CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

206307Orig1s000

PROPRIETARY NAME REVIEW(S)

PROPRIETARY NAME REVIEW PREACTION

Division of Medication Error Prevention and Analysis (DMEPA)

Office of Medication Error Prevention and Risk Management (OMEPRM)

Office of Surveillance and Epidemiology (OSE)

Center for Drug Evaluation and Research (CDER)

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Date of This Review:	November 5, 2014
Application Type and Number:	NDA 206307
Product Name and Strength:	Xtoro (Finafloxacin) Otic Suspension, 0.3%
Product Type:	Single Ingredient
Rx or OTC:	Rx
Applicant/Sponsor Name:	Alcon Laboratories
Submission Date:	October 24, 2014
Panorama #:	2014-40700
DMEPA Primary Reviewer:	Rachna Kapoor, PharmD
DMEPA Team Leader:	Yelena Maslov, PharmD

Contents

1 INTRODUCTION

This re-assessment of the proposed proprietary name, Xtoro, is written in response to the resubmission of this proprietary name by the Sponsor. DMEPA found the proposed name, Xtoro, unacceptable in OSE Review 2014-17319 dated July 24, 2014 due to confusion with two other products that were also under review.

1.1 PRODUCT INFORMATION

The following product information is provided in the October 24, 2014 proprietary name submission.

- Intended pronunciation: ex tore' oh
- Active Ingredient: finafloxacin
- Indication of Use: the treatment of acute otitis externa, with or without an otowick, in pediatric (age (b) (4) and older), adult and elderly patients
- Route of Administration: topical otic
- Dosage Form: otic suspension
- Strength: 0.3%
- Dose and Frequency: instill four drops into the affected ear twice daily for seven days. For patients requiring use of an otowick, the initial dose can be doubled (to eight drops), followed by four drops instilled into the affected ear twice daily for seven days
- How Supplied: 5 mL fill in an 8 mL bottle; 0.5 mL fill in a 4 mL bottle (sample)
- Storage: store at 2^{o} – 25^{o}C (36^{o} – 77^{o}F). Do not freeze. Shake well before use

2 DISCUSSION

The proposed proprietary name, Xtoro, was initially denied due to possible confusion with two other products that were also under review, (b) (4) (IND 102654) and (b) (4) (NDA 206089). However, it appears that it is no longer the case for the reasons specified below:

(b) (4) vs. Xtoro

The proposed proprietary name (b) (4) is no longer under review as the name was denied due to confusion with another currently marketed product. Therefore, we are no longer concerned regarding the potential confusion between (b) (4) and Xtoro.

(b) (4) vs. Xtoro

The proposed proprietary name (b) (4) is no longer under review as the application is in complete response. Therefore, we are no longer concerned regarding a potential confusion between (b) (4) and Xtoro.

Therefore, the proposed proprietary name, Xtoro, is now acceptable.

3 CONCLUSIONS

The re-evaluation of the proposed proprietary name, Xtoro, did not identify any vulnerability that would result in medication errors with any names. Thus, DMEPA has no objection to the proprietary name, Xtoro, for this product at this time.

If you have further questions or need clarifications, please contact Karen Townsend, OSE project manager, at 301-796-5413.

3.1 COMMENTS TO THE APPLICANT

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

This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/

RACHNA KAPOOR
11/05/2014

YELENA L MASLOV
11/05/2014

PROPRIETARY NAME REVIEW

Division of Medication Error Prevention and Analysis (DMEPA)

Office of Medication Error Prevention and Risk Management (OMEPRM)

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Date of This Review:	July 24, 2014
Application Type and Number:	NDA 206307
Product Name and Strength:	Xtoro (Finafloxacin) Otic Suspension, 0.3%
Product Type:	Single Ingredient
Rx or OTC:	Rx
Applicant/Sponsor Name:	Alcon Laboratories
Submission Date:	May 7, 2014
Panorama #:	2014-17319
DMEPA Primary Reviewer:	Rachna Kapoor, PharmD
DMEPA Team Leader:	Yelena Maslov, PharmD
DMEPA Associate Director:	Lubna Merchant, PharmD, MS
OMEPRM Deputy Director:	Kellie Taylor, PharmD, MPH

Contents

1 INTRODUCTION

This review evaluates the proposed proprietary name, Xtoro, from a safety and promotional perspective. The sources and methods used to evaluate the proposed name are outlined in the reference section and Appendix A respectively. The Applicant did not submit an external name study for this proposed proprietary name.

