

1 **HIGHLIGHTS OF PRESCRIBING INFORMATION**  
2 **These highlights do not include all the information needed to use**  
3 **ENCELTO™ safely and effectively. See full prescribing**  
4 **information for ENCELTO.**

5  
6 **ENCELTO (revakinagene taroretcel-lwey) implant, for intravitreal**  
7 **use**  
8 **Initial U.S. Approval: 2025**

9  
10 -----**INDICATIONS AND USAGE**-----

11 ENCELTO is an allogeneic encapsulated cell-based gene therapy  
12 indicated for the treatment of adults with idiopathic macular  
13 telangiectasia type 2 (MacTel). (1)

14  
15 -----**DOSAGE AND ADMINISTRATION**-----

16 **For intravitreal implantation only.**

- 17 • ENCELTO is intended for surgical intravitreal implantation under  
18 aseptic conditions by a qualified ophthalmologist. (2.1)
- 19 • The recommended dose is one ENCELTO implant per affected eye  
20 containing 200,000 to 440,000 allogeneic retinal pigment epithelial  
21 cells expressing recombinant human ciliary neurotrophic factor  
22 (rhCNTF). (2.1)
- 23 • Carefully inspect ENCELTO prior to use and refer to the Instructions  
24 for Use when preparing for and performing surgical placement or  
25 removal of ENCELTO. (2.2, 2.3)

26  
27 -----**DOSAGE FORMS AND STRENGTHS**-----

28 One single-dose implant containing 200,000 to 440,000 allogeneic  
29 retinal pigment epithelial cells expressing rhCNTF. (3)

30  
31 -----**CONTRAINDICATIONS**-----

- 32 • Ocular or periocular infections. (4)
- 33 • Known hypersensitivity to Endothelial Serum Free Media (Endo-  
34 SFM). (4)

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35 -----**WARNINGS AND PRECAUTIONS**-----

- 36 • ENCELTO implantation has been associated with severe vision loss,  
37 infectious endophthalmitis, retinal tears and/or detachment, vitreous  
38 hemorrhage, implant extrusion, cataract formation, suture related  
39 complications, and delayed dark adaptation. Patients should be  
40 instructed to report signs or symptoms that could be associated with  
41 these events without delay. Additional surgical and/or medical  
42 management may be required. (5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8)
- 43 • Vitreous Hemorrhage: Temporarily discontinue antithrombotic  
44 medication prior to ENCELTO insertion surgery to reduce the risk of  
45 implantation related vitreous hemorrhage. Vitreous hemorrhages  
46 occurring greater than one year from implantation could be a sign of  
47 ENCELTO extrusion. The surgical site should be examined closely  
48 and the ENCELTO should be surgically repositioned if indicated.  
49 (5.4)

50  
51 -----**ADVERSE REACTIONS**-----

52 The most common adverse reactions (incidence  $\geq 2\%$ ) were  
53 conjunctival hemorrhage, delayed dark adaptation, foreign body  
54 sensation, eye pain, suture related complications, miosis, conjunctival  
55 hyperemia, eye pruritus, ocular discomfort, vitreous hemorrhage,  
56 blurred vision, headache, dry eye, eye irritation, cataract progression  
57 or formation, vitreous floaters, severe vision loss, eye discharge,  
58 anterior chamber cell, iridocyclitis. (6.1)

59  
60 **To report SUSPECTED ADVERSE REACTIONS, contact Neurotech**  
61 **at 1-833-963-9275 or FDA at 1-800-FDA-1088 or**  
62 **[www.fda.gov/medwatch](http://www.fda.gov/medwatch).**

63  
64 **See 17 for PATIENT COUNSELING INFORMATION and FDA-**  
65 **approved patient labeling**

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112 information are not listed.

113 **FULL PRESCRIBING INFORMATION**

114  
115 **1 INDICATIONS AND USAGE**

116  
117 ENCELTO is indicated for the treatment of adults with idiopathic macular telangiectasia type 2  
118 (MacTel).

119  
120 **2 DOSAGE AND ADMINISTRATION**

121  
122 **2.1 Recommended Dose**

123  
124 **For intravitreal implantation only**

- 125  
126 • ENCELTO is administered by a single surgical intravitreal procedure performed by a qualified  
127 ophthalmologist.
- 128 • The recommended dose is one ENCELTO implant per affected eye. Each ENCELTO implant  
129 contains 200,000 to 440,000 allogeneic retinal pigment epithelial cells expressing recombinant  
130 human ciliary neurotrophic factor (rhCNTF) (NTC-201-6A cell line), a neurotrophic factor.

131  
132 **2.2 ENCELTO Surgical Placement**

133  
134 The ENCELTO implant insertion is a surgical procedure performed in an operating room under  
135 aseptic conditions by a qualified ophthalmologist.

136  
**Pre-Surgical Preparation**

1. Inspect the ENCELTO packaging for any signs of damage or leakage.
2. Verify the use-by date.
3. Confirm that the disposable temperature recording device displays a checkmark at the top of the screen.
4. Ensure the liquid medium is at the correct pH using the provided pH color guide reference card.

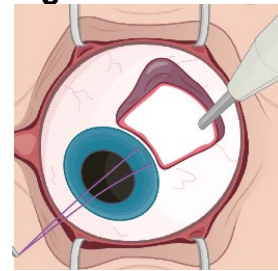
Prepare the surgical field properly.

## Surgical Steps

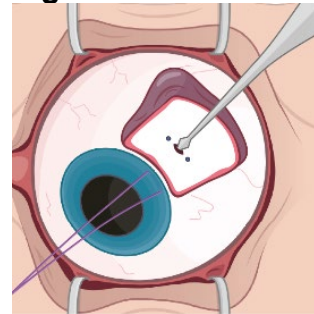
### 1. Preparing the Surgical Site

- a. Create a 7x7 mm peritomy of the conjunctiva and Tenon's capsule at the selected implantation site.
- b. Place a corneal-limbal traction suture in the selected surgical quadrant (either inferotemporal or inferonasal) ([Figure 1](#)).
- c. Maintain hemostasis of the underlying sclera and conjunctiva ([Figure 1](#)).
- d. Using an MVR and 15-degree blade, create a 3.0 mm full-thickness sclerotomy 3.75 mm posterior and parallel to the limbus ([Figure 2](#)). Do not insert ENCELTO outside of the pars plana.
- e. Confirm:
  - The incision is full thickness.
  - There is adequate hemostasis.
  - There is no spanning uveal tissue.

