Choroidal Neovascularization Model (CNV)

Introduction / Background
CNV and retinal neovascularization are characterized by the creation of new blood vessels in the choroid and retinal layers of the eye and are common symptoms of age-related macular degeneration (AMD).

Experimental Procedure:
CNV Induction
Animals were anesthetized and additional topical ocular anesthesia was utilized during the procedure as necessary.

CNV was induced by laser photocoagulation treatment on Day 1. An external diode laser was applied to the retina using a laser contact lens and a slit-lamp biomicroscope. Both eyes of each animal underwent laser photocoagulation. Following laser treatment, VEGF solution was injected intravitreally into each eye. Topical application of antibiotic ointments was applied after CNV induction surgery. Avastin was administered by intravitreal injection on Day 5.

OCT Imaging and Statistical Analysis
Clinical ophthalmic exams, optical coherence tomography (OCT), fundus photography, and fluorescein angiography were performed prior to the study as a baseline, and then weekly for 4 weeks post-induction. The area of each lesion was measured and analyzed using the Heidelberg Spectralis OCT software. Statistical analysis was performed on the lesion measurements for each eye over the course of the study to evaluate differences among the groups.

Conclusions
The observations, lesion size measurements, and statistical analysis demonstrate that Avastin was efficacious in reducing CNV lesion size throughout the course of the study. There were no adverse side effects as a result of the test article treatment.

Benefits
• Optimal induction of choroidal and retinal neovascularization
• More accurate evaluation of the test article's treatment of CNV due to treated and untreated control groups
• Consistent scoring of the eyes using FDA-required techniques
• Advanced imaging equipment and expertise in-house to perform all evaluations on-site.
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