Approval Package for:

APPLICATION NUMBER:

213137Orig1s000

Trade Name: OXBRYTA™ tablets

Generic or Proper Name: voxelotor

Sponsor: Global Blood Therapeutics, Inc.

Approval Date: November 25, 2019

Indication: For the treatment of sickle cell disease in adults and pediatric patients 12 years of age and older
## Reviews / Information Included in this NDA Review.

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APPROVAL LETTER
Global Blood Therapeutics, Inc.
Attention:  Linda Yokoshima
Senior Director, Regulatory Affairs
171 Oyster Point Boulevard, Suite 300
South San Francisco, CA  94080

Dear Ms. Yokoshima:

Please refer to your new drug application (NDA) dated June 26, 2019, received June 26, 2019, and your amendments, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FDCA) for OXBRYTA™ (voxelotor) tablets.

This new drug application provides for the use of OXBRYTA (voxelotor) tablets for the treatment of sickle cell disease in adults and pediatric patients 12 years of age and older.

**APPROVAL & LABELING**

We have completed our review of this application, as amended. It is approved under the provisions of accelerated approval regulations (21 CFR 314.500), effective on the date of this letter, for use as recommended in the enclosed agreed-upon labeling.

Marketing of this drug product and related activities must adhere to the substance and procedures of the referenced accelerated approval regulations.

**CONTENT OF LABELING**

As soon as possible, but no later than 14 days from the date of this letter, submit the content of labeling [21 CFR 314.50(l)] in structured product labeling (SPL) format using the FDA automated drug registration and listing system (eLIST), as described at FDA.gov.¹ Content of labeling must be identical to the enclosed labeling (text for the Prescribing Information and for the Patient Package Insert). Information on submitting SPL files using eLIST may be found in the guidance for industry SPL Standard for Content of Labeling Technical Qs and As.²

The SPL will be accessible via publicly available labeling repositories.

² We update guidances periodically. For the most recent version of a guidance, check the FDA Guidance Documents Database [https://www.fda.gov/RegulatoryInformation/Guidances/default.htm](https://www.fda.gov/RegulatoryInformation/Guidances/default.htm).
CARTON AND CONTAINER LABELING

Submit final printed carton and container labeling that are identical to the carton and container labeling submitted on October 25, 2019, as soon as they are available, but no more than 30 days after they are printed. Please submit these labeling electronically according to the guidance for industry titled Providing Regulatory Submissions in Electronic Format — Certain Human Pharmaceutical Product Applications and Related Submissions Using the eCTD Specifications (April 2018, Revision 5). For administrative purposes, designate this submission “Final Printed Carton and Container Labeling for approved NDA 213137.” Approval of this submission by FDA is not required before the labeling is used.

ADVISORY COMMITTEE

Your application for OXBRYTA was not referred to an FDA advisory committee because evaluation of the data did not raise significant safety or efficacy issues that were unexpected in the intended population.

ACCELERATED APPROVAL REQUIREMENTS

Products approved under the accelerated approval regulations, 21 CFR 314.510, require further adequate and well-controlled clinical trials to verify and describe clinical benefit. You are required to conduct such clinical trials with due diligence. If postmarketing clinical trials fail to verify clinical benefit or are not conducted with due diligence, we may, following a hearing in accordance with 21 CFR 314.530, withdraw this approval. We remind you of your postmarketing requirement specified in your submission dated November 22, 2019. This requirement, along with required completion dates, is listed below.

3746-1 Complete Study GBT440-032: the ongoing Phase 3, randomized, double-blind, placebo-controlled trial in pediatric patients (age 2 years to < 15 years) with Sickle Cell Disease (HOPE Kids 2). Expected enrollment of approximately 224 patients (age 2 years to < 15 years) with at least 15 patients from age 2 years to < 4 years of age. Include patients with baseline hemoglobin of less than 6 g/dL. The primary endpoint is change from baseline at 24 weeks in time averaged maximum of mean velocity (TAMMV) arterial cerebral blood flow as measured by transcranial doppler (TCD). The secondary endpoint is change from baseline in TCD flow velocity at Week 48 and Week 96.

Interim Report Submission (based on primary analysis): 07/2025
Study/Trial Completion: 03/2026
Final Report Submission: 09/2026

Reference ID: 4517492
3746-2 Complete follow-up of patients (on treatment) enrolled in Study GBT440-031: A Phase 3, Double-Blind, Randomized, Placebo-Controlled, Multicenter Study of Voxelotor Administered Orally to Patients with Sickle Cell Disease (HOPE Trial). Conduct an updated safety and efficacy analysis and submit datasets at the time of final clinical study report submission.

Trial Completion: 12/2019
Final Report Submission: 09/2020

Submit clinical protocols to your IND 121691 for this product. In addition, under 21 CFR 314.81(b)(2)(vii) and 314.81(b)(2)(viii) you should include a status summary of each requirement in your annual report to this NDA. The status summary should include expected summary completion and final report submission dates, any changes in plans since the last annual report, and, for clinical studies/trials, number of patients entered into each study/trial.

Submit final reports to this NDA as a supplemental application. For administrative purposes, all submissions relating to this postmarketing requirement must be clearly designated "Subpart H Postmarketing Requirement(s)."

