

Grand Issues in Traditional Chinese Medicine Research

Your opinions on grand priorities, grand challenges and grand opportunities might well make a big difference to shape the future funding prospects in this important field of research/science.

This is a survey designed and conducted by the GP-TCM Consortium, which is funded by the European Commission under the Seventh Framework Programme. The survey focuses on grand issues in Traditional Chinese Medicine (TCM) research and, by completing this survey, you will help the consortium to bring out a consensus on the "grand issues" in the context of the broadest field of TCM and its research. Your selections will, collectively, represent the wisdom of the GP-TCM Consortium and will determine what will come up in the final lists of "Top 15 Priorities", "Top 15 Challenges" and "Top 15 Opportunities", which will be published as part of the leading article of a Journal of Ethnopharmacology Special Issue, to be submitted by mid-October 2011, as well as in the official report of the GP-TCM Consortium to the European Commission. Further dissemination to other stakeholders and outreach to the public are also foreseen.

If you are stakeholders of a relevant organisation and think that your members might be interested in participating this survey, please encourage your members to complete this questionnaire. We welcome your comments to help us to identify any appropriate links to be contacted from main Chinese/European professional bodies for questionnaire dissemination (please contact Prof. Thomas Efferth (efferth@uni-mainz.de) and Dr. Halil Uzuner (halil.uzuner@kcl.ac.uk)).

Of note, the following lists of candidate Grand Issues are compiled based on a pre-survey study. In addition to organisers of the survey, 23 additional consortium members have provided their inputs based on their perspectives. We thank them all for their invaluable contributions and look forward to receiving your survey submissions. You will be informed of the survey results if you leave your e-mail address upon submission of your survey input. Thank you!

Survey Team

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INSTRUCTIONS

Thank you for taking time to complete the survey. All information supplied will be kept strictly confidential.

For sections 1-3, please select up to 15 statements under each category (i.e., Priorities, Challenges and Opportunities), which best reflect your opinions on “Grand Issues”. You are allowed to select minimum of 5 and maximum of 15 statements under each category.

In section 4, please complete the set of questions provided to help us understand the background of survey participants.

The deadline to complete the survey is 20th September 2011, after which the survey will be closed for data analysis and publication.

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SECTION ONE - GRAND PRIORITIES

*** 1. Grand Priorities: Please select top 15 items from the following statements that best reflect your opinions on grand priorities.**

Yes, this is an important issue to be considered

High-quality research to demonstrate the mechanisms of action of CHM and acupuncture

Postgraduate training curriculum for specialties starting with acupuncture, traumatology and 'internal medicine'

Special attention should be paid to rational use of Chinese medicinal plants, especially about those endangered plants, in order to keep sustainable use, maintain biodiversity and protect our environment

Harmonised monographic quality of CMMs and related granule forms: regulatory standards (including the pharmaceutical science of processing CMM)

CHM and acupuncture in prevention and treatment of chronic diseases

Interdisciplinary, international and intersectoral (public-private collaboration) training models should be explored to enable the TCM research community to address the complexity of Chinese materia medica (CMM) and TCM using advanced modern technologies

Database for compiling all relevant information about TCM. Such database would provide critical information to interested groups according to a priority topics as well as a tool to centralise all available scientific literature or documents

Cross platform and combined treatment initiatives for some of the prevalent diseases such as diabetics, cancer and neurodegenerative symptoms etc by combining TCM, Gene Therapeutics, Immune system therapeutics etc

Quality control for those CMMs which were widely used in clinics

Research methodology development focusing in TCM diagnostics leading to standardisation of TCM syndromes of 'Zheng'

Bridging modern personalised health (including sub-health condition), with personalised TCM diagnosis and treatment using "omics" and systems biology

High-quality research to evaluate the quality and safety of CHM, due to recently and frequently misidentification, adulteration and contamination of Chinese herbal products

Pharmacovigilance and safety of CMMs

Rationalisation, separation and clarification of separate drives to both identify and fully characterise individual active CHM agents and/or to evaluate the more holistic approach to TCM

Taking advantage of the maturing "omics" technology and emerging systems biology methodologies, carry out cutting-edge TCM and complex herbal product research

High-quality clinical efficacy and effective studies of CHM and acupuncture

Literature review (open source and grey literature) to understand and to know the studies and evidence of TCM and to identify gaps

CMMs used as functional foods

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Identify priority (disease) areas where TCM is likely to help to achieve better outcomes for patients and the society



Start social network for discussing TCM from a scientific point of view



A harmonised undergraduate curriculum for TCM in English with a subset for conventional medical schools; A harmonised curriculum has been achieved in the medical training system in China and some other Asian countries and could be tested in Europe



