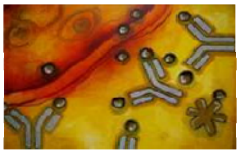

KALOBIOS PHARMACEUTICALS

KB004 (Anti-EphA3) Program Fact Sheet

Humaneered® Antibody Targeting EphA3 for the Treatment of Cancer

KB004 TARGETS HEMATOLOGIC MALIGNANCIES, SOLID TUMORS, AND THEIR STEM CELLS

KB004 is a first-in-class, monoclonal antibody targeting the EphA3 receptor tyrosine kinase, a cell surface expressed oncofetal antigen expressed across a range of tumors. KaloBios is currently conducting a Phase 2 expansion study of a Phase 1/2 study, which is enrolling patients with myelodysplastic syndrome (MDS) and myelofibrosis (MF). The company is also evaluating additional indications, including solid tumors, in which to initiate clinical trials.

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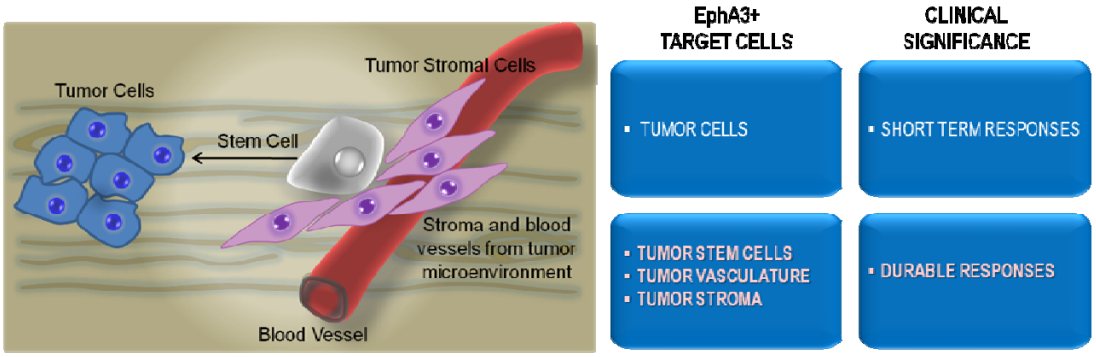
Anti-EphA3 is Designed to Selectively Disrupt the Cancer Stem Cell Niche in Solid Tumors and Hematologic Malignancies



Targeting the tumor niche may be important for achieving durable anti-tumor responses

KB004 PRODUCT DESCRIPTION

Created using KaloBios' proprietary Humaneered® technology, KB004 is a human IgG1, non-fucosylated monoclonal antibody optimized to target EphA3 positive tumor cells and tumor associated cells for destruction. The Humaneered® antibody is expected to have little to no immunogenicity upon repeat administration given that its v-region sequences are close to those of the human germ-line. EphA3 is a tyrosine kinase receptor aberrantly expressed on B, T and myeloid neoplasms, and certain solid tumors. It is upregulated on tumor cells, including stem cells, tumor stromal cells, and tumor neovasculature, but not on normal cells or normal bone marrow stem cells.

KB004 has a unique mechanism of action. Upon binding to EphA3, KB004 causes cell killing to occur either through antibody-dependent cell-medicated cytotoxity (ADCC) or direct apoptosis, and in the case of tumor neovasculature through cell rounding and blood vessel disruption. KB004 is unique in its potential to attack tumors at their source by killing tumor stem cells, tumor stromal cells that protect them, and the vasculature that feeds them; all of which have been shown to express EphA3. In the setting of hematologic malignancies, this unique combination of activities may provide the potential to generate durable responses by directly killing the tumor cells as well as disrupting the tumor stem cell environment. KB004 may have a similar mechanism of action in patients with solid tumors where EphA3 expression has been shown to be a indicator of poor prognosis

PRECLINICAL DATA: ANTI-TUMOR ACTIVITY DEMONSTRATED

EphA3 expression has been documented in a number of tumor types, including acute myeloid leukemia (AML), chronic myelogenous leukemia (CMML), chronic lymphocytic leukemia (CLL), myelodysplastic syndrome (MDS), myelofibrosis (MF), multiple myeloma (MM), melanoma, breast, non-small cell lung cancer (NSCLC), colorectal, gastric, renal, glioblastoma (GBM), and prostate. Recent publications in GBM, colon, prostate, hepatocellular, and gastric cancers indicate that EphA3 tumor cell expression correlates with cancer growth and a poor prognosis. In NSCLC, mutations in EphA3 appear to correlate with increased tumor growth. To date, anti-EphA3 treatment has shown encouraging preclinical results in multiple experiment types, including patient primary tumor cell assays, colony forming assays, and xenograft mouse models. In a mouse model of pre-B-ALL, anti-EphA3 delayed bone marrow colonization by human tumor cells and delayed spread to blood and spleen. In a patient derived xenograft (PDX) model of AML in SCID/NOD mice, dosing with anti-EphA3 showed anti-tumor activity. In mouse models of solid tumor growth anti-EphA3 has shown strong anti-tumor activity by either direct tumor cell targeting or by targeting tumor blood vessels and stroma. Activity of anti-EphA3 in solid tumor xenograft studies in mice in combination with chemotherapy has also been demonstrated. No major safety issues have been observed in these studies or in IND enabling toxicology studies.

CLINICAL DEVELOPMENT: PHASE 2 ONGOING

KaloBios has completed enrollment in the open-label, Phase 1 dose escalation portion of a Phase 1/2 study (KB004-01) of KB004 in hematologic malignancies which was designed to evaluate safety and pharmacokinetics with the objective of determinining a possible maximum tolerated dose (MTD). This portion of the study enrolled a total of 50 patients with hematologic malignancies regardless of EphA3 tumor expression, including patients with heavily pretreated MDS, MF, and AML, with 80% of patients enrolled being late-stage AML patients. In this evaluation, the drug was safe and well tolerated with the most commonly reported drug-related side effect being infusion reactions. No MTD was reached and a 250mg dose was selected for further evaluation in the Phase 2 portion of the study. Signs of activity were also seen and the Phase 2 is now enrolling to further characterize safety and evaluate prelimary activity in patients with MDS or MF. KaloBios has also developed a CLIA validated assay that is currently in use for screening subjects for EphA3 expression prior to entry into the Phase 2 portion of this study.

For additional information about the our clinical trial, including eligibility criteria, please visit www.clinicaltrials.gov.

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