 0.92 points (95% CI, 0.20-1.65; P=.01) and for true acupuncture vs waitlist control was 0.96 points (95% CI, 0.24-1.67; P=.01). Patients in the true acupuncture group experienced more grade 1 bruising compared with patients in the sham acupuncture group (47% vs 25%; P=.01).

CONCLUSIONS AND RELEVANCE: Among postmenopausal women with early-stage breast cancer and aromatase inhibitor-related arthralgias, true acupuncture compared with sham acupuncture or with waitlist control resulted in a statistically significant reduction in joint pain at 6 weeks, although the observed improvement was of uncertain clinical importance.

<https://jamanetwork.com/journals/jama/fullarticle/2687355>

<https://mp.weixin.qq.com/s/IWsOlppDGmVe7I2isHvelA> (中文)



4. Nobel Prize winner Erwin Neher talks about roles for ion channels in TCM research at the 4th Summer Summit of World Congress of Chinese Medicine in Nanchang, Jiangxi, China, in late June 2018.

https://www.toutiao.com/i6576211825560388104/?iid=29860816734&app=news_article (中文)

5. Birch S, et al. Overview of Treatment Guidelines and Clinical Practical Guidelines That Recommend the Use of Acupuncture: A Bibliometric Analysis. *J Altern Complement Med.* 2018 Jun 18. doi: 10.1089/acm.2018.0092. [Epub ahead of print]

INTRODUCTION: As positive evidence emerges for the use of an intervention to treat a health problem, the intervention gradually becomes incorporated into treatment guidelines (TGs) or clinical practice guidelines (CPGs) that are related to that health problem. To assess whether this general hypothesis can apply to acupuncture, 96 health problems were identified for which positive conclusions in systematic reviews and meta-analyses regarding the effectiveness

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of acupuncture have been made and then searched for TGs or CPGs that have recommended the use of acupuncture.

METHODS: Through August 31, 2017, searches were performed in relevant medical databases and Google using "treatment guideline," "clinical practice guideline," and the names of the 96 medical conditions as search terms. A "snow-balling" search approach was adopted. All positive recommendations were added into the registry.

RESULTS: A total of 1311 publications were found that recommended using acupuncture published between 1991 and 2017. The number per year reached 50 in 2005 and 100 in 2009. In addition, 2189 positive recommendations were found for the use of acupuncture. Of these, 1486 were related to 107 pain indications and 703 were related to 97 nonpain indications. These recommendations were made by a wide range of groups, such as government health institutions, national guideline, and medical specialty groups. The recommendations came from around the world but were especially abundant in North America, Europe, and Australasia.

DISCUSSION AND CONCLUSION: Considerably more recommendations were found for the use of acupuncture than are known within the acupuncture or medical communities. A trend by year was also found; a rise in the number of positive statements about acupuncture was typically followed by a rise in the number of recommendations of acupuncture. Thus, the recommendations followed the emergent evidence for acupuncture. Better implementation plans need to be developed for the CPG/TG recommendations about acupuncture to be more effective/efficient.

<https://www.ncbi.nlm.nih.gov/pubmed/29912569/>

Omics in Progress

1. Laland KN. Beyond epigenetics. Science. 2018;360:1408. A comment on the book entitled *Extended Heredity: A New Understanding of Inheritance and Evolution* by Russell Bonduriansky and Troy Day (Princeton University Press, 2018. 302 pp.), it concluded: "The authors conclude that, although NGI 'supplements rather than supplants genetics,' 'extended heredity clearly challenges key assumptions' of neo-Darwinism and pushes us to redefine evolution as 'changes in all heritable traits, whether genetic or nongenetic.' The traditionally minded may find such suggestions taxing. Convinced or not, readers will appreciate *Extended Heredity* as a major contribution to an exciting field."

<http://science.sciencemag.org/content/360/6396/1408.1.full>

2. Davalos V, et al. Messenger RNA Modifications. Cell 2018;174:498. mRNA modifications are defining a novel layer of complexity that is becoming widely appreciated as the epitranscriptome. This SnapShot summarizes the major breakthroughs in the burgeoning field of mRNA modifications to provide an overview of the molecular players involved and insights gained into the functional consequences of the growing number of modifications occurring within mRNA transcripts.

