

WISHING YOU ALL A HAPPY, HEALTHY AND PROSPEROUS YEAR OF THE GOAT!



Editorial

Prof. Dr. De-an Guo President of GP-TCM RA Director of Shanghai Research Center for TCM Modernization Shanghai Institute of Materia Medica Chinese Academy of Sciences, China. daguo@simm.ac.cn

The Good Practice in Traditional Chinese Medicine Research Association (GP-TCM RA) has entered its fourth year since its founding in Leiden on April 15, 2012. In the past three years, the GP-TCM RA has developed greatly from a "baby" society to a well-



recognized organization worldwide in the field of herbal medicine and acupuncture research. As summarized by Prof. Rudolf Bauer in the last Newsletter, tremendous achievements have been made by this organization including the publication of a special issue in *Journal of Ethnopharmacology*, successful organization of three consecutive annual meetings in Shanghai, Graz and Nanjing respectively, publication of 20 Newsletters, and recruitment of more than 270 members worldwide, etc. In addition, what deserves to be mentioned the most is the recent publication of two parts of special features on traditional medicine in *Science* edited by Dr. Tai-Ping Fan and his team. It is believed that these articles in these *Science* special features will generate drastic impact for the future development of traditional Chinese medicine and other traditional medicine systems. All these achievements should be attributed to the wonderful leadership of our founding president Prof. Rudolf Bauer and members of the first Board, and the cooperation and full support of all GP-TCM RA members. Herein I would like to express our great gratitude, on behalf of the second Board, to Prof. Bauer and his team for their hard work and their great contribution to the association.



A special appreciation goes to Dr. Qihe Xu, the leader of the FP7 project *Good Practice in Traditional Chinese Medicine Research in the Post-genomic Era*, which is the predecessor of the GP-TCM RA. There is no doubt that Dr. Xu was the original power and driving force for the founding of the GP-TCM RA and that he contributed tremendously in organizing Board teleconferences, preparing minutes, drafting newsletters, drafting bylaws besides many other excellent activities. Hence, it was a great pity to hear that he decided to retire from the Board. Though we are all sad for his retirement, the good thing is that he will still act as one of the two coeditors of the GP-TCM RA Newsletters and that he remains committed to fully support the society from a different perspective.

By taking over as president of the GP-TCM RA and chair of the second Board of Directors, I can feel the great pressure and challenges that the GP-TCM RA is facing for the future development. Firstly, GP-TCM RA is still a guite young and small society compared with other well-established societies such as Society for Medicinal Plant and Natural Products Research (GA), American Society of Pharmacognosy (ASP), Consortium for Globalization of Chinese Medicine (CGCM) and the World Federation of Chinese Medicine Societies (WFCMS). We are facing the challenge on how to attract more individual or corporate members to join our association. Secondly, the GP-TCM RA sets forth a series of goals to achieve, on which we have to focus our efforts to accomplish. Among many of the goals, formulation of good practices for traditional medicine research, as the name of our association meant, is still the core issue. These good practices formulated could be widely referenced by the related scientists, regulatory agencies and herbal industries. Thirdly, now that we have settled the organization of the five interest groups with ten excellent chairs and co-chairs in place, the interest groups should play an important role in the routine operations of the GP-TCM RA. The chair of Quality Control Interest Group Prof. Kevin Chan has proposed the construction of a virtual platform for good practice in delivering research methods on quality control of traditional Chinese medicines for the GP-TCM RA Website, which sets a good example for the future activities of our Interest Groups.

Finally, I would like to express my confidence for the future development of GP-TCM RA if we all are closely united to work together to face the challenges. As proposed by our founding president Prof. Rudolf Bauer, let us focus more on scientific activities and grant applications under Horizon 2020 or other related projects in the second period under the framework formulated through the tremendous efforts by the first Board. I hope that all members can proactively contribute to the development and work together to build for the bright future of the GP-TCM RA.

