

# Exploration of the Development of Medicine and Food Homology Industry under the Big Health Industry

Yuyi Shen

*School of Economics and Management, Wenhua College, Wuhan, 430074, China*

**Abstract:** *Up against people's improving health awareness, the big health industry has become a sunrise industry with great potential. Thanks to its unique advantages, the homology of medicine and food has research significance in the big health industry. Based on the integration of medicine and food, medicine and food homology aims to provide healthier, safer, and more effective products. In addition to the current situation and development challenges, this paper also discusses future development strategies of the big health industry and the medicine and food homology industry, so as to provide reference for their further developments.*

**Keywords:** *Big Health Industry; Medicine and Food Homology Industry; Development; Challenge; Strategy*

## 1. Introduction

In recent years, with the rapid development of economy and society, people's living standards have improved. However, the problems such as the aggravation of population aging, the spread of sub-health, the outbreak of chronic diseases, etc., and the corresponding social demand for health-related products and services are increasing day by day. Based on this background, for the purpose of people's overall health, a large-scale big health industry with rich connotations came into being. It includes medicines, health products, medical devices, health services, and other fields, providing people with good health protection and life quality. In the big health industry, the medicine and food homology industry, as one of the vital branches, has great development potential <sup>[1]</sup>. Medicine and food homology means that medicine and food have the same source and its basic connotation is to regard medicine and food as a whole, that is, to regard them as interdependent and complementary existence, which plays the same critical role in human health. The concept of medicine and food homology comes from the concept of keeping healthy in traditional Chinese medicine, which emphasizes supplementing medicine with food and vice versa, so as to achieve health and longevity <sup>[2]</sup>. However, in the big health industry, how to give full play to its industrial advantages is still a problem worth pondering. Given the development status of the big health industry and the medicine and food homology industry, this paper discusses the challenges faced by the current industry development and puts forward some strategic suggestions to provide a reference for the further development of the medicine and food homology industry.

## 2. Overview of the Big Health Industry

The prediction of the health industry in *The New Wellness Revolution* has set off its prelude of development for governments and industries in various countries. As for the concept of big health industry, foreign scholars initially believed that the health sports industry was broad, including professional sports, inter-school sports, health and fitness, leisure sports facilities management, etc. <sup>[3]</sup> People from all walks of life in the Chinese government, social organizations, and news media also have different understandings of the big health industry, which can be summarized as medical health services and non-medical health services, referring to the sum of activities such as product production, service provision, and information dissemination to maintain, repair and promote health <sup>[4][5]</sup>.

In addition, to deeply understand the big health industry, we need to figure out its connotation and characteristics in the following three aspects. Firstly, taking the industry as the starting point, the big health industry focuses on health-related economic activities, which are directly related to human and mental health, including the development, layout, and industrial evolution trend of the health industry.

Secondly, the research on the big health industry runs through the whole process of its emergence, growth, and evolution, serving the development of the health industry and maintaining the healthy development of the human body and environment. Thirdly, the big health industry in essence is a collection of economic health-related activities and an industrial collection of economic activities with health attributes, which is the ultimate goal of big health industry research<sup>[6]</sup>.

### **3. Overview of the Medicine and Food Homology Industry**

The connotation of medicine and food homology means that medicine and food have the same source and all come from plants, animals, and minerals in nature. Permeating and communicating with each other, medicine has no clear boundary with food. Medicine and food homology also refers to their same effect where some foods have an effect equal to medicines, and some medicines can also be eaten as food. The concept of medicine and food homology has penetrated into people's eating habits, such as the use of Chinese herbal medicines and ingredients, and foods with health care functions. The connotation of medicine and food homology also involves the concept of keeping healthy, which can be achieved not only by medicines, but also by comprehensive methods such as keeping in good health diet<sup>[7]</sup>.

With a long history in Chinese medicine and food homology, "food and medicine culture" has been recognized by more and more people, and products with medicine and food homology are also favored internationally. According to the data released by the Chinese Academy of Social Sciences from 2013 to 2020, the average annual output of products featuring Chinese medicine and food homology industry exceeded 300 billion yuan. Starting earlier with a wide variety, products featuring Chinese medicine and food homology industry have a good industrial base. With the increasing living standards and the pace of life, life pressure has been intensified accordingly, which makes more people in sub-health. Paying more attention to and advocating green nature and health preservation, people have a stronger demand for food with health preservation and healthcare functions<sup>[8]</sup>.

