



NDA 203441/S-013

SUPPLEMENT APPROVAL

Shire-NPS Pharmaceuticals, Inc.
Attention: Kailash Jain
Global Regulatory Project Management Lead
Global Regulatory Affairs
650 E. Kendall St.
Cambridge, MA 02142

Dear Mr. Jain:

Please refer to your supplemental New Drug Application (sNDA), dated and received on September 11, 2018, and your amendments, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) for GATTEX (teduglutide) for injection, 5 mg.

We additionally acknowledge receipt of your major amendment dated January 11, 2019, which extended the goal date by three months.

This Prior Approval sNDA provides for the expansion of the indication to pediatric patients 1 year of age and older with Short Bowel Syndrome (SBS) who are dependent on parenteral support, and proposes modifications to the approved GATTEX (teduglutide) Risk Evaluation and Mitigation Strategy (REMS).

APPROVAL & LABELING

We have completed our review of this supplemental application, as amended. It is approved, effective on the date of this letter, for use as recommended in the enclosed, agreed-upon labeling text.

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 <http://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/default.htm>. Content of labeling must be identical to the enclosed labeling (text for the Prescribing Information [PI], Medication Guide [MG], and Instructions for Use [IFU]), with the addition of any labeling changes in pending "Changes Being Effected" (CBE) supplements, as well as annual reportable changes not included in the enclosed labeling. Information on submitting SPL files using eLIST

may be found in the Guidance for Industry titled, *SPL Standard for Content of Labeling Technical Qs and As*, located at <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/spl-standard-content-labeling-technical-qs>. The SPL will be accessible from publicly available labeling repositories.

Also, within 14 days, amend all pending supplemental applications that include labeling changes for this NDA, including CBE supplements for which FDA has not yet issued an action letter, with the content of labeling [21 CFR 314.50(l)(1)(i)] in Microsoft (MS) Word format that includes the changes approved in this supplemental application, as well as annual reportable changes. To facilitate the review of your submission, provide a highlighted or marked-up copy, which shows all changes, as well as a clean MS Word version. The marked-up copy should provide appropriate annotations, including supplement number(s) and annual report date(s).

We request that the labeling approved today be available on your website within 10 days of receipt of this letter.

CARTON AND CONTAINER LABELING

Submit final printed carton and container labeling that are identical to the enclosed carton and container labeling, which was submitted and received on September 11, 2018, 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)*, located at <https://www.fda.gov/downloads/drugs/guidancecomplianceregulatoryinformation/guidances/ucm333969.pdf>. For administrative purposes, designate this submission “**Final Printed Carton and Container Labeling for approved NDA 203441/S-013.**” Approval of this submission by FDA is not required before the labeling is used.

MARKET PACKAGE

Please submit one market package of the drug product when it is available to the following address:

Benjamin Vali
Food and Drug Administration
Center for Drug Evaluation and Research
White Oak Building 22, Room 5245
10903 New Hampshire Avenue
Silver Spring, Maryland
*Use zip code **20903** if shipping via United States Postal Service (USPS).*
*Use zip code **20993** if sending via any carrier other than USPS (e.g., UPS, DHL, FedEx).*

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 none of these criteria apply to your application, you are exempt from this requirement.

RISK EVALUATION AND MITIGATION STRATEGY (REMS) REQUIREMENTS

The REMS for GATTEX (teduglutide) was originally approved on December 21, 2012, and the most recent REMS modification was approved on December 18, 2018. The REMS consists of elements to assure safe use and a timetable for submission of assessments of the REMS. Your proposed modifications to the REMS consist of changes to align with this efficacy supplement's approval.

In accordance with section 505-1 of the FD&C Act, we have determined that the following REMS modifications are necessary to ensure the benefits of the drug outweigh the risks:

1. Incorporating information about the new population, which expands usage to include pediatric patients 1 year of age and older with SBS who are dependent on parenteral support, into the existing REMS.
2. Making formatting and editorial changes, typographical corrections, and administrative changes throughout the REMS document and all REMS materials.

Your proposed modified REMS, submitted and received on May 10, 2019 and appended to this letter, is approved. The modified REMS consists of elements to assure safe use and a timetable for submission of assessments of the REMS.

The timetable for submission of assessments of the REMS remains the same as that approved on December 21, 2012. Changes to the assessment plan are included in this modification.

Revised Assessment Plan

The effectiveness of the GATTEX REMS will be evaluated through healthcare professional training metrics and knowledge, attitude, and behavior (KAB) surveys of GATTEX prescribers, patients, and caregivers' understanding of the potential risks associated with GATTEX. The REMS assessment will include an evaluation of the effectiveness of the REMS and recommendations on any areas for program improvements or modifications, as appropriate. The frequency of the KAB surveys changed from annually to every two years at the FDA's request on May 20, 2015.

