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Journal of Immunology Research

Special Issue on *Mycobacterium tuberculosis*

CALL FOR PAPERS

M. tb, the causative agent for tuberculosis (TB), is a slow-growing obligated intracellular pathogen infecting one-third of the world's population. In this population, two billion people are asymptomatic carriers of the bacterial infection. According to WHO, eight million infected individuals will develop active TB and two million will die per year. *M. tb* infection occurs by inhaling droplets containing *M. tb*. The innate response to the early stage of infection is mediated by macrophages. However, only in a small proportion of cases does the initial infection progress to overt disease. In most immunocompetent humans, the subsequent expansion of pathogen-specific T-lymphocyte populations results in the evolution of granulomas where the infection is contained but not eradicated. This condition where the infection continues to persist within the host at a subclinical level has been termed latent tuberculosis infection. 10% of individuals who are latently infected with *M. tb* will undergo reactivation of *M. tb* infection leading to active disease whenever their immune system gets compromised. A clear understanding of the host immune cell functions will greatly aid in the successful development of a vaccine or an immunomodulatory agent; that can be given as an adjunct to prevent active TB. We invite investigators to contribute original research articles as well as review articles that will stimulate the continuing efforts to characterize and understand the host immune responses against *M. tb* infection. We are particularly interested in the following: articles on cutting-edge research on innate and cell-mediated immune responses against *M. tb* infection in humans; novel findings from the *in vivo* studies performed in experimental animals that are relevant to human TB; advances in the discovery of immunomodulatory agents that can enhance the host immune responses to effectively control M. tb infection; and new insights on vaccine discovery.

Potential topics include, but are not limited to:

- Characterization of the effector mechanisms that are responsible for controlling *M. tb* infection in human macrophages
- Elucidating the functions of T-helper subset populations of CD4 T cells (Th1, Th2, Th17, and T-regs) against *M. tb*infection
- Latest breakthroughs in understanding the role of dendritic cells in TB
- Functions of cytokines and chemokines in modulating the host immune responses against *M. tb* infection
- Role of neutrophils in *M. tb* infection
- Recent advances in understanding the functions of natural killer cells against *M. tb* infection
- Progress made in understanding the roles of natural killer T cells and CD8 T cells in *M. tb* infection
- Major headway in the development of vaccine against *M. tb*
- Discovery of novel immunomodulatory agents that can be potentially used as an adjunct to prevent TB

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/jir/mct/.

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