# Trained Immunity and Endotoxin Tolerance in Inflammatory Diseases

Guest Editors:

**Dr. Trim Lajqi**
Department of Neonatology, Heidelberg University Children's Hospital, Heidelberg, Germany

**Dr. Christian Gille**
Department of Neonatology, Heidelberg University Children's Hospital, Heidelberg, Germany

**Dr. Hannes Hudalla**
Department of Neonatology, Heidelberg University Children's Hospital, Heidelberg, Germany

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## Message from the Guest Editors

Innate immune cells have been shown to be able to articulate non-specific memory-like responses known as trained immunity, manifested with increased responsiveness against secondary pathogenic insults. Contrary to trained immunity, endotoxin tolerance is a well-known immune reaction characterized by declined responsiveness and increased repairing/anti-inflammatory reactions. Both of these opposing adaptive features of the innate immune system are shaped by different external and internal stressors, promoted mainly by epigenetic changes with resulting changes in metabolism and mediated particularly by the PI3K/mTOR pathway. Recent advances have revealed that trained memory as well as tolerance may alter several cellular functions. This then has a major impact on the progression or suppression of different inflammatory diseases. The inappropriate induction of one of these antagonistic adaptive manners may result in maladaptive reactions which trigger life-threating events. As such, we invite all the colleagues to submit their findings in this Special Issue to further provide more insights on the role of the trained immunity and tolerance development in inflammatory disorders.

Special Issue

## Editor-in-Chief

**Prof. Dr. Felipe Fregni**
1. Neuromodulation Center and Center for Clinical Research Learning, Spaulding Rehabilitation Hospital and Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114, USA
2. Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA 02115, USA

## Message from the Editor-in-Chief

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