



The ALLEVIATE Phase 3 Allergic Conjunctivitis Clinical Trial of Topical Ocular Reproxalap, a Novel RASP Inhibitor

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Financial Disclosure

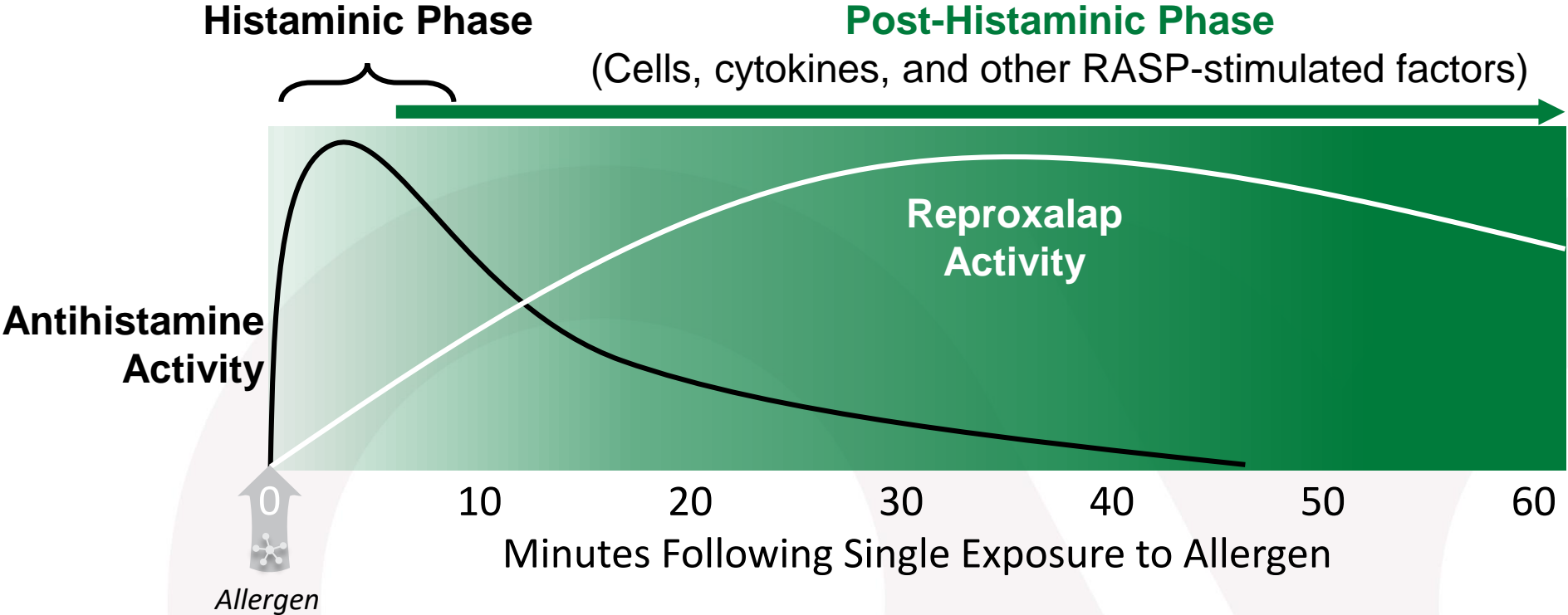
- Dr Clark is an employee of Aldeyra Therapeutics

Reproxalap: A Novel Drug Candidate for the Treatment of Ocular Inflammation

Positive ALLEVIATE Phase 3 Allergic Conjunctivitis Clinical Trial Results

- **Primary and key secondary endpoints achieved for 0.25% and 0.5% concentrations:**
 - Statistically significant improvement vs. vehicle ($p < 0.0001$ and $p = 0.0025$, respectively) on primary endpoint of ocular itch score area under the curve from 10-60 minutes after allergen challenge
 - Statistically significant improvement vs. vehicle ($p = 0.0005$ and $p = 0.0169$, respectively) on key secondary responder analysis of two-point improvement in ocular itch score (0-4 scale)
- **No observed safety or tolerability concerns**
- **Reproxalap 0.25% advanced to Phase 3 programs in allergic conjunctivitis and dry eye disease indications**

Novel Mechanism of Action has the Potential to Provide Differentiated Activity Versus Antihistamines



Reproxalap has the potential to be uniquely effective in post-histaminic allergy, which affects all allergic conjunctivitis patients

ALLEVIATE Phase 3 Allergic Conjunctivitis Clinical Trial Design

- **Primary objective:**

- Evaluate efficacy of reproxalap ophthalmic solutions (0.25% & 0.5%) compared to vehicle for the treatment of ocular itching associated with acute allergic conjunctivitis

