

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:

214511Orig1s000

PROPRIETARY NAME REVIEW(S)

PROPRIETARY NAME REVIEW

Division of Medication Error Prevention and Analysis 2 (DMEPA 2)
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 6, 2023
Application Type and Number:	NDA 214511
Product Name and Strength:	Lumisight (pegulicanine) For Injection, 40 mg/vial
Product Type:	Single Ingredient Product
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	Lumicell, Inc. (Lumicell)
PNR ID #:	2023-1044725065
DMEPA 2 Safety Evaluator:	Devin Kane, PharmD
DMEPA 2 Acting Team Leader:	Stephanie DeGraw, PharmD
DMEPA 2 Director:	Danielle Harris, PharmD

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1 INTRODUCTION

This review evaluates the proposed proprietary name, Lumisight, 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. Lumicell submitted an external name study, conducted by [REDACTED] (b) (4) for this proposed proprietary name. The submitted external name study was previously reviewed under NDA 214511 (see PNR ID No. 2020-39901751).

1.1 REGULATORY HISTORY

Lumicell previously submitted the proposed proprietary name, Lumisight*** under NDA 214511 on May 11, 2020 as part of a rolling submission. On July 31, 2020, the proposed proprietary name, Lumisight***, was found conditionally acceptable.^a

Due to the length of time that passed since our previous review, Lumicell resubmitted the name, Lumisight, for review on March 29, 2023 under NDA 214511 along with the remainder of the marketing application for this NDA.

1.2 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on March 29, 2023.

- Intended Pronunciation: loo' mi site
- Active Ingredient: pegulicianine
- Indication of Use: For use in patients with breast cancer to assist in the detection of cancerous tissue within the lumpectomy cavity following removal of the primary specimen during lumpectomy surgery. LUMISIGHT is used with Lumicell Direct Visualization System (DVS) for fluorescence imaging of the lumpectomy cavity.
- Route of Administration: Intravenous
- Dosage Form: For Injection
- Strength: 40 mg/vial
- Dose and Frequency: 1 mg/kg administered as a single intravenous [REDACTED] (b) (4) dose 2 to 6 hours prior to surgery.
- How Supplied: Provided in a clear, glass vial which contains 40 mg of pegulicianine. It is supplied in a carton containing 10 vials.
- Storage: [REDACTED] (b) (4)
Store in original carton to protect from light. After reconstitution with 0.45% saline (4.0 mL for 40 mg vials), LUMISIGHT is stable for 4 hours at room temperature, or 24 hours

^a Kane, D. Proprietary Name Review for Lumisight (NDA 214511). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2020 JUL 31. PNR ID No. 2020-39901751.

when stored refrigerated between 2°C and 8°C.

(b) (4)

2 RESULTS

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Lumisight would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis 2 (DMEPA 2) and the Division of Medical Imaging and Radiation Medicine (DIRM) concurred with the findings of OPDP's assessment for Lumisight.

2.2 SAFETY ASSESSMENT

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

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*

Lumicell indicated in their submission that the proposed proprietary name, Lumisight, is derived from "LUMI" for luminescence, and "SIGHT" from insight. 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 can contribute to medication error.

2.2.3 *Comments from Other Review Disciplines at Initial Review*

On April 12, 2023, the Division of Medical Imaging and Radiation Medicine (DIRM) did not forward any comments or concerns relating to Lumisight at the initial phase of the review.

2.2.4 *FDA Name Simulation Studies*

Seventy-six (76) practitioners participated in DMEPA's prescription studies for Lumisight. In the voice study, one participant misinterpreted Lumisight as 'Lumasite', which is a close variation to the currently marketed product, Lumason. Given the response in the FDA Name Simulation Study, we evaluate the name pair, Lumisight vs. Lumason, below:

Lumisight vs. Lumason:

Orthographically, the names are different lengths (9 vs. 7 letters). Additionally, the suffixes give the names different shapes when written. Specifically, the downstroke from the letter 'g' in the seventh position and the upstrokes from the letters 'h' and 't' in the eighth and ninth positions of Lumisight provide some differences not seen in Lumason, which contains no upstroke or

^b USAN stem search conducted on April 24, 2023.

downstroke letters. Phonetically, the third syllables (site vs. zon) sound different. Further, FDA’s Phonetic and Orthographic Computer Analysis (POCA) program^c calculates a combined orthographic and phonetic score of 54%, suggesting that there is low similarity between these names.

