CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

761165Orig1s000

PROPRIETARY NAME REVIEW(S)

SUFFIX REVIEW FOR NONPROPRIETARY NAME

Division of Medication Error Prevention and Analysis 1 (DMEPA 1)

Office of Medication Error Prevention and Risk Management (OMEPRM)

Office of Surveillance and Epidemiology (OSE)

Center for Drug Evaluation and Research (CDER)

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

Date of This Review:	6/2/2022
Responsible OND Division:	Division of Ophthalmology (DO)
Application Type and Number:	BLA 761165
Product Name and Strength:	Cimerli (ranibizumab-eqrn) injection 0.5 mg/0.05 mL and 0.3 mg/0.05 mL
Product Type:	Single Ingredient Product
Applicant/Sponsor Name:	Bioeq AG (Bioeq)
FDA Received Date:	August 5, 2021
Nexus NPNS ID #:	2021-44
DMAMES Biologics Suffix Specialist:	Carlos M Mena-Grillasca, BS Pharm
DMEPA 1 Associate Director for Nomenclature and Labeling:	Mishale Mistry, PharmD, MPH

1 PURPOSE OF REVIEW

This review summarizes our evaluation of the four-letter suffixes proposed by Bioeq for inclusion in the nonproprietary name and communicates our recommendation for the nonproprietary name for BLA 761165.

2 ASSESSMENT OF THE NONPROPRIETARY NAME

On August 5, 2021, Bioeq submitted a list of 5 suffixes, in their order of preference, to be used in the nonproprietary name of their product[a]. Bioeq also provided findings from an external study conducted by the (b) (4) evaluating the proposed four-letter suffixes in conjunction with the nonproprietary name, for our consideration. Table 1 presents a list of suffixes submitted by Bioeq:

Table 1. Suffixes submitted by Bioeq***

1.	(b) (4)
2.	eqrn
3.	(b) (4)
4.	(b) (4)
5.	(b) (4)

We reviewed Bioeq's proposed suffixes in the order of preference listed by Bioeq, along with the supporting data they submitted, using the principles described in the applicable guidance.[c]

[a] Request for Review of Proposed Suffixes BLA 761165. Zug (Switzerland): Bioeq AG; 2021 Aug 05. Available from: \\CDSESUB1\evsprod\bla761165\0011\m1\us\12-cover-letters\0011-cover-letter-05-aug-2021-request-for-review-of-proposed.pdf

(b) (4)

[c] Guidance for Industry: Nonproprietary Naming of Biological Products. 2017. Available from: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM459987.pdf

2.1 ranibizumab-(b) (4)

Bioeq's first proposed suffix, (b) (4), is comprised of four distinct letters. We note that the suffix (b) (4) may evoke the word (b) (4) Therefore, we find the proposed suffix, (b) (4) is not devoid of meaning and is therefore inconsistent with the principles described in the Nonproprietary Naming of Biological Products guidance[a].

We acknowledge that our evaluation differs from that of the external study performed by the (b) (4) and submitted by the Applicant. However, the external study did not evaluate the suffix connotation of the word (b) (4) Furthermore, we note that one participant in the external study indicated that the suffix (b) (4) conveyed the meaning (b) (4)

2.2 ranibizumab-eqrn

Bioeq's second proposed suffix, -eqrn, is comprised of four distinct letters.

We determined that the proposed suffix -eqrn, is not too similar to any other products' suffix designation, does not look similar to the names of other currently marketed products, that the suffix is devoid of meaning, does not include any abbreviations that could be misinterpreted, and does not make any misrepresentations with respect to safety or efficacy of this product.

3 COMMUNICATION OF DMEPA 1 ANALYSIS

These findings were shared with OPDP. On May 6, 2022, OPDP identified that the proposed suffix (b) (4) evokes the word (b) (4) On June 2, 2022, OPDP did not identify any concerns that would render the second proposed suffix -eqrn unacceptable. DMEPA 1 also communicated our findings to the Division of Ophthalmology (DO) on June 2, 2022.

