CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

761154Orig1s000

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)

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Date of This Review:	October 2, 2019
Application Type and Number:	BLA 761154
Product Name and Strength:	Hulio (FKB327) [a] Injection 20 mg/0.4 mL and 40 mg/0.8 mL
Product Type:	Combination Product (Biologic-Device)
Rx or OTC:	Prescription (Rx)
Applicant/Sponsor Name:	Mylan, Inc.
Panorama #:	2019-33088712
DMEPA Safety Evaluator:	Teresa McMillan, PharmD
DMEPA Team Leader:	Idalia, Rychlik, PharmD

[a] Hulio has been developed as a proposed biosimilar to US-licensed Humira (adalimumab). Since the proper name for Hulio has not yet been determined, the descriptor, FKB327 is used throughout this review as the nonproprietary name for this product.

Contents

1 INTRODUCTION

This review evaluates the proposed proprietary name, Hulio, 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. Mylan conducted an assessment of the proposed proprietary name.

1.1 REGULATORY HISTORY

Mylan previously submitted the proposed proprietary name, Hulio*** on February 27, 2015. We found the name, Hulio*** conditionally acceptable under IND 116471 on August 6, 2015.[b]

Thus, Mylan resubmitted the name, Hulio, for review on July 12, 2019.

1.2 PRODUCT INFORMATION

The following product information is provided in the proprietary name submission received on July 12, 2019.

- Intended Pronunciation: hue' lee oh
- Active Ingredient: FKB327
- Indication of Use: Rheumatoid Arthritis (RA), Juvenile Idiopathic Arthritis (JIA), Psoriatic Arthritis (PsA, Ankylosing Spondylitis (AS), Adult Crohn's Disease (CD), Ulcerative Colitis (UC), Plaque Psoriasis (Ps)
- Route of Administration: Subcutaneous
- Dosage Form: Injection
- Strength: 20 mg/0.4 mL and 40 mg/0.8 mL
- Dose and Frequency:
    - **Rheumatoid Arthritis, Psoriatic Arthritis, Ankylosing Spondylitis:**

      40 mg every other week. Some patients with RA not receiving methotrexate may benefit from increasing the frequency to 40 mg every week.

    - **Juvenile Idiopathic Arthritis:**

      15 kg (33 lbs) to < 30 kg (66 lbs): 20 mg every other week

      ≥ 30 kg (66 lbs): 40 mg every other week

    - **Adult Crohn's Disease and Ulcerative Colitis:**
      Initial dose (Day 1): 160 mg (four 40 mg injections in one day or two 40 mg injections per day for two consecutive days)
      Second dose two weeks later (Day 15): 80 mg

[b] McMillan, T. Proprietary Name Review for Hulio (IND 116471). Silver Spring (MD): FDA, CDER, OSE, DMEPA (US); 2015 AUG 06. Panorama No. 2015-50004.

Two weeks later (Day 29): Begin a maintenance dose of 40 mg every other week.
For patients with Ulcerative Colitis only: Only continue HULIO in patients who have shown evidence of clinical remission by eight weeks (Day 57) of therapy.

- **Plaque Psoriasis:**
  80 mg initial dose followed by 40 mg every other week starting one week after initial dose.

- How Supplied: Supplied as a preservative-free, sterile, clear to slightly opalescent and colorless to pale brownish-yellow solution for subcutaneous administration. The following packaging configurations are available.

  - HULIO Prefilled Syringe Carton - 20 mg/0.4 mL

    HULIO is supplied in a carton containing two alcohol preps and two dose trays. Each dose tray consists of a single-dose, 1 mL pre-filled plastic syringe with a fixed 29-gauge thin wall, ½ inch needle, providing 20 mg/0.4 mL of HULIO. The NDC number is 0378-0947-02.