Although both Lumisight and Lumason are both single strength products (40 mg/vial vs. 25 mg/vial), where the strength may be omitted on a prescription order, and share the same dosage form (for injection) and similarity in the route of administration (intravenous vs. intravenous or intravesical), this name pair differs based on recommended dose (1 mg/kg vs. 1 mL to 2 mL), which would need to be specified on an order and provides additional differentiation of the pair. Thus, the risk of name confusion between the name pair is minimized. We evaluate the name pair in Appendix F.

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 22 names with the combined score of $\geq 55\%$ or individual orthographic or phonetic score of $\geq 70\%$. We had identified and evaluated some of the names in our previous proprietary name review. We re-evaluated the previously identified names of concern considering any lessons learned from recent post-marketing experience, which may have altered our previous conclusion regarding the acceptability of the name. We note that none of the product characteristics have changed and we agree with the findings from our previous review for the names evaluated previously. Therefore, we identified 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 FDA Prescription Simulation Study. These name pairs are organized as highly similar, moderately similar or low similarity for further evaluation.

Table 1. Names Retrieved for Review Organized by Name Pair Similarity	
Similarity Category	Number of Names
Highly similar name pair: combined match percentage score $\geq 70\%$	0
Moderately similar name pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$	4
Low similarity name pair: combined match percentage score $\leq 54\%$	1

^c POCA search conducted on May 18, 2023 in version 5.2.

^d POCA search conducted on March 30, 2023 in version 5.2.

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 Lumisight as described in Appendices C through H.

2.2.8 Communication of DMEPA's Determination

On June 6, 2023, DMEPA 2 communicated our determination to the Division of Medical Imaging and Radiation Medicine (DIRM).

3 CONCLUSION

The proposed proprietary name, Lumisight, is conditionally acceptable.

If you have any questions or need clarifications, please contact Tri Bui Nguyen, OSE project manager, at (240)-402-3726.

3.1 COMMENTS TO LUMICELL, INC.

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

If any of the proposed product characteristics as stated in your submission, received on March 29, 2023, 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 DNNDP. OPDP or DNNDP 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 DNNDP 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. [°]

[°] 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, Cerner RxNorm, and names in the review pipeline using a 55% threshold in POCA. DMEPA reviews the combined orthographic and phonetic matches and group the names into one of the following three categories:

- Highly similar pair: combined match percentage score $\geq 70\%$.
- Moderately similar pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$.

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

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

- For highly similar names, differences in product characteristics often cannot mitigate the risk of a medication error, including product differences such as strength and dose. Thus, proposed proprietary names that have a combined score of ≥ 70 percent are at risk for a look-alike sound-alike confusion which is an area of concern (See Table 3).
- Moderately similar names are further evaluated to identify the presence of attributes that are known to cause name confusion.
 - Name attributes: We note that the beginning of the drug name plays a significant role in contributing to confusion. Additionally, drug name pairs that start with the same first letter and contain a shared letter string of at least 3 letters in both names are major contributing factor in the confusion of drug names^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 a low similarity name to the moderate similarity category and review according to the moderately similar name pair checklist.

^f 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.

