GVHD TREATMENT FOR CANINES

Canine Anti–ICOS Antibody for the Treatment of Chronic GVHD

Brief Description of Technology

Monoclonal antibody against ICOS significantly increase survival of canines with chronic graft vs. host disease [GVHD].

Technology Overview

In canines, lymphoma comprises up to 24% of all canine cancers. Hematopoietic cell transplantation [HCT] is increasing in popularity as a treatment for lymphoma, however there is a significant risk of graft-versus-host disease [GVHD] as a result. The Storb lab developed a model system for producing chronic GVHD in canines given HCT and have identified an anti-canine ICOS monoclonal antibody which significantly extends canine survival [Figure 1]. Progression of chronic GVHD in canines was halted or even completely eliminated after treatment with anti-ICOS. This antibody can be used as a therapeutic for GVHD treatment in canines.

Applications

- Canine GVHD therapeutic
- Research tool

Figure 1. Anti-ICOS extends survival of canines with GVHD. Two groups of canines given DLA non-identical HCT were evaluated for the time between diagnosis of chronic GVHD and euthanasia. In the control group (n=8), canines were untreated during this period aside from antibiotic and fluid support. In the anti-ICOS-treated group (n=5), canines received either one or two courses IV of anti-canine ICOS consisting of three injections each of anti-ICOS iv at 4 mg/kg, days 0, 3, 6. The difference in the survival periods of the two groups was significant [two tailed Student’s T test p<0.028].