



antibodies



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CAR-T Cell Metabolism

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Message from the Guest Editor

CARs are genetically engineered receptors containing distinct modules, including single chain variable fragments that collectively confer antigen specificity, signal transduction, metabolic reprogramming, and effector function. Previously, we showed how the metabolic properties of T cells can be dynamically regulated by emphasizing signaling and metabolic pathways downstream of the CAR. While CAR-T cells redirected against CD19 provide durable responses in several B cell malignancies, the success of CAR-T cells in solid tumors has been limited. The metabolic nature of solid tumor environment has been implicated as an important factor impeding CAR-T cell effector function. Competition for nutrients in solid tumors provides a barrier to CAR-T cell therapies as antigen-stimulated CARTs can't overcome the energy cost to proliferate and differentiate into functionally-competed effector cells with cytolytic activity. This Special Issue aims to highlight advanced approaches to confer distinct metabolic attributes to CAR-T cells providing resistance to metabolic checkpoints in the solid tumor environment.



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Special Issue



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Message from the Editor-in-Chief

Antibodies is a relatively new journal with a major focus on quick dissemination of knowledge related to antibodies, especially how to quickly translate basic research results to therapeutic applications. Because it covers all areas related to antibodies unexpected connections between different areas could be made, leading to major discoveries and opening new fields of research and development. This is enhanced by the large readership of the many antibody-related areas of research. A specific priority area is human monoclonal antibodies for therapy of diseases and aging.

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