4 CONCLUSION

We find Bioeq's proposed suffix -eqrn acceptable and recommend the nonproprietary name be revised throughout the draft labels and labeling to ranibizumab-eqrn. DMEPA 1 will communicate our findings to the Applicant via letter.

4.1 Recommendations for Bioeq AG

We find the nonproprietary name, ranibizumab-eqrn, conditionally acceptable for your proposed product. Should your 351(k) BLA be approved during this review cycle, ranibizumab-eqrn will be the proper name designated in the license. You should revise your proposed labels and labeling

accordingly and submit the revised labels and labeling to your BLA for our review. However, please be advised that if your application receives a complete response, the acceptability of your proposed suffix will be re-evaluated when you respond to the deficiencies. If we find your suffix unacceptable upon our re-evaluation, we will inform you of our findings.

We also note that the first proposed suffix is unacceptable for the following reason:

1. ranibizumab (b) (4)

We note that the suffix (b) (4) may evoke the word (b) (4) Therefore, we find the proposed suffix, -(b) (4) is not devoid of meaning and is therefore inconsistent with the principles described in the Nonproprietary Naming of Biological Products guidance[a].

We acknowledge that our evaluation differs from that of the external study performed by the (b) (4) However, the external study did not evaluate the suffix connotation of the word (b) (4) Furthermore, we note that one participant in the external study indicated that the suffix (b) (4) conveyed the meaning (b) (4)

[a] Guidance for Industry: Nonproprietary Naming of Biological Products. 2017. Available from: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM459987.pdf

---

This is a representation of an electronic record that was signed electronically. Following this are manifestations of any and all electronic signatures for this electronic record.

/s/

CARLOS M MENA-GRILLASCA
06/02/2022 07:03:18 PM

MISHALE P MISTRY
06/03/2022 08:12:12 AM

PROPRIETARY NAME REVIEW

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

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

Date of This Review:	November 1, 2021
Application Type and Number:	BLA 761165
Product Name and Strength:	Cimerli (ranibizumab-xxxx)[a] injection, 10 mg/mL and 6 mg/mL
Product Type:	Single Ingredient Product
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	Bioeq AG (Bioeq)
PNR ID #:	2021- 1044724102
DMEPA 1 Safety Evaluator:	Nasim Roosta, PharmD
DMEPA 1 Team Leader:	Valerie S. Vaughan, PharmD
DMEPA 1 Associate Director for Nomenclature and Labeling:	Mishale Mistry, PharmD, BCPS

[a] A nonproprietary name suffix has not been designated; therefore, -xxxx is used throughout the review as a placeholder.

Contents

1 INTRODUCTION

This review evaluates the proposed proprietary name, Cimerli, from a safety and misbranding perspective. The sources and methods used to evaluate the proposed proprietary name are outlined in the reference section and Appendix A, respectively. Bioeq submitted an external name study, conducted by (b) (4) for this proposed proprietary name.

1.1 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on August 5, 2021.

- Intended Pronunciation: si mer' lee
- Active Ingredient: ranibizumab-xxxx
- Indication of Use: Treatment of patients with Neovascular (Wet) Age-Related Macular Degeneration (AMD), Macular Edema Following Retinal Vein Occlusion (RVO), Diabetic Macular Edema (DME), Diabetic Retinopathy (DR), Myopic Choroidal Neovascularization (mCNV).
- Route of Administration: intravitreal
- Dosage Form: injection
- Strength: 10 mg/mL and 6 mg/mL
- Dose and Frequency:

Neovascular (Wet) Age-Related Macular Degeneration (AMD):

0.5 mg is injected once a month (approximately 28 days).

Although not as effective, patients may be treated with 3 monthly doses followed by less frequent dosing with regular assessment.

Although not as effective, patients may also be treated with one dose every 3 months after 4 monthly doses. Patients should be assessed regularly.

Macular Edema Following Retinal Vein Occlusion (RVO):

0.5 mg is injected once a month (approximately 28 days).

Diabetic Macular Edema (DME) and Diabetic Retinopathy (DR):

0.3 mg is injected once a month (approximately 28 days).

