

## Clinical Trial Protocol: ADX-102-DED-023

**Protocol Title:** The TRANQUILITY 2 Trial: A Multi-Center Randomized, Double-Masked, Parallel Design, Vehicle-Controlled Phase 3 Clinical Trial to Assess the Efficacy and Safety of 0.25% Reproxalap Ophthalmic Solution Compared to Vehicle in Subjects with Dry Eye Disease

**Protocol Number:** ADX-102-DED-023

**Study Phase:** 3

**Investigational Product Name:** 0.25% Reproxalap Ophthalmic Solution

**Indication:** Dry Eye Disease (DED)

**Investigator:** Multi-Center

**Sponsor/Contract Research Organization:** Aldeyra Therapeutics, Inc.  
131 Hartwell Ave.  
Lexington, MA 02421 USA

**IRB/IEC:**

Date	
<b>Amendment #2:</b>	18May2022

**Confidentiality Statement:** This protocol contains confidential, proprietary information of [REDACTED] Inc. and Aldeyra Therapeutics, Inc. Further dissemination, distribution, or copying of this protocol or its contents is strictly prohibited.

## SPONSOR PERSONNEL

	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]

\_\_\_\_\_

[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]

## MEDICAL MONITOR

--	--

**SYNOPSIS**

<b>Protocol Title:</b>	The TRANQUILITY 2 Trial: A Multi-Center Randomized, Double-Masked, Parallel Design, Vehicle-Controlled Phase 3 Clinical Trial to Assess the Efficacy and Safety of 0.25% -Reproxalap Ophthalmic Solution Compared to Vehicle in Subjects with Dry Eye Disease
<b>Protocol Number:</b>	ADX-102-DED-023
<b>Investigational Product:</b>	0.25% Reproxalap Ophthalmic Solution (reproxalap)
<b>Study Phase:</b>	3
<b>Primary Objective(s):</b>	To evaluate the efficacy of reproxalap, as assessed by conjunctival redness, Schirmer's Test, and symptoms after dosing prior to and during exposure to the [REDACTED] (CAE) in subjects with dry eye disease
<b><u>Overall Study Design:</u></b>	
<b>Structure:</b>	Multi-center, double-masked, randomized parallel design trial
<b>Duration:</b>	An individual subject's participation is estimated to be approximately 16-32 days.
<b>Controls:</b>	Vehicle Ophthalmic Solution (vehicle)
<b>Dosage/Dose Regimen:</b>	<p>Test article (reproxalap or vehicle) will be dosed topically in both eyes.</p> <p>Test article will be administered QID on Day 1 (Visit 2). On Day 2 (Visit 3), test article will be administered once within 10 minutes prior to the CAE entry, once 45 minutes after initiation of the CAE, and once at CAE exit.</p>
<b>Summary of Visit Schedule:</b>	<p>Three visits over the course of approximately 2 weeks:</p> <ul style="list-style-type: none"> <li>• Visit 1 = Day -14 -16/+2, Screening</li> </ul>

Subjects must not meet any of the following criteria:

	<ol style="list-style-type: none"><li>1. Clinically significant slit lamp findings at Visit 1 that may include active blepharitis, meibomian gland dysfunction (MGD), lid margin inflammation, or active ocular allergies that require therapeutic treatment, and/or in the opinion of the investigator may interfere with study parameters;</li><li>2. Diagnosis of an ongoing ocular infection (bacterial, viral, or fungal), or active ocular inflammation at Visit 1;</li><li>3. Contact lens use within 7 days of Visit 1 or anticipate using contact lenses during the trial;</li><li>4. Artificial tear eye drop use within 2 hours of Visit 1 or within 24 hours of Visit 2 (drops cannot be used on the day of Visit 2 or Visit 3);</li><li>5. Previous laser-assisted <i>in situ</i> keratomileusis (LASIK) surgery within the last 12 months;</li><li>6. Cyclosporine 0.05% or 0.09% or lifitegrast 5.0% ophthalmic solution use within 90 days of Visit 1;</li><li>7. Systemic corticosteroid or other immunomodulator therapy (not including inhaled corticosteroids) within 14 days of Visit 1 or any planned immunomodulatory therapy throughout the study period;</li><li>8. Planned ocular and/or lid surgeries over the study period or any ocular surgery within 6 months of Visit 1;</li><li>9. Temporary punctal plugs during the study that have not been stable within 30 days of Visit 1;</li><li>10. Use of and unwillingness to discontinue topical ophthalmic prescriptions (including medications for glaucoma) or over-the-counter (OTC) solutions (not including artificial tears), gels, or scrubs for the duration of the trial (excluding medications allowed for the conduct of the trial);</li><li>11. Corrected visual acuity greater than or equal to logarithm of the minimum angle of resolution</li></ol>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>(logMAR) + 0.7 as assessed by Early Treatment of Diabetic Retinopathy Study (ETDRS) scale in both eyes at Visit 1;</p> <p>12. Pregnancy, nursing, or planned pregnancy during the conduct of the trial;</p> <p>13. Unwillingness to submit a urine pregnancy test at Visit 1 and Visit 3 (or early termination visit) if of childbearing potential. (Non-childbearing potential is defined as a woman who is permanently sterilized [e.g., has had a hysterectomy or tubal ligation], or is post-menopausal [without menses for 12 consecutive months]);</p> <p>14. If of childbearing potential (female or male), unwillingness to use an acceptable means of birth control. (Acceptable methods of contraception include: hormonal – oral, implantable, injectable, or transdermal contraceptives; mechanical – spermicide in conjunction with a barrier such as a diaphragm or condom; intrauterine device [IUD]; or surgical sterilization of partner. For non-sexually active males or females, abstinence may be regarded as an adequate method of birth control; however, if the subject becomes sexually active during the study, he/she must agree to use adequate birth control as defined above for the remainder of the trial.);</p> <p>15. Known allergy and/or sensitivity to the test article or its components;</p> <p>16. A condition that the investigator feels may put the subject at significant risk, may confound the study results, or may interfere significantly with the subject's participation in the trial;</p> <p>17. Current enrollment in an investigational drug or device study or have used an investigational drug or device within 30 days of Visit 1;</p> <p>18. Use of reproxalap ophthalmic solution in the past year;</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>19. Current use of any medication known to cause ocular drying that is not used on a stable dosing regimen for at least 30 days prior to Visit 1;</p> <p>20. Inability or unwillingness to follow instructions, including participation in all study assessments and visits.</p>
<b>Study Formulations and Formulation Numbers:</b>	0.25% Reproxalap Ophthalmic Solution
<b><u>Evaluation Criteria:</u></b>	
<b>Primary Endpoints:</b>	<ul style="list-style-type: none"> <li>Schirmer's Test overall mean change from baseline (CFB) before and after the fourth dose on Day 1</li> <li>Schirmer's Test greater than or equal to 10mm responder analysis of change from baseline before and after the fourth dose on Day 1</li> </ul>
<b>Secondary Endpoints:</b>	<ul style="list-style-type: none"> <li>Overall mean CFB of Conjunctival Redness over 90 minutes in the CAE at Day 2</li> <li>Overall mean CFB of Eye Dryness (VAS; Visual Analog Scale) over 90 minutes in the CAE at Day 2</li> </ul> <div style="margin-left: 20px;"> </div>

	<ul style="list-style-type: none"> <li>• [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>■ [REDACTED]</li> </ul> <div style="margin-left: 20px;">[REDACTED] [REDACTED] [REDACTED]</div> <ul style="list-style-type: none"> <li>• Overall mean CFB of Conjunctival Redness over Days 1 and 2 (excluding CAE)</li> </ul>
Exploratory Endpoints:	<ul style="list-style-type: none"> <li>• Change in tear RASP levels before and after Dose 1 and 2 on Day 1 and Dose 3 on Day 2</li> <li>• Conjunctival redness, [REDACTED] [REDACTED] [REDACTED] and visual analog scale dryness score by time point during the CAE</li> </ul>
Safety Endpoints:	<ul style="list-style-type: none"> <li>• Visual acuity</li> <li>• Slit-lamp evaluation</li> <li>• Adverse event query</li> <li>• Intraocular Pressure (IOP)</li> <li>• Dilated fundoscopy</li> </ul>
General Statistical Methods and Types of Analyses:	

Statistical analyses will be detailed in the statistical analysis plan (SAP), which will dominate any statistical language herein. Any changes to protocol stated analyses will also be detailed in the SAP.

#### Multiplicity Considerations:

To control for multiplicity among primary and secondary endpoints, endpoints will be tested in a fixed sequence at a study-wide two-sided alpha level of 0.05. The primary and secondary endpoints will be tested in the fixed testing sequence as follows:

#### Primary Endpoint:

1. Schirmer's Test overall mean change from baseline (CFB) before and after the fourth dose on Day 1
2. Schirmer's Test greater than or equal to 10mm responder analysis of change from baseline before and after the fourth dose on Day 1

#### Secondary Endpoints:

3. Overall mean CFB of Conjunctival Redness over 90 minutes in the CAE at Day 2
4. Overall mean CFB of Eye Dryness (VAS; Visual Analog Scale) over 90 minutes in the CAE at Day 2
5. Overall mean CFB of Eye Dryness (VAS) assessed over Days 1 and 2 (excluding CAE)

[REDACTED]

[illegible]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

### Safety Analyses:

Safety endpoints will be summarized using descriptive statistics. For qualitative safety assessments, counts and percentages will be reported at the eye level and subject level, where appropriate. For quantitative safety assessments, endpoints will be summarized at the eye level using continuous summary statistics.

**Summary of Known and Potential Risks and Benefits to Human Subjects:**

Refer to Investigator's Brochure.

