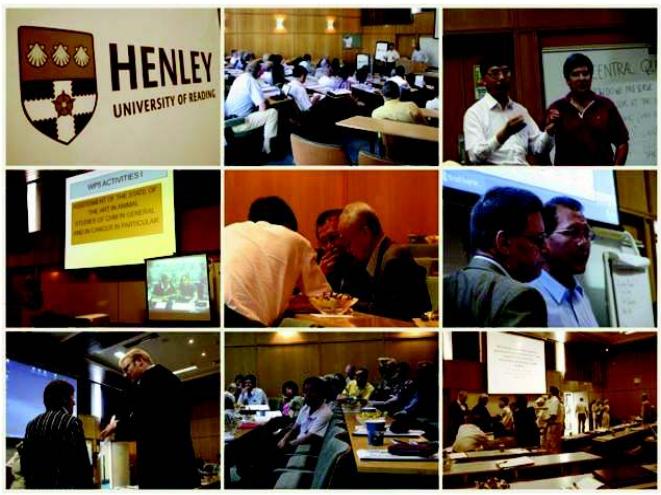
GP-TCM Monthly Newsletter September/October 2010

Features of the Months:

1. 1st GP-TCM Annual General Meeting Photos:



For more images, please visit our project website (http://www.gp-tcm.org/2010/09/1st-gp-tcm-agm-photos-henley/). (For GP-TCM members only: username and password needed for access to these photos)

2. The 3rd e-MSM Teleconference was held on 3rd September 2010 as a Skype teleconference and gathered thirteen senior consortium members across CO, SOP, and other consortium committees. The issues discussed during the 3rd e-MSM included 1st EC Periodic Report and other month 18 deliverables, potential partnership with the open-access Journal *Chinese Medicine*, GP-TCM policy on TCM politics and TCM debates, discussions on GP-TCM and its WP directions after the 1st Annual General Meeting (AGM), discussions on priority plant lists agreed at the 1st AGM, and 1st AGM feedback from consortium members.

3. GP-TCM members spoke about TCM at the headquarters of the Wellcome Trust:

At the invitation of Dr Vivienne Lo of Wellcome Trust Centre for the History of Medicine at UCL, Dr. Tai-Ping Fan organised a 2-hour session on *Herbal Medicine: Regulation or Education?* This session formed part of the 3-day conference "*Potent Substances: on the Boundaries of Food and Medicine*" (13th-15th September 2010). Professor Monique Simmonds presented the start-of-the-art facilities at the Royal Botanic Gardens, Kew for the authentication of medicinal herbs and summarised their efforts in tackling adulterated products; Mrs Greer Deal of Global Regulatory Services highlighted the problems of the impending European Directive on Traditional Herbal Medicine Products (EU Directive 2004/24/EC) from the 1st April 2011, and discussed possible solutions; Dr Daryl Rees of Salupont Consulting talked about commercialisation of food with 'health claims' by revisiting how Phytopharm successfully developed a 3-herb product (Phytopica™ for canine skin health) from a 10-herb TCM formula (Zemaphyte® for steroid-resistant eczema in humans); Dr Vivienne Lo spoke about medicine being an art, how modern day medicine seems to have lost this whereas the traditional Chinese approach actively promotes the 'art of medicine'. Dr

Tai-Ping Fan emphasised the importance of East Meets West, using Li Shizhen's Bencao Gang Mu 《本草纲目》 in 1596 and Henry VIII's Herbalists Charter in 1511 as examples to highlight the monumental task being undertaken by all members of GP-TCM in pursuit of evidence-based TCM. These presentations were very well received as reflected by the active discussions between the panelists and audience. Agreement was reached that regulation **and** education were key to the future of traditional medicine.