**Figure 1**



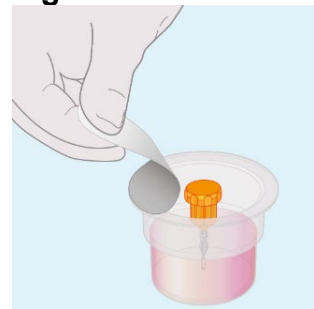
**Figure 2**



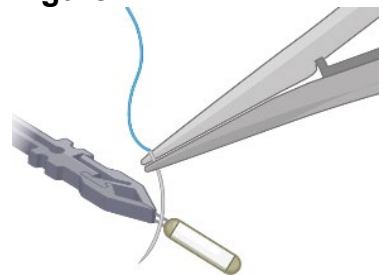
### 2. Preparing the ENCELTO Implant

- a. Open the inner container and expose the upper compartment and luer lock cap ([Figure 3](#)).
- b. Unlock the luer lock cap by turning it counterclockwise once.
- c. Lift the luer lock cap vertically to remove ENCELTO (attached to the gripper).
- d. Rinse ENCELTO with at least 5 mL of sterile Balanced Saline Solution (BSS).
- e. Keep ENCELTO moist by applying BSS every 10 minutes until insertion.
- f. While holding the luer lock cap, pass a double-armed 9-0 polypropylene suture needle through ENCELTO's fixation loop ([Figure 4](#)).

**Figure 3**



**Figure 4**



### 3. Implantation of ENCELTO

- Gently open the sclerotomy incision and insert ENCELTO perpendicularly into the eye (Figure 5).
- Ensure only the fixation loop is exposed.
- Release ENCELTO from the gripper by squeezing the indicated region with forceps or a fine needle holder (Figure 6).

Figure 5

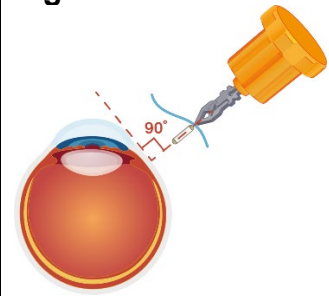
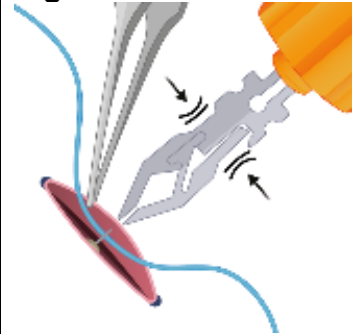


Figure 6



### 4. Securing the Implant

- Secure ENCELTO by creating a 3-1-1 anchor knot with the polypropylene suture at the apex of the fixation loop (Figure 7).
- Confirm ENCELTO is centered in the incision.
- Pass each suture arm centrally through either side of the wound at 90-99% scleral depth (Figure 8).
- Pull up the suture ends and confirm that the fixation loop is at the proper depth (90-99%).
- Tie down the suture to the sclera with a 3-1-1 knot, ensuring the knot is placed away from the incision.
- If a suture breaks, leave the tail as long as possible and lay it flat.
- Take a 2.0 mm scleral bite at 50-75% depth beyond the sclerotomy on each side (Figure 9).

Figure 7

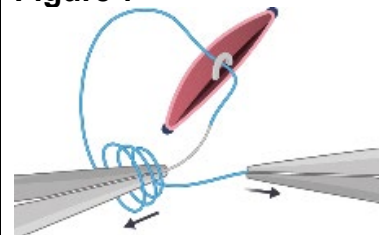


Figure 8

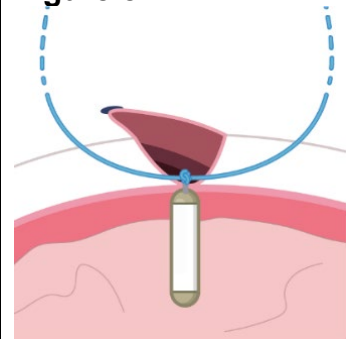


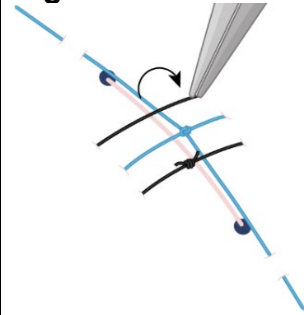
Figure 9



## 5. Closing the Incision

- a. Close the scleral incision with 9-0 nylon sutures (Figure 10), ensuring:
  - The polypropylene suture is captured to prevent irritation and erosion.
  - All nylon suture knots are rotated into the sclera.
  - The closure is watertight.
- b. Pull the polypropylene suture end taut and cut it flush to the sclera.
- c. Close the conjunctiva and Tenon's capsule using 6-0 plain gut or chromic suture, or 7-0 Vicryl suture or similar.
- d. Ensure Tenon's capsule covers the insertion site and use 3-point fixation and scleral bites.
- e. Administer sub-conjunctival steroid injection: dexamethasone, 2 mg/0.5 ml (4 mg/ml) or equivalent. If the case is complicated and inflammation is anticipated, a higher dose of dexamethasone (0.5 cc of 10 mg/ml) or equivalent may be used, at the surgeon's discretion.
- f. Perform indirect ophthalmoscopy to confirm placement of ENCELTO in the vitreous and that there are no intraocular complications. Failure to perform indirect ophthalmoscopy can lead to unidentified malpositioning of ENCELTO and intraocular complications.

Figure 10



## Post-Operative Wound Care

- The patient is to use:
  - A topical antibiotic solution at a frequency of 1 drop four times a day for 7 days.
  - A steroid drop taper of prednisolone acetate 1% (or equivalent) starting the day after surgery with the following taper:
    - 1 drop four times a day for the first 7 days;
    - 1 drop three times a day for the next 7 days;
    - 1 drop two times a day for the next 7 days;
    - 1 drop once a day for the last 7 days.

Refer to ENCELTO Instructions for Use for detailed guidance on implantation procedure.