## TABLE OF CONTENTS

<b>Clinical Trial Protocol: ADX-102-DED-023</b>	<b>1</b>
<b>SYNOPSIS</b>	<b>3</b>
<b>TABLE OF CONTENTS</b>	<b>12</b>
<b>List of Abbreviations</b>	<b>15</b>
<b>1 INTRODUCTION</b>	<b>16</b>
<b>2 STUDY OBJECTIVES</b>	<b>17</b>
<b>3 CLINICAL HYPOTHESES</b>	<b>17</b>
<b>4 OVERALL STUDY DESIGN</b>	<b>18</b>
<b>5 STUDY POPULATION</b>	<b>19</b>
5.1 Number of Subjects (approximate)	19
5.2 Study Population Characteristics	19
5.3 Inclusion Criteria	19
5.4 Exclusion Criteria	20
5.5 Withdrawal Criteria (if applicable)	21
<b>6 STUDY PARAMETERS</b>	<b>21</b>
6.1 Primary Endpoint	21
6.2 Safety Endpoints	21
6.3 Secondary Endpoints	22
6.4 Exploratory Endpoints	23
<b>7 STUDY MATERIALS</b>	<b>23</b>
7.1 Study Treatment(s)	23
7.1.1 Formulations	23
7.1.2 Study Drug Packaging Configuration	23
7.1.3 Study Drug Storage and Accountability	23
7.1.4 Instructions for Dispensation, Use, and Administration	23
7.2 Other Study Supplies	24
<b>8 STUDY METHODS AND PROCEDURES</b>	<b>24</b>
8.1 Subject Entry Procedures	24
8.1.1 Overview	24
8.1.2 Informed Consent	24
8.1.3 Washout Intervals	24
8.1.4 Procedures for Final Study Entry	24
8.1.5 Methods for Assignment to Treatment Groups:	25
8.2 Concurrent Therapies	25
8.2.1 Prohibited Medications/Treatments	25
8.2.2 Escape Medications	25
8.2.3 Special Diet or Activities	25
8.3 Examination Procedures	25
8.3.1 Procedures to be Performed at the Study Visit with Regard to Study Objective(s)	25
8.4 Schedule of Visits, Measurements and Dosing	28

8.4.1	Scheduled Visits.....	28
8.4.2	Unscheduled Visits .....	29
<b>8.5</b>	<b>Subject Disposition .....</b>	<b>29</b>
8.5.1	Completed Subjects .....	29
8.5.2	Discontinued Subjects.....	29
<b>8.6</b>	<b>Study Termination .....</b>	<b>30</b>
<b>8.7</b>	<b>Study Duration .....</b>	<b>30</b>
<b>8.8</b>	<b>Monitoring and Quality Assurance .....</b>	<b>30</b>
<b>9</b>	<b>ADVERSE EVENTS .....</b>	<b>30</b>
<b>9.1</b>	<b>Adverse Event.....</b>	<b>30</b>
9.1.1	Severity .....	30
9.1.2	Relationship to Study Procedures .....	31
9.1.3	Expectedness.....	31
<b>9.2</b>	<b>Serious Adverse Events.....</b>	<b>32</b>
<b>9.3</b>	<b>Procedures for Reporting Adverse Events.....</b>	<b>33</b>
9.3.1	Reporting a Suspected Unexpected Adverse Reaction.....	33
9.3.2	Reporting a Serious Adverse Event .....	33
<b>9.4</b>	<b>Procedures for Unmasking Study Drug.....</b>	<b>34</b>
<b>9.5</b>	<b>Procedures for Reporting Adverse Events.....</b>	<b>34</b>
<b>10</b>	<b>STATISTICAL HYPOTHESES AND METHODS OF ANALYSES .....</b>	<b>34</b>
<b>10.1</b>	<b>Analysis Populations .....</b>	<b>34</b>
<b>10.2</b>	<b>Statistical Hypotheses.....</b>	<b>35</b>
<b>10.3</b>	<b>Sample Size .....</b>	<b>35</b>
<b>10.4</b>	<b>Statistical Analysis.....</b>	<b>35</b>
10.4.1	General Considerations .....	35
10.4.2	Unit of Analysis .....	36
10.4.3	Missing Data .....	36
10.4.4	Multiplicity Considerations .....	36
10.4.5	Primary Efficacy Analysis .....	37
10.4.7	Secondary Efficacy Analyses .....	39
10.4.8	Exploratory Efficacy Analyses .....	39
10.4.9	Safety Variables .....	39
<b>11</b>	<b>COMPLIANCE WITH GOOD CLINICAL PRACTICES, ETHICAL CONSIDERATIONS, AND ADMINISTRATIVE ISSUES.....</b>	<b>40</b>
<b>11.1</b>	<b>Protection of Human Subjects.....</b>	<b>40</b>
11.1.1	Subject Informed Consent.....	40
11.1.2	Institutional Review Board (IRB) Approval.....	40
<b>11.2</b>	<b>Ethical Conduct of the Study .....</b>	<b>40</b>
<b>11.3</b>	<b>Subject Confidentiality .....</b>	<b>40</b>
<b>11.4</b>	<b>Documentation.....</b>	<b>41</b>
11.4.1	Retention of Documentation.....	41
<b>11.5</b>	<b>Labeling, Packaging, Storage, Accountability, and Return or Disposal of Study Drug .....</b>	<b>41</b>
11.5.1	Labeling/Packaging.....	41
11.5.2	Storage of Study Drug .....	41

11.5.3	Accountability of Study Drug.....	42
11.5.4	Return or Disposal of Study Drug .....	42
<b>11.6</b>	<b>Recording of Data on Source Documents and electronic Case Report Forms (eCRFs).....</b>	<b>42</b>
<b>11.7</b>	<b>Handling of Biological Specimens.....</b>	<b>42</b>
<b>11.8</b>	<b>Publications.....</b>	<b>42</b>
<b>12</b>	<b>REFERENCES.....</b>	<b>43</b>
<b>Appendix 1:</b>	<b>Schedule of Visits and Measurements.....</b>	<b>44</b>
<b>Appendix 2:</b>	<b>Examination Procedures, Tests, Equipment, and Techniques .....</b>	<b>45</b>
<b>Appendix 3:</b>	<b>Amendment Summary of Changes Table.....</b>	<b>54</b>
<b>Appendix 4:</b>	<b>Sponsor and Ora Approvals .....</b>	<b>59</b>
<b>Appendix 5:</b>	<b>Investigator's Signature .....</b>	<b>60</b>

## List of Abbreviations

AE	adverse event
CFR	Code of Federal Regulations
DED	dry eye disease
DES	dry eye syndrome
DHHS	Department of Health and Human Services
ETDRS	Early Treatment of Diabetic Retinopathy Study
FDA	Food and Drug Administration
GCP	Good Clinical Practice
HIPAA	Health Information Portability and Accountability Act
ICF	informed consent form
ICH	International Council for Harmonisation
IEC	Independent Ethics Committee
IRB	institutional/independent review board
LogMAR	logarithm of the minimum angle of resolution
OTC	over the counter
RASP	reactive aldehyde species
SAE	serious adverse event
μL	microliter
VA	visual acuity
VAS	Visual analog scale

## 1 INTRODUCTION

Dry eye disease (DED) is the most prevalent form of ocular discomfort and irritation. The estimated population of individuals with mild to moderate DED ranges from 20 million Americans up to 1 out of every 5 Americans. DED can be related to external environmental factors such as low humidity in air-conditioned offices, winter heating, and dusty or windy outdoor environments. Behaviors including prolonged computer use and wearing contact lenses, and internal factors such as hormonal imbalance, autoimmune disease, systemic medications, anatomical changes, trauma, and aging are also contributors. Symptoms result in a mildly decreased quality of life at a minimum and, with increasing severity, loss of function and productivity, pain, light sensitivity, and emotional distress. The aging population in the United States and in other developing countries, and increasing computer use will continue to make DED more prevalent (Schaumberg et al, 2009).

Given that there are few substantive treatments for DED, various over-the-counter (OTC) products are available to help provide temporary relief for DED and for all of the tear film abnormalities. OTC products aim to alleviate symptoms by replacing or retaining moisture on the ocular surface. Additionally, some artificial tear products contain demulcents to enhance lubrication. OTC products provide only short-lived action at best necessitating frequent dosing throughout the day.

[REDACTED]

[REDACTED]

[REDACTED]

## **2 STUDY OBJECTIVES**

To evaluate the efficacy of reproxalap, as assessed by conjunctival redness, Schirmer's Test, and symptoms after dosing prior to and during exposure to the [REDACTED] (CAE) in subjects with dry eye disease.

## **3 CLINICAL HYPOTHESES**

The clinical hypothesis is that reproxalap is more effective than vehicle in reducing the signs and symptoms of DED.

## 4 OVERALL STUDY DESIGN

ADX-102-DED-023 is a Phase 3, multi-center, randomized, double-masked, parallel design, vehicle-controlled trial designed to evaluate the efficacy and safety of 0.25% Reproxalap Ophthalmic Solution compared to vehicle in subjects with dry eye disease. Approximately 350 subjects will be enrolled in the study. Male and female subjects at least 18 years of age with a subject-reported history of dry eye disease in both eyes and meeting all other eligibility criteria will be randomized to receive reproxalap or vehicle in a 1:1 ratio (approximately 150 subjects in each treatment group).

<p><b>Visit 1 (Day -14 -16/+ 2): Screening</b></p>	<ul style="list-style-type: none"> <li>• Informed Consent</li> <li>• Demographics, Medical/Medication &amp; Ocular History</li> <li>• Urine Pregnancy Testing (as needed)</li> <li>• Symptom Questionnaires, Ocular Dryness VAS, Visual Acuity</li> <li>• [REDACTED]</li> <li>• Slit Lamp Exam with Conjunctival Redness assessment</li> <li>• [REDACTED]</li> <li>• CAE exposure (90 minutes) with Ocular Dryness VAS, [REDACTED] and Conjunctival Redness Assessment</li> <li>• Slit Lamp Exam with Conjunctival Redness assessment</li> <li>• [REDACTED]</li> <li>• Schirmer's Test</li> <li>• IOP and Dilated Fundoscopy</li> </ul>
<p><b>Visit 2 (Day 1): Randomization/Baseline</b></p>	<ul style="list-style-type: none"> <li>• Medical/Medication Update: AE Query</li> <li>• Visual Acuity</li> <li>• Slit Lamp Exam</li> <li>• Symptom Questionnaires at specified time points</li> <li>• Conjunctival Redness at specified time points</li> <li>• In-Office Doses (QID)</li> <li>• Tear Collection &amp; Schirmer's Test at specified time points</li> </ul>
<p><b>Visit 3 (Day 2): CAE</b></p>	<ul style="list-style-type: none"> <li>• Medical/Medication Update: AE Query</li> <li>• Urine Pregnancy Testing (as needed)</li> <li>• Visual Acuity, Slit Lamp Exam</li> <li>• Symptom Questionnaires</li> <li>• Conjunctival Redness at specified time points</li> <li>• [REDACTED]</li> <li>• [REDACTED]</li> </ul>

	<ul style="list-style-type: none"><li>• CAE exposure (90 minutes) with Ocular Dryness VAS, and [REDACTED] and Conjunctival Redness Assessments</li><li>• Tear Collection at specified time points</li><li>• IOP and Dilated Fundoscopy</li><li>• Study Exit</li></ul>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## 5 STUDY POPULATION

### 5.1 Number of Subjects (approximate)

Approximately 600 subjects will be screened to enroll approximately 350 subjects across approximately 17 sites.