Appointment of New GP-TCM Members and Changes of Labour Division:

1. Liaison with Consortium for Globalisation of Chinese Medicine (CGCM): As an institutional member of the CGCM, GP-TCM is required to liaise with CGCM based on its existing structure. In order to facilitate the link between GP-TCM and CGCM, the management team of GP-TCM has decided to appoint the following people to represent us in various CGCM working groups:

- **Quality control:** Prof. Monique Simmonds (UK)
- **Informatics:** Dr. Dave Barlow (UK)
- **Clinical:** Prof. Ken Muir (UK)
- **Herbal resources:** Prof. Kelvin Chan (Australia) and Prof. Zhongzhen Zhao (China)
- **Intellectual property:** Dr. Tai-Ping Fan (UK)
- **External Affairs & Industrial Liaison:** Dr. Qihe Xu (UK)
- **Education:** Prof. Peter Hylands (UK)

The management team thanks the above members for taking on additional responsibilities, and has realised the dominance of members from the UK in these appointments. It is intended that these roles are for liaison only. The appointees will represent the GP-TCM management group to liaise with CGCM and major issues will be brought back to our GP-TCM work packages, Steering Committee and e-MSMs to be discussed, as appropriate.

2. Appointment of Prof. Jan van der Greef, CEO of SU BioMedicine B.V. and Chairman of Sino-Dutch Centre for Preventive and Personalized Medicine, the Netherlands, to join the Advisory Board of the GP-TCM Consortium, of which Prof. Tommy Yung-Chi Cheng (USA) and Prof. Brian Clark (Denmark) are Co-Chairs. Jan is Scientific Director of Systems Biology & Personal Health Research at Netherlands Organisation for Applied Scientific Research (TNO). His group is within TNO Quality of Life, a programme with special emphasis on the synergy between pharma and food research. In addition, Jan is Professor of Analytical Biosciences at Leiden University within the Leiden/Amsterdam Centre for Drug Research (LACDR) and Director of the Sino-Dutch Centre for Preventive and Personalised Medicine (SD-PPM), a joint initiative of the Chinese Academy of Sciences, Netherlands Metabolomics Centre, Leiden University and TNO. He is co-founder of SU BioMedicine, a spin-off company of TNO, based on an innovative scientific concept developed for herbal medicine. His current research interest is the development of systems biology as a way to scientifically bridge different healthcare concepts. In a prior responsibility as Managing Director of TNO Pharma, he has successfully developed this innovative business organisation to become an internationally respected organisation for drug discovery and development. He is a co-founder and member of the scientific advisory board of BG Medicine, arguably the first systems biology company in Europe and developed the concept of systems biology for pharmaceutical industry and life sciences. He is also a scientific co-founder of Kiadis, an additional spin-off company of Leiden University, which is based on novel high-resolution screening platforms for natural products. His PhD was completed at the University of Amsterdam in the field of mass spectrometry in 1980. He has published over 300 papers in international journals, supervised more than 22 PhD thesis projects and has given more than 250 opening, plenary and keynote lectures at major life sciences, analytical chemistry and pharmaceutical conferences. He is co-inventor of several patents in life sciences and TCM related technologies. **Warmest welcome and congratulations, Jan!** For more information about Jan, please visit the following websites:
http://abs.lacdr.gorlaeus.net/people/van-dergreef
http://vimeo.com/user3182172

3. Appointment of Prof. Zhong-zhi Qian (State Food and Drug Administration, China) to GP-TCM as a non-beneficiary member devoted to WP7 (R&D of Chinese herbal medicines) led by Dr. Tai-Ping Fan (UK) and Prof. Kelvin Chan (Australia). Zhong-zhi is 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. He obtained his bachelor degree from Heilongjiang University of TCM and served as Director of the TCM Department of Heilongjiang Drug Control Institute

before taking up his current role. He published over 50 academic papers and some of the results have been adopted by the Chinese Pharmacopoeia as national standards. Zhong-zhi worked in Japan for two years to perform research on the isolation and purification of herbs such as Fritilaria Bulbs. He received a number of awards at provincial and ministerial levels. Main social concurrent positions include national drug evaluation committee member, expert member of national basic drug committee, etc. **Warmest welcome and congratulations, Zhong-zhi!**

