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## Milk protein-based encapsulation of multiple bioactive nutrients

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Functional foods containing bioactive nutrients offer benefits beyond basic nutrition and hence the possibility of delaying and preventing chronic diseases. Many bioactive nutrients degrade rapidly under normal food processing and storage. Encapsulation can be used to overcome these limitations. Milk proteins have been widely used as carrier materials because of their ability to form emulsions and to interact with bioactive nutrients. Except in the case of bioactive molecules dissolved in the inner phase of an emulsion-based carrier, entrapped bioactive nutrients generally interact with the carrier material. Milk proteins could interact with many bioactive nutrients to form complexes, improving hydrosolubility and stability of bioactive nutrients.  $\beta$ -Lactoglobulin, which contains multiple ligand-binding sites, could interact simultaneously with  $\alpha$ -tocopherol, resveratrol and folic acid to form protein-multi-ligand complexes. Moreover, bioactive nutrients could possibly bind to protein membrane at the oil-water interface of emulsions. The data suggest the potential to prepare the delivery system based on milk protein for simultaneous encapsulation of multiple bioactive nutrients. These should be useful for the development of functional foods fortified with a range of bioactive nutrients and offering multiple health benefits.

### Biography

Li Liang has completed her PhD from Fudan University in China and Post-doctoral studies from Laval University in Canada. She is a Professor of State Key Lab of Food Science and Technology and School of Food Science and Technology of Jiangnan University in China. She has published about 30 papers in reputed journals.

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