

Special Issue on **Immunometabolism: Molecular Mechanisms, Diseases, and Therapies 2018**

CALL FOR PAPERS

Chronic nonresolving inflammation is a critical phenotype found in several highly incident metabolic diseases such as obesity, cancer, type 2 diabetes mellitus, and atherosclerosis. Despite major implication in disease, the mechanisms underlying the development and failure to resolve metabolic disease-associated chronic inflammation are still not completely elucidated. Several lines of evidence indicate the existence of a complex interrelationship between inflammatory processes and tissue function and metabolism. In this sense, exposure to high levels of some nutrients found upon overnutrition, among other situations, was demonstrated to modulate leukocyte function and induce inflammatory processes. Indeed, changes in the activity of the nutrient sensors mTOR and PPARs, for example, are associated with important alterations in inflammatory processes. Conversely, inflammation and inflammatory mediators are also associated with major changes in cell and tissue function and metabolism. For instance, chronic inflammation is associated with impairment of insulin's ability to stimulate muscle glucose uptake and to inhibit adipocyte lipolysis. Therefore, a deep understanding of the intense cross-talking between metabolic organs (liver, adipose tissue, skeletal muscle, and gastrointestinal tract) and immune system is of major importance to the development of efficient strategies to treat metabolic diseases.

In this special issue, we invite investigators to contribute original research and review articles that address the complex interrelationships between immune system and metabolism. We are particularly interested in articles describing novel mechanisms of interaction between nutrients and metabolites, immune function and inflammation, and possible strategies to prevent or treat metabolic diseases.

Potential topics include but are not limited to the following:

- ▶ Cell nutrient and energy sensors (G protein-coupled receptors, mTOR, PPARs, AMPK, etc.) as regulators of leukocyte function, immune responses, and inflammation
- ▶ Exercise as anti-inflammatory therapy and immunometabolism mechanisms regulated by exercise
- ▶ Microbiome and therapies associated with pre- and probiotics in metabolic diseases
- ▶ Modulation of lipid, protein, and carbohydrate metabolism by inflammatory mediators
- ▶ Metabolomics and lipidomics of cells and tissue upon inflammatory conditions

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/mi/immd18/>.

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

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