

Review of Proposed Proprietary Name - Berinert, September 30, 2009

MEMORANDUM

Department of Health and Human Services Public Health Service  
Food and Drug Administration  
Center for Biologics Evaluation and Research

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**Date:** September 30, 2008

**From:** Jean Makie, M.S., R.D., Regulatory Review Officer  
Advertising and Promotional Labeling Branch (APLB) (HFM-602)  
Division of Case Management (DCM)

**Through:** Ele Ibarra-Pratt, RN, MPH, Branch Chief, APLB, HFM-602

**Through:** Robert A. Sausville, DCM Director, (HFM-610)

**To:** Nannette Cagungun, RPM, OBRR, DBA, RPMB (HFM-380)  
Felice D'Agnillo, Committee Chair, OBRR, DH, LBVB (HFM-343)  
Ross Pierce, Medical Officer, OBRR, DH, CRB (HFM-392)

**Subject:** Review of Proposed Proprietary Name Berinert (C1 esterase inhibitor)  
BLA STN: 125287/0

**Recommendation:** Berinert proprietary name be found Acceptable

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**Executive Summary:**

APLB recommends that the proposed proprietary name Berinert (ber-Ä"-nert), C1 inhibitor (human), lyophilized powder for solution for injection be found Acceptable.

**Background:**

On May 5, 2008, CSL Behring submitted an amendment to BLA STN 125287/0 for C1 esterase inhibitor (human), lyophilized powder for solution for injection, requesting a review of the proposed proprietary name, Berinert, for approval.

The amendment submitted on June 19, 2008 was designated a major amendment; the revised PDUFA action date for this BLA is December 6, 2008.

## Discussion:

According to recent discussions with OBBR reviewers, Berinert will be indicated for the treatment of acute abdominal or facial attacks of hereditary angioedema (HAE), also known as C1 inhibitor deficiency.

Berinert [C1 inhibitor (Human)] is a sterile, stable, lyophilized preparation of highly purified C1 inhibitor derived from human plasma. Berinert will be available in single-use vials that nominally contain 500 Units (U) human C1 inhibitor and will be reconstituted with 10 mL of Sterile Water for Intravenous Injection. According to this submission, the recommended dose of Berinert is 20 units per kilogram body weight. The proposed dosing interval for Berinert is once or trice after the start of an HAE attack, to be administered in a hospital setting.

CSL Behring contracted with the Drug Safety Institute (DSI) to conduct a Risk and Gap Analysis to evaluate Berinert. The study, completed January 31, 2008, concluded that Berinert is an acceptable name for a C1 inhibitor (human). CSL Behring has manufactured and sold C1-INH concentrate for over 20 years in Germany, Austria, Switzerland, and several other countries. There, it is licensed under the trade name Berinert ® P for the treatment of acute HAE attacks.

APLB reviewed the results of this study, which were included in the sponsor's May 5, 2008 submission.

## Evaluation Summary for Berinert:

### 1. **False or Misleading [21 CFR 201.6 (a)]:**

The proposed proprietary name, Berinert, is not regarded to be false or misleading.

### 2. **Fanciful [21CFR 201.10 (c)(3)]:**

Based on APLB's review, the proposed proprietary name, Berinert, is not regarded to be fanciful and does not imply a unique composition, advanced formulation, or superiority over existing products beyond that supported by the data. The sponsor states that "Berinert" is currently the tradename outside of the United States (it is actually Berinert P) and is identified in the clinical community as a therapy for the treatment of acute attacks of HAE. The sponsor also reported that Berinert was not derived from any manufacturing process/procedure or any prefix, base or suffix of the target indication.

Acronym Search: Acronym search for the prefixes "beri" and "ber" and the suffix "nert" were also conducted by APLB. There are no medically and/or science-related meanings for either of these acronyms.

### 3. **Similarity in Spelling or Pronunciation [21 CFR 201.10 (c) (5)]:**

There are no potential problems due to similarity in spelling and pronunciation with proprietary names for other marketed products. The Gap Analysis identified three products having commonalities of dosage form, route of administration, and frequency of administration with Berinert: Ceprotin, Cyanokit, and Reclast, but not phonetic or orthographic similarities.

APLB completed an independent review of existing proprietary and established name products (see references below). No exact or similar matches to Berinert were identified based on phonetic or orthographic qualities. We note that outside of the US, CSL Behring markets other products using the “Ber” prefix such as Beriate P (human coagulation factor VIII) and Berinin P (human coagulation factor IX), however, similar in-class products marketed by them within the US are done so under different, distinct, and unsimilar trade names.