Warmest congratulations to President De-an GUO on being No. 1 author in Pharmacology, Toxicology and Pharmaceutics in China.

Recently, Elsevier published a list of the Most Cited Chinese Researchers in 38 different fields. Professor De-an GUO (果德安) ranked No. 1 in the section of **Pharmacology, Toxicology and Pharmaceutics** (essentially in Pharmaceutical Science). The news can be found in the following website. <u>http://www.biodiscover.com/news/politics/117000.html</u>

排名	学者姓名	目前工作单位
1	果德安	中国科学院
2	谭仁祥	南京大学
3	周宏灏	中南大学
4	李元建	中南大学
5	蒋新国	复旦大学

药理学,毒理学和药剂学领域"高被引"中国学者TOP5



We also warmly congratulate other GP-TCM members who also made it to the list:

Pharmacology, Toxicology and Pharmaceutics

Hongxi XU (徐宏喜, Shanghai University of Traditional Chinese Medicine)

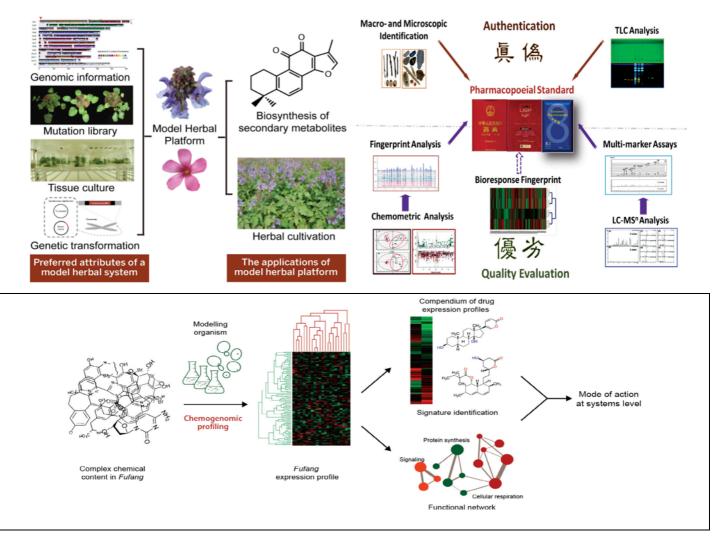
Biochemistry, Genetics and Molecular Biology Anlong XU (徐安龙, Beijing University of Chinese Medicine)

Immunology and Microbiology

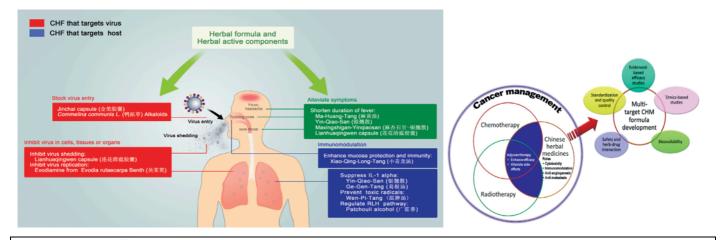
Liping ZHAO (赵立平, Shanghai Jiao Tong University)

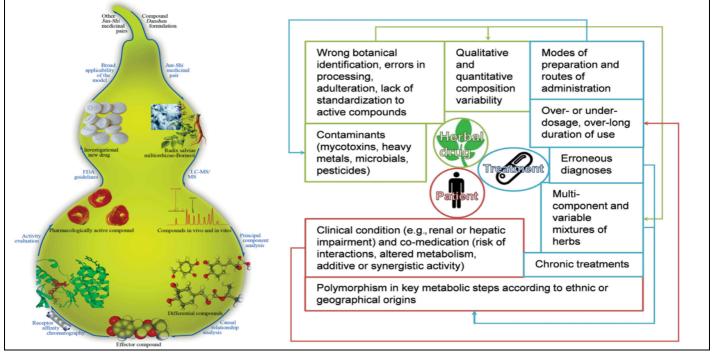
A message from President-Elect Tai-Ping Fan on "The Art and Science of Traditional Medicine" Part 2: Multidisciplinary Approaches for Studying Traditional Medicine in *Science* magazine, 16 January 2015. Vol. 347 no. 6219 p. 337 DOI: 10.1126/science.347.6219.337-c

