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RESEARCH**

APPLICATION NUMBER:

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PROPRIETARY NAME REVIEW(S)

**Department of Health and Human Services
Public Health Service
Food and Drug Administration
Center for Drug Evaluation and Research
Office of Surveillance and Epidemiology
Office of Medication Error Prevention and Risk Management**

Proprietary Name Review

Date:	July 25, 2012
Reviewer:	Jung Lee, RPh Division of Medication Error Prevention and Analysis
Acting Team Leader:	Jamie Wilkins Parker, PharmD Division of Medication Error Prevention and Analysis
Deputy Director:	Kellie Taylor, PharmD, MPH Division of Medication Error Prevention and Analysis
Division Director:	Carol Holquist, RPh Division of Medication Error Prevention and Analysis
Drug Name and Strength:	Jetrea (Ocriplasmin) Intravitreal Injection, 2.5 mg/mL
Application Type/Number:	IND 100370/BLA 125422
Applicant/Sponsor:	ThromboGenics, Inc
OSE RCM #:	2012-374/2012-1095

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1 INTRODUCTION

This review evaluates the proposed proprietary name, Jetrea, 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.

1.1 REGULATORY HISTORY

The Sponsor submitted the proprietary name, Vitroclar, on July 15, 2010 under IND 100370. This name was found conditionally acceptable by DMEPA on January 12, 2011. On June 24, 2011, the Sponsor requested to withdrawal the proprietary name, (b) (4) and the name was withdrawn on June 27, 2011. No reason was provided by the Sponsor for withdrawing the name. On February 2, 2012, the proposed proprietary name, Jetrea, was submitted to the IND. On April 17, 2012, the Sponsor submitted BLA 125422, which was given priority review status. The request for proprietary name review under the BLA was submitted on April 26, 2012. Thus, we are reviewing the proposed proprietary name, Jetrea, associated with the requests submitted under both the IND and BLA.

1.2 PRODUCT INFORMATION

The following product information is provided in the February 2, 2012 (IND 100370) and April 26, 2012 (BLA 125422) proprietary name submissions.

- Active Ingredient: Ocriplasmin
- Indication of Use: Treatment of symptomatic vitreomacular adhesion including macular hole
- Route of Administration: Intravitreal injection
- Dosage Form: Injection Solution
- Strength: 2.5 mg/mL
- Dose and Frequency: Dilute with 0.2 mL of sterile sodium chloride (0.9% w/v) solution for injection into the vial. Administer 0.125 mg (0.1 mL of the diluted solution) by intravitreal injection to the affected eye once as a single dose
- How Supplied: 0.2 mL representing 0.5 mg ocriplasmin in a citric-buffered solution (2.5 mg/mL) in a 2 mL Single-use glass vial
- Storage: Store frozen at or below -20°C (-4°F) until ready to use
- Container and Closure Systems: 2 mL glass vial with a latex free rubber stopper

2 RESULTS

The following sections provide the 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 of the name were considered in the overall safety evaluation.

2.2.1 United States Adopted Names (USAN) SEARCH

On May 21, 2012 the United States Adopted Name (USAN) stem search, identified that a USAN stem is not present in the proposed proprietary name.

2.2.2 Components of the Proposed Proprietary Name

The Sponsor did not provide the derivation of the proposed proprietary name, Jetrea. 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

Thirty-four practitioners participated in DMEPA's prescription studies. The interpretations did not overlap with or appear or sound similar to any currently marketed products. Only one inpatient participant out of a total of all 34 prescription study participants interpreted the name Jetrea correctly. Most inpatient participants either misinterpreted the first letter 'J' in Jetrea with the letter 'T' or the third letter 't' in Jetrea with either the letters 'd', 'f', 'b', 'k', or 'l'. Of the outpatient participants, most misinterpreted the first letter 'J' for the letters 'L' or 'T'. The verbal participants also misinterpreted the first letter 'J' with the letter 'G' and the 5th letter 'e' with the letter 'i'. These orthographic and phonetic misinterpretations were taken into consideration when conducting our search strategy and evaluating our safety risk assessment of the proposed proprietary name Jetrea. See Appendix C for the complete listing of interpretations from the verbal and written prescription studies.

2.2.4 Comments from Other Review Disciplines

In response to the OSE April 2, 2012 e-mail, the Division of Transplant and Ophthalmology Products (DTOP) did not forward any comments or concerns relating to the proposed name at the initial phase of the proprietary name review.

2.2.5 Failure Mode and Effects Analysis of Similar Names

At the beginning stages of review of the proprietary name Jetrea, DMEPA identified a foreign name, Jetrex, which is the proprietary name for dextromethorphan, guaifenesin, bromhexine and chlorpheniramine maleate identified in India. U.S. proprietary names that are identical to or almost identical in spelling or pronunciation to foreign names may cause confusion that can lead to medication errors such as wrong drug errors and wrong

drug information being consulted. Additionally, using a proprietary name in the US that is identical to or almost identical in spelling or pronunciation to a foreign name may inhibit the ability of the Sponsor to obtain a global proprietary name.

The Sponsor was notified of this concern on June 21, 2012 and was asked to provide a response to several questions regarding the name Jetrex and the potential for confusion with their proposed proprietary name, Jetrea.

The Sponsor stated that they believe it is extremely unlikely that Jetrex and Jetrea would ever be mistaken for each other in the course of usual practice. The Sponsor indicated that launch will be in the US and the EU, but that future plans might include marketing the product in India. The firm further stated that given the concern they would be willing to seek approval of a different proprietary name in India if and when they decide to launch the product in India. The Sponsor therefore requested that DMEPA continue with the review of the proposed proprietary name, Jetrea. Therefore, we continued our review.

Appendix B lists possible orthographic and phonetic misinterpretations of the letters appearing in the proposed proprietary name, Jetrea. Table 1 lists the names with orthographic, phonetic, or spelling similarity to the proposed proprietary name, Jetrea identified by the primary reviewer, the Expert Panel Discussion (EPD), and other review disciplines. Table 1 also includes the names identified from the FDA Prescription Simulation or by the (b) (4) not identified by DMEPA, and require further evaluation.

