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Major

Nutrition, Nutrigenomics, Clinical Nutrition

ENVIRONMENTAL  
SCIENCE  
FOR  
HUMAN LIFE

Disease  
prevention

#### ■ Research topics

### Studies on Preventive Effect of Nutrition on Diseases

#### Keywords

Disease prevention, Vitamin C, Fatty acid, Anti-oxidation, Gene polymorphisms

#### Contents

##### ■ Overview (background, goal, detail)

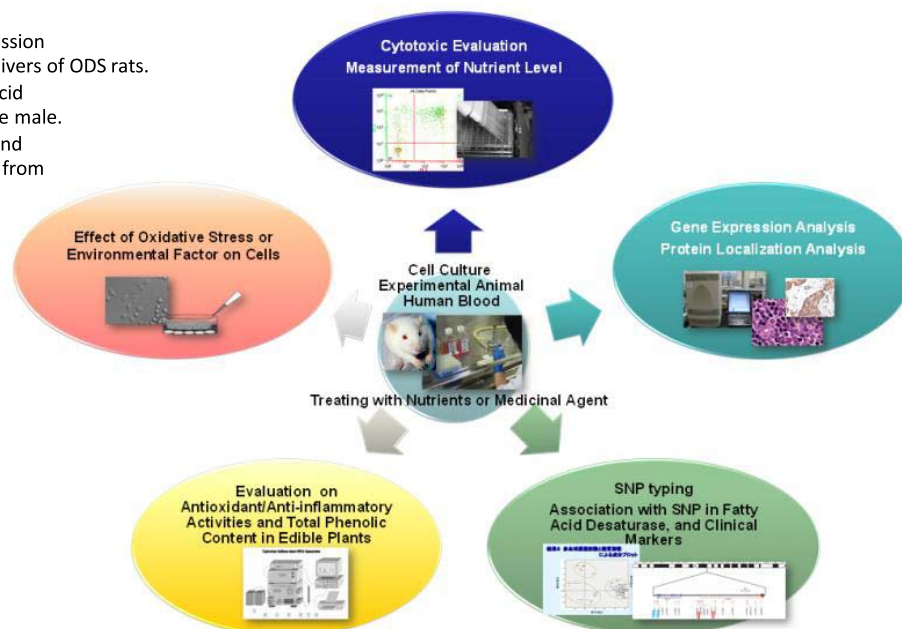
An inability to maintain suitable nutrients levels in tissues and the consequent reduction in antioxidant capacity can result in an increased flux of harmful reactive oxygen species and reactive intermediates, which contribute to high incidence of degenerative diseases such as cancer and other lifestyle-related diseases. Further detailed investigation of the association between suitable nutrients levels and regulation mechanisms is required. Therefore, I am going to focus on the following topics;

##### ■ Case study

- 1) Effect of vitamin C dose level on the expression of its transporters and accumulation in the livers of ODS rats.
- 2) Association with polymorphisms in fatty acid desaturase, and clinical markers in Japanese male.
- 3) Antioxidant/anti-inflammatory activities and total phenolic content of extracts obtained from edible plants.

##### ■ Potential (applications, future goals)

The purpose of present studies is to provide further information on nutrients *in vivo*, resulting in promotion for health.



#### Potential of social/industrial contribution

##### ■ Joint research

Research on food factors or nutrients *in vivo*, *in vitro*, SNP typing,