1.1 PRODUCT INFORMATION

The following product information is provided in the May 7, 2014 proprietary name submission.

- Intended pronunciation: ex tore' oh
- Active Ingredient: finafloxacin
- Indication of Use: the treatment of acute otitis externa, with or without an otowick, in pediatric (age (b) (4) and older), adult and elderly patients
- Route of Administration: otic
- Dosage Form: otic suspension
- Strength: 0.3%
- Dose and Frequency: instill four drops into the affected ear twice daily for seven days. For patients requiring use of an otowick, the initial dose can be doubled (to eight drops), followed by four drops instilled into the affected ear twice daily for seven days
- How Supplied: 5 mL fill in an 8 mL bottle; 0.5 mL fill in a 4 mL bottle (sample)
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2 RESULTS

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

2.1 PROMOTIONAL ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined the proposed name is acceptable from a promotional perspective. DMEPA and the Division of Transplant and Ophthalmology Products (DTOP) concurred with the findings of OPDP's promotional assessment of the proposed name.

2.2 SAFETY ASSESSMENT

The following aspects were considered in the safety evaluation of the name.

2.2.1 United States Adopted Names (USAN) Search

There is no USAN stem present in the proprietary name[1].

2.2.2 Components of the Proposed Proprietary Name

The Applicant stated that there is no derivation or intended meaning for the proposed name, Xtoro, in their submission. This proprietary name is comprised of a single word that does not contain any components (i.e. a modifier, route of administration, dosage form, etc.) that are misleading or can contribute to medication error.

2.2.3 FDA Name Simulation Studies

One hundred one practitioners responded to DMEPA's prescription studies. The interpretations did not overlap with any currently marketed products nor did the misinterpretations sound or look similar to any currently marketed products or any products in the pipeline. In the written outpatient study, 33 of 35 participants correctly interpreted the prescription. One misinterpretation in the written outpatient study was substitution of 's' for 'x'. In the written inpatient study, 18 of 32 participants correctly interpreted the prescription. One misinterpretation in the written inpatient study was substitution of 'e' for 'o'. Seven participants added the letter 'i' between the 'x' and 't' in Xtoro. In the voice study, 3 of the 34 participants correctly interpreted the prescription. Common misinterpretations in the voice study include: 'ek' for 'x', 'p' for 't', and 'a' and 'al' for 'o'. Twenty-one participants added the letter 'e' to the beginning of the name.

2.2.4 Comments from Other Review Disciplines at Initial Review

In response to the OSE, May 20, 2014 e-mail, the Division of Transplant and Ophthalmology Products (DTOP) did not forward any comments or concerns relating to the proposed proprietary name at the initial phase of the review.

2.2.5 Phonetic and Orthographic Computer Analysis (POCA) Search Results

Table 1 lists the number of names with the combined orthographic and phonetic score of ≥50% retrieved from our POCA search organized as highly similar, moderately similar or low similarity for further evaluation. Table 1 also includes names identified from the FDA Prescription Simulation.

[1]USAN stem search conducted on June 6, 2014.

Table 1. POCA Search Results	Number of Names
Highly similar name pair: combined match percentage score ≥70%	0
Moderately similar name pair: combined match percentage score ≥50% to ≤ 69%	46
Low similarity name pair: combined match percentage score ≤49%	0

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

We determined that forty-four of the forty-six names contained in Table 1 will not pose a risk for confusion as described in Appendices C through G. However, the proposed name could be confused with two proposed products, [(b) (4)]*** and [(b) (4)]***, that are currently being reviewed. The rationale for the risk of confusion is described below.

[(b) (4)]* vs. Xtoro**

The proposed proprietary name, Xtoro, is orthographically similar to and shares overlapping product characteristics with another product that is also under review, [(b) (4)] In terms of orthographic similarity, both names begin with the same letter [(b) (4)], are similar in length, and end with the same letter string [(b) (4)]. Additionally, the first letter 'o' in Xtoro can be scripted similarly to the letter [(b) (4)]***. Due to overwhelming orthographic similarity between this name pair, the letter 't' in Xtoro does not provide sufficient orthographic differentiation.

