

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:

216974Orig1s000

PROPRIETARY NAME REVIEW(S)

PROPRIETARY NAME REVIEW

Division of Medication Error Prevention and Analysis 1 (DMEPA 1)
Office of Medication Error Prevention and Risk Management (OMEPRM)
Office of Surveillance and Epidemiology (OSE)
Center for Drug Evaluation and Research (CDER)

***** This document contains proprietary information that cannot be released to the public*****

Date of This Review:	December 21, 2022
Application Type and Number:	NDA 216974
Product Name and Strength:	Xacduro (sulbactam; durlobactam) for injection, 1 gram/1 gram per kit ^a
Product Type:	Multiple Ingredients Co-packaged Product
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	Entasis Therapeutics, Inc. (ETI)
PNR ID #:	2022-1044724790
DMEPA 1 Safety Evaluator:	Deborah Myers, RPh, MBA
DMEPA 1 Associate Director for Nomenclature and Labeling:	Mishale Mistry, PharmD, MPH

^a The Applicant states, “Xacduro for injection is supplied as a kit containing 3 single-dose vials each containing sterile powder for reconstitution” in their proposed prescribing information. We note that the Office of Pharmaceutical Quality (OPQ) will make a final determination regarding the accuracy and use of the terminology “kit” during the NDA review.

Contents

1	INTRODUCTION	1
1.1	Regulatory History.....	1
1.2	Product Information.....	1
2	RESULTS.....	2
2.1	Misbranding Assessment	2
2.2	Safety Assessment	2
3	CONCLUSION	5
3.1	Comments to Entasis Therapeutics, Inc.....	5
4	REFERENCES	6
	APPENDICES	7

1 INTRODUCTION

This review evaluates the proposed proprietary name, Xacduro, from a safety and misbranding perspective. The sources and methods used to evaluate the proposed proprietary name are outlined in the reference section and Appendix A, respectively. ETI submitted an external name study, conducted by (b) (4), for this proposed proprietary name. The submitted external name study was previously reviewed under IND 131330 (see Section 1.1 below).

1.1 REGULATORY HISTORY

ETI previously submitted the proposed proprietary name, Xacduro on December 7, 2018. We found the name, Xacduro conditionally acceptable under IND 131330 on June 3, 2019.^b

On September 29, 2022, ETI submitted their original New Drug Application for NDA 216974.

On October 3, 2022, an information request was sent to ETI recommending submission of their request for proprietary name for review.^c Subsequently, on October 4, 2022, ETI submitted an amendment to their September 29, 2022 submission, to request for review the proposed proprietary name, Xacduro, under NDA 216974.^d

1.2 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on October 4, 2022.

- Intended Pronunciation: zak dur' oh
- Active Ingredient: sulbactam; durlobactam
- Indication of Use: Indicated in adults for the treatment of infections due to *Acinetobacter baumannii-calcoaceticus* complex including multidrug-resistant and carbapenem-resistant strains.
- Route of Administration: intravenous infusion
- Dosage Form: for injection
- Strength: 1 gram/1 gram per kit^e

^b Myers, D. Proprietary Name Review for Xacduro (IND 131330). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2019 JUN 03. PNR ID No. 2018-27822110.

^c Chung, A. FDA Correspondence Via Email (03-OCT-2022): Email from OSE Re: Request for Proprietary Name Review. Silver Spring (MD): FDA, CDER, OND, OSE (US); 2022 OCT 03. NDA 216974. Available from: <\\CDSESUB1\EVSPROD\nda216974\0002\m1\us\112-other-corr\2022-10-03-fda-email-216974-ose-proprietary-name-review.pdf>

^d Cover Letter: Request for Proprietary Name Review for Xacduro (NDA 216974). Waltham (MA) Entasis Therapeutics, Inc.; 2022 OCT 04. Available at: <\\CDSESUB1\EVSPROD\nda216974\0002\m1\us\12-cover-letter\cover-letter-0002-04oct2022.pdf>.

