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**April 23, 12:45 pm ET**

***ONSITE NEWSROOM***

Boston Convention Center

April 20-24, 2013

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***Your Body's Microbiome Has a Unique 'Fingerprint'***

*Study Suggests Increasing Complexity of Gut Effect on Health*

**Boston, MA**—The microbiome is your body's set of microbial communities; microbial cells outnumber human cells roughly ten to one. Through studying the microbiome, scientists are learning more the relationship between these microbes and human health and disease. In looking at the effect of diet on the composition of the gut microbiome, Dr. Nanette Steinle of the University of Maryland's School of Medicine and Dr. Emmanuel Mongodin of the University of Maryland Institute of Genome Sciences wanted to determine if the Mediterranean diet would cause changes in an individual's microbiome. This diet was selected because it has already been associated with reduced risk of cardiovascular disease.

In this small study, 8 women and 1 man ages 50-65 were provided with foods that fit the Mediterranean diet profile: high fiber, whole grains, dry beans/lentils, olive oil, and 5 servings of fruits/vegetables a day. After 2 weeks, they provided blood for the analysis of fasting lipids and stool samples to determine the microbes present.

The results indicated a decrease in total cholesterol and LDL cholesterol levels. In addition, there was clustering of individuals' microbial profiles.

“What we expected to find was that a particular microbe species increased, but we haven't observed that,” said Steinle. “Instead, each individual appears to have a unique microbiome signature, like a fingerprint. A sample from 5 people would result in 5 unique profiles. It's the first time we've observed that this signature remained true, even after manipulation of diet,” Steinle added.

This study adds another clue to the complicated nature of the gut microbiome. Dr. Steinle will present the data for the American Society for Nutrition's poster sessions on Tuesday, April 23. Prior to the poster session on the microbiome on April 23, there is a symposium “Managing the Microbiome in Human Gastrointestinal Disease” on Saturday, April 20, 8-10 am.

This study was partially funded by the Dry Bean Health Research Program.

### **About Experimental Biology 2013**

Experimental Biology's mission is to share the newest scientific concepts and research findings shaping future and current clinical advances – and to give scientists and clinicians an unparalleled opportunity to hear from colleagues working on similar biomedical problems using different disciplines. With six sponsoring societies and another 20 U.S. and international guest societies, the annual meeting brings together scientists from throughout the United States and the world, representing dozens of scientific areas, from laboratory to translational to clinical research. The meeting also offers a wide spectrum of professional development sessions.

### **About American Society for Nutrition**

ASN is the authoritative voice on nutrition and publisher of *The American Journal of Clinical Nutrition*, *The Journal of Nutrition*, and *Advances in Nutrition*. Established in 1928, ASN's more than 4,900 members in more than 65 countries work in academia, practice, government and industry. ASN advances excellence in nutrition research and practice through its publications, education, public affairs and membership programs. Visit us at [www.nutrition.org](http://www.nutrition.org).