

ICHI, Ikuyo

Life science / Department of Food and Nutritional Sciences

**NUTRITION  
AND  
FOOD**

Lipid

■ Researcher information

Contact

Email: ichi.ikuyo@ocha.ac.jp / TEL: : 03-5978-5750 / FAX: : 03-5978-5752

Major

Nutritional Science, Biochemistry of Lipid, Clinical Nutrition

■ Research topics

## Research on the in increasing fatty acid during essential fatty acid deficiency

Keywords

Nutrition, Fatty acid, deficiency, Mass spectrometry

Contents

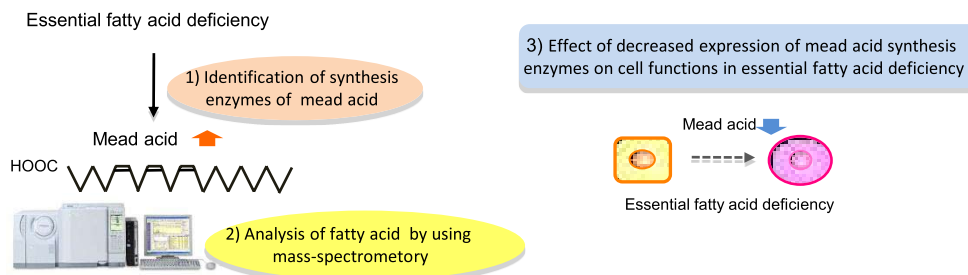
■ Overview (background, goal, detail)

Fatty acids are major components of lipids. It is showed that its metabolism is correlated with various diseases. Because we can't synthesize essential fatty acids in the body, we must take essential fatty acids from foods. When there is a deficiency of essential fatty acid, mead acid is increased in plasma. I examine what kind of enzymes involve in the synthesis mead acid. Moreover, I study how mead acid affects cell functions in essential fatty acid deficiency. .

■ Process, case study

- 1) Identification of synthesis enzymes of mead acid in vitro
- 2) Analysis of fatty acid by using mass-spectrometry
- 3) Effect of decreased expression of mead acid synthesis enzymes on cell functions in essential fatty acid deficiency

■ Potential (applications, future goals)



Potential of social/industrial contribution

■ Joint research

I want to do joint researches with another university and the enterprise by the establishment of the measurement technique of the lipid that uses the mass-spectrometry.