## 2.3 ENCELTO Removal Procedure

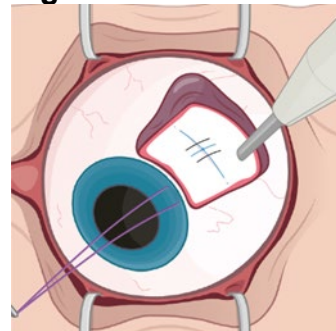
Removal of ENCELTO is a surgical procedure performed in an operating room under aseptic conditions by a qualified ophthalmologist. Remove ENCELTO implant, if vitrectomy with a complete gas fill or silicone oil fill is required or if infectious endophthalmitis occurs.

## Surgical Steps

### 1. Preparing the Surgical Site (Figure 11)

- Create a 7x7 mm peritomy of the conjunctiva and Tenon's capsule to expose the insertion site.
- Place a corneal-limbal traction suture in the quadrant where ENCELTO is located.
- Maintain hemostasis of the sclera and surrounding conjunctiva.

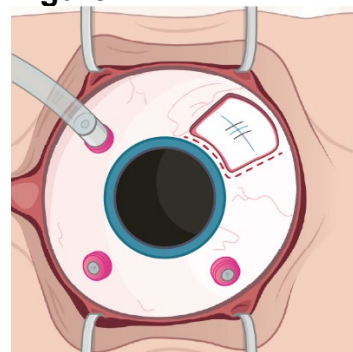
Figure 11



### 2. Establishing Infusion & Vitrectomy (Figure 12)

- Place an infusion cannula in the inferior quadrant (opposite ENCELTO).
- Confirm the infusion line is positioned within the vitreous cavity before opening the infusion.
- Insert two superior cannulas following normal pars plana vitrectomy protocol.
- Perform a thorough vitrectomy to remove vitreous surrounding ENCELTO without disrupting the hollow fiber membrane.

Figure 12



### 3. Reopening the Sclerotomy

- Locate the ENCELTO incision and remove the two nylon sutures while leaving the polypropylene suture intact (Figure 13).
- Using an MVR blade, carefully dissect open the original scleral incision down to the ENCELTO cap at the base of the fixation loop (Figure 14).
- Extend the incision along the entire 3.0 mm length to full thickness.
- Cut the polypropylene anchor suture on the anterior side of the knot.
- Turn off or lower infusion pressure.

Figure 13

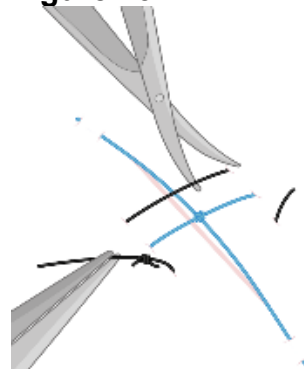
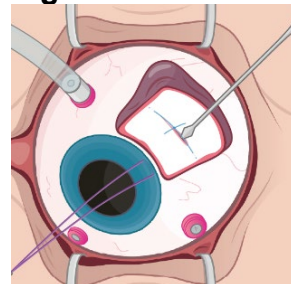


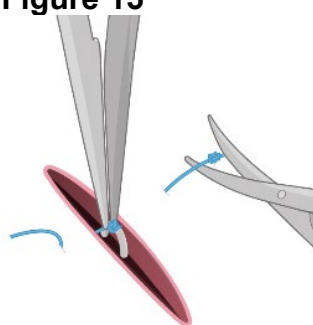
Figure 14



#### 4. Removing ENCELTO (Figure 15)

- a. Fully open the pars plana sclerotomy and confirm there is no spanning uveal tissue.
- b. Identify and grasp the fixation loop.
- c. Cut off the remaining polypropylene knot.
- d. Remove ENCELTO from the eye.
- e. Inspect the ENCELTO capsule for any damage or penetration.
- f. Do not discard or dispose of the ENCELTO implant. Call and report to 1-833-963-9275. The appropriate action will be taken to initiate the return of ENCELTO and possible replacement.

Figure 15



#### 5. Closing the Incision

- a. Remove any prolapsed vitreous.
- b. Close the sclerotomy with interrupted 7-0 Vicryl sutures for a watertight closure.
- c. Remove the infusion line and additional cannulas.
- d. Close the conjunctiva with 6-0 plain gut sutures or equivalent.

#### Post-Operative Wound Care

- The patient is to use:
  - A topical antibiotic solution at a frequency of 1 drop four times a day for 7 days.
  - A steroid drop taper of prednisolone acetate 1% (or equivalent) starting the day after surgery with the following taper:
    - 1 drop four times a day for the first 7 days;
    - 1 drop three times a day for the next 7 days;
    - 1 drop two times a day for the next 7 days;
    - 1 drop once a day for the last 7 days.

Refer to ENCELTO Instructions for Use for detailed guidance on removal procedure.

### 3 DOSAGE FORMS AND STRENGTHS

ENCELTO is a single-dose implant that contains 200,000 to 440,000 allogeneic retinal pigment epithelial cells expressing recombinant human ciliary neurotrophic factor (rhCNTF) (NTC-201-6A cell line) for intravitreal surgical placement. ENCELTO is an opaque semi-permeable capsule that is white to off-white, capped on both ends, and has a titanium loop on one end. The ENCELTO width is  $1.2 \pm 0.1$  mm, its length is  $6.1 \pm 0.4$  mm, and its internal diameter is  $0.88 \pm 0.02$  mm (Figure 17).

### 4 CONTRAINDICATIONS

ENCELTO is contraindicated in patients with:

- Active or suspected ocular or periocular infections.
- Known hypersensitivity to Endothelial Serum Free Media (Endo-SFM)

### 5 WARNINGS AND PRECAUTIONS

#### 5.1 Severe Vision Loss

Severe vision loss defined as three or more lines of visual acuity loss [ $\geq 15$  Early Treatment Diabetic Retinopathy Study (ETDRS) letters] has occurred following ENCELTO implantation [see [Adverse](#)

169 [Reactions \(6\)](#)]. Monitor patients for signs and symptoms of vision loss and manage as clinically  
170 indicated.  
171

## 172 **5.2 Infectious Endophthalmitis**

173  
174 Infectious endophthalmitis may occur following ENCELTO implantation. Signs and symptoms of  
175 infectious endophthalmitis include progressively worsening eye pain, vision loss, or scleral and  
176 conjunctival injection. To mitigate the risk of endophthalmitis, use proper aseptic surgical technique  
177 for ENCELTO implantation [see [Dosage and Administration \(2.2\)](#)]. Monitor patients for signs or  
178 symptoms of infectious endophthalmitis. Remove ENCELTO implant if infectious endophthalmitis  
179 occurs and manage symptoms according to clinical practice.  
180

