

# CENTER FOR DRUG EVALUATION AND RESEARCH

## Approval Package for:

### *APPLICATION NUMBER:*

**213378Orig1s000**

**213378Orig2s000**

*Trade Name:* LYBALVI

*Generic or Proper Name:* olanzapine/samidorphan

*Sponsor:* Alkermes, Inc.

*Approval Date:* MAY 28, 2021

*Indications:* Original 1: Treatment of schizophrenia (adults)  
Original 2: Acute treatment of manic or mixed episodes as monotherapy and as adjunct to lithium or valproate associated with bipolar I disorder and maintenance monotherapy treatment of bipolar I disorder (adults)

# CENTER FOR DRUG EVALUATION AND RESEARCH

**213378Orig1s000**

**213378Orig2s000**

## CONTENTS

### Reviews / Information Included in this NDA Review.

<b>Approval Letter</b>	<b>X</b>
<b>Other Action Letters</b>	<b>X</b>
<b>Labeling</b>	<b>X</b>
<b>REMS</b>	
<b>Officer/Employee List</b>	<b>X</b>
<b>Multidiscipline Review(s)</b> <ul style="list-style-type: none"><li>• <b>Summary Review</b></li><li>• <b>Office Director</b></li><li>• <b>Cross Discipline Team Leader</b></li><li>• <b>Clinical</b></li><li>• <b>Non-Clinical</b></li><li>• <b>Statistical</b></li><li>• <b>Clinical Pharmacology</b></li></ul>	<b>X</b>
<b>Product Quality Review(s)</b>	<b>X</b>
<b>Clinical Microbiology / Virology Review(s)</b>	
<b>Other Reviews</b>	<b>X</b>
<b>Risk Assessment and Risk Mitigation Review(s)</b>	<b>X</b>
<b>Proprietary Name Review(s)</b>	<b>X</b>
<b>Administrative/Correspondence Document(s)</b>	<b>X</b>

**CENTER FOR DRUG EVALUATION AND  
RESEARCH**

*APPLICATION NUMBER:*

**213378Orig1s000**

**213378Orig2s000**

**APPROVAL LETTER**



NDA 213378/Original 1  
NDA 213378/Original 2

## **NDA APPROVAL**

Alkermes, Inc.  
Attention: Nicholas Douris, PhD  
Director, Regulatory Affairs  
852 Winter Street  
Waltham, MA 02451

Dear Dr. Douris:

Please refer to your new drug application (NDA) dated November 15, 2019, received November 15, 2019, and your amendments, submitted pursuant to section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act (FDCA) for Lybalvi (olanzapine/samidorphan) Tablets.

We acknowledge receipt of your amendment dated December 1, 2020, which constituted a complete response to our November 13, 2020, action letter.

NDA 213378 provides for the use of Lybalvi (olanzapine/samidorphan) tablets for the following indications:

- NDA 213378/Original 1 – Treatment of schizophrenia (adults)
- NDA 213378/Original 2 – Acute treatment of manic or mixed episodes as monotherapy and as adjunct to lithium or valproate associated with bipolar I disorder and maintenance monotherapy treatment of bipolar I disorder (adults)

### **APPROVAL & LABELING**

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

### **WAIVER OF ½ PAGE LENGTH REQUIREMENT FOR HIGHLIGHTS**

We are waiving the requirements of 21 CFR 201.57(d)(8) regarding the length of Highlights of Prescribing Information. This waiver applies to all future supplements containing revised labeling unless we notify you otherwise.

## **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.<sup>1</sup> Content of labeling must be identical to the enclosed labeling (text for the Prescribing Information and Medication Guide) 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 *SPL Standard for Content of Labeling Technical Qs and As*.<sup>2</sup>

The SPL will be accessible via publicly available labeling repositories.

