Special Issue

The Molecular Basis of Immunotherapy in Cancer Treatment

Message from the Guest Editor

Immunotherapy has revolutionized cancer treatment, bringing hope for better results in many tumors, while further research and refining are needed to meet its limits. Immunotherapy uses the immune system's sophisticated molecular systems to target and eradicate cancer cells. The efficacy of these treatments is based on a thorough understanding of the immune system's components, the molecular biology of immune cell function, cancer cell evasion methods, and their interconnections. Immunotherapy works through a variety of processes, including immune checkpoints and T cell activation, tumor antigens and antigen presentation, CAR-T cell therapy, monoclonal antibodies, immune evasion mechanisms, cytokines, and immunomodulation. These therapies alter biological processes to defeat cancer's evasion strategies and restore the immune system's ability to attack the disease effectively. In this Special Issue, we intend to collect research on the molecular basis of immunotherapy and its challenges. We welcome original research, reviews, and perspective articles describing in vivo, in vitro, and in silico studies. We look forward to receiving your contributions.

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Message from the Editor-in-Chief

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