

GP-TCM Monthly Newsletter July/August 2010

Consortium News

GP-TCM Activities

1. The 1st Annual General Meeting (AGM) of the GP-TCM Consortium was successfully held at Henley Business School (UK) on 28th-30th July 2010. ~50 GP-TCM PIs and beneficiary representatives attended the meeting. Details of the meeting will be reported in the next issue of GP-TCM Newsletters and will be uploaded onto the GP-TCM website in late August.



Group photo of attendees of the 1st AGM

2. WP4 and WP7 Joint Phase II Meeting was successfully held at King's College London (UK) on 26th-27th July 2010. The event started with a welcome dinner on Sunday, 25th July and continued with joint meetings and workshops until midday of 27th July. During the meeting, the attendees discussed WP4- and WP7-related items as well as other consortium issues.



Group photo of attendees of the WP4/WP7 Joint Meeting

3. WP1 and WP2 Joint Phase II Meeting: was successfully held in Germany. The phase II meeting of WP1 and WP2 was hosted by Prof. Peter Proksch, bringing together 17 participants from Germany, Austria, the Netherlands, Belgium, United Kingdom and China to the beautiful Schloß Mickeln in Düsseldorf, Germany. The eruption of the volcano Eyjafjallajökull

on Iceland took place around the time of the meeting and prevented any air transport in central Europe. The arrival of many invited participants was uncertain until late evening Sunday evening. Amazingly, many participants were willing to take great efforts to attend the meeting so that finally 17 of expected 19 participants somehow managed to come. Lectures of Brigitte Kopp, Werner Knöss, Ian Sutherland and Svetlana Ignatova were followed by round table discussions about (i) the post-harvest treatment and extraction of TCM herbal drugs with a special focus on *pao zhi*, (ii) minimum acceptable standards for extract preparation and component analysis with special regard to existing European standards (iii) application of high speed counter current chromatography and (iv) criteria for the selection of priority list species. A group photo of the meeting attendees are available from our consortium website: <http://www.gp-tcm.org/2010/06/phase-ii-joint-meeting-of-wp1-and-wp2/>

4. The 4th GP-TCM Plant Lists Teleconference was held on 6th July 2010: The meeting was attended by Kelvin Chan, Pierre Duez, Tai-Ping Fan, Peter Hylands, Debbie Shaw, Monique Simmonds, Halil Uzuner, Rob Verpoorte, and Qihe Xu. Halil Uzuner led a brief review of the topics discussed at the 3rd meeting; Monique led the discussions on WP1 priority plant lists, regulatory aspects and marketing issues, which was debated by all attendees; this session was followed by Debbie's CMM naming issue update, and Pierre's WP3 priority plant lists update (toxicology info and drug processing aspects) and associated activities within these WPs.

5. GP-TCM Website: The project website has been updated to include new sections dedicated for the use of our registered users. Two new sections have been added under the member links on the right menu, namely "Useful resources" and "Members recommendations". At **Useful resources** section, you can view the following (kindly provided by Prof. Kelvin Chan):

- Commonly Used Chinese Herbs and Formulae in the UK: <http://www.gp-tcm.org/2010/07/commonly-used-chinese-herbs-and-formulae-in-the-uk/>
- The best-selling herbs in the EU: <http://www.gp-tcm.org/2010/07/best-selling-herbs-in-the-eu/>

In the **Members Recommendations** section, you can view 2 papers kindly provided by Dr. Dan Jiang: <http://www.gp-tcm.org/recommendations/>.

5. GP-TCM members spoke at WorldPharma2010 (17-23 July, Copenhagen): Rudi Bauer, Tai-Ping Fan Monique Simmonds, Lina Svedlund, Liz Williamson gave invited lectures to pharmacologists interested in natural products and TCM, drawing the attention of a wider audience to the work of GP-TCM.

