



**Good Practice in Traditional Chinese Medicine Research in
the Post-genomic Era**

GP-TCM

D2.13

**Presentation of findings at the conference planned in work
package**



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1 REPORT ON PRESENTATIONS

1.1 About GP-TCM Final Conference

The GP-TCM Final Conference was organised by WP9 and took place in Kerkrade, the Netherlands from 11th to 14th of April 2012 (Program is shown in Figure 1).

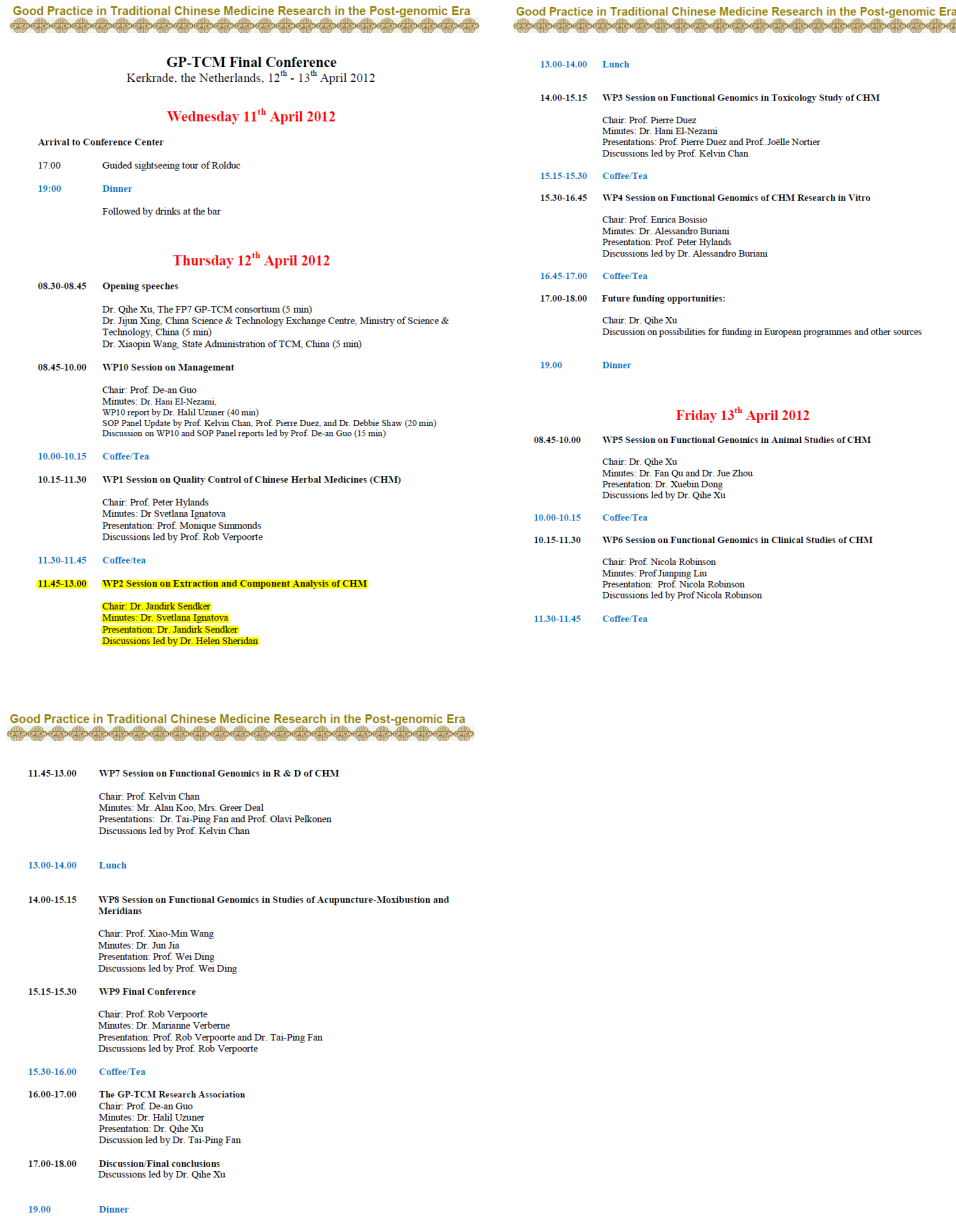


Figure 1: Program of GP-TCM Final Conference in Kerkrade, WP2 contribution is highlighted.

