Precision Medicine and the Human Microbiome
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The human microbiome has emerged as a hitherto unknown 'organ' with several surprising connections to disease, ranging from disorders of the gastrointestinal tract to cardiovascular disease. As continued research has leveraged deep next-generation sequencing to uncover the biochemical mechanisms of these interactions, it has not been lost on researchers and entrepreneurs that the human microbiome is a significant target for personalized treatment and therapeutics development. I will introduce the human microbiome, discuss the big data aspects of this area of research, highlight two examples of discoveries that have a personalized medicine aspect, and will discuss efforts to translate these findings into therapeutics.