4. Appointment of Prof. Olavi Pelkonen, Department of Pharmacology and Toxicology, University of Oulu, Oulu, Finland, to GP-TCM as a non-beneficiary member devoted to WP3 (toxicology studies) led by Prof. Pierre Duez (Belgium), and Prof. Xinmin Liu (China). Olavi has MD and PhD degrees. He was a postdoctoral fellow at the National Institute of Child Health and Human Development, Bethesda, Maryland (1976-1977) and since 1978 he has been Associate and then Full Professor of Pharmacology as well as Head of the Department at University of Oulu. He has been as a visiting professor in Spain, UK and Australia and has actively participated in European Union COST Actions (B1 in 1986-1998, B15 in 1998-2004 and B25 in 2005-2009) and coordinated EUROCYP, a Framework Programme consortium entitled "Integration of *in vitro* approaches to study drug metabolism and drug interaction in drug development in human" (1996-1999). He has more than 300 original and review articles published in international journals, mainly on various aspects of drug and carcinogen metabolism, especially by cytochrome P450 enzymes, and its regulation by genetic and environmental factors. He is a "Highly Cited Researcher" in pharmacology and toxicology' (ISI-Thomson) and his current interests include the development of *in vitro* and *in silico* methods for drug development and chemical risk assessment. In this respect, he has been participating multiple Pharma projects in Finland, as supported by The Academy of Finland, Finnish Technology Research Centre and the pharmaceutical industry. He has expert roles at ECVAM and EMA (a co-opted member in toxicology), among others, and has advisory roles in Finnish drug development service entities. In 2003, he gave The Oswald Schmiedeberg Lecture at the University of Tartu. In 2007, he was awarded The Bo Holmstedt Memorial Lecture Award by EUROTOX and he was a plenary lecturer in IUPHAR WorldPharma2010 Congress in Copenhagen in 2010. **Warmest welcome and congratulations, Olavi!** For more information about Olavi, please visit the following websites:
http://www.emea.europa.eu/docs/en_GB/document_library/contacts/opelkonen_CV.pdf
http://www.biomedexperts.com/Profile.bme/1641000/Olavi_Pelkonen

5. Appointment of Prof. (Lynn) Ge Lin (The Chinese University of Hong Kong, China) to GP-TCM as a non-beneficiary member devoted to WP3 (toxicology studies) led by Prof. Pierre Duez (Belgium), and Prof. Xinmin Liu (China). Lynn is a full professor in School of Biomedical Sciences, The Chinese University of Hong Kong. She joined Department of Pharmacology in this university in 1993 and has worked in the field of pharmaceutical sciences for about twenty years. Lynn and members in her research group have a long interest in the globalisation of Chinese medicine. Having been trained in various disciplines in the field of pharmaceutical sciences, including B.Sc. in Pharmacy at China Pharmaceutical University, China; M.Sc. in Natural Product Chemistry at University of Alberta, Canada; and Ph.D. in Pharmacokinetics, Drug Metabolism and Disposition at University of Saskatchewan, Canada, Lynn is an expert in applying multidisciplinary studies for the investigation of Chinese medicines. She integrates chemical quality control, pharmacodynamics, pharmacokinetics and toxicology for the identification of adverse effects/toxicity, absorbable and *in vivo* bioactive ingredients of Chinese medicines and also investigates herb-drug and herb-herb interactions. Her studies on the assessment, mechanism, and development of biomarkers of hepatotoxicity induced by pyrrolizidine alkaloids-containing herbs have been well recognised internationally. Lynn is Associate Editor of the open-access journal *Chinese Medicine*, has published over 110 papers and holds several intellectual properties for Chinese medicines. **Warmest welcome and congratulations, Lynn!**
For more information on Lynn and her research, please visit the following websites:
http://www.sbs.cuhk.edu.hk/TeachingStaffDetails.asp?TE_NAME=LIN+Ge
http://scholar.google.co.uk/scholar?hl=en&q=Ge-Lin+Chinese+University+of+Hong+Kong&btnG=Search&as_sdt=2000&as_ylo=&as_vis=0