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Appointment of new GP-TCM Members and changes of membership

1. Appointment of Dr. Shaw Tsen Chen to join GP-TCM as a non-beneficiary member, devoting to WP7 (R&D of Chinese herbal medicines) led by Dr Tai-Ping FAN (UK) and Prof. Kelvin CHAN (Australia) and WP10 (management) led by Dr Qihe XU (UK).

Shaw is Deputy Director, Office of Drug Evaluation-IV, Centre for Drug Evaluation and Research, US Food and Drug Administration (FDA) and is the Leader of the FDA Botanical Review Team. Prior to his current assignment, he was Associate Director of ODE-I and a senior medical review staff in the Division of Cardiorenal Drug Products. Shaw is a physician scientist with over 22 years of regulatory experiences in new drug development and expertise in regulatory review of clinical trial design, data analysis, overall risk/benefit assessment and post-marketing safety surveillance. He was responsible for drafting/implementing FDA guidance/process for a new class of drug products and has unique experience in establishing modern drug review agency and educating/training of regulatory scientists in the Asian Pacific region. Shaw is a graduate of National Taiwan University (BSc, 1970), Johns Hopkins University (PhD, 1977) and University of Miami (MD, 1982). He received post-doctoral trainings in basic sciences at Johns Hopkins and Yale; did paediatric residency/clinical fellowship at University of Minnesota and National Institutes of Health. **Warmest welcome and congratulations, Shaw!**

2. Appointment of Dr Zhongzhi QIAN as a non-beneficiary member of GP-TCM, devoting to WP7 (R&D of Chinese herbal medicines) led by Dr Tai-Ping FAN (UK) and Prof. Kelvin CHAN (Australia):

Professor Qian is currently the Director of Department of Chinese Herbal Medicine, State Pharmacopoeia Commission of China. He is mainly responsible for the establishment and revision of national drug standards for Chinese herbal medicines. Trained in Heilongjiang University of Traditional Chinese Medicine, he served as director of TCM Department of Heilongjiang Drug Control Institute. With over 50 academic publications, some of his results have been adopted by the Chinese Pharmacopoeia as national standards. Dr Qian worked in Japan for two years on the isolation and purification of herbs such as Fritilaria Bulbs, and received a number of awards at provincial and ministerial levels. His main concurrent social positions include national drug evaluation committee member, expert member of national basic drug committee, etc. **Warmest welcome and congratulations, Zhongzhi!**

3. Appointment of Prof. Hin Wing Yeung, Editor-in-Chief of CHINESE MEDICINE, to join the Advisory Board of the GP-TCM Consortium. Prof. Yeung is

Director of Publication and Editorial Office, International Society for Chinese Medicine (ISCM) and is Past General Secretary of ISCM. **Warmest welcome and congratulations, Prof. Yeung!** For more information about Prof. Yeung and his journal please visit: <http://www.cmjournal.org/>

4. Appointment of Prof. Nicola Robinson (Thames Valley University, TVU, UK) as a WP8 Co-Coordinator.

Following recommendation and invitation by the WP8 Coordinator Prof. Xiaomin Wang, Nicky has been appointed a Co-coordinator of WP8 to promote liaison among WP 8 members based in China and Europe. As Head of Centre for Complementary Healthcare and Integrated Medicine, Faculty of Health and Human Sciences, TVU, UK, Nicky is also Head of Subject/professional lead for Complementary Medicine. She manages TVU's Acupuncture Research Resource Centre which is funded by the British Acupuncture Council. In addition to management of PhD/MPhil supervision and teaching, she is research active, focusing on (i) traditional and Complementary approaches to health for children (Kings Fund); (ii) student doctors attitudes to TCM in Hong Kong (The Chinese University, Hong Kong); (iii) evaluation of complementary medicine provided in primary care (GetWell UK); (iv) positive self management programmes for people with HIV disease in China (Ditan Hospital, Beijing); (v) acupuncture and its effect on stress and chronic pain; (vi) acupuncture effectiveness and acceptability to manage the side effects of hormonal adjuvant treatment in women with breast cancer; (vii) acupuncture and implications for a clinical trial for schizophrenia; (viii) acupuncture treatment of infertility, etc. **Warmest congratulations, Nicky!**

5. Appointment of Prof. Sarah Stewart-Brown, Professor of Public Health, Warwick Medical School, University of Warwick (UK) to join GP-TCM as a non-beneficiary member dedicated to WP6 (Clinical studies, led by Prof. Ken Muir).

