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SUBMITTED VIA REGULATIONS.GOV

Division of Dockets Management
Food and Drug Administration
Department of Health and Human Services
5630 Fishers Lane, Room 1061
Rockville, MD 20852

SUITABILITY PETITION

Dear Sir/Madam:

The undersigned, on behalf of a client, submits this Suitability Petition pursuant to Section 505(j)(2)(C) of the Federal Food, Drug and Cosmetic Act (“FDC Act”) and in accordance with 21 C.F.R. § 314.93 and 21 C.F.R. §§ 10.20 and 10.30, to request that the Commissioner of the U.S. Food and Drug Administration (“FDA”) declare that the drug product Sugammadex Injection, 100 mg/mL (100 mg/mL) single-dose prefilled syringe, is suitable for consideration in an Abbreviated New Drug Application (“ANDA”).¹

A. Action Requested

The Petitioner requests that FDA declare that Sugammadex Injection, 100 mg/mL (100 mg/mL) single-dose prefilled syringe is suitable for submission as an ANDA. As designated in FDA’s *Approved Drug Products with Therapeutic Equivalence Evaluations* (“Orange Book”), the Reference Listed Drug (“RLD”) upon which this petition is based is Merck Sharp & Dohme LLC’s BRIDION (sugammadex) Injection, which is approved for prescription use under New Drug Application (“NDA”) 022225 in 200 mg/2 mL (100 mg/mL) and 500 mg/5 mL (100 mg/mL) strengths. The Petitioner seeks to introduce a new 100 mg/mL (100 mg/mL) single-dose prefilled syringe strength for prescription use, as shown in the table below.

¹ Petitioner previously petitioned FDA seeking a determination for the same drug product, *see* Docket No. FDA-2023-P-3411 (Aug. 9, 2023); however, with this Petition, Petitioner seeks a goal date or action according to the Generic Drug User Fee Amendments Reauthorization Performance Goals and Program Enhancements Fiscal Years 2023-2027.

Product Details	BRIDION (Sugammadex) Injection (NDA 022225)	Petitioner's Proposed Sugammadex Injection
Active Ingredient	Sugammadex Sodium	Sugammadex Sodium
Route of Administration	Intravenous	Intravenous
Dosage Form	Solution	Solution
Volume (per container)	2 mL and 5 mL	1 mL
Strength (per mL)	100 mg	100 mg
Strength (per container)	200 mg and 500 mg	100 mg
Package Type	Single dose vial	Single dose Pre filled Syringe

B. Statement of Grounds

FDC Act § 505(j)(2)(A)(iii) provides for the submission of an ANDA for a drug product that differs in strength from that of the listed drug provided FDA has first approved a petition permitting the submission of such an application.

BRIDION, approved under NDA 022225, contains either 200 mg/2 mL (100 mg/mL) or 500 mg/5 mL (100 mg/mL) of sugammadex in a single-dose vial solution dosage form for intravenous injection. A copy of the current Orange Book entry for BRIDION Injection, 200 mg/2 mL (100 mg/mL) and 500 mg/5 mL (100 mg/mL), is included in **Attachment 1**. The proposed drug product also contains sugammadex in a solution dosage form for intravenous injection, but in a 100 mg/mL (100 mg/mL) single-dose prefilled syringe strength. The petition is thus seeking a change in strength (fill volume, but not concentration) to 100 mg/mL (100 mg/mL) from that of the RLD (200 mg/2 mL (100 mg/mL) and 500 mg/5 mL (100 mg/mL)).

The proposed change in strength (fill volume) is consistent with the dosing recommendations of the RLD's approved labeling. For example, the Prescribing Information for BRIDION Injection, 200 mg/2 mL (100 mg/mL) and 500 mg/5 mL (100 mg/mL) (NDA 022225)—which is approved for the reversal of neuromuscular blockade induced by rocuronium bromide and vecuronium bromide in adults and pediatric patients aged 2 years and older undergoing surgery—states in the “Dosage and Administration” section that “BRIDION dosing is based on actual body weight.” Prescribing Information, BRIDION Injection, Dosage and Administration, Section 2.1 (Important Dosing and Administration Information) (Nov. 2022), *available at* https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/022225Orig1s012lbl.pdf (**Attachment 2**). To that end, the Prescribing Information provides the following dosing recommendations:

2.2 Recommended Dosing

BRIDION can be used to reverse different levels of rocuronium- or vecuronium-induced neuromuscular blockade.

For rocuronium and vecuronium:

- A dose of 4 mg/kg BRIDION is recommended if spontaneous recovery of the twitch response has reached 1 to 2 post-tetanic counts (PTC) and there are no twitch responses to train-of-four (TOF) stimulation following rocuronium- or vecuronium-induced neuromuscular blockade [see Warnings and Precautions (5.8)].
- A dose of 2 mg/kg BRIDION is recommended if spontaneous recovery has reached the reappearance of the second twitch (T2) in response to TOF stimulation following rocuronium- or vecuronium-induced neuromuscular blockade [see Warnings and Precautions (5.8)].

