

Which is more important to the gut microbiome? Genetics or environment?

Genetics hold far more sway over the mouse microbiome than transient environmental exposures, researchers reported July 26 in [Applied and Environmental Microbiology](#). The results appear to contradict previous studies in humans that have found environmental factors to be more influential than genetics, and they add to an ongoing dialogue in the microbiome research community over how much control we hold over the bacterial communities in our guts.

[Hila Korach-Rechtman](#), a microbiologist at the Israel Institute of Technology in Haifa, set out to identify the microbes in mice that become a fixture in the gut after being introduced through the environment.

...

Instead, the investigators found that environmental factors exert only temporary effects, much like probiotic supplements that only populate the gut with certain bacteria as long as they are taken.

...

Despite its experimental novelty, the study's results may not allow "such a broad conclusion [to] be reached in the general case, even in the mouse setting," says [computer scientist and computational biologist] [Eran Segal](#).

He notes that the 12 taxa highlighted in the mouse study represent an unknown percentage of the microbiome, and therefore can't capture how much of its composition may be dominated by genetics.

Read full, original post: [Mouse Genetics Shape the Gut Microbiome More than Their Environment](#)