### **4. Development of Medicine and Food Homology Industry**

#### ***4.1 Increasing Consumer Demand***

The development of the medicine and food homology industry is promoted by consumer demand. Modern people generally face a sub-health state, which leads to the increasing attention paid by society to health. Thus, more and more people begin to value the influence of diet on health. By providing a healthy and natural therapeutic product, the medicine and food homology satisfies people's pursuit of health in daily life. Consumers' demand for products with medicine and food homology is on the rise day by day, which boosts the rapid development of the medicine and food homology industry and also brings great opportunities and challenges<sup>[9]</sup>.

#### ***4.2 Increasing Government Support***

Government support for the medicine and food homology industry is also an imperative factor in its development. With the rising big health industry, the government pays more attention to the health industry, which has issued a series of supportive policies to encourage the development of the medicine and food homology industry. For example, the government not only strengthens the supervision and improves the quality and safety of products, but also promotes the integration of the medicine and food homology industry with other industries, so as to enhance the coordinated development of industries. The introduction of these policies provides a good environment and conditions for the medicine and food homology industry<sup>[10]</sup>.

#### ***4.3 Continuous Breakthrough of Scientific and Technological Innovation***

The progress of science and technology has also brought new opportunities for the development of the medicine and food homology industry. With the continuous advance of science and technology, it has been greatly improved in product research and development as well as production technology. For example, genetic engineering technology is used to cultivate more efficient plants with medicine and food homology; advanced production technology is used to extract effective components from products with medicine and food homology. The application of these technologies enables the medicine and food

homology industry to better meet the needs of consumers and provide better products <sup>[11]</sup>.

## **5. Challenges for the Development of Medicine and Food Homology Industry**

### ***5.1 Iteration Research and Development of Similar Products***

At present, in the research on new drugs for medicine and food in China, the application of repetition of raw materials, efficacy, and preparation is limited. Medicinal materials are generally *Astragalus membranaceus*, American ginseng, and others commonly used, whose efficacy is mainly to improve the body's immunity. Meanwhile, due to product homogenization, the competition becomes more intense. Therefore, price has been the competition focus in the market, instead of concentrating on product iteration and development.

### ***5.2 Imperfect Quality Control System***

“Medicine” and “food” belong to the same kind of natural products, whose quality is often affected by the different genetic material basis among species, external environmental factors, etc. In addition, the preparation of medicine and food homology resources is to regain the chemical group of traditional Chinese medicine, such as processing and storage in the place of origin, processing, extraction, purification, preparation forming, etc., which are all crucial factors on the quality of traditional Chinese medicine. Meanwhile, there is no complete standard system for raw materials, intermediates, and final products, which leads to their quality instability. However, many problems still exist in the current commodity quality inspection. For example, the contents of polysaccharides, total flavonoids, and polyphenols are often regarded as inspection indicators, which means that the content of corresponding quality inspection indicators can be improved by adding cheap similarities. Some functional products even achieve curative effects by adding Western medicine ingredients.

### ***5.3 Unstandardized Market Order***

At present, the laws and regulations of food production licenses, business licenses, and advertising in China are still imperfect, which triggers uneven product quality and chaotic market order. At the same time, with the rapid development of emerging technologies such as big data, cloud computing, and the application of e-commerce model, the traditional food marketing model has been changed, which results in over-marketing and other problems in some enterprises, such as vicious competition, exaggerated curative effect, and practical harm to the interests of consumers.

### ***5.4 Insufficient Professional and Technical Personnel***

The development of the medicine and food homology industry has an urgent requirement for talent, which is unique both in technical level and personnel structure. However, the current allocation of human resources can no longer meet the requirements of industrial development. With an unbalanced talent structure, some people that own relevant professional knowledge need to promote their specialty and professionalism. Therefore, there is a shortage of high-end talents and compound talents. Nowadays, the attraction of science and technology to scientific and technical personnel in China is weak, which is mainly manifested in policies, funds, and the environment.

