

## ARVO

**Title:** Novel Okra Polysaccharide Approach to Inflammation Control for Dry Eye

**Laymen Abstract:**

Dry eye affects millions of people in the US and countless more worldwide. Despite its name, dry eye is due to an underlying inflammatory process that originates from the eyelid margin, a condition called meibomian gland dysfunction. It's the chronic inflammation, similar to what occurs with a paper cut, that leads to the sensation of grittiness, tearing, blurry vision, and pain, which can severely affect work and daily activities. There is no cure for dry eye and current treatments are limited by cost, side effects, and effectiveness. Artificial tears generally do not last for more than a few minutes. Some drugs like steroids and antibiotics produce too many negative side effects – glaucoma, diarrhea, light sensitivity. Other prescription drugs are costly and can take weeks to months to produce any improvements.

There is now a novel approach to dry eye that produces immediate and long-lasting dry eye relief using a natural okra-based polysaccharide approach for inflammation control. In a study by Dr. Scott Schachter, 9 patients were treated with this okra-based technology called Zokrex and their subjective dry eye symptoms were assessed before and two hours after treatment. The results of this study were statistically significant. The average SPEED score before treatment was 11.3, which indicates severe dry eye symptoms. After treatment, the SPEED score improved to 0.7, or minimal if any dry eye symptoms. Perhaps there's more to okra than meets the eye.

**Purpose:** Dry eye is generally a chronic inflammatory condition involving the eyelid margin and meibomian glands. There are very few treatment options for dry eye that can provide immediate and lasting symptomatic relief beyond a few minutes. We performed an in-office eyelid debridement procedure using a novel okra-based polysaccharide gel to evaluate its effectiveness for dry eye relief as assessed by a Standard Patient Evaluation of Eye Dryness (SPEED) questionnaire.

**Methods:** Subjects with a SPEED score over 6 and who were 18 years or older were eligible for this study. Exclusion criteria included smoking, pregnancy, active ocular infection or intraocular inflammation, recent eye surgery within the previous 3 months, or prior isotretinoin use. SPEED scores were taken at baseline and at 2 hours following bilateral eyelid debridement using the ZocuKit™ System containing the okra-based polysaccharide gel.

**Results:** At baseline, the average SPEED score was 11.3. Two hours after ZocuKit eyelid debridement, the SPEED score improved to 0.7, with a P value of 0.0001.

**Conclusion:** Our results demonstrate a striking improvement in all treated subjects with moderate to severe dry eye symptoms using a novel okra-based polysaccharide approach for controlling inflammation at the eyelid margin. Further research will help to clarify how this natural okra-based approach can be used as a long-term therapy for dry eye and its role as adjunctive treatment for other types of interventional eye procedure like IPL, meibomian gland probing, pterygium and refractive surgeries.



