



## **Recent Study Indicates NutraFlora® May Help Alleviate Symptoms of Common Digestive Ailments in Young Children**

*September 17, 2003*—A study recently completed at the University of Illinois at Urbana-Champaign earlier this year concluded that the introduction of short-chain fructooligosaccharides (scFOS™) in the diets of young children suffering from diarrhea may be an easy and cost effective way to reduce the severity of symptoms caused by diarrhea.

The study showed that consuming scFOS, a fermentable fiber with a prebiotic effect similar to that of breast milk oligosaccharides, significantly reduced the symptoms and duration of diarrhea in a relevant animal model. Specifically, scFOS helped to retain stool consistency during infection and significantly increased the short-chain fatty acid (SCFA) production that is essential for maintaining intestinal structure and function.

“The need for prebiotic fiber and attention to digestive problems in children has not played a major role in the food and nutraceutical industry even though more than 30% of pediatric visits result from diarrhea and constipation.” states Dr. Linda Chamberlain Douglas, Manager of Scientific Affairs for GTC.

According to the study, the Centers for Disease Control report that diarrhea accounts for approximately 9% of all hospitalizations of children in the United States. NutraFlora® scFOS is the only FDA reviewed GRAS short-chain prebiotic fiber for children under the age of one and offers formulators of toddler foods and follow-on formulas an easy way to support the healthy digestive systems of young children.

### **About NutraFlora®**

NutraFlora is a natural prebiotic fiber that promotes intestinal health faster and more efficiently than any other product on the market today. At 95% pure scFOS, it is the most effective prebiotic available. As a result, it has the lowest inclusion rate and supports the widest variety of beneficial probiotic strains compared to any other fiber.

Because of its composition and positive technical attributes, such as low viscosity, limited Maillard reaction, and low inclusion rates, NutraFlora is a versatile ingredient that can undetectably add the benefits of a prebiotic fiber to milk, yogurt, powdered drinks, drink boxes, bottled water, shakes, cereal, baked goods, nutrition bars, ice cream, soup, jams and jellies, baby food and much more.

### **About GTC Nutrition LLC**

GTC is a leader in providing natural, science-based ingredients to the food processing, dietary supplement and animal feed industries. GTC promotes health throughout North America, South America, Australia and New Zealand with innovative functional food ingredients and unsurpassed customer support. For more information, visit [www.gtcnutrition.com](http://www.gtcnutrition.com).

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Article Abstract

## **Fermentable Fiber Reduces Recovery Time and Improves Intestinal Function in Piglets Following *Salmonella typhimurium* Infection<sup>1,2</sup>**

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**ABSTRACT** Diarrhea is a leading cause of morbidity and mortality in infants. The addition of fiber to infant formulas reduces recovery time following pathogenic infection in infants  $\geq 6$  mo old, but effects on neonates unknown. The hypothesis that fermentable fiber reduces infection-associated symptoms and enhances intestinal structure and function in neonates was examined. Piglets (2 d old) were randomly assigned to receive formula alone (control) or formula containing methylcellulose (MCEL), soy polysaccharides (SPS) or fructooligosaccharides (FOS) for 14 d. On d 7, piglets were further randomly assigned to receive an oral gavage of *Salmonella typhimurium* serve as noninfected controls. *S. typhimurium* infection produced diarrhea in controls and MCEL groups, but in the SPS and FOS groups. Postinfection physical activity was lower ( $P < 0.0001$ ) in the controls than in all other groups. Ileal lactase activity was reduced ( $P < 0.05$ ) following infection in the control group but not in the MCEL, SPS and FOS groups. Ileal mucosal barrier function, measured as resistance, was impaired by infection ( $P < 0.05$ ) in the control and SPS groups, but was unaltered in the jejunum and colon. Total ion transport and basal short-circuit current were higher ( $P < 0.05$ ) in jejunum than in ileum and colon, irrespective of diet or infection. SPS and FOS increased ( $P < 0.05$ ) ileal glutamine transport relative to piglets fed MCEL, irrespective of infection. Because fermentable fiber enhances intestinal function and reduces the severity of *S. typhimurium* infection-associated symptoms, it may be a cost-effective way in which to reduce the severity of pathogenic infection-associated symptoms in infants. *J. Nutr.* 133: 1845–1852, 2003.