^e The Applicant states “Xacduro for injection is supplied as a kit containing 3 single-dose vials each containing sterile powder for reconstitution” in their proposed prescribing information. We note that the Office of

- Dose and Frequency:

Recommended Dosage of XACDURO for Adults by Renal Function

Estimated CL _{cr} (mL/min)*	Recommended Dosage of Sulbactam/Durlobactam (g)	Frequency	Infusion Time
≥ 130	1.5 g/1.5 g	Every 6 hours	3 hours
45-129	1 g/1 g	Every 6 hours	3 hours
30-44	1 g/1 g	Every 8 hours	3 hours
15-29	Loading dose of 1 g/1 g followed by 0.5 g/0.5 g	Every 8 hours	3 hours
< 15†	Loading dose of 1 g/1 g followed by 0.5 g/0.5 g	Every 12 hours	3 hours

*CL_{cr} = creatinine clearance estimated by Cockcroft-Gault equation

†For patients on hemodialysis, the dose should be administered after the dialysis session has ended.

- How Supplied: Kit containing 3 single-dose vials each containing sterile powder for reconstitution: 1 vial contains sulbactam 1 g and 2 vials each contain durlobactam 0.5 g.
- Storage: Refrigerate at 2°C to 8°C (36°F to 46°F); (b) (4)

2 RESULTS

The following sections provide information obtained and considered in the overall evaluation of the proposed proprietary name, Xacduro.

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Xacduro would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis 1 (DMEPA 1) concurred with the findings of OPDP's assessment for Xacduro. The Division of Anti-Infectives (DAI) did not comment on the findings of OPDP's assessment for Xacduro.

2.2 SAFETY ASSESSMENT

The following aspects were considered in the safety evaluation of the proposed proprietary name, Xacduro.

2.2.1 United States Adopted Names (USAN) Search

There is no USAN stem present in the proposed proprietary name.^f

2.2.2 Components of the Proposed Proprietary Name

ETI did not provide a derivation or intended meaning for the proposed proprietary name, Xacduro, in their submission. However, we note that the proposed proprietary name, Xacduro, includes the letter string '-dur-' which may suggest one of the two product's active ingredients,

Pharmaceutical Quality (OPQ) will make a final determination regarding the accuracy and use of the terminology "kit" during the NDA review.

^f USAN stem search conducted on October 7, 2022.

durlobactam. Also, the proposed proprietary name, Xacdure, includes the letter string ‘-ac-’ which may suggest both of the two product’s active ingredients, sulbactam and durlobactam. As these letter strings, ‘-dur-’ and ‘-ac-’ are consistent with the product’s active ingredients, sulbactam and durlobactam, we find their inclusion in the infix of the proposed proprietary name, Xacdure, acceptable from a medication error perspective.

Additionally, this proprietary name is comprised of a single word. We note that Xacdure includes the letter strings ‘-ac-’, a medical abbreviation for “before meals” (i.e., taking a medication dosage before meals) and ‘-cd-’, an abbreviation for chewable dispersible, controlled delivery, and controlled diffusion. In some circumstances, the incorporation of medical abbreviations in proprietary names can inadvertently be a source of error. For more information see draft guidance, *Best Practices in Developing Proprietary Names for Human Prescription Drug Products*.⁸ Although we typically discourage the inclusion of medical abbreviations in proprietary names, we determined that the locations of the abbreviations, ‘ac’ and ‘cd’ in the infix of the proposed proprietary name, are unlikely to be separated from the surrounding letters or misinterpreted in a manner that would lead to confusion in this case. Thus, in this case, we do not object to the inclusion of the letter strings ‘ac’ and ‘cd’ in the infix of the proposed proprietary name.

2.2.3 Comments from Other Review Disciplines at Initial Review

On November 3, 2022, the Division of Anti-Infectives (DAI) did not forward any comments or concerns relating to Xacdure at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

Ninety-four practitioners participated in DMEPA’s prescription studies for Xacdure. The responses did not overlap with any currently marketed products nor did the responses sound or look similar to any currently marketed products or any products in the pipeline. We note that in the voice simulation study, the first syllable ‘Xac’ was misinterpreted as ‘Zac’ by 6 participants, ‘Zap’ by 8 participants, and ‘Zat’ by 2 participants. Currently there are no marketed proprietary names beginning with the letter strings ‘Zac’, ‘Zap’, or ‘Zat.’ However, we have considered this phonetic similarity and these variations in our analysis.

