

Special Issue on
**Functions of Noncoding RNAs in Immune Homeostasis
and Autoimmunity**

CALL FOR PAPERS

Advances in transcriptome sequencing facilitated by human genome annotation have revealed that human genome is pervasively transcribed. Intriguingly, significantly higher number of these transcripts exhibited little or no protein coding potential. Based on the size of mature functional transcript, these noncoding transcripts are classified as long noncoding RNAs (lncRNAs; size >200 nts) or small noncoding RNAs (sncRNAs; size <200 nts). While both of these classes differ in terms of transcription, processing, and cellular localization, they are now acknowledged as ubiquitous regulators of cell differentiation, development, and immunity. MicroRNAs (miRNAs) in particular represent a class of small (~21 nts), nonprotein coding, RNA molecules that bind target mRNAs leading to their degradation or translational suppression. Over the last few decades, significant strides have been made in our understanding of noncoding RNAs function in the regulation of key immunological functions.

Emerging lines of evidence suggest that alterations in noncoding RNA expression or function can lead to significant impairments of the immune system and result in autoimmune diseases. For example, miRNAs have been recognized in the pathogenesis of several autoimmune and inflammatory conditions such as type 1 diabetes mellitus, multiple sclerosis, and rheumatoid arthritis.

It is therefore important to understand the role of noncoding RNAs in normal immune homeostasis and changes in its expression and functions that lead to autoimmunity. The purpose of this special issue is to publish high-quality original research papers as well as review articles addressing recent issues on the role of noncoding RNAs in influencing the immune response and autoimmunity.

Potential topics include but are not limited to the following:

- ▶ Identification of novel noncoding RNAs as regulator of immune cell differentiation and polarization
- ▶ Identification of novel biological functions of noncoding RNAs in immunity
- ▶ Regulatory role of noncoding RNAs in innate immune responses/inflammation
- ▶ Effects of noncoding RNAs on T cell activation, proliferation, cytokine secretion, and T cell polarization
- ▶ Noncoding RNAs in autoimmunity
- ▶ Role of noncoding RNAs in immune tolerance

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

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