Before joining Warwick Medical School Sarah was Reader in the Department of Public Health at the University of Oxford, where she directed the Health Services Research Unit and prior to that she worked in the UK NHS in various public health and clinical medical roles. Sarah has a long-standing interest in mental health and wellbeing, focusing primarily on life course considerations and interventions in childhood. She has a strong interest in TCM and CAM more generally for the vital role these approaches could play in terms of public health and wellbeing. She brings knowledge of CAM and energy medicine as a practitioner and recipient; research skills in epidemiology, systematic review and trials of complex interventions; and a experience of public health practice

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in the UK NHS. **Warmest welcome and congratulations, Sarah!**

6. Appointment of Prof. Claudia M. Witt (Charité University Medical Center, Germany) as a WP8 Member: Following recommendation and invitation by the WP8 Coordinator Prof. Xiaomin Wang, Claudia has been appointed to WP8 as a non-beneficiary member, in addition to her existing non-beneficiary membership in WP6. Her strong expertise and track record in acupuncture studies will make an important contribution to the group activities. Claudia is Vice Chairman, International Research Society of Complementary and Alternative Medicine. **Warmest congratulations, Claudia!** <http://www.ncbi.nlm.nih.gov/pubmed/16005336>
<http://www.ncbi.nlm.nih.gov/pubmed/15870415>
<http://www.ncbi.nlm.nih.gov/pubmed/16055451>

7. Appointment of Dr. Tianjun Wang, Senior Lecturer, University of East London (UK) to GP-TCM as a non-beneficiary member dedicated to WP10 (Management, led by Dr. Qihe Xu). Tianjun came to the UK and joined University of East London as a Lecturer and practitioner in 2007, appointed Director of the Acupuncture Clinic in 2008 and promoted to Senior Lecturer in 2009. From 2001 to 2003 he worked as a lecturer and acupuncturist in the Mediterranean Regional Centre for Traditional Chinese Medicine (MRCTCM), Malta. A graduate of Nanjing University of Chinese Medicine (NJUCM) for both his MBBS and PhD, he had worked as a TCM doctor and acupuncturist in Jianye TCM Hospital, Nanjing, China for 20 years and was appointed an Associate Professor at NJUCM before coming to the UK. His main research interest is the effect of acupuncture on depression. **Warmest welcome and congratulations, Tianjun!**

8. Appointment of Prof. Peter Jones to GP-TCM as a non-beneficiary member dedicated to WP4 (led by Prof. Peter Hylands, UK) and WP5 (led by Prof Javier Lucio-Cazana, Spain): Peter Jones is Professor of Endocrine Biology and Head of the Diabetes Research Group in the Division of Endocrinology and Reproduction at the Guy's campus of King's College London. Peter obtained his PhD at the National Institute for Medical Research (London) studying peptide hormones in the central nervous system. He started working on β -cell function in diabetes as a postdoctoral fellow at Queen Elizabeth College in 1984. He was awarded an R.D. Lawrence Fellowship by the British Diabetic Association, followed by a Medical Research Council Senior Research Fellowship, after which he took up an academic position as Lecturer in Physiology at King's. He was awarded the British Diabetic Association R.D. Lawrence Lecture for 1997 in recognition of his work on the regulation of insulin secretion. His research interests remain with the β -cell, with current focus on the generation of β -cell substitutes for transplantation therapy of Type 1 diabetes and on

novel therapeutic targets for Type 2 diabetes. Peter and his colleagues in the Diabetes Research Group have a long-standing interest in the therapeutic potential of phytochemicals and have published studies on the modes of action of Indian and European plant extracts in the regulation of insulin secretion in vitro and in vivo. They are now keen to extend these studies into the area of TCM.

