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# The importance and limitation of Chinese Traditional Herbal Medicine

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**Abstract:**

With ongoing advancements in medicine, an increasing number of scientists are turning their attention to Traditional Chinese Herbal Medicine (TCHM) as a promising approach to health and wellness. Although Western medicine remains the predominant form of therapy worldwide, many advocates argue that TCHM addresses the root causes of illness, whereas Western medicine primarily focuses on alleviating symptoms. This difference in approach means that patients using TCHM may experience an initial worsening of symptoms before achieving full recovery. In contrast, patients treated with Western medicine may experience faster symptom relief but could suffer a decrease in immunity after recovery due to a more symptomatic focus. However, with advancements in medical technology and research, certain disadvantages traditionally associated with TCHM have been minimized. This has led some health authorities to recognize TCHM as a viable complementary therapy for treating complex diseases, including cancer. In this paper, I will provide a foundational introduction to TCHM, explore its therapeutic functions and significance, and examine several limitations it continues to face within the context of modern medical practices.

**Keywords:** Herbal Medicine, medical, immunity, disease

## Introduction

Traditional Chinese herb medicine (TCHM) has more than 5000 years history, playing a important role in medical field.

Most of people believe that TCHM originated from Shennong who personally trial plenty of herbs and wrote”Shennong ben cao jin”---Classical Pharmacopeia of the Heavenly Husbandman . The book contains 365 kinds of herbs, including botany (252), zoology (67), and mineral (46) substances. [1] The book lays the foundations for the development of TCHM。

With time goes by , the TCHM system becomes gradually perfect. “Shang han za bing lun” --- Treatise on Febrile and Miscellaneous Diseases describes 269 kinds of prescriptions, including Bahia Decoction curing hepatitis B and Wumei pills curing roundworm. “Yao Xing Lun” (Matura Media of Medicinal Properties, circa AD 600) is a combination of TCHM

discovery from the Late Sui (AD 581-61 8) and early Tang (AD 618-907) dynasties. The book detailed describes the nature, principle and application of TCHM. [1] In Ming Dynasty, Shizhen Li sorted 1892 kinds of medicine and 11096 kinds of prescriptions, which provide invaluable data for us to discover TCHM.

After the founding of the People's Republic of China, the government placed a renewed focus on Traditional Chinese Herbal Medicine (TCHM). In 1997, the Zhong Yao Da Ci Dian (Encyclopedia of Traditional Chinese Medicinal Substances) was published, representing decades of work by experts in the field. This comprehensive reference contains 5,767 entries, covering botanical (4,773), zoological (740), and mineral (82) substances, and records 104,172 different prescriptions, laying a solid foundation for modern research and development in TCHM[1].

TCHM has also gained considerable significance in the international medical community. In the United States alone, annual retail sales of TCHM products are nearly $4 billion and are growing at a rate of 18% per year. Globally, the TCHM market was estimated to be worth approximately $1.025 billion in 201[6][2][3]. This international demand reflects a growing recognition of TCHM's therapeutic potential, as well as increased interest in complementary and alternative medicine practices. Further international research and collaboration could enhance the global understanding and integration of TCHM into mainstream healthcare.

I want to analysis the importance of TCHM and find the limitation that hinder TCHM to become a long-recognized therapy.

## The function and importance of TCHM

Chinese have using TCHM to cure diseases for thousands of years. It is undeniable that TCHM is efficient in some cases and quite prospecting.

Chinese scientists Youyou Tu and her colleagues extracted artemisinin and its synthetic derivatives , a kind of antimalarial medicine, from 'QingHao'(Artemisia annua) [4]. The medicine saved considerable life and made great contributions to the global malaria control, and Youyou Tu also was awarded the Nobel Prize for physiology and medicine.

Aconitum carmichaeli and Aconitum kusnezoffii are often regarded as poisonous plants due to their toxic properties. However, in Traditional Chinese Herbal Medicine (TCHM), they hold significant medicinal value when used appropriately. These herbs, once processed to reduce toxicity, can diminish inflammation and relieve pain[5]. In ancient China, practitioners used them to treat various conditions, including tetanus, hemiplegia resulting from apoplexy, and wind-cold-damp arthralgia. The controlled use of Aconitum species highlights the depth of TCHM knowledge, as it requires skill and understanding to harness their therapeutic effects while minimizing potential risks.

