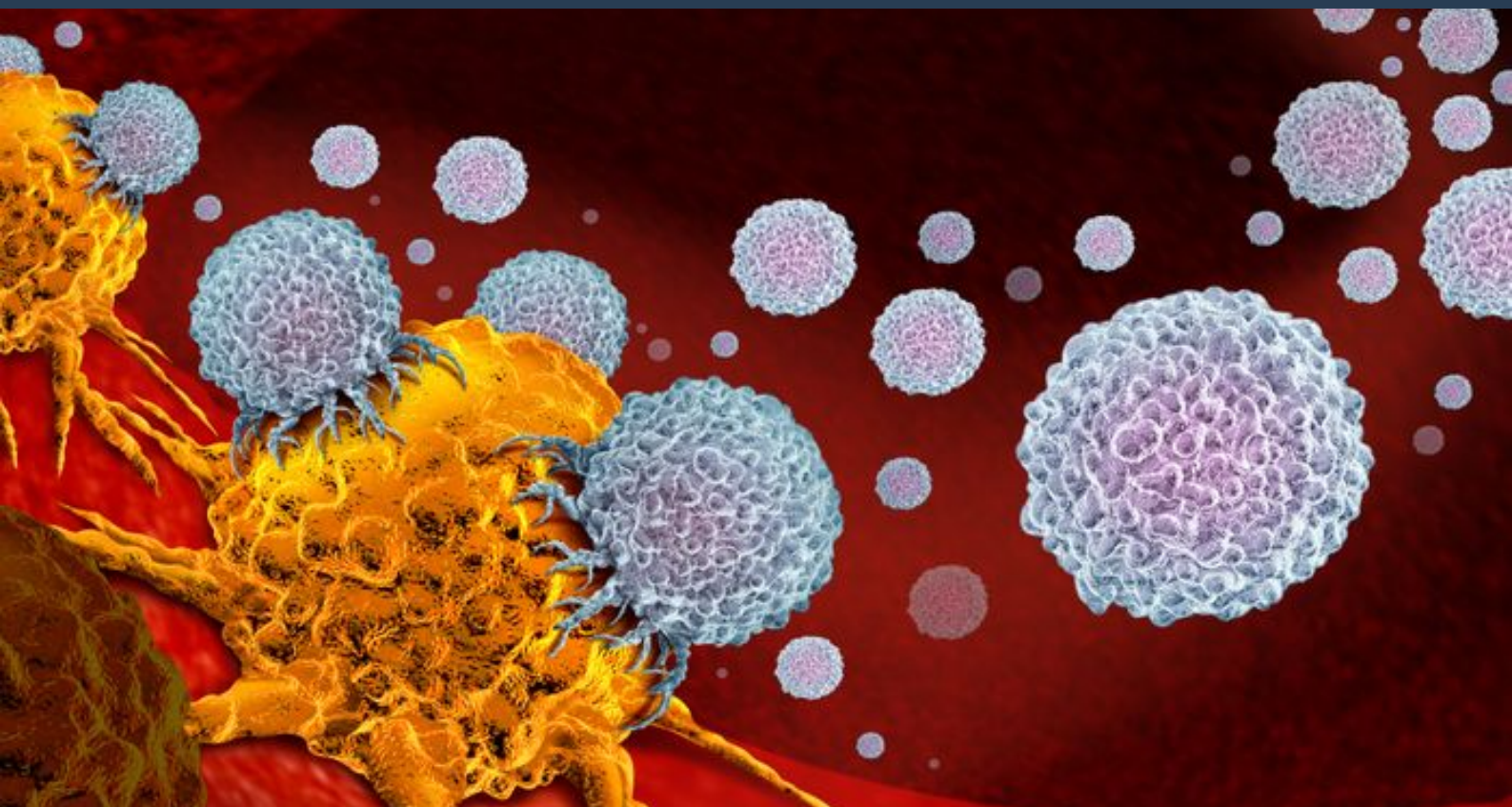


Enabling Technologies for Cellular Therapies of Solid Cancer Entities

Platform technologies tackling the critical hurdles of cell therapy in solid tumors: access to tissue, immune suppression, cell recognition

Reference: Cellular Therapies



Please note, header image is purely illustrative. Source: freshidea, stock.adobe.com

IP Status

Patent application submitted

Seeking

Development partner

About **LMU Munich**

Ludwig-Maximilians-Universität München is the University in the heart of Munich. LMU is recognized as one of Europe's premier academic and research institutions. The LMU Munich community is engaged in generating new knowledge for the benefit of society at large.

Background

Cell therapies have so far failed to demonstrate efficacy outside of haematological entities. This has been ascribed to critical hurdles that are not found in blood borne cancer which are:

1. Access of T cells to tumor tissue;
2. Immune suppression and
3. Cancer cell recognition.

This is in sharp contrast to technologies that have been so far explored in the space in relation to haematological oncology where most of the efforts went into the identification of target structures and receptor design. LMU Munich have developed platforms that allow researchers to address these critical limitations for efficient cellular therapies.

Tech Overview

LMU Munich researchers have developed different strategies that allow access of T cells to solid tumor tissues. One of the strategies they have been following is the use of chemokine receptors matching gradients released by tumor cells and their surroundings. Equipment with such chemokine receptors allows targeted redirection of T cells to tumor tissue, increased infiltration, and thereby enhanced efficacy with enhanced safety potential.

One of the pilot candidates is CXCR6 which is currently being patented and more candidates and strategies of recruitment have been filled or are in development but not yet released. Approaches to relieve immune suppression and for ameliorated tumor-targeting are currently under development but are not yet released.

Further Details

- doi: 10.1016/j.semcancer.2019.11.004
- doi: 10.1038/s41416-018-0341-1
- doi: 10.3389/fimmu.2018.01955
- doi: 10.1080/2162402X.2015.1105428
- doi: 10.1093/jnci/djv146
- doi: 10.1093/jnci/dju364
- doi: 10.1158/1078-0432.CCR-18-3927

Stage of Development

For most of the above mentioned strategies, the researchers have already generated proof-of-concept *in vitro* and *in vivo* in various animal models including patient-derived models.

Benefits

- Enables cell therapy in solid tumor entities
- Allows T cell access to tumor sites
- Relieves immune suppression
- Ameliorates tumor cell recognition and discrimination

Applications

- Solid cancer entities such as pancreatic, breast or lung cancer
- As stand-alone or in combination with technologies (such as targeting receptors) of potential partners

Opportunity

The university is looking for partnering opportunities.

Patents

- Patent application submitted. Contact TTO for further information.

For further information, please contact us.

Ludwig-Maximilians-Universität München (LMU Munich)

Office for Research and Technology Transfer

- Corporate Partnerships -



Dr. Barbara Blaurock

+49(0)89 2180-722 13



Dr. Laura Gerwin

+49(0)89 2180-722 12

corporatepartnerships@lmu.de

www.lmu.de/researchservices/corporatepartnerships/