<http://www.kcl.ac.uk/schools/biohealth/research/rhed/endocrin/pjones.html>

9. Appointment of Ms. Annika Orland, PhD Student, Federal Institute for Drugs and Medical Devices (Germany) to join GP-TCM as a non-beneficiary member dedicated to WP2 (Component analysis and extraction, led by Prof. Peter Proksch). Following her education as biological-technical assistant, Annika has been employed at a medical laboratory. Afterwards, she studied biology at the University of Applied Sciences in Bonn, where her studies were focused on medical microbiology and biomedical sciences. She finished the programme with a bachelor degree. Later, she specialised in plant biochemistry at the University of Bochum. Annika's master thesis was about photosynthesis in cyanobacteria under iron stress. Currently she is employed by the Federal Institute for Drugs and Medical Devices (BfArM) in Bonn, where she works under a research project "Identification of medical plants and plant material". Subjects of research project are medical plants, also from Asian therapy like TCM or Ayurveda. The intention of this research project: development of a method, which has a broad range of medical plants and herbal products. For the identification of the plants or herbal products, two different methods are used. The first one is a molecular biological approach and the second one is metabolomic fingerprinting approach. **Warmest welcome and congratulations, Annika!**

10. Appointment of Dr Yue Wu (King's College London, UK) to GP-TCM as a non-beneficiary member dedicated to WP10 (led by Dr Qihe Xu) and a local assistant to Prof. Peter Jones (WP4 and WP5) and Prof. Shanta Persaud (also appointed to WP4 and WP5; announcement to be made in the next issue of newsletter). Yue completed her undergraduate and postgraduate degrees at Nanjing University of Technology, China. After her tenure as a lecturer in Biochemistry and Molecular Biology at Nanjing Medical University, she was awarded the prestigious KC Wong Scholarship to pursue a PhD research degree in the Diabetes Group at King's College London, working on the trans-differentiation of liver cells into insulin-producing cells. In 2005, after completing her PhD, she joined the Hepatocyte Transplantation Group at King's College Hospital. There, the focus of her research was to look for new sources of cells for hepatocyte transplantation. From May 2007 to the end

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of 2009, she has pursued a post-doctoral fellowship in the Stem Cell Biology Laboratory at King's College London, where the aim of her research is to differentiate human embryonic stem cells into a variety of functional cell types, including neurons, pancreatic β cells, cardiomyocytes and hepatocytes, for potential therapeutic applications. At present, after returning to the Hepatocyte Transplantation Group, she has embarked on looking at interaction of hepatocytes and mesenchymal stem cells and their potential clinical use. For many years, she has had an interest in TCM and has played an active role in promoting UK-China collaborations in TCM research. She has carried out some preliminary work on some selected TCM extracts on the proliferation and differentiation of human embryonic stem cells, human neural stem cells and human glioma cells, and the results have been encouraging. She now wishes to further that study for a more detailed analysis. **Warmest welcome and congratulations, Yue!**

Funding Opportunities

1. Billion-euro boost to EU science: European science is set for a serious shot in the arm, after the EU's commissioner for research and innovation announced that the EU will invest €6.4 billion in R&D on the continent through 2011, the largest ever infusion of funding into research activities across Europe. <http://www.the-scientist.com/blog/display/57564/>

2. Marie Curie Action calls now open: Among the above funding, €772 million has been slated to go to 7,000 researchers through the Marie Curie Actions, with 40% allocated to **Intitail Training Networks (ITN)** that GP-TCM members have decided to apply for.