Ginseng also is a kind of crucial TCHM. People believe that the value of ginseng increase by the years they grow and some people think that ginseng with thousands of years can bring the dying back to life. Although it sound like impractical, considerable researches have proved that it is reasonable in some degree. Ginseng possess an acidic polysaccharide (Ginsan) with immunostimulatory activity. [6][7] Besides, ginsenosides is the primary active component of ginseng. It is interesting that North America ginseng possesses different function with Panax ginseng C.A. Meyer due to different composition of ginsenosides. Furthermore, Ginseng possess both direct and indirect antioxidant functions. [8].

Danggui (Angelica sinensis) can be used to cure gynecological diseases in ancient China, so that it is regarded as "female ginseng"[9].It has been widely applied to treat anemia, constipation, cardiovascular disease and hepatic fibrosis. [10-13] Danggui possesses polysaccharides with widespread pharmacological activities, which attracted attention of researchers. [14-16]

## Limitation

Nowadays, TCHM still has some limitations, so people can not total regard it as a safe and efficient therapy.

First , TCHM may has heavy metal, including lead, mercury, copper, cadmium, arsenic and thallium[17], which harms brain and other organs and contributes to dizziness, insomnia or even cancer. A study showed that more than 90% of the sample were detected to have some form of contamination. Moreover, mass spectrometry revealed heavy metals, one with a level of arsenic >10 times the acceptable limit and beyond the safe ingestion recommendations. [18]

Second, TCHM practitioners are lack of regulation and training. In China, as the origin of TCHM, there are regular hospitals proving TCHM with professional doctors' diagnosis. However, there are not any regulation about TCHM, that is more likely to harm patient's "health". A WHO report from 129-member states in 2012 indicated that as many as 43.5% of traditional medicine practitioners were not regulated, and 56% of them lacked a university-level education. [19]

Thirdly, the quality of TCHM is unstable. Different places of origin can affect the amount of effective constituent.

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For example, a study shows that Punica granatum L. from China had a stronger anti-oxidant capacity than that from Australia and America, because the former has the higher total phenolic and flavoid contents[20]. Consequently, it is hard to guarantee the effectivity of TCHM.

Finally, research on Traditional Chinese Herbal Medicine (TCHM) remains limited and incomplete, and several unresolved questions continue to surround its practices. Many Chinese scientists have published studies on TCHM in Chinese, which creates language barriers and restricts the international dissemination and understanding of this knowledge. Additionally, some manufacturers keep the formulations and ratios of their patented products confidential due to insufficient intellectual property protections for TCHM products in China. This lack of transparency makes it challenging for researchers to systematically review and analyze the specific ingredient ratios used in these formulas and to understand the scientific rationale behind them. Enhanced protections and international collaboration could facilitate more comprehensive studies and contribute to a deeper, evidence-based understanding of TCHM.[21]

## Conclusion

TCHM is a field that is worth researching in depth. Some herbs, like Artemisia annua, have been widely applied to treat illnesses; while others, such as Aconitum carmichaeli and Aconitum kusnezoffii, which are viewed as toxins by some, are used to address certain health issues. Ginseng and Angelica sinensis have gained a foothold in the medical field. However, several aspects hinder the development and dissemination of TCHM, including metal problems, quality issues, the experience of relevant medical practitioners, and the limitation of related literature.

However, this paper has certain limitations. Due to limited resources, I was unable to conduct primary research to validate my theories, relying instead on existing literature. Additionally, many of the studies I referenced are from several decades ago, meaning that recent advancements in TCHM may not be reflected in my analysis. As a result, some data presented here may be outdated, and emerging developments in TCHM that could offer further insight are not included. Future research with updated resources and empirical studies would be valuable in building upon and verifying the findings discussed in this paper.

In the future, I hope that scientists will be able to address the issues of heavy metal contamination associated with Traditional Chinese Herbal Medicine (TCHM), ensuring that patients can receive safe and effective treatments. Additionally, it is crucial to identify the primary active components within these herbs and develop methods for high-volume production. By achieving these advancements, medical practitioners can more readily incorporate TCHM into their treatment plans, potentially broadening its application for various health conditions. Furthermore, increased collaboration between Chinese scientists and the global medical community is essential. By participating in international conferences and publishing research in widely accessible journals, Chinese scientists can help reduce misconceptions, fostering a greater understanding and appreciation of TCHM's therapeutic potential worldwide. Through these efforts, TCHM may gain broader recognition and acceptance as a valuable complement to modern medicine.

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