CLN-418, a clinical-stage B7H4 x 4-1BB bispecific antibody with potential to treat patients with a wide range of solid tumors

Background

• CLN-418 is a fully human bispecific antibody optimized using Monoclonal Antibody Biomanufacturing Technology (CIATM). 
  • The antibody is highly potent and has a similar dissociation constant (Kd) to 4-1BB and B7H4 expressing cells.
  • CLN-418 has demonstrated preclinical activity in multiple solid tumor models.
• CLN-418: a Potential First-in-Class B7H4 x 4-1BB Bispecific Antibody

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Results

Figure 2: Surface B7H4 expression on human solid tumor cell lines

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- **References:**
  1. Patrick A. Baeuerle1,3, Jennifer S. Michaelson1
  1. Cullinan Oncology, Cambridge, MA, USA. 2. Harbour BioMed, Shanghai, China. 3. Institute for Immunology, Ludwig Maximilians University, Munich, Germany.

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Figure 3: 3T4H and 4-1BB are expressed across multiple solid tumor indications

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- **Figure 4:** CLN-418 shows specific high-affinity binding to B7H4 and 4-1BB proteins, as well as dual binding between B7H4 and 4-1BB expressing cells to form a trimeric complex.

- **Figure 5:** CLN-418 promotes B7H4-dependent 4-1BB engagement and T cell activation

- **Figure 6:** CLN-418 exhibits robust dose-dependent single-agent efficacy against 4-1BB expressing cancers

Conclusions

- **Figure 5:** CLN-418 promotes B7H4-dependent 4-1BB engagement and T cell activation

- **Figure 6:** CLN-418 exhibits robust dose-dependent single-agent efficacy against 4-1BB expressing cancers

- **Table 1:** CLN-418 monotherapy controls growth of a B7H4-positive human carcinoma in PBMC-engrafted mice.

- **Table 2:** CLN-418, urelumab or IgG1, and tumor growth was measured in tumors s.c. and randomized into groups (n=8 mice/group) on C57BL/6-h4-1BB mice.

- **Figure 7:** CLN-418 demonstrates potent preclinical activity in multiple solid tumor models.

- **Figure 8:** CLN-418 exhibits robust, dose-dependent single-agent efficacy against 4-1BB expressing tumors.

- **Figure 9:** CLN-418 demonstrates potent preclinical activity in multiple solid tumor models.

- **Table 3:** CLN-418, urelumab or IgG1, and tumor growth was measured in tumors s.c. and randomized into groups (n=8 mice/group) on C57BL/6-h4-1BB mice.

- **Table 4:** CLN-418 demonstrates potent preclinical activity in multiple solid tumor models.

- **Table 5:** CLN-418, urelumab or IgG1, and tumor growth was measured in tumors s.c. and randomized into groups (n=8 mice/group) on C57BL/6-h4-1BB mice.

- **Conclusion:** CLN-418 is a promising bispecific antibody with potential to treat patients with a wide range of solid tumors.