CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

761166Orig1s000

PROPRIETARY NAME REVIEW(S)

PROPRIETARY NAME REVIEW

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

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

Date of This Review:	August 4, 2021
Application Type and Number:	BLA 761166
Product Name and Strength:	Besremi (ropeginterferon alfa-2B-njft) injection, 500 mcg/mL
Product Type:	Single Ingredient Product
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	PharmaEssentia Corporation (PharmaEssentia)
Panorama/PNR ID #:	2021-1044723974
DMEPA Safety Evaluator:	Devin Kane, PharmD
DMEPA Team Leader:	Hina Mehta, PharmD
DMEPA Associate Director for Nomenclature and Labeling:	Chi-Ming (Alice) Tu, PharmD

Contents

1 INTRODUCTION

This review evaluates the proposed proprietary name, Besremi, 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. PharmaEssentia submitted an external name study, conducted by [redacted] (b) (4) for this proposed proprietary name.

1.1 REGULATORY HISTORY

PharmaEssentia previously submitted the proposed proprietary name, Besremi*** on March 13, 2020 under BLA 761166, which was found conditionally acceptable on June 5, 2020..[a] BLA 761166 received a Complete Response Letter (CRL) on March 12, 2021. On May 13, 2021, PharmaEssentia resubmitted the name, Besremi***, for review as a part of the resubmission for BLA 761166.

1.2 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on May 13, 2021.

- Intended Pronunciation: bes-REH-mee
- Nonproprietary Name: ropeginterferon alfa-2B-njft
- Indication of Use: The proposed indication is for the treatment of polycythemia vera in adults without symptomatic splenomegaly.
- Route of Administration: subcutaneous
- Dosage Form: injection
- Strength: 500 mcg/mL
- Dose and Frequency: The recommended starting dose is 100 mcg [redacted] (b) (4) The dose should be gradually increased by 50 mcg every 2 weeks [redacted] (b) (4) The usual dose is 100 mcg to 500 mcg once every 2 weeks for at least [redacted] (b) (4). The dose may then be adjusted and/or the administration interval extended up to every 4 weeks as appropriate for the patient.
- How Supplied: This product will be supplied as prefilled syringes, packaged into a carton.
- Storage: This product should be refrigerated at 2°C to 8°C.

2 RESULTS

[a] DeGraw, S. Proprietary Name Review for Besremi (BLA 761166). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2020 JUN 05. Panorama No. 2020-38497388.

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Besremi would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis (DMEPA) and the Division of Non-Malignant Hematology (DNH) concurred with the findings of OPDP's assessment for Besremi.

2.2 SAFETY ASSESSMENT

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

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

PharmaEssentia indicated in their submission that the proposed proprietary name, Besremi, was derived from a combination of letters that is devoid of meaning. 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 Comments from Other Review Disciplines at Initial Review

On May 28, 2021, the Division of Non-Malignant Hematology (DNH) did not forward any comments or concerns relating to Besremi at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

One hundred and thirty-three (133) practitioners participated in DMEPA's prescription studies for Besremi. 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[c] identified 117 names with the combined score of ≥55% or individual orthographic or phonetic score of ≥70%. We had identified and evaluated some of the names in our previous proprietary name review. We re-evaluated the previously identified names of concern considering any lessons learned from recent post-marketing experience, which may have altered our previous conclusion regarding the acceptability of the name. We note that none of the product characteristics have changed and we agree with the findings from our previous review

[b] USAN stem search conducted on June 22, 2021.

[c] POCA search conducted on June 10, 2021 in version 4.4.

for the names evaluated previously. Therefore, we identified 4 names not previously analyzed. These names are included in Table 1 below.

2.2.6 Names Retrieved for Review Organized by Name Pair Similarity

Table 1 lists the number of names retrieved from our POCA search and the external study conducted by (b) (4) 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%	3
Low similarity name pair: combined match percentage score ≤54%	1

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

Our analysis of the 5 names contained in Table 1 determined none of the names will pose a risk for confusion with Besremi as described in Appendices C through H.

2.2.8 Communication of DMEPA's Analysis at Midpoint of Review

DMEPA communicated our findings to the Division of Non-Malignant Hematology (DNH). At that time we also requested additional information or concerns that could inform our review. On August 3, 2021, the Division of Non-Malignant Hematology (DNH) stated no additional concerns with the proposed proprietary name, Besremi.

3 CONCLUSION

The proposed proprietary name, Besremi, is acceptable.

