Special Issue

T Cell Immunity in Coronavirus Infection: Mechanisms, Dysregulation, and Therapeutic Targets

Message from the Guest Editor

Coronavirus infection induces activation of acute and chronic immune responses, to both of which T cells, both innate (such as gammadelta-T cells, NK T cells and ILCs) and adaptive (alphabeta-T cells) subsets, make indispensable contributions. T cell-mediated protective effects can be realized by secreting anti-viral cytokines or immune cell-recruiting chemokines, killing infected cells, as well as regulating inflammation caused by infection. Compared to virus-specific antibodies, virus-specific T cells recognize conserved epitopes of virus, thus favoring the elimination and control of immune-escaping variants, such as SARS-CoV-2 variants of concern. On the other hand, dysregulated T cell-mediated responses may lead to excessive tissue damage and represent potential targets for treating immunopathology caused by coronavirus infection, especially in highly susceptible populations, such as the elderly and those with co-morbidities. Clarifying the role of T cells and their effects during both acute and chronic phase of coronavirus infection is still in urgent need for developing next-generation strategy to prevent and treat coronavirus infection-associated diseases.

Guest Editor

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