Table 1: Collective List of Potentially Similar Names (DMEPA, EPD, Other Disciplines, FDA Name Simulation Studies, and External Name Study if applicable) (n=39)

Look Similar		Look Similar		Look Similar	
<i>Name</i>	<i>Source</i>	<i>Name</i>	<i>Source</i>	<i>Name</i>	<i>Source</i>
Fastin	EPD	Jinteli	EPD	Tetra 500	Primary Reviewer
Fettrin	EPD	Jolessa	EPD	Tetra-Clear	Primary Reviewer
Foltrin	EPD	Kutrase	EPD	Tetra-Mag	Primary Reviewer
Fortaz	EPD	Latuda	EPD	Tetra Tannate Pediatric	Primary Reviewer
Forteo	EPD	Letairis	EPD	Tetrex	EPD
Intron-A	EPD	Lotrel	EPD	Tilia	EPD
Jalyn	EPD	Lutera	EPD	Tobrex	EPD
Jenloga	EPD	Tatum-T	EPD	Totect	EPD
Jetrex	EPD	Taztia XT	EPD	Vantas	EPD
Jevtana	EPD	Testim	EPD	Vitrase	Primary Reviewer
Look and Sound Similar		Look and Sound Similar		Look and Sound Similar	
Detrol LA	(b) (4)	Hydrea	(b) (4)	Kaletra	(b) (4)
Eylea	Primary Reviewer	Jantoven	EPD (b) (4)	Treanda	(b) (4)
Genora	(b) (4)	Januvia	EPD/ (b) (4)	Zetia	(b) (4)

Our analysis of the 39 names contained in Table 1 considered the information obtained in the previous sections along with their product characteristics. We determined 39 names will not pose a risk for confusion as described in Appendix D through E.

2.2.6 Communication of DMEPA's Final Decision to Other Disciplines

DMEPA communicated our findings to the Division of Transplant and Ophthalmology Products via e-mail on June 11, 2012. At that time we also requested additional information or concerns that could inform our review. Per e-mail correspondence from

the Division of Transplant and Ophthalmology Products on June 27, 2012, they stated no additional concerns with the proposed proprietary name, Jetrea.

3 CONCLUSIONS

The proposed proprietary name is acceptable from both a promotional and safety perspective.

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, Jetrea, and have concluded that this name is acceptable. However, if any of the proposed product characteristics as stated in your February 2, 2012 submission are altered, DMEPA rescinds this finding and the name must be resubmitted for review.

Additionally, the proposed proprietary name must be re-reviewed 90 days prior to approval of the BLA. The conclusions upon re-review are subject to change.

4 REFERENCES

1. ***Micromedex Integrated Index*** (<http://csi.micromedex.com>)

Micromedex contains a variety of databases covering pharmacology, therapeutics, toxicology and diagnostics.

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

POCA is a database which was created for the Division of Medication Error Prevention and Analysis, FDA. As part of the name similarity assessment, proposed names are evaluated via a phonetic/orthographic algorithm. The proposed proprietary name is converted into its phonemic representation before it runs through the phonetic algorithm. Likewise, an orthographic algorithm exists which operates in a similar fashion.

3. ***Drug Facts and Comparisons, online version, St. Louis, MO***
(<http://factsandcomparisons.com>)

Drug Facts and Comparisons is a compendium organized by therapeutic course; it contains monographs on prescription and OTC drugs, with charts comparing similar products. This database also lists the orphan drugs.

4. ***FDA Document Archiving, Reporting & Regulatory Tracking System [DARRTS]***

DARRTS is a government database used to organize Applicant and Sponsor submissions as well as to store and organize assignments, reviews, and communications from the review divisions.

5. ***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.

6. ***Drugs@FDA*** (<http://www.accessdata.fda.gov/scripts/cder/drugsatfda/index.cfm>)

Drugs@FDA contains most of the drug products approved 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, generic drugs, therapeutic biological products, prescription and over-the-counter human drugs and discontinued drugs and “Chemical Type 6” approvals.

7. ***U.S. Patent and Trademark Office*** (<http://www.uspto.gov>)

USPTO provides information regarding patent and trademarks.

8. ***Clinical Pharmacology Online*** (www.clinicalpharmacology-ip.com)

Clinical Pharmacology contains full monographs for the most common drugs in clinical use, plus mini monographs covering investigational, less common, combination, nutraceutical and nutritional products. It also provides a keyword search engine.

9. **Data provided by Thomson & Thomson's SAEGIS™ Online Service, available at (www.thomson-thomson.com)**

The Pharma In-Use Search database contains over 400,000 unique pharmaceutical trademarks and trade names that are used in about 50 countries worldwide. The data is provided under license by IMS HEALTH.

10. **Natural Medicines Comprehensive Databases (www.naturaldatabase.com)**

Natural Medicines contains up-to-date clinical data on the natural medicines, herbal medicines, and dietary supplements used in the western world.

11. **Access Medicine (www.accessmedicine.com)**

Access Medicine® from McGraw-Hill contains full-text information from approximately 60 titles; it includes tables and references. Among the titles are: Harrison's Principles of Internal Medicine, Basic & Clinical Pharmacology, and Goodman and Gilman's The Pharmacologic Basis of Therapeutics.

12. **USAN Stems (<http://www.ama-assn.org/ama/pub/about-ama/our-people/coalitions-consortiums/united-states-adopted-names-council/naming-guidelines/approved-stems.shtml>)**

USAN Stems List contains all the recognized USAN stems.

13. **Red Book (www.thomsonhc.com/home/dispatch)**

Red Book contains prices and product information for prescription, over-the-counter drugs, medical devices, and accessories.

14. **Lexi-Comp (www.lexi.com)**

Lexi-Comp is a web-based searchable version of the Drug Information Handbook.

15. **Medical Abbreviations (www.medilexicon.com)**

Medical Abbreviations dictionary contains commonly used medical abbreviations and their definitions.

16. **CVS/Pharmacy (www.CVS.com)**

This database contains commonly used over the counter products not usually identified in other databases.

17. **Walgreens (www.walgreens.com)**

This database contains commonly used over the counter products not usually identified in other databases.

18. **Rx List (www.rxlist.com)**

RxList is an online medical resource dedicated to offering detailed and current pharmaceutical information on brand and generic drugs.

19. Dogpile (www.dogpile.com)

Dogpile is a [Metasearch](#) engine that searches multiple search engines including Google, Yahoo! and Bing, and returns the most relevant results to the search.

APPENDICES

Appendix A

FDA's Proprietary Name Risk Assessment considers the promotional and safety aspects of a proposed proprietary name. The promotional review of the proposed name is conducted by OPDP. OPDP 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 provides their opinion to DMEPA for consideration in the overall acceptability of the proposed proprietary name.