6. Appointment of Ms. Christine Leon (The Royal Botanic Gardens, Kew, UK) to GP-TCM as one of WP1 (Quality control of CHMs) Coordinator Prof. Monique Simmonds' (UK) local assistants Christine is a Medical Botanist and her research focus in the past 30 years at Kew has spanned plant conservation, plant toxicology and, since 1995, has focused exclusively on the authentication of Chinese medicinal plants. From 1980-90 she managed a threatened plants unit for The World Conservation Union, the EU and Council of Europe to assess endangered plants as priorities for conservation legislation; from 1990-1996, she worked

on computer-aided identification of toxic UK plants and later joined the UK Traditional Remedies Surveillance Programme identifying plant ingredients implicated in herbal medicine adverse reactions. In 1998 she obtained funding to establish a Chinese Medicinal Plant Authentication & Conservation Centre at Kew to build a reference resource to help identify and develop quality control methods for TCM plants used in the West. To achieve this, Christine spent the next 10 years undertaking extensive fieldwork in China collecting fresh plant material growing in 19 different provinces; she was occasionally joined by Dr. Debbie Shaw of WP3 hence maintaining the valuable clinical toxicology connection. The resulting TCM reference collection housed at Kew under controlled storage has a current holding of ~4,500 dried crude and processed herbs (with herbarium vouchers). This represents ~80% of TCM plant species described in the Chinese Pharmacopoeia (2005 edition). Christine specialises in the gross morphological identification, taxonomy and nomenclature of these herbs while she also researches the occurrence and cause of herbal substitution and counterfeiting in international trade. As part of Monique's Group at Kew, she also facilitates access to these herbs for lab-based authentication 'finger-printing' research in order to assist in the development of herbal medicine QC standards. Access to this resource is available to all interested groups via Christine or Monique. Finally Christine is a member of Kew's *Medicinal Plants Names Information Service* (http://www.kew.org/science/directory/projects/MPNI.html), the British Pharmacopoeia's Expert Advisory Group on Herbal and Complementary Medicines and since 2005 has been appointed Visiting Professor at Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Beijing, providing technical input on draft monographs on Good Agricultural and Collecting Practice for the Chinese government, focusing on those TCM plant species known to be endangered in the wild. **Warmest welcome and congratulations, Christine!**

7. Appointment of Dr. Graeme A. Ladds (PharSafer Associates Ltd, UK) to GP-TCM as a non-beneficiary member, devoted to WP3 (toxicology studies) led by Prof. Pierre Duez (Belgium) and Prof. Xinmin Liu (China), as well as WP10 (management) led by Dr. Qihe Xu (UK). Graeme is the CEO of PharSafer Associates Ltd, a Contract Research Organisation specialising in the Safety of Medicines and Medical Information. Formed nearly 9 years ago, the Company has multinational companies as clients and offers services for both clinical trial safety as well as post marketed products. With Graeme's 20 years of experience in this field, his company has a wide breadth of experience in helping clients from both academic and commercial sectors for a wide range of medicines including, herbal (traditional), biological, new chemical entities, generic products, and stem cell therapies. PharSafer Associates operates in many countries worldwide and currently has safety reporting responsibilities for over 60 countries and is operating clinical trials multi-nationally at Phases I to III for many different therapy areas including cardiovascular, neurological, gastrointestinal, allergy, respiratory and oncology. **Warmest welcome and congratulations, Graeme!** For more information about PharSafer, please visit the following website: http://www.pharsafer.com/