### 5.2 Study Population Characteristics

All subjects must be at least 18 years of age, be of either sex and of any race, have a subject-reported history of dry eye disease, and meet all of the inclusion criteria and none of the exclusion criteria.

### 5.3 Inclusion Criteria

Each subject **must meet each of the following criteria:**

1. 18 years of age (either gender and any race);
2. Ability to provide written informed consent and sign the Health Information Portability and Accountability Act (HIPAA) form;
3. Reported history of dry eye for at least 6 months prior to Visit 1;
4. Reported history of use or desire to use eye drops for dry eye symptoms within 6 months of Visit 1;

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## 5.4 Exclusion Criteria

**Each subject may not meet any of the following criteria:**

1. Clinically significant slit lamp findings at Visit 1 that may include active blepharitis, meibomian gland dysfunction (MGD), lid margin inflammation, or active ocular allergies that require therapeutic treatment, and/or in the opinion of the investigator may interfere with study parameters;
2. Diagnosis of an ongoing ocular infection (bacterial, viral, or fungal), or active ocular inflammation at Visit 1;
3. Contact lens use within 7 days of Visit 1 or anticipate using contact lenses during the trial;
4. Artificial tear eye drop use within 2 hours of Visit 1 or within 24 hours of Visit 2 (drops cannot be used on the day of Visit 2 or Visit 3);
5. Previous laser-assisted *in situ* keratomileusis (LASIK) surgery within the last 12 months;
6. Cyclosporine 0.05% or 0.09% or lifitegrast 5.0% ophthalmic solution use within 90 days of Visit 1;
7. Systemic corticosteroid therapy or other immunomodulator (not including inhaled corticosteroids) within 14 days of Visit 1 or anticipate such therapy throughout the study period;
8. Planned ocular and/or lid surgeries over the study period or any ocular surgery within 6 months of Visit 1;
9. Temporary punctal plugs during the study that have not been stable within 30 days of Visit 1;
10. Use of and unwillingness to discontinue topical ophthalmic prescriptions (including medications for glaucoma) or over-the-counter (OTC) solutions (not including artificial tears), gels or scrubs for the duration of the trial (excluding medications allowed for the conduct of the trial);
11. Corrected visual acuity greater than or equal to logarithm of the minimum angle of resolution (logMAR) + 0.7 as assessed by Early Treatment of Diabetic Retinopathy Study (ETDRS) scale in both eyes at Visit 1;
12. Pregnancy, nursing, or planned pregnancy during the conduct of the trial;
13. Unwillingness to submit a urine pregnancy test at Visit 1 and Visit 3 (or early termination visit) if of childbearing potential. (Nonchildbearing potential is

defined as a woman who is permanently sterilized [e.g., has had a hysterectomy or tubal ligation], or is post-menopausal [without menses for 12 consecutive months]);

14. If of childbearing potential (female or male), unwillingness to use an acceptable means of birth control. (Acceptable methods of contraception include: hormonal – oral, implantable, injectable, or transdermal contraceptives; mechanical – spermicide in conjunction with a barrier such as a diaphragm or condom; intrauterine device [IUD]; or surgical sterilization of partner. For non-sexually active males or females, abstinence may be regarded as an adequate method of birth control; however, if the subject becomes sexually active during the study, he/she must agree to use adequate birth control as defined above for the remainder of the trial.);
15. Known allergy and/or sensitivity to the test article or its components;
16. A condition that the investigator feels may put the subject at significant risk, may confound the study results, or may interfere significantly with the subject's participation in the trial;
17. Current enrollment in an investigational drug or device study or have used an investigational drug or device within 30 days of Visit 1;
18. Use of reproxalap ophthalmic solution in the past year;
19. Current use of any medication known to cause ocular drying that is not used on a stable dosing regimen for at least 30 days prior to Visit 1;
20. Inability or unwillingness to follow instructions, including participation in all study assessments and visits.

### **5.5 Withdrawal Criteria (if applicable)**

Subjects may voluntarily withdraw from the trial at any time. Additionally, subjects may be discontinued for safety reasons as determined by the investigator and/or Medical Monitor.

## **6 STUDY PARAMETERS**

### **6.1 Primary Endpoint**

- Schirmer's Test overall mean change from baseline (CFB) before and after the fourth dose on Day 1
- Schirmer's Test greater than or equal to 10mm responder analysis of change from baseline before and after the fourth dose on Day 1

### **6.2 Safety Endpoints**

- Visual acuity

- 11/11/2016

11/11/2016

- 11/11/2016

11/11/2016

## 6.4 Exploratory Endpoints

- Change in tear RASP levels before and after Dose 1 and 2 on Day 1 and Dose 3 on Day 2
- Conjunctival redness, [REDACTED] and visual analog scale dryness score by time point during the CAE

# 7 STUDY MATERIALS

## 7.1 Study Treatment(s)

### 7.1.1 Formulations

#### Randomized Study Treatments

- 0.25% Reproxalap Ophthalmic Solution
- Vehicle

### 7.1.2 Study Drug Packaging Configuration

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### 7.1.3 Study Drug Storage and Accountability

The study drug must be stored in a secure area accessible only to the investigator and his/her designees. The study drug will be administered only to subjects entered into the clinical study, in accordance with the conditions specified in this protocol. [REDACTED]

[REDACTED]

[REDACTED]

The study drug is to only be prescribed by the principal investigator or his/her named sub investigator(s), and is to only be used in accordance with this protocol. The study drug must only be distributed to subjects properly qualified under this protocol to receive study drug. The investigator must keep an accurate accounting of the study drug by maintaining a detailed inventory. This includes the amount of study drug received by the site, amount used, and the amount returned to the Sponsor upon the completion of the study.

### 7.1.4 Instructions for Dispensation, Use, and Administration

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## 7.2 Other Study Supplies

Tear collection supplies, Schirmer's Test strips, Scale to weigh Schirmer's strips, 2% preservative-free sodium Fluorescein Solution, Fluorescein Strips, ETDRS Series 2000 Chart 1 & Chart 2, eye occluder, alcohol swabs.

# 8 STUDY METHODS AND PROCEDURES

## 8.1 Subject Entry Procedures

### 8.1.1 Overview

Subjects as defined by the criteria in section 5.2, 5.3, and 5.4 will be considered for entry into the trial.

### 8.1.2 Informed Consent

Prior to each subject's participation in the clinical trial (i.e., changes in a subject's medical treatment and/or study related procedures), the clinical trial will be discussed with the subjects, and subjects wishing to participate must give written informed consent using an informed consent form. The informed consent form must be the most recent version that has received approval/favorable review by a properly constituted Independent Review Board.

### 8.1.3 Washout Intervals

Prohibited medications, treatments, and activities are outlined in the exclusion criteria.

### 8.1.4 Procedures for Final Study Entry

Subjects must satisfy all of the inclusion criteria and none of the exclusion criteria in order to be entered into the study.

### 8.1.5 Methods for Assignment to Treatment Groups:

At Visit 1 each subject who signs the informed consent will be assigned a screening number. All screening numbers will be assigned in strict numerical sequence at each site and no numbers will be skipped or omitted.

At Visit 2, a patient who meets all the eligibility criteria will be randomized to receive reproxalap or vehicle in a 1:1 ratio. Patients will be assigned a randomization number and kit number via IWRS.

Both the randomization number and the assigned study drug kit number will be recorded on the patient's source document and eCRF.

## 8.2 **Concurrent Therapies**

The use of any applicable concurrent medications, prescription or OTC medications is to be recorded on the subject's source document along with the reason the medication was taken.

Concurrent enrollment in an investigational drug or medical device study is not permitted.

### 8.2.1 Prohibited Medications/Treatments

Prohibited medications, treatments, and activities are outlined in the exclusion criteria.

### 8.2.2 Escape Medications

Not applicable.

### 8.2.3 Special Diet or Activities

Not applicable.

