A global network reveals, in general, no microbe is an island

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Abstract

Microbiomes across the entire planet connect numerous microorganisms to one another, but how are these communities themselves connected across the globe? To find out, researchers recently analyzed the massive Earth Microbiome Project dataset, which pools data about microbial life from around the world. The result was a planet-sized co-occurrence network of microorganisms. The network consists of 8 taxonomically distinct modules, each associated with a distinct environment. Studying the network's shape revealed microbial relationships that are essential to certain microbiomes, including relationships characterized by distinct levels of competition or niche differentiation. The network highlights the importance of understanding co-occurrence features of microbiomes and could offer global insight into how and why microbes are connected.