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<http://tetkoba.umin.jp/>, <http://researchers.ao.ocha.ac.jp/2398873050.html>,  
<https://kaken.nii.ac.jp/ja/r/50178323>

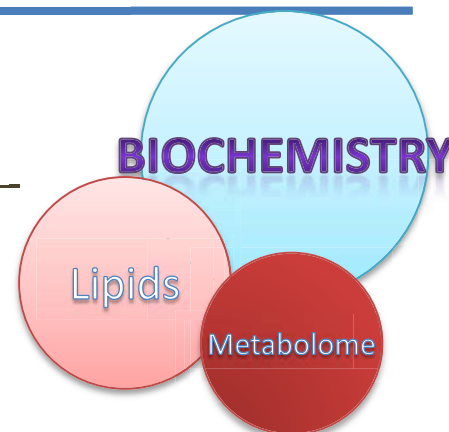
#### ■ Researcher information

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Major

Lipid Biochemistry, Cellular Biochemistry, Lipid Nutrition



#### ■ Research topics

### Biochemical investigation of lipids involved in cellular functions and pathology

#### Keywords

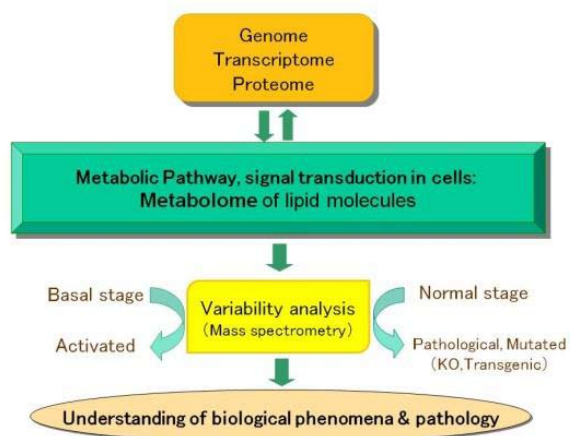
Bioactive lipids, Soft ionization mass spectrometry, Metabolomics, Essential fatty acids, Hemorrhagic shock

#### Contents

##### ■ Overview and Potential

We have investigated cellular functions of lipid molecules using the techniques in biochemistry, molecular cell biology and mass spectrometry. Our main research interests are as follows.

- 1) Metabolism and functions of bioactive lipids: Biological activities including of an inhibitory activity toward cancer cell invasion and neurotrophic effects on cultured embryonic hippocampal neurons by cyclic phosphatidic acid (cPA) and lysophosphatidic acid (LPA) have been studied as well as their metabolism. The significance of lysophospholipids in hemorrhagic shock has been also investigated.
- 2) Lipid metabolome analysis based on mass spectrometry. Investigations of phospholipid and steroid molecules using soft-ionization mass spectrometry are performed.
- 3) Biological activities of omega-3 fatty acids. I have reviewed the recent research papers concerned with omega-3 fatty acids to return the results of research to society at large from the lipid nutritional point of view.



Intellectual properties (Patents, computer programs), productization, publications and social/industrial contributions

Patent publication number 2002-363081, "A potentiator of hyaluronic acid production and its application", Patent publication number 2002-308779, "Cyclic phosphatidic acid-related agents promoting proliferation, differentiation and/or survival of glial cells "

Potential of social/industrial contribution

##### ■ Joint research

Research and development of lipid biochemical analyses and metabolomics can be jointly promoted.

##### ■ knowledge sharing

A commentary on topics of lipid nutrition can be provided..