## **6. Development Strategy of Medicine and Food Homology Industry Under the Big Health Industry**

### ***6.1 Push for Technological Innovation***

The technological innovation, transformation, and upgrading of the functional food industry with homologous medicine and food should be vigorously promoted. Apart from improving the high-quality development of the local food industry, we should establish an open cooperation platform featuring the simultaneous production, learning, and research with scientific research institutions and medicine and food homology enterprises, so as to gather and integrate various resources and extend the value of the industrial chain, innovating formats, models, industries, and systems with medicine and food homology. Meanwhile, it is necessary to increase investment in technology research and development of medicine and food homology industries, so that their technology can keep up with the development of the times.

To strengthen the research and development fund for the medicine and food homology industry, it is imperative to ensure that the nation, local governments, and enterprises attach importance to increasing their investment in science and technology and speeding up the R&D and innovation of products characterized by medicine and food homology. Moreover, scientific research achievements should be transformed to better serve the medicine and food homology industry. This can not only enhance the ability of enterprises to independently innovate, but also promote the transformation of scientific research achievements into economic productivity, thus facilitating the rapid development of China's medicine and food homology industry.

### ***6.2 Strict Quality Control Standards***

The medicine and food homology industry is new-born with immature development. Standardization is needed from product development to production, sales, service, supervision, and management. At present, the quality control standards of medicine and food homology are insufficient, and the existing quality control standards can not fully reflect the dual attributes of products with medicine and food homology, thus restricting the development of this industry. Many standards, such as national food safety standards, can be used as the basis for the quality control of food with medicine and food homology. Nevertheless, these standards are not completely applicable to the quality control of food with medicine and food homology.

Standardization is the basis of the quality and safety of medicinal and edible products. Thus, it is necessary to establish a production and evaluation system of products with medicine and food homology based on food safety standards and supported by functional claim standards, production technical standards, and quality control standards, so as to realize the whole process management from raw materials to products and from production to consumption. Besides, it is urgent to give full play to the role of industry organizations, scientific research institutes, and universities in establishing and improving the standard system of products with medicine and food homology, especially their evaluation and detection methods of chemical composition, food safety, and health functions, so as to evaluate and control the safety and effectiveness of products characterized by medicine and food homology.

### ***6.3 Quicker Talents Fostering***

Talent training is a long-term and arduous task. Strengthening the training of existing talents and improving their skills is one of the most effective ways. As for the lasting promotion of education and learning, the particularity of the industry requires employees to master relevant knowledge, skills, and systematic knowledge. The government should guide employees to study and establish an assessment and punishment system to reward talents who have made outstanding contributions to technological innovation and transformation. In view of the talent shortage in medicine and food homology, this demand can be incorporated into the vocational education plan. Majors of medicine and food homology can be set up in vocational and technical colleges, and order-based professional talents can be trained in cooperation with enterprises, which not only provides a stable supply of talent for the industry, but also realizes the purpose of higher vocational education. In addition, an industrial college can be established, and a maker laboratory of "medicine and food homology" can be constructed, which aims to transform creativity into products and explore the road for educational reform in colleges and universities.

### ***6.4 Improved Policy Framework***

We should further improve the laws and regulations related to medicine and food homology, and promote its entry threshold. Apart from revising the existing food safety standards and hygiene standards of related products, the functional components, product categories, and safe use scope of products with medicine and food homology should be clarified, so as to boost relevant product standards and provide a guarantee for the healthy development of medicine and food homology industries. Meanwhile, we should establish and improve the fiscal and tax preferential policy system for its development and reduce the tax burden of enterprises. Relevant enterprises should be encouraged to participate in international exchanges and cooperation, and promote the international development of medicine and food homology industries. We should also set up a multi-section collaborative supervision mechanism to promote industry self-discipline management. Industry associations should actively play their roles in promoting the establishment of an industry credit system and traceability system, and the credit evaluation system for health product manufacturers, thus

building a unified, open, competitive, and orderly market environment.

## 7. Conclusion

To sum up, the medicine and food homology industry has great development potential with advantages in the big health industry. Combining the concepts of traditional Chinese medicine and food nutrition, it can provide healthier and safer food and medicine choices. At present, the medicine and food homology industry has made achievements, although some problems and challenges still exist, such as imperfect standard systems and a lack of professionals. It is necessary to strengthen scientific research and innovation, improve product quality, broaden market channels, and strengthen industry cooperation to achieve better development. In a word, the medicine and food homology industry plays an important role in the big health industry, which is expected to provide better health protection for people.

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