Abstract #TPS32: Exploratory phase I study of HF1K16 for the treatment of patients with refractory/recurrent advanced glioma

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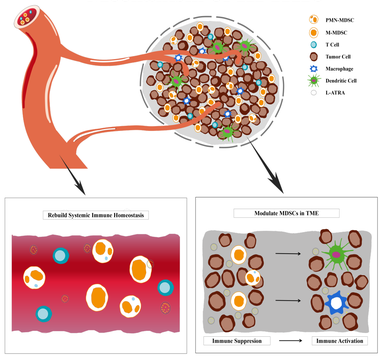
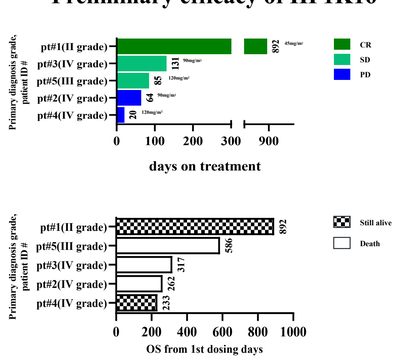
BACKGROUND

- Very few therapies had been approved for the treatment of recurrent glioma for over the past two decades, emphasizing the need for novel treatments.
- GBM tumors are well-accepted to be a immunosuppressive and a hallmark of GBM immunosuppression is the appearance of circulating myeloid-derived suppressor cells (MDSCs) at higher levels.
- Our preliminary data suggests that HF1K16, a liposome ATRA (all trans retinoic acid) suspension, is capable of relieving immune suppression induced by MDSCs.
- A recently completed a phase I dose escalation study which showed that HF1K16 is safe, well-tolerated.
- 5 recurrent glioma patients involved in escalation study showed a encouraging preliminary efficacy.

Mechanism of HF1K16



Preliminary efficacy of HF1K16

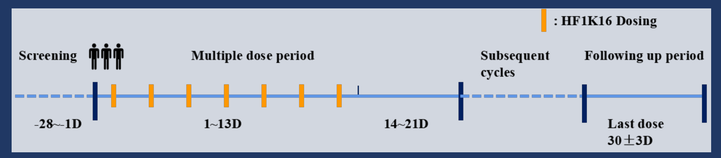


The dual effect of HF1K16 targeting MDSCs and sustainably HF1K16 release lead to rebuilding of systematic homeostasis and tumor microenvironment. These support its re-purposed and expanded application in cancer immunotherapy.

METHOD

This is an advanced glioma-specific expansion arm for adult patients with prior confirmed brain tumor and failed standard treatment. We plan to enroll 20~30 evaluable patients. HF1K16 infusions were administered in 21-day cycles (q.o.d days 1-14). Prior to and during treatment, peripheral blood mononuclear cells were collected and analyzed with flow cytometry to monitor the changes in myeloid cell phenotype and T cell composition. The recruitment of patients is anticipated completed in 2024.

DOSING REGIMEN



OBJECTIVES AND ENDPOINTS

PRIMARY OBJECTIVES	SECONDARY OBJECTIVES
• Determination of overall response rate (ORR) according to RANO criteria	• To assess the changes in MDSC after HF1K16 treatment, including changes in MDSC number
• Duration of response (DOR)	• Incidence of Adverse Events
• disease control rate (DCR)	• To assess the changes in MDSC after HF1K16 treatment, including changes in MDSC phenotype
• progression-free survival (PFS).	

KEY ELIGIBILITY

KEY INCLUSION CRITERIA

- Male or female, 75 yrs ≥ age > 18 yrs
- Diagnosed with glioma by histology, and relapsed or progressed after previous treatment.
- At least one lesion that can be measured in two dimensions is required (RANO criteria)
- Karnofsky physical fitness score ≥ 60
- Expected lifetime > 12 weeks

KEY EXCLUSION CRITERIA

- Ongoing immunosuppresive therapy
- Systemic corticosteroids (≥10 mg/day prednisone, or other equivalent corticosteroids) for 7 consecutive days within 14 days of the first dose
- Evidences of serious or uncontrolled systemic disease
- Serious liver and kidney function damage
- Brain MRI not available
- Uncontrolled epilepsy
- Clinical significance of cardiovascular disease
- Severe osteoporosis or with bone metastases with serum 25-hydroxyvitamin D assay values less than 50 nmol/L

Reference:

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