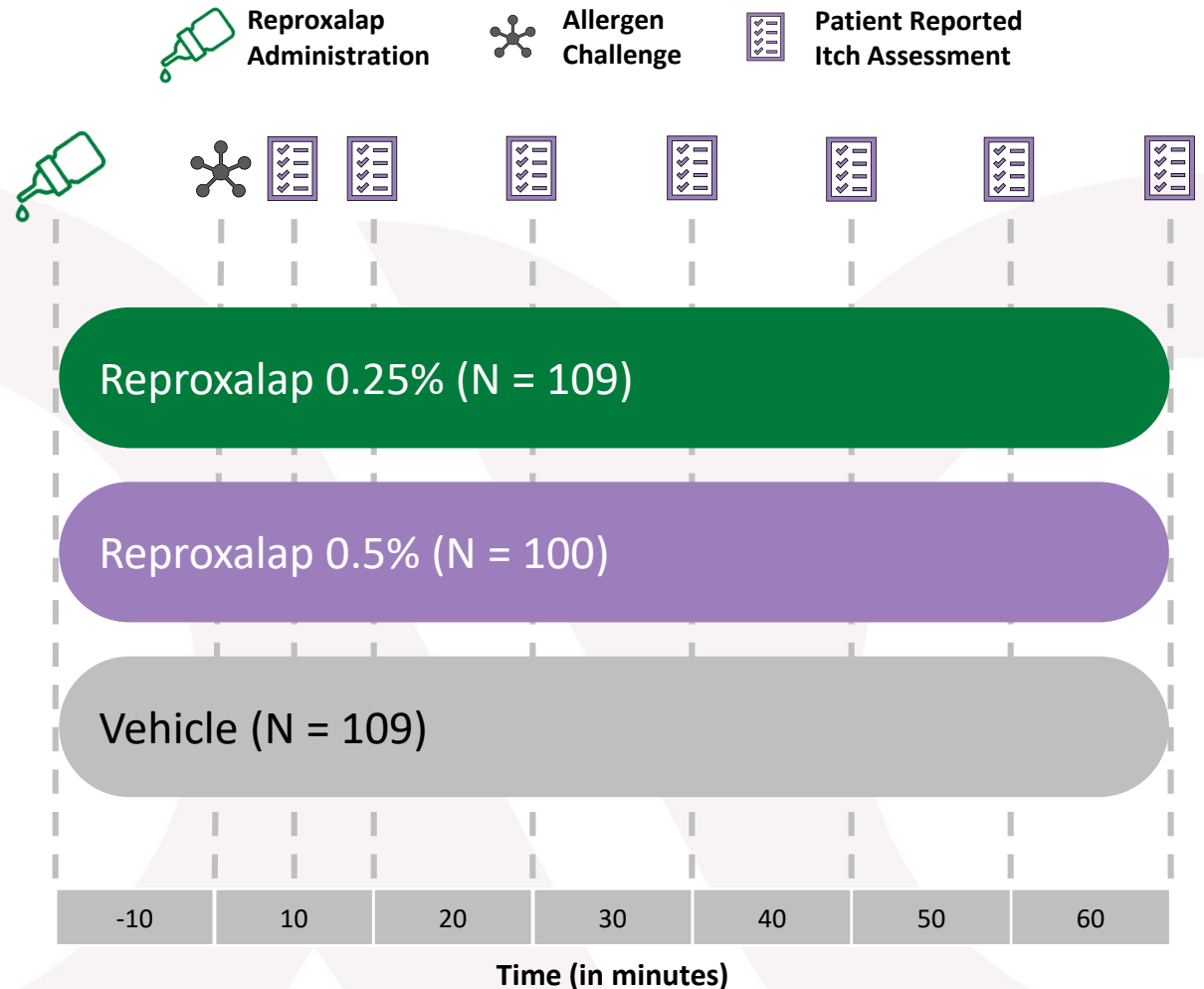
- **Inclusion/exclusion highlights:**

- Positive history of ocular allergies and positive skin test reaction to a seasonal allergen
- Positive bilateral conjunctival allergen challenge (CAC) ocular itch score (0-4 scale) reaction of ≥ 2.5 for itching and ≥ 2 for redness within 10 min of allergen instillation at first baseline visit
- Positive bilateral CAC reaction for at least two out of first three time points following challenge at second baseline visit