1.2 About GP-TCM Congress

The GP-TCM Congress was organised by WP9 and took place in Leiden, the Netherlands from 15th to 18th of April 2012 (Program is shown in Figure 2).



Universiteit Leiden
The Netherlands



The GP-TCM Congress, Leiden, The Netherlands, 2012
Programme

Sunday 15 April 2012

14.00-18.00 Registration with free entrance to Naturalis
16.00-18.00 Reception at Naturalis

Monday 16 April 2012

08.30-09.15 Registration

Chair: Dr. Qihe Xu (King's College London, UK)

09.15-09.45 Opening, introduction of The GP-TCM Research Association (Prof. Rudolf Baser, University of Graz, Austria, Dr. Qihe Xu, King's College London, UK)
09.45-10.00 EU Funding: Horizon 2020 (Dr. Alexandru-Sorin Costescu, European Commission)
10.00-10.30 A systems biology view on Health and Disease, integrating Western and Chinese perspectives (Prof. Jan van der Greef, Leiden University, The Netherlands)
10.30-11.00 R&D and clinical trial of PHY906 in the USA (Dr. Shwu-Hsuey Liu, PhytoCeutica, USA)

11.00-11.30 Coffee/Tea

Parallel sessions

Chair: Prof. Monique Simmonds (Royal Botanical Gardens, Kew, UK)
11.30-11.50 An epidemiological survey of cancer patients practicing Guolin Qigong in China (Prof. Junping Liu, Beijing University of Chinese Medicine, China)

Chair: Dr. Tai-Ping Fan (University of Cambridge, UK)
11.30-11.50 Mode-of-Action Analysis of Traditional Chinese Medicines and Ayurvedic Medicines Using In Silico Target Prediction Tools (Dr. Andreas Bender, University of Cambridge, UK)

11.50-12.10 Could Panax ginseng prevent arisolic acid-induced nephrotoxicity? (Vlaesman Buel, Universit  Libre de Bruxelles, Belgium)

11.50-12.10 Status Quo and Thinking of Preventing and Treating Infectious Diseases via Traditional Chinese Medicines (Prof. Xianjun Fan, Chengde University of TCM, China)

10.50-11.05 How did the concept of meridians survive? (Prof. Marinus Vermeulen, Academisch Medisch Centrum, Amsterdam, The Netherlands)
11.05-11.20 Can the new technologies help explain and understand TCM? (Prof. Peter Hylands, King's College London, UK)
11.20-12.00 Panel discussion (Panel members will be announced)

12.00-13.30 Lunch and Posters

Chair: Prof. Kelvin Chan (University of Sydney and University of Western Sydney, Australia)
13.30-14.00 TCM in Cancer: Recent Progress in Animal Studies (Prof. Xiaodong Cheng, Tongji University, China)
14.00-14.30 The evidence challenge for GP-TCM (Prof. Nicola Robinson, South Bank University, UK)
14.30-15.00 The efficacy-effectiveness continuum in clinical research - implications for TCM research (Prof. Claudia Witt, Charite University, Germany)

15.00-15.30 Posters and Coffee/Tea

City walk (bus at 15.45) and Reception in Town hall - 17.00

Wednesday 18 April 2012

Chair: Prof. Peter Hylands (King's College London, UK)
9.00-9.30 First-line toxicological models for genotoxicity and nephrotoxicity assessment of herbal products (Prof. Pierre Duez, Universit  Libre de Bruxelles, Belgium)
9.30-10.00 The sketch of clinical oriented acupuncture basic research in China based on literature analyses (Prof. Wei Ding, Capital Medical University, China)

10.00-10.30 Posters and Coffee/Tea

Chair: Prof. Xiaodong Cheng (Tongji University, China)
10.30-10.50 How to integrate and visualize Chinese and Western Medicine concepts? (Herman van Wiermarcken, Leiden University, The Netherlands)
10.50-11.10 Physico-chemical characterization and antimicrobial activity of oils extracted from *Acacia arabica* and *A. raddiana* of the Saharan region of Hoggar (southern Algeria) (Fatima Tissouras, University Mostaganem, Algeria, Algeria)
11.10-11.30 Extracts and bioactive compounds from Chinese herbal medicines and their effect on NF- B, PPAR  and PPAR  and inflammatory responses (Evelien Rozema, University of Vienna, Austria)
11.30-12.00 Current problems and possible solutions when establishing TCM-Herbal Drug Monographs for the European Pharmacopoeia (Prof. Gerhard Franz, Chairman, TCM Working Party, The European Pharmacopoeia Commission, Germany)