8. Appointment of Dr. Günter Meng (Dr. Willmar Schwabe GmbH & Co. KG, Germany) to GP-TCM as a non-beneficiary member devoted to WP10 (management) led by Dr. Qihe Xu (UK). Günter is a physician working in industrial drug research for 25 years. He studied medicine, chemistry and philosophy and obtained the Certificate on "Biometry in Medicine" of the International Biometrical Society. He worked as a medical advisor in Knoll AG (today: Abbot) as well as in the Schwabe Group (Karlsruhe, Germany), which focuses on herbal products for the world markets. He was responsible for the medical biometry unit and later for the clinical research department of Schwabe. He has broad experience in planning, conduct and evaluation of clinical trials in psychiatry (dementia, depression, anxiety, somatisation), cardiology (arrhythmia, chronic heart failure), and urology (LUTS). Since 2004 he is Senior Vice President Research & Development of Schwabe. Schwabe's R&D has 125 researchers working on phytochemical, pharmacological, analytical, galenical, and clinical research topics. He is or was a member of several advisory boards to the German Drug Authority (BfArM) and to Associations of the German Pharmaceutical Industry (BPI, BAH). He is a member of the International Society for Medicinal Plant and Natural Product Research (GA), the German Society for Psychiatry, Neurology and Psychotherapy (DGPPN), the German Society for Phytotherapy (GPT), and the German Society for Medical Informatics, Biometry and Epidemiology (GMDS). For more information about Dr. Willmar Schwabe GmbH & Co. KG, please visit the following website: http://www.schwabepharma.com/international/about-us/index.php

9. Appointment of Dr. Egon Koch (Dr. Willmar Schwabe GmbH & Co. KG, Germany) to GP-TCM as a non-beneficiary member devoted to WP10 (management) led by Dr. Qihe Xu (UK). Egon finished studies in agricultural sciences and veterinary medicine and is a State Veterinary Association approved

expert in pharmacology and toxicology as well as in animal reproduction. He did his PhD thesis at the Institute of Animal Reproduction and Animal Behaviour of the Federal Agricultural Research Centre (FAL) in Neustadt/Hannover (Germany) and spent two years as a postdoctoral fellow at the Institute of Animal Physiology of the Agricultural and Food Research Council in Cambridge (UK) working on the maternal recognition of pregnancy and immunological aspects of reproduction. After returning to the FAL, he established his own research group in the field of reproductive immunology, before taking over the position of Group Leader for Inflammation and Immunopharmacology in the Department of Pharmacology of Dr. Willmar Schwabe Pharmaceuticals (Karlsruhe, Germany) in 1988. In 2003, he became Head of the Department of Pharmacology, and since 2005 is Head of Preclinical Research. Dr. Koch has extensive research experience in the pharmacological and toxicological evaluation of herbal medicinal products, isolated plant constituents and synthetic compounds. Besides his main professional interests in pharmacology (e.g. inflammation and immunopharmacology, central nervous system and cardiovascular diseases as well as metabolic and endocrine disorders) and toxicology, he covers a range of other areas including cultivation of medicinal plants and phytochemistry. He is a member of the German Society for Experimental and Clinical Pharmacology und Toxicology, the German Society for Immunology as well as the Society for Medicinal Plant and Natural Product Research and is a regular reviewer for a number of scientific journals. **Warmest welcome and congratulations, Egon!**

News & Views:

1. NIH Selects Botanical Research Centers http://www.nutraceuticalsworld.com/contents/view/27204

Studies of the safety, effectiveness and biological action of botanical products are major focuses for the five dietary supplement research centers selected to be jointly funded by the Office of Dietary Supplements (ODS) and the National Center for Complementary and Alternative Medicine (NCCAM), two components of the National Institutes of Health. The NIH's National Cancer Institute is co-supporting two of the five centers.

The competitive awards, approximately $1.5 million each per year for five years, were made to Pennington Biomedical Research Center, Baton Rouge, La.; University of Illinois at Chicago; University of Illinois at Urbana-Champaign; University of Missouri, Columbia; and Wake Forest University Health Sciences, Winston-Salem, N.C.