Additionally, one computerized provider order entry (CPOE) simulation study participant commented that the proposed proprietary name, Xacdure, is “very close with Xaciato.” Xaciato (clindamycin phosphate) vaginal gel was approved under NDA 215650 on 12/07/2021 and is indicated for the treatment of bacterial vaginosis in female patients 12 years of age and older. We therefore assessed the name pair, Xacdure vs. Xaciato, noting the name pair has a combined Phonetic and Orthographic Computer Analysis (POCA) score of 48% (individual orthographic 61% and individual phonetic 35%), indicating that there is a low similarity between this name pair. We note the infixes ‘dur’ vs. ‘iat’ look different. Phonetically, the 2nd and 3rd syllables of this name pair (dur’ oh vs. see awt) sound different and Xaciato (zah-see-awt-o) contains an extra syllable compared to Xacdure (zak dur’ oh). Moreover, Xaciato is a vaginal gel available in

⁸ Guidance for Industry: Best Practices in Developing Proprietary Names for Human Prescription Drug Products. 2020. Available from: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents>.

a single strength of 2%, dosed as one applicatorful (5 g of vaginal gel containing 100 mg of clindamycin) and administered once intravaginally as a single dose at any time of the day. We note that there is no numeric overlap in strength, dosage form or route of administration between Xacduro and Xaciato, if included on a prescription. When all of the aforementioned mitigations are considered in totality, we find the risk of confusion is adequately minimized in this case (see Appendix E).

Appendix B contains the results from the prescription simulation studies.

2.2.5 Phonetic and Orthographic Computer Analysis (POCA) Search Results

Our POCA search^h identified 47 names with the combined score of $\geq 55\%$ or individual orthographic or phonetic score of $\geq 70\%$. We had identified and evaluated some of the names in our previous proprietary name review. We re-evaluated the previously identified names of concern considering any lessons learned from recent post-marketing experience, which may have altered our previous conclusion regarding the acceptability of the name. We note that none of the product characteristics have changed, and we agree with the findings from our previous review for the names evaluated previously. Therefore, we identified 5 names not previously analyzed. These names are included in Table 1 below.

2.2.6 Names Retrieved for Review Organized by Name Pair Similarity

Table 1 lists the number of names retrieved from our POCA search and FDA Prescription Simulation Study. These name pairs are organized as highly similar, moderately similar or low similarity for further evaluation.

Table 1. Names Retrieved for Review Organized by Name Pair Similarity	
Similarity Category	Number of Names
Highly similar name pair: combined match percentage score $\geq 70\%$	0
Moderately similar name pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$	5
Low similarity name pair: combined match percentage score $\leq 54\%$	1

2.2.7 Safety Analysis of Names with Potential Orthographic, Spelling, and Phonetic Similarities

Our analysis of the six names contained in Table 1 determined none of the names will pose a risk for confusion with Xacduro as described in Appendices C through H.

^h POCA search conducted on October 7, 2022 in version 5.0.

2.2.8 *Communication of DMEPA's Determination*

On December 21, 2022, DMEPA 1 communicated our determination to the Division of Anti-Infectives (DAI).

3 CONCLUSION

The proposed proprietary name, Xacduro, is conditionally acceptable.

If you have any questions or need clarifications, please contact Amy Chung, OSE project manager, at 240-402-4547.

3.1 COMMENTS TO ENTASIS THERAPEUTICS, INC.

We have completed our review of the proposed proprietary name, Xacduro, and have concluded that this name is conditionally acceptable.

If any of the proposed product characteristics as stated in your submission, received on October 4, 2022, are altered prior to approval of the marketing application, the name must be resubmitted for review.

4 REFERENCES

1. **USAN Stems** (<https://www.ama-assn.org/about/united-states-adopted-names-approved-stems>)

USAN Stems List contains all the recognized USAN stems.