12.00-13.30 Lunch and Posters

Chair: Prof. Nicola Robinson (South Bank University, UK)

12.10-12.30 Strategy of microdialysis on the pharmacokinetic study for traditional Chinese medicine (Prof. Tung-Hu Tsai, National Yang-Ming University, Taipei, Taiwan)

12.10-12.30 Health World, Infinite Taji (Dr. Yuling Qing, vice chief engineer, Taji Pharmaceuticals, China)

12.30-13.30 Lunch

13.30-14.20 Poster session

Chair: Prof. Pierre Duez (Universit  Libre de Bruxelles, Belgium)
14.20-14.40 Globalization of TCM based on Systems Biology: critical success factors, science and business (Dr. Mei Wang, SU BioMedicine, Zeist, The Netherlands)
14.40-15.00 Peripheral nerve regeneration by Chinese Medicine (Dr. Sven Schr der, University Medical Center Eppendorf, Hamburg, Germany)
15.00-15.20 Anti-androgenic effect of sesquiterpenes isolated from the rhizomes of *Curcuma aeruginosa* Roxb. (Prof. Kornkoolk Ingkaninan, Naresuan University, Phitsanulok, Thailand)

15.20-15.45 Posters and Coffee/Tea

Chair: Prof. Brigitte Kopp (University of Vienna, Austria)
15.45-16.15 Supporting the quality control of plants used in traditional Chinese medicine (Prof. Monique Simmonds, Royal Botanical Gardens, Kew, UK)
16.15-16.45 The potential of metabolite fingerprinting as a tool for the modernization of TCM preparations (Dr. Jandirk Sendker, University of Muenster, Germany)
16.45-17.05 Capital Medical University and its TCM research (Prof. Dr. Xiaomin Wang, Capital Medical University, Beijing, China)
17.05-17.45 The GP-TCM Research Association Members' Assembly (open to all congress attendees)

Tuesday 17 April 2012

Chair: Prof. Rudolf Baser (University of Graz, Austria)
09.00-09.30 An overview of the use of omics in TCM research (Prof. Peter Hylands, King's College London, UK)

09.30-10.00 Impact of omics on R&D and future regulation of complex plant derived products including including Chinese herbal medicine (Dr. Tai-Ping Fan, University of Cambridge, UK)

10.00-10.30 Posters and Coffee/Tea

Chair: Dr. Jandirk Sendker (University of Muenster, Germany)
10.30-10.50 Testing and Generating Hypotheses on Manipulative Traditional Therapies: Exploring WHO Recommendation on Rheumatoid Arthritis with omic data (Dr. Christine Nardin, CAS-MPG Partner Institute for Computational Biology, Shanghai, China)
10.50-12.00 The roadmap to evidence-based Chinese medicine

13.30-14.00 TCM - Options and Perspectives in the European Regulatory Framework for Medicinal Products (Dr. Werner Knobis, Federal Institute for Drugs and Medical Devices, Germany)
14.00-14.15 Translational Research of Natural Medicinal Products (Prof. Yang-Chang Wu, China Medical University, Taiwan, China)
14.15-14.30 Status and Internationalization Strategy of Clinical Trials on Innovative Chinese Herbal Medicines (Prof. Junguo Duan, Chengde University of TCM, China)

14.30-15.30 Posters and Coffee/Tea

Chair: Dr. Shwu-Hsuey Liu (PhytoCeutica, USA)
15.30-16.00 Chinese herbal industry: Fragmentation in a globalized world (Dr. Youping Zhu, CMC Tasty Group BV, The Netherlands)
16.00-16.15 Visionary Herbal Medicine Companies: Their Products and Success (Kehinde Adeniran Abolarin, Oyo Thames Park and Gardens, Bodan, Nigeria)
16.15-16.30 The adverse drug reaction in clinical trials for herbal medicine in Taiwan (Dr. Hen-Hong Chang, Chang Gung Memorial Hospital, Taiwan)

16.30-16.50 Final conclusions about Good Practices in TCM studies
16.50-17.00 Closure/Final remarks
Transport by bus to Katwijk - 17.30
Congress dinner in 'Zomers' - BBQ party at the Beach, from 18.00
Transport by bus back to Leiden - 22.30

Figure 2: Program of GP-TCM conference in Leiden, WP2 contribution is highlighted.