These five interdisciplinary and collaborative dietary supplement centers, known as the Botanical Research Centers (BRC) Program (http://ods.od.nih.gov/Research/BRCProgram), are expected to advance understanding of how botanicals may affect human health. "Eventually, the program may provide data that translates to new ways to reduce disease risk," explained Paul M. Coates, Ph.D., director of ODS. "Until then, the research from these centers will help the public make informed decisions about botanical dietary supplements."

"Botanicals are usually complex mixtures of many active constituents," said Josephine P. Briggs, M.D., Director of NCCAM. "This complexity poses some unique research challenges that these centers are well positioned to address."

The 2007 National Health Interview Survey shows that about 18% of adults reported taking a non-vitamin, non-mineral, natural product, spending about $15 billion on the purchase of these products. These products contain a dietary ingredient intended to supplement the diet other than vitamins and minerals, such as single herbs or mixtures.

Botanical products, including supplements, are among the most popular and use appears to be on the rise. *Nutrition Business Journal* (*NBJ*) data show that sales of dietary supplements have steadily increased by about 24% from 2003 to 2008. Elderberry supplement sales, for example, grew by almost 50% during this time. Furthermore, *NBJ* forecasts that sales of herbs/botanicals will increase about 19% over the next five years. Many of the botanicals proposed for study by the five centers appear on *NBJ's* list of Top 100 Dietary Supplements According to U.S. Sales, 2002-2008: Part II. They include plant oils, garlic, soy, elderberry, licorice, black cohosh, St. John's wort and dong quai. The safety and efficacy of these products has not been adequately studied, despite their widespread use.

In 1999, ODS received funding to develop a botanical research initiative that resulted in the BRC Program. The BRC Program is entering its third five-year cycle. Three of the five centers are renewals; that is, they received funding in the last cycle. The renewed centers are Pennington Biomedical Research Center, Wake Forest University Health Sciences, and University of Illinois at Chicago.

2. Novel anti-inflammatory Chinese herb therapy for Parkinson's disease

Parkinson's disease (PD) is a common neurodegenerative disease characterized by the selective loss of midbrain dopaminergic neurons. Although the cause of PD is unknown, increasing evidence has suggested that neuroinflammation significantly contributes to the progress of PD. Therefore, anti-inflammatory therapy could represent a promising neuroprotective intervention.

Recently, in a review published in *CNS & Neurological Disorders - Drug Targets*, Prof. Xiaomin Wang's lab at Capital Medical University of China, made a revision of this interesting topic: the use of atypical anti-inflammatory compounds on Parkinson's disease treatment. The review mainly focused on triptolide, a major active compound extracted from Chinese herb *Tripterygium wilfordii* Hook F. Dr. Wang's lab firstly reported its neuroprotection in PD animal models (Chinese patent was obtained– the extract of TWHF on prevention and treatment of nervous system diseases. Patent No.: ZL00107779.1). Other novel potential agents/candidates that might open new avenues for the treatment of PD, such as minocycline, glatiramer acetate were also summarised.

Citation: Li Lu, Fengqiao Li, Xiaomin Wang*. Novel Anti-inflammatory and Neuroprotective Agents for Parkinson's Disease. *CNS & Neurological Disorders - Drug Targets, 2010, **9**: 232-240*

Acknowledgements: Many thanks for the contributions by Mrs. **Greer Deal** (UK), Prof. **Jan van der Greef** (the Netherlands), Dr. **Jun Jia** (China), Dr. **Egon Koch** (Germany), Dr. **Graeme A. Ladds** (UK), **Ms. Christine Leon** (UK), Prof. **Ge Lin** (China), Dr. **Günter Meng** (Germany), Prof. **Olavi Pelkonen** (Finland), Prof. **Zhong-zhi Qian** (China), Dr. **Halil Uzuner** (UK), and Dr. **Qihe Xu** (UK).