In this second of three special supplements, herbal genomics as a novel approach for revolutionizing research on, and ultimately use of, traditional herbal medicines and other materia medica, as well as advances in their quality control and standardization, is highlighted. A prominent focus is the U.S. Food and Drug Administration's practical framework for developing botanicals (including traditional medicines) into new drugs based on the same standards as small molecule drugs. The application of mechanistic studies to drug discovery and development from traditional therapies is discussed, with an emphasis on preclinical toxicology assessments, pharmacovigilance, comparative effectiveness research, and the practice of "P4" medicine, particularly in the context of influenza, ischemic heart disease, stroke, and cancer. [Some of the illustrations are shown here.]









European observations

1. Macilwain C. Economic divide taking toll on European science Nature 2015; 517:123. The Horizon 2020 programme threatens to siphon away the best scientists from southern Europe, argues Colin Macilwain — Just before Christmas, European Union (EU) legislators delivered an unexpected bonus for European scientists: a generous 2015 budget for the flagship Horizon 2020 funding programme. The scheme, which runs from 2014 to 2020, seems to have wind in its sails, and has already proved immensely popular with researchers. There is trouble ahead, however. The benefits of the programme are unevenly spread. Horizon 2020 will mainly finance countries and regions that are already doing well, but it will not do much for the other half of Europe, which has steadily weakening research and innovation capacities. This conflicts with a central mission of the EU Framework programmes,...

http://www.nature.com/news/economic-divide-taking-toll-on-european-science-1.16659?WT.ec_id=NATURE-20150108

2. European Commission 2015 Work Programme Now Available Online: President Juncker stated that the Work Programme (the first issued by the new Juncker Commission)



represented the translation of the ten priorities from his political guidelines into 'concrete first deliverables'. The programme, described as a 'twelve-month "to do list" features 23 initiatives which the Commission is politically committed to delivering in 2015. Proposed actions which are particularly relevant to research and innovation are as follows:

• Implementation of the Investment Plan for Europe - legislation and the establishment of the new European Fund for Strategic Investments (ESIF). This will potentially involve the reappropriation of EUR 2.7 billion currently allocated to Horizon 2020.

- Mid-term review of the Europe 2020 strategy.
- A Connected Digital Single Market
- Modernisation of copyright.
- A Resilient Energy Union with a Forward-Looking Climate Change Policy

• New Strategic Framework for the Energy Union, which will include measures on decarbonising the energy mix and promoting research and innovation in the energy field.

In addition to proposing new initiatives, the Commission has also reviewed approximately 450 proposals which had been put forward by its predecessors but not yet been adopted by legislators, and taken the decision to withdraw a significant number of them. Pending proposals were assessed against four criteria:

- whether the pending proposals are in line with the ten priorities of this Commission and still fit to address current challenges;
- what their prospects are for adoption in the near future;
- whether they will can be successfully implemented on the ground;
- whether they still serve their initial objectives.

http://ec.europa.eu/priorities/work-programme/index_en.htm

3. IMI2: Third Call for Proposals Launched - deadline: 24/03/2015. This Call will include six Research and Innovation Action (RIA) topics:

- Remote assessment of disease and relapse (RADAR), topic 1: central nervous system;
- Assessing risk and progression of prediabetes and type 2 diabetes to enable disease modification;
- Linking clinical neuropsychiatry and quantitative neurobiology;
- The consistency approach to quality control in vaccine manufacture
- · Pertussis vaccination research; and

• Knowledge repository to enable patient focused medicine development.

http://www.imi.europa.eu/content/stage-1-14

4. Science policy: Europe is failing young researchers. Thomas Schäfer on behalf of 15 correspondents: "We are young European researchers and participants in science-policy initiatives who feel strongly that the European Research Area (ERA) faces many challenges. The absence of a fully inclusive and self-sufficient ERA still affects research institutions locally. Regional funding remains too sparse and fragmented. As well as a dearth of sustainable career..."