  - HULIO Prefilled Syringe Carton - 40 mg/0.8 mL

    HULIO is dispensed in a carton containing two alcohol preps and two dose trays. Each dose tray consists of a single-dose, 1 mL prefilled plastic syringe with a fixed 29-gauge thin wall, ½ inch needle, providing 40 mg/0.8 mL of HULIO. The NDC number is 0378-0948-02.

  - HULIO Pen Carton - 40 mg/0.8 mL

    HULIO is dispensed in a carton containing two alcohol preps and two dose trays. Each dose tray consists of a single-dose pen, containing a 1 mL prefilled plastic syringe with a fixed ½ inch needle, providing 40 mg/0.8 mL of HULIO. The NDC number is 0378-0946-02

- Storage: Do not use beyond the expiration date on the container. HULIO must be refrigerated at 36°F to 46°F (2°C to 8°C). DO NOT FREEZE. Do not use if frozen even if it has been thawed.

  Store in original carton until time of administration to protect from light.

  If needed, for example when traveling, HULIO may be stored at room temperature up to a maximum of 77°F (25°C) for a period of up to 14 days, with protection from light. HULIO should be discarded if not used within the 14-day period. Record the date when HULIO is first removed from the refrigerator in the spaces provided on the carton and dose tray.

  Do not store HULIO in extreme heat or cold.

2 RESULTS

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

2.1 MISBRANDING ASSESSMENT

The Office of Prescription Drug Promotion (OPDP) determined that Hulio would not misbrand the proposed product. The Division of Medication Error Prevention and Analysis (DMEPA) and the Division of Pulmonary, Allergy, and Rheumatology Products (DPARP) concurred with the findings of OPDP's assessment for Hulio.

2.2 SAFETY ASSESSMENT

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

2.2.1 United States Adopted Names (USAN) Search

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

2.2.2 Components of the Proposed Proprietary Name

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

2.2.3 Comments from Other Review Disciplines at Initial Review

In response to the OSE, July 24, 2019 e-mail, the Division of Pulmonary, Allergy, and Rheumatology Products (DPARP) did not forward any comments or concerns relating to Hulio at the initial phase of the review.

2.2.4 FDA Name Simulation Studies

Seventy-eight practitioners participated in DMEPA's prescription studies for Hulio. The responses did not overlap with any currently marketed product nor did the responses sound or look similar to any currently marketed products. However, four voice study participants misinterpreted Hulio as "Julio", which is similar to the proposed proprietary name (b) (4) Appendix G contains the assessment of the name (b) (4)". Appendix B contains the results from the verbal and written prescription studies.

2.2.5 Phonetic and Orthographic Computer Analysis (POCA) Search Results

Our POCA search[d] identified 20 names with the combined score of ≥55% or individual orthographic or phonetic score of ≥70%. We had identified and evaluated some of the names in

[c] USAN stem search conducted on July 23, 2019.

[d] POCA search conducted on July 23, 2019 in version 4.3.

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 6 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. 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%	2
Moderately similar name pair: combined match percentage score ≥55% to ≤ 69%	3
Low similarity name pair: combined match percentage score ≤54%	1

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

Our analysis of the six names contained in Table 1 determined none of the names will pose a risk for confusion with Hulio 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 Pulmonary, Allergy, and Rheumatology Products (DPARP) via e-mail on October 2, 2019. At that time, we also requested additional information or concerns that could inform our review. Per e-mail correspondence from the Division of Pulmonary, Allergy, and Rheumatology Products (DPARP) on October 2, 2019, they stated no additional concerns with the proposed proprietary name, Hulio.

3 CONCLUSION

The proposed proprietary name, Hulio, is acceptable.

If you have any questions or need clarifications, please contact Saharat Patanavanich, OSE project manager, at 240-402-0139.

3.1 COMMENTS TO MYLAN, INC.

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

If any of the proposed product characteristics as stated in your submission, received on July 12, 2019, are altered prior to approval of the marketing application, the name must be resubmitted for review.

REFERENCES

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

USAN Stems List contains all the recognized USAN stems.