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

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

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

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

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

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

Step 1	Review the DOSAGE AND ADMINISTRATION and HOW SUPPLIED/STORAGE AND HANDLING sections of the prescribing information (or for OTC drugs refer to the Drug Facts label) to determine if strengths and doses of the name pair overlap or are very similar. Different strengths and doses for products whose names are moderately similar may decrease the risk of confusion between the moderately similar name pairs. Name pairs that have overlapping or similar strengths or doses have a higher potential for confusion and should be evaluated further (see Step 2). Because the strength or dose could be used to express an order or prescription for a particular drug product, overlap in one or both of these components would be reason for further evaluation. For single strength products, also consider circumstances where the strength may not be expressed. For any i.e., drug products comprised of more than one active ingredient, consider whether the strength or dose may be expressed using only one of the components. To determine whether the strengths or doses are similar to your proposed product, consider the following list of factors that may increase confusion: • Alternative expressions of dose: 5 mL may be listed in the prescribing information, but the dose may be expressed in metric weight (e.g., 500 mg) or in non-metric units (e.g., 1 tsp, 1 tablet/capsule). Similarly, a strength or dose of 1000 mg may be expressed, in practice, as 1 g, or vice versa. • Trailing or deleting zeros: 10 mg is similar in appearance to 100 mg which may potentiate confusion between a name pair with moderate similarity. • Similar sounding doses: 15 mg is similar in sound to 50 mg
Step 2	Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may reduce the likelihood of confusion for moderately similar names 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 <i>z</i> and <i>f</i>), 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 as 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. Lumisight Study (Conducted on April 7, 2023)

Handwritten Medication Order/Prescription	Verbal Prescription
Medication Order: <i>Lumisight Inject 1mg/kg via peripheral intravenous injection over 3 minutes</i>	Lumisight Bring to Clinic #1
Outpatient Prescription: Patient _____ Date <u>4-7-23</u> Address _____ R <i>Lumisight</i> <i>Bring to clinic</i> <i>#1</i>  Refill(s): _____ Dr. <u>OSE</u> DEA No. _____ Address _____ Telephone _____	
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
Lumisight	

FDA Prescription Simulation Responses (Aggregate Report)

Study Name: Lumisight

258 People Received Study

76 People Responded

INTERPRETATION	INPATIENT	CPOE	VOICE	OUTPATIENT	TOTAL
FEMISIGHT	0	0	0	1	1
LUMACITE	0	0	2	0	2
LUMACYTE	0	0	2	0	2
LUMASITE	0	0	1	0	1
LUMESITE	0	0	1	0	1
LUMICITE	0	0	1	0	1
LUMICYTE	0	0	5	0	5
LUMISCITE	0	0	1	0	1
LUMISIGHT	18	16	1	24	59
LUMISITE	0	0	2	0	2
LUNACYTE	0	0	1	0	1

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

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

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

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg administered as a single intravenous ^{(b)(4)} dose 2 to 6 hours prior to surgery	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.	Lumasiran established name for Oxlumio, NDA 214103	61	Orthographically, the suffixes give the names different shapes when written. Specifically, the downstroke from the letter “g” in the seventh position, the upstroke from the letter “h” in the eighth position, and the upstroke from the letter “t” in the ninth position of Lumisight provide some differences not seen in Lumasiran, which contains no downstroke or upstroke letters. Phonetically, Lumisight is comprised of 3 syllables whereas Lumasiran is comprised of 4 syllables. The ending syllables (site vs. ran) sound different. Although both Lumisight and Lumasiran are single strength products (40 mg/vial vs. 94.5 mg/0.5 mL), where the strength may be omitted on a prescription order, and share similarity in dosage form (for injection vs. injection), this name pair differs in route of administration (intravenous vs. subcutaneous), recommended dosage (1 mg/kg vs. 3 mg/kg or 6 mg/kg) and frequency of administration (once vs. once monthly or every 3 months). Thus, the risk of name confusion between the name pair is minimized.

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

No.	Name	POCA Score (%)
1.	Lumason	54

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.	Luviset 360	60	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
2.	(b) (4) ***	58	(b) (4)

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

No.	Name	POCA Score (%)
1.	Baltusssin Hc	56

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

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/s/

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PROPRIETARY NAME REVIEW

Division of Medication Error Prevention and Analysis (DMEPA)
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Panorama #:	2020-39901751
DMEPA Safety Evaluator:	Devin Kane, PharmD
DMEPA Team Leader:	Hina Mehta, PharmD

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1 INTRODUCTION

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1.1 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on May 11, 2020.

