

## Nestlé Researchers Discover a New Link between Gut Microbiota and Glucose Control

**Lausanne, SWITZERLAND 8 May 2008** – Nestlé Researchers made a new and exciting discovery linking the composition of bacteria in the gut with blood glucose control. Studies at the Nestlé Research Center, Lausanne, Switzerland demonstrate that modulating gut microbiota improves the regulation of glycemic control and reverses the insulin resistance that occurs with obesity. The full article is available on the [FASEB Journal](#) website.

Obese, diabetic animal models were given antibiotics to appropriately modify their gut microflora. The robust benefit of the modulated microbiota was evidenced by significantly enhanced oral glucose tolerance, insulin sensitivity, restored hepatic glycogen storage and reduced hepatic fat accumulation. Additionally, results revealed that the modified gut microbiota influenced whole body glucose homeostasis, independent of food intake or obesity.

Gut microbial communities have been shown to play a critical role in the development of innate immunity, production of essential vitamins, and other biological processes. Nestlé scientists took this knowledge a step further to determine that the presence or absence of specific bacteria in the gut may modulate the systemic inflammation which contributes to insulin resistance and obesity.

“Our results strongly support the idea that modulating gut microbiota could be beneficial for improving glycemic control and insulin sensitivity,” said Nestlé Research scientist Dr. Chieh Jason Chou. “The next questions for Nestlé Research to answer are: Is there a gut microbiota profile that lowers the risk of obesity and diabetes development? And can we modulate gut microbiota accordingly, with food-based interventions, to improve metabolic regulation and glucose control?”

Nestlé will continue to work in this area to leverage the potential of gut microbiota regulation as an effective therapeutic strategy for managing type 2 diabetes.

### Article Reference:

Membrez M, Blancher F, Jaquet M, Bibiloni R, Cani P, Burcelin R, Corthesy I, Macé K, Chou CJ. Gut microbiota modulation with norfloxacin and ampicillin enhances glucose tolerance in mice. *FASEB Journal*. 22, 2008. Published online March 7, 2008 ahead of print. doi:10.1096/fj.07-102723

### About Nestlé Science and Research

Nestlé Science & Research, encompassing the Nestlé Research Center and its extensive network of external alliances, is a leading research entity in food, nutrition and life sciences. Based on Nestlé's research emphasis, Nestlé Science & Research builds strategic alliances with the best scientific institutions in the world to bring a full breadth of knowledge to its nutrition, health and wellness research. A diverse staff of premier researchers from a broad range of scientific competencies together with external collaborators worldwide are central to fulfilling Nestlé's vision of *Good Food, Good Life*.

Nestlé Research is very active in consumer health benefit areas, employing a multidisciplinary approach to science and research. Integrating diverse scientific disciplines and expertise ranging from biology, food technology, nutrigenomics and sociology, Nestlé strives to bring practical nutrition solutions to consumers. Learn more about the Nestlé Research Center at [www.research.nestle.com](http://www.research.nestle.com).



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