The overall similarity of this name pair is attested by FDA's Phonetic and Orthographic Computer Analysis (POCA) which calculates a 70% combined orthographic/phonetic match for this name pair.

Both products share the same frequency of administration (twice daily). Although we acknowledge that there are some differences between these products (strength, dosage form, and route of administration), these differences may not prevent confusion due to the fact that these product characteristics may not be routinely presented on prescription orders. Both Xtoro and [(b) (4)]*** are available in a single strength (0.3% vs. [(b) (4)]%), a single dosage form [(b) (4)], and a single route of administration [(b) (4)]. Thus, strength, dosage form, and route of administration may be omitted when prescribed for either product. In addition, both may be prescribed with the same frequency of administration (twice daily) or as "Use BID."

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(b) (4)

(b) (4)

(b) (4) **vs. Xtoro**

The proposed proprietary name, Xtoro, is similar in spelling and pronunciation to another proposed product that is currently under review, (b) (4)*** (Testosterone undecanoate), IND (b) (4) and NDA (b) (4). (b) (4)

In terms of phonetic similarity, both names have (b) (4) syllables. The first syllable of both names (b) (4) sound similar due to the (b) (4) being the predominant sound as seen in the voice prescription stimulation study, where 29 participants misinterpreted the (b) (4)

In addition, both names are similar orthographically as both names (b) (4) . The overall combined orthographic and phonetic similarity of this name pair is attested by FDA's Phonetic and Orthographic Computer Analysis (POCA) which calculates a 63% combined match (82% orthographic match), for this name pair.

We acknowledge that (b) (4) (b) (4) which is not pres
prevent an error if the proposed name Xtoro is approved. Selection errors may occur by healthcare providers when utilizing Computerized Physician Order Entry (CPOE) systems because a name is embedded in another name. A report from Institute for Safe Medication Practices describes this type of confusion between the drug names Ranexa and Tranexamic Acid in a CPOE system [2] where tranexamic acid was listed in a patient's medication history instead of Ranexa. The name Ranexa is completely embedded and correctly spelled within the word **tranexa**mic acid, and when 'Ranexa' was typed

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[2] Institute for Safe Medication Practices. Safety briefs: Searching by drug name gives information on wrong drug. ISMP Med Saf Alert Acute Care. 2012;17(16):1-3.

tranexamic acid was selected in error. Therefore, we have concern that a healthcare provider may enter 'xtoro' in an electronic ordering system with the intention to order Xtoro for a patient, and mistakenly select (b) (4)***.

This name pair also shares product characteristics including frequency of administration (twice daily). We carefully considered whether the differences in remaining product characteristics for Xtoro compared to (b) (4)*** would minimize the potential for error between Xtoro and (b) (4)***. Although the dosage form and route of administration of both products do not overlap (b) (4) product characteristics may be omitted since both products are available in a single dosage form and given by a single route of administration. Therefore, these product characteristics may not help to differentiate these two products.

Additionally, although the strength of Xtoro and (b) (4)*** does not overlap (0.3% vs. (b) (4)),we are concerned that these differences will not adequately prevent confusion between the name pairs given the overwhelming similarity of the names. We have identified post-marketing reports of confusion between products marketed in different strengths when strong orthographic or phonetic similarity exists. As an example, a report from Institute for Safe Medication Practices describes confusion between Prenexa and Ranexa where a written prescription for Ranexa 500 mg was dispensed instead of Prenexa.[3] The patient took Ranexa for one year thinking that it was a prenatal vitamin. This error occurred despite the differences in products strengths (Ranexa is available in 500 mg and 1000 mg and Prenexa is a single strength prenatal multivitamin) and frequency of administration (Ranexa should be administered twice daily vs. Prenexa should be administered once daily). Thus, the differences in strength and frequency of administration may not prevent a medication error arising from names that are very similar. As it relates to Xtoro, such examples raise concern that similar errors could occur between Xtoro and (b) (4)***.

(b) (4)

(b) (4)

Based on our assessment, the names Xtoro versus (b) (4)*** and (b) (4)*** are vulnerable to medication errors due to name confusion. Therefore, we find your proposed name unacceptable as per 21 CFR 201.10(c) (5), which states "The labeling of a drug may be misleading by reason of designation of a drug or ingredient by a proprietary name that,

[3] Institute for Safe Medication Practices. Safety briefs: Ranexa and Prenexa too similar. ISMP Med Saf Alert Community/Ambulatory Care. 2012;11(3):1-4.