## 181 **5.3 Retinal Tear and Detachment**

182  
183 Retinal tears and retinal detachment may occur following ENCELTO implantation. Signs and  
184 symptoms of retinal tears include acute onset of flashing lights, floaters, and/or loss of visual acuity.  
185 Signs and symptoms of retinal detachment may include progressive visual field loss and/or loss of  
186 visual acuity. Use standard vitreoretinal surgical techniques during ENCELTO implantation to  
187 minimize the risk of retinal tears and retinal detachment. Monitor for any signs or symptoms of retinal  
188 tear and/or retinal detachment. Treat rhegmatogenous retinal detachment and retinal tears promptly.  
189 Remove ENCELTO implant, if vitrectomy with a complete gas fill or silicone oil fill is required [see  
190 [Dosage and Administration \(2.3\)](#)].  
191

## 192 **5.4 Vitreous Hemorrhage**

193  
194 Vitreous hemorrhage, which may result in temporary vision loss, has occurred following ENCELTO  
195 implantation [see [Adverse Reactions \(6\)](#)]. Patients receiving antithrombotic medication (e.g., oral  
196 anticoagulants, aspirin, nonsteroidal anti-inflammatory drugs) may be at increased risk of vitreous  
197 hemorrhage. To reduce the risk of vitreous hemorrhage, interrupt antithrombotic medications prior to  
198 the ENCELTO implantation. Vitrectomy surgery may be necessary to clear severe, recurrent, or non-  
199 clearing vitreous hemorrhage. If the patient has a late onset vitreous hemorrhage (greater than one  
200 year following ENCELTO implantation surgery), examine the ENCELTO implantation site for possible  
201 implant extrusion. If implant extrusion has occurred, surgically reposition ENCELTO [see [Implant](#)  
202 [Extrusion \(5.5\)](#)].  
203

## 204 **5.5 Implant Extrusion**

205  
206 Implant extrusion through the initial scleral wound has occurred following ENCELTO implantation [see  
207 [Adverse Reactions \(6\)](#)]. Signs and symptoms of implant extrusion include recurrent uveitis, vitreous  
208 hemorrhage, eye pain more than one year after implantation, or visibility of titanium fixation loop  
209 under the conjunctiva. To reduce the risk of implant extrusion, carefully follow the specific surgical  
210 steps for ENCELTO implantation [see [Dosage and Administration \(2.2\)](#)].  
211

212 Evaluate patients after 6 months to confirm proper positioning of ENCELTO and then annually. If  
213 ENCELTO begins to extrude, surgically reposition ENCELTO to a proper scleral wound depth either  
214 in the same site or in the opposing inferior quadrant of the vitreous cavity.  
215

## 216 **5.6 Cataract Formation**

217  
218 Cataract formation, including cataract cortical, cataract nuclear, cataract subcapsular, cataract  
219 traumatic, and lenticular opacities, has occurred following ENCELTO implantation [see [Adverse](#)



220 [Reactions \(6\)](#)]. To reduce the risk of ENCELTO-related cataract formation or progression, carefully  
221 follow the specific surgical steps for ENCELTO implantation [see [Dosage and Administration \(2.2\)](#)].  
222

## 223 5.7 Suture Related Complications

224

225 Suture related complications, including conjunctival erosions due to suture tips and suture knots,  
226 have occurred following ENCELTO implantation [see [Adverse Reactions \(6\)](#)].  
227

228 To mitigate the risk of suture related complications, carefully follow the specific surgical steps for  
229 ENCELTO implantation [see [Dosage and Administration \(2.2\)](#)] and manage suture-related  
230 complications as clinically indicated.  
231

## 232 5.8 Delayed Dark Adaptation

233

234 Delayed Dark Adaptation, a delay in the ability to adjust vision from a bright lighting condition to a dim  
235 lighting, has occurred following ENCELTO administration which remained unchanged for the duration  
236 of study follow up [see [Adverse Reactions \(6\)](#)]. Advise patients to take caution while driving and  
237 navigating in the dark.  
238

# 239 6 ADVERSE REACTIONS

240

## 241 6.1 Clinical Trials Experience

242

243 Because clinical trials are conducted under widely varying conditions, adverse reaction rates  
244 observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of  
245 another drug and may not reflect the rates observed in practice.  
246

247 The safety data described in this section reflects exposure to ENCELTO in two clinical trials, Study 1  
248 (NTMT-03-A) and Study 2 (NTMT-03-B) and are pooled for analysis. A total of 117 patients received  
249 ENCELTO, and 111 patients underwent a sham procedure and were followed for a duration of 24  
250 months [see [Clinical Studies \(14\)](#)].  
251

252 Serious adverse reactions occurred in six patients (5%) including suture related complications (n=5)  
253 and implant extrusion (n=1).  
254

255 [Table 1](#) lists the most common adverse reactions that occurred in  $\geq 2\%$  patients and with higher  
256 frequency in ENCELTO group compared to Sham group in Study 1 and Study 2.  
257

258 **Table 1. Adverse Reactions occurring in  $\geq 2\%$  of Patients and with higher frequency in  
259 ENCELTO group compared to Sham group in ENCELTO studies\***

Adverse Reactions	ENCELTO (N=117) n (%)	Sham (N=111) n (%)
Conjunctival hemorrhage	36 (31)	29 (26)
Delayed dark adaptation	27 (23.1)	1 (1)
Foreign body sensation in eyes	18 (15)	15 (13.5)
Eye pain	18 (15)	10 (9)
Suture related complication**	18 (15.4)	3 (2.7)
Miosis	18 (15.4)	0 (0.0)
Conjunctival hyperemia	13 (11)	9 (8)

<b>Adverse Reactions</b>	<b>ENCELTO (N=117) n (%)</b>	<b>Sham (N=111) n (%)</b>
Eye pruritus	10 (9)	4 (3.6)
Ocular discomfort	10 (9)	1 (1)
Vitreous hemorrhage	10 (8.5)	0 (0.0)
Vision blurred	8 (7)	4 (4)
Headache	8 (7)	1 (1)
Dry eye	7 (6)	2 (2)
Eye irritation	6 (5.1)	2 (2)
Cumulative cataract incidence	6 (5)	0 (0)
Vitreous floaters	6 (5)	0 (0.0)
Severe visual loss>15 letters***	4 (3)	0 (0)
Eye discharge	4 (3.4)	1 (0.9)
Anterior chamber cell	4 (3.4)	0 (0.0)
Iridocyclitis	3 (2.6)	0 (0)