China reports

1. 2014: A fruitful year for the Junguo DUAN 段俊国 Group at Chengdu University of TCM, a GP-TCM RA Corporate Member. 2014 witnessed the successful launch of three new projects in Prof. Duan's group, including a National Key Foundation for Exploring Scientific Instrument project, a National "Twelfth Five-Year" Plan for Science & Technology Support project and a Natural Science Foundation of China National Key Scientific project. Also in 2014, the government of Sichuan Province awarded Prof. Duan the top prize of "Science & Technology Progress Award of Sichuan" for his past ten years' research series entitled Syndrome-effect basis and evidence-based TCM treatment of diabetic microvascular complications – a special honour that was given for the first time in the past twelve years (http://www.cdutcm.edu.cn/get/2014-04/7477.html).



In the same year, Professor Duan was awarded a "National Outstanding Professional and Technical Personnel Award" by four ministries of Chinese central government, including Ministry of Science & Technology – a highly prestigious award conferred to only 100 people every five years over all China (http://www.cdutcm.edu.cn/get/2 014-09/7903.html). At the end of 2014, Prof. Duan also received a "National Excellent Science & Technology Worker" award from the China Association of Science & Technology, an honour only



given to 1,000 people every two years all over China (http://www.cdutcm.edu.cn/get/201412/2014-12-19-9-20.htm) - The GP-TCM RA sincerely commend Prof. Duan and his group. Warmest congratulations!

2. Hou J, Michaud C, Li Z, Dong Z, et al. Transformation of the education of health professionals in China: progress and challenges. Lancet 2014; 384: 819-827. In this Review authors from almost 20 medical institutions and organisations, mainly from China but also from the USA, examine the progress and challenges of China's ambitious 1998 reform of the world's largest health professional educational system. The reforms merged training institutions into universities and greatly expanded enrolment of health professionals. Positive achievements include an increase in the number of graduates to address human resources shortages, acceleration of production of diploma nurses to correct skill-mix imbalance, and priority for general practitioner training, especially of rural primary care workers. These developments have been accompanied by concerns: rapid expansion of the number of students without commensurate faculty strengthening, worries about dilution effect on quality, outdated curricular content, and ethical professionalism challenged by narrow technical training and growing admissions of students who did not express medicine as their first career choice. In this Review the authors underscore the importance of rebalance of the roles of health sciences institutions and government in educational policies and implementation. The imperative for reform is shown by a looming crisis of violence against health workers hypothesised as a result of many factors including deficient educational preparation and harmful profit-driven clinical practices.

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2961307-6/abstract

Lancet Editorial: http://www.sciencedirect.com/science/article/pii/S0140673614614203

Comments by RJ Duvivier (Australia): <u>http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2962369-2/fulltext</u>

Comments by F Liu, et al (China): <u>http://www.thelancet.com/journals/lancet/article/PIIS0140-</u>6736%2814%2962370-9/fulltext

Authors' reply: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2962371-0/fulltext

3. Science in Western China: China's remarkable economic rise is also propelling advances across the sciences, and these intertwined trends are transforming the western section of the country. To speed up this transformation, the Chinese Academy of Sciences (CAS), universities, and the central government are all creating award schemes aimed at attracting leading scholars trained abroad to take up positions in western China. Science centers across the region are



ramping up efforts to make research teams more innovative and more international. This strategy extends to the spheres of genomics, medicine, geoscience, astronomy, physics, and conservation and is creating professional openings across the western sector of China...

http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2014_12_12/science.opms.r1400151

4. *Natur*e Index 2014 China:

http://www.nature.com/nature/journal/v516/n7531_supp/full/516S49a.html?WT.ec_id=NATURE-20141218

