AFM13 enhances the anti-tumor activity of AB-101 towards CD30+ tumors, conferring tumor growth control in vivo.

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BACKGROUND

- The efficacy of allogeneic natural killer (NK) cell immunotherapies can be enhanced by addition of tumor-targeting bispecific antibodies.1,2
- Bispecific Innate Cell Engager (ICE®) molecules bind to CD16A on NK cells and a tumor cell-surface antigen, inducing NK cell-mediated antibody-dependent cellular cytotoxicity (ADCC).3
- AFM13, a CD30/CD16A ICE®, is designed to target CD30+ malignancies such as Hodgkin lymphoma (HL) by significantly enhancing the cytotoxic activity of CD16A+ NK cells towards CD30+ tumor cells.4,5
- In a Phase 1 clinical study (NCT04074746), the recommended Phase 2 dose of AFM13 in combination with adoptive NK cell transfer achieved an unprecedented objective response rate of 94%, and a complete response (CR) rate of 71%, in 35 heavily pre-treated patients with CD30+ HL and non-Hodgkin lymphoma; of the patients with at least six months follow-up after the initial infusion (n=24), 63% remained in CR for over 6 months or more.6

OBJECTIVE

To investigate if the combination of AFM13 with AB-101 leads to enhanced anti-tumor activity in vitro and in vivo.

RESULTS

AFM13 + AB-101: MECHANISM OF ACTION

AFM13 acts by binding CD30 on tumor cells and CD16A on AB-101 NK cells, redirecting and potentiating NK cell-mediated ADCC.4

AFM13 + AB-101: MECHANISM OF ACTION

AFM13 + AB-101

RESULTS

AFM13 saturated CD16 on AB-101 after cryopreservation

AFM13 saturated CD16 on AB-101 after cryopreservation

AFM13 + AB-101

CONCLUSIONS

- The combination of AFM13 with AB-101 has the potential to synergistically improve and direct the anti-tumor cytotoxic activity of AB-101 towards CD30-expressing tumor cells
- Building on the clinical data with fresh cord blood-derived stimulated/expanding NK cells combined with AFM13 (NCT04074746), co-administration of AFM13 with cryopreserved AB-101 offers a promising, highly scalable off-the-shelf treatment for patients with CD30+ malignancies

Investigational new drug status for the combination of AFM13 with AB-101 has been granted by the FDA for the combination of AFM13 with AB-101 has been granted by the FDA for

REFERENCES