For rocuronium only:

- A dose of 16 mg/kg BRIDION is recommended if there is a clinical need to reverse neuromuscular blockade soon (approximately 3 minutes) after administration of a single dose of 1.2 mg/kg of rocuronium. The efficacy of the 16 mg/kg dose of BRIDION following administration of vecuronium has not been studied. Immediate reversal in pediatric patients has not been studied [see Clinical Studies (14.1)].

Prescribing Information, BRIDION Injection, Dosage and Administration, Section 2.2 (Recommended Dosing) (Nov. 2022).

The availability of a new 100 mg/mL (100 mg/mL) strength will provide a prescribing physician with the ability to dose sugammadex “based on actual body weight.” This is particularly true for adults and pediatric patients with a body weight up to 50 kgs for the 2 mg/kg dosing regimen above, and for pediatric patients with a body weight up to 25 kgs for the 4 mg/kg dosing regimen (as shown below). In addition to providing more accurate dosing based on body weight, a lower fill volume (strength) available in a prefilled syringe offers a convenience for dose administration.

Dosage administration for the reversal of neuromuscular blockade induced by rocuronium and vecuronium-as per RLD label:

- 4 mg/kg is recommended if spontaneous recovery of the twitch response has reached 1 to 2 post-tetanic counts (“PTC”) and there are no twitch responses to train-of-four (“TOF”) stimulation.
- 2 mg/kg is recommended if spontaneous recovery has reached the reappearance of the second twitch in response to TOF stimulation.

Dosage of Sugammadex for Patients With Various Body Weights:

Patient Body Weight (Kgs.)	Dose of Sugammadex (for 2 mg/kg dosing regimen)	Dose of Sugammadex (for 4 mg/kg dosing regimen)
10 Kgs.	20 mg	40 mg
15 Kgs.	30 mg	60 mg
20 Kgs.	40 mg	80 mg
25 Kgs.	50 mg	100 mg
30 Kgs.	60 mg	120 mg
40 Kgs.	80 mg	160 mg
50 Kgs.	100 mg	200 mg

As noted in the BRIDION Prescribing Information, dosing of Sugammadex is based on body weight. From the above table, it can be seen that the proposed fill volume of 1 ml of Sugammadex can be better utilized for children or adults up to the body weight of 50 kgs for the 2 mg/kg dosing regimen of Sugammadex. Similarly, the lower fill volume can also be better utilized for children with a body weight up to 25 kgs for the 4 mg/kg dosing regimen of Sugammadex.

The proposed change in strength (fill volume) from that of the RLD does not raise questions of safety or efficacy for the proposed drug product. Therefore, FDA should conclude that clinical investigations are not necessary to demonstrate safety or effectiveness of the proposed drug product.

There are no proposed changes in labeling with the exception of the change in strength sought in this petition. The uses, indications, warnings, and directions for use will remain the same as that of the RLD. Approved labeling for BRIDION Injection, 200 mg/2 mL (100 mg/mL) and 500 mg/5 mL (100 mg/mL) (NDA 022225) is included as *Attachment 2*. Draft labeling for the proposed drug product is included as *Attachment 3*. Therefore, the Petitioner requests that FDA find that a change in strength (fill volume) from 200 mg/2 mL (100 mg/mL) and 500 mg/5 mL (100 mg/mL) to 100 mg/mL (100 mg/mL) of sugammadex raises no questions of safety or effectiveness.

The Pediatric Research Equity Act (“PREA”), enacted in December 2003, amended the FDC Act by requiring certain applications for a drug submitted under FDC Act § 505 to contain an assessment of the safety and effectiveness of the product in pediatric patients unless this requirement is deferred or waived. *See* FDC Act § 505B(a)(1)(A)(i). Specifically, PREA applies to all applications for a new active ingredient, dosage form, indication, route of administration, or dosing regimen. *See id.* ANDAs submitted under an approved suitability petition for a change in strength are not subject to PREA requirements. *See* FDA, Draft Guidance for Industry, Pediatric Drug Development: Regulatory Considerations — Complying With the Pediatric Research Equity Act and Qualifying for Pediatric Exclusivity Under the Best Pharmaceuticals for Children Act, at 9 (May 2023). Petitioner asserts that PREA is not applicable to the proposed Sugammadex Injection, 100 mg/mL (100 mg/mL) single-dose prefilled syringe, drug product because the proposed change concerns only a new strength. As such, PREA should not serve as an impediment to the Agency granting this petition.

C. Environmental Impact

A claim for categorical exclusion of the requirements for an environmental assessment is made pursuant to 21 C.F.R. § 25.31.

D. Economic Impact

Pursuant to 21 C.F.R. § 10.30(b), economic impact information is submitted only when requested by the Commissioner. This information will be promptly provided, if so requested.

E. Certification

The undersigned certifies that, to the best knowledge and belief of the undersigned, this Petition includes all information and views on which the Petition relies, and that it includes representative data and information known to the Petitioner which are unfavorable to the Petition.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kurt R. Karst', with a stylized flourish at the end.

Kurt R. Karst