APLB identified only one prescription product, Survanta (beractant), approved in the US for the prevention and treatment (“rescue”) of Respiratory Distress Syndrome (RDS) (hyaline membrane disease) in premature infants as having a low risk for sound-alike and look-alike confusion between its established name, beractant, and the proposed tradename, Berinert. Survanta, however, is intended for intratracheal use only in premature infants. As presently proposed in its draft prescribing information, the safety and efficacy of Berinert has not been established in the pediatric population.

Medivert is one of nine different brand names marketed for meclizine, a generic antihistamine and anticholinergic used to treat or prevent nausea, vomiting and dizziness caused by motion sickness. Medivert is a 30 mg chewable tablet.

Although potential similarities (dosage form, route of administration, and frequency of administration) with three other marketed products, as identified by the sponsor, as well as our own finding of two other products may exist, APLB concurs with the findings in their report that there appears to be a minimal risk for medications errors with the proprietary and established names for any products currently marketed in the US as well when taking into account similarity in spelling, pronunciation, handwriting, therapeutic class, indication, and storage information (see table below).

Proprietary name (established name)	Dosage Form	Dosing Regimen	Strength	Rx/OTC	Indication	Potential for medication error
<b>Berinert [C1 inhibitor (Human)]</b>	lyophilized powder for reconstitution as an intravenous injection	administered as an intravenous (IV) injection to be administered as 20 units per kilogram body weight	Single-use vials contain 500 Units (U) human C1 inhibitor. Each vial is reconstituted with 10 mL of Sterile Water for	Rx	C1 Inhibitor replacement therapy for use in patients with Hereditary Angioedema (HAE)	N/A

IV injection.

<b>Survanta (Beractant)</b>	intratracheal suspension	Each dose of SURVANTA is 100 mg of phospholipids/kg birth weight (4 mL/kg).	single-use glassvials containing 4 mL or 8 mL of Survanta	Rx	prevention and treatment ("rescue") of Respiratory Distress Syndrome (RDS) (hyaline membrane disease) in premature infants	Low
<b>Medivert (Meclizine)</b>	Oral chewable tablet	1 tablet every 24 hours	30 mg	Rx	to treat or prevent nausea, vomiting and dizziness caused by motion sickness	Low

## Recommendations:

APLB recommends that the proposed proprietary name Berinert be found acceptable. No recently approved products whose names resemble Berinert were found. There appears to be a minimal risk for medications errors with the proprietary names for other marketed products taking into account similarity in spelling, therapeutic class, indication, pronunciation, handwriting, storage, dosage form, route of administration, and marketing status (see table above).

If OBRR accepts our recommendation that the proposed proprietary name Berinert be found acceptable, please include the following text in your letter to the manufacturer:

In consultation with CBER's Advertising and Promotional Labeling Branch (APLB), we have considered your proposed proprietary name Berinert and conclude that under 21 CFR Part 201 the proposed proprietary name is acceptable at this time.

## References:

1. Electronic Physicians' Desk Reference 2006 (<http://www.thomsonhc.com/pdrel/librarian/PFPUI/hh1v3uN21Vqw06>), searched 9/23/08
2. <http://www.fda.gov/cder/ob> (Electronic Orange Book), searched 9/23/08
3. <http://www.rxlist.com>.(RxList), searched 9/23/08

4. <http://www.accessdata.fda.gov/scripts/cder/drugsatfda>, searched 9/23/08
5. CBER New BLA, NDA and ANDA approvals, searched 9/23/08
6. <http://www.factsandcomparisons.com/efacts.asp> (Drug Facts and Comparisons), searched 9/23/08
7. <http://www.acronymfinder.com>, searched 9/23/08
8. <http://www.accessdata.fda.gov/scrpys/cder/ndc/gettradename.cfm>, searched 9/23/08
9. United States Adopted Names (USAN) at <http://search.ama-assn.org>, searched 9/23/08
10. <http://cdspoca.cder.fda.gov/POCA/search.aspx>, searched 9/23/08
11. <http://www.accessdata.fda.gov/scripts/cder/ndc/gettradename.cfm>, searched 9/25/08
12. Medivert oral at <http://www.healthsquare.com/drugs/68766.htm>, searched 9/25/06