TAC T CELL THERAPY, FOR THE TREATMENT OF GASTRIC CANCER

PRECLINICAL STUDIES OF TAC01-CLDN18.2, AN AUTOLOGOUS CLAUDIN 18.2-DIRECTED

**ABSTRACT**

**Background**

Claudin 18.2 (CLDN18.2) is a transmembrane protein that is expressed in tight junctions of normal tissues and is dysregulated in gastric cancer. CLDN18.2 is a target for T-cell receptor (TAC) therapy, and TAC01-CLDN18.2 is the lead candidate in development. This presentation will provide an overview of the TAC01-CLDN18.2 platform, including preclinical data from solid tumor models and highlight the versatility of the TAC platform for therapeutic applications in solid tumors.

**Materials and Methods**

CLDN18.2-TAC T cells were evaluated in vitro and in vivo. In vitro assays were performed by flow cytometry analysis of cell proliferation and surface antigen expression. Cytotoxicity assays were performed using cultured human cancer cell lines. In vivo studies examined the anti-tumor effects of TAC01-CLDN18.2 in various tumor models.

**Results**

CLDN18.2-TAC T cells showed specific anti-tumor activity against CLDN18.2-expressing gastric cancer cell lines. In vivo, TAC01-CLDN18.2 T cells demonstrated the ability to eradicate a variety of solid tumors, including gastric cancer, leading to complete and sustained tumor clearance, even when the tumors were resistant to standard therapies. These results demonstrate the potential of CLDN18.2-TAC T cells as a treatment for solid tumors.

**Conclusion**

The in vitro and in vivo data confirm the specificity and efficacy of TAC01-CLDN18.2 T cells against CLDN18.2-expressing solid tumors and highlight the potential of the TAC platform for solid tumor treatments.

**TAC SCIENCE**

The membrane-bound TAC receptor complex directly binds to the CD11a/CD18 co-receptor domain and...