The safety assessment is conducted by DMEPA. DMEPA staff search a standard set of databases and information sources to identify names that are similar in pronunciation, spelling, and orthographically similar when scripted to the proposed proprietary name. Additionally, 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.). 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.¹

Following the preliminary screening of the proposed proprietary name, DMEPA gathers to discuss their professional opinions on the safety of the proposed proprietary name. This meeting is commonly referred to the Center for Drug Evaluation and Research (CDER) Expert Panel discussion. DMEPA also considers other aspects of the name that may be misleading from a safety perspective. DMEPA staff conducts a prescription simulation studies using FDA health care professionals. 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. DMEPA bases the overall risk assessment on the findings of a Failure Mode and Effects Analysis (FMEA) of the proprietary name and misleading nature of the proposed proprietary name with a focus on the avoidance of medication errors.

DMEPA uses the clinical expertise of its staff to anticipate the conditions of the clinical setting where the product is likely to be used based on the characteristics of the proposed product. DMEPA considers the product characteristics associated with the proposed product throughout the risk assessment because the product characteristics of the

¹ National Coordinating Council for Medication Error Reporting and Prevention.
<http://www.nccmerp.org/about/MedErrors.html>. Last accessed 10/11/2007.

proposed may provide a context for communication of the drug name and ultimately determine the use of the product in the *usual* clinical practice setting.

Typical product characteristics considered when identifying drug names that could potentially be confused with the proposed proprietary name include, but are not limited to; established name of the proposed product, proposed indication of use, dosage form, route of administration, strength, unit of measure, dosage units, recommended dose, typical quantity or volume, frequency of administration, product packaging, storage conditions, patient population, and prescriber population. DMEPA considers how these product characteristics may or may not be present in communicating a product name throughout the medication use system. Because drug name confusion can occur at any point in the medication use process, DMEPA considers the potential for confusion throughout the entire U.S. medication use process, including drug procurement, prescribing and ordering, dispensing, administration, and monitoring the impact of the medication.²

The DMEPA considers the spelling of the name, pronunciation of the name when spoken, and appearance of the name when scripted. DMEPA compares the proposed proprietary name with the proprietary and established name of existing and proposed drug products and names currently under review at the FDA. DMEPA compares the pronunciation of the proposed proprietary name with the pronunciation of other drug names because verbal communication of medication names is common in clinical settings. DMEPA examines the phonetic similarity using patterns of speech. If provided, DMEPA will consider the Sponsor's intended pronunciation of the proprietary name. However, DMEPA also considers a variety of pronunciations that could occur in the English language because the Sponsor has little control over how the name will be spoken in clinical practice. The orthographic appearance of the proposed name is evaluated using a number of different handwriting samples. DMEPA applies expertise gained from root-cause analysis of postmarketing medication errors to identify sources of ambiguity within the name that could be introduced when scripting (e.g., "T" may look like "F," lower case 'a' looks like a lower case 'u,' etc). Additionally, other orthographic attributes that determine the overall appearance of the drug name when scripted (see Table 1 below for details).

² Institute of Medicine. Preventing Medication Errors. The National Academies Press: Washington DC. 2006.

Table 1. Criteria Used to Identify Drug Names that Look- or Sound-Similar to a Proposed Proprietary Name.

Type of Similarity	Considerations when Searching the Databases		
	<i>Potential Causes of Drug Name Similarity</i>	<i>Attributes Examined to Identify Similar Drug Names</i>	<i>Potential Effects</i>
Look-alike	Similar spelling	Identical prefix Identical infix Identical suffix Length of the name Overlapping product characteristics	<ul style="list-style-type: none"> Names may appear similar in print or electronic media and lead to drug name confusion in printed or electronic communication Names may look similar when scripted and lead to drug name confusion in written communication
	Orthographic similarity	Similar spelling Length of the name/Similar shape Upstrokes Down strokes Cross-strokes Dotted letters Ambiguity introduced by scripting letters Overlapping product characteristics	<ul style="list-style-type: none"> Names may look similar when scripted, and lead to drug name confusion in written communication
Sound-alike	Phonetic similarity	Identical prefix Identical infix Identical suffix Number of syllables Stresses Placement of vowel sounds Placement of consonant sounds Overlapping product characteristics	<ul style="list-style-type: none"> Names may sound similar when pronounced and lead to drug name confusion in verbal communication

Lastly, DMEPA considers the potential for the proposed proprietary name to inadvertently function as a source of error for reasons other than name confusion. Post-marketing experience has demonstrated that proprietary names (or components of the proprietary name) can be a source of error in a variety of ways. Consequently, DMEPA considers and evaluates these broader safety implications of the name throughout this assessment and the medication error staff provides additional comments related to the

safety of the proposed proprietary name or product based on professional experience with medication errors.

1. Database and Information Sources

DMEPA searches the internet, several standard published drug product reference texts, and FDA databases to identify existing and proposed drug names that may sound-alike or look-alike to the proposed proprietary name. A standard description of the databases used in the searches is provided in the reference section of this review. To complement the process, the DMEPA uses a computerized method of identifying phonetic and orthographic similarity between medication names. The program, Phonetic and Orthographic Computer Analysis (POCA), uses complex algorithms to select a list of names from a database that have some similarity (phonetic, orthographic, or both) to the trademark being evaluated. Lastly, DMEPA reviews the USAN stem list to determine if any USAN stems are present within the proprietary name. The individual findings of multiple safety evaluators are pooled and presented to the CDER Expert Panel. DMEPA also evaluates if there are characteristics included in the composition that may render the name unacceptable from a safety perspective (abbreviation, dosing interval, etc.).

2. Expert Panel Discussion

DMEPA gathered CDER professional opinions on the safety of the proposed product and discussed the proposed proprietary name (Expert Panel Discussion). The Expert Panel is composed of Division of Medication Errors Prevention (DMEPA) staff and representatives from the Office of Prescription Drug Promotion (OPDP). We also consider input from other review disciplines (OND, ONDQA/OBP). The Expert Panel also discusses potential concerns regarding drug marketing and promotion related to the proposed names.

The primary Safety Evaluator presents the pooled results of the database and information searches to the Expert Panel for consideration. Based on the clinical and professional experiences of the Expert Panel members, the Panel may recommend additional names, additional searches by the primary Safety Evaluator to supplement the pooled results, or general advice to consider when reviewing the proposed proprietary name.

3. FDA Prescription Simulation Studies

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.

4. 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.

