Special Issue

Vaccines Targeting the Tumor Microenvironment: Challenges and Future Prospects

Message from the Guest Editors

Immunotherapies integrating immune checkpoint inhibitors represent the current standard of care in many forms of solid cancer, yet they effectively treat only a minority of patients and are leveraged by the prerequisite for the presence of tumor-reactive T/B cells. To augment levels of therapeutic immune effector cells, active vaccination approaches are warranted as priming regimens prior to the administration of ICI or for inclusion in combination intervention protocols to improved patient outcomes. Although cancer vaccines have traditionally targeted tumor cell-associated antigens, the TME can enforce altered epigenetic programming in stromal cell populations including CAFs, vascular pericytes/mural cells, vascular endothelial cells and others, providing a diverse array of TME-associated antigens capable of being differentially recognized by the adaptive immunity. In this Special Issue, we welcome the submission of articles focused on cutting-edge vaccine-based approaches to improve the host response to cancer when applied as monotherapies or in combination with alternate immunotherapies such as ICI, TME conditioning agents, adoptive (T/CAR-T) cell therapies, or others.

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Vaccines (ISSN 2076-393X) has had a 6-year history of publishing peer-reviewed state of the art research that advances the knowledge of immunology in human disease protection. Immunotherapeutics, prophylactic vaccines, immunomodulators, adjuvants and the global differences in regulatory affairs are some of the highlights of the research published that have shaped global health. Our open access policy allows all researchers and interested parties to immediately scrutinize the rigorous evidence our publications have to offer. We are proud to present the work and perspectives of many to contribute to future decisions concerning human health.

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