Myopic Choroidal Neovascularization (mCNV):

0.5 mg injected once a month (approximately 28 days) for up to three months. Patients may be retreated if needed.

- How Supplied: Single-use, 2 mL glass vial designed to deliver 0.05 mL of 10 mg/mL ranibizumab-xxxx solution. Single-use, 2 mL glass vial designed to deliver 0.05 mL of 6 mg/mL ranibizumab-xxxx solution. Each carton is for single-eye use only.
- Storage: Should be refrigerated at 2º-8ºC (36º- 46ºF). DO NOT FREEZE. Do not use beyond the date stamped on the label. Protect vials from light and store in the original carton until time of use.
- Reference Product: Lucentis (ranibizumab) BLA 125156

2 RESULTS

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Cimerli would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis 1 (DMEPA 1) and the Division of Ophthalmology (DO) concurred with the findings of OPDP's assessment for Cimerli.

2.2 SAFETY ASSESSMENT

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

2.2.1 United States Adopted Names (USAN) Search

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

2.2.2 Components of the Proposed Proprietary Name

Bioeq did not provide a derivation or intended meaning for the proposed proprietary name, Cimerli, in their submission. This proprietary name is comprised of a single word that contains the letter string 'IM', an abbreviation of the route of administration, intramuscular, and the letter string 'ER', a medical abbreviation for 'extended release', embedded within the name. In some circumstances, the incorporation of medical abbreviations in proprietary names can inadvertently be a source of error. For more information see, *Best Practices in Developing Proprietary Names for Human Prescription Drug Products*.[c] Although we typically discourage the inclusion of medical abbreviations in proprietary names, we determined that the abbreviations, 'IM' and 'ER' in the prefix and infix of the name, respectively, are unlikely to be separated in a manner that would lead to confusion in this case. Thus, in this case, we do not object to the inclusion of the letter strings 'IM' and 'ER' in the proposed proprietary name.

[b] USAN stem search conducted on September 6, 2021.

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

2.2.3 Comments from Other Review Disciplines at Initial Review

On August 18, 2021, the Division of Ophthalmology (DO) did not forward any comments or concerns relating to Cimerli at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

One hundred twenty-two (122) practitioners participated in DMEPA's prescription studies for Cimerli. The responses did not overlap with any currently marketed products nor did the responses sound or look similar to any currently marketed products or any products in the pipeline. Appendix B contains the results from the prescription simulation studies.

2.2.5 Phonetic and Orthographic Computer Analysis (POCA) Search Results

Our POCA search[d] identified 61 names with a combined phonetic and orthographic score of ≥55% or an individual phonetic or orthographic score ≥70%. These names are included in Table 1 below.

2.2.6 Names Retrieved for Review Organized by Name Pair Similarity

Table 1 lists the number of names retrieved from our POCA search and (b) (4) external study. These name pairs are organized as highly similar, moderately similar or low similarity for further evaluation.

Table 1. Names Retrieved for Review Organized by Name Pair Similarity

Similarity Category	Number of Names
Highly similar name pair: combined match percentage score ≥70%	1
Moderately similar name pair: combined match percentage score ≥55% to ≤ 69%	63
Low similarity name pair: combined match percentage score ≤54%	11

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

Our analysis of the 75 names contained in Table 1 determined none of the names will pose a risk for confusion with Cimerli as described in Appendices C through H.

2.2.8 Communication of DMEPA's Analysis at Midpoint of Review

DMEPA 1 communicated our findings to the Division of Ophthalmology (DO). At that time we also requested additional information or concerns that could inform our review. On insert

[d] POCA search conducted on August 31, 2021 in version 4.2.

response date, the Division of Ophthalmology (DO) stated no additional concerns with the proposed proprietary name, Cimerli.

3 CONCLUSION

The proposed proprietary name, Cimerli, is acceptable.

If you have any questions or need clarifications, please contact Oyinlola Fashina, OSE project manager, at 301-796-4446.