5. Safety Evaluator Risk Assessment of the Proposed Proprietary Name

The primary Safety Evaluator applies his/her individual expertise gained from evaluating medication errors reported to FDA, considers all aspects of the name that may be misleading or confusing, conducts a Failure Mode and Effects Analysis, and provides an overall decision on acceptability dependent on their risk assessment of name confusion. Failure Mode and Effects Analysis (FMEA) is a systematic tool for evaluating a process and identifying where and how it might fail.³ When applying FMEA to assess the risk of a proposed proprietary name, DMEPA seeks to evaluate the potential for a proposed proprietary name to be confused with another drug name because of name confusion and, thereby, cause errors to occur in the medication use system. FMEA capitalizes on the predictable and preventable nature of medication errors associated with drug name confusion. FMEA allows the Agency to identify the potential for medication errors due to orthographically or phonetically similar drug names prior to approval, where actions to overcome these issues are easier and more effective than remedies available in the post-approval phase.

In order to perform an FMEA of the proposed name, the primary Safety Evaluator must analyze the use of the product at all points in the medication use system. Because the proposed product is has not been marketed, the primary Safety Evaluator anticipates the use of the product in the usual practice settings by considering the clinical and product

³ Institute for Healthcare Improvement (IHI). Failure Mode and Effects Analysis. Boston. IHI:2004.

characteristics listed in Section 1.2 of this review. The Safety Evaluator then analyzes the proposed proprietary name in the context of the usual practice setting and works to identify potential failure modes and the effects associated with the failure modes.

In the initial stage of the Risk Assessment, the Safety Evaluator compares the proposed proprietary name to all of the names gathered from the above searches, Expert Panel Discussion, and prescription studies, external studies, and identifies potential failure modes by asking:

“Is the proposed proprietary name convincingly similar to another drug name, which may cause practitioners to become confused at any point in the usual practice setting? And are there any components of the name that may function as a source of error beyond sound/look-alike?”

An affirmative answer indicates a failure mode and represents a potential for the proposed proprietary name to be confused with another proprietary or established drug name because of look- or sound-alike similarity or because of some other component of the name. If the answer to the question is no, the Safety Evaluator is not convinced that the names possess similarity that would cause confusion at any point in the medication use system, thus the name is eliminated from further review.

In the second stage of the Risk Assessment, the primary Safety Evaluator evaluates all potential failure modes to determine the likely *effect* of the drug name confusion, by asking:

“Could the confusion of the drug names conceivably result in medication errors in the usual practice setting?”

The answer to this question is a central component of the Safety Evaluator’s overall risk assessment of the proprietary name. If the Safety Evaluator determines through FMEA that the name similarity would not ultimately be a source of medication errors in the usual practice setting, the primary Safety Evaluator eliminates the name from further analysis. However, if the Safety Evaluator determines through FMEA that the name similarity could ultimately cause medication errors in the usual practice setting, the Safety Evaluator will then recommend the use of an alternate proprietary name.

Moreover, DMEPA will object to the use of proposed proprietary name when the primary Safety Evaluator identifies one or more of the following conditions in the Overall Risk Assessment:

- a. OPDP finds the proposed proprietary name misleading from a promotional perspective, and the Review Division concurs with OPDP’s findings. The Federal Food, Drug, and Cosmetic Act provides that labeling or advertising can misbrand a product if misleading representations are made or suggested by statement, word, design, device, or any combination thereof, whether through a PROPRIETARY name or otherwise [21 U.S.C 321(n); See also 21 U.S.C. 352(a) & (n)].
- b. DMEPA identifies that the proposed proprietary name is misleading because of similarity in spelling or pronunciation to another proprietary or established name of a different drug or ingredient [CFR 201.10.(C)(5)].

- c. FMEA identifies the potential for confusion between the proposed proprietary name and other proprietary or established drug name(s), and demonstrates that medication errors are likely to result from the drug name confusion under the conditions of usual clinical practice.
- d. The proposed proprietary name contains an USAN (United States Adopted Names) stem.
- e. DMEPA identifies a potential source of medication error within the proposed proprietary name. For example, the proprietary name may be misleading or, inadvertently, introduce ambiguity and confusion that leads to errors. Such errors may not necessarily involve confusion between the proposed drug and another drug product but involve a naming characteristic that when incorporated into a proprietary name, may be confusing, misleading, cause or contribute to medication errors.

If DMEPA objects to a proposed proprietary name on the basis that drug name confusion could lead to medication errors, the primary Safety Evaluator uses the FMEA process to identify strategies to reduce the risk of medication errors. DMEPA generally recommends that the Sponsor select an alternative proprietary name and submit the alternate name to the Agency for review. However, in rare instances FMEA may identify plausible strategies that could reduce the risk of medication error of the currently proposed name. In that instance, DMEPA may be able to provide the Sponsor with recommendations that reduce or eliminate the potential for error and, thereby, would render the proposed name acceptable.

In the event that DMEPA objects to the use of the proposed proprietary name, based upon the potential for confusion with another proposed (but not yet approved) proprietary name, DMEPA will provide a contingency objection based on the date of approval. Whichever product, the Agency approves first has the right to use the proprietary name, while DMEPA will recommend that the second product to reach approval seek an alternative name.

The threshold set for objection to the proposed proprietary name may seem low to the Applicant/Sponsor. However, the safety concerns set forth in criteria a through e above are supported either by FDA regulation or by external healthcare authorities, including the Institute of Medicine (IOM), World Health Organization (WHO), the Joint Commission, and the Institute for Safe Medication Practices (ISMP). These organizations have examined medication errors resulting from look- or sound-alike drug names, confusing, or misleading names and called for regulatory authorities to address the issue prior to approval. Additionally, DMEPA contends that the threshold set for the Proprietary Name Risk Assessment is reasonable because proprietary drug name confusion is a predictable and preventable source of medication error that, in many instances, the Agency and/or Sponsor can identify and rectify prior to approval to avoid patient harm.

Furthermore, post-marketing experience has demonstrated that medication errors resulting from drug name confusion are notoriously difficult to rectify post-approval. Educational and other post-approval efforts are low-leverage strategies that have had limited effectiveness at alleviating medication errors involving drug name confusion. Sponsors have undertaken higher-leverage strategies, such as drug name changes, in the


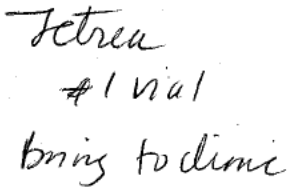
past but at great financial cost to the Sponsor and at the expense of the public welfare, not to mention the Agency's credibility as the authority responsible for approving the error-prone proprietary name. Moreover, even after Sponsors' have changed a product's proprietary name in the post-approval phase, it is difficult to eradicate the original proprietary name from practitioners' vocabulary, and as a result, the Agency has continued to receive reports of drug name confusion long after a name change in some instances. Therefore, DMEPA believes that post-approval efforts at reducing name confusion errors should be reserved for those cases in which the potential for name confusion could not be predicted prior to approval.