## 8.3 **Examination Procedures**

### 8.3.1 Procedures to be Performed at the Study Visit with Regard to Study Objective(s)

#### **Visit 1 (Day -14 -16/+2, Screening)**

- Informed Consent and HIPAA
- Demographics (e.g., gender, date of birth, race, ethnicity)
- Medical/Medication & Ocular History
- Urine Pregnancy Test (as needed)
- Symptom Questionnaires:

■ [REDACTED]  
■ [REDACTED]

- Ocular Dryness Visual Analog Scale
- [REDACTED]
- Visual Acuity (ETDRS)
- Slit Lamp Biomicroscopy with Conjunctival Redness assessment
- Fluorescein Staining [REDACTED]
- Inclusion/Exclusion Criteria Review
- [REDACTED]
- CAE Exposure (90 minutes, [REDACTED])  
with:
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
- Slit Lamp Biomicroscopy with Conjunctival Redness assessment
- Schirmer's Test
- Intraocular Pressure
- Dilated Exam
- Schedule for Visit 2

### Visit 2 (Day 1, Baseline and In-Office Dosing)

- Medical/Medication Update
- Adverse Event Query
- Visual Acuity (ETDRS)
- Slit Lamp Biomicroscopy
- Symptom Questionnaires
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
- Conjunctival Redness Photography
- Inclusion/Exclusion Criteria Review
- Randomization/Enrollment
- Pre-Dose #1 Tear Collection (30 +/- 5 minutes pre-dose)
- In-Office Dose #1
- Post-Dose #1 Tear Collection (started within 10 + 2 minutes of dose)  
*Wait 3 hours between doses*

- Pre-Dose #2 Tear Collection (30 +/- 5 minutes pre-dose)
- In-Office Dose # 2
- Post-Dose #2 Tear Collection (started within 10 + 2 minutes of dose)  
*Wait 30 minutes between doses*

- In-Office Dose #3
- Conjunctival Redness Photography (10 minutes +/- 2 minutes post-Dose #3)
- Symptom Questionnaires started within 10 minutes + 2 minutes post-

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

*Wait 30 minutes between doses*

- Pre-Dose #4 Schirmer's Test (10 +/- 2 minutes pre-dose)
  - Weigh Schirmer's Test strip before and after use
- In-Office Dose #4
- Post-Dose #4 Schirmer's Test (started within 5 +/- 2 minutes of dose)
  - Weigh Schirmer's Test strip before and after use
- Schedule for Visit 3

### Visit 3 (Day 2, CAE■)

- Medical/Medication Update
- Adverse Event Query
- Urine Pregnancy Test (as needed)
- Visual Acuity (ETDRS)
- Slit Lamp Biomicroscopy
- Conjunctival Redness Photography
- Symptom Questionnaires:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

- Pre-Dose #1 Tear Collection (30 +/- 5 minutes pre-dose)
- In-Office Dose #1 within 10 minutes prior to CAE Entry
- CAE Exposure (90 minutes) with:

- [REDACTED]
- [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- In-Office Dose #2 (45 +/- 2 minutes into CAE exposure, administer by site staff)
- Post-CAE exit Tear Collection (started within 5 + 2 minutes)
- In-Office Dose #3 (started within 2 minutes post-tear collection)
- Symptom Questionnaires started within 10 minutes + 2 minutes post-Dose #3:
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
- Post-Dose #3 Tear Collection (started within 15 + 2 minutes of dose)
- Slit Lamp Biomicroscopy
- Intraocular Pressure
- Dilated Exam
- Study Exit

### Early Termination/Discontinuation

If a subject is discontinued from the study prior to Visit 3, then all safety evaluations that are to be performed at Visit 3 should be performed on the day of discontinuation (early termination) or at the discretion of the investigator.

Adverse Events (both elicited and observed) and serious adverse events (SAEs) will be monitored throughout the trial. The investigator will promptly review all adverse events (both elicited and observed) for accuracy and completeness. All adverse events will be documented on the appropriate source document and case report form.

If a female reports a pregnancy or has a positive pregnancy test during the study the investigator will notify [REDACTED] immediately. The investigator shall request from the subject and/or the subject's physician copies of all related medical reports during the pregnancy and shall document the outcome of the pregnancy. The investigator will retain these reports together with the subject's source documents and will provide a copy of all documentation to [REDACTED]. The pregnant subjects will be discontinued from the trial as per the exclusion criteria.

## 8.4 Schedule of Visits, Measurements and Dosing

### 8.4.1 Scheduled Visits

Refer to Appendix 1 for a schedule of visits and measurements.

#### 8.4.2 Unscheduled Visits

These visits may be performed in order to ensure subject safety. All procedures performed at an unscheduled visit will be recorded in the source documents and on the Unscheduled Visit eCRF pages. Any procedure indicated in the eCRF that is not performed should be indicated as “Not done.”

Evaluations that may be conducted at an Unscheduled Visit include:

- Slit-lamp Biomicroscopy;
- Visual Acuity;
- Intraocular Pressure;
- Urine Pregnancy Test;
- Dilated Fundoscopy;
- Assessment of Adverse Events;
- Assessment of concurrent medications and/or treatments; and
- Any other assessments needed in the judgment of the investigator.

### 8.5 **Subject Disposition**

#### 8.5.1 Completed Subjects

A completed subject is one who has not been discontinued from the study and has completed all applicable assessments.

#### 8.5.2 Discontinued Subjects

Subjects may be discontinued prior to their completion of the study due to:

- adverse events
- protocol violations
- administrative reasons (e.g., inability to continue)
- Sponsor termination of study
- other

Note: In addition, any subject may be discontinued for any sound medical reason.

Notification of a subject discontinuation and the reason for discontinuation will be made to [REDACTED] and will be clearly documented on the source document.

## 8.6 Study Termination

The clinical trial may be stopped at any time by the investigator, or [REDACTED] with appropriate notification.

## 8.7 Study Duration

An individual subject's participation is estimated to be approximately 2 – 4 weeks.

## 8.8 Monitoring and Quality Assurance

During the course of the study a monitor, or designee, will make routine site visits to review protocol compliance, assess study drug accountability and storage conditions, subject safety, and ensure the study is being conducted according to the pertinent regulatory requirements. The review of the subjects' medical records will be performed in a manner that adequately maintains subject confidentiality. Further details of the study monitoring will be outlined in a monitoring plan.

Regulatory authorities of domestic and foreign agencies, [REDACTED] quality assurance and or its designees may carry out on-site inspections and audits which may include source data checks. Therefore, direct access to the original source data will be required for inspections and audits. All inspections and audits will be carried out giving consideration to data protection as well as subject confidentiality to the extent that local, state, and federal laws apply.

# 9 ADVERSE EVENTS

## 9.1 Adverse Event

For the purposes of this trial, an adverse event is defined as any untoward medical event occurring after the subject's signing of the informed consent until they are exited from the trial. An adverse event can therefore be any unfavorable and unintended sign, symptom, or disease occurring after the subject started the clinical trial, without any judgment about causality. Any pre-existing medical condition that worsens during the trial will also be considered a new adverse event. Documentation regarding the adverse event should be made as to the nature, date of onset, end date, severity, relationship to study procedure, expectedness, action(s) taken, seriousness, and outcome of any sign or symptom observed by the investigator or reported by the patient upon indirect questioning.

### 9.1.1 Severity

Severity of an adverse event is defined as a qualitative assessment of the degree of intensity of an adverse event as determined by the investigator or reported to him/her by the patient/subject. The assessment of severity is made irrespective of relationship to study procedures or seriousness of the event and should be evaluated according to the following scale:

- [REDACTED]  
[REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED]  
[REDACTED]

#### 9.1.2 Relationship to Study Procedures

The relationship of each AE to the study procedures should be determined by the investigator using these explanations. Decisive factors for the assessment of causal relationship of an AE to the study procedures include, but may not be limited to, temporal relationship between the AE and the procedure, known side effects of the procedure medical history, and/or concomitant medication:

- *Definite*: When there are good reason and sufficient documentation to demonstrate a direct causal relationship between study procedure and AE;
- *Probable*: When there are good reasons and sufficient documentation to assume a causal relationship in the sense of plausible, conceivable, likely but not necessarily highly probable.
- *Possible*: When there is sufficient information to accept the possibility of a causal relationship in the sense of not impossible and not unlikely, although the connection is uncertain or doubtful, for example; due to missing data or insufficient evidence.
- *None*: When there is sufficient information to accept a lack of a causal relationship, in the sense of impossible and improbable.
- *Unclassified*: When the causal relationship is not assessable for whatever reason due to insufficient evidence, conflicting data or poor documentation.

#### 9.1.3 Expectedness

The expectedness of an adverse event should be determined based upon existing safety information about the study procedures. Therefore, the following definition will be used:

- *Unexpected*: An adverse event that is not listed in the safety information available for the study procedure at the specificity or severity that has been observed.
- *Expected*: An adverse event that is listed in the safety information available for the study procedure at the specificity and severity that has been observed.
- *Not Applicable*: Any adverse event that is unrelated to the study procedure.

## 9.2 Serious Adverse Events

An adverse event is considered serious if, in the view of either the investigator or Sponsor, it results in any of the following outcomes:

- Death;
- A life-threatening adverse event;
  - Note: An adverse event is considered “life-threatening” if, in the view of either the investigator or sponsor, its occurrence places the patient or subject at immediate risk of death. It does not include an adverse event that, had it occurred in a more severe form, might have caused death.
- Inpatient hospitalization or prolongation of existing hospitalization;
  - Note: The term “inpatient hospitalization” refers to any inpatient admission (even if less than 24 hours). For chronic or long-term inpatients, inpatient admission includes transfer within the hospital to an acute/intensive care inpatient unit. Inpatient hospitalization does not include: emergency room visits; outpatient/same-day/ambulatory procedures; observation/short stay units; rehabilitation facilities; hospice facilities; nursing homes; or clinical research/phase 1 units.
  - Note: The term “prolongation of existing hospitalization” refers to any extension of an inpatient hospitalization beyond the stay anticipated or required for the reason for the initial admission as determined by the investigator or treating physician.
- A persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
  - Note: A serious adverse event specifically related to visual threat would be interpreted as any potential impairment or damage to the subject’s eyes (e.g., hemorrhage, retinal detachment, central corneal ulcer or damage to the optic nerve).

- A congenital anomaly/birth defect.

Important medical events that may not result in death, are life-threatening, or require hospitalization may be considered serious when, based upon appropriate medical judgment, they may jeopardize the patient or subject and may require medical or surgical intervention to prevent one of the outcomes listed in this definition.

### 9.3 Procedures for Reporting Adverse Events

All adverse events and their outcomes must be reported to [REDACTED] and the IRB as required by the IRB, federal, state, or local regulations and governing health authorities and recorded on the appropriate source document.

#### 9.3.1 Reporting a Suspected Unexpected Adverse Reaction

All adverse events that are related (definite, probable, possible) and 'unexpected' are to be reported to [REDACTED] and the IRB as required by the IRB, federal, state, or local regulations and governing health authorities.

#### 9.3.2 Reporting a Serious Adverse Event

To ensure subject safety, all serious adverse events, regardless of relationship to the investigational product, must be immediately reported. All information relevant to the serious adverse event must be recorded on the appropriate source documents. The investigator is obligated to pursue and obtain information requested by [REDACTED] in addition to that information reported on the source document. All subjects experiencing a serious adverse event must be followed up and the outcome reported.