Start different levels and different length of introductory courses on TCM for health professionals. This could also be on the spot information event to personnel of a hospital, meetings of pharmacists, medical specialists, etc. For this a database with possible speakers should be made



Taking advantage of the EU-China dialogue channels strengthened through the FP7 GP-TCM Consortium and other consortiums, organisations and societies, develop EU-China joint centres, initiatives and adventures focused on TCM and CMM products



Respect and protect traditional knowledge from TCM, and fairly share TCM intellectual property rights with all the parties concerned



Upgrade EU funding and pool funding from a variety of sources to build international research collaborations to support evidence-based clinical and basic research on some maturing areas of TCM, including CMM products



TCM knowledge-based development of new Western medicines and new types of complex medicines, including new drug R&D from classical TCM formulas



Analysis and research should be done to address possible allergic reactions to CMMs



Develop national policy for TCM, support integrating TCM into mainstream health care system, especially in the primary care system, for example, put the herbal medicine as essential drugs in the health insurance package



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SECTION TWO - GRAND CHALLENGES

***2. Grand Challenges: Please select top 15 items from the following statements that best reflect your opinions on grand challenges.**

Yes, this is an important issue to be considered

Risk-benefit assessment of CHM, especially of multi-preparations or formula commonly used by TCM practitioners



Regulation of TCM practitioners in the EU



Lack of European funding for TCM research, comparing to the circumstances in China and the USA



An evaluation of TCM contribution to European health system and consumers' perception



The almost self-evident complexity of CMMs and the vast skills and collaborations needed to address such complexity



Lack of knowledge on allergic reactions caused by CMMs, when used as functional foods



Understanding the TCM's philosophy (yin-yang theory, meridians, eight principles, five elements theory) and complexity. Although herbal remedies and acupuncture are the most used, it is necessary to know the role of moxibustion, cupping, massage, mind-body therapy and dietary therapy in the global TCM



Lack of rules and registrations suitable for CMM products used as drugs



GxP for CHM (i.e. Good Agricultural and Collection Practice, Good Manufacturing Practice, Good Distribution Practice etc)



TCM diagnosis (Zheng, syndrome or pattern classification) is not well done for CMM research



Focus on TCM research efforts on certain chronic diseases and conditions, which TCM has established good track record of efficacy by using scientific method to establish and prove the efficacy



TCM uses thousands of CMMs. It is a grand challenge to determine which ones should be accepted in the EU market, to which conditions and which ones should be barred from the market



The language barrier and the poor access to TCM literature in Europe



TCM terminology and its proper definition to promote accurate understanding and avoid misinterpretation. It is not merely translation of terminology, but trying to define the terminology in both medical "languages"



Integration of TCM, which is personalised, holistic and has a strong emphasis on prevention, with modern Western medicine, which has come to the post-genomic era, striving for "omics"-based personalisation and holistic and pre-emptive approaches: challenges on both sides



New EU regulation and its impact on the complex herbal product industry



Accreditation of education programmes for training TCM practitioners in the EU



Alternative methods to animal testing



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Placebo should be proven inert but to prove this could be equally difficult as to prove a drug is effective. Thus, placebo controls for CHM and acupuncture studies are difficult to design but placebo control is often required for convincing evidence of efficacy. Thus, designing different controls to suit for trials of different types of CHM and the level of acceptance, by the public and the scientific community, of evidence for effectiveness of CHM and acupuncture (without placebo controls) represent a dual challenge

Not so many strong team work or scientist network in Europe for TCM research

Defining minimal toxicity testing required to ensure (likely) safe use of medicinal herbs (general problem not limited to CHM)

A harmonised TCM/integrative curriculum: It has been achieved in the medical training system in China and some other Asian countries but is Europe ready and how can we prepare Europe for such an integrative approach of medical training?

Sorting out CHM according to safety and known/probable toxicities: proven toxic herbs (e.g. pyrrolizidine alkaloids, aristolochic acids, ... containing plants); highly suspected herbs; (supposedly) detoxified toxic herbs (e.g. Aconitum); probably safe herbs; proven safe herbs

Syndrome differentiation in TCM as additional stratification in clinical trials of TCM products to be monitored with measureable biomarkers and PROs

Patients' reported outcomes (PROs) assessed by approved quality of life (QOL) instrument as acceptable objective measures of TCM treatment efficacy in clinical trials

Bridging modern personalised health (including sub-health condition), with personalised TCM diagnosis and treatment using "omics" and systems biology

Scarcity of personnel and/or lack of communication between people in Europe who are well trained to address the complexity of CMM and TCM using modern technologies

Recognition of China-trained practitioners in the EU

A continuous professional development (CPD) programme for training and development of qualified professionals in TCM

Quality control of CMMs and complex herbal products

Close industrial partners' involvement to bridge the funding and technology gap

Nature and scientific meaning of acupuncture points? Do meridians exist? How does acupuncture work, if at all?

