



NDA 212028

**NDA APPROVAL**

Eisai Inc.  
Attention: Amanda Goodwin  
Senior Director, Global Regulatory Strategy  
155 Tice Boulevard  
Woodcliff Lake, NJ 07677

Dear Ms. Goodwin:

Please refer to your new drug application (NDA) dated and received December 27, 2018, and your amendments, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FDCA) for Dayvigo (lemborexant) tablets, for oral use.

This new drug application provides for the use of Dayvigo (lemborexant) tablets for the treatment of adult patients with insomnia, characterized by difficulties with sleep onset and/or sleep maintenance.

### **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.

### **CONTROLLED SUBSTANCE SCHEDULING**

You were previously informed that FDA intends to recommend scheduling of Dayvigo under the Controlled Substances Act (CSA). The scheduling of this product in accordance with the CSA (21 U.S.C. 811) is not yet complete as of the date of this letter. Therefore, in accordance with the FDCA (21 U.S.C. 355(x)), the date of approval for Dayvigo shall be the date on which the Drug Enforcement Administration (DEA) publishes a notice in the Federal Register announcing the interim final scheduling of lemborexant.

We note that, when the drug is scheduled by the DEA, you will need to make appropriate revisions to the Prescribing Information, Medication Guide, and carton and container labeling by submitting a supplement to your NDA. This would include the statements in the labeling detailing the scheduling of lemborexant, as the scheduled substance in Dayvigo, as required under 21 CFR 201.57(a)(2) and (c)(10)(i). Therefore, Dayvigo may be marketed only after DEA has published the notice in the Federal Register announcing the interim final scheduling of lemborexant and you submit a supplement to your NDA to revise all applicable drug labeling to reflect the drug

scheduling described in the notice. For changes to the Prescribing Information, Medication Guide, and carton and container labeling to describe the scheduling of Dayvigo, you can submit a Changes Being Effected supplement described in 21 CFR 314.70(c)(6). Permission to use a Changes Being Effected supplement for this purpose reflects a waiver by the Agency, pursuant to 21 CFR 314.90, of the requirement to submit a Prior Approval Supplement for changes to reflect the scheduling to the Highlights of Prescribing Information for Dayvigo described in 21 CFR 314.70(b)(2)(v)(C) and changes to the Medication Guide described in 21 CFR 314.70(b)(2)(v)(B).

We note that Dayvigo will be listed in the Orange Book upon the date of approval in accordance with 21 U.S.C. 355(x). With respect to the submission of patent information, as required under 21 CFR 314.53(c)(2)(ii), we note that you must submit Form FDA 3542 within 30 days after the date on which DEA has published the notice in the Federal Register announcing the interim final scheduling of lemborexant.

### **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.

### **CONTAINER LABELING**

Submit final printed container labeling that are identical to the enclosed container labeling, 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*

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<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>.

*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 212028.**” Approval of this submission by FDA is not required before the labeling is used.

### **ADVISORY COMMITTEE**

Your application for Dayvigo was not referred to an FDA advisory committee because there were no issues that would benefit from advisory committee discussion.

### **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.

We are waiving the pediatric study requirement for this application because necessary studies are impossible or highly impracticable due to challenges in defining a homogeneous pediatric insomnia population.

### **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 –

- Assess the effect of Dayvigo on respiratory safety in individuals with moderate to severe obstructive sleep apnea (OSA) and moderate to severe chronic obstructive pulmonary disease (COPD)
- Identify unexpected serious risks of drug interactions
- Identify an unexpected serious risk of pregnancy complications, effects on the developing fetus and neonate, and effects on the breastfed infant during lactation

Furthermore, the new pharmacovigilance system that FDA is required to establish under section 505(k)(3) of the FDCA will not be sufficient to assess these serious risks.

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

3753-1 Conduct a randomized, double-blind, placebo-controlled study to evaluate the short-term respiratory safety of DAYVIGO in subjects with moderate to severe obstructive sleep apnea (OSA) and in subjects with moderate to severe chronic obstructive pulmonary disease (COPD).

The timetable you submitted on November 26, 2019 states that you will conduct this trial according to the following schedule:

Draft Protocol Submission:	06/2020
Final Protocol Submission:	09/2020
Study/Trial Completion:	09/2021
Final Report Submission:	03/2022

3753-2 Conduct an in vitro DDI study to assess the potential of lemborexant and its metabolites as an inducer for CYP2C8, CYP2C9 and CYP2C19. Design and conduct the study in accordance with the FDA Guidance for Industry entitled "In Vitro Metabolism- and Transporter- Mediated Drug-Drug Interaction Studies."

The timetable you submitted on November 26, 2019 states that you will conduct this trial according to the following schedule:

Draft Protocol Submission:	02/2020
Final Protocol Submission:	04/2020
Study/Trial Completion:	10/2020
Final Report Submission:	12/2020

3753-3 Conduct an in vitro DDI study to assess the potential of lemborexant as an P-gp substrate at clinically relevant concentrations. Design and conduct the study in accordance with the FDA Guidance for Industry entitled "In Vitro Metabolism- and Transporter- Mediated Drug-Drug Interaction Studies."