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because of similarity in spelling or pronunciation, may be confused with the proprietary name or the established name of a different drug or ingredient."

2.2.7 Communication of DMEPA's Analysis at Midpoint of Review

DMEPA communicated our findings to the Division of Transplant and Ophthalmology Products (DTOP) via e-mail on July 7, 2014. At that time we also requested additional information or concerns that could inform our review. Per e-mail correspondence from DTOP on July 14, 2014, they stated no additional concerns with the proposed proprietary name, Xtoro.

3 CONCLUSIONS

The proposed proprietary name is acceptable from a promotional perspective but not acceptable from a safety perspective. The proposed name is vulnerable to name confusion with two other products that are also under review. Therefore, the decision to deny the name will be communicated to the Sponsor via letter (See ***Section 3.1***).

If you have further questions or need clarifications, please contact Karen Townsend, OSE project manager, at 301-796-5413.

3.1 COMMENTS TO THE APPLICANT

We have completed our review of the proposed proprietary name, Xtoro, and conclude that this name could result in medication errors due to confusion with two other products that are also under review. Therefore, the ultimate acceptability of your proposed proprietary name, Xtoro, is dependent upon which underlying application is approved first. If another product is approved prior to your product, with a name that would be confused with your proposed name of Xtoro, you will be requested to submit another name.

4 REFERENCES

1. ***USAN Stems (http://www.ama-assn.org/ama/pub/physician-resources/medical-science/united-states-adopted-names-council/naming-guidelines/approved-stems.page)***

   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 considers the promotional and safety aspects of a proposed proprietary name.

1. **Promotional Assessment**: For prescription drug products, the promotional review of the proposed name is conducted by OPDP. For over-the-counter (OTC) drug products, the promotional review of the proposed name is conducted by DNCE. OPDP or DNCE evaluates proposed proprietary names to determine if they are overly fanciful, so as to misleadingly imply unique effectiveness or composition, as well as to assess whether they contribute to overstatement of product efficacy, minimization of risk, broadening of product indications, or making of unsubstantiated superiority claims. OPDP or DNCE 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. [4]

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

	Affirmative answers to these questions indicate a potential area of concern.
Y/N	Does the name have obvious Similarities in Spelling and Pronunciation to other Names?
Y/N	Are there Manufacturing Characteristics in the Proprietary Name?
Y/N	Are there Medical and/or Coined Abbreviations in the Proprietary Name?
Y/N	Are there Inert or Inactive Ingredients referenced in the Proprietary Name?
Y/N	Does the Proprietary Name include combinations of Active Ingredients
Y/N	Is there a United States Adopted Name (USAN) Stem in the Proprietary Name?
Y/N	Is this the same Proprietary Name for Products containing Different Active Ingredients?
Y/N	Is this a Proprietary Name of a discontinued product?

[4] National Coordinating Council for Medication Error Reporting and Prevention. http://www nccmerp.org/aboutMedErrors html. Last accessed 10/11/2007.

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 50% 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 ≥70%.
- Moderately similar pair: combined match percentage score ≥50% to ≤ 69%.
- Low similarity: combined match percentage score ≤49%.

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. Based on our root cause analysis of post marketing experience errors, we find the expression of strength and dose, which is often located in close proximity to the drug name itself on prescriptions and medication orders, is an important factor in mitigating or potentiating confusion between similarly named drug pairs. The ability of other product characteristics to mitigate confusion is limited (e.g., route, frequency, dosage form, etc.).

- For highly similar names, there is little that can mitigate a medication error, including product differences such as strength and dose. Thus, proposed proprietary names that have a combined score of ≥ 70 percent are likely to be rejected by FDA. (See Table 3)
- Moderately similar names with overlapping or similar strengths or doses represent an area for concern for FDA. The dosage and strength information is often located in close proximity to the drug name itself on prescriptions and medication orders, 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 (e.g., route, frequency, dosage form, etc.) to mitigate confusion may be limited when the strength or dose overlaps. FDA will review these 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 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 (See Table 5).