\* Pooled data from Study 1 and Study 2; Adverse reaction rates were comparable between the two studies

\*\*Suture related complications include exposed suture, foreign body sensation, conjunctival wound dehiscence, painful sutures, suture irritation, suture granuloma, scleral wound opening, and itchy suture

\*\*\* Includes one case of visual loss due to cataract formation which remained unresolved at the end of the study

## 8 USE IN SPECIFIC POPULATIONS

### 8.1 Pregnancy

#### Risk Summary

There are no data on the use of ENCELTO in pregnant women. Endogenous CNTF is naturally found in maternal plasma, placental cells, and umbilical cord blood. It is not known if the use of ENCELTO increases CNTF above naturally occurring levels in these tissues.

In animal reproduction studies, subcutaneous administration of rhCNTF to pregnant rats and rabbits demonstrated no evidence of teratogenic effects on the fetus. However, when administered to rabbits at a dose level of 10ug/kg/day, a decrease in implantations and live fetuses was observed. When administered to rats at a dose level of 100ug/kg/day a decrease in corpora lutea was observed.

The estimated background risk of major birth defects and miscarriage in the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects is 2% to 4% and of miscarriage is 15% to 20% of clinically recognized pregnancies.

#### Data

##### *Animal Data*

See *Risk Summary* for details on data.

## 8.2 Lactation

### Risk Summary

There is no data on the presence of ENCELTO in human milk, its effects on the breastfed infant, or its impact on milk production.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for ENCELTO and any potential adverse effects on the breastfed infant from rhCNTF or from the underlying maternal condition.

## 8.4 Pediatric Use

The safety and effectiveness of ENCELTO have not been established in pediatric patients.

## 8.5 Geriatric Use

There were 38 patients (32%) 65 years of age and older and two patients (1%) 75 years of age and older in Study 1 and Study 2 who received ENCELTO [see [Clinical Studies \(14\)](#)]. Clinical studies of ENCELTO did not include sufficient numbers of patients aged 65 and over to determine whether they respond differently than younger patients.

# 11 DESCRIPTION

ENCELTO (revakinagene taroretsel-lwey) implant, is single-dose, sterile, nonpyrogenic and retrievable.

ENCELTO is an allogeneic encapsulated cell-based gene therapy that contains 200,000 to 440,000 allogeneic retinal pigment epithelial cells expressing recombinant human ciliary neurotrophic factor (rhCNTF) (NTC-201-6A cell line) for surgical intravitreal placement.

ENCELTO consists of an opaque, semi-permeable white to off-white capsule surrounding a scaffold of polyethylene terephthalate (PET) yarn, loaded with rhCNTF secreting allogeneic retinal pigment epithelial cells (NTC-201-6A cell line). Each end of the semi-permeable capsule is sealed with medical grade methacrylate adhesive, and to one end a titanium fixation loop is attached. ENCELTO width is  $1.2 \pm 0.1$  mm, length is  $6.1 \pm 0.4$  mm, and its internal diameter is  $0.88 \pm 0.02$  mm ([Figure 17](#)).

ENCELTO is packaged in a protective inner container within an orange to pink liquid hold medium referred to as Endothelial Serum Free Media (Endo-SFM), which is maintained sterile by a sealed outer container. ENCELTO is provided attached, by the fixation loop, to a gripper that both suspends ENCELTO in the Endo-SFM and facilitates intraocular insertion. The Endo-SFM within the packaging inner container may contain visible particles generally described as fiber, solid, white, or metallic in appearance.

ENCELTO is manufactured using animal and human derived reagents.

# 12 CLINICAL PHARMACOLOGY

## 12.1 Mechanism of Action

ENCELTO secretes recombinant human ciliary neurotrophic factor (rhCNTF), which is one of several neurotrophic factors endogenously produced by neurons and supporting glial cells. Exogenous CNTF

342 is thought to initially target Müller glia to trigger a cascade of signaling events that may promote  
343 photoreceptor survival; however, the mechanism of action for ENCELTO is not completely  
344 understood.

### 346 **12.3 Pharmacokinetics**

347  
348 Systemic exposure of rhCNTF was measured in 2 distribution studies in rabbits and in 2 toxicology  
349 studies in minipigs. Overall, there was no evidence of systemic exposure to rhCNTF after  
350 implantation of ENCELTO in rabbits for periods up to 9 months or in minipigs for periods of up to  
351 6 months.

352  
353 Following intraocular implantation of a single ENCELTO dose in rabbits at 12 weeks, the mean  $C_{max}$   
354 of rhCNTF in the vitreous and aqueous was 2.0 and 0.3 ng/mL, respectively, and below the level of  
355 quantitation (LLOQ) in the serum and contralateral, untreated eye. Similarly in human patients,  
356 rhCNTF levels were below the limit for LLOQ in the serum.

### 358 **12.6 Immunogenicity**

359  
360 The observed incidence of anti-drug antibodies is highly dependent on the sensitivity and specificity  
361 of the assay. Differences in assay methods preclude meaningful comparisons of the incidence of anti-  
362 drug antibodies in the studies described below with the incidence of anti-drug antibodies in other  
363 studies, including those of ENCELTO or of other products.

364  
365 In a six-month Study NTMT-02B in which patients received ENCELTO in a single eye, one out of  
366 31 patients (3%) tested positive for serum antibodies against the ENCELTO secreted product protein  
367 rhCNTF and one patient (3%) tested positive to serum non-secreted intracellular protein DHFR.

368  
369 Because of the low occurrence of anti-drug antibodies, the effect of serum anti-rhCNTF and anti-  
370 DHFR antibodies on the safety or efficacy of ENCELTO is unknown.

## 372 **13 NONCLINICAL TOXICOLOGY**

### 374 **13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility**

#### 376 Carcinogenesis and Mutagenesis

377  
378 No carcinogenicity or mutagenicity studies have been conducted with rhCNTF.

#### 380 Impairment of Fertility

381  
382 In male rats, fertility was unaffected at subcutaneous doses of rhCNTF up to 300 µg/kg/day.

383  
384 See [Pregnancy \(8.1\)](#) for data regarding effects on female fertility.

