SOPP 8426: Assignment of Biological and Drug Product Proper Names and Biological Suffixes

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I. Purpose

A. This Standard Operating Policy and Procedure (SOPP) serves as a guide for Center for Biologics Evaluation and Research (CBER) staff on assigning proper names for biological and drug products.

B. This SOPP also serves as a guide for CBER staff to review of the FDA-designated suffix for each originator biological product, related biological product and biosimilar product.

II. Scope

A. This SOPP covers proper names for biological products and drugs and the FDA-designated suffix applicable to each originator biological product, related biological product and biosimilar product.

III. Background

A. This SOPP describes the process for naming biological and drug products, i.e., the proper name, that are regulated by CBER. While most FDA drug

product names and some CBER biological product names are assigned by the U.S. Adopted Names (USAN) Council, many are named outside of the USAN process.

B. USAN establishes logical nomenclature classifications based on pharmacological and/or chemical relationships. In addition to one member-at-large and a Food and Drug Administration (FDA) liaison, the council consists of one representative from each of the following: The American Medical Association (AMA), U.S. Pharmacopeia(USP) and the American Pharmacists Association (AphA).

C. The USAN Council Names:

- Small-molecule drugs
- Biotechnology drugs including monoclonal antibodies, therapeutic vaccines, proteins and peptides, DNA, RNA, nucleoside and nucleotide therapies
- Gene therapies
- Cellular therapies and non-cellular immunotherapies
- Other biological substances deemed appropriate to be assigned a USAN by the USAN Council
- Contact lens materials
- Active ingredients in sunscreens
- Veterinary products intended to control diseases in animals
- The base, salt, solvate, ester or other chemical derivative of a substance that has received a USAN

D. FDA's naming convention for biological products licensed under the Public Health Service (PHS) Act is a proper name consisting of a core name. In addition, for original and reference biological products licensed under section 351(a) of the PHS Act and for biosimilar products licensed under section 351(k) of the PHS Act, a distinguishing suffix that is devoid of meaning and composed of four lowercase letters is attached with a hyphen to the core name. The addition of a suffix to these products is intended to enhance biological product pharmacovigilance, ensure safe use and advance appropriate practices and perceptions.

IV. Definitions

A. Biosimilar Product: means a biological product submitted in a 351(k) application that has been shown to be highly similar to the reference product

notwithstanding minor differences in clinically inactive components, and for which there are no clinically meaningful differences between the biological product and the reference product in terms of the safety, purity, and potency of the product (see section 351(i)(2) of the PHS Act).

B. Core name: The component shared among an originator biological product and any related biological product, biosimilar product or interchangeable product as part of the proper names of those products, excluding the suffix.

C. Originator Biological Product: A biological product submitted in a BLA under section 351(a) of the PHS Act (i.e., a stand-alone BLA) that is not a related biological product.

D. Proper name: The nonproprietary name designated by FDA in the license for a biological product licensed under the PHS Act. The proper name may also be referred to as the established or non-proprietary name.

E. Proprietary name: The exclusive name of a drug or biological product owned by a company under trademark law regardless of registration status with the Patent and Trademark Office. The proprietary name may also be referred to as the trade name or brand name.

F. Reference Product: The single biological product licensed under section 351(a) of the PHS Act against which a biological product is evaluated in a 351(k) application (section 351(i)(4) of the PHS Act).

G. Related Biological Product: a biological product submitted in a BLA under section 351(a) of the PHS Act (i.e., a stand-alone BLA) for which there is a previously licensed biological product submitted in a different section 351(a) BLA that contains a drug substance for which certain nomenclature conventions (e.g., United Stated Adopted Names (USAN) Guiding Principles) would be expected to provide for use of the same drug substance name.

H. Suffix: Four lowercase letters devoid of meaning, which are added to the core name to distinguish between each originator biological product, related biological product, and biosimilar product.

I. USAN: The United States Adopted Names Council - a private organization sponsored by the American Medical Association, and the American Pharmaceutical Association, that has engaged in the assignment of drug names since 1964. The council negotiates with manufacturing firms in the selection of non-proprietary names for drugs.

V. Policy

A. The designation of the proper name is the responsibility of the product review office (except for USAN-designated products). The formal assignment of the proper name will occur prior to product approval.

B. The proper name for new products should be discussed with the review committee. Recommendations for new product names should be cleared by product review office management.

C. In general, the proper name should not include the following:

- the route of administration
- the dosage form
- the strength or concentration
- manufacturing process steps
- storage conditions

Note: the Route of Administration (ROA) or other product descriptors may be included in the proper name if deemed necessary to assure safe use of the product.

