Introduction

AFM13 is a first-in-class tetravalent, bispecific NK cell engager that binds to CD30 on tumor cells and CD16A on NK cells. By engaging CD16A on NK cells, AFM13 leads to NK cell mediated killing of tumor cells. Pembrolizumab (Pembrolizumab) is approved in patients with R/R classical Hodgkin lymphoma as monotherapy. AFM13 showed single agent clinical activity with solid safety profile in a Phase 1 study. Pre-clinical in vivo data of the combination of AFM13 with PD1-FOG showed synergistic activity and the potential for induction of cross-talk between innate and adaptive immunity. Based on these findings, we conducted a Phase 1b study evaluating the safety and tolerability of AFM13 in combination with pembrolizumab in patients with R/R Hodgkin lymphoma.

Methods

- Study design: 7+3 dose escalation design with 3 dose escalation cohorts (C) and an extension cohort (EC) of up to 24 patients (pts)
- Primary objectives:
  - Maximum tolerated dose (MTD) determination
- Secondary objectives:
  - Safety/tolerability
  - Anti-tumor activity
  - PK profile evaluation
- Study assessments:
  - Response, Characteristics
- PK profile evaluation
- Safety population

Efficacy

- Patients: Efficacy analysis included best response amongst all 30 pts (intent to treat, ITT)
- Overall response: 60% ORR by both investigator and independent assessments at the highest dose treated/treated chosen for expansion
- Complete response rate: 42% by investigator and 48% by independent assessments at the highest dose treated/treated chosen for expansion
- ITT: 60% ORR for the ITT population that included dose escalation cohorts (C1 & C2) by both investigator and independent assessments

Conclusions

- The combination of AFM13 and pembrolizumab is well tolerated, with most common AE being IRBs that are mostly mild to moderate in nature and manageable with standard of care measures
- Deepening of responses over time was observed in multiple patients, and patients who were previously transplant ineligible transplanted to transplant after achieving an objective response
- At the highest treated dose, the ORR of 88% and CR rates of 42% and 46% by local and independent assessments, respectively, compare favorably to the historical data of pembrolizumab in a similar patient population, with the CR rate approximately double that of pembrolizumab.
- The combination of AFM13 with pembrolizumab is a promising regimen for patients with relapsed/refractory Hodgkin lymphoma.