In centuries prior to the modern age, human mortality was largely attributed to a variety of infectious diseases. As such, research was heavily focused on discovering antimicrobial agents, which lead to the discovery of antibiotics. Fast forward to the 21st century, infectious diseases as the leading causes of human mortality are replaced by cardiovascular diseases and cancer. Recent research on these two and other polygenic diseases has revealed intriguing associations between the host and microbiota residing with the host as a previously ignored feature contributing to a variety of pathologies. The vast scope of such host-microbiota interactions, which is now known to affect most, if not all host organs and their physiology, begs the question of whether the use of antibiotics has reshaped our microbiota and thereby contributed to the surge of host new age disorders. In support, multiple studies provide clear evidence demonstrating that perturbations of the host microbiota with antibiotics have consequences on shaping the course of host susceptibility to pathologies. From the perspective of the trillions of microbiota residing within the host, this experience of what they face as consequences of the actions of the host can be likened to an ‘internal climate change’. This ‘internal climate change’ is a continuum shaped not just by antibiotics, but by the voluntary choices of the host diet, synthetic food additives, medications, lifestyle, etc. This confers a selection pressure for the fittest of microbiota to adapt and survive. By promoting such changes in the composition of microbiota, the host is faced with functional consequences of the microbial metabolites released into the host circulation. Therefore, such mutualism between the host and microbiota, when tipped, has far reaching consequences on the health of all eukaryotic hosts.

The realization of this crucial bidirectional symbiosis has kindled the quest for a deep mechanistic understanding of the underlying biochemical wiring between the microbiota and host. In this regard, our new journal ‘Microbiota and Host’ is a timely journal being launched to serve as the receptacle for your highly impactful research in delineating the mechanisms governing microbiota-host interactions. The scope of the journal is not limited to humans and model organisms, but intentionally broad to encompass research on all eukaryotic hosts experiencing the ‘internal climate change’ as a cause for their transition from physiology to pathophysiology. The vision of our Journal is to encourage studies which enable us to forge ahead beyond taxonomic associations of microbiota with the host to functional characterizations of such associations.

We are pleased to offer you the collective expertise of an excellent international team as our Editorial Board and welcome your submissions on topics as detailed in the scope of our journal.

Bina Joe, PhD, FAHA, FAPS, ISHF
Editor-in-Chief

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