Background
- Dry eye (keratoconjunctivitis sicca) is a common ocular disease in dogs that leads to discomfort and vision loss. In addition to their ability to differentiate into a variety of cell types, mesenchymal stem cells (MSCs) have been proven to have immunomodulatory capabilities that reduce inflammation. Since the most common cause of dry eye in dogs is an immune-mediated inflammatory response targeted against tear producing glands, this study is designed to determine if treatment with MSCs will cause local, long-term control of tear gland inflammation and dry eye.

Participation Requirements
- Confirmed diagnosis of dry eye
- Tear production that is well controlled on tear-stimulating medication (e.g., cyclosporine or tacrolimus)
- Free of serious systemic diseases

Procedures
- A serial Schirmer tear test will be performed, which is a minimally invasive procedure to measure tear production.
- A minor surgical procedure during which a small sample of fat is obtained from the abdomen. We will harvest stem cells from this fat sample.
- Under sedation, the stem cells will be injected around the lacrimal and third eyelid gland.

Owner Responsibilities
- You will need to bring your dog in at the requested appointments and re-evaluations, which may be weekly prior to and immediately following stem cell injection. Re-examination intervals will be extended based on response to therapy.

Benefits
- The study covers the examinations, ophthalmic medications and study procedures, so there is no cost to the owner.
- If the stem cell injection is successful, we will treat the other eye with stem cells at no cost to the owner.
- If MSCs injected into the tear producing glands of dogs with immune-mediated dry eye results in increased tear production, this procedure may remove the need for life long topical medications.