- Intended Pronunciation: loo' mi site
- Active Ingredient: pegulicianine
- Indication of Use: (b) (4)
- Route of Administration: Intravenous (b) (4) injection
- Dosage Form: For Injection
- Strength: 40 mg/vial
- Dose and Frequency: Administer 1 mg/kg as a single intravenous (b) (4) dose prior to surgery.
- How Supplied: The product will be provided in a clear 10cc vial with flip off cap. (b) (4)
- Storage: The product should be stored (b) (4) and protected from light. After reconstitution, protect from light (b) (4)

2 RESULTS

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Lumisight would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis (DMEPA) and the Division of Medical Imaging and Radiation Medicine (DMIRM) concurred with the findings of OPDP's assessment for Lumisight.

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

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

2.2.2 Components of the Proposed Proprietary Name

Lumicell indicated in their submission that the proposed proprietary name, Lumisight, is comprised of ‘Lumi’ from luminescence and ‘Sight’ from insight. 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, May 22, 2020 e-mail, the Division of Medical Imaging and Radiation Medicine (DMIRM) did not forward any comments or concerns relating to Lumisight at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

Eighty-three (83) practitioners participated in DMEPA’s prescription studies for Lumisight. 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 18 names with a combined phonetic and orthographic score of $\geq 55\%$ or an individual phonetic or orthographic score $\geq 70\%$. 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 $\geq 70\%$	1
Moderately similar name pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$	17
Low similarity name pair: combined match percentage score $\leq 54\%$	3

^a USAN stem search conducted on June 10, 2020.

^b POCA search conducted on May 14, 2020 in version 4.3.

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

Our analysis of the 21 names contained in Table 1 determined none of the names will pose a risk for confusion with Lumisight 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 Medical Imaging and Radiation Medicine (DMIRM) via e-mail on July 24, 2020. At that time we also requested additional information or concerns that could inform our review. Per e-mail correspondence from the Division of Medical Imaging and Radiation Medicine (DMIRM) on July 31, 2020, they stated no additional concerns with the proposed proprietary name, Lumisight.

3 CONCLUSION

The proposed proprietary name, Lumisight, is acceptable.

If you have any questions or need clarifications, please contact Tri Bui Nguyen, OSE project manager, at (240)-402-3726.

3.1 COMMENTS TO LUMICELL, INC.

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

If any of the proposed product characteristics as stated in your submission, received on May 11, 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 $\geq 70\%$.
 - Moderately similar pair: combined match percentage score $\geq 55\%$ to $\leq 69\%$.
 - Low similarity: combined match percentage score $\leq 54\%$.

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

- For highly similar names, differences in product characteristics often cannot mitigate the risk of a medication error, including product differences such as strength and dose. Thus, proposed proprietary names that have a combined score of ≥ 70 percent are at risk for a look-alike sound-alike confusion which is an area of concern (See Table 3).
- Moderately similar names are further evaluated to identify the presence of attributes that are known to cause name confusion.
 - Name attributes: We note that the beginning of the drug name plays a significant role in contributing to confusion. Additionally, drug name pairs that start with the same first letter and contain a shared letter string of at least 3 letters in both names are major contributing factor in the confusion of drug names^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 $\geq 70\%$).

Answer the questions in the checklist below. Affirmative answers to some of these questions suggest that the pattern of orthographic or phonetic differences in the names may render the names less likely to confusion, provided that the pair does not share a common strength or dose.

