A mechanistic view on health-promoting effects of fermented foods

Fermented food has existed since the dawn of human civilization and in many cultures worldwide. There are a wide variety of food materials used for fermented food including milk, legumes, fruit and vegetables. More importantly, several health-promoting properties often ascribed to fermented foods include the prevention of cancers and cardiovascular disease. As with other health promoting foods, the precise components and mechanisms by which fermented food promotes health remain elusive. Existing literature suggests that the mechanisms by which fermented food exerts its health-promoting effects may be complex and multiple cellular pathways may be associated with their health-promoting effects. Some effects may include: modulation of gut microbiomes, inflammation, hormone and cytokines pathways, and xenobiotic metabolism pathways. Also, regulation can be through genetic and/or epigenetic mechanisms. Additionally, individual differences may influence health-promoting efficacies of fermented foods. Future research should include dissecting specific active components, identifying specific mechanisms and identifying whom will benefit.

Biography
Thomas T Y Wang received his PhD from University of California, Davis and conducted Postdoctoral studies at Purdue University. He is currently serving as Research Leader (RL) in the Diet, Genomics, and Immunology Laboratory (DGIL), Beltsville Human Nutrition Research Center (BHNRC), Beltsville, MD. He has published more than 80 papers in peer-review journals and serving as Editorial Board Member of journals.

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