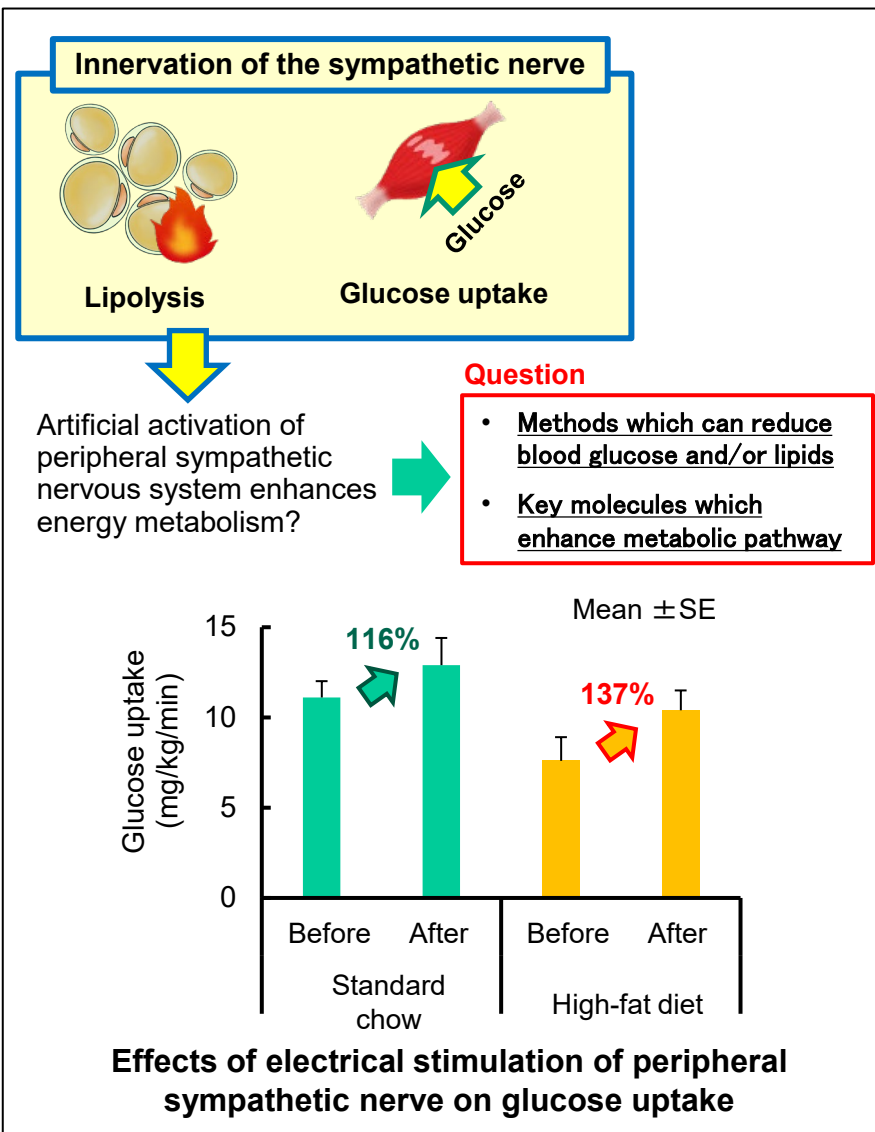


# Artificial control of energy metabolism via nervous system

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## Content:

Lifestyle-related diseases are social issues, and there is a growing need for more effective treatments for impaired glucose tolerance and dyslipidemia.

The glucose and lipid metabolism are controlled not only by hormone but also by nervous system. Therefore, our current project intended to development of a novel method for artificial control of glucose and lipid metabolism with activation of peripheral sympathetic nervous system.

We have revealed that the electrical stimulation of peripheral sympathetic nerve enhanced glucose uptake in standard chow- and insulin-resistant high-fat-fed rats, so far. In addition, we have found that the stimulation can reduce fatty acids in the adipose tissue in rats.

## Appealing point:

We have technique for direct measurement of peripheral nervous activity in experimental animals. The understanding nervous control on energy metabolism will enable to develop novel medical devices for treatment of metabolic diseases.

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Research Interest : Metabolism  
Biomedical Engineering

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