- Identifier: FP7-PEOPLE-2011-ITN
- Budget: € 318.41M, an increase of €74.62M or 30% compared the last year (€243.79M).
- Deadline: 26 January 2011

http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.PeopleDetailsCallPage&call_id=313

3. European Research Council calls now open:

The 2011 ERC Work Programme announcing the ERC grant schemes for 2011 has been published, with deadlines in autumn 2010. The 2011 Advanced Grants call will be published in autumn 2010, with deadlines in spring 2011. http://www.ukro.ac.uk/erc/stg_open_calls.htm
http://www.ukro.ac.uk/erc/faqs.htm#faqs_stg

4. An FP7 funding opportunity for small and medium-sized enterprises (SMEs) with expertise in the field of pharmacovigilance, pharmaco-epidemiology and health outcome research:

http://www.ema.europa.eu/ema/index.jsp?curl=pages/news_and_events/news/2010/07/news_detail_001066.jsp&murl=menus/news_and_events/news_and_events.jsp&mid=WC0b01ac058004d5c1&jsenabled=true

News and Views

1. TCM Hothouse Gathering Momentum. Tony Queded. *Business Weekly* (July 29-August 5, 2010; No. 599. www.businessweekly.co.uk)

A series of meetings designed to build momentum for a Traditional Chinese Medicine hothouse in Cambridge are taking place this summer and autumn. They involve crucial talks with potential funders and collaborators as well as discussions with influencers, such as the FDA (US Food and Drug Administration) and European Medicines Agency without whose support Chinese medicines will largely stay in China.

Dr Tai-Ping Fan, who is spearheading a campaign to create a centre for TCM in Cambridge, will be continuing talks with contacts in FDA and its counterparts in Canada (Natural Health Products Directorate) and Australia (Therapeutic Goods Administration) and China (State Food and Drug Administration). He has also been in Copenhagen for WorldPharma2010 (17-23 July 2010) where he co-organised a focused conference on natural products.

In the 50 years of International Union of Basic and Clinical Pharmacology (IUPHAR; www.iuphar.org), a special section on natural products is now in place. Thanks to the foresight of Professor Paul Vanhoutte (IUPHAR President 2002-2006; University of Hong Kong) and Professor Michael Mulvany (Secretary General of WorldPharma2010; University of Aarhus, Denmark), "Natural Products - Past and Future?" was a focused conference with 5 half-day sessions. It covered the latest discoveries of the pharmacology and molecular mechanisms of TCM and other natural products such as the cardioprotection by polyphenols from red wine and flavanols from dark chocolate as well as the immunomodulatory activity of alkaloids from *Echinacea* (purple coneflowers), just to mention a few. Amazingly, in addition to 19 invited lectures, this conference attracted 203 abstracts from 40 countries from across the world: Algeria, Australia, Austria, Bangladesh, Barbados, Belgium, Brazil, China, Cuba, Czech Republic, Denmark, Egypt, Finland, France, Germany, Hungary, India, Iran, Japan, Kazakhstan, Malaysia, Mexico, New Zealand, Nigeria, Pakistan, the Philippines, Russia Federation, Saudi Arabia, Republic of Serbia, South Africa, South Korea, Spain, Switzerland, Taiwan, Thailand, Trinidad & Tobago, Turkey, Ukraine, UK and USA. China offered the largest number (42) of abstracts. These facts and figures clearly signify the immense potential of medicines derived from plants and other natural sources.

At the meeting, Professor Michel Lazdunski, a world-renowned specialist of ion channels (Medical School of the University of Nice – Sophia Antipolis, and the founder and past-Director of the CNRS Institute of Molecular and Cell Pharmacology as well as the

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founder of the new CNRS institute of Neuromolecular Medicine) was complimentary about Dr Fan's research at Cambridge. Professor Lazdunski is also the Vice-President for Research of Moleac Pte Ltd in Singapore, working selectively on TCMs for stroke and neurodegenerative diseases. Future collaborations between the two groups will no doubt accelerate the rate of success.

Dr Hendrik van Veen (Department of Pharmacology, University of Cambridge), whose team works on molecular mechanisms of multidrug transporters and human breast cancer resistance protein, was equally convinced by the power of natural products. In particular, he and Dr Fan will embark on testing compounds derived from TCM for their ability to protect and/or reverse multidrug resistance which seriously limits the clinical effectiveness of antibiotics and anticancer drugs alike.

