

Special Issue on
Impact of Metabolism on Immune Responses

CALL FOR PAPERS

CD4⁺ T helper (Th) cells play a central role in regulating the adaptive immune response. Thus, a better understanding of the mechanisms that control T cell function and differentiation is essential for the development of novel therapeutic approaches to modulate immune function and prevent autoimmune and inflammatory diseases. To date, several CD4⁺ T helper cell subsets have been described (Th1, Th2, Th17, and Treg), each with a specific set of functions and characteristics. It is well established that the balance between these T cell subsets is critical in providing an adequate, but not overly zealous, immune response.

Increasing evidence suggests that T cell metabolism plays a cardinal feature in both T cell activation and T cell differentiation. Although T cells have been mainly characterized by their cytokine environment and respective master transcription factors, it has also been considered, for example, that specific programs and metabolites involved in energy metabolism are able to be potent regulators governing CD4⁺ T cell fate.

The goal of this special issue is to publish high-quality review articles as well as original research articles addressing the impact of metabolism on immune responses. A particular interest of this series will be given to articles related to innate and adaptive immune cells.

Potential topics include but are not limited to the following:

- ▶ Roles of oxidative phosphorylation and aerobic glycolysis in regulating innate and adaptive immune cells
- ▶ Interplay of autophagy and energy metabolism
- ▶ Changes in leukocyte energy metabolism with aging
- ▶ The role of cofactors of energy metabolism (i.e., ATP, NAD⁺, and others) in regulating adaptive and innate immune responses
- ▶ Impact of the microbiome and its metabolites on differentiation and activation of innate and adaptive immune cells
- ▶ Altered metabolism in diseases and inflammation

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jir/mire/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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