OUR MICROBIOME

The "human intestinal microbiome" describes the microorganisms that exist symbiotically within our gastrointestinal tract (bacteria, viruses, fungi, and more!) For millennia, we had no knowledge of their activity or function within our biology. Now we are finally touching the surface of understanding function.

WHAT ARE THE KNOWN FUNCTIONS OF OUR FRIENDLY RESIDENT INTESTINAL BACTERIA?

1 Immune balance and tolerance development

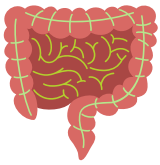
There is a cross talk between the microbes and our immune cells helping them differentiate pathogens from non pathogens and ultimately self tissue

2 Detoxification of foreign and endogenous chemicals

We are constantly under pressure from the toxic outside world making this function important. The microbes have an ability to breakdown chemicals.

3 Suppression of pathogenic bacteria

By controlling the **intestinal real estate**, commensal bacteria reduce the ability of pathogenic bacteria to thrive and promote intestinal disease. We call this "Squatter's Rights."



4 Promotion of mucous development and gut lining health

Bacteria promote the production of mucous that offers layers of protection from foreign pathogens and proteins at the intestinal cell surface. **This function can help prevent MIS-C in pediatric COVID patients!**

5 Maintenance of glucose/fat metabolism

Bacteria are involved in promoting the effective use and storage of sugars and fats **especially in pregnancy**. They can promote or prevent obesity and inflammation, which is important in the prevention of insulin resistance

6 Food Production for the gut.

Microbes produce short chain fatty acids that are **direct food source for our intestinal cells** helping to preserve the health of the intestinal system's barriers