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Editorial

Scientific and Practical Bio-analysis Method is Basic for TCM Pharmacokinetic Study

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Traditional Chinese medicine (TCM) has an ancient history and unique system, including theory, methodology, prescription, formulation and medicines. There are differences between TCM and chemical drugs. For TCM, the multiple components in vivo are possibly to be detected; the number of components is relatively restricted; they could represent the therapeutic effect of the parent recipe; the concentrations and pharmacokinetics (PK) could be affected by the combination of traditional medicines in recipe; the effects of new bioactive compounds (metabolites) related with those of their recipe; and the PK can be affected by body state in TCM treatment significantly. Therefore, the difficulty and challenge are far greater in PK study of TCMs than the chemical drugs.

In the recent ten years, along with the biological analysis of technical progress, TCM pharmacokinetics research methods have made remarkable progress. Understanding complexities of Chinese medicine active at the same time, Test design is a challenge to selecting objective compounds related with pharmacodynamics, pharmacology, toxicology and quality control of TCM.

In this issue, A paper titled "Bioanalysis and pharmacokinetics of eight active components from Huanglian Jiedu Decoction in rat plasma by LC-ESI-MS/MS Method" is published (CHM, 2014, 6(3): 198-210, doi: 10.1016/S1674-

6384(14)60029-0). Authors developed a sensitive and rapid bioanalysis method with LC-ESI-MS/MS for the simultaneous determination of eight active components (wogonin, coptisine, berberine, palmatine, jatrorrhizine, phellodendrine, magnoflorine and wogonoside) in rat plasma and studied the pharmacokinetic characteristics of Huanglian Jiedu Decoction (HJD).

After Reading this article from the method to the results, I found that there are three points worth for review. Firstly, authors established a rapid, sensitive and convenient LC-ESI-MS/MS method for determination of eight active components in bio-sample. Secondly, comparison of published papers, sample processing method for the analysis of simple and easy. This process can take into account the determination of active compounds with different chemical characteristics. Thirdly, the determined eight objective compounds are associated with pharmacodynamic actions of the prescription. In fact, the determined eight objective compounds meet three conditions on PK markers for PK study of Chinese complex formulations, which is new concept presented by Chinese researchers.

Of course, this article with all research papers, it may not be perfect. If the theory of traditional Chinese medicine and modern medicine research and discusses the scientific connotation, it will add more information on theory and modern research of TCM.

Introduction of Cover Photos

This issue (CHM 2014, 6(3): 198-210) published research paper on bioanalysis and pharmacokinetics of Huanglian Jiedu Decoction (HJD). HJD is an aqueous extract of four Chinese medicinal materials, *Coptidis Rhizoma*, *Phellodendri Cortex*, *Scutellariae Radix*, and *Gardeniae Fructus*, which are originated from four medicinal plants, (A) *Coptis chinensis* Franch, (B) *Scutellaria baicalensis* Georgi, (C) *Phellodendron amurense* Rupr., and (D) *Gardenia jasminoides* Ellis, respectively. The photos of four medicinal plants are from <http://image.so.com>