

Research profile for applicants

Name of DKFZ research division/group:	<i>Immune Regulation in Cancer (D250)</i>
Contact person:	<i>Dr. Chong Sun</i> <i>c.sun@dkfz.de +49 622143432</i>
Group homepage: <i>Visit this website for further information on current research and recent publications.</i>	<i>https://www.dkfz.de/en/krebs-immunregulation/index.php</i>

RESEARCH PROFILE AND PROJECT TOPICS

Our laboratory investigates the interplay between T cells and tumors, focusing on the molecular mechanisms that compromise T cell-mediated immune responses to tumors, a critical component of antitumor immunity. Specifically, insufficient T cell trafficking into tumors, compromised T cell activation, and tumor cell resistance to T cell cytotoxicity collectively contribute to immune evasion in cancer and limit the effectiveness of T cell-based immunotherapies. Our primary objective is to systematically identify and understand the molecular mechanisms that contribute to these processes in the tumor microenvironment or intrinsically within T cells.

To achieve our objective, we use physiologically or clinically relevant cell and mouse models to recapitulate the individual processes that compromise antitumor T cell immunity, including T cell trafficking, modulation of T cell functions, and tumor cell response to T cell attack. We then employ or develop function-based genomic methods, such as genetic and chemical screening, in combination with biochemical and cell biological tools to systematically identify and comprehend the molecular determinants underlying these individual processes. Finally, we evaluate the translational potential of our findings using in vivo and ex vivo tumor models.

Our aim is to contribute to the understanding of molecular and cellular mechanisms that regulate antitumor T cell responses and bridge the gap between basic research and clinical translation, thus facilitating the development of more effective therapeutic strategies for cancer immunotherapy.

We are seeking a postdoctoral researcher with a strong background in immunology, molecular cell biology, bioinformatics or related fields, and a proven track record of scientific accomplishments. The postdoctoral researcher will have the opportunity to work in a supportive and collaborative environment, further develop their skills, and advance their career.

Prospective candidates who meet these criteria are enthusiastically encouraged to reach out to Dr. Sun for further information about the projects.



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