## **CARTON AND CONTAINER LABELING**

Submit final printed carton and container labeling that are identical to the enclosed carton and container labeling and carton and container labeling submitted on May 5, 2021, 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 *Providing Regulatory Submissions in Electronic Format — Certain Human Pharmaceutical Product Applications and Related Submissions Using the eCTD Specifications*. For administrative purposes, designate this submission “**Final Printed Carton and Container Labeling for approved NDA 213378.**” Approval of this submission by FDA is not required before the labeling is used.

## **DATING PERIOD**

Based on the stability data submitted to date, the expiry dating period for Lybalvi (olanzapine/Samidophan) tablets shall be 30 months from the date of manufacture when stored at controlled room temperature (20°C to 25°C).

## **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.

---

<sup>1</sup> <http://www.fda.gov/ForIndustry/DataStandards/StructuredProductLabeling/default.htm>

<sup>2</sup> 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>.

We are waiving the pediatric study requirement for patients with schizophrenia ages 0 to 12 years and bipolar I disorder ages 0 to 9 years because necessary studies are impossible or highly impracticable. This is because of the very low incidence of schizophrenia and bipolar I disorder in these age groups.

We are deferring submission of your pediatric studies for ages 10 to 17 years for this application because this product is ready for approval for use in adults and the pediatric studies have not been completed.

Your deferred pediatric studies required by section 505B(a) of the Federal Food, Drug, and Cosmetic Act/FDCA are required postmarketing studies. The status of these postmarketing studies must be reported annually according to 21 CFR 314.81 and section 505B(a)(4)(C) of the Federal Food, Drug, and Cosmetic Act/FDCA. These required studies are listed below.

3907-1 Conduct a multiple-dose safety and pharmacokinetic study of LYBALVI (olanzapine/samidorphan) in male and female patients with bipolar disorder ages 10 to 12 years.

Final Protocol Submission: 05/2021  
Study Completion: 06/2024  
Final Report Submission: 12/2024

3905-1 Conduct an adequately powered 52-week, double-blind, active-controlled study, enrolling patients 13 to 17 years with schizophrenia, and patients 10 to 17 years with bipolar I disorder, to evaluate change in weight at 12 weeks, and the long-term safety of LYBALVI (olanzapine/samidorphan).

Final Protocol Submission: 09/2021  
Study Completion: 09/2026  
Final Report Submission: 03/2027

3905-2 Conduct a long-term (at least 12-month), open-label study to evaluate the safety and tolerability of LYBALVI (olanzapine/samidorphan) in patients 13 to 17 years with schizophrenia and patients 10 to 17 years with bipolar I disorder.

Final Protocol Submission: 05/2021  
Study Completion: 09/2027  
Final Report Submission: 03/2028

FDA considers the term *final* to mean that the applicant has submitted a protocol, the FDA review team has sent comments to the applicant, and the protocol has been revised as needed to meet the goal of the study or clinical trial.<sup>3</sup>

Submit the protocol(s) to your IND 114375, with a cross-reference letter to this NDA. Reports of these required pediatric postmarketing studies must be submitted as an NDA or as a supplement to your approved NDA with the proposed labeling changes you believe are warranted based on the data derived from these studies. When submitting the reports, please clearly mark your submission "**SUBMISSION OF REQUIRED PEDIATRIC ASSESSMENTS**" in large font, bolded type at the beginning of the cover letter of the submission.

### **POSTMARKETING REQUIREMENTS UNDER 505(o)**

Section 505(o)(3) of the FDCA authorizes FDA to require holders of approved drug and biological product applications to conduct postmarketing studies and clinical trials for certain purposes, if FDA makes certain findings required by the statute.

We have determined that an analysis of spontaneous postmarketing adverse events reported under subsection 505(k)(1) of the FDCA will not be sufficient to identify an unexpected serious risk associated with the presence of olanzapine/Samidorphan in human milk.

Furthermore, the active postmarket risk identification and analysis system as available under section 505(k)(3) of the FDCA will not be sufficient to assess this serious risk.

Therefore, based on appropriate scientific data, FDA has determined that you are required to conduct the following study:

3905-3      Perform a lactation study (milk only) in lactating women who have received therapeutic doses of LYBALVI (olanzapine/samidorphan) using a validated assay to assess concentrations of olanzapine and concentrations of samidorphan in breast milk.