In the event of a serious adverse event, the investigator must notify [REDACTED] immediately; obtain and maintain in his/her files all pertinent medical records, information, and medical judgments from colleagues who assisted in the treatment and follow-up of the subject; provide [REDACTED] with a complete case history and inform the IRB of the adverse event within their guidelines for reporting serious adverse events.

Contact information for reporting serious adverse events (SAEs):

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

## 9.4 Procedures for Unmasking Study Drug

All subjects, investigators, and study personnel involved with the conduct of the study will be masked with regard to treatment assignments. When medically necessary, the investigator may need to determine what treatment arm has been assigned to a subject. When possible (i.e., in non-emergent situations), [REDACTED] and/or the study sponsor should be notified, when possible, before unmasking study drug as described in the following paragraph.

If an investigator identifies a medical need for unmasking the treatment assignment of a subject, he/she should contact [REDACTED] and/or the medical monitor prior to unmasking the identity of the IP, if possible. [REDACTED] will ask the site to complete and send them the Unmasking Request Form. [REDACTED] will notify Aldeyra and jointly will determine if the unmasking request should be granted. They may consult the medical monitor as needed. The result of the request will be documented on the Unmasking Request Form. If approval is granted to unmask a subject, written permission via the Unmasking Request Form will be provided to the investigator. The investigator will unmask the subject via IWRS. The investigator will complete the Unmasking Memo form and include it in the subject's study file and provide a copy for the Trial Master File (TMF). For each unmasked request, the reason, date, signature, and name of the person who unmasked the subject, must be noted in the subject's study file.

## 9.5 Procedures for Reporting Adverse Events

Adverse events that are ongoing at the end of the study visit will be followed. Phone calls will be placed with any subject who experiences an adverse event until the issue is resolved or the condition is considered ongoing and stable.

# 10 STATISTICAL HYPOTHESES AND METHODS OF ANALYSES

## 10.1 Analysis Populations

The following analysis populations will be considered:

- Intent-to-Treat Population – The intent-to-treat (ITT) population includes all randomized subjects. Subjects in the ITT population will be analyzed as randomized.
- Per-Protocol Population – The per-protocol (PP) population includes subjects in the ITT population who do not have significant protocol deviations and who complete the study. Protocol deviations will be assessed prior to database lock and unmasking. Subjects in the PP population will be analyzed as treated.
- Safety Population – The safety population includes all randomized subjects who have received at least one dose of the investigational product. Subjects in the safety population will be analyzed as treated.

All analyses will be performed for the ITT population and, in addition, on the PP population as sensitivity analyses, as needed. Descriptive statistics of safety data will be calculated for the safety population.

## 10.2 Statistical Hypotheses

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## 10.3 Sample Size

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## 10.4 Statistical Analysis

### 10.4.1 General Considerations

Quantitative variables will be summarized descriptively using number of subjects (n), mean, standard deviation, median, minimum, and maximum. Qualitative variables will be summarized using counts and percentages.

All summaries will be presented by treatment group. Summaries will be provided for demographics, baseline medical history, concurrent therapies, and subject disposition.

For the purpose of summarization, medical history, concurrent therapies, and adverse events will be coded to MedDRA and WHODrug dictionaries, as appropriate.

Baseline measures are defined as the last non-missing measure prior to the initiation of randomized study treatment at Day 1. Change from baseline will be calculated as follow-up visit value minus baseline value. Treatment comparisons between active and vehicle calculated as active minus vehicle.

All analyses will be 2-sided at a significance level of 0.05. 95% confidence intervals will be provided where appropriate.

The statistical analysis plan (SAP) will detail the statistical procedures, and will dominate any text herein.

#### 10.4.2 Unit of Analysis

[REDACTED]  
[REDACTED]  
[REDACTED] Assessment scales are detailed in the Appendices.

#### 10.4.3 Missing Data

#### 10.4.4 Multiplicity Considerations

[REDACTED]  
[REDACTED] Primary and secondary endpoints will be tested in the fixed testing sequence as follows:

##### Primary Endpoint:

1. Schirmer's Test overall mean change from baseline (CFB) before and after the fourth dose on Day 1
2. Schirmer's Test greater than or equal to 10mm responder analysis of change from baseline before and after the fourth dose on Day 1

##### Secondary Endpoints:

3. Overall mean CFB of Conjunctival Redness over 90 minutes in the CAE at Day 2
4. Overall mean CFB of Eye Dryness (VAS; Visual Analog Scale) over 90 minutes in the CAE at Day 2
5. Overall mean CFB of Eye Dryness (VAS) assessed over Days 1 and 2 (excluding CAE)

[REDACTED]

[REDACTED]

No type I error control will be utilized for exploratory endpoints; thus, exploratory comparisons are considered hypothesis generating.

#### 10.4.5 Primary Efficacy Analysis

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### Estimand 1

- [REDACTED]
- [REDACTED]
  - [REDACTED]
    - [REDACTED]
  - [REDACTED] [REDACTED] [REDACTED]
    - [REDACTED]
- [REDACTED]
  - [REDACTED]
  - [REDACTED]
  - [REDACTED]
- [REDACTED]
  - [REDACTED]
    - [REDACTED]
  - [REDACTED]
    - [REDACTED]

[REDACTED]

[REDACTED]

#### 10.4.7 Secondary Efficacy Analyses

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

#### 10.4.8 Exploratory Efficacy Analyses

[REDACTED]

[REDACTED]

[REDACTED] may be conducted. Further details of the exploratory analysis plan will be described in SAP.

#### 10.4.9 Safety Variables

Adverse events will be coded using the MedDRA dictionary.

Frequencies and percentages will be provided per treatment group of subjects with treatment-emergent adverse events (TEAEs), serious TEAEs, and TEAEs causing premature discontinuation. An adverse event is treatment-emergent if it occurs or worsens after the first dose of randomized study treatment. Furthermore, frequencies will be given of subjects with TEAEs by system organ class, by system organ class and preferred term, by system organ class, preferred term and maximal severity, by system organ class, preferred term and strongest relationship, and by system organ class, preferred term, maximal severity, and strongest relationship. Separate analyses will be performed for ocular specific and all adverse events (including systemic).

Other safety endpoints including visual acuity, slit lamp biomicroscopy, intraocular pressure (IOP), and dilated funduscopy will be summarized by treatment group and visit using descriptive statistics. Changes or shifts from baseline will also be summarized where appropriate. For assessments performed by eye, eyes will be summarized separately.

## **11 COMPLIANCE WITH GOOD CLINICAL PRACTICES, ETHICAL CONSIDERATIONS, AND ADMINISTRATIVE ISSUES**

The ADX-102-DED-023 clinical trial will be conducted in compliance with the protocol, current Good Clinical Practices (GCPs), including the International Council for Harmonization (ICH) Guidelines, and in general, consistent with the Declaration of Helsinki. In addition, all applicable local, state, and federal requirements in the countries involved will be adhered to.

### **11.1 Protection of Human Subjects**

#### **11.1.1 Subject Informed Consent**

Informed consent/assent must take place before any study specific procedures are initiated. Signed and dated written informed consent must be obtained from each subject and/or from the legal guardian prior to enrollment into the study.

All informed consent/assent forms must be approved for use by [REDACTED] and receive approval/favorable opinion from an IRB prior to their use. If the consent form requires revision (e.g., due to a protocol amendment or significant new safety information), it is the investigator's responsibility to ensure that the amended informed consent is reviewed and approved by sponsor prior to submission to the governing IRB and that it is read, signed and dated by all subjects subsequently enrolled in the study as well as those currently enrolled in the study. If informed consent is taken under special circumstances (oral informed consent), then the procedures to be followed must be determined by [REDACTED] and provided in writing by [REDACTED] prior to the consent process.

#### **11.1.2 Institutional Review Board (IRB) Approval**

The ADX-102-DED-023 clinical trial is to be conducted in accordance with Institutional Review Board regulations (U.S. 21 CFR Part 56.103). The investigator must obtain appropriate IRB approval before initiating the trial and re-approval at least annually.

Only an IRB approved version of the informed consent form will be used.

### **11.2 Ethical Conduct of the Study**

The ADX-102-DED-023 clinical trial will be conducted in accordance with the ethical principles that originated with the Declaration of Helsinki.

### **11.3 Subject Confidentiality**

All personal study subject data collected and processed for the purposes of this trial should be maintained by the investigator and his/her staff with adequate precautions as to ensure that the confidentiality of the data in accordance with local, state, and federal laws and regulations.

Monitors, auditors and other authorized representatives of [REDACTED], the IRB approving this trial, the FDA, the DHHS, other domestic government agencies, and other foreign regulatory agencies will be granted direct access to the study subject's original medical and study records for verification of the data and clinical trial procedures. Access to this information will be permitted to the aforementioned individuals to the extent permitted by law.

## 11.4 Documentation

Source documents may include a subject's medical records, hospital charts, clinic charts, the investigator's study subject files, as well as the results of diagnostic tests such as X-rays, laboratory tests, and EKGs. The investigator's copy of the source documents serves as the investigator's record of a subject's study-related data.

### 11.4.1 Retention of Documentation

All trial related correspondence, patient records, consent forms, and copies of source documents should be maintained on file for at least two years. These documents will be retained for a longer period if required by the applicable regulatory requirements or by an agreement with the Sponsor. It is the responsibility of the Sponsor to inform the investigator/institution as to when these documents no longer need to be retained.

If the responsible investigator retires, relocates, or for other reasons withdraws from the responsibility of keeping study records, custody must be transferred to a person who will accept the responsibility. [REDACTED] must be notified in writing of the name and address of the new custodian.

## 11.5 Labeling, Packaging, Storage, Accountability, and Return or Disposal of Study Drug

### 11.5.1 Labeling/Packaging

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

### 11.5.2 Storage of Study Drug

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

### 11.5.3 Accountability of Study Drug

The study drug is to only be prescribed by the principal investigator or his/her named sub investigator(s), and is to only be used in accordance with this protocol. The study drug must only be distributed to subjects properly qualified under this protocol to receive study drug. The investigator must keep an accurate accounting of the study drug by maintaining a detailed inventory. This includes the amount of study drug received by the site, amount used, amount returned to the site by the subjects, and the amount returned to the Sponsor upon the completion of the study.