Appendix B: Letters with Possible Orthographic or Phonetic Misinterpretation

Letters in Name, Jetrea	Scripted May Appear as	Spoken May Be Interpreted as
Capital 'J'	F, I, L, Q, T, U, V, Z	'DN', 'GN', 'KN', 'MN', 'PN'
Lower Case 'j'	g, p, q, y	
Lower Case 'e'	a, i, l, p, Any vowel	Any vowel
Lower Case 't'	A, b, d, f, k, l, x	'd'
Lower Case 'r'	e, i, l, n, s, v	
Lower Case 'e'	a, i, l, p, Any vowel	Any vowel
Lower Case 'a'	el, ci, cl, d, o, u	Any vowel

Appendix C: Prescription Simulation Samples and Results

Figure 1. Jetrea Study (Conducted on 3/9/2012)

Handwritten Requisition Medication Order	Verbal Prescription
<p><u>Medication Order:</u></p>  <p><u>Outpatient Prescription:</u></p> 	<p>Jetrea</p> <p>#1 vial</p> <p>Bring to clinic</p>

FDA Prescription Simulation Responses (Aggregate 1 Rx Studies Report)

Study Name: Jetrea				
As of Date 4/9/2012				
				84 People Received Study
				34 People Responded
Study Name: Jetrea				
Total	15	8	11	34
INTERPRETATION	INPATIENT	VOICE	OUTPATIENT	TOTAL
GATRIA	0	1	0	1
GETRIA	0	1	0	1
JEDREA	1	0	0	1
JEFREA	1	0	0	1
JETREA	1	0	0	1
JETRIA	0	6	0	6
LETREA	0	0	2	2
TEBREA	1	0	0	1
TEKREA	1	0	0	1
TELREA	1	0	0	1
TETREA	9	0	9	18

Appendix D: Proprietary names not likely to be confused or not used in usual practice settings for the reasons described. (n=20)

No.	Proprietary Name	Active Ingredient	Similarity to Jetrea	Failure preventions
1	Detrol LA	Tolterodine Tartrate	Look & Sound Alike	The pair have sufficient orthographic differences
2	Foltrin	Ferrous Fumerate/Folic Acid/Vitamin B12/Vitamin C	Look Alike	The pair have sufficient orthographic differences
3	Genora	Ethinyl Estradiol/Norethidrone	Look & Sound Alike	The pair have sufficient orthographic differences
4	Jalyn	Dutasteride/Tamsulosin HCl	Look Alike	The pair have sufficient orthographic differences
5	Jantoven	Warfarin Sodium	Look Alike	The pair have sufficient orthographic differences
6	Januvia	Sitagliptin Phosphate	Look Alike	The pair have sufficient orthographic differences
7	Jenloga	Clonidine HCl	Look Alike	The pair have sufficient orthographic differences
8	Jetrex	Laxative Preparation or Dextromethorphan/Guaifenesin/Bromhexine/Chlorpheniramine maleate	Look Alike	Unable to find product characteristics in commonly used drug databases. USPTO shows this is an expired (as of 4/19/1999) pharmaceutical laxative preparation by Sherman, Robert Miles. Also, a cough and cold product marketed in India.
9	Jinteli	Ethinyl Estradiol/Norethindrone Acetate	Look Alike	The pair have sufficient orthographic differences
10	Jolessa	Ethinyl Estradiol/Levonorgestrel	Look Alike	The pair have sufficient orthographic differences
11	Kaletra	Lopinavir/Ritonavir	Look & Sound Alike	The pair have sufficient orthographic differences
12	Kutrase	Amylase/Lipase/Protease	Look Alike	The pair have sufficient orthographic differences
13	Latuda	Lurasidone HCl	Look Alike	The pair have sufficient orthographic differences
14	Letairis	Ambrisentan	Look Alike	The pair have sufficient orthographic differences
15	Lotrel	Amlodipine Besylate/Benazepril HCl	Look Alike	The pair have sufficient orthographic differences

No.	Proprietary Name	Active Ingredient	Similarity to Jetrea	Failure preventions
16	Tatum-T	Copper Intrauterine Device	Look Alike	This NDA 018205 is discontinued and withdrawn FR effective 11/5/1992 after Searle's liability insurance lapsed. There are over 775 lawsuits filed against this and similar products.
17	Totect	Dexrazoxane HCl	Look Alike	The pair have sufficient orthographic differences
18	Treanda	Bendamustine HCl	Look Alike	The pair have sufficient orthographic differences
19	Vantas	Histrelin Acetate	Look Alike	The pair have sufficient orthographic differences
20	Eylea	Aflibercept	Look & Sound Alike	The pair have sufficient orthographic and phonetic differences

Appendix E: Risk of medication errors due to product confusion minimized by dissimilarity of the names and/ or use in clinical practice for the reasons described. (n=19)

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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	Fastin (Phentermine HCl) Capsules Strength: 30 mg Usual Dose: One capsule by mouth 2 hours after breakfast	Orthographic Similarity: Both names contain 6 letters and begin with an orthographically similar first letter (F vs. J). Strength: Both products are available in a single strength.	Orthographic Difference: Fastin contains a cross-stroke 't' in the 4 th position while the cross-stroke 't' is in the 3 rd position of the name Jetrea. When scripted, the prefix 'Fas' in Fastin elongates the name prior to the upstroke and the suffix 'in' after the upstroke appears shorter than the suffix 'rea' in Jetrea; thereby, giving the names a different shape when scripted. Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. One capsule (30 mg) vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Once daily vs. once