2. **Phonetic and Orthographic Computer Analysis (POCA)**

POCA is a system that FDA designed. As part of the name similarity assessment, POCA is used to evaluate proposed names via a phonetic and orthographic algorithm. The proposed proprietary name is converted into its phonemic representation before it runs through the phonetic algorithm. Likewise, an orthographic algorithm exists that operates in a similar fashion. POCA is publicly accessible.

Drugs@FDA

Drugs@FDA is an FDA Web site that contains most of the drug products approved in the United States since 1939. The majority of labels, approval letters, reviews, and other information are available for drug products approved from 1998 to the present. Drugs@FDA contains official information about FDA-approved *brand name* and *generic drugs*; *therapeutic biological products*, *prescription* and *over-the-counter* human drugs; and *discontinued drugs* (see Drugs @ FDA Glossary of Terms, available at http://www.fda.gov/Drugs/InformationOnDrugs/ucm079436.htm#ther_biological).

RxNorm

RxNorm contains the names of prescription and many OTC drugs available in the United States. RxNorm includes generic and branded:

- Clinical drugs – pharmaceutical products given to (or taken by) a patient with therapeutic or diagnostic intent
- Drug packs – packs that contain multiple drugs, or drugs designed to be administered in a specified sequence

Radiopharmaceuticals, contrast media, food, dietary supplements, and medical devices, such as bandages and crutches, are all out of scope for RxNorm

(<http://www.nlm.nih.gov/research/umls/rxnorm/overview.html>).

Division of Medication Errors Prevention and Analysis proprietary name consultation requests

This is a list of proposed and pending names that is generated by the Division of Medication Error Prevention and Analysis from the Access database/tracking system.

APPENDICES

Appendix A

FDA's Proprietary Name Risk Assessment evaluates proposed proprietary names for misbranding and safety concerns.

1. **Misbranding Assessment:** For prescription drug products, OPDP assesses the name for misbranding concerns. For over-the-counter (OTC) drug products, the misbranding assessment of the proposed name is conducted by DNDP. OPDP or DNDP evaluates proposed proprietary names to determine if the name is false or misleading, such as by making misrepresentations with respect to safety or efficacy. For example, a fanciful proprietary name may misbrand a product by suggesting that it has some unique effectiveness or composition when it does not (21 CFR 201.10(c)(3)). OPDP or DNDP provides their opinion to DMEPA for consideration in the overall acceptability of the proposed proprietary name.
2. **Safety Assessment:** The safety assessment is conducted by DMEPA, and includes the following:
 - a. Preliminary Assessment: We consider inclusion of USAN stems or other characteristics that when incorporated into a proprietary name may cause or contribute to medication errors (i.e., dosing interval, dosage form/route of administration, medical or product name abbreviations, names that include or suggest the composition of the drug product, etc.) See prescreening checklist below in Table 2*. DMEPA defines a medication error as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer.ⁱ

ⁱ National Coordinating Council for Medication Error Reporting and Prevention. <https://www.nccmerp.org/about-medication-errors> Last accessed 10/05/2020.

***Table 2- Prescreening Checklist for Proposed Proprietary Name**

	Answer the questions in the checklist below. Affirmative answers to any of these questions indicate a potential area of concern that should be carefully evaluated as described in this guidance.
Y/N	Is the proposed name obviously similar in spelling and pronunciation to other names?
	Proprietary names should not be similar in spelling or pronunciation to proprietary names, established names, or ingredients of other products.
Y/N	Are there inert or inactive ingredients referenced in the proprietary name?
	Proprietary names should not incorporate any reference to an inert or inactive ingredient in a way that might create an impression that the ingredient's value is greater than its true functional role in the formulation (21 CFR 201.10(c)(4)).
Y/N	Does the proprietary name include combinations of active ingredients?
	Proprietary names of fixed combination drug products should not include or suggest the name of one or more, but not all, of its active ingredients (see 21 CFR 201.6(b)).
Y/N	Is there a United States Adopted Name (USAN) stem in the proprietary name?
	Proprietary names should not incorporate a USAN stem in the position that USAN designates for the stem.
Y/N	Is this proprietary name used for another product that does not share at least one common active ingredient?
	Drug products that do not contain at least one common active ingredient should not use the same (root) proprietary name.
Y/N	Is this a proprietary name of a discontinued product?
	Proprietary names should not use the proprietary name of a discontinued product if that discontinued drug product does not contain the same active ingredients.

