

Strategy for Developing Functional Foods and Materials from Medicinal Herbs Produced in Kangwon Province, Korea

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Numerous medicinal herbs have been produced in Kangwon province, compared to other areas in Korea, because it is surrounded by many mountains and highland areas. However, the technology and/or concepts of utilizing these natural resources has not been well developed yet. Recently, there has been great interest in developing mult-functional foods and new materials from these resources due to the limitation of investigating typical foods and drugs from conventional plants and animals.

Several factors have to be considered to develop new types of functional foods and materials as follows: Define confirmative target and customers, Define exact biochemical and biological functions and structures of desired products in vivo, Confirm the safety of the products, Expect the combined efficacy in foods or drugs, etc. To accomplish this object, there are several key processes must be resolved such as the techniques to select good strains, the techniques to efficiently extract bioactive substances, cell culture techniques, and techniques of bioprocess, etc. Extraction is very critical process in developing a functional foods from plant sources because the plants have many kinds of cellulose and fibers which are relatively difficult to break and negatively affect the extraction yield. Separation is also important process in food and biotechnology, which can dramatically upgrade the quality of final products using membrane and other organic solvents. Fundamentally, one of key strategies in developing new functional foods and materials is to understand and meet the demand of the customers rather than the idea of leading and educating the customers to create the consumption of the new products.