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
2	Fetrin (Ascorbic Acid/ Cyanocobalamin/ Ferrous Fumarate) Capsules Strength: 60 mg/5 mcg/200 mg Usual Dose: One tablet by mouth once daily	Orthographic Similarity: Both names contain 6 letters and begin with an orthographically similar letter string (Fetr vs. Jetr). Strength: Both products are available in a single strength.	Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. One capsule vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Once daily vs. once
3	Fortaz (Ceftazidime Sodium) Powder for Injection Strengths: 500 mg, 1 gm, 2 gm, 6 gm Usual Dose: <u>Adults:</u> 250 mg to 2 gm intravenously or intramuscularly every 8 to 12 hours <u>Children:</u> 30 mg/kg to 50 mg/kg intravenously every 8 to 12 hours. For example, for a child weighing 34 kg, the dose would be approximately 1018 mg to 1700 mg intravenously every 8 to 12 hours. <u>Renal Dose:</u> 500 mg every 24 to 48 hours or 1 gm every 12 to 24 hours	Orthographic Similarity: Both names contain 6 letters and begin with an orthographically similar first letter (F vs. J).	Orthographic Difference: Fortaz contains a cross-stroke 't' in the 4 th position while the cross-stroke 't' is in the 3 rd position of the name Jetrea. When scripted, the suffix 'az' in Fortaz appears different than the suffix 'rea' in Jetrea. Differentiating Product Characteristics: <u>Strength:</u> No strength overlap. Fortaz is available in multiple strengths; thus, a strength would need to be specified on the prescription for dispensing. <u>Route of Administration:</u> Intravenously or Intramuscularly vs. Intravitreally <u>Frequency:</u> Every 8 to 48 hours vs. once

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
4	Forteo (Teriparatide) Injection Solution Strength: 250 mcg/mL Usual Dose: 20 mcg (0.08 mL) subcutaneously once a day	Orthographic Similarity: Both names contain 6 letters and begin with an orthographically similar first letter (F vs. J). Strength: Both products are available in a single strength. Unit of Measure: mcg or mL vs. mg or mL	Orthographic Difference: Forteo contains a cross-stroke ‘t’ in the 4 th position while the cross-stroke ‘t’ is in the 3 rd position of the name Jetrea giving the prefix a longer appearance. Differentiating Product Characteristics: <u>Frequency:</u> Once daily vs. once <u>Dose:</u> No dose overlap. Inject 20 mcg (0.08 mL) vs. Inject 0.1 mL (0.125 mg)

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
5	<p>Hydrea (Hydroxyurea) Capsules</p> <p>Strength: 500 mg</p> <p>Usual Dose: <u>Carcinoma of the head and neck (with radiation) and Solid Tumors (Intermittent therapy):</u> 80 mg/kg as a single dose every third day. For example, for a patient weighing 80 kg, the dose would be approximately 6335 mg.</p> <p><u>Resistant chronic myelocytic leukemia and Solid Tumors (Continuous therapy):</u> 20 mg/kg (~1600 mg) to 30 mg/kg (~2400 mg) as a single daily dose</p> <p><u>Renal Dosing:</u> 50% of the usual dosage</p>	<p>Orthographic and Phonetic Similarities:</p> <p>Both names contain 6 letters and end with a similar letter string 'rea'. Also, both names contain 2 syllables in which the 2nd syllable in both names sounds similar when spoken.</p> <p>Strength: Both products are available in a single strength.</p> <p>Dose: Both can be given as a single dose</p>	<p>Orthographic and Phonetic Differences:</p> <p>When scripted, the first letter 'H' in Hydrea appears orthographically different than the first letter 'J' in Jetrea. Also, Hydrea contains a downstroke 'y' in the 2nd position of the name which is not seen in Jetrea giving the names a different shape and appearance. When spoken, the first syllable of the names sounds distinctly different (Hy vs. Je).</p> <p>Differentiating Product Characteristics:</p> <p><u>Dose:</u> No dose overlap. Hydrea is dosed based on the patient's weight vs. Inject 0.1 mL (0.125 mg)</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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	<p>Intron-A (Interferon Alfa-2B) Injection Solution</p> <p>Strengths: <u>Injection Solution:</u> 6 MU/mL, 10 MU/mL <u>Reconstituted Injection Solution:</u> 10 MU, 18 MU, 50 MU <u>Subcutaneous Kit:</u> 3 MU/0.2 mL, 5 MU/0.2 mL, 10 MU/0.2 mL</p> <p>Usual Dose: <u>AIDS-related Kaposi Sarcoma:</u> 30 million units/m² per dose 3 times a week administered subcutaneously or intramuscularly. For example, an adult BSA of 1.72 m², the dose would be approximately 52 MU 3 times a week.</p> <p><u>Chronic Hepatitis B:</u> 5 MU daily or 10 MU 3 times a week subcutaneously or intramuscularly</p> <p><u>Chronic Hepatitis C:</u> 3 MU 3 times a week subcutaneously or intramuscularly</p>	<p>Orthographic Similarity:</p> <p>Both names contain 6 letters, begin with an orthographically similar first letter (I vs. J) and contain a similar letter string 'tr' in the infix of the names.</p>	<p>Orthographic Difference:</p> <p>When scripted, the suffix in Intron-A appears different than the suffix in Jetrea ('ron' vs. 'rea').</p> <p>Differentiating Product Characteristics:</p> <p><u>Strength:</u> No strength overlap. Intron-A is available in multiple strengths; thus, a strength would need to be specified on the prescription for dispensing.</p> <p><u>Dose and Unit of measure:</u> No dose overlap. Inject XX Million Units vs. Inject 0.1 mL (0.125 mg)</p> <p><u>Frequency:</u> Three times a week vs. once</p> <p><u>Route of Administration:</u> Intramuscularly or Subcutaneously vs. Intravitreally</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
	<p><u>Condylomata Acuminata:</u> 1 MU per lesion in a maximum of 5 lesions in a single course 3 times weekly on alternate days</p> <p><u>Follicular Lymphoma:</u> 5 MU subcutaneously 3 times a week</p> <p><u>Hairy Cell Leukemia:</u> 2 MU/m² intramuscularly or subcutaneously 3 times a week. For example, an adult BSA of 1.72 m², the dose would be approximately 3.44 MU 3 times a week.</p> <p><u>Malignant Melanoma:</u> <u>Initial Dose:</u> 20 MU/m² intravenous infusion over 20 minutes. For example, an adult BSA of 1.72 m², the dose would be approximately 34.4 MU intravenous infusion over 20 minutes. <u>Maintenance Dose:</u> 10 MU/m² subcutaneously 3 times a week. For example an adult BSA of 1.72 m², the dose would be approximately 17.2 MU subcutaneously 3 times a</p>		

