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# The Maladaptive Immune Response in Innate and Adaptive Immunity during Systemic Inflammation

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### Message from the Guest Editors

Innate and adaptive immune system are hallmarks in the defense against infections with exogenous pathogens. These systems and their cellular as well as non-cellular components. The immune system activation cascade involves the coordinated interplay of multiple cellular and humoral elements, orchestrated to deliver the appropriate immune response to a given, specific pathogen. However, effective pathogen killing also bears the risk of collateral cell, tissue, and/or organ damage. In particular, the same elicited immune response that may be effective and beneficial for the defense against one pathogen may be deleterious if it occurs in an uncontrolled and overshooting fashion or in response to another inflammatory stimulus (e.g., immune system activation during cardiopulmonary bypass). The response of both the innate and adaptive immune system also bears the dangerous potential of a deleterious, overshooting, and uncontrolled maladaptive activation with severe consequences for the host. The Special shed light on the various dysregulated cellular and non-cellular immune system checkpoints contributing to a maladaptive immune response and resulting in systemic inflammation









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