3.1 COMMENTS TO BIOEQ AG

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

If any of the proposed product characteristics as stated in your submission, received on August 5, 2021, are altered prior to approval of the marketing application, the name must be resubmitted for review.

4 REFERENCES

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

USAN Stems List contains all the recognized USAN stems.

2. Phonetic and Orthographic Computer Analysis (POCA)

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

Drugs@FDA

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

RxNorm

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

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

Radiopharmaceuticals, contrast media, food, dietary supplements, and medical devices, such as bandages and crutches, are all out of scope for RxNorm (http://www.nlm.nih.gov/research/umls/rxnorm/overview.html).

Division of Medication Errors Prevention and Analysis proprietary name consultation requests

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

APPENDICES

Appendix A

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

1. **Misbranding Assessment**: For prescription drug products, OPDP assesses the name for misbranding concerns. For over-the-counter (OTC) drug products, the misbranding assessment of the proposed name is conducted by DNDP. OPDP or DNDP evaluates proposed proprietary names to determine if the name is false or misleading, such as by making misrepresentations with respect to safety or efficacy. For example, a fanciful proprietary name may misbrand a product by suggesting that it has some unique effectiveness or composition when it does not (21 CFR 201.10(c)(3)). OPDP or DNDP provides their opinion to DMEPA for consideration in the overall acceptability of the proposed proprietary name.
2. **Safety Assessment**: The safety assessment is conducted by DMEPA, and includes the following:

a. Preliminary Assessment: We consider inclusion of USAN stems or other characteristics that when incorporated into a proprietary name may cause or contribute to medication errors (i.e., dosing interval, dosage form/route of administration, medical or product name abbreviations, names that include or suggest the composition of the drug product, etc.) See prescreening checklist below in Table 2*. DMEPA defines a medication error as any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. [e]

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

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

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

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

- Highly similar pair: combined match percentage score ≥70%.
- Moderately similar pair: combined match percentage score ≥55% to ≤ 69%.

- Low similarity: combined match percentage score ≤54%.

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

- For highly similar names, differences in product characteristics often cannot mitigate the risk of a medication error, including product differences such as strength and dose. Thus, proposed proprietary names that have a combined score of ≥ 70 percent are at risk for a look-alike sound-alike confusion which is an area of concern (See Table 3).
- Moderately similar names are further evaluated to identify the presence of attributes that are known to cause name confusion.
    - Name attributes: We note that the beginning of the drug name plays a significant role in contributing to confusion. Additionally, drug name pairs that start with the same first letter and contain a shared letter string of at least 3 letters in both names are major contributing factor in the confusion of drug names[f]. We evaluate all moderately similar names retrieved from POCA to identify the above attributes. These names are further evaluated to identify overlapping or similar strengths or doses.
    - Product attributes: Moderately similar names of products that have overlapping or similar strengths or doses represent an area for concern for FDA. The dose and strength information is often located in close proximity to the drug name itself on prescriptions and medication orders, and the information can be an important factor that either increases or decreases the potential for confusion between similarly named drug pairs. The ability of other product characteristics to mitigate confusion (e.g., route, frequency, dosage form) may be limited when the strength or dose overlaps. DMEPA reviews such names further, to determine whether sufficient differences exist to prevent confusion. (See Table 4).

- Names with low similarity that have no overlap or similarity in strength and dose are generally acceptable (See Table 5) unless there are data to suggest that the name might be vulnerable to confusion (e.g., prescription simulation study suggests that the name is likely to be misinterpreted as a marketed product). In these instances, we would reassign

