



## “From herb to kitchen and bedside: food factors are pharmacological molecules with antioxidant activity”

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## GUEST EDITORIAL

**“From herb to kitchen and bedside: food factors are pharmacological molecules with antioxidant activity”**

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This issue highlights contributions emanating from the 5<sup>th</sup> International Niigata Symposium on Diet and Health, held October 29/30, 2010 in Niigata, Japan. The symposium addressed molecular mechanisms and clinical aspects of food ingredients and natural products functioning in anti-aging, health improvement and disease prevention. Functional food and the nutraceutical application of functional foods were topics as well. The papers arising from the meeting are listed below (refs 1–11).

Prevention and amelioration of age-related complex diseases is an important focus in health science research and the antioxidant protection is basic concern. Foods are the major source of antioxidants. Therefore, many natural products including food factors have been isolated, and the antioxidant activity of these products has been tested *in vitro* and *in vivo*, and more recently their role in modulating cellular signaling molecules, typically transcription factors, has been studied. Moreover, epigenetic modulation of gene expression is also the target of food factors. Therefore, antioxidants are considered not only as free radical/oxidant scavengers, but they are also “pharmacological” molecules. Further comparative studies on food factors and drugs will be necessary for the better use of food factors in human health promotion.

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