- b. Phonetic and Orthographic Computer Analysis (POCA): Following the preliminary screening of the proposed proprietary name, DMEPA staff evaluates the proposed name against potentially similar names. In order to identify names with potential similarity to the proposed proprietary name, DMEPA enters the proposed proprietary name in POCA and queries the name against the following drug reference databases, Drugs@fda, CernerRxNorm, and names in the review pipeline using a 55% threshold in POCA. DMEPA reviews the combined orthographic and phonetic matches and group the names into one of the following three categories:
- Highly similar pair: combined match percentage score $\geq 70\%$.
 - Moderately similar pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$.

- Low similarity: combined match percentage score $\leq 54\%$.

Using the criteria outlined in the check list (Table 3-5) that corresponds to each of the three categories (highly similar pair, moderately similar pair, and low similarity), DMEPA evaluates the name pairs to determine the acceptability or non-acceptability of a proposed proprietary name. The intent of these checklists is to increase the transparency and predictability of the safety determination of whether a proposed name is vulnerable to confusion from a look-alike or sound-alike perspective. Each bullet below corresponds to the name similarity category cross-references the respective table that addresses criteria that DMEPA uses to determine whether a name presents a safety concern from a look-alike or sound-alike perspective.

- For highly similar names, differences in product characteristics often cannot mitigate the risk of a medication error, including product differences such as strength and dose. Thus, proposed proprietary names that have a combined score of ≥ 70 percent are at risk for a look-alike sound-alike confusion which is an area of concern (See Table 3).
- Moderately similar names are further evaluated to identify the presence of attributes that are known to cause name confusion.
 - Name attributes: We note that the beginning of the drug name plays a significant role in contributing to confusion. Additionally, drug name pairs that start with the same first letter and contain a shared letter string of at least 3 letters in both names are major contributing factor in the confusion of drug names^j. We evaluate all moderately similar names retrieved from POCA to identify the above attributes. These names are further evaluated to identify overlapping or similar strengths or doses.
 - Product attributes: Moderately similar names of products that have overlapping or similar strengths or doses represent an area for concern for FDA. The dose and strength information is often located in close proximity to the drug name itself on prescriptions and medication orders, and the information can be an important factor that either increases or decreases the potential for confusion between similarly named drug pairs. The ability of other product characteristics to mitigate confusion (e.g., route, frequency, dosage form) may be limited when the strength or dose overlaps. DMEPA reviews such names further, to determine whether sufficient differences exist to prevent confusion. (See Table 4).
- Names with low similarity that have no overlap or similarity in strength and dose are generally acceptable (See Table 5) unless there are data to suggest that the name might be vulnerable to confusion (e.g., prescription simulation study suggests that the name is likely to be misinterpreted as a marketed product). In these instances, we would reassign

^j Shah, M, Merchant, L, Characteristics That May Help in the Identification of Potentially Confusing Proprietary Drug Names. Therapeutic Innovation & Regulatory Science, September 2016

a low similarity name to the moderate similarity category and review according to the moderately similar name pair checklist.

- c. FDA Prescription Simulation Studies: DMEPA staff also conducts a prescription simulation studies using FDA health care professionals.

Four separate studies are conducted within the Centers of the FDA for the proposed proprietary name to determine the degree of confusion of the proposed proprietary name with marketed U.S. drug names (proprietary and established) due to similarity in visual appearance with handwritten prescriptions, verbal pronunciation of the drug name or during computerized provider order entry. The studies employ healthcare professionals (pharmacists, physicians, and nurses), and attempts to simulate the prescription ordering process. The primary Safety Evaluator uses the results to identify vulnerability of the proposed name to be misinterpreted by healthcare practitioners during written, verbal, or electronic prescribing.

In order to evaluate the potential for misinterpretation of the proposed proprietary name during written, verbal, or electronic prescribing of the name, written inpatient medication orders, written outpatient prescriptions, verbal orders, and electronic orders are simulated, each consisting of a combination of marketed and unapproved drug products, including the proposed name.

