DEVELOPMENT AND CLINICAL EXPERIENCE WITH SUPRACHOROIDAL INJECTION OF TRIAMCINOLONE ACETONIDE (CLS-TA) AS A LOCAL TREATMENT FOR NONINFECTIOUS UVEITIS

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PURPOSE
To review the efforts involved with suprachoroidal injection of CLS-TA in development of a potential local treatment for Non-infectious Uveitis from preclinical studies through early clinical development including Phase 1/2 and Phase 2 trials.

METHODS
Animal pharmacokinetic and pharmacodynamic data along with efficacy results from phase 1/2 and phase 2 clinical trials will be presented. In each of these human trials, a single suprachoroidal injection of triamcinolone acetonide (TA) (4.0mg/100 μL) was administered and a total of 25 subjects (phase 1/2 = 8 subjects, phase 2 = 17 subjects) were followed for 6 months and 2 months respectively.

CONCLUSIONS
• Suprachoroidal injection of CLS-TA as a potential treatment of noninfectious uveitis appears to show promise for further development on account of the selective distribution of the drug, along with the potential for improved efficacy and safety relative to other periocular and intraocular administration routes.

• Four of 8 patients did not receive any additional treatment through the 6-month study. Mean improvements were similar to those seen in the phase 2 trial with >10 letters in BCVA and 154 μm reduction in CST by OCT.

PHASE TWO RESULTS
• Mean reduction from baseline in macular edema (ME) was 164 μm (p=0.0017) at month 2.
• Mean improvement from baseline in visual acuity (VA) was 9.2 letters (p=0.0004) at month 2.
• Mean twenty percent (20%) reduction is 105 microns.

PRECLINICAL RESULTS
• Preclinical data from a three-month ocular distribution study in rabbits has shown higher amounts of drug accumulating in the choroid and retina following suprachoroidal injection (by 1200%) compared to an intravitreal injection.

• The same study has shown relative sparing of the vitreous and anterior segment including lens (ranging from below quantification levels in the anterior chamber to 4% in the vitreous) when compared to drug distribution levels following an intravitreal injection.

• Twenty-two (22) patients were randomized into high and low dose arms
• 17 patients received 4.0 mg (High Dose Arm) and 5 patients received 0.8 mg (Low Dose Arm)
• All patients completed the study; No patients discontinued

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