## 386 **14 CLINICAL STUDIES**

387  
388 The efficacy of ENCELTO was evaluated in two studies, Study NTMT-03-A (NCT03316300; Study 1)  
389 and Study NTMT-03-B (NCT03319849; Study 2) as described below.

## Study 1

Study 1 was a randomized, multi-center, sham-controlled study which enrolled adults with MacTel. For enrollment, the patients were required to have a photoreceptor inner segment/outer segment (IS/OS PR) break (loss) in ellipsoid zone (EZ) between 0.16 and 2.00 mm<sup>2</sup> measured by spectral domain-optical coherence tomography (SD-OCT) and best corrected visual acuity (BCVA) of 54-letter score or better (20/80 or better) as measured by the Early Treatment Diabetic Retinopathy Study (ETDRS) chart at screening. Patients with neovascular MacTel were excluded. Patients were randomized to receive either ENCELTO intravitreal implant or sham procedure under standard operative procedures. Patients in ENCELTO group underwent conjunctival peritomy, implant placement in the vitreous cavity via sclerotomy and closure with sutures. Patients in the Sham group underwent conjunctival peritomy, scleral pressure, and conjunctival closure with sutures. One hundred and fifteen (96%) of 120 patients underwent the assigned procedure and were included in the analysis of efficacy.

A total of 120 patients were randomized and of these, 115 patients (ENCELTO group: 58; Sham group: 57) comprise the efficacy analysis population. The demographic characteristics of the efficacy analysis population were as follows: the mean age was 61 years (range 40 to 78 years), 79 patients (69%) were female, 98 patients (85%) were White, 5 patients (4%) were Asian, 3 patients (3%) were Black or African American, 1 patient (1%) was American Indian, and 8 patients (7%) were of "other" race. Six patients (5%) were Hispanic. The median (min, max) baseline EZ area loss was 0.35 (0.15, 1.99) mm<sup>2</sup> for the ENCELTO group and 0.36 (0.16, 1.7) mm<sup>2</sup> for the Sham group. The median (min, max) baseline aggregate sensitivity of microperimetry within the EZ break area 35.2 (0.75, 398.8) dB for the ENCELTO group and 35.5 (2, 281.3) dB for the Sham group.

The primary efficacy outcome measure was the rate of change in the area of EZ loss (IS/OS, macular PR loss) over 24 months, as measured by SD-OCT. The secondary outcome measure was the mean change in aggregate sensitivity loss of microperimetry within the EZ break area from baseline to Month 24.

The efficacy outcome results for Study 1 are summarized in [Table 2](#).

**Table 2. Efficacy Results for Study 1 (N=115)**

Efficacy endpoints	ENCELTO n= 58	Sham n=57	Difference ENCELTO-Sham	P-value <sup>c</sup>
Rate of change in EZ area loss from baseline over 24 months <sup>a</sup> mm <sup>2</sup> (95% CI)	0.075 (0.05, 0.10)	0.166 (0.14, 0.19)	-0.091 (-0.13, -0.06)	<0.0001
Mean change in aggregate retinal sensitivity loss from baseline to 24-months <sup>b</sup> dB (95% CI)	25.27 (15.88, 34.67)	43.02 (31.78, 54.26)	-17.75 (-32.58, -2.91)	0.02

CI = confidence interval, EZ=ellipsoid zone

<sup>a</sup> Estimated by using a longitudinal mixed model including EZ area loss as the dependent variable, patient-specific random intercepts, treatment group, time (continuous), and interaction between treatment and time as covariates. The baseline and Months 12, 16, 20, and 24 visits were included.

<sup>b</sup> Estimated by using two-sample t-test; seven ENCELTO and four Sham patients were excluded due to missing data.

<sup>c</sup> Statistically significant at two-sided alpha of 0.05.

## Study 2

Study 2 was a randomized, multi-center, sham-controlled study which enrolled adult with MacTel. For enrollment, the patients were required to have an IS/OS PR break in EZ between 0.16 and 2.00 mm<sup>2</sup>

434 measured by SD-OCT and BCVA of 54-letter score or better (20/80 or better) as measured by the  
435 ETDRS chart at screening. Patients with neovascular MacTel were excluded.

436 Patients were randomized to receive either ENCELTO intravitreal implant or sham procedure under  
437 standard peri-operative procedures. Patients in ENCELTO group underwent conjunctival peritomy,  
438 implant placement in the vitreous cavity via sclerotomy and closure with sutures. Patients in the Sham  
439 group underwent conjunctival peritomy, scleral pressure, and conjunctival closure with sutures. One  
440 hundred and thirteen (95%) of the 119 patients underwent the assigned procedure and were included  
441 in efficacy evaluation.  
442

443 A total of 119 patients were randomized and of these, 113 patients (ENCELTO group: 59; Sham  
444 group: 54) comprise the efficacy analysis population. The demographic characteristics of the efficacy  
445 analysis population were as follows: the mean age was 59 years (range: 40 to 75 years), 82 patients  
446 (73%) were female, 102 patients (90%) were White, 4 patients (4%) were Asian, and 7 patients (6%)  
447 were of "other" race or "unable to specify" race. Eight patients (7%) were Hispanic. The median (min,  
448 max) baseline EZ area loss was 0.48 (0.16, 1.63) mm<sup>2</sup> for the ENCELTO and 0.39 (0.16, 1.38) mm<sup>2</sup>  
449 for the Sham group. The median (min, max) baseline aggregate sensitivity of microperimetry within  
450 the EZ break area 40.07 (4.82, 291.52) dB for the ENCELTO group and 28.86 (0.33, 221.17) dB for  
451 the Sham group.  
452

453 The primary efficacy outcome measure was the rate of change in the area of EZ loss (IS/OS, macular  
454 PR loss) over 24 months, as measured by SD-OCT. The secondary outcome measure was the mean  
455 change in aggregate sensitivity loss of microperimetry within the EZ break area from baseline to  
456 Month 24.  
457

458 The efficacy results from Study 2 are summarized in [Table 3](#) below.  
459  
460

**Table 3. Efficacy Results for Study 2 (N=113)**

Efficacy endpoints	ENCELTO n= 59	Sham n=54	Difference ENCELTO-Sham	P-value <sup>c</sup>
Rate of change in EZ area loss from baseline over 24 months <sup>a</sup> mm <sup>2</sup> (95% CI)	0.111 (0.08, 0.14)	0.160 (0.13, 0.19)	-0.049 (-0.089, -0.008)	0.0186 <sup>c</sup>
Mean change in aggregate retinal sensitivity loss from baseline to 24-month <sup>b</sup> dB (95% CI)	40.02 (26.08, 53.96)	41.97 (30.34, 53.60)	-1.95 (-20.33, 16.43)	0.83

461 CI = confidence interval, EZ=ellipsoid zone

462 <sup>a</sup> Estimated by using a longitudinal mixed model including EZ area loss as the dependent variable, patient-specific random intercepts, treatment group,  
463 time (continuous), and interaction between treatment and time as covariates. The baseline and Months 12, 16, 20, and 24 visits were included.