- d. Comments from Other Review Disciplines: DMEPA requests the Office of New Drugs (OND) and/or Office of Generic Drugs (OGD), ONDQA or OBP for their comments or concerns with the proposed proprietary name, ask for any clinical issues that may impact the DMEPA review during the initial phase of the name review. Additionally, when applicable, at the same time DMEPA requests concurrence/non-concurrence with OPDP's decision on the name. The primary Safety Evaluator addresses any comments or concerns in the safety evaluator's assessment.

The OND/OGD Regulatory Division is contacted a second time following our analysis of the proposed proprietary name. At this point, DMEPA conveys their decision to accept or reject the name.

Additionally, other review disciplines opinions such as ONDQA or OBP may be considered depending on the proposed proprietary name.

When provided, DMEPA considers external proprietary name studies conducted by or for the Applicant/Sponsor and incorporates the findings of these studies into the overall risk assessment.

The DMEPA primary reviewer assigned to evaluate the proposed proprietary name is responsible for considering the collective findings, and provides an overall risk assessment of the proposed proprietary name.

Table 3. Highly Similar Name Pair Checklist (i.e., combined Orthographic and Phonetic score is $\geq 70\%$).

Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may render the names less likely to confusion, provided that the pair does not share a common strength or dose.			
<u>Orthographic Checklist</u>		<u>Phonetic Checklist</u>	
Y/N	Do the names begin with different first letters? <i>Note that even when names begin with different first letters, certain letters may be confused with each other when scripted.</i>	Y/N	Do the names have different number of syllables?
Y/N	Are the lengths of the names dissimilar* when scripted? <i>*FDA considers the length of names different if the names differ by two or more letters.</i>	Y/N	Do the names have different syllabic stresses?
Y/N	Considering variations in scripting of some letters (such as z and f), is there a different number or placement of upstroke/downstroke letters present in the names?	Y/N	Do the syllables have different phonologic processes, such vowel reduction, assimilation, or deletion?
Y/N	Is there different number or placement of cross-stroke or dotted letters present in the names?	Y/N	Across a range of dialects, are the names consistently pronounced differently?
Y/N	Do the infixes of the name appear dissimilar when scripted?		
Y/N	Do the suffixes of the names appear dissimilar when scripted?		

Table 4: Moderately Similar Name Pair Checklist (i.e., combined score is $\geq 55\%$ to $\leq 69\%$).

Step 1	Review the DOSAGE AND ADMINISTRATION and HOW SUPPLIED/STORAGE AND HANDLING sections of the prescribing information (or for OTC drugs refer to the Drug Facts label) to determine if strengths and doses of the name pair overlap or are very similar. Different strengths and doses for products whose names are moderately similar may decrease the risk of confusion between the moderately similar name pairs. Name pairs that have overlapping or similar strengths or doses have a higher potential for confusion and should be evaluated further (see Step 2). Because the strength or dose could be used to express an order or prescription for a particular drug product, overlap in one or both of these components would be reason for further evaluation. For single strength products, also consider circumstances where the strength may not be expressed. For any i.e., drug products comprised of more than one active ingredient, consider whether the strength or dose may be expressed using only one of the components. To determine whether the strengths or doses are similar to your proposed product, consider the following list of factors that may increase confusion: • Alternative expressions of dose: 5 mL may be listed in the prescribing information, but the dose may be expressed in metric weight (e.g., 500 mg) or in non-metric units (e.g., 1 tsp, 1 tablet/capsule). Similarly, a strength or dose of 1000 mg may be expressed, in practice, as 1 g, or vice versa. • Trailing or deleting zeros: 10 mg is similar in appearance to 100 mg which may potentiate confusion between a name pair with moderate similarity. • Similar sounding doses: 15 mg is similar in sound to 50 mg
Step 2	Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may reduce the likelihood of confusion for moderately similar names <u>with</u> overlapping or similar strengths or doses.