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
	week.		
7	<p>Jevtana (Cabazitaxel) Intravenous Solution</p> <p>Strength: 60 mg/1.5 mL</p> <p>Usual Dose: 25 mg/m² administered as a 1 hour intravenous infusion every 3 weeks in combination with oral prednisone 10 mg administered daily throughout cabazitaxel treatment. For example, for an adult BSA of 1.72 m², the dose would be approximately 43 mg (1.075 mL) administered as a 1 hour intravenous infusion every 3 weeks.</p> <p><u>Dose modifications:</u> The cabazitaxel dose should be reduced to 20 mg/m² (~34.4 mg or 0.86 mL) if patients experiences specific adverse reactions.</p>	<p>Orthographic Similarity:</p> <p>Both names begin with the letters 'Je' and end with the letter 'a'.</p> <p>Strength: Both products are available in a single strength.</p>	<p>Orthographic Difference:</p> <p>Jevtana contains a cross-stroke 't' in the 4th position of the name while Jetrea contains the cross-stroke in the 3rd position, thereby, elongating the prefix 'Jev' in the name Jevtana and giving the names a different shape and appearance.</p> <p>Differentiating Product Characteristics:</p> <p><u>Dose:</u> No dose overlap. Jevtana is dosed based on the patient's body surface area (BSA) vs. Inject 0.1 mL (0.125 mg)</p> <p><u>Frequency:</u> 1 hour intravenous infusion every 3 weeks vs. once</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
8	Lutera (Ethinyl Estradiol/ Levonorgestrel) Tablets Strength: 0.02 mg/0.1 mg Usual Dose: One tablet by mouth once daily	Orthographic Similarity: Both names contain 6 letters, begin with an orthographically similar letter (L vs. J), contain a cross-stroke 't' in the 3 rd position of their names and end with the letter 'a'. Strength: Both products are available in a single strength.	Orthographic Difference: Lutera contains a 'u' in the 2 nd position while Jetrea contains the letter 'e' giving the prefix a longer appearance. In addition, the suffix 'era' in Lutera appears different than the suffix, 'rea' in Jetrea when scripted. Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. One tablet vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Once daily vs. once
9	Taztia XT (Diltiazem HCl) Capsules Strengths: 120 mg, 180 mg, 240 mg, 300 mg, 360 mg Usual Dose: 120 mg to 480 mg by mouth once daily	Orthographic Similarity: Both names contain 6 letters and begin with an orthographically similar letter (T vs. J).	Orthographic Difference: Taztia contains a cross-stroke 't' in the 4 th position of the name vs. Jetrea contains a cross-stroke 't' in the 3 rd position giving the prefix a longer appearance. Differentiating Product Characteristics: <u>Strength:</u> No strength overlap. Taztia XT is available in multiple strengths; thus, a strength would need to be specified on the prescription for dispensing. <u>Dose:</u> No dose overlap. One capsule vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Once daily vs. once

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
10	<p>Testim (Testosterone) Transdermal Gel</p> <p>Strength: 50 mg/5 gm or 1%</p> <p>Usual Dose: 5 gm to 10 gm (1 to 2 tubes) applied once daily to clean, dry, intact skin of the shoulders and/or upper arms</p>	<p>Orthographic Similarity:</p> <p>Both names contain 6 letters and begin with an orthographically similar letter (T vs. J).</p> <p>Strength: Both products are available in a single strength.</p>	<p>Orthographic Difference:</p> <p>Testim contains a cross-stroke ‘t’ in the 4th position of the name while Jetrea contains a cross-stroke ‘t’ in the 3rd position giving the prefix a longer appearance.</p> <p>Differentiating Product Characteristics:</p> <p><u>Dose:</u> No dose overlap. Apply 1 to 2 tubes (5 gm to 10 gm) vs. Inject 0.1 mL (0.125 mg)</p> <p><u>Frequency:</u> Once daily vs. once</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
11	<p>Tetra 500 (Tetracycline HCl) Capsules</p> <p>Strength: 500 mg</p> <p>Usual Dose: <u>Adults:</u> 500 mg to 1000 mg twice a day or 500 mg to 1000 mg every 6 hours or 500 mg 3 times a day</p> <p><u>Children:</u> 25 mg/kg/day to 50 mg/kg/day by mouth in 2 to 4 divided doses. For example, for a child weighing 34 kg, the dose would be approximately 850 mg to 1700 mg in 2 to 4 divided doses.</p> <p><u>Renal Dosing:</u> Same dose as usual dose for adults and children but with a reduced frequency of every 8 to 24 hours</p> <p>(RX product that has been deactivated 6/13/2001 per Red Book Online.)</p>	<p>Orthographic Similarity:</p> <p>Both names begin with an orthographically similar string (Tetr vs. Jetr).</p> <p>Strength: Both products are available in a single strength.</p>	<p>Orthographic Difference:</p> <p>Jetrea contains 3 letters 'rea' in the suffix of the name vs. 2 letters 'ra' in the suffix of the root name Tetra giving the name Jetrea a longer appearance. In addition, the modifier '500' would need to be specified on a prescription for dispensing since there are other products that begin with the root name 'Tetra'.</p> <p>Differentiating Product Characteristics:</p> <p><u>Dose:</u> No dose overlap. XX capsule(s) vs. 0.1 mL (0.125 mg)</p> <p><u>Frequency:</u> Once daily to 4 times daily vs. once</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
12	Tetra-Clear (Tetrahydrozoline HCl) Solution Strength: 0.05% Usual Dose: Instill 1 to 2 drops in the affected eye(s) up to 4 times daily. (OTC product that has been deactivated 12/15/1993 per Red Book Online.)	Orthographic Similarity: Both names begin with an orthographically similar string (Tetr vs. Jetr). Strength: Both products are available in a single strength. Route of Administration: Both are given ophthalmically.	Orthographic Difference: Jetrea contains 3 letters 'rea' in the suffix of the name vs. 2 letters 'ra' in suffix of the root name Tetra giving the name Jetrea a longer appearance. In addition, the modifier 'Clear' would need to be specified on a prescription for dispensing since there are other products that begin with the root name 'Tetra'. Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. Instill 1 to 2 drops vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Four times daily vs. once
13	Tetra-Mag (Magnesium Salicylate Tetrahydrate, Phenyltoloxamine Citrate) Tablets Strength: 600 mg/25 mg Usual Dose: 1 tablet by mouth 3 to 4 times a day (maximum of 6-8 tablets per day) (RX product deactivated 11/30/2007 per Red Book Online)	Orthographic Similarity: Both names begin with an orthographically similar string (Tetr vs. Jetr). Strength: Both products are available in a single strength.	Orthographic Difference: Jetrea contains 3 letters 'rea' in the suffix of the name vs. 2 letters 'ra' in the suffix of the root name Tetra giving the name Jetrea a longer appearance. In addition, the modifier 'Mag' would need to be specified on a prescription for dispensing since there are other products that begin with the root name 'Tetra'. Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. 1 tablet vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> 3 to 4 times daily vs. once