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

   Three 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 or verbal pronunciation of the drug name. 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 orthographic or phonetic vulnerability of the proposed name to be misinterpreted by healthcare practitioners.

   In order to evaluate the potential for misinterpretation of the proposed proprietary name in handwriting and verbal communication of the name, inpatient medication orders and/or outpatient prescriptions are written, each consisting of a combination of marketed and unapproved drug products, including the proposed name. These orders are optically scanned and one prescription is delivered to a random sample of participating health professionals via e-mail. In addition, a verbal prescription is recorded on voice mail. The voice mail messages are then sent to a random sample of the participating health professionals for their interpretations and review. After receiving either the written or verbal prescription orders, the participants record their interpretations of the orders which are recorded electronically.

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. The OND or OGD Regulatory Division is requested to provide any further information that might inform DMEPA's final decision on the proposed 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 ≥ 70%).

Answer the questions in the checklist below. Affirmative answers to 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 do not share a common strength or dose (see Step 1 of the Moderately Similar Checklist).			
Orthographic Checklist		Phonetic Checklist	
Y/N	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.*	**Y/N**	Do the names have different number of syllables?
Y/N	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.*	**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 ≥50% to ≤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 have a higher potential for confusion and should be evaluated further (see Step 2). For single strength products, also consider circumstances where the strength may not be expressed. For any combination drug products, 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: o 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. o Trailing or deleting zeros: 10 mg is similar in appearance to 100 mg which may potentiate confusion between a name pair with moderate similarity. o Similar sounding doses: 15 mg is similar in sound to 50 mg
Step 2	Answer the questions in the checklist below. Affirmative answers to these questions suggest that the pattern of orthographic or phonetic differences in the names may render the names less likely to confusion between moderately similar names **with** 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?

Table 5: Low Similarity Name Pair Checklist (i.e., combined score is ≤49%).

In most circumstances, these names are viewed as sufficiently different to minimize confusion. Exceptions to this would occur in circumstances where there are data that suggest a name with low similarity might be vulnerable to confusion with your proposed name (for example, misinterpretation of the proposed name as a marketed product in a prescription simulation study). In such instances, FDA 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. Xtoro Study (Conducted on May 16, 2014)

Handwritten Requisition Medication Order	Verbal Prescription
Medication Order: Xtoro Install 4 drops in right ear twice a day	Xtoro Use as directed Disp.#1
Outpatient Prescription: Xtoro Use as directed Disp #1	

FDA Prescription Simulation Responses (Aggregate 1 Rx Studies Report)

Study Name: Xtoro

As of Date 6/6/2014

268 People Received Study

101 People Responded

Total	35	34	32	
INTERPRETATION	**OUTPATIENT**	**VOICE**	**INPATIENT**	**TOTAL**
EKTORO	0	1	0	1
EXPORO	0	1	0	1
EXSTORAL	0	1	0	1
EXTARA	0	1	0	1
EXTORAL	0	1	0	1
EXTORO	0	21	0	21
EXTORRO	0	3	0	3
STORO	1	0	0	1
X TORO	1	0	0	1
XITORO	0	0	7	7
XTERO	0	0	2	2
XTORO	33	3	18	54
XTORO ANSTILL	0	0	2	2
X-TORO ANSTILL	0	0	1	1
XTORO ANSTREL	0	0	2	2
XTORRO	0	1	0	1
XTROYOLL	0	1	0	1

Appendix C: Highly Similar Names (i.e., combined POCA score is ≥70%)

No.	**Proposed name: Xtoro** **Strength: 0.3%** **Usual Dose: instill 4 drops into the affected ear twice daily for seven days**	**POCA Score (%)**	**Orthographic and/or phonetic differences in the names sufficient to prevent confusion**
1.	none		

Appendix D: Moderately Similar Names (i.e., combined POCA score is ≥50% to ≤69%) with no overlap or numerical similarity in Strength and/or Dose

No.	Proposed Name	POCA Score (%)
1.	(b) (4)***	63
2.	Zocor	56
3.	Norco	53
4.	Cipro	52
5.	G-tar	52
6.	Xalkori	52
7.	(b) (4)***	51
8.	Vytorin	51
9.	Dopar	50
10.	Dutoprol	50
11.	Rytary***	50

