

## **Vitamins in Health: In Recognition of the 100<sup>th</sup> Anniversary of the Discovery of Vitamins**

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### **< Summary >**

1. The history of vitamin research during the 100 years following the discovery of vitamins and future prospects for vitaminology

This year is the 100th anniversary of the discovery that a vitamin was a factor related to beriberi (this factor was later named vitamin B<sub>1</sub>) by Dr Umetaro Suzuki in 1910. Over the subsequent 100 years, vitamin research has become an integral area of life science research and has made numerous contributions to the progress of the life sciences.

I am sure there will be further developments in vitaminology which will result in many important discoveries in the life sciences.

2. Genome-based vitaminology and evaluation of vitamin supplements taking into consideration genetic polymorphism

Genetic polymorphism is being watched with interest to see if it can be used to determine optimal vitamin intake, and thus avoid hypo- and hyper-vitaminosis. The development of nutrigenomics and genome-based vitaminology may contribute the prevention of vitaminosis and result in personalized nutrition-based healthy life-styles.

Vitamin supplements functions both as nutrients and medicines. Patient population selection based on genetic polymorphism may improve the preventive and therapeutic effects of vitamin supplements on diseases.

3. Suboptimal hypovitaminosis and educational movements for the improvement of nutrition and life-styles

Recently, the suboptimal hypovitaminosis, which may result from irregular food intake and life styles, has been reported in Japan. Good results have been obtained for the prevention of such life-style dependent suboptimal hypovitaminosis by a government-supported educational initiative for the improvement of nutrition and life-style.

In the near future, it is very likely that that nutritional specialists will explain and offer advice on vitamin supplements and functional foods sold in outlets such as drug stores.