SRF617, a potent enzymatic inhibitor of CD39, demonstrates single-agent activity and cooperates with various cancer therapies in both solid tumor and hematologic malignancies


Surface Oncology, Inc., Cambridge, MA, USA

Figure 1: SRF617 treatment inhibits xenograft tumor growth and combines with various chemotherapies

Figure 2: SRF617 treatment inhibits xenograft tumor growth and combines with various chemotherapies

Figure 3: SRF617 treatment inhibits xenograft tumor growth and combines with various chemotherapies

Figure 4: Vx26102 (Mouse Surrogate Ab) inhibits mouse CD39 and increases Anti-PD-1 Efficacy

Conclusions

- CD39 protein expression in the TME is predominantly found on TILs and stroma
- SRF617 has single-agent activity in CD39-expressing human xenograft tumors
- SRF617 inhibits CD39 enzymatic activity in tumors
- SRF617 potentiates the activity of chemotherapy and immunotherapy agents to improve tumor growth inhibition and survival
- The murine CD39-specific inhibitor antibody, Vx26102, modulates CD39 activity in vivo and has modest single-agent activity in subcutaneous CT-26 tumors
- Blocking CD39 activity with Vx26102 increases the efficacy of PD-1 blockade in vivo
- SRF617 is currently being evaluated in a Phase 1 clinical trial: NCT04336098

Poster #6639

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Background

- Accumulation of extracellular adenosine in the TME is an important mechanism of tumor immune evasion
- The degradation of immunogenic ATP and rapid conversion of ATP to adenosine depends on the concerted activity of the ectonucleotidases CD39 and CD73, respectively
- Blockade of CD39 activity may be an effective approach to limit ATP degradation and prevent adenosine accumulation in the TME

SRF617 is a fully human CD39 antibody that prevents ATP hydrolysis and has the potential to ameliorate the immunosuppressive TME caused by reduced extracellular ATP and elevated adenosine

CD39 Expression (% pos)

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Figure 4: Vx26102 is a mIgG1 antibody that binds to muCD39 and inhibits enzymatic activity. Binding to Vx26102 is cell-surface-dependent and inhibits muCD39 enzymatic activity. Binding to Vx26102 is cell-surface-dependent and inhibits muCD39 enzymatic activity. Binding to Vx26102 is cell-surface-dependent and inhibits muCD39 enzymatic activity. Binding to Vx26102 is cell-surface-dependent and inhibits muCD39 enzymatic activity.