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

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

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

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

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

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

   The OND/OGD Regulatory Division is contacted a second time following our analysis of the proposed proprietary name. At this point, DMEPA conveys their decision to accept or reject the name. 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 some of these questions suggest that the pattern of orthographic or phonetic differences in the names may render the names less likely to confusion, provided that the pair does not share a common strength or dose.			
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 ≥55% 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 or doses have a higher potential for confusion and should be evaluated further (see Step 2). Because the strength or dose could be used to express an order or prescription for a particular drug product, overlap in one or both of these components would be reason for further evaluation. For single strength products, also consider circumstances where the strength may not be expressed. For any i.e. drug products comprised of more than one active ingredient, consider whether the strength or dose may be expressed using only one of the components. To determine whether the strengths or doses are similar to your proposed product, consider the following list of factors that may increase confusion: • Alternative expressions of dose: 5 mL may be listed in the prescribing information, but the dose may be expressed in metric weight (e.g., 500 mg) or in non-metric units (e.g., 1 tsp, 1 tablet/capsule). Similarly, a strength or dose of 1000 mg may be expressed, in practice, as 1 g, or vice versa. • Trailing or deleting zeros: 10 mg is similar in appearance to 100 mg which may potentiate confusion between a name pair with moderate similarity. • Similar sounding doses: 15 mg is similar in sound to 50 mg
Step 2	Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may reduce the likelihood of confusion for moderately similar names **with** overlapping or similar strengths or doses.

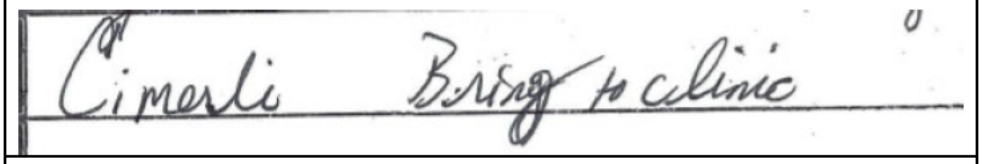
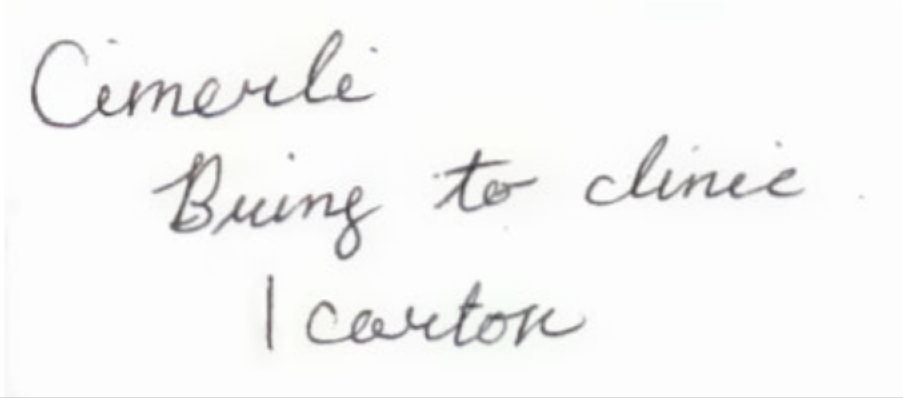
	Orthographic Checklist (Y/N to each question) • Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. • Are the lengths of the names dissimilar* when scripted? *FDA considers the length 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 ≤54%).

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

Appendix B: Prescription Simulation Samples and Results

Figure 1. Cimerli Study (Conducted on September 2, 2021)

Handwritten Medication Order/Prescription	Verbal Prescription
Medication Order:  	Cimerli Bring to clinic Dispense 1 carton
Outpatient Prescription:  	
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
Cimerli	

FDA Prescription Simulation Responses (Aggregate Report)

261 People Received Study
122 People Responded

Study Name: Cimerli

Total	29	31	27	35	
INTERPRETATION	**OUTPATIENT**	**CPOE**	**VOICE**	**INPATIENT**	**TOTAL**
CIMERLE	6	0	0	0	6
CIMERLEE	0	0	1	0	1
CIMERLI	22	31	0	32	85
CIMERLY	0	0	1	0	1
CIMERTI	0	0	0	1	1
CIMESLI	0	0	0	1	1