The timetable you submitted on November 26, 2019 states that you will conduct this trial according to the following schedule:

Draft Protocol Submission:	02/2020
Final Protocol Submission:	04/2020
Study/Trial Completion:	09/2020
Final Report Submission:	11/2020

3753-4 Conduct a prospective, registry based observational exposure cohort study that compares the maternal, fetal, and infant outcomes of women exposed to lemborexant during pregnancy to an unexposed control population. The registry will detect and record major and minor congenital

malformations, spontaneous abortions, stillbirths, elective terminations, small for gestational age, preterm birth, and any other adverse pregnancy outcomes. These outcomes will be assessed throughout pregnancy. Infant outcomes, including effects on postnatal growth and development, will be assessed through at least the first year of life.

The timetable you submitted on November 26, 2019 states that you will conduct this trial according to the following schedule:

Draft Protocol Submission:	08/2020
Final Protocol Submission:	02/2021
Study/Trial Completion:	02/2031
Final Report Submission:	02/2032

3753-5 Conduct an additional pregnancy study that uses a different design from the Pregnancy Registry (for example a case control study or a retrospective cohort study using claims or electronic medical record data with outcome validation) to assess major congenital malformations, spontaneous abortions, stillbirths, and small for gestational age and preterm birth in women exposed to lemborexant during pregnancy compared to an unexposed control population.

The timetable you submitted on November 26, 2019 states that you will conduct this trial according to the following schedule:

Draft Protocol Submission:	10/2020
Final Protocol Submission:	04/2021
Study/Trial Completion:	04/2026
Final Report Submission:	04/2027

3753-6 Perform a lactation study in lactating women who have received therapeutic doses of lemborexant using a validated assay to assess concentrations of lemborexant in breast milk and the effects on the breastfed infant.

The timetable you submitted on November 26, 2019 states that you will conduct this trial according to the following schedule:

Draft Protocol Submission:	09/2020
Final Protocol Submission:	12/2020
Study/Trial Completion:	12/2021
Final Report Submission:	12/2022

Submit clinical protocols to your IND 111871 with a cross-reference letter to this NDA. Submit nonclinical protocols and all final reports 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).**

Submission of the protocol(s) for required postmarketing observational studies to your IND is for purposes of administrative tracking only. These studies do not constitute clinical investigations pursuant to 21 CFR 312.3(b) and therefore are not subject to the IND requirements under 21 CFR part 312 or FDA's regulations under 21 CFR parts 50 (Protection of Human Subjects) and 56 (Institutional Review Boards).

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. To do so, submit, in triplicate, a cover letter requesting advisory comments, the proposed materials in draft or mock-up form with annotated references, and the Prescribing Information, Medication Guide, and Patient Package Insert (as applicable) to:

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

Alternatively, you may submit a request for advisory comments 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*

**U.S. Food and Drug Administration**  
Silver Spring, MD 20993  
[www.fda.gov](http://www.fda.gov)

*Non-Electronic Format—Promotional Labeling and Advertising Materials for Human Prescription Drugs.*<sup>3</sup>

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>4</sup> Information and Instructions for completing the form can be found at FDA.gov.<sup>5</sup> For more information about submission of promotional materials to the Office of Prescription Drug Promotion (OPDP), see FDA.gov.<sup>6</sup>

## **REPORTING REQUIREMENTS**

You must comply with the reporting requirements described in 21 CFR 314.80(c)(1) (e.g., 15-day alert reports) beginning on the date of **this** letter. The due dates for the periodic (including quarterly) adverse drug experience reports described in 21 CFR 314.80(c)(2) should be calculated from the date of this letter. Annual reports described in 21 CFR 314.81(b)(2) are due within 60 days of the anniversary of the date of approval in accordance with 21 U.S.C. 355(x).

## **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.<sup>7</sup>

## **POST APPROVAL FEEDBACK MEETING**

New molecular entities and new biological products 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.

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<sup>3</sup> 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>.

<sup>4</sup> <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM083570.pdf>

<sup>5</sup> <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM375154.pdf>

<sup>6</sup> <http://www.fda.gov/AboutFDA/CentersOffices/CDER/ucm090142.htm>

<sup>7</sup> <http://www.fda.gov/Safety/MedWatch/HowToReport/ucm166910.htm>

If you have any questions, call Keith Kiedrow, Senior Regulatory Project Manager, at 301-796-1924.

Sincerely yours,

*{See appended electronic signature page}*

Ellis F. Unger, M.D.  
Director  
Office of Drug Evaluation I  
Office of New Drugs  
Center for Drug Evaluation and Research

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

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**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.**  
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/s/  
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