### 11.5.4 Return or Disposal of Study Drug

All study drug will be returned to the sponsor or their designee or destroyed on behalf of the Sponsor following local regulations.

## 11.6 **Recording of Data on Source Documents and electronic Case Report Forms (eCRFs)**

The investigator is responsible for ensuring that study data is completely and accurately recorded on each subject's eCRF and all study-related material. All study data should also be attributable, legible, contemporaneous, and original. Recorded datum should only be corrected in a manner that does not obliterate, destroy, or render illegible the previous entry (e.g., by drawing a single line through the incorrect entry and writing the revision next to the corrected data). An individual who has corrected a data entry should make clear who made the correction and when, by adding to the correction his/her initials as well as the date of the correction.

## 11.7 **Handling of Biological Specimens**

The ADX-102-DED-023 clinical trial entails the collection of certain biospecimens from you, you should be aware that even if your personal identifiers are removed from the identifiable private information surrounding your biospecimens or removed from the biospecimens themselves, the information or biospecimens will not be used for future research in other studies or distributed to another investigator for future research studies without receiving additional informed consent from you for such activities.

## 11.8 **Publications**

Authorship and manuscript composition will reflect cooperation among all parties involved in the study. Authorship will be established before writing the manuscript.

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

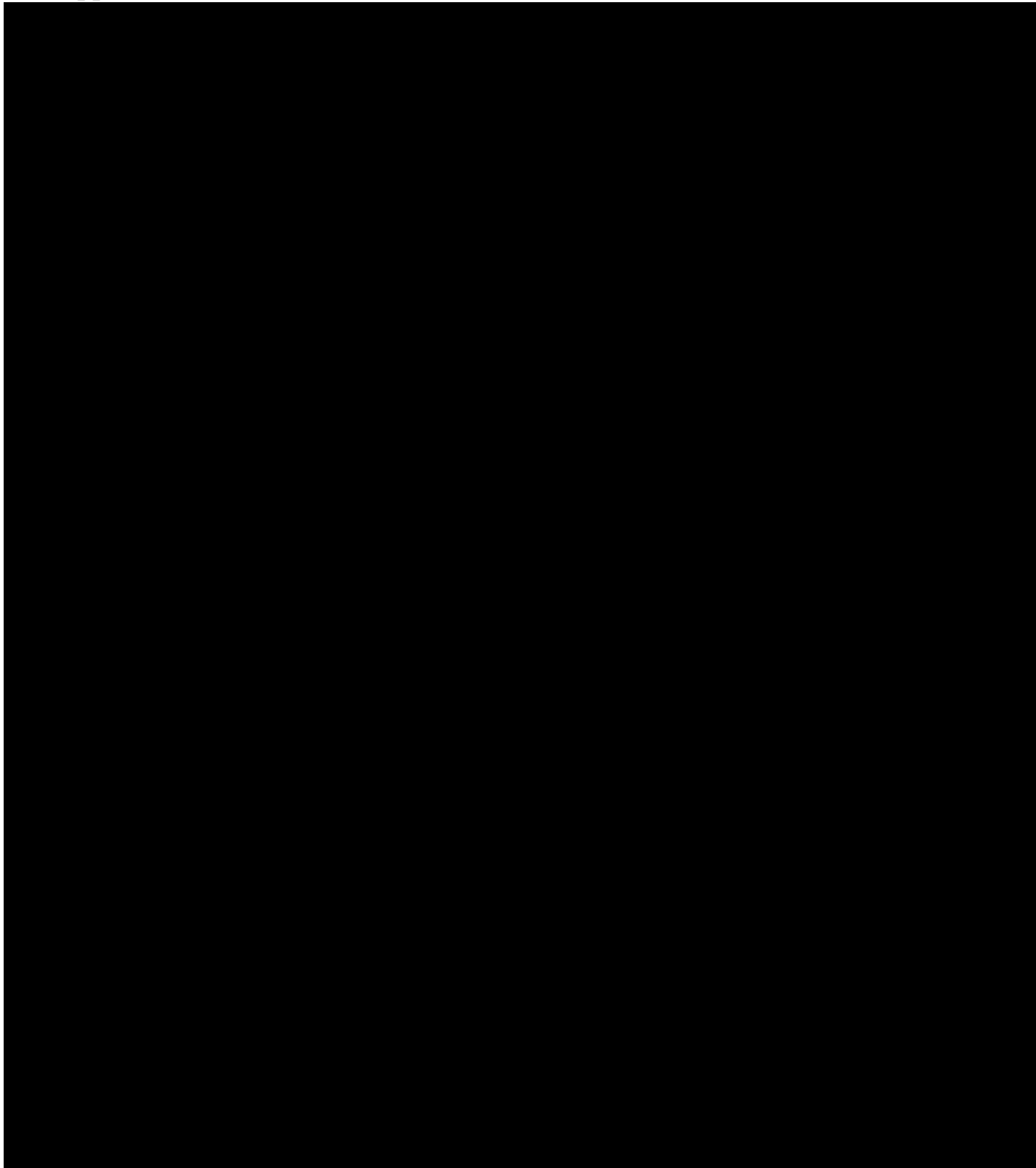
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

## **Appendix 1: Schedule of Visits and Measurements**



## Appendix 2: Examination Procedures, Tests, Equipment, and Techniques

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

LogMAR Visual Acuity Calculations

[Redacted]

[Redacted]

[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

[Redacted]

[Redacted]

### **Slit Lamp Biomicroscopy**

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

### **Fluorescein Staining**

[REDACTED]

### **Conjunctival Redness Photography**

[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[Redacted]

[Redacted]

[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED] [REDACTED]
	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED] [REDACTED]
	[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]  
[REDACTED]
- [REDACTED]
- [REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]

[illegible]

**Visual Analogue Scale (VAS)**

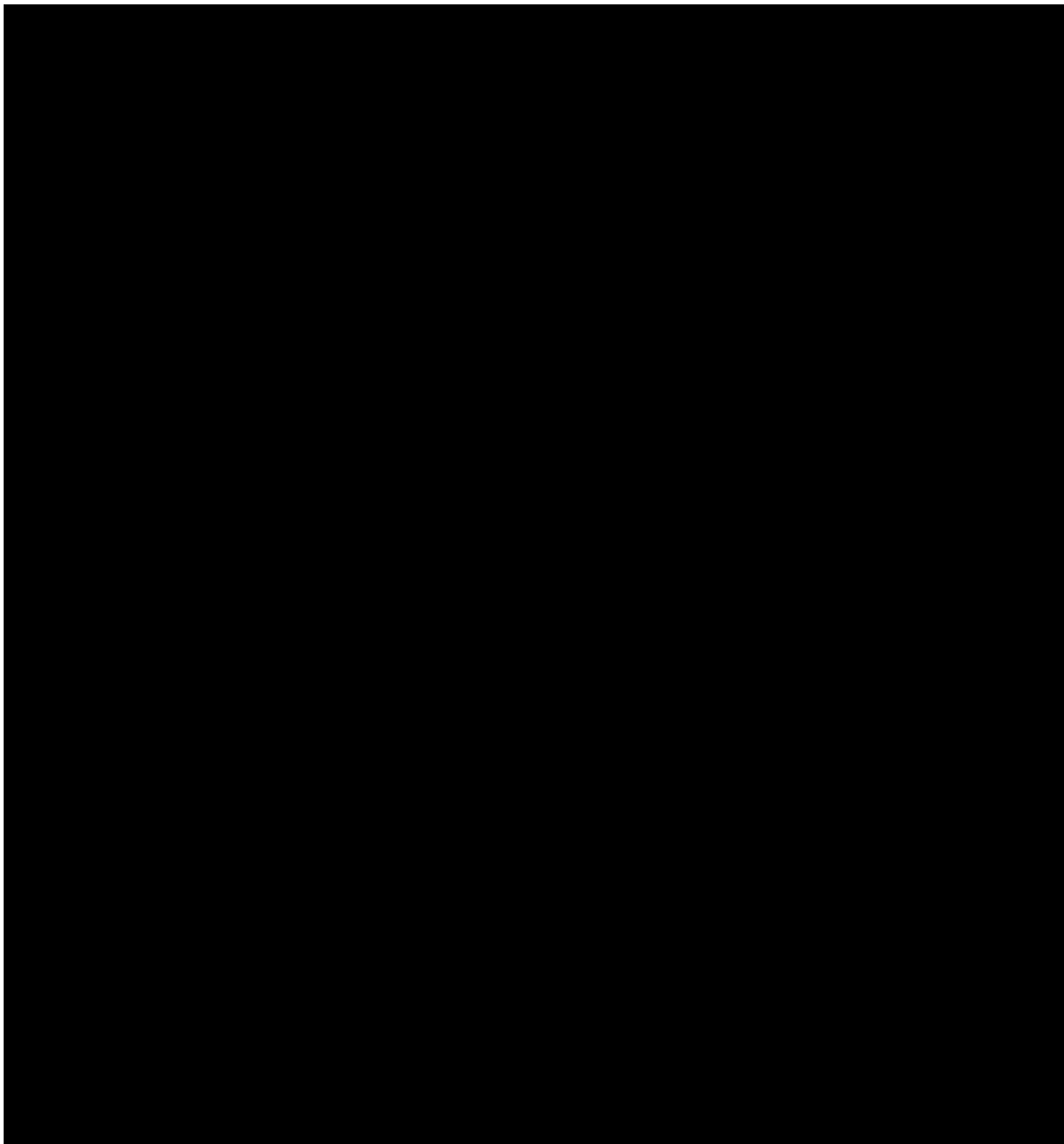
[REDACTED]