	Orthographic Checklist (Y/N to each question) - Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. - Are the lengths of the names dissimilar* when scripted? *FDA considers the length of names different if the names differ by two or more letters. - Considering variations in scripting of some letters (such as z and f), is there a different number or placement of upstroke/downstroke letters present in the names? - Is there different number or placement of cross-stroke or dotted letters present in the names? - Do the infixes of the name appear dissimilar when scripted? - Do the suffixes of the names appear dissimilar when scripted?	Phonetic Checklist (Y/N to each question) - Do the names have different number of syllables? - Do the names have different syllabic stresses? - Do the syllables have different phonologic processes, such vowel reduction, assimilation, or deletion? - Across a range of dialects, are the names consistently pronounced differently?
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Table 5: Low Similarity Name Pair Checklist (i.e., combined score is $\leq 54\%$).

Names with low similarity are generally acceptable unless there are data to suggest that the name might be vulnerable to confusion (e.g., prescription simulation study suggests that the name is likely to be misinterpreted as a marketed product). In these instances, we would reassign a low similarity name to the moderate similarity category and review according to the moderately similar name pair checklist.

Appendix B: Prescription Simulation Samples and Results

Figure 1. Xacduro Study (Conducted on October 14, 2022)

Handwritten Medication Order/Prescription	Verbal Prescription
Medication Order: <i>Xacduro 1gram/1gram q6h by intravenous infusion</i>	Xacduro Bring to clinic. Dispense 8 kits
Outpatient Prescription: <i>Xacduro</i> <i>Bring to clinic</i> <i># 8 kits</i>	
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
Xacduro	

FDA Prescription Simulation Responses (Aggregate Report)

265 People Received Study
94 People Responded

Study Name: Xacduro

Total	27	27	17	23	
INTERPRETATION	INPATIENT	CPOE	VOICE	OUTPATIENT	TOTAL
XACDURA	0	0	0	1	1
XACDURE	0	0	0	1	1
XACDURO	25	27	1	21	74
XACDURS	1	0	0	0	1
XAODURO	1	0	0	0	1
ZACDURO	0	0	3	0	3
ZACHDURO	0	0	1	0	1
ZACTERO	0	0	2	0	2
ZAPDORO	0	0	1	0	1
ZAPDURO	0	0	7	0	7
ZATDURO	0	0	2	0	2

Appendix C: Highly Similar Names (e.g., combined POCA score is $\geq 70\%$)

No.	Proposed name: Xacduro Established name: sulbactam; durlobactam Dosage form: for injection Strength(s): 1 gram/1 gram Usual Dose: 1 gram/1 gram (b) (4)	POCA Score (%)	Orthographic and/or phonetic differences in the names sufficient to prevent confusion Other prevention of failure mode expected to minimize the risk of confusion between these two names.
1.	N/A		

Appendix D: Moderately Similar Names (e.g., combined POCA score is $\geq 55\%$ to $\leq 69\%$) with no overlap or numerical similarity in Strength and/or Dose

No.	Name	POCA Score (%)
1.	N/A	

Appendix E: Moderately Similar Names (e.g., combined POCA score is $\geq 55\%$ to $\leq 69\%$) with overlap or numerical similarity in Strength and/or Dose

No.	Proposed name: Xacduro Established name: sulbactam; durlobactam Dosage form: for injection Strength(s): 1 gram/1 gram Usual Dose: 1 gram/1 gram (b) (4)	POCA Score (%)	Prevention of Failure Mode In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names
1.	Dapzura	64	"Dapzura" is the root name of the marketed product, Dapzura RT (NDA 213645). The prefix and suffix in the proposed proprietary name, "Xacduro" compared to the root name "Dapzura" (Xa- vs. Da- and -cdu- vs. -pzu-, respectively) provide sufficient orthographic differences. Specifically, the difference in the first letters, the

