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## Editorial

# A Key Model: Translational Medicine in Research of Herbal Medicines

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It is delighted to read the paper of review titled “Correlation Analysis between Visceral Manifestation Theories on Xuanfa and Effect of Adrenergic Receptors” (CHM 2014, 5: 85-92) written by Professor Gang Bai et al at College of Pharmacy, Nankai University. The purpose of this article is very clear, as the authors said “The research and development of modern drugs should fully expect the guidance from Chinese visceral manifestation theory, and the application of this principle will guide the prevention and clinical treatment of a variety of refractory diseases caused by a change in environment, climate, or lifestyle”.

The authors proposed that natural adrenergic receptor agonists or antagonists could participate in *Xuanfa* regulation process, and prescription compatibility of Chinese materia medica (CMM) could enhance the regulation of the target adrenergic receptors related signal pathway more effectively. The authors also hope the visceral manifestation theory of traditional Chinese medicine (TCM) will play a key role in modern drug research and development. Meanwhile, it is of profound importance on using this theory to guide the prevention and clinical treatment of a variety of refractory diseases. This process is actually one process of clinical practice

from basic research to translational medicine research.

Known as the concept of translational medicine, the translational medicine is an emerging view of medical practice and interventional epidemiology, as a natural progression from evidence-based medicine in the 21st century. It integrates the research inputs from the basic sciences, social sciences, and political sciences to optimize both patient care and also preventive measures which may extend beyond the provision of healthcare services. For the herb, it is still herb if there is no translation. No modern scientific research, herbal medicine still remains in the traditional understanding, and is difficult to be accepted as the therapeutic drug by the people over the world.

In the 21st century, the translational medicine is the integrated application of innovative pharmacology tools, biomarkers, clinical methods, clinical technologies, and study designs to improve disease understanding and confidence in human drug targets. Translational research is one of the most important activities of the translational medicine which supports the prediction and application of probable drug activities across species and is especially important when understating drug targets is brought to

humans for the first time. The translational research has the potential to deliver many practical benefits for patients and justify the extensive investments placed by the private and public sector in biomedical research.

The translational research encompasses a complexity of scientific, financial, ethical, regulatory, legislative and practical hurdles that need to be addressed at several levels to make the process efficient. It provides the knowledge necessary to draw the important conclusions from clinical testing regarding disease and the viability of drug action mechanisms.

Today, with a single compound with single target for the treatment of non communicated disease (NCD), these problems effect, resistance, and safety, gradually appear. Such as the recent reports on clinical failure of 10 new drugs and the treatment of rosiglitazone and pioglitazone

for diabetes is disabled in Europe and the United States national events, may also be associated with these drugs with single target. I certainly appreciate the author summarizes difference of the theory between Western medicine and herbal treatment in Figure 6 of this article, I think that the comparison of multi-component and multi-target effect of herbs with single target drugs may have an advantage of herbal medicine in the treatment of NCD. In translational research from the laboratory to clinic, the discovery and application of more attention, more targets, and biomarkers can exhibit a better characteristic of herbs in the treatment of this kind of disease. According to the different ideologies of TCM and Western medicine, the research can enrich the modern medicine and overcome the defect in the treatment of chemical drugs.