If you have any questions or need clarifications, please contact Linda Wu, OSE project manager, at 240-402-5120.

3.1 COMMENTS TO PHARMAESSENTIA CORPORATION

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

If any of the proposed product characteristics as stated in your submission, received on May 13, 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. [d]

[d] 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[e]. 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

[e] 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.

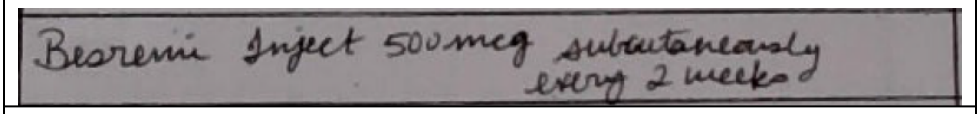
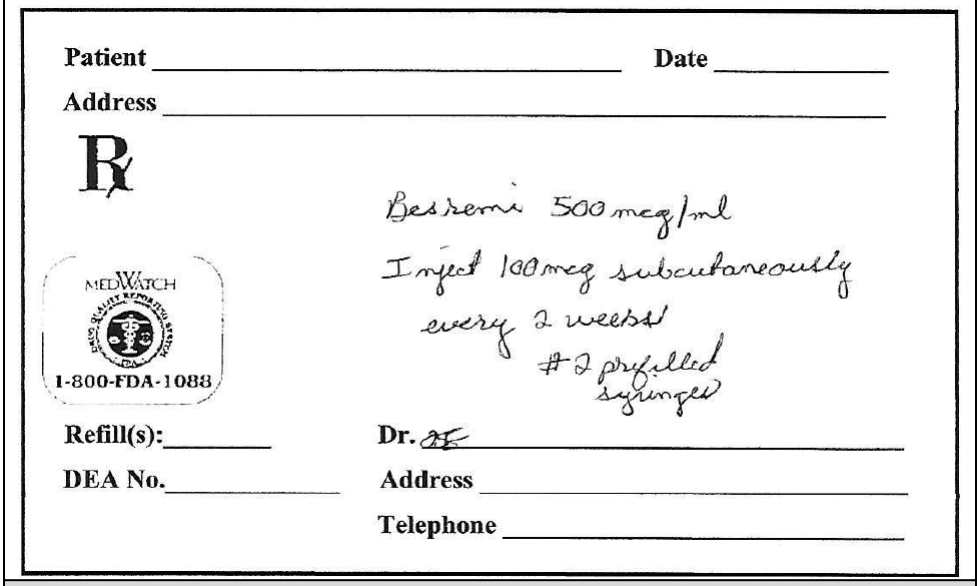
	Orthographic Checklist (Y/N to each question) • Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. • Are the lengths of the names dissimilar* when scripted? *FDA considers the length 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. Besremi Study (Conducted on May 27, 2021)

Handwritten Medication Order/Prescription	**Verbal Prescription**
Medication Order:  Outpatient Prescription:  	Besremi 500 mcg/mL Inject 100 mcg subcutaneously every 2 weeks #2 prefilled syringes
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
Besremi	

FDA Prescription Simulation Responses (Aggregate Report)

260 People Received Study
133 People Responded

Study Name: Besremi

Total	34	29	41	29	
INTERPRETATION	**OUTPATIENT**	**CPOE**	**VOICE**	**INPATIENT**	**TOTAL**
BEAREUI	0	0	0	1	1
BESRAMI	0	0	2	0	2
BESRAMI 500 MG/ML	0	0	1	0	1
BESRAMINE	0	0	1	0	1
BESREMI	32	29	5	23	89
BESREMI INJECTION	0	0	0	2	2
BESREMY	0	0	3	0	3
BESRENI	0	0	0	1	1
BESREVUI INJECT	0	0	0	1	1
BESROMI	1	0	0	0	1
BESSERNI	1	0	0	0	1
BESSREMY	0	0	1	0	1
BEZRAMI	0	0	1	0	1
BEZRAMIE	0	0	1	0	1
BEZREMI	0	0	8	0	8
BEZREMY	0	0	1	0	1
DESREMI	0	0	2	1	3
DESREMY	0	0	1	0	1
FESREMI	0	0	3	0	3
FEZREMY	0	0	2	0	2
VESREMI	0	0	1	0	1
VESREMY	0	0	2	0	2
VIZRAMI	0	0	1	0	1

