**FPT155-001: A Phase 1a/b Study of FPT155 (CD80-Fc) in Patients with Advanced Solid Tumors**

**Introduction**

- Despite recent advances in immunotherapy, including checkpoint inhibitors such as PD-L1 and CTLA-4 antibodies, treatment of patients with selected tumor types experience durable clinical benefit at low rates for multiple immunotherapies targeting one or more TCR-expressed antigens.

- Combination designs involve the development of multiple targeting pathways, expanding on the TCR complex and through co-expressing multiple cytokines and costimulatory ligands. Due to potential pathologic crosstalk, it is important for the co-expressed antigens to be expressed on professional antigen presenting cells such as dendritic cells and activated macrophages.

- In vivo, TCR engagement with PD-L1 acts as a constitutive signal to enhance PD-L1 expression with increased co-expression of either PD-L1 or CD80 resulting in a more pronounced T cell activation.

- FPT155 alone demonstrated a tumor regression in the context of endogenous CD80 activation. However, in combination with CD80, FPT155 enhanced anti-tumor activity, suggesting an additional interaction with its receptor, CD28, expressed on T cells. In addition to signaling via CD28, FPT155 also binds to CTLA-4, preventing it from mediating co-inhibition and indirectly, in the context of endogenous CD80 and PD-L1, FPT155 demonstrates that FPT155 must be co-presented with TCR stimulus to activate T cells.

**FPT155-001: An ongoing phase 1a/b study of FPT155 in patients with advanced solid tumors.**

**Objectives**

- **Primary objectives**
  - To assess the safety and tolerability of FPT155 in non-melanoma patients with advanced solid tumors
  - To determine the RD of FPT155 as monotherapy

- **Secondary objectives**
  - To evaluate the clinical efficacy of FPT155 in non-melanoma patients with advanced solid tumors
  - To evaluate the immunotherapeutic activity of FPT155 in non-melanoma patients with advanced solid tumors

**Study Design**

- **Phase 1a Dose Escalation**
  - Up to 30 patients total enrolled at one or more dose levels
  - Cohort 1aM1: 0.70 mg/kg, Cohort 1aM2: 2.1 mg/kg, Cohort 1aM3: 7.0 mg/kg
  - Cohort escalation criteria:
    - DLT must be documented in first 28 days
    - Minimum anticipated biologic effect level (MABEL) approach used to select safe starting dose

- **Phase 1b Expansion**
  - 30 patients in each cohort
  - Up to 6 tumor-specific cohorts

**Key Exclusion Criteria**

- Disease that is unresectable, locally advanced, or metastatic and has progressed following all standard treatments or is not appropriate for standard treatments
- Prior treatment with a CTLA-4 antagonist, including ipilimumab or tremelimumab
- Availability of archival tumor tissue and consent to provide archival tumor for retrospective biomarker analysis, or consent to undergo a fresh tumor biopsy during screening

**Emphasis Criteria**

- Morphometric parameters and recent and historical factors as defined in the protocol

**Summary**

- FPT155 is a humanized CD80-Fc fusion protein engineered to activate T cells through multiple pathways
- The murine surrogate (FPT155) has potent anti-tumor activity in multiple murine tumor models
- FPT155 does not have TCR-independent superagonist activity and does not elicit a cytokine release response
- FPT155-001, a Phase 1b/1 study of FPT155 in patients with advanced solid tumors, is ongoing
- Open for enrollment in Australia with planned expansion into South Korea
- Planned expansion in the United States for Phase 1b

**A Marine Serogroup, FPT155: Induces Tumor Regressions at Low Dose**

**FPT155 Promotes a Favorable Tumor Immune Contexture**

- Robust effector T cell infiltration is observed in CT26 tumors after two doses of mFPT155 at 0.3 mg/kg.
- T cells frequently infiltrate into drug treated tumors.
- Combination of FPT155 with anti-PD1 agent synergistically enhances tumor growth control. The combination achieved a complete remission in CT26 tumors in a murine model.
- No mFPT155 was administered during the second challenge.

**FPT155-001**

- A soluble CD80 fusion protein is being developed for the treatment of solid tumors.
- FPT155 is being developed to enhance the antitumor activity of immune checkpoint inhibitors by activating T cells and reducing regulatory T cells.
- FPT155 has the potential to synergize with other immunotherapies and standard treatments to improve clinical benefit.
- A need exists for more efficacious immuno-oncology approaches that are well-tolerated.

- FPT155-001 is an ongoing phase 1a/1b study of FPT155 in patients with advanced solid tumors.

- FPT155, a soluble CD80 fusion protein, is being developed for the treatment of solid tumors.
- FPT155, demonstrating that FPT155 must be co-presented with TCR stimulus to activate T cells.
- The Stebbings assay format predicts the cytokine release syndrome (CRS) induced in patients by mFPT155 alone.
- FPT155-001-001 is an ongoing phase 1a/1b study of FPT155 in patients with advanced solid tumors.
- FPT155-001 demonstrates tumor regression at low doses.

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