2. Phonetic and Orthographic Computer Analysis (POCA)

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

Drugs@FDA

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

RxNorm

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

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

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

Division of Medication Errors Prevention and Analysis proprietary name consultation requests

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

APPENDICES

Appendix A

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

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

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

[e] National Coordinating Council for Medication Error Reporting and Prevention. 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[f]. We evaluate all moderately similar names retrieved from POCA to identify the above attributes. These names are further evaluated to identify overlapping or similar strengths or doses.
    - Product attributes: Moderately similar names of products that have overlapping or similar strengths or doses represent an area for concern for FDA. The dose and strength information is often located in close proximity to the drug name itself on prescriptions and medication orders, and the information can be an important factor that either increases or decreases the potential for confusion between similarly named drug pairs. The ability of other product characteristics to mitigate confusion (e.g., route, frequency, dosage form) may be limited when the strength or dose overlaps. DMEPA reviews such names further, to determine whether sufficient differences exist to prevent confusion. (See Table 4).

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

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

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

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

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

In order to evaluate the potential for misinterpretation of the proposed proprietary name in handwriting and verbal communication of the name, inpatient medication orders and/or outpatient prescriptions are written, each consisting of a combination of marketed and unapproved drug products, including the proposed name. These orders are optically scanned and one prescription is delivered to a random sample of participating health professionals via e-mail. In addition, a verbal prescription is recorded on voice mail. The voice mail messages are then sent to a random sample of the participating health professionals for their interpretations and review. After receiving either the written or verbal prescription orders, the participants record their interpretations of the orders which are recorded electronically.

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.

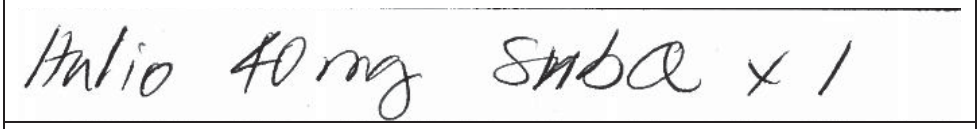
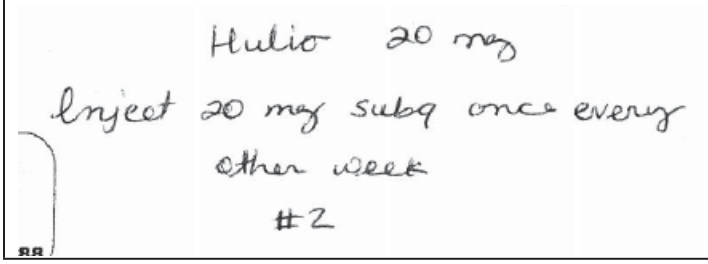
	Orthographic Checklist (Y/N to each question) • Do the names begin with different first letters? Note that even when names begin with different first letters, certain letters may be confused with each other when scripted. • Are the lengths of the names dissimilar* when scripted? *FDA considers the length 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. Hulio Study (Conducted on August 6, 2019)

Handwritten Medication Order/Prescription	Verbal Prescription
Medication Order:  	Hulio 20 mg Inject 20 mg subq once every other week #2
Outpatient Prescription:  	

FDA Prescription Simulation Responses (Aggregate Report)

217 People Received Study

78 People Responded

Study Name: Hulio

Total	**42**	**15**	**21**	
INTERPRETATION	**OUTPATIENT**	**VOICE**	**INPATIENT**	**TOTAL**
AULIO	**0**	**0**	**1**	**1**
CULIO	**0**	**1**	**0**	**1**
HALIO	**0**	**0**	**14**	**14**
HOOLIO	**0**	**1**	**0**	**1**
HOULIO	**0**	**1**	**0**	**1**
HULEO	**0**	**1**	**0**	**1**
HULIO	**41**	**5**	**6**	**52**
HULIO 20 MG	**1**	**0**	**0**	**1**
JULIO	**0**	**4**	**0**	**4**
WHOLIO	**0**	**2**	**0**	**2**

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

No.	**Proposed name:** Hulio **Established name:** FKB327[g] **Dosage form:** Injection **Strength(s):** 20 mg/0.4 mL and 40 mg/0.8 mL **Usual Dose[h]:**	**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.	Hulio***	100	This is the subject of this review.
2.	Rhuli	75	The first letters 'R' vs. 'H' and the additional letter 'o' at the end of Hulio provide some orthographic differences. Phonetically, Hulio contains three syllables whereas Rhuli has two syllables. The 1st ('Rhu' vs. 'hue') and second/third syllables ('li' vs. 'lee oh') provide sufficient phonetic differences. Additionally, differences in the product characteristics may help mitigate the potential for an error to reach the patient if the names were confused. Hulio is a subcutaneous injection administered at a dose of 20 mg or 40 mg once weekly. Rhuli is a gel administered by applying a thin layer to the affected area up to four times daily and rubbing in gently until completely absorbed. There is no overlap in dose or frequency between the products.

[g] Hulio has been developed as a proposed biosimilar to US-licensed Humira (adalimumab). Since the proper name for Hulio has not yet been determined, the descriptor, FKB327 is used throughout this review as the nonproprietary name for this product.

[h] Rheumatoid Arthritis, Psoriatic Arthritis, Ankylosing Spondylitis: 40 mg every other week. Some patients with RA not receiving methotrexate may benefit from increasing the frequency to 40 mg every week.

Juvenile Idiopathic Arthritis: 15 kg (33 lbs) to < 30 kg (66 lbs): 20 mg every other week ≥ 30 kg (66 lbs): 40 mg every other week

Adult Crohn's Disease and Ulcerative Colitis: Initial dose (Day 1): 160 mg (four 40 mg injections in one day or two 40 mg injections per day for two consecutive days) Second dose two weeks later (Day 15): 80 mg Two weeks later (Day 29): Begin a maintenance dose of 40 mg every other week. For patients with Ulcerative Colitis only: Only continue HULIO in patients who have shown evidence of clinical remission by eight weeks (Day 57) of therapy.

Plaque Psoriasis: 80 mg initial dose, followed by 40 mg every other week starting one week after initial dose.

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

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

No.	**Proposed name:** Hulio **Established name:** FKB327[i] **Dosage form:** Injection **Strength(s):** 20 mg/0.4 mL and 40 mg/0.8 mL **Usual Dose[j]:**	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
3.	Solia	56	This name pair has sufficient orthographic and phonetic differences.
4.	Rhulicort	54 Ortho-71	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 (%)
5.	Diulo	48 Ortho-70

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
6.	Sileo	56	This is a veterinary drug product.

[i] Hulio has been developed as a proposed biosimilar to US-licensed Humira (adalimumab). Since the proper name for Hulio has not yet been determined, the descriptor, FKB327 is used throughout this review as the nonproprietary name for this product.

[j] Rheumatoid Arthritis, Psoriatic Arthritis, Ankylosing Spondylitis: 40 mg every other week. Some patients with RA not receiving methotrexate may benefit from increasing the frequency to 40 mg every week.

Juvenile Idiopathic Arthritis: 15 kg (33 lbs) to < 30 kg (66 lbs): 20 mg every other week ≥ 30 kg (66 lbs): 40 mg every other week

Adult Crohn's Disease and Ulcerative Colitis: Initial dose (Day 1): 160 mg (four 40 mg injections in one day or two 40 mg injections per day for two consecutive days) Second dose two weeks later (Day 15): 80 mg Two weeks later (Day 29): Begin a maintenance dose of 40 mg every other week. For patients with Ulcerative Colitis only: Only continue HULIO in patients who have shown evidence of clinical remission by eight weeks (Day 57) of therapy.

Plaque Psoriasis: 80 mg initial dose, followed by 40 mg every other week starting one week after initial dose.