Functional Genomics

Ledford H. End of cancer-genome project prompts rethink. *Nature* 2015; 517:128–129. Geneticists debate whether focus should shift from sequencing genomes to analysing function, Heidi Ledford argues — A mammoth US effort to genetically profile 10,000 tumours has officially come to an end. Started in 2006 as a US\$100-million pilot, The Cancer Genome Atlas (TCGA) is now the biggest component of the International Cancer Genome Consortium, a collaboration of scientists from 16 nations that has discovered nearly 10 million cancer-related mutations. The question is what to do next. Some researchers want to continue the focus on sequencing; others would rather expand their work to explore how the mutations that have been identified influence the development and progression of cancer... http://www.nature.com/news/end-of-cancer-genome-project-prompts-rethink-1.16662?WT.ec_id=NATURE-20150108

Meeting reports

1. International Forum on Standardization of Traditional Chinese Medicine was organized by the Secretariat of ISO/TC 249 Traditional Chinese Medicine and held on 14 **December**, 2014 in Shanghai, China. Thirty-eight experts including senior representatives of various pharmacopoeia organizations explored the opportunities and approaches for a coordinated approach to developing TCM standards.

International Forum of Standardization on Traditional Chinese Medicine
_____ Seeking consensus & Building cooperation _____





The Secretary of ISO/TC 249, Prof Shen Yuandong 沈远东 welcomed all the participants and noted that it's an ideal opportunity for exchanging information and establishing cooperation for the international development of TCM.

Pharmacopoeias are a source of standards for a country or a region and are often mandated in law. Those represented at the meeting were the European Pharmacopoeia, the United States Pharmacopoeia, the Chinese Pharmacopoeia and the Thai Pharmacopoeia. Also participants provided information on the Japanese Pharmacopoeia. Presentations were also made on the work of the GP-TCM Research Association.

The participants then focused on specific advice to ISO/TC 249 in planning its work priorities in the herbal area for the development of international standards. The meeting also discussed the benefits of ongoing communication and coordination and planned how this might be done.

All the participants thought that the meeting had been valuable and the secretary indicated that a similar meeting might be arranged in the medical device area.

The meeting concluded with the participants being warmly thanked for their thoughtful contributions and an exchange of season greetings.

Future meetings:

⁴⁴⁴1. The 4th GP-TCM RA Annual Meeting: Joint Meeting of the GP-TCM RA, the TCM Chemistry Specialty Committee and the TCM Pharmaceutical Analysis Specialty Committee of the WFCMS will be held in Mons, Belgium, on 13-15 July 2015.

The meeting provides a platform for regulatory-industrial-academic exchanges and potential research collaborations, on various frontiers of TCM.

Mons, the host city, is No. 2 among the top 10 prestigious cities/places in the world, as ranked by CNN News! http://edition.cnn.com/2014/12/16/travel/best-destinations-2015/index.html

Please register and reserve your hotel rooms quick! Places are limited...

www.umons.ac.be/tcm-mons2015





2. The Chinese Academy of Medical Sciences (CAMS) and *The Lancet* family of journals invite abstract submissions from China for *The Lancet*-CAMS Health Summit, which will be held in Beijing, China on Oct 30–31, 2015.

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2814%2961406-9/fulltext

3. The 8th International Workshop Metabolomics Basics and Applications to Plant Sciences, Leiden, The Netherlands, 13-17 April 2015. Please address enquiries to: plantsandmetabolomics@gmail.com. www.plantsandmetabolomics.nl

4. The 16th Congress of the International Society of Ethnopharmacology (ISE) will be held in **Yulin, Guangxi, China, on 16-18 May 2016.** The ISE is an international society of researchers dedicated to the interdisciplinary study of the pharmacological activities of traditional medicines. ISE is also committed to preservation and conservation of such practices for future generations. http://www.ethnopharmacology.org