REQUIRED PEDIATRIC ASSESSMENTS

Under the Pediatric Research Equity Act (PREA) (21 U.S.C. 355c), all applications for new active ingredients (which includes new salts and new fixed combinations), new indications, new dosage forms, new dosing regimens, or new routes of administration are required to contain an assessment of the safety and effectiveness of the product for the claimed indication in pediatric patients unless this requirement is waived, deferred, or inapplicable.

Because this drug product for this indication has an orphan drug designation, you are exempt from this requirement.

POSTMARKETING COMMITMENTS SUBJECT TO REPORTING REQUIREMENTS UNDER SECTION 506B

We remind you of your postmarketing commitments:

3746-3 Complete at least 5 years of follow-up for all patients (on treatment) enrolled in Study GBT440-034: An Open-Label Extension Study of voxelotor Administered Orally to Patients with Sickle Cell Disease who have Participated in GBT440 Clinical trials. Include updated safety and efficacy analysis in yearly reports and submit datasets at the time of final clinical study report submission.
The timetable you submitted on November 22, 2019, states that you will conduct this study according to the following schedule:

<table>
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<tr>
<th>Interim Report Submission (Year 1):</th>
<th>06/2021</th>
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<tr>
<td>Interim Report Submission (Year 2):</td>
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<td>Interim Report Submission (Year 3):</td>
<td>06/2023</td>
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<td>Interim Report Submission (Year 4):</td>
<td>06/2024</td>
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<tr>
<td>Final Report Submission (Year 5):</td>
<td>06/2025</td>
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</tbody>
</table>

Submit clinical protocols to your IND 121691 for this product. Submit nonclinical and chemistry, manufacturing, and controls protocols and all postmarketing final reports to this NDA. In addition, under 21 CFR 314.81(b)(2)(vii) and 314.81(b)(2)(viii) you should include a status summary of each commitment in your annual report to this NDA. The status summary should include expected summary completion and final report submission dates, any changes in plans since the last annual report, and, for clinical studies/trials, number of patients entered into each study/trial. All submissions, including supplements, relating to these postmarketing commitments should be prominently labeled “Postmarketing Commitment Protocol,” “Postmarketing Commitment Final Report,” or “Postmarketing Commitment Correspondence.”

**PROMOTIONAL MATERIALS**

Under 21 CFR 314.550, you are required to submit, during the application pre-approval review period, all promotional materials, including promotional labeling and advertisements, that you intend to use in the first 120 days following marketing approval (i.e., your launch campaign). If you have not already met this requirement, you must immediately contact the Office of Prescription Drug Promotion (OPDP) at 796-1200. Please ask to speak to a regulatory project manager or the appropriate reviewer to discuss this issue.

As further required by 21 CFR 314.550, submit all promotional materials that you intend to use after the 120 days following marketing approval (i.e., your post-launch materials) at least 30 days before the intended time of initial dissemination of labeling or initial publication of the advertisement. We ask that each submission include a detailed cover letter together with three copies each of the promotional materials, annotated references, and approved Prescribing Information (PI)/Medication Guide/Patient Package Insert (as applicable).
Send each submission directly to:

OPDP Regulatory Project Manager  
Food and Drug Administration  
Center for Drug Evaluation and Research  
Office of Prescription Drug Promotions (OPDP)  
5901-B Ammendale Road  
Beltsville, MD 20705-1266

Alternatively, you may submit promotional materials for accelerated approval products electronically in eCTD format. For more information about submitting promotional materials in eCTD format, see the draft guidance for industry Providing Regulatory Submissions in Electronic and Non-Electronic Format—Promotional Labeling and Advertising Materials for Human Prescription Drugs.³

REPORTING REQUIREMENTS

We remind you that you must comply with the reporting requirements for an approved NDA (21 CFR 314.80 and 314.81).

MEDWATCH-TO-MANUFACTURER PROGRAM

The MedWatch-to-Manufacturer Program provides manufacturers with copies of serious adverse event reports that are received directly by the FDA. New molecular entities and important new biologics qualify for inclusion for three years after approval. Your firm is eligible to receive copies of reports for this product. To participate in the program, please see the enrollment instructions and program description details at FDA.gov.⁴

POST APPROVAL FEEDBACK MEETING

New molecular entities and new biologics qualify for a post approval feedback meeting. Such meetings are used to discuss the quality of the application and to evaluate the communication process during drug development and marketing application review. The purpose is to learn from successful aspects of the review process and to identify areas that could benefit from improvement. If you would like to have such a meeting with us, call the Regulatory Project Manager for this application.

³ When final, this guidance will represent the FDA’s current thinking on this topic. For the most recent version of a guidance, check the FDA guidance web page at https://www.fda.gov/RegulatoryInformation/Guidances/default.htm.
⁴ http://www.fda.gov/Safety/MedWatch/HowToReport/ucm166910.htm

U.S. Food and Drug Administration  
Silver Spring, MD 20993  
www.fda.gov
If you have any questions, call Charlene Wheeler, Acting Chief Project Management Staff, Division of Hematology Products at (301) 796-1141.

Sincerely,

{See appended electronic signature page}

Marc R. Theoret, MD
Acting Deputy Director
Office of Oncologic Diseases
Center for Drug Evaluation and Research

ENCLOSURES:
- Content of Labeling
  - Prescribing Information
  - Patient Package Insert
This is a representation of an electronic record that was signed electronically. Following this are manifestations of any and all electronic signatures for this electronic record.

/s/

MARC R THEORET
11/25/2019 02:49:21 PM