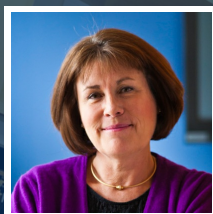


# The Gut Microbiota: Our Microbial Allies



Claire Fraser

Professor, Department of Medicine Professor, Department of Microbiology and Immunology Director, Institute for Genome Sciences

## CURRENT RESEARCH

### Approaching and addressing health from the microbiota perspective

Anyone who has had a digestion problem, or anyone living in the age of well-being in general, has probably been advised to "eat more yogurt," or to "eat more fiber." One of the reasons why probiotics like yogurt or dietary materials like fiber are so important is that they feed the microorganisms lining our gastrointestinal tract (i.e. the GI tract) that supplement our health. From birth to old age, this gut microbiota plays a key role in human health as it partners with our body to carry out essential functions. The trillions of microbes, representing thousands of species of bacteria in our GI tract, help us digest and process the foods we eat, producing some of the vitamins and byproducts that are most vital to our body. Because of its importance, many even believe that we should consider the microbiota to be another organ in the body. Dr. Claire Fraser, Professor of the University of Maryland School of Medicine and Director of the Institute for Genome Sciences, studies the structure and function of the gut microbiota in health and disease, with the ultimate goal of designing interventions through diet, probiotics, etc., to promote homeostasis in the gut to maintain health and/or mitigate disease.

While the overall composition of the gut microbiota is similar in most people, there is a great deal of inter-individual variability that likely reflects host genotype, diet, environment, and other factors; as humans, we all carry a different makeup of these communities of microbes - like how we each have different fingerprints. The significance of these differences across individuals from a functional perspective is one of the most important areas of Dr. Fraser's current research. Another area that Dr. Fraser...

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## AFFILIATION



University of Maryland College Park Campus

## EDUCATION

- Ph.D. in Pharmacology 1981, State University of New York at Buffalo
- B.S. in Biology 1977, Rensselaer Polytechnic Institute

## AWARDS

- Maryland's Top 100 Women, 1997
- Ernest Orlando Lawrence Award, Department of Energy, 2002
- AAAS Fellow, American Association for the Advancement of Science, 2004
- Elected into the Institute of Medicine of the National Academies, 2011
- Thomson Reuter's The World's Most Influential Scientific Minds, 2014

## RESEARCH AREAS

Life Science, Genomics / Congenital, Metabolic / Diabetes, Proteomics

## FUNDING REQUEST

Your donations will support the continued research of Dr. Claire Fraser and her team at the University of Maryland School of Medicine as they unravel new ways to monitor and treat various diseases from the perspective of the microbiota. The funding of \$500K/year will not only support the team members individually but also allow this talented team to conduct valuable DNA sequencing and carry out validation tests. Partner with Dr. Fraser's work as it may potentially rewrite how we approach life sciences!