Corneal Wound Healing

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Type of Model
Evaluation of corneal wound healing drugs and devices

Test System
Rabbit

Time
Up to 5 – 7 Days

Study Purpose

Evaluate efficacy and safety of pharmaceuticals and drug-eluting devices designed to treat corneal epithelial defect.

Deliverables

- Clinical Ophthalmic Exams (slit lamp biomicroscopy and ophthalmoscopy) using a modified McDonald-Shadduck scoring system
- Evaluation of wound healing using fluorescein staining images
- Digital photographs to bench mark healing process
- Analysis of wound areas to quantitatively measure wound healing
- Histopathological analysis

Model Description

- Epithelial defect created in the center of the cornea with alcohol
  - *Epithelium removed using Gill corneal knife or #15 Bard-Parker blade*
  - *Steroid treatment to maintain chronic condition*
- Epithelial defect created in the center of the cornea with NaOH (alkali burn)
- Removal of nictitating membrane (if applicable)

Benefits

- Trained scientists for consistent and accurate measurements
- Advanced ocular equipment and expertise in-house

Percent Change of Corneal Wound Healing

- Evaluation of fluorescein staining areas
- Treatment was efficacious in increasing the rate of corneal wound healing

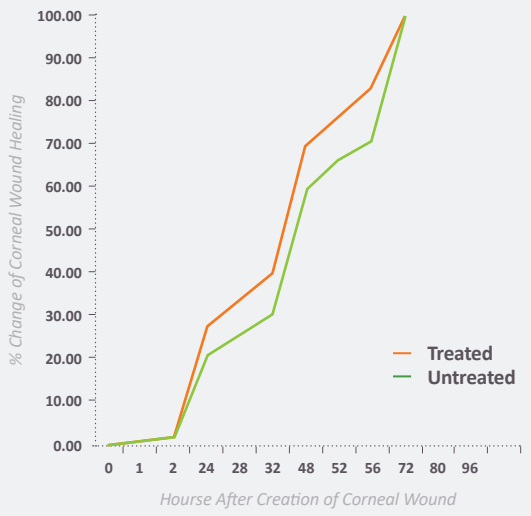

*Figure 1: Percent Wound Healing (OU) against the placebo. *p<0.05 **p<0.01 ***p<0.001*

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