CUNERLI	0	0	0	1	1
CYMERLE	0	0	2	0	2
CYMERLI	0	0	1	0	1
CYMERLY	0	0	5	0	5
CYMRELY	0	0	1	0	1
SIMERLEE	0	0	1	0	1
SIMERLY	0	0	5	0	5
SIMURY	0	0	1	0	1
SINREALE	0	0	1	0	1
SYMARLY	0	0	1	0	1
SYMERLI	0	0	2	0	2
SYMERLY	0	0	5	0	5
ZIMERLI	1	0	0	0	1

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

No.	**Proposed name:** Cimerli **Established name:** ranibizumab-xxxx **Dosage form:** injection **Strength(s):** 10 mg/mL and 6 mg/mL **Usual Dose:** 0.3 - 0.5 mg via intravitreal injection once a month depending on indication	**POCA Score (%)**	**Orthographic and/or phonetic differences in the names sufficient to prevent confusion** **Other prevention of failure mode expected to minimize the risk of confusion between these two names.**
1.	Cimerli***	100	Name is the subject of this review.

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

No.	Name	POCA Score (%)
1.	Mineral Ice	56

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

No.	**Proposed name:** Cimerli **Established name:** ranibizumab-xxxx **Dosage form:** injection **Strengths:** 10 mg/mL and 6 mg/mL **Usual Dose:** 0.3 - 0.5 mg via intravitreal injection once a month depending on indication	**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.	Jemperli	68	This name pair has sufficient orthographic and phonetic differences.
2.	Livmarli***	68	Phonetically, the first syllables of the name pair (“Si” vs. “Liv”) sound sufficiently different. In regard to product characteristics, Cimerli is a once monthly ophthalmic intravitreal injection; whereas Livmarli*** is an oral solution intended to be prescribed once daily. The dosage form, route of administration and frequency of administration, if included on a

No.	**Proposed name:** Cimerli **Established name:** ranibizumab-xxxx **Dosage form:** injection **Strengths:** 10 mg/mL and 6 mg/mL **Usual Dose:** 0.3 - 0.5 mg via intravitreal injection once a month depending on indication	**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**
			prescription, would help mitigate the risk of product confusion. Additionally, Cimerli is dispensed by a specialty pharmacy directly to an ophthalmologist's office, hospital or outpatient clinic, would be administered by an ophthalmologist during surgery and would not be dispensed directly to the patient for use. In contrast, Livmarli*** is (b) (4) Because this product is prescribed for a specific population with a rare disease, the prescribing provider must enroll the patient into an access support program prior to initiating the medication and is required to order patient specific parameters for monitoring, such as baseline liver function tests. The medication would then be dispensed by a single-source specialty pharmacy directly to the patient for self-administration at home. Thus, considering the totality of factors listed above, we find the risk for name confusion is adequately minimized.
3.	Fiberall	67	This name pair has sufficient orthographic and phonetic differences.
4.	Viberzi	66	This name pair has sufficient orthographic and phonetic differences.

No.	**Proposed name:** Cimerli **Established name:** ranibizumab-xxxx **Dosage form:** injection **Strengths:** 10 mg/mL and 6 mg/mL **Usual Dose:** 0.3 - 0.5 mg via intravitreal injection once a month depending on indication	**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**
5.	Siderol	66	This name pair has sufficient orthographic and phonetic differences.
6.	Demerol	65	This name pair has sufficient orthographic and phonetic differences.
7.	Cemill 500	64	This name pair has sufficient orthographic and phonetic differences.
8.	Cemill 1000	64	This name pair has sufficient orthographic and phonetic differences.
9.	Pirmella 1/35	62	This name pair has sufficient orthographic and phonetic differences.
10.	Pirmella 7/7/7	62	This name pair has sufficient orthographic and phonetic differences.
11.	Macimorelin	60	This name pair has sufficient orthographic and phonetic differences.
12.	Afirmelle	60	This name pair has sufficient orthographic and phonetic differences.
13.	Climara	60	This name pair has sufficient orthographic and phonetic differences.
14.	Cinryze	60	This name pair has sufficient orthographic and phonetic differences.
15.	Symmetrel	60	This name pair has sufficient orthographic and phonetic differences.
16.	Limbrel	58	This name pair has sufficient orthographic and phonetic differences.
17.	Hemril	58	This name pair has sufficient orthographic and phonetic differences.
18.	Hemril-30	58	This name pair has sufficient orthographic and phonetic differences.
19.	Cem-Urea	58	This name pair has sufficient orthographic and phonetic differences.
20.	Swim Ear	56	This name pair has sufficient orthographic and phonetic differences.
21.	Succimer	56	This name pair has sufficient orthographic and phonetic differences.
22.	Cometriq	56	This name pair has sufficient orthographic and phonetic differences.