- **Endpoints:**

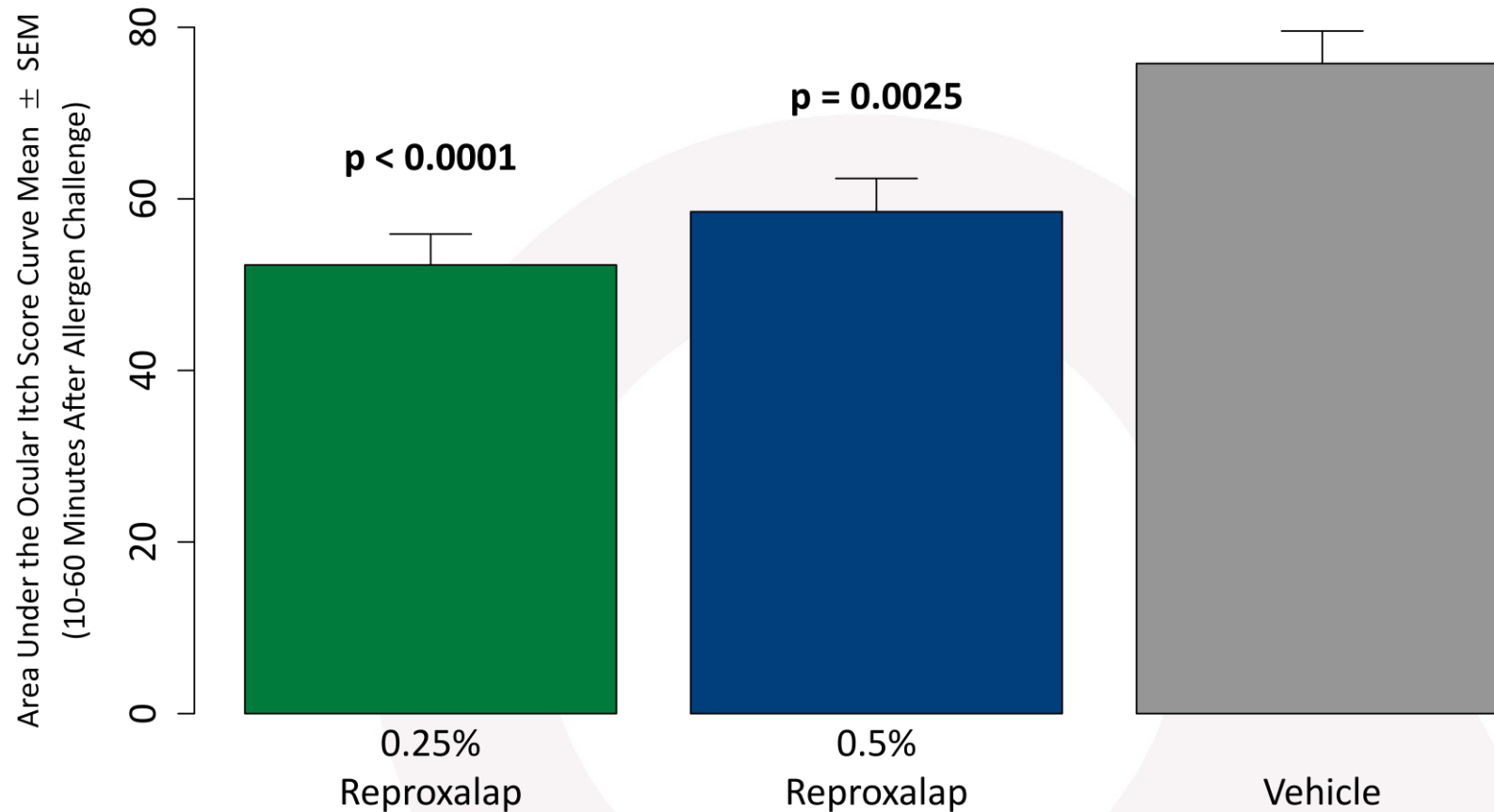
- Ocular itch score area under the curve (primary)
- Two-point responder comparison (key secondary) to assess clinical relevance