Differences between conventional ("Western") and Chinese medicine paradigms are reflections of, and interwoven with, differing concepts of health and disease and go deeply into different attitudes and beliefs about health preservation and disease causation. Consequently, working towards a common language, first identifying differences and then trying to find a common ground from both traditions, is a major challenge and one of the first grand tasks

Pharmacovigilance of complex herbal products

The accessibility to modern research methods such as "omics" and systems biology needed to address the complexity of CMMs



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SECTION THREE - GRAND OPPORTUNITIES

***3. Grand opportunities: Please select top 15 items from the following statements that best reflect your opinions on grand opportunities.**

Yes, this is an important issue to be considered

Openness and readiness for China and EU to engage with large pharma and other agencies to identify commercial opportunities to extend the use of CHM in other markets/areas



China's open policy and ever increasing funding to scientists in China create good collaborating opportunities



Openness and readiness for EU and China to jointly fund clinical studies including trials and observational studies in both countries/locations



Long-term conditions and chronic diseases are top challenges for Europe and TCM might offer potentially useful knowledge on these diseases and conditions, including ageing, infectious disease, diabetes and obesity



Identification of stakeholders or other special interest groups of TCM for obtaining financial support and other type of collaboration



Chinese government recently announced a \$308 billion biotech industry expansion scheme to create one million new biotech jobs in 2015; EU must come up with new policy and funding initiatives to promote biotech industry especially TCM or herbal medicine projects to attract Chinese partnership and investment



Knowledge accumulated through thousands of years of TCM clinical experience provides rich resources for knowledge transfer/education and for understanding and integration of Western and Eastern ideals. The knowledge transfer should eventually benefit healthcare and pharmaceutical industry and education should not be restricted to scientists, it should include industry, the regulators, charities and the public



Maturing "omics" and improving systems biology methodologies have offered powerful tools to interpret the complexity and holism of CMM and TCM



International cooperation on clinical trial for marketed CMMs



Bridging modern personalised health (including sub-health condition), with personalised TCM diagnosis and treatment using "omics" and systems biology



Sources of CMM: EU/other region/China initiative towards cultivation of medicinal plants outside China, closely monitored with chemical markers/fingerprint profiles



The worldwide rapid development of Confucius institutes/centres, which focus on teaching and research of Chinese language and culture, should provide a useful framework and platform for the research of TCM, as an important part of Chinese culture



With the FP7 GP-TCM funding, an EU-China collaborating forum has been established and good practice guidelines have started to be developed



Network based pharmacological evaluation for CMMs



Many other international organisations such as CGCM, GA, ISE, ISCMR, ISCM and IASTAM have offered international platforms for research on various aspects of TCM and complex herbal products



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Attract TCM based novel therapeutics clinical trial projects to EU countries by simplifying regulatory clearance and promoting clinical Excellency centres with EU financial support



TCM pattern based toxicological evaluation for CMMs



Potential positive or negative effects of the combination of drugs from both systems needs to be established



SECTION FOUR - DEMOGRAPHIC INFORMATION

In order to help us better understand the survey results and know more about the participants, please complete the questions given below.

***4. Your Expertise: Please describe your area(s) of expertise and professional background by choosing one or more options (or adding a new one).**

- Bioengineering
- Biology
- Botany (plant sciences or plant biology)
- Cell biology
- Genomics/Transcriptomics
- Literature and arts
- Metabolomics
- Molecular biology
- Nursing
- Pharmaceutical R&D (industrial)
- Pharmacognosy
- Pharmacology
- Proteomics
- Pharmacy
- Physiotherapy
- Social sciences, e.g., languages, philosophy and history
- Systems biology
- TCM (practitioner)
- TCM and Western Medicine (Practitioner qualified in Western medicine)
- Taxonomy (science of classification and naming living things)
- Western medicine (Doctor)
- Other (please specify below)

If other, please specify

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*5. What is your relationship with the GP-TCM consortium?

- Beneficiary member (signed the GP-TCM Grant Agreement and received funds from European Commission)
- Non-beneficiary member (registered at the Coordination Office of GP-TCM without receiving funds from European Commission)
- Not a registered GP-TCM member / external survey participant

*6. Are you?

- Female
- Male

*7. How old are you?

- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60 or more years

*8. Currently in what country do you live?

*9. How did you hear about this survey?

- By word of mouth
- From an email
- GP-TCM website
- Other (please specify below)
- Through a particular TCM professional association (please specify below)

Other (please specify)

10. If you would like to be informed about the survey outcomes, please enter your email address: