CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

213536Orig1s000

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:	11/9/2020
Application Type and Number:	NDA 213536
Product Name and Strength:	Rezipres (Ephedrine hydrochloride) injection, 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL
Total Product Strength:	23mg/5ml, 47mg/5ml & 47mg/ml
Product Type:	Single Ingredient Product
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	Sintetica
Panorama #:	2020-42284810
DMEPA Safety Evaluator:	Sofanit Getahun, PharmD. BCPS.
DMEPA Team Leader:	Otto L. Townsend, PharmD

Contents

1 INTRODUCTION

This review evaluates the proposed proprietary name, Rezipres, 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. Sintetica did not submit an external name study for this proposed proprietary name.

1.1 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on August 18, 2020.

- Intended Pronunciation: REZ-I-PRES, or [REH-ZUH-PRES]
- Active Ingredient: Ephedrine hydrochloride
- Indication of Use: treatment of clinically important hypotension occurring in the setting of anesthesia
- Route of Administration: intravenous
- Dosage Form: injection
- Strength: 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL
- Dose and Frequency: single administration
- How Supplied:
    - Single-use ampoule of 23.5mg/5mL (4.7mg/mL) in carton boxes of 10 ampoules
    - Single-use ampoule of 47mg/5mL (9.4mg/ml) in carton boxes of 10ampoules
    - Single-use ampoule of 47mg/ml in carton boxes of 10 ampoules
- Storage: 20 ^{o}C to 25 ^{o}C (68 ^{o}F to 77 ^{o}F); excursions permitted to 15 ^{o}C to 30 ^{o}C (59 ^{o}F to 86 ^{o}F [see USP Controlled Room Temperature].

2 RESULTS

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Rezipres would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis (DMEPA) and the Division of Anesthesiology, Addiction Medicine, and Pain Medicine (DAAP) concurred with the findings of OPDP's assessment for Rezipres.

2.2 SAFETY ASSESSMENT

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

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

Sintetica indicated in their submission that the proposed proprietary name, "Rezipres, is a name that comes from the combination of the words "REZI" + "PREZ", where the word "REZI" is derived from the word resistance and the word "Pres" comes from "Pressor" (the type of pharmacological agent)." This proprietary name is comprised of a single word. We note that the proposed name REZIPRES contains the letter string '-ip-' which is an abbreviation for the route of administration, intraperitoneal. We typically discourage the inclusion of medical abbreviations in proprietary names. However, if a prescription was written for, Rezipres, we determined that the location of the letter string embedded in the middle of the name is unlikely to be separated from the surrounding letters in a manner that could lead to confusion in this case. Beyond this abbreviation, REZIPRES 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, September 11, 2020 e-mail, the Division of Anesthesiology, Addiction Medicine, and Pain Medicine (DAAP) did not forward any comments or concerns relating to Rezipres at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

84 practitioners participated in DMEPA's prescription studies for Rezipres. One participant in the verbal simulation study interpreted the name as 'VASOPRESS'. There is not a product currently marketed as Vasopress; however, Vasopress is similar to the currently marketed product vasopressin. Vasopressin was also one of the names that was in our POCA search results. See section Appendix D for our assessment. 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 199 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.

[a] USAN stem search conducted on October 1, 2020.

[b] POCA search conducted on September 17, 2020 in version 4.4.

2.2.6 Names Retrieved for Review Organized by Name Pair Similarity

Table 1 lists the number of names retrieved from our POCA search. 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%	7
Moderately similar name pair: combined match percentage score ≥55% to ≤ 69%	188
Low similarity name pair: combined match percentage score ≤54%	4

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

Our analysis of the 199 names contained in Table 1 determined none of the names will pose a risk for confusion with Rezipres 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 Anesthesiology, Addiction Medicine, and Pain Medicine (DAAP) via e-mail on October 29, 2020. At that time, we also requested additional information or concerns that could inform our review. Per e-mail correspondence from the Division of Anesthesiology, Addiction Medicine, and Pain Medicine (DAAP) on November 6, 2020, they stated no additional concerns with the proposed proprietary name, Rezipres.

3 CONCLUSION

The proposed proprietary name, Rezipres, is acceptable.

If you have any questions or need clarifications, please contact Tamika White, OSE project manager, at 301-796-0310.

3.1 COMMENTS TO SINTETICA

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

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

[d] 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.

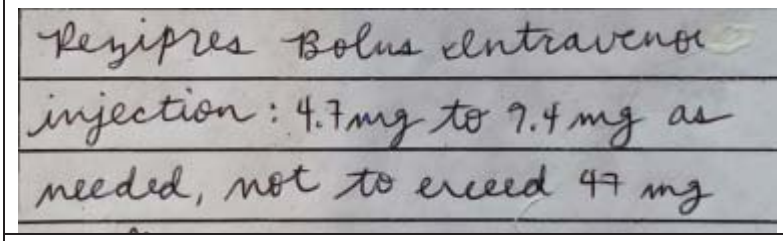
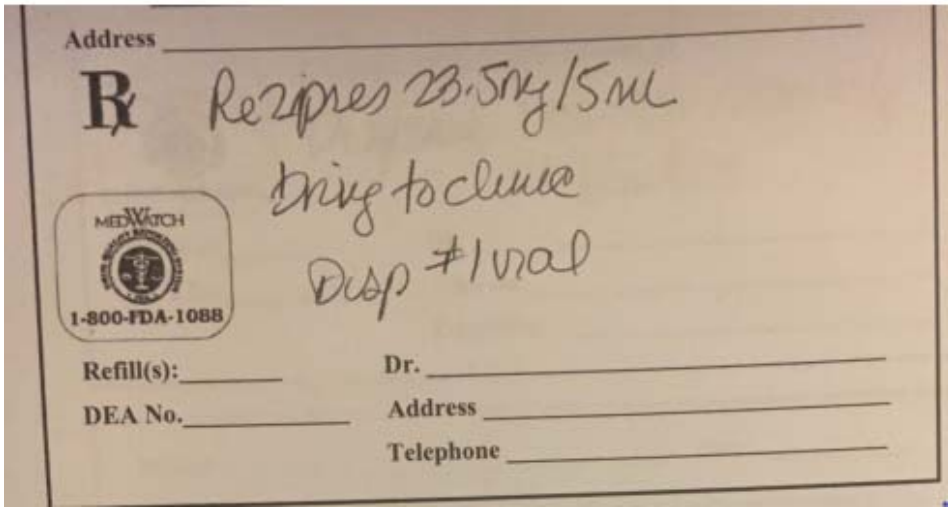
	Orthographic Checklist (Y/N to each question) • Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. • Are the lengths of the names dissimilar* when scripted? *FDA considers the length 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. Rezipres Study (Conducted on September 15, 2020)

Handwritten Medication Order/Prescription	**Verbal Prescription**
Medication Order:  	Rezipres Bolus Intravenous injection: 4.7mg to 9.4mg as needed, not to exceed 47mg
Outpatient Prescription:  	
CPOE Study Sample (displayed as sans-serif, 12-point, bold font)	
REZIPRES	

FDA Prescription Simulation Responses (Aggregate Report)

Study Name: Rezipres
As of Date 10/4/2020

208 People Received Study
84 People Responded

Study Name: Rezipres

Total	17	29	20	18	
INTERPRETATION	**OUTPATIENT**	**CPOE**	**VOICE**	**INPATIENT**	**TOTAL**
PEYIPRES	0	0	0	1	1
RESAPRES	0	0	3	0	3
RESAPRESS	0	0	2	0	2
RESEPRES	0	0	1	0	1
RESIPRES	0	0	3	0	3
RESIPRESS	0	0	1	0	1
RESOPRESS	0	0	2	0	2
RESUPRESS	0	0	1	0	1
REYIPRES	0	0	0	2	2
REYIPRES BOLUS INTRAVENOUS INJECTION	0	0	0	1	1
REZAPRESS	0	0	2	0	2
REZIPRES	17	29	1	12	59
REZIPRES BOLUS IV	0	0	0	1	1
REZIPRESS	0	0	3	1	4
VASOPRESS	0	0	1	0	1

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

No.	**Proposed name:** Rezipres **Established name:** Ephedrine hydrochloride **Dosage form:** injection **Strength(s):** 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL **Usual Dose:** Bolus intravenous injection: 4.7 to 9.4 mg as needed, not to exceed 47mg	**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.	Rezipres	100	Name is subject of this review
2.	Rezipas	82	Rezipas was the proprietary name for aminosalicylic acid resin complex oral powder. However, the brand has been discontinued with no generic equivalents available NDA 009052 withdrawn FR effective 09/13/2000.
3.	E-Z Prep	70	There are sufficient orthographic and phonetic differences between the name pair. The names begin with different first letter (R- vs. E-). The placement of downstroke letters ‘z’ and ‘p’ in each name is different. In Rezipres, the ‘z’ is in the third position and the ‘p’ is in the fifth position. However, in E-Z Prep, the ‘z’ is in the second position and the first ‘p’ is in the third position. Furthermore, E-Z Prep contains an additional ‘p’ in the sixth and final position of the name. The names also differ in length (8 vs. 6 letters). These provide sufficient orthographic differences. Phonetically first syllables (rez or reh vs. ee) and third syllables (pres vs prep) provide sufficient phonetic differences.
4.	E-Z Prep 220	70	The names begin with different first letter (R- vs. E-). The placement of downstroke letters ‘z’ and ‘p’ in each name is different. In Rezipres, the ‘z’ is in the third position and the ‘p’ is in the fifth position. However, in E-Z Prep, the ‘z’ is in the second position and the first ‘p’ is in the third position. Furthermore, E-Z Prep contains an

No.	**Proposed name:** Rezipres **Established name:** Ephedrine hydrochloride **Dosage form:** injection **Strength(s):** 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL **Usual Dose:** Bolus intravenous injection: 4.7 to 9.4 mg as needed, not to exceed 47mg	**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.**
			additional 'p' in the sixth and final position of the name. The names also differ in length (8 vs. 6 letters). In addition, E-Z Prep 220 contains the modifier "220" making the pair look different when written, if included. Phonetically first syllables (rez or reh vs. ee) and third syllables (pres vs prep) provide sufficient phonetic differences. In addition, E-Z Prep 220 contains the modifier "220" making the pair sound different, if included.
5.	Minipress	70	There are sufficient orthographic and phonetic differences between the name pair. Orthographically the prefixes (Rez- vs. Min-), provide the pair sufficient orthographic differences. Phonetically the first syllable (rez vs. mi) provide the name pair sufficient phonetic differences. In addition, the products differ in strength and dose. The strength of Rezipres is 23.5 mg/5 mL (4.7 mg/mL), 47 mg/5 mL (9.4 mg/mL) and 47 mg/mL vs. Minipress 1mg, 2mg and 5mg. The dosage of Rezipres is 4.7 mg to 9.4 mg vs. Minipress 1 capsule or 1 mg, 2 mg, and 5 mg. There is no overlap in strength and/or dose. When all of the aforementioned mitigations are considered in totality, we find the risk of name confusion is adequately minimized in this case.

No.	**Proposed name:** Rezipres **Established name:** Ephedrine hydrochloride **Dosage form:** injection **Strength(s):** 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL **Usual Dose:** Bolus intravenous injection: 4.7 to 9.4 mg as needed, not to exceed 47mg	**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.**
6.	Reditrex	70	There are sufficient orthographic and phonetic differences between the name pair. Orthographically, the upstroke of the letter "d" included in Red- vs. no upstroke letters in Rez and the infix (the downstroke in letter "p" included in -ip- vs. the upstroke in letter "t" included in -it-) provide sufficient orthographic differences. Phonetically the first syllable (Rez or Reh vs Red) and the third syllable (pres vs. treks), provide sufficient phonetic differences. Furthermore, there are differences in strength and dose: The strength of Rezipres is 23.5 mg/5 mL (4.7 mg/mL), 47 mg/5 mL (9.4 mg/mL)and 47mg/mL vs. Reditrex 7.5mg/0.3mL, 10mg/0.4mL, 12.5mg/0.5mL, 15mg/0.6mL, 17.5mg/0.7mL, 20mg/0.8mL, 22.5mg/0.9mL and 25mg/mL. The dose of Rezipres is 4.7 mg to 9.4 mg vs. 7.5mg, 10mg, 12.5mg, 15mg, 17.5mg, 20mg, 22.5mg and 25mg. There is no numeric overlap between dose and/or strength.
7.	Tussi Press	70	There are sufficient orthographic and phonetic differences between the name pair. Orthographically, the first letters (R- vs. T-), the infixes (the downstroke of the letter z (if scripted as such), and the -ss- in the infix and -ss at the end of Tussi Press lengthens the name (10 letters vs. 7 letters) which provide sufficient orthographic differences. In

No.	**Proposed name:** Rezipres **Established name:** Ephedrine hydrochloride **Dosage form:** injection **Strength(s):** 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL **Usual Dose:** Bolus intravenous injection: 4.7 to 9.4 mg as needed, not to exceed 47mg	**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.**
			addition, if Tussi Press is written as two words, this would make the pair look different. Phonetically the first syllables (rez or reh vs. tuh) provide sufficient phonetic differences.

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

No.	Name	POCA Score (%)
1.	Bet-R-Prep	58
2.	Breztri	62
3.	Catapres	60
4.	Cleviprex	62
5.	Clopres	63
6.	Daliresp	56
7.	Depopred	58
8.	Diaprex	58
9.	Docefrez	56
10.	Duraprep	58
11.	Enpresse - 21	62
12.	Enpresse - 28	62
13.	(b) (4)***	60
14.	Ferriprox	58
15.	Giapreza	55
16.	Grazoprevir	58
17.	Isentress	64
18.	Isuprel	61
19.	Medipred	66
20.	Medipren	63
21.	Mifeprex	58
22.	Millipred	58
23.	Moviprep	62
24.	Nitropress	60
25.	Ocupress	58

26.	Pediapred	59
27.	Perseris	62
28.	Pitressin	55
29.	Predicort – 50	56
30.	(b) (4)***	57
31.	Previfem	55
32.	Prevymis	61
33.	Prezista	61
34.	Ramipril	62
35.	Reclipsen	60
36.	Redisol	55
37.	Refresh Plus	55
38.	Refresh Pm	56
39.	Regimex	56
40.	Reopro	55
41.	Rephresh Pro-B	57
42.	Repronex	55
43.	Resicort	64
44.	Respa – Br	57
45.	Respillin	56
46.	Respiram	64
47.	Respirol	64
48.	Restasis	62
49.	Restoril	58
50.	Retacrit	61
51.	Retisert	62
52.	Reversol	56
53.	Rev-Eyes	60
54.	Rezamid	58
55.	Rezira	66
56.	Rezurock***	60
57.	Rhinaris	56
58.	Rhopressa	62
59.	Ridiprin	68
60.	Risperdal	56
61.	(b) (4)***	55
62.	Rose Hips	61
63.	Rose Hips C	55
64.	Roweepra	56
65.	Rozerem	58
66.	Rozlytrek	59
67.	(b) (4)***	57
68.	(b) (4)***	60
69.	Saizenprep	60
70.	Seb-prev	62

71.	Soluprep	56
72.	Sterapred	56
73.	Sterapred Ds	56
74.	Suprep	56
75.	Terlipressin	58
76.	Trezix	60
77.	Tussi pres B	63
78.	Tussi-pres Pe	58
79.	Vasopressin	56
80.	Veripred	69
81.	Zortress	62
82.	Zyprexa	58

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:** Rezipres **Established name:** Ephedrine hydrochloride **Dosage form:** injection **Strength(s):** 23.5 mg/ 5mL (4.7 mg/mL), 47mg/5 mL (9.4mg/mL) and 47mg/mL **Usual Dose:** Bolus intravenous injection: 4.7 to 9.4 mg as needed, not to exceed 47mg	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.	Reteplase	63	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.	Pripsen	52
2.	Precise	53
3.	(b) (4)***	54
4.	Rezine	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.	(b) (4) ***	59	Proposed proprietary name for NDA 208791 found unacceptable by DMEPA (OSE# 2016-9839697 dated 11/9/2016). NDA 208791 approved under the proprietary name Clorotekal.
2.	Argipressin	62	International product marketed in several foreign countries, currently marketed in Poland, Switzerland, Czech Republic, Netherlands, Germany and Australia. Formerly Marketed in United Kingdom, New Zealand, Ireland, German
3.	Cetapred	58	Brand discontinued with no generic equivalents available. ANDA 087771 withdrawn FR effective 7/21/2017.
4.	Combipres	60	Brand discontinued with no generic equivalents available. NDA 017503 withdrawn FR effective 09/07/2013.
5.	Diupres	66	Brand discontinued with no generic equivalents available. NDA -011635 withdrawn FR effective 06/18/2009.
6.	Diupres-250	66	Brand discontinued with no generic equivalents available. NDA -011635 withdrawn FR effective 06/18/2009.
7.	Diupres-500	66	Brand discontinued with no generic equivalents available. NDA -011635 withdrawn FR effective 06/18/2009.
8.	Epipram	56	Name identified in RxNorm database. Unable to find product characteristics in commonly used databases.
9.	(b) (4) ***	60	Proposed proprietary name for IND (b) (4) found unacceptable by DMEPA (OSE# (b) (4)). No new proposed proprietary name
10.	Felypressin	57	International product marketed in several foreign countries, currently marketed in Singapore, Denmark, Finland, Norway, Sweden, Netherlands, New Zealand, United Kingdom, Brazil, and Mexico
11.	Fleet Ez-prep	56	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
12.	Hydropres	56	Brand discontinued with no generic equivalents available. NDA-011958, withdrawn FR Effective 09/17/2003

No.	Name	POCA Score (%)	Failure preventions
13.	Hydropres 25	56	Brand discontinued with no generic equivalents available. NDA-011958, withdrawn FR Effective 09/17/2003
14.	Hydropres 50	56	Brand discontinued with no generic equivalents available. NDA-011958, withdrawn FR Effective 09/17/2003
15.	Isoprene	58	Product is not a drug. It is a chemical compound
16.	(b) (4) ***	56	Proposed proprietary name for NDA 210428 found unacceptable by DMEPA (OSE #2017-16330472 dated 10/10/2017). NDA 210428 approved under the proprietary name Kapspargo Sprinkle
17.	Lypressin	55	Brand discontinued with no generic equivalents available. NDA 016755, withdrawn FR Effective 03/20/2000
18.	Mallopress	57	Name identified in Rx Norm Database. Product is deactivated and no generic equivalent are available.
19.	Marpres	62	Name identified in RxNorm Database. Product is deactivated and no generic equivalents are available.
20.	Ornipressin	62	International product formerly marketed in Austria, South Africa, Switzerland, New Zealand, Germany, Australia
21.	Peroxi – Fresh	55	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
22.	Preferid	56	International product marketed in Italy, United Kingdom, Belgium, Ireland, Netherlands, Norway, Sweden and Switzerland
23.	Preservex	55	International product marketed in the United Kingdom
24.	Prezatide	56	Product is not a drug. It is a chemical compound.
25.	Raphtre	57	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
26.	(b) (4) ***	59	Proposed proprietary name for NDA 212520 found unacceptable by DMEPA (OSE #2019-34489390). NDA 212520 approved under the proprietary name Upneeq
27.	Relifex	58	International product marketed in Denmark, Mexico, Finland, Germany, Hungary, Italy, Norway, Sweden, United Kingdom and Ireland.
28.	Renaplus	64	Veterinary Product

No.	Name	POCA Score (%)	Failure preventions
29.	Renese	55	Brand discontinued with no generic equivalents available. NDA 012845 withdrawn FR effective 06/18/2009
30.	Renese-R	55	Brand discontinued with no generic equivalents available. NDA 013636 withdrawn FR effective 06/18/2009
31.	(b) (4) ***	60	Proposed proprietary name for CBER IND (b) (4) found unacceptable by CBER (b) (4). An alternate name has not been submitted.
32.	Renitec	58	International product marketed in several different countries in South America, Europe, and Asia.
33.	Repiderm	56	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available.
34.	Replesta	58	Product is not a drug. It is medical food
35.	Rescriptor	56	Brand discontinued with no generic equivalents available. NDA 020705. FR effective date not available
36.	Respaire	57	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
37.	Respaire-120 Sr	67	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available
38.	Respaire – 60 Sr	67	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available
39.	Respa -1 St	60	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available
40.	Respa – Pe	60	Name identified in RxNorm database. Product is deactivated and no generic equivalents are available
41.	Respa-Sa	60	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
42.	Respbid	58	Name identified in RxNorm database product is deactivated and no generic equivalents are available.
43.	Respivent	57	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
44.	Resporal	62	Brand discontinued with no generic equivalents available. NDA 089139 withdrawn FR effective 08/27/1992
45.	(b) (4) ***	66	Proposed proprietary name for BLA 125590 found acceptable by CBER, But the BLA 125590 was approved under the name Asceniv

No.	Name	POCA Score (%)	Failure preventions
46.	Reviprarin	68	International product marketed in China, Germany, Italy, and India
47.	Revive Plus	62	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
48.	Rezulin	55	Brand discontinued with no generic equivalents available. NDA 020720 withdrawn FR effective 01/10/2003
49.	Riboprine	60	Product is not a drug. It is a chemical compound.
50.	Rice Bran	60	Product is not a drug. It is a plant.
51.	Rideril	56	International product formerly marketed in United Kingdom
52.	Rispas	62	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
53.	Rivotril	58	International product marketed in many countries in Europe, Asia, Australia, Africa, South America
54.	(b) (4)***	66	Proposed proprietary name for NDA (b) (4) was found unacceptable by DMEPA (OSE# (b) (4)). Subsequently, the proposed proprietary name (b) (4)***was found conditionally acceptable for NDA (b) (4).
55.	Roxiprin	58	Brand discontinued with no generic equivalents available. ANDA -087743 withdrawn FR effective 11/12/2002
56.	(b) (4)***	65	The proposed proprietary name for IND (b) (4) found unacceptable by DMEPA (OSE # (b) (4)). IND (b) (4) is pending, and no new names have been submitted.
57.	Suppressor	56	Name identified in RxNorm database. Unable to find product characteristics in commonly used drug databases.
58.	Unipres	69	Brand discontinued with no generic equivalents available. ANDA -085893 withdrawn FR effective 08/04/1999.
59.	Verapress Mr	58	International product marketed in Israel and United Kingdom.
60.	Zipeprol	62	International product marketed in Greece
61.	Zuprevo	56	Veterinary product
62.	Zuraprep***	63	Proposed proprietary name for NDA 210872 found unacceptable by DMEPA (OSE# 2018-24256508 dated 09/25/2018). NDA 210872 approved under the proprietary name ZuraGuard.

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 (%)
1.	Acepril	55
2.	Adcetris	56
3.	Alezuris	60
4.	Basic Red 51	55
5.	Benzepril	58
6.	Benzepro	56
7.	Berri-Freez	61
8.	Breezee Mist	60
9.	Cisapride	57
10.	Deproist	57
11.	Elaprase	60
12.	Elzonris	59
13.	Entre-S	58
14.	Eprizero	56
15.	Esidrix	60
16.	Ferretts Ips	55
17.	Gris-Peg	56
18.	Isotrex	57
19.	Letairis	57
20.	Levitra	55
21.	Luveris	56
22.	Oraverse	55
23.	Pedi-Pro	56
24.	Septra Ds	56
25.	Ser-Ap-Es	58
26.	Sitrex	56
27.	Tricitrates	58
28.	Trifexis	58
29.	Trivaris	60
30.	Trivespi	56
31.	Trizelys	60
32.	Urispas	58
33.	(b) (4) ***	56
34.	Vesicare Ls	58

[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 (%)
35.	Vesprin	58
36.	Vitrase	56
37.	Vizimpro	56
38.	(b) (4) ***	55
39.	Xelpros	62
40.	Zentrip	59
41.	Zephrex	60
42.	Zephrex-D	56
43.	Zestril	58

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