No.	Name	POCA Score (%)	Failure preventions
7.	(b) (4) ***	56	The proposed proprietary name (b) (4) the sponsor stated that they plan to submit another proprietary name to the NDA.

Appendix H: Names not likely to be confused due to absence of attributes that are known to cause name confusion[k].-N/A

[k] 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/

TERESA S MCMILLAN
10/02/2019 04:15:29 PM

IDALIA E RYCHLIK
10/02/2019 04:24:07 PM

MEMORANDUM
SUFFIX REVIEW FOR NONPROPRIETARY NAME

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

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

Date of This Review:	March 3, 2020
Responsible OND Division:	Division of Pulmonary, Allergy, and Rheumatology Products (DPARP)
Application Type and Number:	BLA 761154
Product Name and Strength:	Hulio (adalimumab- fkjp) injection, 20 mg/0.4 mL and 40 mg/0.8 mL
Product Type:	Combination Product (Drug-Biologic)
Applicant/Sponsor Name:	Mylan GmbH (Mylan)
FDA Received Date:	July 12, 2019
OSE RCM #:	2019-1496
DMEPA Primary Reviewer:	Carlos M Mena-Grillasca, BS Pharm
DMEPA Deputy Director:	Danielle Harris, PharmD

1 PURPOSE OF MEMO

This memorandum summarizes our evaluation of the four-letter suffixes proposed by Mylan for inclusion in the nonproprietary name and communicates our recommendation for the nonproprietary name for BLA 761154.

2 ASSESSMENT OF THE NONPROPRIETARY NAME

On July 12, 2019, Mylan submitted a list of 2 suffixes, in their order of preference, to be used in the nonproprietary name of their product[a]. Mylan also provided findings from their own assessment[b], evaluating the proposed four-letter suffixes in conjunction with the nonproprietary name, for our consideration. Table 1 presents a list of suffixes submitted by Mylan:

Table 1. Suffixes submitted by Mylan***	
1.	fkjp
2.	(b) (4)

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

2.1 adalimumab-fkjp

Mylan's first proposed suffix, -fkjp, is comprised of 4 distinct letters.

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

3 COMMUNICATION OF DMEPA'S ANALYSIS

These findings were shared with OPDP. Per an email correspondence dated February 28, 2020, OPDP did not identify any concerns that would render this proposed suffix

[a] Request for Reviews of Suffixes. Steinhausen (Switzerland): Mylan GmbH; 2019 Jul 12. Available from: \\cdsesub1\evsprod\bla761154\0001\m1\us\112-other-correspondence\request-for-review-of-suffixes.pdf

[b] Request for Review of Suffixes – Appendix 1. Steinhausen (Switzerland): Mylan GmbH; 2019 Jul 12. Available from: \\cdsesub1\evsprod\bla761154\0001\m1\us\112-other-correspondence\request-for-review-of-suffixes-appendix-1.pdf

[c] See Section VI which describes that any suffixes should be devoid of meaning in Guidance for Industry: Nonproprietary Naming of Biological Products. 2017. Available from: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM459987.pdf

unacceptable. DMEPA also communicated our findings to the Division of Pulmonary, Allergy, and Rheumatology Products (DPARP) via e-mail on March 3, 2020.

4 CONCLUSION

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

4.1 Recommendations for Mylan GmbH

We find the nonproprietary name, adalimumab-fkjp, conditionally acceptable for your proposed product. Should your 351(k) BLA be approved during this review cycle, adalimumab-fkjp will be the proper name designated in the license. You should revise your proposed labels and labeling accordingly and submit the revised labels and labeling to your BLA for our review. However, please be advised that if your application receives a complete response, the acceptability of your proposed suffix will be re-evaluated when you respond to the deficiencies. If we find your suffix unacceptable upon our re-evaluation, we would inform you of our finding.

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/s/

CARLOS M MENA-GRILLASCA
03/03/2020 11:31:56 AM

DANIELLE M HARRIS
03/04/2020 08:12:50 AM