Phase 3 Conjunctival Allergen Challenge Trial



ALLEVIATE Primary Endpoint Achieved For Both Concentrations of Reproxalap

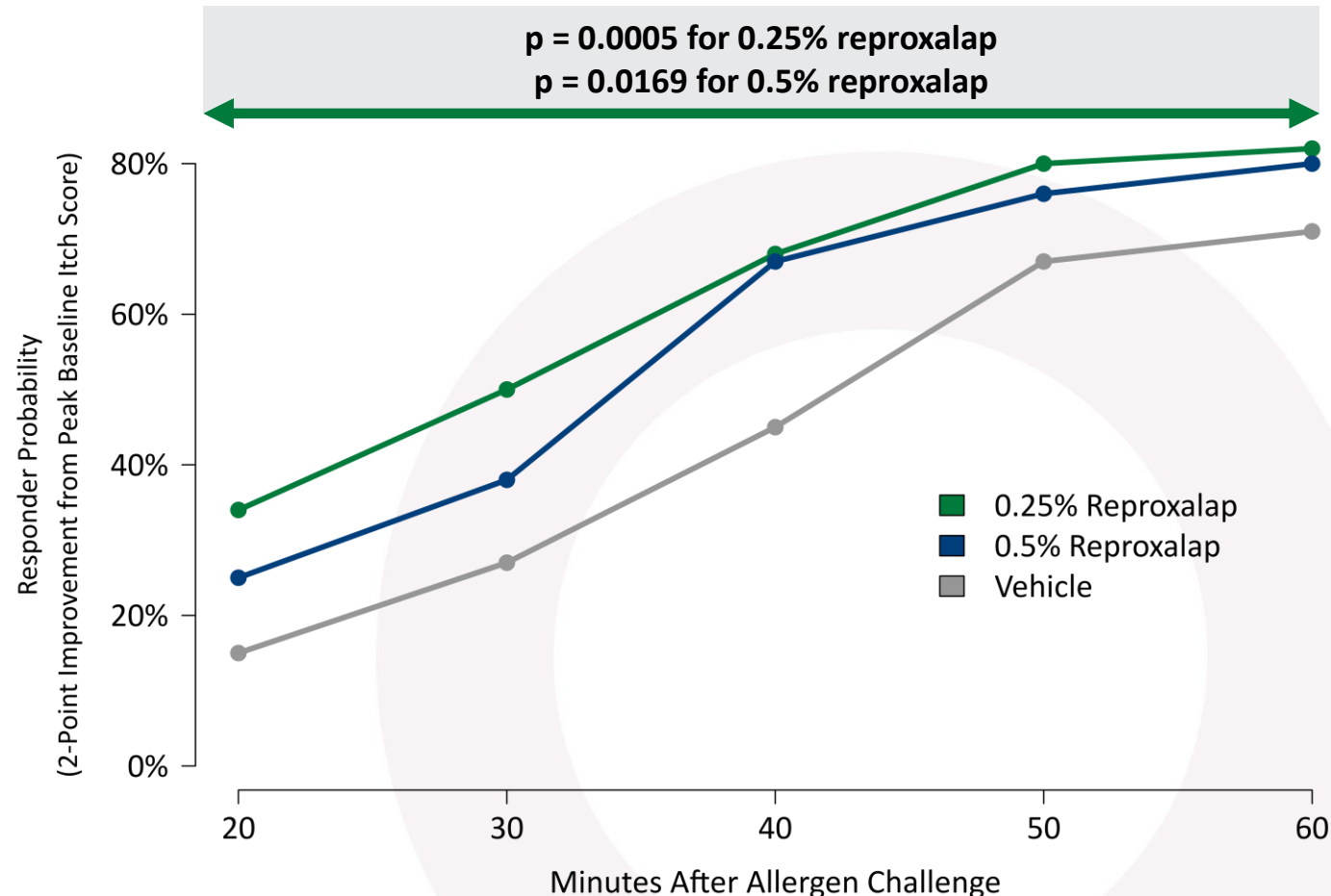
Area Under the Curve: Ocular Itch Score (0-4) 10 to 60 Minutes After Allergen Challenge



Improvement in itch score over one hour after allergen exposure statistically greater for reproxalap vs. vehicle

