

Digestive Physiology of Pigs 2012 – Preconference Symposium

**Gut Chemosensing: Integrating nutrition, gut function and metabolism in pigs**

1 pm to 6 pm, May 29, 2012  
Conference Center, Keystone, Colorado

**Program**

Theme: Gut chemosensory system and the interaction between enteroendocrine cells and visceral afferent nerves.

(Presentation 1)

**Nutrient chemosensation by GPCRs and the activation of gastrointestinal hormone secretion**

*By Alice P. Liou*

Obesity, Metabolism, and Nutrition Institute and Gastrointestinal Unit,  
Massachusetts General Hospital

(Presentation 2)

**Physiological roles of dietary glutamate signaling via gut-brain axis due to efficient digestion and absorption**

*By Kunio Torii*

Institute for Innovation, Ajinomoto Co., Inc.

Theme: Involvement of gut chemosensing on gut growth, motility, and metabolism

(Presentation 3)

**Intestinal bile acid sensing is linked to key endocrine and metabolic signaling pathways**

*By Douglas Burrin, Barbara Stoll, and David Moore*

USDA Children's Nutrition Research Center, Section of Gastroenterology, Hepatology, and Nutrition, Department of Pediatrics, Department of Molecular and Cellular Biology, Baylor College of Medicine, Houston, TX

Theme: Involvement of gut chemosensing on the regulation of mucosal barrier function and defense mechanisms

(Presentation 4)

**Luminal nutrients augment duodenal mucosal defense mechanisms**

*By Jonathan Kaunitz<sup>1-4</sup> and Yasutada Akiba<sup>2,4,5</sup>*

<sup>1</sup>Department of Medicine, Greater Los Angeles VA Health Care System  
Departments of <sup>2</sup>Medicine and <sup>3</sup>Surgery, UCLA School of Medicine. <sup>4</sup>CURE: Digestive Diseases Research Centre. <sup>5</sup>Brentwood Biomedical Research Institute

Theme: Involvement of gut chemosensing on the regulation of nutrient absorption and energy supply

(Presentation 5)

**There is more to taste receptors than glucose – an intestinal nutrient transporter network to control energy supply is mediated by taste receptors**

*By Oliver J. Mace*

Heptares Therapeutics, Biopark, Welwyn Garden City, UK

Theme: Involvement of gut chemosensing on the regulation of nutrient absorption and energy supply

(Presentation 6)

**Gut chemosensing and the control of food intake in humans**

*Robert E. Steinert and C. Beglinger*

Department of Biomedicine, Division of Gastroenterology, University Hospital Basel, Switzerland

Theme: Applications of gut chemosensing to manage gut integrity, feed intake, and metabolism in pigs

(Presentation 7)

**Potential Applications of Knowledge of Gut Chemosensing in Pig Production**

*By Y. Liu<sup>1</sup>, I. Ipharraguerre<sup>2</sup> and J.E. Pettigrew<sup>1</sup>*

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