From 25-30 July, there will be a two-day meeting of Dr Fan's Workpackage 7 within the EU-funded consortium - Good Practice of TCM Research in the Post-genomic Era (GP-TCM; www.gp-tcm.org), followed by the first annual meeting of GP-TCM. With Dr Shaw Chen (Botanical Team Leader at the Center for Drug Evaluation and Research, US FDA), Dr Klaus Reh (Head Herbal Medicinal Products and Traditional Medicinal Products Unit, German Federal Institute for Drugs and Medical Device) and Prof Zhongzhi Qian (Director, Department of Chinese Herbal Medicine, State Pharmacopoeia Commission of China), as well as other experts converging at King's College London, WP7 members will discuss regulatory issues on herbal products and botanical drugs, aiming to recommend a universal harmonised registration strategy for product development of Chinese herbal medicines.

In August, Dr Fan will be in China where he will meet the Minister of Health and update him on the situation regarding TCM in Cambridge and the UK. He will also visit collaborators in Shanghai at Hutchison China Meditech; Shanghai Innovative Research Center of TCM and Shanghai University of TCM before going on to Hong Kong to attend the 9th Annual Meeting of Consortium for Globalization of Chinese Medicine (CGCM; www.tcmedicine.org) and meet officials at the University of Hong Kong. Dr Fan said: "This trip is multi-purpose aiming to consolidate existing collaborations and to meet potential donors."

2. Identification of the Botanical Origin of Pine Nuts Found in Food Products by Gas-Liquid Chromatography Analysis of Fatty Acid Profile.

Destailats F *et al.* *J. Agric. Food Chem.* 2010, 58, 2082–2087. Pine nuts are traditionally used in various part of the world for the preparation of desserts or sauces or in salads. Local production is not sufficient to cope with the high demand of pine nuts around the

world, and countries such as China or Pakistan are exporting much of their production to Western countries. Almost all the nuts that are traditionally consumed belong to the *Pinus* genus, but over the past years, the number of consumer complaints following consumption of commercial pine nuts increased. Some consumers experienced taste disturbance lasting for up to two weeks after consumption. Food safety agencies raised some concerns regarding pine nuts imported from Asia and their association with taste disturbance. However, even though a formal association has not been found to date, the *Pinus* genus comprises species that are not classified as edible and could be eventually used to adulterate edible species. *Pinus* spp. seed lipids are known to contain very specific polyunsaturated fatty acids known as Δ^5 -olefinic acids. Seed fatty acid profile of conifers had been used in the past as a taxonomic marker, and in the present study to identify the botanical origin of pine nut in nine commercial products. Fast gas-liquid chromatography (GLC) was used to resolve the complete fatty acid profile of *Pinus* spp. samples in less than 5 min. A diagnostic index based on the relative levels of the main fatty acids including distinctive Δ^5 -olefinic acids was used to identify botanical origins. Results revealed the occurrence of the following *Pinus* spp. in commercial products: *P. pinea*, *P. koraiensis*, *P. gerardiana*, *P. armandii* and *P. massoniana*. The later two species, known as Chinese white pine and Chinese red pine, are only cultivated in China and are not listed as common source of edible pine nuts by the Food and Agriculture Organization (FAO). The present study shows that the botanical origin of pine nuts can be identified in products based on the fatty acid profile.

Call for Bianzheng Lunzhi Discussion Group

辨症论治 (bianzheng lunzhi = Debate on the Treatment of Disease) is an important guiding principle of TCM diagnosis and treatment. Editor Tai-Ping Fan wishes to form a Discussion Group and produce a simple-to-follow synopsis for readers of the Newsletter. Interested TCM practitioners within GP-TCM please contact him via email (tpf1000@cam.ac.uk) asap

Research Tools: Focus on Imaging

<http://hosted.verticalresponse.com/328583/0afea767be/1417005877/fd3979b534/>

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