Nitric Oxide (NO) is a signaling molecule that mediates diverse pathways in target cells playing an important role in many physiological processes. Because the pathway of NO formation and signaling may be one of the oldest bioregulatory systems controlling human and animal physiology, the question arises why such molecule should serve so many purposes in regulating diverse and complex cellular functions. What's the function of NO in the evolution of organisms? From a wider perspective, the study of the molecular basis of NO signaling in different systems can uncover the role of NO in human metabolism under normal conditions and in the context of environmental changes that can lead to cellular dysfunction and human disease.

As Guest Editors of this Special Issue, we invite authors to submit original research articles as well as review articles that will contribute to broadening the understanding of the biochemical, cellular and molecular mechanisms regulated by NO. We are particularly interested in articles covering the significance of the evolved function of NO in biology.