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## Effect of intranasal infusion of GALP (Galanin-Like Peptide) on feeding and energy metabolism

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Galanin-like peptide (GALP), a 60 amino acid neuropeptide, is known to suppress feeding behavior and energy metabolism. In order to use of GALP as the anti-obese drug, it is important to determine whether or not GALP suppress feeding behavior when it is administered noninvasively. Recently, we have reported that intranasal infusion of neuropeptide is an effective route of administration for delivery into the brain. Therefore, we studied to clarify the effect of intranasal infusion of GALP on feeding behavior and energy metabolism. Male lean and ob/ob mice were given continuous intranasal infusion of GALP once a day for 1 week. In the control lean mice, the body weight was not decreased significantly but in the obese mice food intake was started to decrease after the infusion of GALP and reached the same level in the lean mice at 1 week. The intranasal infusion of GALP decreased both food and water intake, and suppressed a spontaneous increase in body weight in the obese mice. We have also showed that the central infusion of GALP can further promote energy metabolism when administered to spontaneously exercising mice. The inhibition of fatty acid synthesis and glycogenesis by GALP administration could be involved in this effect. These results may indicate that intranasal infusion of GALP is an effective route to exert its effect as an anti-obesity drug and therapeutic exercise.

## **Biography**

Seiji Shioda has completed his PhD at the age of 30 years from Showa University School of Medicine in Tokyo. He is the chairperson of Dept. of Anatomy, Showa University School of Medicine for 16 years, with an adjunctive Professor of Tulane University Medical School in New Orleans. He has published more than 450 papers in reputed journals and serving as an editorial board member of repute journals such as *Peptides, Regulatory Peptides, J Molecular Neuroscience, Pharmaceutical Design*. He is also the steering committee members of the society of VIP/PACAP and Regulatory Peptides.

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