

Special Issue on
**New Insights for Immune-based Diagnosis and Therapy
for Infectious Diseases**

CALL FOR PAPERS

The role of the immune response as marker as well as therapeutic tool for the diagnosis and treatment of infectious diseases, is well ascertained and described; however, these concepts are continually evolving.

In the diagnostic field, the research of a specific humoral immune response has been used from a long time. In fact, the seropositivity is considered as an important key for the determination of an occurring infection. Recently, in addition to the classical investigation on the presence or absence of antibodies directed against specific antigens, the titer of specific antibodies, defined as index, is gaining importance as a prognostic marker for certain infectious diseases, for example, the introduction of the JCPyV-seropositivity, defined as the presence of specific anti-JCPyV antibodies, in the stratification of multiple sclerosis patients for the risk to develop progressive multifocal leukoencephalopathy.

The immune response is the key element to resolve an infection. For this reason, a therapeutic and a prophylactic strategy for infectious diseases is usually based on immune-based approaches. In particular, prophylactic strategies are principally focused on the stimulation of a specific immune response against the pathogen, that is, the active immunization. On the other hand, immunotherapeutic strategies are based on the concept of a passive immunization. In this case, immunoglobulins obtained from sera of immune individuals or by the cloning of recombinant antibodies (usually, antigen-specific monoclonal antibodies) are injected to protect a susceptible or infected host. In this regard, very recently, a cocktail of monoclonal antibodies is being considered as a possible treatment of Ebola virus infections.

Recently, in the context of a passive immunization, also the infusions of antigen-specific or engineered T cells, as an alternative treatment for infectious diseases, are being considered. As an example, chimeric antigen receptor- (CAR-) engineered T cells are increasingly gaining potential application also for the elimination of difficult-to-eradicate pathogens. In this regard, in the last few years, several CARs directed against different infectious agents, such as HIV, CMV, HBV, HCV, and *A. fumigatus*, have been described.

The purpose of this special issue is to publish high quality research paper and review articles that underline the use of immune-based approaches for the diagnosis and therapy of infectious diseases. Original, high quality contributions that are not yet published or that are not under review by other journals or peer-reviewed conferences are evaluated.

Potential topics include but are not limited to the following:

- ▶ Immune-based diagnostic tools for infectious diseases
- ▶ New immune-based approaches as prognostic markers for infectious diseases
- ▶ Immunotherapeutic approaches against infectious diseases
- ▶ Anti-infective monoclonal antibodies and their engineering
- ▶ New prophylactic approaches against infectious diseases
- ▶ Adoptive T cell therapy for infectious diseases
- ▶ Engineered and redirected T cells for the treatment of infectious diseases

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

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First Round of Reviews

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