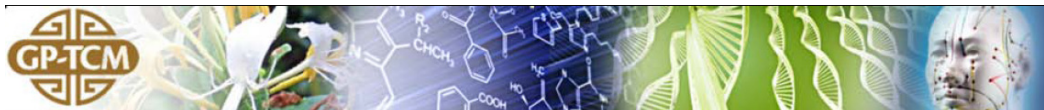
2 BRIEF SUMMARY OF PRESENTED WP2 RESULTS

The central outcomes of WP2's work were presented by Dr. Jandirk Sendker on the GP-TCM Final Conference in Kerkrade between 11:45 and 13:00 on Thursday, 12th of April and on the GP-TCM Congress in Leiden between 16:15 and 16:45 on Monday, 16th of April, respectively. Both presentations included the main findings of WP2 (see 2.2 and D2.14); the presentation



on the GP-TCM Final Conference in Kerkrade additionally included organisational details about WP2's structure and work.

2.1 Titles



WP2: Extraction and Component Analysis of Chinese Herbal Medicines

Kerkrade, The Netherlands, 12th April 2012

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Figure 3: Title slide of WP2 presentation on the GP-TCM Final Conference in Kerkrade.



The potential of metabolic fingerprinting as a tool for the modernisation of TCM preparations

International Congress on Good Practice in
Traditional Chinese Medicine
Leiden, The Netherlands, 16th April 2012

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Figure 4: Title slide of WP2 presentation on the GP-TCM Congress in Leiden.

2.2 Abstract

The abstract is related to the presentation on the GP-TCM Congress in Leiden.

Chinese Herbal Medicines (CHM) are traditionally administered as decoctions of complex herbal mixtures. These decoctions are rather difficult to handle in practice and technological problems arising from polar extract components hamper the development of more convenient dosage forms based on dry extracts. Modern extraction methods could overcome these problems but result in an altered extract composition. An optimisation of modernised extracts towards their content of rather unspecific marker compounds frequently used for the quality control of single drugs seems not reasonable, especially when considering that TCM often claims one specific herbal drug to display different activities within different complex herbal mixtures as well as the presence of synergetic effects between the ingredients. Furthermore, the co-extraction of complex herbal mixtures with water has shown to involve interactions between the herbal ingredients that significantly impact on the extract composition, as demonstrated on the example of the rather simple two-herb CHM of Danggui Buxue Tang. Consequently, a more detailed knowledge about the traditional extracts' chemical profiles and their impact on the preparations' biological activities is desirable in order to allow the development of modernised extracts that factually contain the whole range of compounds relevant for the efficacy of the traditional preparations. By concepts like daodi and the different methods of paozhi processing, TCM offers a vast variety of traditional products of the same botanical origin but with distinct therapeutical properties. We suggest that this variety constitutes an ideal sample set for the application of metabolomic techniques aiming at the identification of the components relevant for the efficacy of complex herbal mixtures.

2.3 Discussion and Impact

2.3.1 Astragaloside IV in Danggui Buxue Tang

As part of the presentation, aspects of traditional extraction were illustrated on the example of the rather simple traditional two-herb preparation of Danggui Buxue Tang. In this example, the yield of the saponine astragaloside IV, which was used as a marker compound for one of its herbal ingredients, Astragali radix, is increased *(i)* by co-extraction when compared to the individual extraction of the ingredients and *(ii)* by *paozhi* processing of the other herbal ingredient Angelicae sinensis radix.

With regard to this aspect, Prof. Dr. Ruldoph Bauer amended that the higher yields of astragaloside IV are likely to result from the partial hydrolysis of more complex saponines during the extraction process (the aspect of instability due to hydrolysis in a water decoction had been generally addressed but had not been explicitly linked to this particular observation).

2.3.2 Traditional Chinese descriptors become apparent on a molecular level?

TCM practitioner Dr. Andrew Flowers amended that the effects of molecular interaction described for the traditional extraction of the aforementioned example of Danggui Buxue Tang are in accordance to the traditional Chinese concepts of mutual interaction between the herbal components (that is *yang* and *qi* in this case).