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

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

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

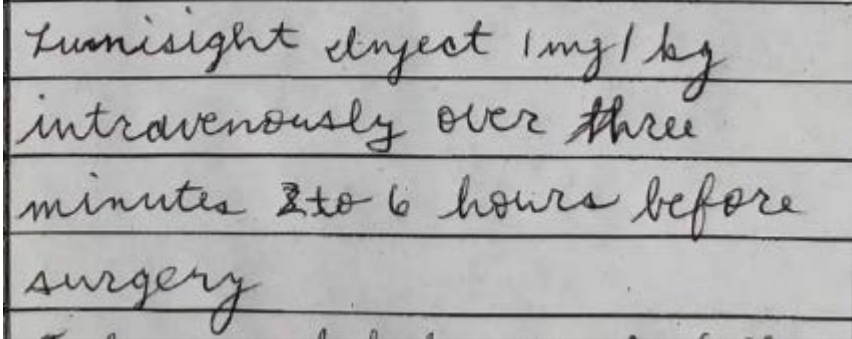
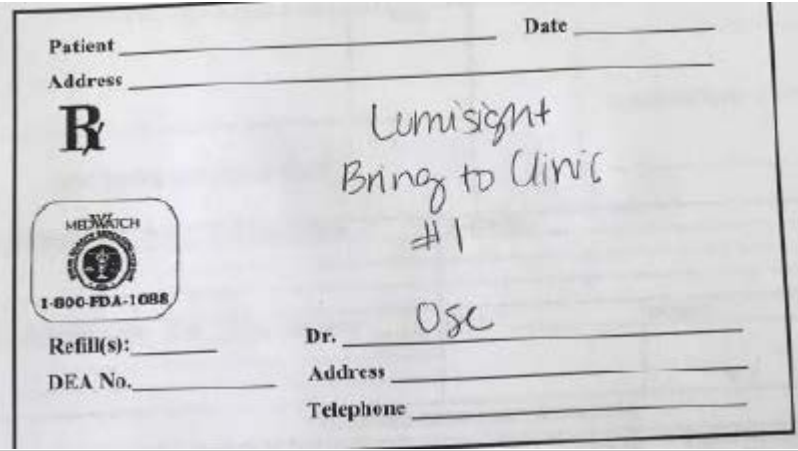
	Orthographic Checklist (Y/N to each question) • Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. • Are the lengths of the names dissimilar* when scripted? *FDA considers the length of names different if the names differ by two or more letters. • Considering variations in scripting of some letters (such as <i>z</i> and <i>f</i>), 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 as 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. Lumisight Study (Conducted on May 21, 2020)

Handwritten Medication Order/Prescription	Verbal Prescription
Medication Order: 	Lumisight Bring to Clinic #1
Outpatient Prescription: 	
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
Lumisight	

FDA Prescription Simulation Responses (Aggregate Report)

	208 People Received Study 83 People Responded					
	Study Name: Lumisight					
	Total	28	18	13	24	
	INTERPRETATION	OUTPATIENT	CPOE	VOICE	INPATIENT	TOTAL
	LEMISIGHT	2	0	0	0	2
	LULICITE	0	0	1	0	1
	LUMICITE	0	0	4	0	4
	LUMICYTE	0	0	3	0	3
	LUMISIGHT	24	18	0	19	61
	LUMISIGHT INJECT	0	0	0	1	1
	LUMISIGHTS INJECT	0	0	0	1	1
	LUMISIGNT	2	0	0	0	2
	LUMISITE	0	0	2	0	2
	LUNACYT	0	0	1	0	1
	LUNISIGHT	0	0	0	3	3
	MULACITE	0	0	1	0	1
	NUMOCYTE	0	0	1	0	1

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

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	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.	Lumisight***	100	Name being evaluated by study.

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

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

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	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
2.	Flumist 2015-2016	64 O=78	This name pair has sufficient orthographic and phonetic differences.
3.	Humist	55 O=77	This name pair has sufficient orthographic and phonetic differences.
4.	Kleersight	66	Orthographically, the prefix ('Klee' vs. 'Lum') provide sufficient orthographic differences. Additionally, the extra upstroke from the letter 'l' in Kleersight provides some difference. Phonetically, Kleersight is comprised of two syllables, whereas Lumisight is comprised of three syllables. The first syllables ('Kleer-' vs. 'Lum-') do not overlap. We note that Kleersight is an over the counter product and does not contain a

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	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
			strength, while Lumisight is a single strength product where the strength may be omitted on a prescription order. This name pair differs in dosage form (ophthalmic solution <i>versus</i> injection), and route of administration (ophthalmically <i>versus</i> intravenous). We note that Kleersight is available over the counter as an eyewash preservative to be placed in a station and is not administered directly. There is no dose for Kleersight. Additionally, we note Lumisight is a radiopharmaceutical available by prescription only for imaging purposes, and is limited to specialized handling, preparation, and dispensing. The setting of use of these two products in the medication use process differ.
5.	Lamisil	55	Orthographically, the suffix ('sil' vs 'sight') provide sufficient orthographic differences. Phonetically, third syllables ('sil' vs. 'sight') provide some differences. Although both products are similar in their frequency (once daily <i>versus</i> once), this name pair differ in dosage form (tablet or topical cream <i>versus</i> injection), route of administration (orally or topically <i>versus</i> intravenous), and strength (1% and 250 mg <i>versus</i> 40 mg/vial).
6.	Lamisil At	64	Orthographically, the suffix ('sil' vs 'sight') provide sufficient orthographic differences. Also, we note the presence