D. A suffix is required to be added to the proper name for each original biological product, reference biological product and biosimilar product newly licensed under section 351(a) or 351(k) of the Public Health Services Act. Applicants may submit up to ten proposed suffixes with their BLA. The acceptance of the proposed suffix is determined by the Advertising and Promotional Labeling Branch (APLB) in consultation with CBER/CDER working group.

E. Vaccines are currently within the scope of the naming convention described in the *Guidance for Industry: Nonproprietary Naming of Biological Products* (Naming Guidance). However, FDA is reconsidering that approach and is evaluating whether the currently available identification systems associated with the administration of vaccines are sufficiently robust to ensure safe dispensing practices and optimal pharmacovigilance without requiring distinguishable proper names.

F. The Naming Guidance does not apply to:

- In vitro reagents
- Blood donor screening tests
- Reagents use in determining donor/recipient compatibility in transfusion medicine

- Products for which a proper name is provided in the regulations (e.g., 21 CFR part 640)
- Or certain categories of biological products for which there are well-established , robust identification and tracking systems (e.g., ISBT 128 cord blood products and blood components).

G. The product review offices should follow the proper naming conventions listed below based on the product type.

1. Vaccine Products

a. Live vaccines: The word, "Live," should be a component of the proper name and should be stated at the end of the name. If the ROA is required in the proper name for safe use, the word, “Live,” should be placed prior to the ROA.

b. Inactivated vaccine: The word, "Inactivated," should be removed from the proper name. This information should be part of the prescribing information provided that all vaccines containing living (attenuated) organisms contain the word "Live" in the proper name.

c. Viral vaccines: There is little reason to include "virus" as a distinct word in vaccine proper names in as much as this is not done for most bacterial vaccines. Therefore, the word, “virus,” should be removed from vaccine proper names unless part of another word (e.g., Papillomavirus).

d. Microbial strains: Viral or bacterial strains do not have to be specified in the proper name. This information can be provided in the prescribing information.

e. Polysaccharides: The word, “polysaccharide,” should be included in the vaccine proper name for those products not conjugated (e.g., Pneumococcal polysaccharide 23-valent). The word, “polysaccharide,” should be omitted from those bacterial products that represent conjugate vaccines.

f. Antigenic valency: The proper name should indicate a product’s valency as a number, but it is not necessary to list individual serotypes; the latter should be part of the prescribing information.

g. **Recombinant antigens:** Information about recombinant origin could be described in the prescribing information and does not have to be part of the non-proprietary name.

h. **Conjugate vaccines:** The current description of the conjugate should be maintained in the proper name; however, using it in a redundant manner should be avoided.

i. **Production media:** The production media should not be part of the proper name; however, this information should be included in the prescribing information.

j. **Adjuvants:** Aluminum-adjuvanted products should specify the name, “adsorbed,” in the proprietary name. For vaccines formulated with other adjuvants the term “adjuvanted,” should be used in the proper name to clarify that the product is formulated with adjuvant. The adjuvant should be described in the prescribing information.

k. **Combination vaccines:** The word “combined” should be omitted from the proper name.

l. **Multiple uses of the term “vaccine” within a name:** The word “vaccine” should only be used once in the proper name.

m. **Diphtheria and tetanus toxoid products**: The target population should not be part of the proper name; however, the target population may be indicated on the container label. The regulations in 21 CFR 610.60 do not preclude indicating the target population on the container label.

n. **Therapeutic vaccines:** USAN recommends vaccines intended for therapy only, not for prophylaxis, include the term “Therapeutic” as part of the proper name, and that if a vaccine is indicated for prophylactic and therapeutic uses, the term “Vaccine” should be included in the proper name (e.g. Bacille Calmette-Guérin Vaccine Live).

o. **Route of Administration (ROA):** Inclusion of ROA in the proper name should be a case-by-case decision. There are instances where the ROA should be included in the name, i.e., safety reasons (e.g. differentiation between mucosal and parenteral routes of administration). In those cases the ROA should be stated last.