[https://www.cell.com/cell/abstract/S0092-8674\(18\)30849-3](https://www.cell.com/cell/abstract/S0092-8674(18)30849-3)

3. The Lancet. Genome editing: proceed with caution. Lancet 2018;392:253. Philosophically interrogating peoples' motives and aims in matters of procreation leads to controversy and emotionally charged debates. Introducing ideas about genome editing and its implications broadens discussions about human reproduction from fertility clinics and prospective parents to organisations and governments worldwide. 40 years after the first baby was born by in-vitro fertilisation, the game changing technique of CRISPR-Cas9, which enables precise alterations of DNA sequences in living cells, has once again sparked heated argument about the use of interventions selecting for traits and against diseases of human beings...

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)31653-2/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31653-2/fulltext)



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Other Recommended Readings

1. Austin CP. Translating translation. *Nature Reviews Drug Discovery* 2018;17:455–6. As director of the leading US public agency focused on translational science, the National Center for Advancing Translational Sciences, I speak frequently to diverse audiences about translation and its relatives, translational research and translational science. Despite the widespread use of these terms, I have found widespread variation in their intended meaning, and frequent confusion among scientists, physicians, patients and policy makers about what translation is, how it differs from translational research and translational science, and how each relates to areas of biomedical research with which they may be more familiar. With the hope of advancing scientific and public discourse on translation and its potential and challenges, I offer here some definitions and distinctions. <https://www.nature.com/articles/nrd.2018.27>

2. Writing a journal article. What are the rules you should be following when writing a journal article? Read some of the best advice given by Taylor & Francis journal editors – follow it and you can't go far wrong.

- Read the journal you're intending to submit to
- Stick to the point
- Don't be afraid to explain
- Clarity is key
- Be aware of the other literature in your field (and reference it)
- Make your references current and relevant
- Be original

<https://authorservices.taylorandfrancis.com/writing-a-journal-article/?utm>

3. Fung ICH. Citation of non-English peer review publications – some Chinese Examples. *Emerg Themes Epidemiol.* 2008; 5: 12. Articles published in English language journals with citations of non-English peer reviewed materials are not very common today. However, as epidemiologists are becoming more aware of data and information being readily available and accessible in the non-English literature, the question of whether non-English materials can be cited in English language journals and if so, how should they be cited, has become an increasingly important issue. Bringing together personal insights from the author's familiarity with both the English and Chinese language epidemiological literature and results from a survey on the use of citations of non-English peer reviewed materials across a sample of epidemiology and public health journals, this commentary discusses the different ways authors cite non-English articles in different English language journals and the different methods used by journals to handle non-Latin scripts (e.g. transliteration). This commentary will be useful to both epidemiologists and editors alike.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2570362/>

Future Meetings & Events

1. The 17th Meeting of Consortium for Globalization of Chinese Medicine (CGCM) will be held in Kuching-Sarawak, Malaysia on August 8 - 10, 2018. This year's meeting is going to be organized by the Malaysian Institute of Pharmaceuticals and Nutraceuticals, National Institutes of Biotechnology Malaysia. 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 our website. Should you have any enquiries, please feel free to contact the CGCM Central Office: Email: centraloffice@tcmedicine.org; Website: www.tcmedicine.org

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Information for meeting program, abstract submission, registration and travel grant can be found here: <http://www.cgcm2018.com>

Important dates:

- **June 15, 2018** Deadline for abstract submission (extended) and for travel grant application
- **July 16, 2018** Registration Deadline

Should you have any enquiries, please feel free to contact cgcm2018@ipharm-nibm.my

<http://mp.weixin.qq.com/s/R5Ao3tYI7Q2UwzaP94ikTw> (中文)

2. Workshop - Toxicity and risk assessment of pyrrolizidine alkaloids - current status and way forward, Kaiserslautern, Germany, 12-13 September 2018.