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	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
			of the modifier ‘At’ in Lamisil At which provides some difference not seen with Lumisight. Phonetically, Lamisil At is comprised of 5 syllables, whereas Lumisight is comprised of 3 syllables. The third syllables (‘sil’ vs. ‘sight’) provide some differences. Although both products are single strength products, this name pair differ in dosage form (topical gel, topical cream, topical solution, topical spray <i>versus</i> injection), route of administration (topically <i>versus</i> intravenously), dose (apply topically <i>versus</i> 1 mg/kg), and frequency (once to twice daily <i>versus</i> 2 to 6 hours before surgery). Thus, these product characteristic differences provide additional differentiation if included on a prescription.
7.	Lithostat	48	This name pair has sufficient orthographic and phonetic differences.
8.	Lotensin Hct	57	This name pair has sufficient orthographic and phonetic differences.
9.	(b) (4) ***	56	(b) (4)

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	POCA Score (%)	Prevention of Failure Mode In the conditions outlined below, the following combination of factors, are expected to minimize the risk of confusion between these two names
			(b) (4)
10.	(b) (4) ***	60	
11.	Lumigan	54	Orthographically, the suffix ('gan' vs 'sight') provide sufficient orthographic

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	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
			differences. Additionally, the upstrokes from the letters ‘h’ and ‘t’ in Lumisight provide some differences. Phonetically, the third syllables (‘gan’ vs. ‘sight’) do not sound-alike. Although these products share numerical similarities in frequency of administration (once per day <i>versus</i> once) and dose (1 drop <i>versus</i> 1 mg/kg), the name pair do not overlap in strength (0.01% or 0.03% <i>versus</i> 40 mg/vial), dosage form (ophthalmic solution <i>versus</i> injection), or route of administration (ophthalmically <i>versus</i> intravenous). A strength for Lumigan would be needed on a prescription for dispensing, thus provide additional differentiating product characteristics that would prevent name confusion with Lumisight.
12.	Lumoxiti	58	Orthographically, the suffix (‘xiti’ vs ‘sight’) provide sufficient orthographic differences. Phonetically, Lumoxiti is comprised of 4 syllables, whereas Lumisight is comprised of 3 syllables. The second (‘mox’ vs. ‘mi’) and third syllables (‘i’ vs. ‘sight’) do not sound-alike. Although these products share the same dosage form (injection) and are single strength (1 mg/vial <i>versus</i> 40 mg/vial), the name pair do not overlap in dose and frequency (0.04

No.	Proposed name: Lumisight Established name: pegulicianine Dosage form: For Injection Strength(s): 40 mg/vial Usual Dose: 1 mg/kg intravenously over three minutes 2 to 6 hours before surgery.	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
			mg/kg/dose on days 1, 3, and 5 of each 28-day cycle <i>versus</i> 1 mg/kg administered intravenously 2 to 6 hours before surgery).
13.	Olumiant	56	This name pair has sufficient orthographic and phonetic differences.

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

No.	Name	POCA Score (%)
14.	Lumify	52

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
15.	Flunisin	55	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
16.	(b) (4)***	56	Proposed proprietary name for NDA 213227 was formerly withdrawn by Sponsor on January 3, 2020. Sponsor submitted the proprietary name DetectNET*** under NDA 213227 on June 3, 2020, and this is currently under review by the agency.
17.	Libetist	57	International drug product formerly marketed in United Kingdom.
18.	Liquitussin Hc	56	Name identified in RxNorm database. Per Redbook, drug product is deactivated with no generic equivalents available.

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 (%)
19.	Baltussin Hc	56
20.	Ditussin-Hc	56
21.	Iotussin Hc	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

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/s/

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