2. Plasma Derivatives and Recombinant Analogues

a. Each proper name comprises the historical, scientific name of the protein accompanied in parentheses by its origin, for example:

- Antihemophilic Factor (Human)
- Antihemophilic Factor (Porcine)
- Antihemophilic Factor (Recombinant)
- Coagulation Factor IX (Human)
- Coagulation Factor IX (Recombinant)
- Coagulation Factor VIIa (Recombinant)
- $Alpha_1$-Proteinase Inhibitor (Human)
- C1-Esterase Inhibitor (Recombinant)
- Antithrombin (Human)
- Protein C (Human)

b. A short descriptor may be added to define unique, critical quality attributes, for example:

- Antihemophilic Factor (Recombinant), Fc Fusion Protein
- Coagulation Factor XIII (Recombinant), A Subunit
- Pooled Plasma (Human), Solvent/Detergent Treated, Dehydrated

c. The ROA or other product descriptors may be included to assure safe use of the product, e.g., for Thrombin, the term, “Topical” was added for safety, as a means of mitigation against administration by injection with potential fatal outcomes. For Immune Globulin, the term, “IV,” for intravenous, was introduced upon licensure of the first such product in 1981, in order to signify its distinction from available products for subcutaneous or intramuscular injection.

- Thrombin, Topical (Bovine); Thrombin, Topical (Human); Thrombin, Topical (Recombinant)
- Immune Globulin Intravenous (Human); Immune Globulin Subcutaneous (Human)

3. Gene Therapy and Cellular Therapy Products

a. USAN schemes exist for gene therapy products, cellular products, and non-cellular products including peptide and protein

preparations from cells/tissues used in immunotherapy. Product developers follow USAN procedures to apply for a name. USAN consults with OTAT on each ballot to ensure the proposed name would be appropriate for the described product.

The following products are not covered by the USAN schemes:

- minimally manipulated hematopoietic elements including minimally manipulated umbilical cord blood and peripheral blood stem cells for transplant;
- combination products, which include combinations of cells with non-cellular pharmaceutical products (cell/device, cell/drug combination products);
- prophylactic vaccines;
- tissue engineered products;
- induced pluripotent stem (iPS) cells;
- embryonic-derived cell therapies.

For products that are not named by USAN, product offices will assign a descriptive proper name during the BLA review period.

b. USAN Scheme for Gene Therapy - Applies to non-cellular products produced by insertion of genetic material (transgene) into a vector (virus or plasmid) and where altered genetic material is administered to patients as a biological drug.

1) Elements of name

a. Indication of the drug's mechanism of action or pharmacologic class.

b. The vector used in transfection; and

c. Complete identification of the genes carried by the vector if there are one or two transgenes; for vectors containing > three transgenes, one or two genes will be chosen to be included in the gene qualifier based on an analysis of the impact that they have on preventing product confusion or conveying safety information.

d. Additional nomenclature elements would be a fantasy syllable(s) that serves as a unique identifier for the molecular entity and a stem indicating the gene

therapy class of products or the ability of the vector to replicate.

Based on these elements, the following is proposed:

i. First word: corresponds to the *gene* component

ii. Second word: corresponds to the *vector* component

c. **USAN Scheme for Cellular Therapies -** Applies to all cell therapy products, with the exception of minimally manipulated hematopoietic elements, combination products and prophylactic vaccines. The scheme also covers non-recombinant peptide and protein preparations from cells/tissues used in immunotherapy, however; it does not apply to chemically synthesized peptides or recombinant proteins.

Specifications of name elements:

1) Product Name composition: Prefix + Infixes + Stem-Qualifier

2) Prefix: Suggested by manufacturer and reviewed by USAN Council (to provide uniqueness)

3) Infixes: the cell type/source and product manipulation or modification would be part of the cellular therapy product name, incorporated as infixes. May include:

   a. Infix 1= manipulation -fus = fused with peptide, cells or other agent)

   b. Infix 2= cell type (e.g., -myo =myoblast, -isle = islet cell, -den = dendritic cell)

4) Suffixes: -cel (stem for cell therapies) is used for all cell therapies.

   a. Sub-stems are added as follows:

      i. -temcel (stem for stem cells)

      ii. -strocel (stem for stromal cells)

d. **USAN Scheme for "Non-Cellular" Therapies -** Applies to all non-cellular therapeutic products, which include cell lysates, non-recombinant, recombinant, and synthetic peptides or proteins (isolated from cells/tissues) used for cancer vaccines.

1) Prefix: Suggested by the manufacturer and reviewed by the USAN Council (to provide uniqueness)

2) Infixes:

   a. cell lysate: -lis
   b. peptides: -pep
   c. protein: -pro(t)
   d. heat shock: -tespen-

3) Stem: is -imut

4) Sub-stems are added as follows:

   a. -lisimut (stem for cell lysates)
   b. -pepimut (stem for peptides)
   c. -protimut (stem for protein)

5) Qualifiers: source is represented by a letter after a hyphen at the end of the name: -R = recombinant, -S = synthetic -T = Autologous

4. In Vitro Diagnostics, Blood Grouping Reagents, Reagents Red Blood Cells

a. Some proper names are specified in the CFR Title 21, PART 660 as described below:

1) Antibody to Hepatitis B Surface Antigen, section 660.1(a)

   "The proper name of this product shall be Antibody to Hepatitis B Surface Antigen. The product is defined as a preparation of serum containing antibody to hepatitis B surface antigen."