No.	**Proposed name:** Cimerli **Established name:** ranibizumab-xxxx **Dosage form:** injection **Strengths:** 10 mg/mL and 6 mg/mL **Usual Dose:** 0.3 - 0.5 mg via intravitreal injection once a month depending on indication	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**
23.	Casimersen	56	This name pair has sufficient orthographic and phonetic differences.
24.	Cinolar	56	This name pair has sufficient orthographic and phonetic differences.
25.	Synercid	56	This name pair has sufficient orthographic and phonetic differences.
26.	Camila	56	This name pair has sufficient orthographic and phonetic differences.
27.	Cimzia	55	This name pair has sufficient orthographic and phonetic differences.

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

No.	Name	POCA Score (%)
1.	Synarel	54
	Cevimeline	54
2.	Pimecrolimus	54
3.	Micrell	54
4.	Senergy	51
5.	Cerium	51
6.	Mellaril	51
7.	Imperialine	49
8.	Cimetidine	46
9.	Cymbalta	46
10.	Celexa	39
11.	C-Time	36

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.	Temaril	66	Veterinary product.
2.	Dimyril	65	International product marketed in United Kingdom.

No.	Name	POCA Score (%)	Failure preventions
3.	Ismelin	61	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
4.	Cedrol	60	International product formerly marketed in Spain.
5.	Citral	60	Product is not a drug. It is a pair or mixture of terpenoids present in essential oils of plants and used for perfumes and flavorings.
6.	Cereflin	58	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
7.	Simeprevir	58	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
8.	Esimil	58	Brand discontinued with no generic equivalents available. NDA 013553 withdrawn FR effective 07/12/1999.
9.	Sermorelin	58	Brand discontinued with no generic equivalents available. NDA 019863 withdrawn FR effective 06/18/2009.
10.	Vanceril	58	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
11.	Ceberclon	58	Name identified in RxNorm. Unable to find product characteristics in commonly used drug databases.
12.	Soneryl	57	International product marketed in Australia, Canada, United Kingdom and many other countries.
13.	Chromelin	56	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
14.	(b) (4) ***	56	Proposed proprietary name for CBER IND 14496 was found unacceptable on 03/06/2014 by the Advertising and Promotional Labeling Branch (APLB). However, the corresponding BLA 125563 was approved under the name Vaxelis.
15.	Rimiterol	56	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
16.	Lime Oil	56	Product is not a drug. It is an over-the-counter essential oil.
17.	(b) (4) ***	56	Proposed proprietary name for IND (b) (4) is pending and no new names have been submitted.
18.	Emersal	56	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
19.	Cebatrol	56	International product market in Canada

No.	Name	POCA Score (%)	Failure preventions
20.	Thimerosal	55	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
21.	Citrolith	55	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.

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

No.	Name	POCA Score (%)
1.	Tri-Mili	66
2.	Rideril	62
3.	Acepril	59
4.	Temaril-P	58
5.	Fiber Lax	58
6.	Femmesil	58
7.	Moderil	57
8.	Xermelo	56
9.	Seebri	56
10.	Kimyrsa	56
11.	Feverall	56
12.	Emetrol	56
13.	Stamaril	55
14.	Gemmily	55

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

This is a representation of an electronic record that was signed electronically. Following this are manifestations of any and all electronic signatures for this electronic record.

/s/

NASIM N ROOSTA
11/01/2021 10:11:13 AM

VALERIE S VAUGHAN
11/01/2021 11:04:08 AM

MISHALE P MISTRY
11/01/2021 11:08:49 AM