

Traditional Chinese Medicine - A Source of Innovative Drugs

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Editorial

Traditional Chinese Medicine (TCM), an important part of the drug, has been shouldering the significant task of serving the health of the people for thousands of years. From the date of its birth, it produced a series of theories and unique works. In the 21st century, exploring innovative drugs from TCM has become a trend with the application of modern science and technology. It is popular for the scientists to apply the inspiration coming from traditional medicine works to search for new drugs, for example, the discovery and development of artemisinin.

As a representative of natural medicine, TCM is regarded as an important research object in the drug innovation by the pharmacologists, and it is endowed with a status not to be ignored in a way. In reality, in addition to artemisinin, other compounds including ephedrine, tripterygium glycosides, digoxin and berberine are the main components coming from TCM, such as *Herba Ephedrae*, *Tripterygium Wilfordii*, *Digitalis Lanata*, *Coptis Chinensis* and so on. These compounds not only have a higher biological activity, but also are widely recognized in clinical practice. The origin of TCM can be traced back to thousands of years ago, and the human being has accumulated numerous experience from the fighting against disease. Furthermore, as the wisdom of Chinese culture, Chinese medicinal formula is an important subject of TCM, and its compatibility regularity has an important significance when the human being looks for new inspiration. And also, the new drug innovation would have the broader space for development under the guidance of the theory of

Chinese medicine. These things provide a basis for the inspiration from Chinese medicine. Since TCM can prevent and cure diseases, it must have its material basis, that is, bioactive components. Thus, as a source of drug innovation, TCM has both material foundation and theoretical basis.

However, the research of TCM should be further improved. On the one hand, TCM is usually used in its crude form, for example, the whole herb, so it is difficult for scientists to know how TCM works and how the internal components interact because of the complexity. On the other hand, the role of TCM depends on the presence of active components, but the structure and chemical properties of different components have an influence on the separation of effective components. Therefore, it is urgent to isolate and identify the effective components effectively.

With the development of science and technology, new separation techniques have been applied to the drug research gradually. The spectroscopic techniques make the isolation and identification of the compounds easier and more efficient. Taking two dimensional nuclear magnetic resonance spectroscopy (2D-NMR) as an example, its application makes the structure elucidation of the compound more accurate and reliable. It saves the cost of drug research and development and also greatly reduces the duration of drug innovation. In a broad sense, TCM belongs to the category of natural medicine, so it's lucky that resources of TCM are inexhaustible. We believe that in the near future, more and more innovative drugs will be found and used, and TCM will make greater contribution to the mankind.