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

No.	**Proposed name:** Besremi **Established name:** ropeginterferon alfa-2B-njft **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	**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.	Besremi***	100	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 – N/A

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:** Besremi **Established name:** ropeginterferon alfa-2B-njft **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	**POCA Score (%)**	**Prevention of Failure Mode** **In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names**
1.	(b) (4) ***	56	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.	Remifentanil	35

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

No.	Name	POCA Score (%)	Failure preventions
1.	(b) (4) ***	56	(b) (4)

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

No.	Name	POCA Score (%)
1.	(b) (4) ***	60

[f] 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/

DEVIN R KANE
08/04/2021 11:12:35 AM

HINA S MEHTA
08/04/2021 03:13:27 PM

SUFFIX REVIEW FOR NONPROPRIETARY NAME

Division of Mitigation Assessment & Medication Error Surveillance (DMAMES)

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:	7/26/2021
Responsible OND Division:	Division of Non-Malignant Hematology (DNH)
Application Type and Number:	BLA 761166
Product Name and Strength:	Besremi (ropeginterferon alfa-2b-njft) injection, 500 mcg/mL
Product Type:	Combination Product (Drug-Biologic)
Applicant/Sponsor Name:	PharmaEssentia Corporation (PharmaEssentia)
Nexus NPNS ID#:	2021-37
DMAMES Biologics Suffix Specialist:	Carlos M Mena-Grillasca, BS Pharm
OMEPRM Deputy Director:	Lubna Merchant, MS, PharmD

1 PURPOSE OF REVIEW

This review is to reassess the FDA-generated suffix, -njft, for BLA 761166, which was found conditionally acceptable on September 1, 2020[a], for inclusion in the nonproprietary name and communicates our recommendation for the nonproprietary name for BLA 761166.

1.1 Regulatory History

FDA generated a four-letter suffix, -njft, for BLA 761166 on September 1, 2020[b]. However, BLA 761166 received a Complete Response (CR) letter on March 12, 2021[c]. Thus, PharmaEssentia submitted a Class 2 Resubmission on May 13, 2021.

2 ASSESSMENT OF THE NONPROPRIETARY NAME

We reassessed the previously generated four-letter suffix, -njft, using the principles described in the applicable guidance[d].

We determined that the FDA-generated suffix -njft, 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'S ANALYSIS

These findings were shared with OPDP. On July 22, 2021, OPDP did not identify any concerns that would render this suffix unacceptable. DMAMES also communicated our findings to the Division of Non-Malignant Hematology (DNH) on July 26, 2021.

---

[a] Harris, D. Nonproprietary Name Suffix Advice Letter (BLA 761166). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2020 Sep 03.

[b] Mena-Grillasca, C. Nonproprietary Name Suffix Revoew for ropeginterferon alfa-2b-njft (BLA 761166). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2020 Sep 01. RCM No.: 2020-914.

[c] Thompson, Carleveva. Complete Response (BLA 761166). Silver Spring (MD): FDA, CDER, OND, DNH (US); 2021 Mar 12.

[d] See Section VI which describes that any suffixes should be devoid of meaning in Guidance for Industry: Nonproprietary Naming of Biological Products. 2017. Available from:

http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM459987.pdf

4 CONCLUSION

We find the suffix -njft acceptable and recommend the nonproprietary name ropeginterferon alfa-2b-njft be used throughout the labels and labeling.

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
07/26/2021 01:09:43 PM

LUBNA A MERCHANT
07/26/2021 01:44:28 PM

SUFFIX REVIEW FOR NONPROPRIETARY NAME

Division of Medication Error Prevention and Analysis (DMEPA)

Office of Medication Error Prevention and Risk Management (OMEPRM)

Office of Surveillance and Epidemiology (OSE)

Center for Drug Evaluation and Research (CDER)

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

Date of This Review:	September 1, 2020
Responsible OND Division:	Division of Non-Malignant Hematology (DNH)
Application Type and Number:	BLA 761166
Product Name and Strength:	Besremi (ropeginterferon alfa-2b-njft) injection, 500 mcg/mL
Product Type:	Combination Product (Drug-Biologic)
Applicant/Sponsor Name:	PharmaEssentia Corporation (PharmaEssentia)
OSE RCM #:	2020-914
DMEPA Primary Reviewer:	Carlos M Mena-Grillasca, BS Pharm
DMEPA Deputy Director:	Danielle Harris, PharmD

1 PURPOSE OF REVIEW

This review summarizes our evaluation of the four-letter suffix for inclusion in the nonproprietary name and communicates our recommendation for the nonproprietary name for BLA 761166.