2) Blood Grouping Reagent, section 660.20(a)

   "The proper name of this product shall be Blood Grouping Reagent and it shall consist of an antibody-containing fluid containing one or more of the blood grouping antibodies listed in section 660.28(a)(4)."

   Can be further modified by addition of:

   a. Identification of the source

i. If human source only, no designation is necessary

ii. An animal, e.g. rabbit, goat

iii. Cell culture, e.g. murine monoclonal, human/murine heterohybridoma

iv. Type of immunoglobulin e.g., IgM, IgG

- If solely IgM – no designation is necessary in the proper name
- A blend, e.g., IgG/IgM Blend

b. "Formulated for Automated Testing", if applicable

c. "For Further Manufacturing Use" (FFMU) if the material is concentrated source material being provided under shared manufacture

Examples:

i. Blood Grouping Reagent, Anti-D (Monoclonal Blend)

ii. Blood Grouping Reagent, Anti-A,B (Murine Monoclonal)

iii. Blood Grouping Reagent, Anti-C (Human/Murine Monoclonal)

iv. Blood Grouping Reagent, Anti-A (Murine Monoclonal)(For Further Manufacturing Use)

3) Reagent Red Blood Cells section 660.30(a)

"The proper name of the product shall be Reagent Red Blood Cells, which shall consist of a preparation of human red blood cells used to detect or identify human blood-group antibodies."

a. Can be further modified by the addition of:

i. Terms related to the specific use, i.e., ABO Serum Grouping or Reverse Grouping, Antibody Detection, Antibody Identification

ii. The words "pooled cells" as describe in section 660.35

iii. "For Use in Automated Systems", if applicable

4) Hepatitis B Surface Antigen section 660.40(a)

"The proper name of this product shall be Hepatitis B Surface Antigen (HBsAg), which shall consist of a serum or tissue preparation containing one or more subtypes of the Hepatitis B Surface Antigen."

5) Anti-Human Globulin section 660.50(a)

"The proper name of this product shall be Anti-Human Globulin which shall consist of one or more antiglobulin antibodies identified in section 660.55(a)(4)."

a. Can be further modified by the addition of:

i. Identification of the source

- If solely from one animal, e.g. rabbit, goat – no designation is necessary
- A blend e.g. rabbit/murine monoclonal blend
- Cell culture, e.g. murine monoclonal

ii. "Formulated for Automated Testing", if applicable

iii. "For Further Manufacturing Use" (FFMU) if the material is concentrated source material being provided under shared manufacture

Example:

- Anti-Human Globulin (Murine Monoclonal)

b. Those proper names not included in the CFR are designated based on the specific biologic entity being detected, i.e., a specific antigen or antibody. For example,

Multiplex assay, agent, type of assay, source (licensable components):

1) Antibody to Human Immunodeficiency Virus Type 1

2) Human T-Lymphotropic Virus Types I and II (E. Coli, Recombinant)
3) Hepatitis C Virus Encoded Antigen (HCV Encoded Antigen/Enzyme Immuno Assay (EIA)/Recombinant)
4) Trypanosoma cruzi (T. cruzi)(E. coli, Recombinant) Antigen
5) West Nile Virus (WNV/Nucleic Acid Pooled Testing/Synthetic)
6) Hepatitis C Virus (Hepatitis C Virus/Nucleic Acid Pooled Testing/Synthetic)
7) Human Immunodeficiency Virus Type 1 (HIV-1/Nucleic Acid Pooled Testing/Synthetic)
8) Hepatitis B Virus (Hepatitis B Virus/Nucleic Acid Pooled Testing/Synthetic)
9) Human Immunodeficiency Virus Types 1 and 2 (E. coli, B. megaterium, Recombinant) Antigen, Antibody (p24) and Synthetic Peptide

VI. Responsibilities

A. Office of Compliance and Biologics Quality (OCBQ)/Division of Case Management (DCM)/Advertising and Promotional Labeling Branch (APLB) Chief – reviews proposed suffix and designates one, or if a suffix was not submitted by the applicant, designates one.

B. Product Office or Division Director or Designee – evaluates proper name recommendations and makes the final determination on novel proper names.