No.	Proposed name: Xacduro Established name: sulbactam; durlobactam Dosage form: for injection Strength(s): 1 gram/1 gram Usual Dose: 1 gram/1 gram (b) (4)	POCA Score (%)	Prevention of Failure Mode In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names
			cross-stroke letter 'X' vs. 'D', and that Xacduro contains an upstroke 'd' vs. Dapzura contains the downstroke 'p' as well as the potential downstroke 'z', if scripted provide orthographic differences. In addition, Dapzura RT contains the modifier “RT” making the pair look different when written, if included. Phonetically, (zak dur' oh vs. dap zur' ah), the onset of the first syllables (the alveolar speech sound /z/ vs. the plosive speech sound /d/) and the onset of the second syllables (the plosive speech sound /d/ vs. the alveolar speech sound /z/) provide sufficient phonetic differences. In addition, Dapzura RT contains the modifier “RT” making the pair sound different when spoken, if included. Additionally, even when considering potential metathesis involving Xacduro and the root name Dapzura (i.e., transposing the /d/ and /z/ sounds), the modifier “RT” offers some phonetic difference, if included. Furthermore, we note product characteristics between this name pair (Xacduro vs. Dapzura RT) are different, which may provide additional differentiation, if included. Specifically, we note that the dose would have to be included on the

No.	Proposed name: Xacduro Established name: sulbactam; durlobactam Dosage form: for injection Strength(s): 1 gram/1 gram Usual Dose: 1 gram/1 gram (b) (4)	POCA Score (%)	Prevention of Failure Mode In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names
			medication order/prescription for both Xacduro and Dapzura RT. Additionally, we note that the aforementioned Dapzura RT dosing, the resulting dose for Dapzura RT will be x mg, resulting in a difference in dosing presentation (i.e., x mg for Dapzura RT vs. 0.5 g/0.5 g, 1 g/1 g, and 1.5 g/1.5 g for Xacduro), which will provide adequate differentiation. While we acknowledge that both products will be single strength, there is no numerical overlap or similarity in strength (Xacduro is proposed as a multiple ingredient co-packaged product with the strength 1 g/1 g per kit vs. Dapzura RT is available as 500 mg/vial). When all of the aforementioned mitigations are considered in totality, we find the risk of confusion is adequately minimized in this case.
2.	(b) (4) **	61	(b) (4)

No.	Proposed name: Xacduro Established name: sulbactam; durlobactam Dosage form: for injection Strength(s): 1 gram/1 gram Usual Dose: 1 gram/1 gram (b) (4)	POCA Score (%)	Prevention of Failure Mode In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names
			(b) (4)
3.	Xaciato	48	Orthographically, the infixes 'dur' vs. 'iat' look different. Phonetically, the 2nd and 3rd syllables of this name pair (dur' oh vs. see awt) sound different and Xaciato (zah-see-awt-o) contains an extra syllable compared to Xacduro (zak dur' oh). Moreover, Xaciato is a vaginal gel available in a single strength of 2%, dosed as one applicatorful (5 g of vaginal gel containing 100 mg of clindamycin) and administered once intravaginally as a single dose at any time of the day. We note that there is no numeric overlap in strength, dosage form or route of administration between Xacduro and Xaciato, if included on a prescription. When all of the aforementioned mitigations are considered in totality, we find the risk of confusion is adequately minimized in this case.

Appendix F: Low Similarity Names (e.g., combined POCA score is ≤54%)

No.	Name	POCA Score (%)
1.	N/A	

Appendix G: Names not likely to be confused or not used in usual practice settings for the reasons described.

No.	Name	POCA Score (%)	Failure preventions
1.	(b) (4) ***	58	(b) (4) Proposed proprietary name, (b) (4) ***, for NDA 212728 found unacceptable by DMEPA (OSE# 2019-32851235). Subsequently, the Applicant submitted a request for reconsideration and the name, (b) (4) ***, for NDA 212728 was again found to be unacceptable (OSE # 2019-34863111). NDA 212728 approved under the proprietary name Nurtec ODT.

Appendix H: Names not likely to be confused due to absence of attributes that are known to cause name confusion^k.

No.	Name	POCA Score (%)
1.	(b) (4)	59
2.	(b) (4)	55

^k Shah, M, Merchant, L, Chan, I, and Taylor, K. Characteristics That May Help in the Identification of Potentially Confusing Proprietary Drug Names. *Therapeutic Innovation & Regulatory Science*, September 2016

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