464 <sup>b</sup> Estimated by using two-sample t-test; Seven ENCELTO and six Sham patients were excluded due to missing data.

465 <sup>c</sup> Statistically significant at two-sided alpha of 0.05.  
466

## 467 **16 HOW SUPPLIED/STORAGE AND HANDLING**

### 468 **16.1 How Supplied**

469 ENCELTO is supplied as a sterile, single-dose, implant that contains 200,000 to 440,000 allogeneic  
470 retinal pigment epithelial cells expressing rhCNTF (NTC-201-6A cell line).  
471

472 ENCELTO is packaged in a protective inner container within an Endothelial Serum Free Media  
473 (Endo-SFM), which is maintained sterile by a sealed outer container. ENCELTO is provided attached  
474  
475

476 to a gripper that both suspends ENCELTO in the Endo-SFM and facilitates intraocular insertion.  
477 ENCELTO contains no preservatives.  
478

479 NDC: 82958-501-01  
480

481 See [Table 4](#), [Figure 16](#) and ENCELTO “Instructions for Use” for additional details.  
482  
483

**Table 4. ENCELTO Corepack Contents**

<b>Components</b>	<b>Description</b>
Inner container	This is provided sterile. It is a cylindrical plastic container with a lower compartment filled with liquid medium. It has an upper compartment connected to it via a narrow channel that is secured shut with a luer lock cap.
Outer container	This is a plastic container with a foil lid hermetically sealed. It maintains the sterility of the inner container until ready to use.
Disposable temperature recording device	A disposable device that measures and records the temperature in the package. If ENCELTO has been stored within the acceptable range, a “✓” will be shown at the top of the screen. If an “X” is displayed, ENCELTO has been exposed to temperatures outside of the acceptable range and must not be used.
ENCELTO Medium pH Color Guide	A card that provides a color scale to indicate the acceptable pH range for the liquid medium.
ENCELTO Instructions for Use	A booklet that contains the full instructions and includes the ENCELTO patient card.
ENCELTO Inspection Checklist	An information sheet that contains instructions for inspection prior to use.
USPI	United States Prescribing Information.

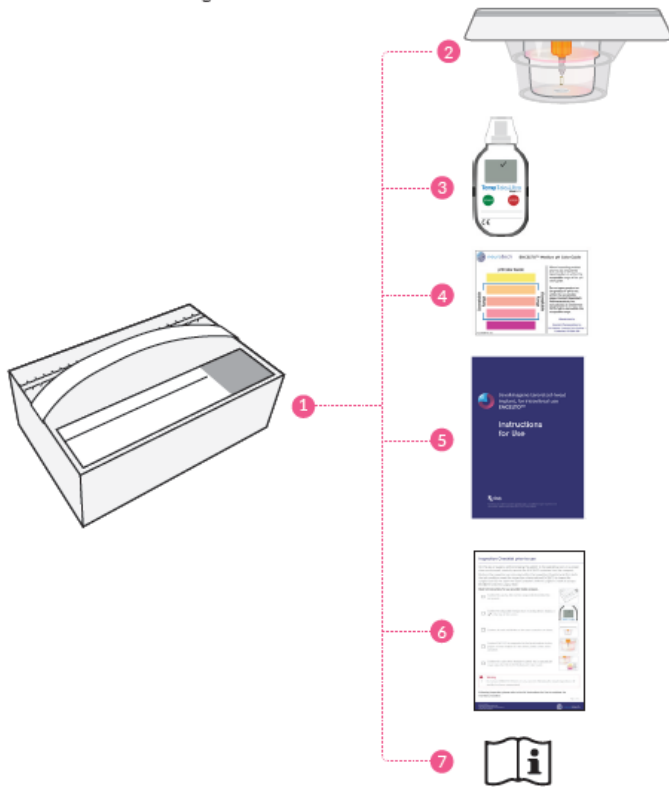
484

485

### Figure 16. ENCELTO Corepack Contents

#### Components in the Corepack

- 1 Corepack
- 2 Outer container holding the sterile inner container
- 3 Disposable temperature recording device
- 4 ENCELTO Medium pH Color Guide
- 5 ENCELTO Instructions for Use
- 6 ENCELTO Inspection Checklist
- 7 United States Prescribing Information



486

487

### Figure 17. ENCELTO



Not to scale

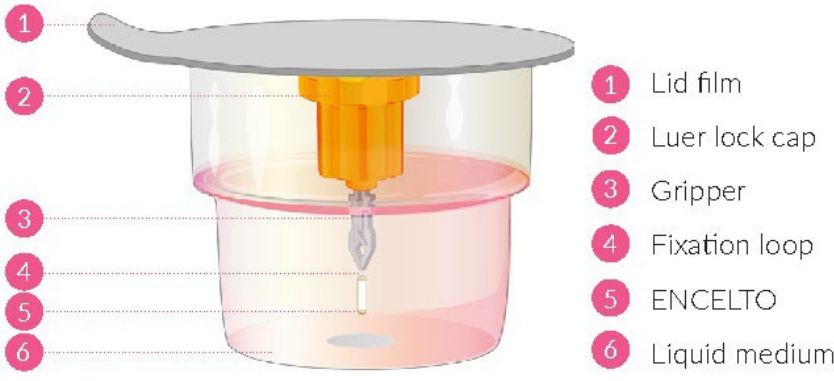
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490

