

Stephen C. Woods, PhD

Professor

Department of Psychiatry

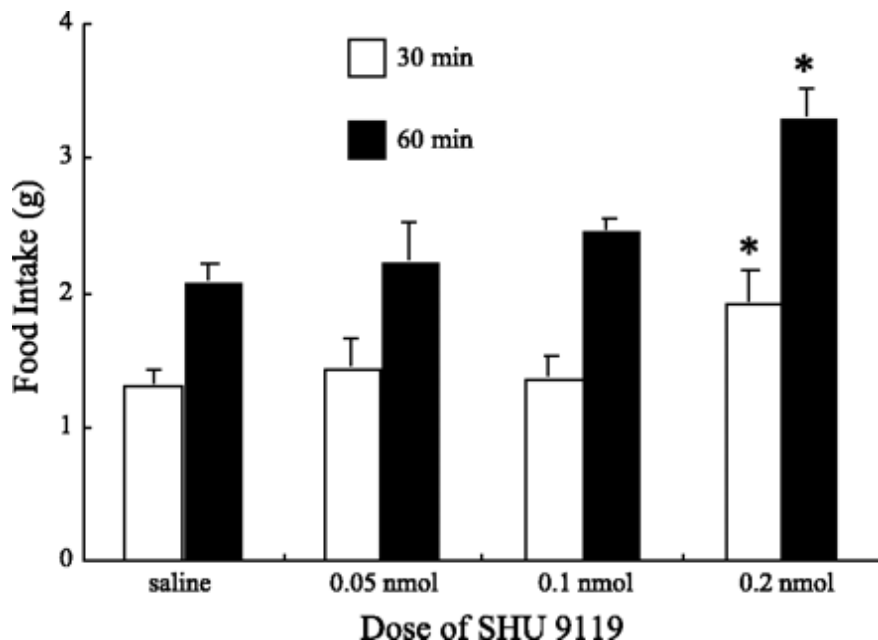
Description of Research:

Dr. Woods is examining the role of gastrointestinal hormones in influencing food intake and body weight. Specifically, considerable evidence suggests that two kinds of peripheral signals influence eating. Some signals, represented by cholecystokinin, are peptides secreted in response to meals. Besides contributing to digestion, some of these peptides additionally signal the central nervous system (CNS) to contribute to sensations that lead to satiety ("fullness"). Other signals, represented by insulin and leptin, circulate to the CNS in direct proportion to adiposity. Within the brain, they interact with meal-generated satiety signals to determine food intake and ultimately body weight. Working with animal models (rats and mice), Dr. Woods' research considers all aspects of these systems including secretion and interactions of the signals, their ability to influence peripheral and central neural circuits and the CNS systems that control food intake and energy homeostasis. Dr. Woods is typically able to obtain behavioral, physiological, hormonal, anatomic and molecular biological data from the same animals.

Collaborations:

Dr. Woods collaborates with Dr. Sakai studying the influence of stress on body weight regulation, and with Dr. Tso in the Cincinnati Mouse Diabetes Phenotype Center. Dr. Woods has a long standing collaboration with Dr. Seeley investigating the causes of diet-induced obesity in rodents. As a new member, Dr. Woods has not used DHC cores.

Representative Figure:



Effect of SHU9119 (0.05, 0.1, or 0.2 nmol) or saline on 30- and 60-min food intake. * $P < 0.05$ vs. saline. Fig. 4 from Am J Physiol Regul Integr Comp Physiol, 2006; 290:R202-R207.