Dear Ms. Thomas:

Please refer to your supplemental new drug application (sNDA) dated and received February 11, 2019, and your amendments, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FDCA) for DOXIL [(doxorubicin HCL) liposome injection], injection, 20 mg/10mL and 50 mg/25 mL.

This Prior Approval supplemental new drug application provides for following updates to the package insert:

- To add lichenoid keratosis to the ADVERSE REACTIONS, Postmarketing Experience (6.1) subsection.

- To revise the WARNING AND PRECAUTIONS, Cardiomyopathy (5.1) subsection to include information regarding prior use of other anthracyclines or anthracenediones in calculations of the cumulative dose.

- To include information regarding infusion-related reactions after the first dose in the WARNING AND PRECAUTIONS, Infusion-Related Reactions (5.2) subsection.

- To revise the WARNING AND PRECAUTIONS, Embryo-Fetal Toxicity (5.5) subsection; and, the USE IN SPECIFIC POPULATIONS, Pregnancy (8.1) subsection to recommend avoiding DOXIL during the first trimester and state that available human data do not establish the absence or presence of major birth defects and miscarriage during the second and third trimester.

- To update the USE IN SPECIFIC POPULATIONS, Females and Males of Reproductive Potential (8.3) subsection to include the recommendation to verify the pregnancy status of females of reproductive potential prior to initiating DOXIL.
To revise the DOSAGE FORMS AND STRENGTHS subsection to changesingle-use vials to single-dose vials.

In addition, the Boxed Warning in the Highlights and in the Full Prescribing Information (FPI) were modified for consistency.

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.

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. Content of labeling must be identical to the enclosed labeling (text for the Prescribing Information), 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 SPL Standard for Content of Labeling Technical Qs and As. 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 Word format, that includes the changes approved in this supplemental application, as well as annual reportable changes. To facilitate review of your submission(s), provide a highlighted or marked-up copy that shows all changes, as well as a clean Microsoft Word version. The marked-up copy should provide appropriate annotations, including supplement number(s) and annual report date(s).

CARTON AND CONTAINER LABELING

Submit final printed carton and container labeling that are identical to the enclosed carton and container labeling, as soon as they are available, but no more than 30 days

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

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after they are printed. Carton and container labeling changes included changing “DOXOrubicin HCL liposome injection” to “DOXOrubicin hydrochloride liposome injection”; and carton only labeling changes included adding language stating that 2 mg of doxorubicin hydrochloride is “equivalent to 1.87 mg of doxorubicin”. 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 050718/S-055.” Approval of this submission by FDA is not required before the labeling is used.

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.

PROMOTIONAL MATERIALS

You may request advisory comments on proposed introductory advertising and promotional labeling. To do so, submit the following, in triplicate, (1) a cover letter requesting advisory comments, (2) the proposed materials in draft or mock-up form with annotated references, and (3) the Prescribing Information to:

OPDP Regulatory Project Manager
Food and Drug Administration
Center for Drug Evaluation and Research
Office of Prescription Drug Promotion (OPDP)
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

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Non-Electronic Format-Promotional Labeling and Advertising Materials for Human Prescription Drugs.\(^3\)

You must submit final promotional materials and Prescribing Information, accompanied by a Form FDA 2253, at the time of initial dissemination or publication [21 CFR 314.81(b)(3)(i)]. Form FDA 2253 is available at FDA.gov.\(^4\) Information and Instructions for completing the form can be found at FDA.gov.\(^5\) For more information about submission of promotional materials to the Office of Prescription Drug Promotion (OPDP), see FDA.gov.\(^6\)

**REPORTING REQUIREMENTS**

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

If you have any questions, call Idara Udoh, Senior Regulatory Health Project Manager, at 301-796-3074.

Sincerely,

{See appended electronic signature page}

Jeffrey Summers, M.D.
Deputy Director for Safety
Division of Oncology Products 2
Office of Hematology and Oncology Products
Center for Drug Evaluation and Research

ENCLOSURE(S):

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

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\(^3\) 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/downloads/AboutFDA/ReportsManualsForms/Forms/UCM083570.pdf](http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM083570.pdf)


\(^6\) [http://www.fda.gov/AboutFDA/CentersOffices/CDER/ucm090142.htm](http://www.fda.gov/AboutFDA/CentersOffices/CDER/ucm090142.htm)

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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.

/s/

JEFFERY L SUMMERS
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