1.1 Regulatory History

PharmaEssentia was notified of the Agency's intention to designate a nonproprietary name that includes a four-letter distinguishing suffix that is devoid of meaning for their product in an Advice Letter[a].

2 ASSESSMENT OF THE NONPROPRIETARY NAME

ropeginterferon alfa-2b-njft

FDA generated a four-letter suffix, -njft. This suffix was evaluated using the principles described in the applicable guidance[b].

We determined that the FDA-generated suffix -njft, 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'S ANALYSIS

These findings were shared with OPDP. In email correspondence dated September 1, 2020, OPDP did not identify any concerns that would render this suffix unacceptable. DMEPA also communicated our findings to the Division of Non-Malignant Hematology (DNH) via e-mail on September 1, 2020.

---

[a] Harris, D. General Advice Letter for BLA 761166. Silver Spring (MD): FDA, CDER, OSE, DMEPA (US) 2020 Jun 05.
[b] See Section VI which describes that any suffixes should be devoid of meaning in Guidance for Industry: Nonproprietary Naming of Biological Products. 2017. Available from: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM459987.pdf

4 CONCLUSION

We find the suffix -njft acceptable and recommend the nonproprietary name be revised throughout the draft labels and labeling to ropeginterferon alfa-2b-njft. DMEPA will communicate our findings to the Applicant via letter.

4.1 Recommendation for PharmaEssentia Corporation

We find the nonproprietary name, ropeginterferon alfa-2b-njft, conditionally acceptable for your proposed product. Should your 351(a) BLA be approved during this review cycle, ropeginterferon alfa-2b-njft 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 this suffix will be re-evaluated when you respond to the deficiencies. If we find the suffix unacceptable upon our re-evaluation, we would inform you of our finding.

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
09/01/2020 09:23:40 PM

DANIELLE M HARRIS
09/02/2020 10:06:33 AM

PROPRIETARY NAME REVIEW

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

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

Date of This Review:	June 5, 2020
Application Type and Number:	BLA 761166
Product Name and Strength:	Besremi (ropeginterferon alfa-2b) injection 500 mcg/mL
Total Product Strength:	500 mcg/mL
Product Type:	Single Ingredient Product
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	PharmaEssentia Corporation (PharmaEssentia)
Panorama #:	2020-38497388
DMEPA Safety Evaluator:	Stephanie DeGraw, PharmD
DMEPA Team Leader:	Hina Mehta, PharmD

Contents

1 INTRODUCTION

This review evaluates the proposed proprietary name, Besremi, 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. PharmaEssentia submitted an internal Phonetic and Orthographic Computer Analysis (POCA) study for this proposed proprietary name.

1.1 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on March 13, 2020.

- Intended Pronunciation: bes-REH-mee
- Nonproprietary Name: ropeginterferon alfa-2b
- Indication of Use: Treatment of polycythemia vera in adults without symptomatic splenomegaly.
- Route of Administration: subcutaneous
- Dosage Form: injection
- Strength: 500 mcg/mL
- Dose and Frequency: The recommended starting dose is 100 mcg (b) (4) . The dose should be gradually increased by 50 mcg every 2 weeks (b) (4) . The usual dose is 100 mcg to 500 mcg once every 2 weeks for at least (b) (4) . The dose may then be adjusted and/or the administration interval extended up to every 4 weeks as appropriate for the patient.
- How Supplied: Prefilled syringe (graduated)
- Storage: Refrigerated 2ºC to 8ºC

2 RESULTS

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Besremi would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis (DMEPA) and the Division of Non-Malignant Hematology (DNH) concurred with the findings of OPDP's assessment for Besremi.

2.2 SAFETY ASSESSMENT

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

2.2.1 United States Adopted Names (USAN) Search

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

2.2.2 Components of the Proposed Proprietary Name

PharmaEssentia did not provide a derivation or intended meaning for the proposed proprietary name, Besremi, in their submission. This proprietary name is comprised of a single word that does not contain any components (i.e. a modifier, route of administration, dosage form, etc.) that are misleading or can contribute to medication error.