5. The 19th International Congress PHYTOPHARM 2015 which will be organized on July 21-24, 2015 Bonn, Germany

On behalf of the Organizing Committee, We are pleased to invite you to participate on this Congress. The scientific program of Congress will consist of plenary lectures, oral communications and 8 symposia:

Topics

- Medicinal plant products: challenges, safety and efficacy
- Quality control of natural medicinal preparations
- Pharmacology and Ethnopharmacology
- Technology of natural medicinal products
- Advances in clinical studies of Phytotherapeutics
- · Regulation of herbal medicinal products and food
- · Supplements in Russia, the European Union and the USA
- Good practices in TCM

Special exhibitions will be organized during Congress.

The Congress will represent an unique opportunity for companies to present and promote their products to specialists in the field of Natural Medicinal Preparations and Products from all over the world. Detailed information is available on web-site: http://www.ipharm.sp.ru/phyto2015.html

Sincerely yours Prof. Valery Makarov Prof. H. Schweim

Recommended readings (and listening):

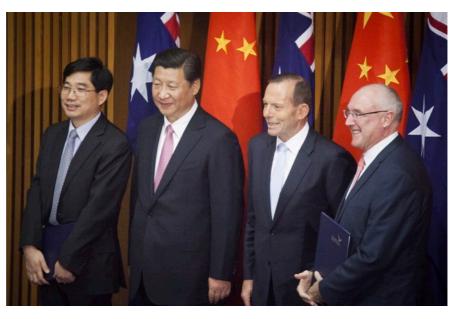
- ⁴⁴⁴⁴1. Reports on the Science special issue "The Art and Science of Traditional Medicine"
 - China Radio International reports "Science Magazine Printed TCM Issue" and "China Speeds up Promotion of TCM around the Globe" <u>http://english.cri.cn/12394/2015/01/05/3961s860007.htm</u> <u>http://english.cri.cn/12394/2015/01/12/3863s861184.htm</u>
 - China News report on the development of the Science special issue "The Art and Science of Traditional Medicine" (中文): http://finance.chinanews.com/jk/2015/01-14/6967802.shtml



⁴2. On 17th November 2014, the Australian Prime Minister Tony Abbott and the Chinese President Xi Jinping attended the signing of an MoU in Canberra between the University of Western Sydney and the Beijing University of Chinese Medicine.

The focus of the new agreement will be the development of an Australian-first, high quality Chinese

medicine integrative clinical service in Sydney, which will have a close connection to both clinical and laboratorybased research. It is hoped that the research will lead to the development of new treatments for unmet medical needs and new medicines for export around the world. Australia is the only Western nation to have a unified national registration of Chinese medicine practitioners strict and regulation of medicines. which delivers safe healthcare to thousands of Australians every year.



3. Big Advances and Setbacks in Science: 2014. <u>http://www.the-scientist.com/?articles.view/articleNo/41731/title/2014-s-Big-Advances-in-Science/</u> <u>http://www.the-scientist.com/?articles.view/articleNo/41720/title/Science-Setbacks-2014/</u>

4. Science in 2015: New year's resolutions: Nine scientific leaders, including those from EU and China, share their goals for 2015, professional and personal. <u>http://www.nature.com/news/leadership-new-year-s-resolutions-1.16620?WT.ec_id=NATURE-</u>20141225

5. New England Journal of Medicine special report on NIH plans to issue new regulations on Clinical Trials Registration and Results Submission: NIH plans to issue new regulations that will prescribe specific procedures for registering clinical trails in the expanded ClinicalTrials.gov registry, and define the information that must be provided. Required information will include descriptive information, recruitment information, location and contact information, and administrative information. The regulations will define additional information needed to comply with specific statutory requirements related to search capabilities, enforcement, posting of information related to trials of uncleared/unapproved devices, as well as to support efficient entry of valid data, link the trials in the registry database to their results, and to provide a comprehensive registry of clinical trials for the public. In a NEJM special report, information about the *FDA Amendments Act of 2007* and the *Notice of Proposed Rulemaking for Clinical Trials Registration and Results Submission* is provided to encourage the research community to submit comments on the proposed rule at www.regulations.gov/#!docketDetail;D=NIH-2011-0003. Comments submitted before February 19, 2015, will be considered in formulating the final rule. The NEJM special report can be found here: http://www.nejm.org/doi/full/10.1056/NEJMsr1414226