https://www.chemie.uni-kl.de/fileadmin/agschrenk/unterlagen/Flyer_PA-workshop.pdf

3. The 15th World Congress of Chinese Medicine and Belt and Road TCM Culture Week to be held in Rome, Italy, Nov. 16-20 2018.

http://c.eqxiu.com/s/O8xACe2w?eqrcode=1&share_level=4&from_user=a294a700-73b5-4d95-9d8b-dc428813e7cd&from_id (中文)

4. The 19th International Congress of Oriental Medicine will be held in Taipei, Taiwan on 24-26 November 2018. The theme of the conference is “The Applications of Traditional Medicine in Acute and Critical Care.”

<http://www.19icm2018.org.tw/index>

5. The 30th International Symposium on the Chemistry of Natural Products and the 10th International Congress on Biodiversity will be held on Nov. 25–29 2018 in Athens, Greece.

<http://www.iscnp30-icob10.org/Default.asp?c=6&lng=1>

<http://www.iscnp30-icob10.org/Default.asp?c=7&lng=1>

6. The 6th World Integrative Medicine Congress is to be held in Shanghai, China, December 6-9, 2018. In 1958, Chairman Mao Zedong issued a written instruction to encourage

“Western medical doctors to learn traditional Chinese medicine” with the hope that some of them may become “brilliant theorists”. This year marks the 60th anniversary of the important instruction. The past 60 years have witnessed fruitful results in integrative medicine, coupled with its significant role in promoting medical innovation and progress. To further facilitate the international exchange in integrative medicine, the World Integrative Medicine Congress now meets every year instead of every five years. The 6th World Integrative Medicine Congress, co-hosted by Chinese Association of

Integrative Medicine and Shanghai Association for Science and Technology, will be held December 6-9, 2018 at Shanghai Fuyue Hotel. <http://www.wimco2018.com/weben2018/>

<http://wimco2018.shcim.org.cn/m2018/index.asp?from=groupmessage&isappinstalled=0> (中文)

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>

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2. **Frontiers in Pharmacology** and **Frontiers in Ethnopharmacology** special topic “**Metabolomics and Metabolism of Traditional Chinese Medicine**”

Submission Deadlines: 3rd September 2018 (Abstract); 1st March 2019 (Manuscript)

<https://www.frontiersin.org/research-topics/8155/metabolomics-and-metabolism-of-traditional-chinese-medicine>

3. **Call for Papers: Phytomedicine Special Issue Entitled “systems pharmacology and Metabolomics of Traditional Medicine”**

Deadline for submission of manuscripts is December 31st 2018.

Edited by

Prof. Thomas Efferth, Editor in Chief of Phytomedicine, Johannes Gutenberg University

Prof. Liang Liu, Associate Editor in Chief of Phytomedicine, Macau University of Science and Technology

Prof. Xijun Wang, Heilongjiang University of Chinese Medicine

Prof. Hua Zhou, Macau University of Science and Technology

Prof. Haitao Lu, Member of Editorial Board of Phytomedicine, Shanghai Jiao Tong University

<https://www.journals.elsevier.com/phytomedicine/call-for-papers/systems-pharmacology-and-metabolomics-traditional-medicine>

Sounding Board

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

Acknowledgements

Contributions from Prof **Rudolf Bauer** (Graz), Mr **Mark Bovey** (British Acupuncture Council), Prof **Pierre Duez** (Mons), Dr **Tai-Ping Fan** (Cambridge), Prof **Gerhard Franz** (Regensburg), **Dr Clara Lau** (Hong Kong), Dr **Christine Leon** (London), Prof **Monique Simmonds** (London), Prof **Rob Verpoorte** (Leiden), Dr **Mei Wang** (Leiden), Dr **Qihe Xu** (London) and Prof **Zhongzhen Zhao** (Hong Kong) are gratefully acknowledged. Pictures of orchids are selected from here:

<https://mp.weixin.qq.com/s/9HL8B1oeJrbOPjqpHenlhw>