ALLEVIATE Key Secondary Endpoint Achieved For Both Concentrations of Reproxalap

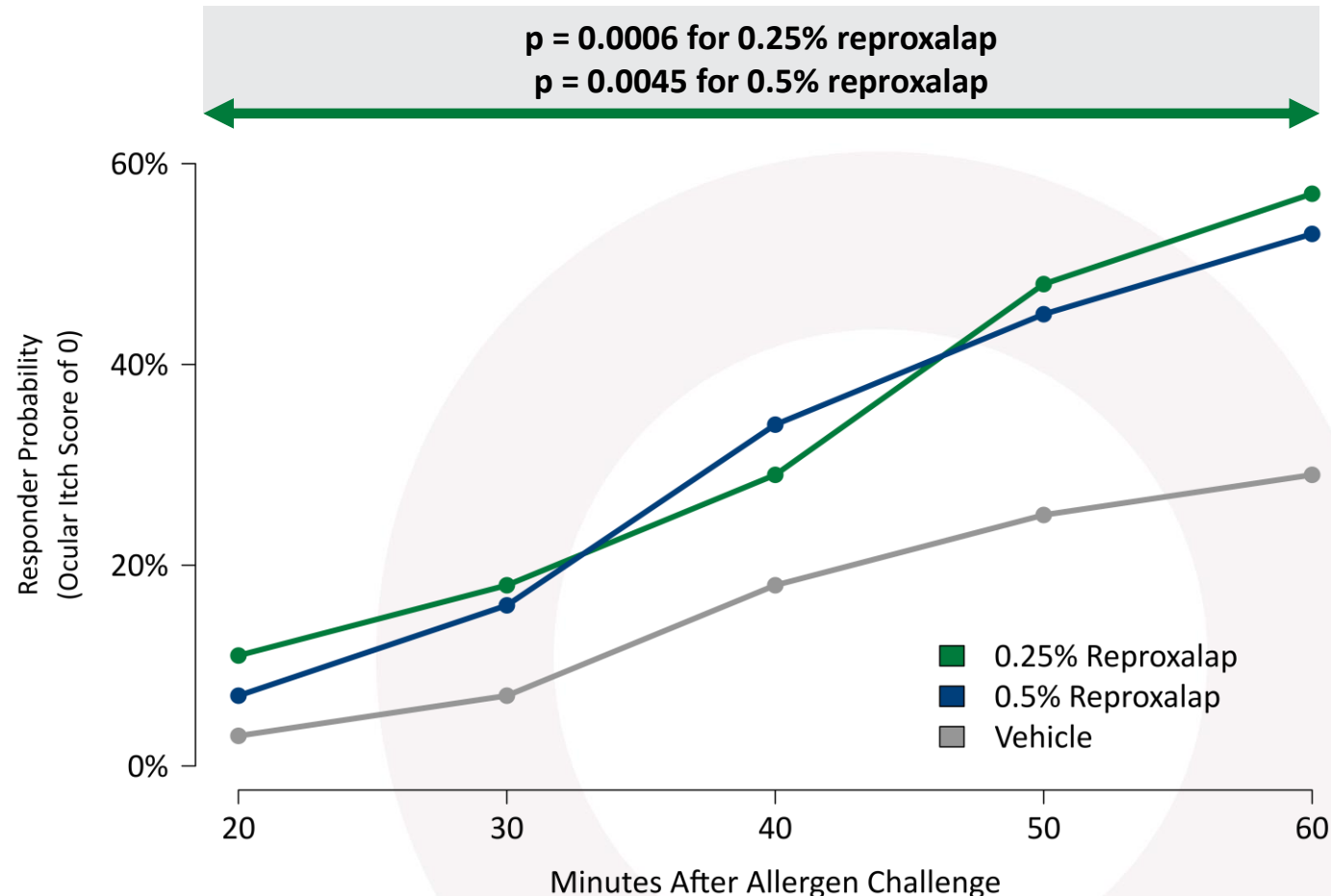
Probability of Two-Point Response: Ocular Itch Score (0-4)



Clinically significant two-point improvement of ocular itch response rate with reproxalap statistically superior to vehicle, supporting the clinical relevance of the primary endpoint improvement

In ALLEVIATE, Reproxalap Was Statistically Superior to Vehicle in Achieving Complete Resolution of Ocular Itch

Probability of Therapeutic Cure (Zero Itch) Post-Allergen Challenge:



Complete resolution of ocular itch (zero itch score) response rate with reproxalap statistically superior to vehicle, confirming clinical relevance of drug-mediated improvement

Topical Ocular Reproxalap: No Observed Safety Concerns and Generally Well Tolerated in ALLEVIATE

- Now administered to over 800 patients across ten completed clinical trials
- No observed safety or tolerability concerns
- No adverse events other than mild, transient instillation site irritation, consistent with prior reproxalap clinical trials
- No observed findings on safety assessments:
 - Visual Acuity (ETDRS chart)
 - Intraocular pressure (contact tonometry)
 - Slit lamp biomicroscopy
 - Dilated fundoscopy

Conclusions

Positive ALLEVIATE Phase 3 Allergic Conjunctivitis Clinical Trial Results

- Reproxalap is a novel immune-modulating reactive aldehyde species (RASP) inhibitor, which targets the post-histaminic allergic phase of allergic conjunctivitis
- ALLEVIATE is the first Phase 3 conjunctival allergen challenge trial to evaluate drug effect over one hour post challenge
- Primary and key secondary endpoints achieved in ALLEVIATE, demonstrating clinically relevant durable activity for both concentrations of reproxalap
- No observed safety or tolerability concerns
- Reproxalap 0.25% advanced to Phase 3 programs in allergic conjunctivitis and dry eye disease