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Sommario/riassunto	<p>In complex systems, such as our body or a plant, the host is living together with thousands of microbes, which support the entire system in function and health. The stability of a microbiome is influenced by environmental changes, introduction of microbes and microbial communities, or other factors. As learned in the past, microbial diversity is the key and low-diverse microbiomes often mirror out-of-control situations or disease. It is now our task to understand the molecular principles behind the complex interaction of microbes in, on and around us in order to optimize and control the function of the microbial community - by changing the environment or the addition of the right microorganisms. This Research Topic focuses on studies (including e.g. original research, perspectives, mini reviews, and opinion papers) that investigate and discuss: 1) The role of the microbiome for the host/environmental system 2) The exchange and change of microbes and microbial communities (interplay) 3) The influence of external factors toward the stability of a microbiome 4) Methods, possibilities and approaches to change and control a system's microbiome (e.g. in human or plant disease) 5) Experimental systems and approaches in microbiome research. The articles span the areas: human health and disease, animal and plant microbiomes, microbial interplay and control, methodology and the built environment microbiome.</p>