2.2.3 Comments from Other Review Disciplines at Initial Review

In response to the OSE, March 24, 2020 e-mail, the Division of Non-Malignant Hematology (DNH) did not forward any comments or concerns relating to Besremi at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

Ninety-four (94) practitioners participated in DMEPA's prescription studies for Besremi. 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[b] identified 117 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 the POCA study conducted by PharmaEssentia. 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%	111
Low similarity name pair: combined match percentage score ≤54%	5

[a] USAN stem search conducted on March 31, 2020.

[b] POCA search conducted on March 31, 2020 in version 4.3.

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

Our analysis of the 117 names contained in Table 1 determined none of the names will pose a risk for confusion with Besremi as described in Appendices C through H.

2.2.8 Communication of DMEPA's Analysis at Midpoint of Review

DMEPA communicated our findings to the Division of Non-Malignant Hematology (DNH) via e-mail on June 2, 2020. At that time, we also requested additional information or concerns that could inform our review. Per e-mail correspondence from the Division of Non-Malignant Hematology (DNH) on June 5, 2020, they stated no additional concerns with the proposed proprietary name, Besremi.

3 CONCLUSION

The proposed proprietary name, Besremi, is acceptable.

If you have any questions or need clarifications, please contact Linda Park, OSE project manager, at 240-402-5120.

3.1 COMMENTS TO PHARMAESSENTIA CORPORATION

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

If any of the proposed product characteristics as stated in your submission, received on March 13, 2020, 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. [c]

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

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

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

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.

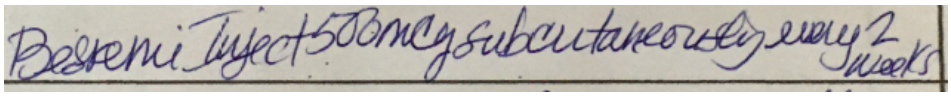
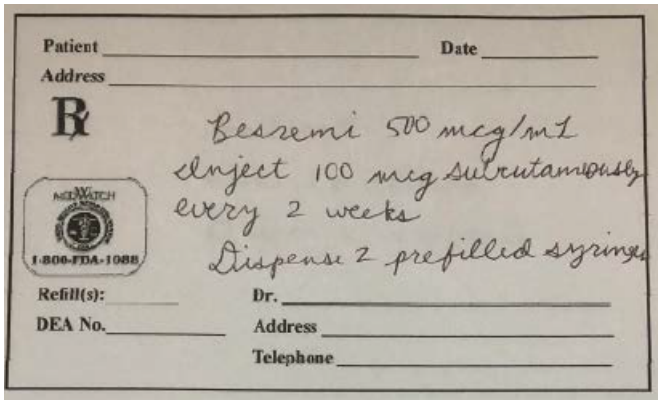
	Orthographic Checklist (Y/N to each question) • Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. • Are the lengths of the names dissimilar* when scripted? *FDA considers the length 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. Besremi Study (Conducted on April 3, 2020)

Handwritten Medication Order/Prescription	Verbal Prescription
Medication Order:  	Besremi 500 mcg/mL Inject 100 mcg subcutaneously every 2 weeks Dispense 2 prefilled syringes
Outpatient Prescription:  	
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
Besremi	

FDA Prescription Simulation Responses (Aggregate Report)

209 People Received Study
94 People Responded

Study Name: Besremi

Total	19	35	20	20	
INTERPRETATION	OUTPATIENT	CPOE	VOICE	INPATIENT	TOTAL
BEDREMI	0	0	2	0	2
BEGSEMI	0	0	0	1	1
BENZREMI	0	0	1	0	1
BESEMRI	1	0	0	1	2
BESENIE	0	0	0	1	1
BESKENVII	0	0	0	1	1
BESREMI	17	35	2	5	59

BESREMI INJECT	0	0	0	5	5
BESREMI INJECTION	0	0	0	2	2
BESRENU	0	0	0	1	1
BESRYMEE	0	0	1	0	1
BESSREMI	1	0	0	0	1
BESTEMI	0	0	0	1	1
BESTEMI INJECT	0	0	0	1	1
BEVREMY	0	0	2	0	2
BEZRAMI	0	0	1	0	1
BEZREMI	0	0	6	0	6
BEZREMY	0	0	3	0	3
BESKEMI INJ	0	0	0	1	1
VEZREMI	0	0	1	0	1
VEZRENY	0	0	1	0	1