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Appendix E: Moderately Similar Names (i.e., combined POCA score is ≥50% to ≤69%) with overlap or numerical similarity in Strength and/or Dose

No.	**Proposed name: Xtoro** **Strength: 0.3%** **Usual Dose: instill 4 drops into the affected ear twice daily for seven days**	**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.	(b) (4) ***	68	The infix of this name pair has sufficient orthographic differences. (b) (4)
2.	Zetar	60	The prefix and suffix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.
3.	Tora	59	The prefix of this name pair has sufficient orthographic differences. Both names have a different number of syllables. The first syllable in Xtoro and last syllable in both names gives the names a distinctly different sound when spoken.
4.	Sirturo	56	The prefix of this name pair has sufficient orthographic differences. The first syllable in both names gives the names a distinctly different sound when spoken.
5.	Di-atro	54	The prefix and infix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.

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No.	**Proposed name: Xtoro** **Strength: 0.3%** **Usual Dose: instill 4 drops into the affected ear twice daily for seven days**	**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**
6.	X-prep	54	The infix and suffix of this name pair have sufficient orthographic differences. Both names have a different number of syllables. The second syllable in Xtoro and last syllable in both names gives the names a distinctly different sound when spoken.
7.	Astepro	52	The prefix and infix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.
8.	Neupro	52	The prefix and infix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.
9.	Orfro	52	The prefix and infix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.
10.	Scytera	51	The prefix of this name pair has sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.
11.	Estar	50	The prefix and suffix of this name pair have sufficient orthographic differences. Both names have a different number of syllables. The second syllable in Xtoro and last syllable in both names gives the names a distinctly different sound when spoken.
12.	Vi-atro	50	The prefix and infix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.

No.	Proposed name: Xtoro Strength: 0.3% Usual Dose: instill 4 drops into the affected ear twice daily for seven days	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
13.	Xibrom	50	The infix and suffix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.
14.	Zutripro	50	The prefix and infix of this name pair have sufficient orthographic differences. All the syllables in both names give the names a distinctly different sound when spoken.

Appendix F: Low Similarity Names (i.e., combined POCA score is ≤49%)

No.	Name	POCA Score (%)
1.	none	

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.	Touro	62	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
2.	Dipro	58	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
3.	Ostora***	58	This proposed proprietary name was found unacceptable (b) (4) due to name confusion with Ostera, Artane, Ostiva, and Ester-C. An alternate name has not yet been submitted for this application.

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No.	Name	POCA Score (%)	Failure preventions
4.	(b) (4) ***	58	This proposed proprietary name was found unacceptable (b) (4)
5.	(b) (4) ***	54	This proposed proprietary name was not reviewed. The previous submitted name (b) (4) (b) (4)
6.	Nupro	54	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
7.	(b) (4) ***	54	This proposed proprietary name was withdrawn as of February 13, 2012. An alternate name has not yet been submitted for this application.
8.	Testro	54	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
9.	(b) (4) ***	54	The proposed proprietary name was an alternate name submitted by the Sponsor. The name found acceptable under this application is (b) (4) (b) (4)
10.	Torem	53	International product marketed in Germany, Sweden, Switzerland, Argentina, and United Kingdom.
11.	Azuro	52	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
12.	Exterol	52	International product marketed in United Kingdom.
13.	Metoros	52	International product marketed in Austria.
14.	(b) (4) ***	52	This proposed proprietary name was found unacceptable (b) (4)

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No.	Name	POCA Score (%)	Failure preventions
15.	(b) (4) ***	51	This proposed proprietary name was found unacceptable (OSE RCM#2010-1510, NDA 201280) due to name confusion with (b) (4) The name approved under this NDA was Tradjenta on May 2, 2011.
16.	(b) (4) ***	51	This proposed proprietary name was found unacceptable (b) (4) from a promotional perspective. An alternate name has not yet been submitted for this application.
17.	Tara-8	51	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
18.	Zorac	51	International product marketed in Austria, Brazil, Ireland, Sweden, Switzerland, Australia, Belgium, Greece, Italy, Poland, Spain, and United Kingdom.
19.	Ib Pro	50	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
20.	No Dolo	50	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
21.	Duceptoro	50	Name entered by safety evaluator in POCA database. Unable to find product characteristics in commonly used drug databases.

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/s/

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