- Surveys will be conducted with a random sample of prescribers, patients, and caregivers, identified through dispensing data from specialty pharmacies, in order to assess their

awareness and understanding of the potential risks associated with GATTEX. Assessment protocols and survey instruments will be submitted to the FDA at least 90 days before the assessments are conducted.

- Protocols will include the rationale for and description of methodologies and questionnaires to be used to evaluate prescribers', patients', and caregivers' understanding about the safe use of GATTEX. Shire-NPS Pharmaceuticals, Inc. will initiate the prescriber, patient, and caregivers' KAB surveys so that survey results can be included in the REMS Assessment Report to be submitted to FDA 12 months after REMS approval and annually thereafter. The protocol will include:
 - Expected sample size and confidence intervals associated with that sample size
 - Description of the methodology for recruitment and selection of the prescribers' sample
 - Selection criteria for inclusion into the survey
 - Description of how and when the survey will be administered
 - Explanation of the design features and controls that will be included to minimize bias and compensate for any limitations in the methodology

The proposed REMS assessment plan includes the following:

1. Communication Activities:
 - a. Date(s) the Dear Healthcare Professional letter mailing(s) were sent and number of healthcare professionals that were sent this letter
 - i. Number of mailings returned
 - ii. Sources of the recipient lists
2. Healthcare Professional (HCP) Training (each reporting period and cumulatively):
 - a. Number of HCPs who have prescribed GATTEX
 - b. Number of HCPs who completed the Post-Training Knowledge Assessment Questions
 - c. Number of HCPs who have completed training and prescribed GATTEX
 - d. Demographics of HCPs (by specialty type) that completed the Post-Training Knowledge Assessment Questions, to the extent possible
 - e. Number and percent of HCP who completed the Post-Training Knowledge Assessment Questions by method of completion (on-line, fax/mail)
 - f. Number of HCPs who completed each knowledge assessment question correctly and the number of HCPs who did not complete each post-training knowledge assessment question correctly
 - g. Number of HCPs who were retrained
 - h. Number of HCPs identified through specialty pharmacy dispensing data to have dispensed a patient prescription who did not complete the Post-Training Knowledge Assessment Questions (during the reporting period and cumulatively)

- i. Number of HCPs who did not complete the Post-Training Knowledge Assessment Questions who were contacted by Shire-NPS Pharmaceuticals, Inc., and then who completed the Post-Training Knowledge Assessment Questions
3. KAB surveys (to be conducted every two years beginning in 2018):
KAB surveys of prescribers', patients', and caregivers' understanding of the potential risks associated with use of GATTEX for SBS and their understanding of the recommended monitoring during treatment with GATTEX.
4. Narrative summary of adverse events of interest including the risks of acceleration of neoplastic growth and enhancement of colon polyp growth, gastrointestinal obstruction, and biliary and pancreatic disorders, reporting from spontaneous sources, published literature, regulatory agencies, clinical studies and trials (clinical serious adverse events/SAEs), and solicited sources for entry into the Shire-NPS Pharmaceuticals, Inc. drug safety database.
5. Utilization (each reporting period and cumulatively):
 - a. A report of the number of GATTEX prescriptions
 - b. A report of the number of patients who were dispensed GATTEX
6. The requirements for assessments of an approved REMS under section 505-1(g)(3) include, with respect to each goal included in the strategy, an assessment of the extent to which the approved strategy, including each element of the strategy, is meeting the goal or whether one or more such goals or such elements should be modified.

We remind you that in addition to the REMS assessments submitted according to the timetable in the approved REMS, you must include an adequate rationale to support a proposed REMS modification for the addition, modification, or removal of any goal or element of the REMS, as described in section 505-1(g)(4) of the FD&C Act.

We also remind you that you must submit a REMS assessment when you submit a supplemental application for a new indication for use, as described in section 505-1(g)(2)(A) of the FD&C Act. This assessment should include:

- a. An evaluation of how the benefit-risk profile will or will not change with the new indication.
- b. A determination of the implications of a change in the benefit-risk profile for the current REMS.
- c. *If the new indication for use introduces unexpected risks:* A description of those risks and an evaluation of whether those risks can be appropriately managed with the currently approved REMS.
- d. *If a REMS assessment was submitted in the 18 months prior to submission of the supplemental application for a new indication for use:* A statement about whether the REMS was meeting its goals at the time of that last assessment and if any modifications of the REMS have been proposed since that assessment.

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