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
14	<p>Tetra Tannate Pediatric (Carbetapentane Tannate, Chlorpheniramine Tannate, Ephedrine Tannate, Phenylephrine Tannate) Oral suspension</p> <p>Strength: 30 mg/4 mg/5 mg/5 mg/5 mL</p> <p>Usual Dose: 2.5 mL to 10 mL (1/2 teaspoonful to 2 teaspoonsful) by mouth every 12 hours</p> <p>(RX product deactivated 2/28/2007 per Red Book Online. No available generics.)</p>	<p>Orthographic Similarity:</p> <p>Both names begin with an orthographically similar string (Tetr vs. Jetr).</p> <p>Strength: Both products are available in a single strength.</p> <p>Dose: Numeric overlap. 2.5 mL to 10 mL (1/2 teaspoonful to 2 teaspoonsful) vs. Inject 0.1 mL (0.125 mg)</p>	<p>Orthographic Difference:</p> <p>Jetrea contains 3 letters 'rea' in the suffix of the name vs. 2 letters 'ra' in the suffix of the root name Tetra giving the name Jetrea a longer appearance. In addition, the modifier 'Tannate' would need to be specified on a prescription for dispensing since there are other products that begin with the root name 'Tetra'.</p> <p>Differentiating Product Characteristics:</p> <p><u>Frequency:</u> Every 12 hours vs. once</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
15	<p>Tetrex (Tetracycline Phosphate Complex) Capsules</p> <p>Strengths: 100 mg, 250 mg, 500 mg (as HCl equivalents)</p> <p>Usual Dose: <u>Adults:</u> 500 mg to 1000 mg twice a day or 250 mg to 1000 mg every 6 hours or 250 mg to 500 mg 3 times a day <u>Children:</u> 25 mg/kg/day to 50 mg/kg/day by mouth in 2 to 4 divided doses. For example, for a child weighing 34 kg, the dose would be approximately 850 mg to 1700 mg in 2 to 4 divided doses. <u>Renal Dosing:</u> Same dose as the usual dose for adults and children but with a reduced frequency of every 8 to 24 hours (NDA 050212-Withdrawn FR effective 6/7/2007. ANDA 061653/061889 are discontinued.)</p>	<p>Orthographic Similarity:</p> <p>Both names contain 6 letters and begin with an orthographically similar letter string (Tetre vs. Jetre).</p>	<p>Differentiating Product Characteristics:</p> <p><u>Strength:</u> No strength overlap. Tetrex is available in multiple strengths; thus, a strength would need to be specified on the prescription for dispensing.</p> <p><u>Dose:</u> No dose overlap. XX capsule(s) vs. 0.1 mL (0.125 mg)</p>

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
16	Tilia Fe 28 (Ethinyl Estradiol/Norethindrone Acetate) Tablets Strength: 0.035 mg-1 mg/0.02 mg-1 mg/0.03 mg-1 mg/75 mg Usual Dose: One tablet by mouth once daily	Orthographic Similarity: Both names begin with an orthographically similar letter (T vs. J) and end with the letter 'a'. Strength: Both products are available in a single strength.	Orthographic Difference: Jetrea contains a cross-stroke 't' in the 3 rd position of the name while Tilia contains an upstroke 'l'. When scripted, the suffix 'rea' in Jetrea appears longer than the suffix 'ia' in Tilia. Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. One tablet vs. 0.1 mL (0.125 mg) <u>Frequency:</u> Once daily vs. once
17	Tobrex (Tobramycin) Ophthalmic Solution, Ointment Strength: 0.03% Usual Dose: <u>Solution:</u> <u>Mild to moderate infections</u> --Instill 1 to 2 drops into the affected eye(s) every 4 hours <u>Severe infections</u> --2 drops into eye(s) hourly until improvement <u>Ointment:</u> <u>Mild to moderate infections</u> --Apply a half-inch ribbon into affected eye(s) 2 or 3 times a day <u>Severe infections:</u> Apply a half-inch ribbon into affected eye(s) every 3 to 4 hours until improvement	Orthographic Similarity: Both names contain 6 letters and begin with an orthographically similar letter (T vs. J). Strength: Both products are available in a single strength. Route of Administration: Both products are given ophthalmically.	Differentiating Product Characteristics: <u>Dosage Form:</u> Solution or Ointment vs. Injection <u>Dose:</u> No dose overlap. Instill 1 to 2 drops or Apply a half-inch ribbon vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Every 4 hours or every hour or 2 to 3 times a day or every 3 to 4 hours vs. once

No.	Proposed name: Jetrea Dosage Form: Intravitreal Injection Strength: 2.5 mg/mL Usual Dose: 0.125 mg (0.1 mL of the diluted solution) administered by intravitreal injection to the affected eye once as a single dose	Failure Mode: Incorrect Product Ordered/ Selected/Dispensed or Administered because of Name confusion Causes (could be multiple)	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
18	Vitrase (Hyaluronidase) Injection Solution Strength: 200 units/mL Usual Dose: <u>Subcutaneous fluid administration (Hypodermoclysis):</u> 200 units (1 mL) injected under skin prior to clysis <u>Subcutaneous Urography:</u> Inject 75 units (0.375 mL) subcutaneously over each scapula, followed by injection of contrast medium at the same sites.	Orthographic Similarity: Both names begin with an orthographically similar letter (V vs. J) and contain a similar letter string 'tr' in the infix of their names. Strength: Both products are available in a single strength. Dose: Numeric dose overlap. 1 mL (200 Units) or 0.375 mL (75 Units) vs. 0.1 mL (0.125 mg)	Orthographic Difference: When scripted, the suffix 'ase' in Vitrase elongates the name giving the names a different shape and appearance.
19	Zetia (Ezetimibe) Tablets Strength: 10 mg Usual Dose: One tablet by mouth once daily	Orthographic Similarity: Both names contain a cross-stroke 't' in the 3 rd position of their names and end with the letter 'a'. Strength: Both products are available in a single strength.	Orthographic Difference: When scripted, the first letter 'Z' in Zetia appears orthographically different than the first letter 'J' in Jetrea. Also, the suffix 'rea' in Jetrea appears longer than 'ia' in Zetia, thereby elongating the name. Differentiating Product Characteristics: <u>Dose:</u> No dose overlap. One tablet vs. Inject 0.1 mL (0.125 mg) <u>Frequency:</u> Once daily vs. once

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/s/

JUNG E LEE
07/25/2012

JAMIE C WILKINS PARKER
07/25/2012

CAROL A HOLQUIST on behalf of KELLIE A TAYLOR
07/25/2012

CAROL A HOLQUIST
07/25/2012