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

No.	**Proposed name:** Besremi **Established name:** ropeginterferon alfa-2b **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	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.	Besremi***	100	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 (%)
2.	Oby-Trim	60
3.	Differin	58
4.	Beta Med	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:** Besremi **Established name:** ropeginterferon alfa-2b **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	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.	Baqsimi	64	Orthographically, the downstroke letter 'q' in the third position of Baqsimi, which is absent in Besremi, provides some orthographic difference. Phonetically, the first two syllables of the name pair (BAK-see vs. bes-REH) sound different. The following differences in product characteristics, if included on a prescription/medication order, may also help to mitigate the risk of errors: • Dose and Frequency: The dose of Baqsimi is 3 mg as needed for severe hypoglycemia (or use as directed) whereas the dose of Besremi is 50 mcg to 500 mcg every 2 weeks. Therefore,

No.	**Proposed name:** Besremi **Established name:** ropeginterferon alfa-2b **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	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**
			there is no overlap in dose or frequency between the products. • Route of Administration: Baqsimi is administered intranasally, whereas Besremi is administered subcutaneously. If the route of administration is included on a prescription/ medication order, we note that there is no overlap. • Dosage form: Baqsimi is a nasal powder, whereas Besremi is an injection. If the dosage form is included on a prescription/medication order, we note that there is no overlap. Therefore, in this scenario, due to the above-mentioned factors, we find this name pair acceptable.
6.	Merrem	63	This name pair has sufficient orthographic and phonetic differences.
7.	B-12 Resin	62	This name pair has sufficient orthographic and phonetic differences.
8.	Benemid	62	This name pair has sufficient orthographic and phonetic differences.
9.	Bufferin	62	This name pair has sufficient orthographic and phonetic differences.
10.	Bactrim	60	This name pair has sufficient orthographic and phonetic differences.
11.	Devrom	60	This name pair has sufficient orthographic and phonetic differences.
12.	Bepreve	60	This name pair has sufficient orthographic and phonetic differences.
13.	Ibsrela	60	This name pair has sufficient orthographic and phonetic differences.
14.	Beser	59	This name pair has sufficient orthographic and phonetic differences.
15.	Berinert	58	This name pair has sufficient orthographic and phonetic differences.
16.	Bethaprim	58	This name pair has sufficient orthographic and phonetic differences.
17.	Bevespi	58	Orthographically, the endings of the names ('spi' vs. 'mi') provide some orthographic difference.

No.	**Proposed name:** Besremi **Established name:** ropeginterferon alfa-2b **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	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**
	Bevespi is the root name for the currently marketed product Bevespi Aerosphere.		Phonetically, the second (VES vs. REH) and onset of the third syllables (p vs. m) of the name pair sound different. Additionally, if the full proprietary name is specified on a prescription/medication order, the modifier 'Aerosphere' provides additional orthographic and phonetic differences. The following differences in product characteristics, if included on a prescription/medication order, may also help to mitigate the risk of errors: • Dose and Frequency: The dose of Bevepsi is 2 inhalations twice a day whereas the dose of Besremi is 50 mcg to 500 mcg every 2 weeks. Therefore, there is no overlap in dose or frequency between the products. • Dosage form: Bevespi is an inhalation aerosol whereas Besremi is an injection. If the dosage form is included on a prescription/medication order, we note that there is no overlap. • Route of Administration: Bevespi is administered as an oral inhalation, whereas Besremi is administered subcutaneously. If the route of administration is included on a prescription/medication order, we note that there is no overlap. Therefore, in this scenario, due to the above-mentioned factors, we find this name pair acceptable.
18.	(b) (4) ***	58	This name pair has sufficient orthographic and phonetic differences.
19.	(b) (4) ***	58	This name pair has sufficient orthographic and phonetic differences.
20.	Obestin-30	58	This name pair has sufficient orthographic and phonetic differences.
21.	Tremin	58	This name pair has sufficient orthographic and phonetic differences.
22.	(b) (4) ***	56	This name pair has sufficient orthographic and phonetic differences.