**Figure 18. ENCELTO Inner Container**

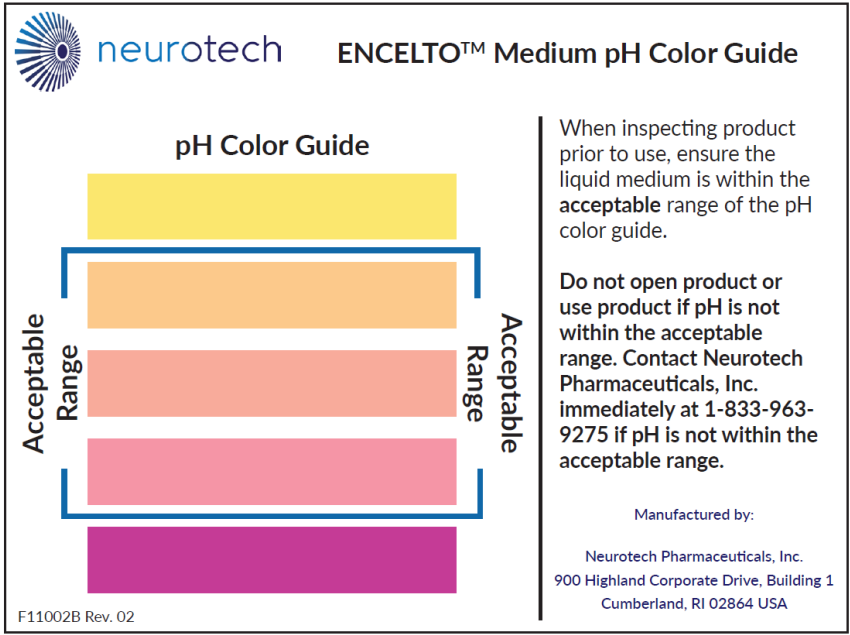


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**Figure 19. pH Color Guide**



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**16.2 Storage and Handling**

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1. Using the handle, remove the corepack from the larger shipping box (Figure 16).
2. Store ENCELTO in the corepack at 16° to 37°C (61° to 99°F) until ready for use.
3. Do not freeze or refrigerate.
4. Inspect the disposable temperature recording device. If a check mark is displayed, the ENCELTO has remained within the acceptable temperature range and may be used. If a “X” is displayed, the ENCELTO was exposed to temperatures outside the acceptable range and must not be used. Contact Neurotech immediately at (833)-963-9275.
  - Protect ENCELTO from light.
5. Handle inner container (Figure 18) using sterile technique.
6. Do not use beyond the “use by” date identified on the corepack label.
7. Do not use ENCELTO if the pH is not within the acceptable range (Figure 19). Contact Neurotech immediately at (833)-963-9275.
  - Prior to disposal of an ENCELTO implant per local institutional protocols, call 1-833-963-9275 for assessment of ENCELTO return or replacement.

512 Orange to pink liquid hold medium referred to as Endothelial Serum Free Media (Endo-SFM) within  
513 packaging inner container may contain visible particles. Particle general description fiber, solid, white,  
514 or metallic in appearance.  
515  
516

## 517 **17 PATIENT COUNSELING INFORMATION**

518  
519 Advise the patient to read the FDA-approved patient labeling (Patient Information).  
520

521 Discuss the following with the patient.  
522

523 Advise patients that ENCELTO implantation may be associated with infectious endophthalmitis (eye  
524 infection), retinal tear and detachment (retina separates from the eye wall resulting in vision loss),  
525 vitreous hemorrhage (bleeding within the central cavity of the eye), implant extrusion, suture-related  
526 complications, cataract formation (clouding of the lens of the eye), severe vision loss, and delayed  
527 dark adaptation (ability of the eye to adjust from bright lighting conditions to dark lighting conditions)  
528 [see [Warnings and Precautions \(5\)](#)].  
529

530 Instruct patients to seek immediate care from an ophthalmologist if they experience any signs or  
531 symptoms that could be associated with these events which may include the following:  
532

- 533 • An increase in floaters, the appearance of “spider webs”, flashing lights, sensitivity to light, or  
534 loss of vision or visual field;
- 535 • Increasing eye pain, progressive redness in the white of the eye, a sudden sensation that  
536 something is in their eye (i.e., foreign body sensation) or eye discharge.  
537


538 Advise patients that they may temporarily experience the following after ENCELTO implantation:  
539

- 540 • Mild sensation of something in the eye (i.e., foreign body sensation)
- 541 • Eye redness, irritation, pain or discomfort, or dryness
- 542 • Blurred vision or floaters  
543

544 Advise patients that delayed dark adaptation may be experienced for the length of time that  
545 ENCELTO is surgically placed [see [Warnings and Precautions \(5.8\)](#)]. Advise patients on the  
546 following safety precautions.

- 547 • Driving: delayed dark adaptation may impair one's ability to see objects, pedestrians, or road  
548 signs when moving rapidly from a brightly lit environment to a dimly lit environment (for  
549 example, entering a tunnel during the daytime).
- 550 • Navigating in the dark: Advise caution when moving from bright to dark areas, such as entering  
551 a dark room or stepping outside at dusk. Consider using flashlights, nightlights, or motion-  
552 activated lighting at home.
- 553 • Consider wearing sunglasses or tinted lenses in bright environments to reduce the impact of  
554 transitioning from light to dark.  
555

### 556 Magnetic Resonance (MR) Conditional Information

557  MR Conditional  
558

559 ENCELTO is MR conditional. Advise patients that they have ENCELTO implanted in their eye and  
560 provide the patient with their implant card should they require Magnetic Resonance Imaging (MRI).  
561

### 562 Driving and Using Machines

- Advise patients to not drive or use machinery until the eye shield has been removed and their ophthalmologist informs them that their vision has recovered to an acceptable level.

### 566 Postoperative Care

567 Advise patients on the following post operative care:

- Avoid heavy lifting (over 20 pounds) for one week.
- Keep water out of the eye (e.g., close eye while showering) for one week.
- Protect eyes by wearing glasses or protective eyewear during the day and using an eye shield at night for one week.
- Use a topical antibiotic solution at a frequency of 1 drop four times a day for 7 days.
- Use a steroid drop taper of prednisolone acetate 1% (or equivalent) starting the day after surgery with the following taper:
  - 1 drop four times a day for the first 7 days;
  - 1 drop three times a day for the next 7 days;
  - 1 drop two times a day for the next 7 days;
  - 1 drop once a day for the last 7 days.

579 Manufactured by:

580 Neurotech Pharmaceuticals, Inc.

581 Building 1, Suite 101

582 Cumberland, RI 02864

584 U.S. license number: 2321  
585