

Challenges to sequencing microbiomes: sample collection is the easy part

I have fun thinking about the few pounds of bacteria in and on my body— which bacteria live there, how they got there, and what that means for my health. And, of course, how my microbiome might be evolving. Maybe you have also been thinking about the invisible ecosystems on you.

So when two different campaigns on Indiegogo offered me the chance to peer at the composition of my microbiome, I was sold. I had my genome profiled by 23andme years ago and this was clearly the next step.

But I was simultaneously cautious, because microbiome profiling is messy (and I'm not just talking about the sample collection). For example, a story broke a few years ago that each of our guts belongs to one of three canonical types, called 'enterotypes.' Since then, the notion of discrete enterotypes has come under considerable scrutiny. The problem is that microbiome research is hard. The DNA profiling technologies and analysis methods are imperfect and still developing. There is no gold standard, because we do not know how to grow most gut bacteria in the lab, to check if they are really there. Moreover, our microbiomes are a moving target, changing with age and diet. How much then can I really learn from a snapshot?

Read the full, original story: [Which bacteria are in my poop? It depends where you look...](#)