

“Weak direct” and “Strong indirect” interactions are the mode of action of food factors

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Summary

Age-dependent and lifestyle related diseases such as metabolic syndromes have become a social problem worldwide. Since these disorders are closely related to dietary lifestyle, the old saying “foods are medicine” is now being re-evaluated. Thus, dietary protection against these diseases is attracting much attention. As research into functional foods advances, a book of knowledge is being accumulated on the active ingredients, termed “food factors”, present in food resources. Identifying such molecules usually follows the conventional methodology used for finding drug candidates from natural resources. The question has arisen as to whether the mode of action of food factors as molecules is the same as that of drugs. In this article, the functional properties of food factors and drugs are comparatively reviewed and the characteristic features of food factor function is discussed, based on the idea of “weak direct” and “strong indirect” actions of food factors to their receptors.

Keywords: Food factor; Functional models; Weak direct interaction; Strong indirect interaction; Ligand-receptor interaction