AB598 is a novel humanized monoclonal antibody under development by Arcus Biosciences as a solid tumor immuno-therapy targeting the enzymatic activity of CD39 (ENTPD1).

CD39 is widely expressed in the tumor microenvironment, where inhibition of CD39 enzymatic activity promotes anti-tumor immune responses by increasing the immunostimulatory substrate ATP and decreasing the formation of the product AMP, a precursor to immunoinhibitory adenosine.

Anti-CD39 treatment can be combined with immunogenic chemotherapy to increase intratumoral levels of ATP and further enhance immune responses.

The data presented herein show that AB598 can stimulate myeloid cells to promote anti-tumor immunity.

**INTRODUCTION**

**AB598 Potently Binds Cell Surface CD39**

**AB598 Promotes ATP-Dependent Dendritic Cell Maturation and Macrophage Inflammation Activity**

**RESULTS**

**AB598 Treatment Blocks Extracellular ATP in Combination With Oxlaplatin**

**CONCLUSIONS**

**AB598 binds primary human monocytes and B cells with sub-nanoliter affinity independently of ATP concentration.**

**AB598 increases the immunogenic effect of ATP on monocyte-derived dendritic cells and macrophages to increase co-stimulatory molecules and pro-inflammatory cytokine production.**

**In vitro, AB598 increases the extracellular concentration of ATP in AB598-treated tumor cells upon treatment with immunogenic chemotherapy.**

**Analysis of RNA expression from the TCGA suggests that ATP-induced immunostimulation has the potential for broad application in solid tumors.**

**Taken together, these data show that inhibition of CD39 with AB598 in combination with an immunogenic cell death inducing agent is a potential therapeutic for the treatment of several solid tumor types.**

**CONTACT**

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