No.	**Proposed name:** Besremi **Established name:** ropeginterferon alfa-2b **Dosage form:** injection **Strength(s):** 500 mcg/mL **Usual Dose:** 50 mcg to 500 mcg (in increments of 50 mcg) every 2 weeks	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.	Breezee Mist	56	This name pair has sufficient orthographic and phonetic differences.
24.	Belsomra	56	This name pair has sufficient orthographic and phonetic differences.
25.	Berri-Freez	56	This name pair has sufficient orthographic and phonetic differences.
26.	Betimol	56	This name pair has sufficient orthographic and phonetic differences.
27.	Bicarsim	56	This name pair has sufficient orthographic and phonetic differences.
28.	Dotarem	56	This name pair has sufficient orthographic and phonetic differences.
29.	Rozerem	56	This name pair has sufficient orthographic and phonetic differences.
30.	Bismarex	55	This name pair has sufficient orthographic and phonetic differences.
31.	Bexsero	55	This name pair has sufficient orthographic and phonetic differences.
32.	Bis-Mate	55	This name pair has sufficient orthographic and phonetic differences.
33.	(b) (4) *** (b) (4) ***.	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 (%)
34.	Berberine	54
35.	Esbriet	54
36.	Citroma	53
37.	Bromsite	50
38.	Vaprino	50

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
39.	Petrem	69	Veterinary product
40.	Metramid	66	International product formerly marketed in the UK.
41.	Vesprin	66	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
42.	Bepridil	63	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
43.	Vetrimec	62	Veterinary product
44.	Baseretic	62	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
45.	Milprem-200	61	Brand discontinued with no generic equivalents available. NDA 011045 withdrawn FR effective 9/29/1995.
46.	Milprem-400	61	Brand discontinued with no generic equivalents available. NDA 011045 withdrawn FR effective 9/29/1995.
47.	Basic Red 51	60	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
48.	(b) (4) ***	60	Proposed proprietary name for IND 112023 found unacceptable by DMEPA/OPDP (OSE# 2018-20453252). BLA 761125 approved under the proprietary name Beovu.
49.	(b) (4) ***	60	Proposed proprietary name withdrawn by the Applicant. Infliximab-dyyb (BLA 125544) approved under the proprietary name Inflectra.
50.	Berman	58	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
51.	Betim	58	International product formerly marketed in the UK, Greece, Ireland, Norway, and Finland.
52.	Buserelin	58	Veterinary product
53.	(b) (4) ***	58	(b) (4)
54.	Surem	57	International product marketed in Spain. International product formerly marketed in the UK.
55.	Somatrem	57	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
56.	Supreme	57	Veterinary product
57.	Betadren	56	International product formerly marketed in the UK and Italy.
58.	Biperiden	56	Established name for Akineton. Brand discontinued with no generic equivalents available. NDA 012003 withdrawn FR effective 7/21/17 and NDA 012418 withdrawn FR effective 09/17/2003.
59.	Barmine	55	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.

No.	Name	POCA Score (%)	Failure preventions
60.	Xartemis	55	Root name for Xartemis XR. Brand discontinued with no generic equivalents available. NDA 204031 withdrawn FR effective 11/28/2018.

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

No.	Name	POCA Score (%)
61.	Westrim	63
62.	Mepriam	61
63.	Prefrin	60
64.	Dutrebis	60
65.	Testred	60
66.	Dietrim Es	60
67.	Gestrin	60
68.	Ferrimin	60
69.	Ferrimin 150	60
70.	Measurin	60
71.	Epifrin	59
72.	Prefrin-A	58
73.	Cefrom	58
74.	Epipram	58
75.	Dibrom	58
76.	Dibromm	58
77.	Di-Bromm	58
78.	Fectrim	58
79.	Menrium 10-4	58
80.	Menrium 5-2	58
81.	Menrium 5-4	58
82.	Meronem	58
83.	Merbromin	58
84.	Tetramed	57
85.	Fetrin	57
86.	Anefrin	56
87.	Neofrin	56
88.	Edecrin	56

[e] 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

No.	Name	POCA Score (%)
89.	Mirena	56
90.	Metrodin	56
91.	Vetribute	56
92.	Disomer	56
93.	(b) (4)***	56
94.	Epiceram	56
95.	Metro I.V.	56
96.	Septrin	56
97.	Xibrom	56
98.	Desyrel	56
99.	Meridia	56
100.	(b) (4)***	56
101.	***	56
102.	Desirudin	56
103.	Testim	56
104.	Moderiba	56
105.	Tresiba	56
106.	Sarenin	56
107.	Respiram	56
108.	Esimil	56
109.	Vectrin	55
110.	Disobrom	55
111.	Cerenia	55
112.	Tegsedi	55
113.	Dr.S Cream	55
114.	Zestril	55
115.	Perdiem	55
116.	Perseris	55
117.	Mecasermin	55

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/

STEPHANIE L DEGRAW
06/05/2020 11:38:01 AM

HINA S MEHTA
06/08/2020 11:04:14 AM