C. Chair– in the pre-BLA/NDA meeting provides guidance and direction to the applicant on the assignment of the proper name. Upon application receipt evaluates the proposed proper name and advises the applicant if the name needs to be modified. Confers with staff, evaluates proper name recommendations, and collaborates on the final determination of novel proper names.

D. Regulatory Project Manager (RPM) or designee – in the pre-BLA meeting provides guidance and direction to the applicant on the assignment of the proper name. Upon application receipt evaluates the proposed proper name and collaborates with the review staff to determine acceptability. Communicates acceptable proper name to RIB.

E. Office of Regulatory Operations (ORO)/Division of Informatics (DI)/Regulatory Information Branch (RIB) – enters all new proper names and suffixes into the appropriate system following notification from the RPM. Flags and resolves errors with data entry regarding the proposed name and existing names in RMS-BLA with the review office.

VII. Procedures

A. Proper Name Assignment (all products)

1. Provides guidance and recommendations to the applicant on the proposed proper name and suffix (if applicable) during the pre-BLA meeting or other communications prior to submission receipt. **[RPM/Chair]**

2. Notifies RIB of the proposed proper name (i.e., user fee status) listed by the applicant on the Form FDA 356h. **[RPM]**

3. Using *T833.01: Characterization of Proper Names in RMS-BLA*, ensures that RIB has needed attributes for categorizing the proper name within the regulatory system. **[RPM/Chair]**

4. Enters the proper name and information provided by the RPM on T833.01 and as submitted with the original application into the appropriate regulatory system. **[RIB]**

5. Reviews the proper name identified by the applicant in the product labeling and Form FDA 356h and consults with review office staff and the product Office or Division Director, as appropriate, on proper name acceptability. Obtains concurrence or correction on new proper name. **[RPM]**

- If the product does not fit into USAN scheme, is not assigned by USAN or not codified in the Code of Federal Regulations (CFR), assigns the proper name as outlined in the policy section. **[Product Office]**

6. Notifies RPM on the acceptability or assignment of the proper name by mid-cycle review. **[Chair]**

7. Notifies RIB to update the appropriate regulatory system with the CBER accepted proper name. **[RPM]**

8. Enters or updates the new proper name and notifies the review office (RPM) when data entry is complete. **[RIB]**

B. Suffix Assignment (for applicable biological products)

1. Submits up to 10 proposed suffixes composed of four lowercase letters, in the order of preference, at the time of BLA submission **[Applicant]**
2. Reviews the submission for inclusion of suffixes **[RPM]**
    a. If an applicant has not included a list of suffixes for review, sends an email notification requesting the submission of suffixes using the template *T 910.18: Email Template- Request for Proposed Suffixes*.
3. Notifies APLB chief of suffixes receipt **[RPM]**
    a. If, as requested, the applicant does not submit a proposed suffix, the APLB Chief designates one, uploads memo to the appropriate system and notifies RPM. **[APLB Chief]**
4. Notifies the applicant via letter of either the acceptability of proposed suffix, unacceptability of all proposed suffixes or FDA's designated suffix using the appropriate CBER letter template. **[RPM]**
5. Requests RIB to update the proper name to include the suffix in the appropriate regulatory system. **[RPM]**
6. Enters suffix and notifies the review office (RPM) when data entry is complete. **[RIB]**

VIII. Appendix

Not Applicable

IX. References

A. References below are CBER Internal:

1. LTR-BLAPND-01 Letter Template for Proposed Suffix(es)
2. T 910.18: Email Template - Request for Proposed Suffixes
3. T833.01: Characterization of Proper Names in RMS-BLA

B. References below may be found on the Internet:

1. Guidance for Industry: Nonproprietary Naming of Biological Products
2. United Stated Adopted Names (USAN)

X. History

Written/ Revised	Approved	Approval Date	Version Number	Comment
Kendra Moran	Katie Rivers Chief, RABOB/DROP/ ORO	August 3, 2023	7	Clarifies Proper Name data entry procedures
Martha Monser	N/A	February 27, 2023	6	Technical update due to 2023 CBER reorganization
Martha Monser	N/A	February 27, 2022	5	Technical update due to 2022 CBER reorganization
Martha Monser	N/A	December 11, 2020	4	Technical Update to remove references to “database” and to use “system”
Martha Monser	N/A	March 31, 2020	3	Technical Update to Current format/font
Iliana Valencia	Chris Joneckis, Ph.D.	March 31, 2019	2	Major revision to include procedure for the FDA-designated suffix
Carla Vincent	Chris Joneckis, Ph.D.	Jan 18, 2016	1	First issuance of this SOPP