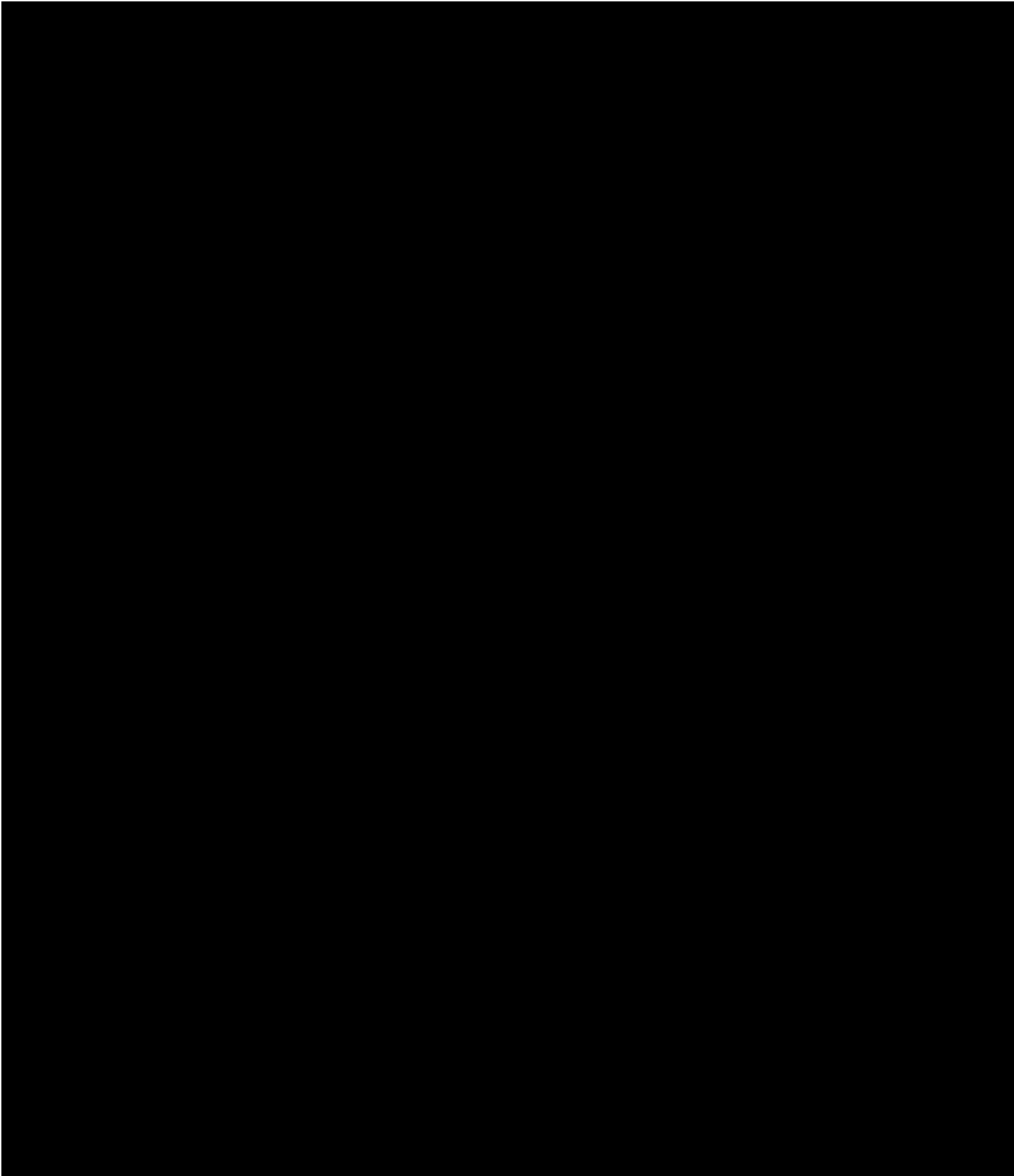
[REDACTED]

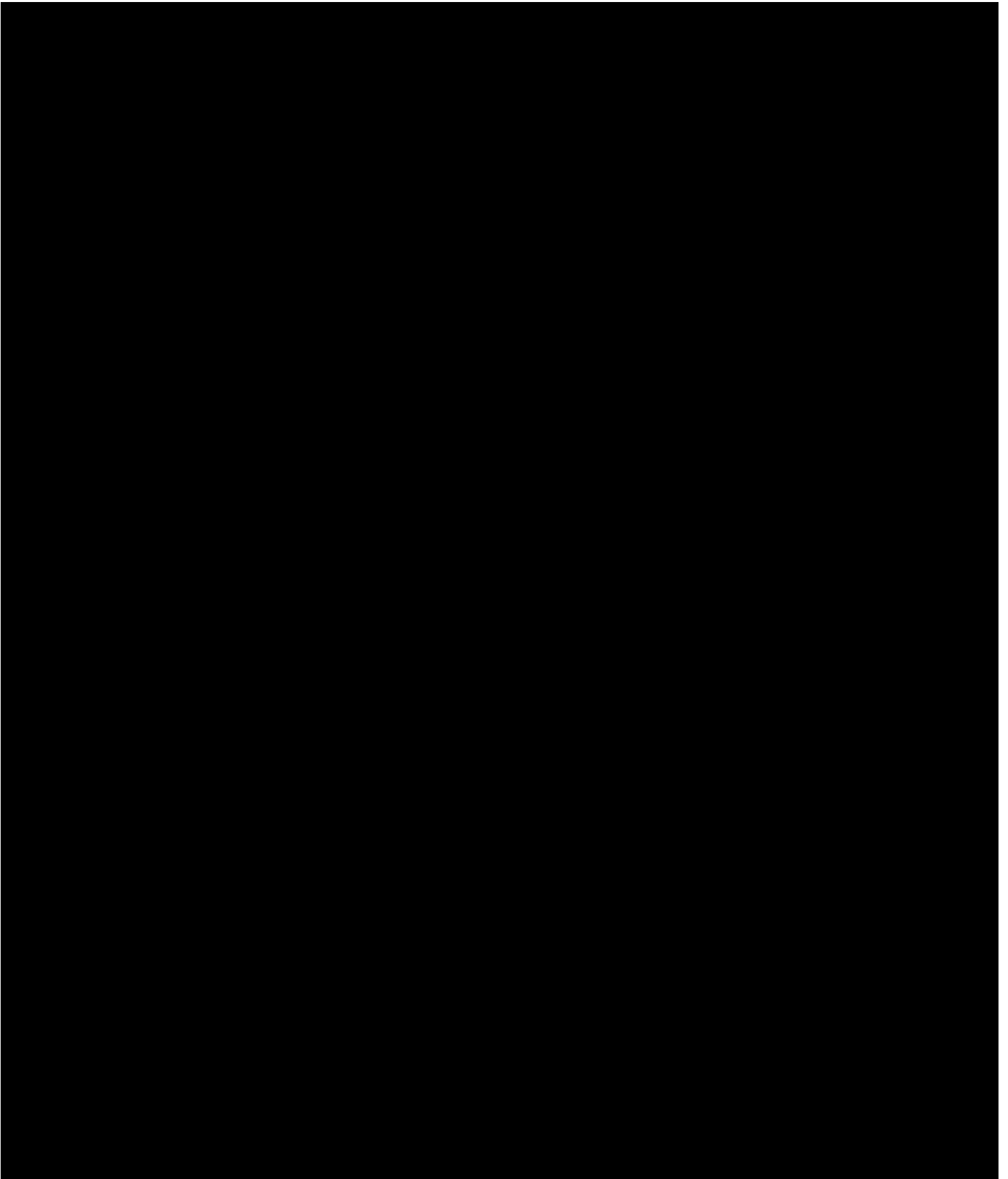
[REDACTED]

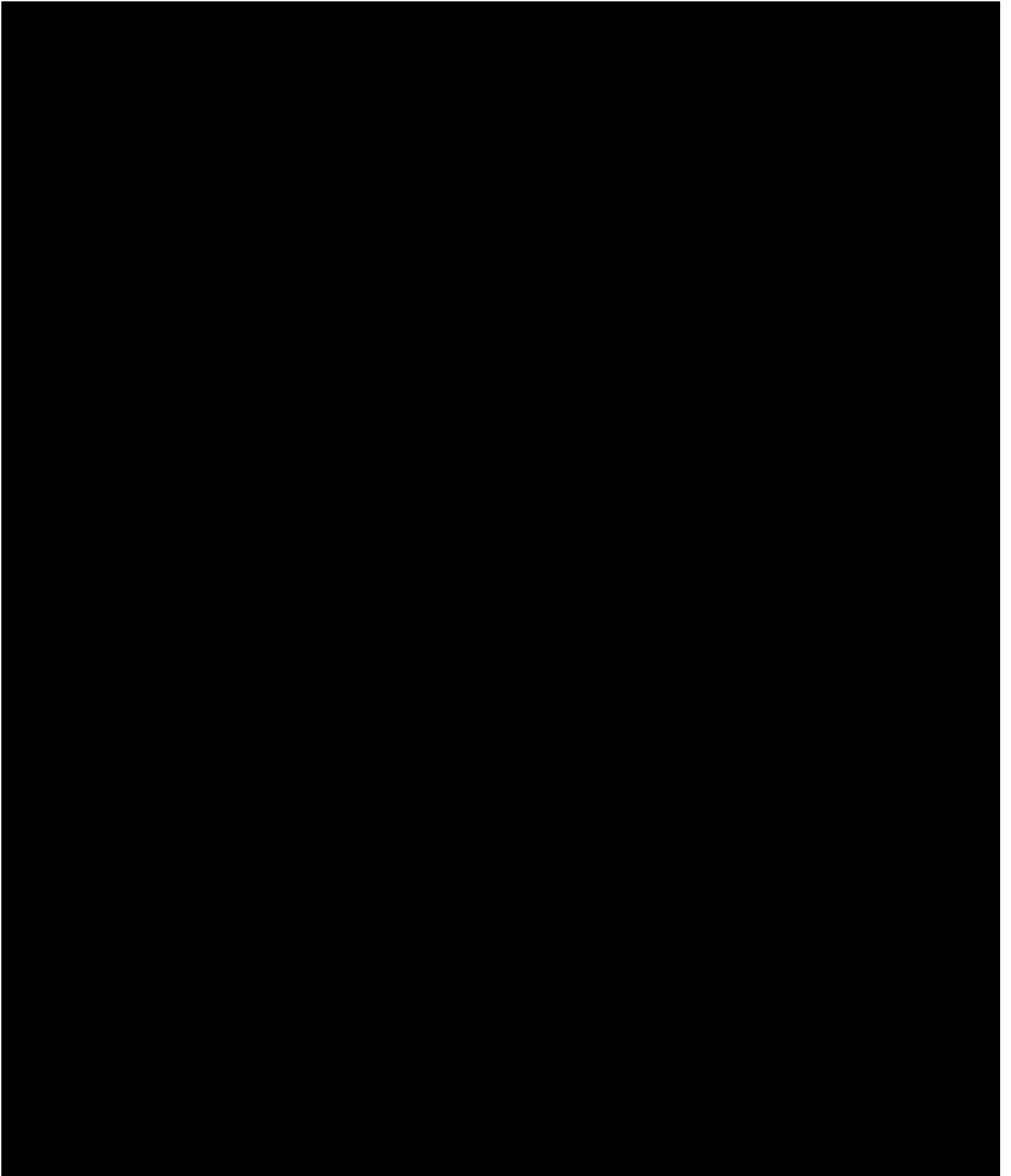
[REDACTED]

