



GASTROINTESTINAL BIOLOGY



UNIVERSITY OF NEBRASKA-LINCOLN

DR. ANDREW BENSON
foodsci.unl.edu/abenson

Study of the evolution and development of gut microflora. Genome evolution in pathogenic bacteria. Identifying host genes that affect gut flora development.

DR. JENNIFER CLARKE
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Dr. Clarke researches the analysis of complex high-dimensional data; statistical model assessment, validation, and prediction; metagenomics; and inference from multitype data; 'big data' applications.

DR. HEATHER HALLEN-ADAMS
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The role of fungi in the healthy human gut, including interactions between different species of gut fungi, interactions with bacteria, and interactions with the human host. The potential for fungal probiotics to limit fungal disease in humans.

DR. ROBERT HUTKINS
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Studies of bacteria important in fermented foods and in human health. Understanding the molecular basis for metabolism of prebiotic sugars by lactic acid bacteria and bifidobacteria (so-called probiotic bacteria). Study of the anti-adhesive properties of oligosaccharides and the molecular mechanisms involved in pathogen binding to the surface of host cells.

DR. JACQUES IZARD
foodsci.unl.edu/izard

Dr. Izard studies the biology of human microbiomes in context of their host, with a focus on the role of human digestive tract microbiota in health and disease, including its impact on host homeostasis. One aspect of this research is to understand the effect of diet on microbiome structure and cancer risk.

DR. AMANDA RAMER-TAIT
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Current research projects are aimed at understanding how interactions between the mucosal immune system and intestinal microbes contribute to the pathogenesis of chronic, inflammatory diseases, including inflammatory bowel diseases, obesity, and metabolic syndrome. We are also interested in dietary modulation of the immune system and the gut microbiota.

DR. DEVIN ROSE
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Evaluation of quality and chemical composition of whole grains. Impact of whole grain and dietary fiber containing foods on diet related disease prevention. Determine how differences in chemical and physical properties of whole grains influence end-use quality.

DR. VICKI SCHLEGEL
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Characterize natural bioactive agents and their interactions with various types of food matrices through the integration of metabolomic and physiochemical approaches. Facilitate the development of functional foods and/or nutraceuticals.

DR. ROHITA SINHA
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Researching metagenomics, the taxonomic and functional diversity of the gut microbiome. Development of computational methods to analyze metagenomic data. Functional genomics: amino-acid composition and biases in metagenomics environments.

IMPACTING THE WORLD THREE TIMES A DAY



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