Building microbial communities from the bottom up

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Microbes exist in complex, multi-species communities with diverse interactions that play an essential role in both human health as well as the health of the planet. Over the last decade tremendous progress has been made in characterizing these communities, but the lack of experimentally tractable model systems has made it difficult to discern the rules governing microbial community assembly and function. In this talk I will describe our recent experimental efforts to develop a bottom-up approach to understanding the dynamics of these communities. We find that simple, phenomenological descriptions of microbial interactions provide a surprising amount of insight into community assembly and how communities change under stress.