The timetable you submitted on May 28, 2021, states that you will conduct this study according to the following schedule:

Final Protocol Submission:	06/2022
Study Completion:	06/2023
Final Report Submission:	06/2024

---

<sup>3</sup> See the guidance for Industry *Postmarketing Studies and Clinical Trials—Implementation of Section 505(o)(3) of the Federal Food, Drug, and Cosmetic Act (October 2019)*.  
<https://www.fda.gov/RegulatoryInformation/Guidances/default.htm>.

FDA considers the term *final* to mean that the applicant has submitted a protocol, the FDA review team has sent comments to the applicant, and the protocol has been revised as needed to meet the goal of the study or clinical trial.<sup>4</sup>

Submit clinical protocol(s) to your IND 114375, with a cross-reference letter to this NDA. Submit nonclinical and chemistry, manufacturing, and controls protocols and all final report(s) to your NDA. Prominently identify the submission with the following wording in bold capital letters at the top of the first page of the submission, as appropriate:

**Required Postmarketing Protocol Under 505(o), Required Postmarketing Final Report Under 505(o), Required Postmarketing Correspondence Under 505(o).**

Section 505(o)(3)(E)(ii) of the FDCA requires you to report periodically on the status of any study or clinical trial required under this section. This section also requires you to periodically report to FDA on the status of any study or clinical trial otherwise undertaken to investigate a safety issue. Section 506B of the FDCA, as well as 21 CFR 314.81(b)(2)(vii) requires you to report annually on the status of any postmarketing commitments or required studies or clinical trials.

FDA will consider the submission of your annual report under section 506B and 21 CFR 314.81(b)(2)(vii) to satisfy the periodic reporting requirement under section 505(o)(3)(E)(ii) provided that you include the elements listed in 505(o) and 21 CFR 314.81(b)(2)(vii). We remind you that to comply with 505(o), your annual report must also include a report on the status of any study or clinical trial otherwise undertaken to investigate a safety issue. Failure to submit an annual report for studies or clinical trials required under 505(o) on the date required will be considered a violation of FDCA section 505(o)(3)(E)(ii) and could result in enforcement action.

## **PROMOTIONAL MATERIALS**

You may request advisory comments on proposed introductory advertising and promotional labeling. For information about submitting promotional materials, see the final guidance for industry *Providing Regulatory Submissions in Electronic and Non-Electronic Format – Promotional Labeling and Advertising Materials for Human Prescription Drugs*.<sup>5</sup>

---

<sup>4</sup> See the guidance for Industry *Postmarketing Studies and Clinical Trials—Implementation of Section 505(o)(3) of the Federal Food, Drug, and Cosmetic Act (October 2019)*.

<https://www.fda.gov/RegulatoryInformation/Guidances/default.htm>.

<sup>5</sup> For the most recent version of a guidance, check the FDA guidance web page at <https://www.fda.gov/media/128163/download>.



As required under 21 CFR 314.81(b)(3)(i), you must submit final promotional materials, and the Prescribing Information, at the time of initial dissemination or publication, accompanied by a Form FDA 2253. Form FDA 2253 is available at FDA.gov.<sup>6</sup> Information and Instructions for completing the form can be found at FDA.gov.<sup>7</sup>

## **REPORTING REQUIREMENTS**

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

## **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.

If you have any questions, call Jasmeet (Mona) Kalsi, Regulatory Project Manager, at (240) 402 - 8977.

Sincerely,

*{See appended electronic signature page}*

Eric Bastings, MD  
Deputy Director  
Office of Neuroscience  
Center for Drug Evaluation and Research

### ENCLOSURE(S):

- Content of Labeling
  - Prescribing Information
  - Medication Guide
- Carton and Container Labeling

---

<sup>6</sup> <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM083570.pdf>

<sup>7</sup> <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM375154.pdf>

-----  
**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/  
-----

ERIC P BASTINGS  
05/28/2021 04:13:38 PM