

The Human Microbiome: the New Frontier



Catherine Lozupone
Assistant Professor, Medicine

CURRENT RESEARCH

How bacteria in our gut might be the next best therapy

Home is where the gut is, at least for the pound or two of bacteria that live in each of our guts contributing to an ecosystem of living and dying bacteria. Recently researchers have begun to investigate the complex community of bacteria that live on and in the human body, what they do, and how they influence disease. Dr. Catherine Lozupone, of the University of Colorado, is interested in how this community differs in health versus disease and the impact of these changes in disease states. Understanding the bacteria that inhabit the human body is a true frontier in science that has generated considerable interest as it is uniquely positioned to increase our understanding of how gut microbes may impact a diversity of diseases including HIV, autism spectrum disorders, obesity, and asthma. In fact, Dr. Lozupone says, her greatest hope is, "that this work will lead to new therapies that improve health."

Working mostly in the human gut, Dr. Lozupone was involved in the first research to show a link between gut bacteria and obesity and has since investigated microbiota composition in the context of diet, culture, inflammatory bowel disease, and more. Her strong computational skills that are needed to interpret the sequencing of data and her role as a biologist that can interpret results gives her a unique set of tools to make significant contributions to human microbiome research. Thus, her advanced skills combined with her experience in analyzing a large range of diseases, has resulted in a keen eye for drawing connections between different disease states and the impact that microbiome research may have. As a young investigator, having started at the University of Denver in 2013, in addition to her desire to "do..."

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AFFILIATION



University of Colorado, Denver

EDUCATION

- Ph.D. in Molecular Cellular and Developmental Biology 2007 , University of Colorado at Boulder
- M.S. in Microbiology 1999 ,Colorado State University
- B.S. in Biology/Honors 1997,Villanova University

AWARDS

- Named one of "The World's Most Influential Scientific Minds, 2014"
- Alpha Epsilon Delta Pre-Medical Honor Society: Villanova University, 1997

RESEARCH AREAS

Life Science, Immunology / Inflammatory, Metabolic / Diabetes, Neurological / Cognitive

FUNDING REQUEST

Your contributions will support the continued research of Dr. Catherine Lozupone as she studies the thousands of microbes living in our gut to promote health. Donations will support the recruitment of study participants, sequencing data, personnel, and equipment. In choosing to donate, you will help researchers discover the role of the human microbiota in potentially leading to novel therapeutics.