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Studies on the quality analysis of traditional Chinese medicines based on qHNMR technology

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The quality of traditional Chinese medicine (TCM) is closely related to its chemicals contained, but complex and diverse ingredients are existed in TCM, which makes the quality control being difficult and a bottleneck in the process of modernization and globalization of TCMs. NMR technique is a versatile technology, which was mainly used to resolve the structures of compounds, but in recent years, it has been widely used for the metabolomics and traditional herbal medicine quality analysis. NMR is an unbiased detection tool, which can detect all the metabolites in a single run, and make the compounds with different structural types, polarities and molecular weights present in a same spectrogram. This method also has the advantages of simple sample preparation process, fast detection process, high stability, good reproducibility and sample easy to recycle, which are particularly suitable for the detection of TCMs with the complex constitution. Moreover, this technology does not need the references of the determined components, which supplies a solution for the problem of reference scarcity in the quantitative analysis of TCMs. In the study, it was used Dictamni Cortex, Magnoliae Officinalis Cortex, Vignae Semen, Cistanches Herba, and Strychni Semen as samples to illustrate the application of qHNMR technology in the quantitative analysis of TCMs.

Biography

Yong Jiang obtained her PhD in 2003 from Peking University, and made a Post-doctorate research in the Institute of Pierre Fabre, France for one and a half years. Now she is an Associate Professor and PhD supervisor in the School of Pharmaceutical Sciences, Peking University. Her current research interests involve the studies on natural active constituents & new drugs from traditional Chinese medicines, and the quality analysis of traditional Chinese medicines. Up to now, more than 100 papers have been published, and 21 patents have been applied. In 2012, she obtained National Excellent Youth Grant from National Natural Science Foundation of China.

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