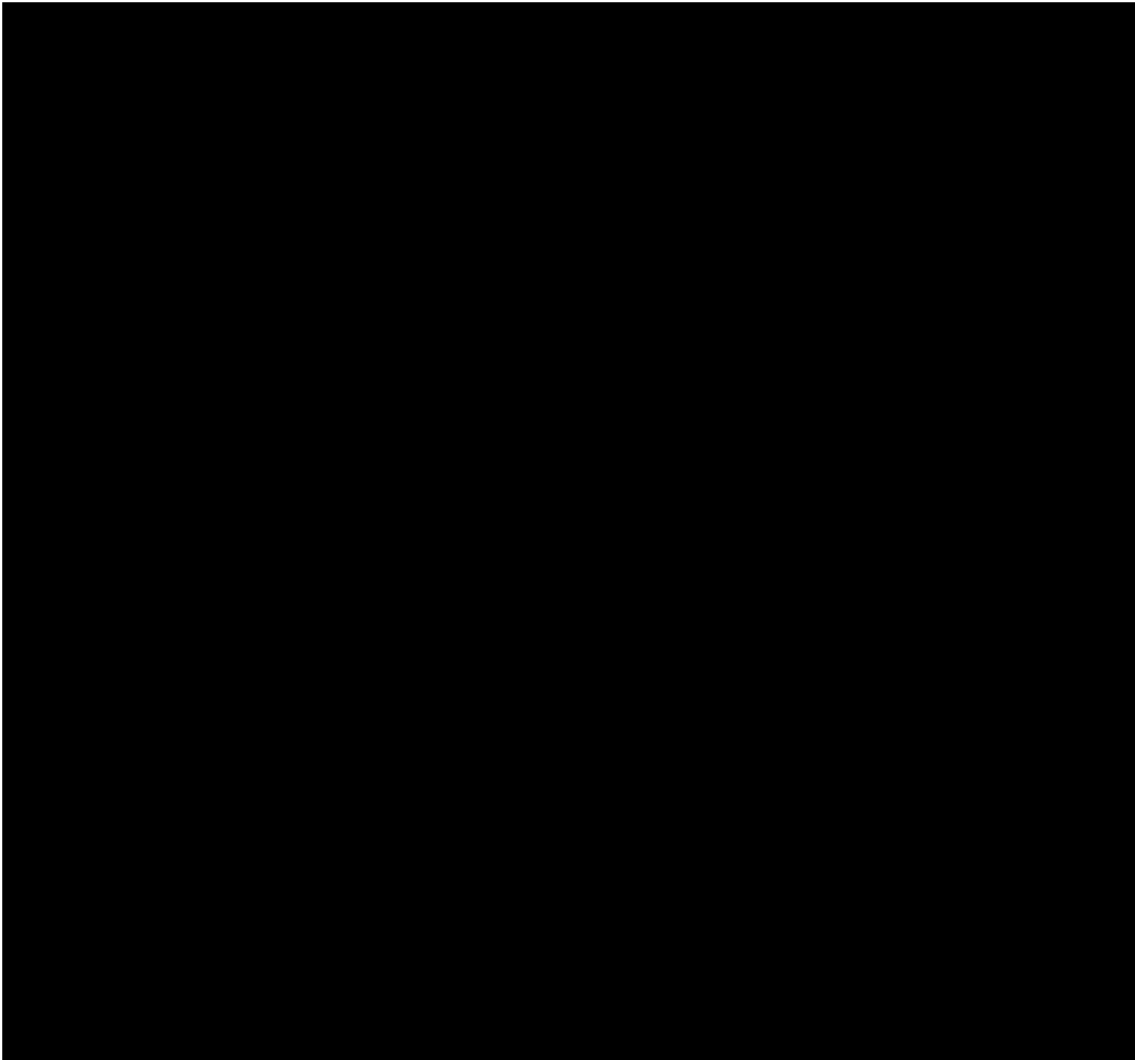
### **Appendix 3: Amendment Summary of Changes Table**









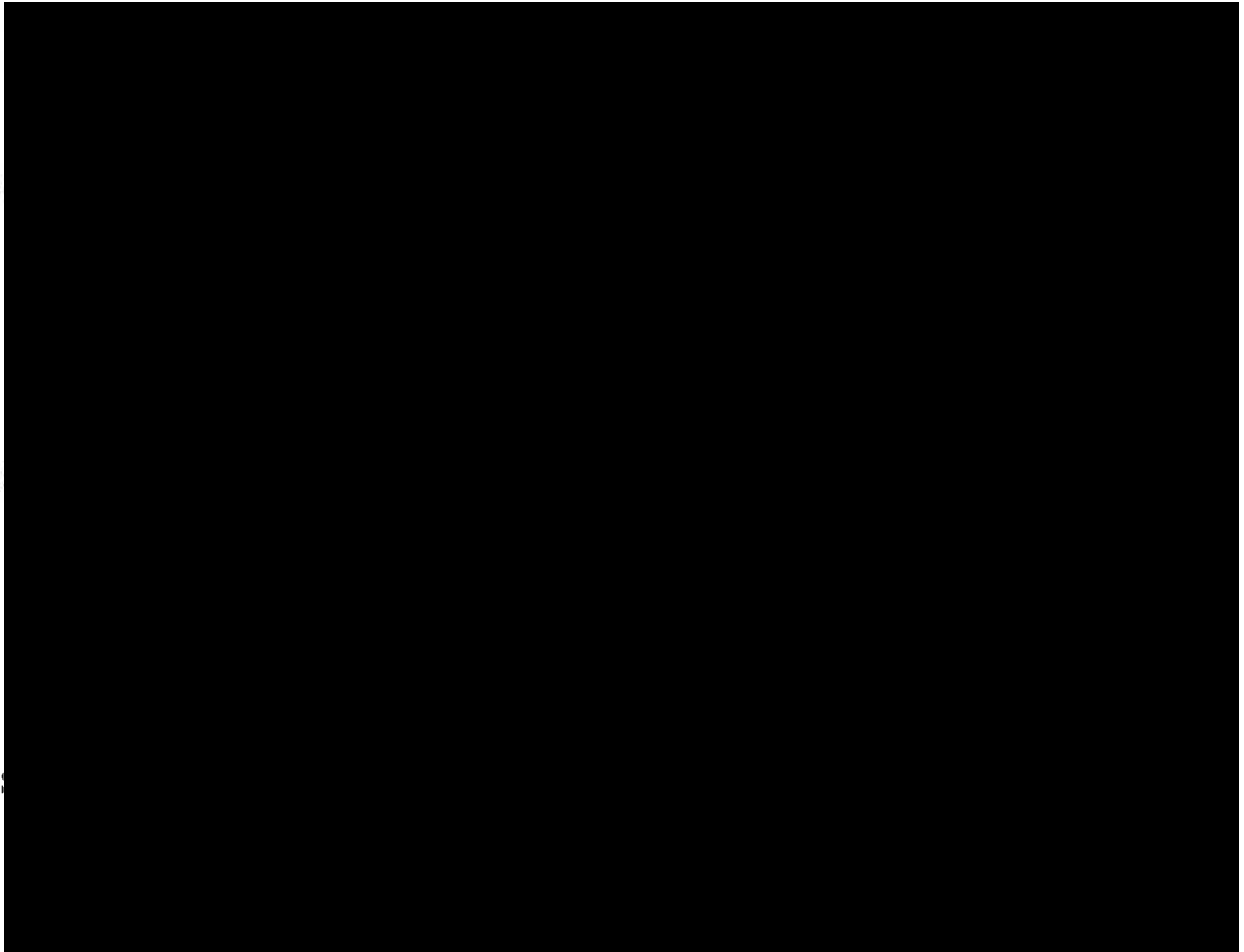


#### Appendix 4: Sponsor and [REDACTED] Approvals

**Protocol Title:** The TRANQUILITY 2 Trial: A Multi-Center Randomized, Double-Masked, Parallel Design, Vehicle-Controlled Phase 3 Clinical Trial to Assess the Efficacy and Safety of 0.25% Reproxalap Ophthalmic Solution Compared to Vehicle in Subjects with Dry Eye Disease

**Protocol Number:** ADX-102-DED-023

**Protocol Date:** 18May2022



## Appendix 5: Investigator's Signature

**Protocol Title:** The TRANQUILITY 2 Trial: A Multi-Center Randomized, Double-Masked, Parallel Design, Vehicle-Controlled Phase 3 Clinical Trial to Assess the Efficacy and Safety of 0.25% Reproxalap Ophthalmic Solution Compared to Vehicle in Subjects with Dry Eye Disease

**Protocol Number:** ADX-102-DED-023

**Protocol Date:** 18May2022

I agree to implement and conduct the study diligently and in strict compliance with the protocol, good clinical practices, and all applicable laws and regulations. I agree to maintain all information supplied by [REDACTED] in confidence and, when this information is submitted to an Institutional Review Board (IRB) or another group, it will be submitted with a designation that the material is confidential.

I have read this protocol in its entirety, including the above statement, and I agree to all aspects.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Name:

Title: Principal Investigator

Site:

Address:

Phone Number: