

How do we begin to understand the microbiome?

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

As soon as we emerge from the womb, we've started to accumulate the first few hundred of our lifelong companions—the rich population of microbes that live in and on us. By the time we greet our kindergarten teacher, we are outnumbered: The microbial cells we carry far exceed our own.

These bugs aren't freeloaders. We maintain a symbiosis with our microbiome that helps keep us healthy. Its job includes breaking down foods our bodies are otherwise unable to digest, metabolizing nutrients into needed vitamins, helping to regulate glucose levels, and sending signals to our immune system.

Several technological and clinical advances have converged to produce the current microbiome mania. The most critical development has been the ability to use gene sequencing to quickly identify the microbes camping out in the human body and sometimes deduce their function.

“To understand the microbiome, we have to look at literally thousands of different species of bacteria all at once,” says Roger Pomerantz, CEO of Seres Therapeutics. Without the precipitous drop in the cost and time it takes to capture and analyze gargantuan quantities of genetic data, he adds, “the microbiome revolution would not be here.”

The new sequencing capabilities have enabled projects that not long ago would have been inconceivable. For example, four-year-old Second Genome recently did an experiment that required it to sequence and analyze several thousand biological samples. Whereas a decade ago it would have taken a year to sequence just one genome, the company's researchers wrapped up the project in just a month.

Read full, original post: [Harnessing The Hordes In The Microbiome](#)