6. Lancet published a 55-page open-access article on the 10th January 2015 on global disease burden and cause of mortality, entitled *Global, regional, and national age_sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. http://dx.doi.org/10.1016/S0140-6736(14)61682-2*



- 7. Publications of the first two international standards of ISO/TC249:
 - ISO17218:2014 Sterile Acupuncture Needle for Single Use has been proposed by SAC since 2011 and published on 3 February 2014. This international standard which harmonizes and defines the acceptable specifications and the requirements for the sterile acupuncture needles for single use (specialized for filiform needles) not only assists trade and commerce but protect the reputation of acupuncture and the safety of the community. http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=59443
 - ISO 17217-1:2014 Traditional Chinese medicine -- Ginseng seeds and seedlings --Part 1: Panax ginseng C.A. Meyer (published on 22 April 2014) specifies minimum requirements and test methods for ginseng seeds and seedlings, Panax ginseng C.A. Meyer. It is suitable for marketing of cultivated ginseng seeds and seedlings, P. ginseng C.A. Meyer. It is also suitable for quality assurance for ginseng cultivators. http://www.iso.org/iso/catalogue detail.htm?csnumber=63485

44. 7. TCM Matters in 2014 (中文) (盘点 2014 中医药那些不能忘记的事儿) http://finance.chinanews.com/jk/2014/12-30/6924065.shtml

8. Prof. Kelvin Chan recommends Docphin for keeping up with medical research. For example, his recent *Chin J Integr Med* paper entitled *Understanding interactions between Chinese medicines and pharmaceutical drugs in integrative healthcare* can be read on your smart phone: https://www.docphin.com/research/article-detail/16318778/PubMedID-25523600/Understanding-interactions-between-Chinese-medicines-and-pharmaceutical-drugs-in-integrative-healthcare

9. Berberine activates thermogenesis in white and brown adipose tissue (Zhang Z, et al. *Nat Commun.* 2014 Nov 25; 5:5493). **Abstract:** Obesity develops when energy intake exceeds energy expenditure. Promoting brown adipose tissue formation and function increases energy expenditure and hence may counteract obesity. Berberine (BBR) is a compound derived from the Chinese medicinal plant *Coptis chinensis*. Here we show that BBR increases energy expenditure, limits weight gain, improves cold tolerance and enhances brown adipose tissue (BAT) activity in obese *db/db* mice. BBR markedly induces the development of brown-like adipocytes in inguinal, but not epididymal adipose depots. BBR also increases expression of UCP1 and other thermogenic genes in white and BAT and primary adipocytes via a mechanism involving AMPK and PGC-1α. BBR treatment also inhibits AMPK activity in the hypothalamus, but genetic activation of AMPK in the ventromedial nucleus of the hypothalamus does not prevent BBR-induced weight loss and activation of the thermogenic programme. Our findings establish a role for BBR in regulating organismal energy balance, which may have potential therapeutic implications for the treatment of obesity.

http://www.nature.com/ncomms/2014/141125/ncomms6493/full/ncomms6493.html http://www.asianscientist.com/2014/12/in-the-lab/activating-brown-fat-lose-weight/

[•] 10. A scientific documentary on *The Compendium of Materia Medica* (《本草纲目》) by China Network Television is made open-access (中文):

上集(Part 1)<u>http://tv.cntv.cn/video/VSET100215536918/532d07e201284d5b98d1e957c97da015</u> 下集(Part 2)http://tv.cntv.cn/video/VSET100215536918/20c8b1bdebfd41a4bf824d1599769626

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