



Our STN: BL 125807/0

**MID-CYCLE COMMUNICATION  
SUMMARY**  
February 22, 2024

Abeona Therapeutics, Inc.  
Attention: Carl Denny  
Vice President, Regulatory Affairs  
6555 Carnegie Ave, 4<sup>th</sup> Floor  
Cleveland, OH 44103

Dear Carl Denny:

Attached is a copy of the summary of your January 25, 2024 Mid-Cycle Communication Teleconference with CBER. This memorandum constitutes the official record of the Teleconference. If your understanding of the Teleconference outcomes differs from those expressed in this summary, it is your responsibility to communicate with CBER as soon as possible.

Please include a reference to STN 125807 in your future submissions related to prademagene zamikeracel.

If you have any questions, please contact Hawa Camara at (240) 402-8097 or by email at [hawa.camara@fda.hhs.gov](mailto:hawa.camara@fda.hhs.gov).

Sincerely,

Mara Miller, MA  
Director  
Division of Review Management and Regulatory Review 2  
Office of Review Management and Regulatory Review  
Office of Therapeutic Products  
Center for Biologics Evaluation and Research

## Mid-Cycle Communication Teleconference Summary

**Application Type and Number:** BL 125807/0

**Product Name:** Prademagene zamikeracel

**Proposed Indication for Use:** Treatment of wounds associated with recessive dystrophic epidermolysis bullosa (RDEB)

**Applicant:** Abeona Therapeutics, Inc.

**Meeting Date & Time:** January 25, 2024

**Committee Chair:** Bao-Ngoc Nguyen, PhD

**RPM:** Hawa Camara, MS, PMP

### FDA Attendees:

Meghna Alimchandani, MD, CBER/OBPV/DPV  
Ritu Argawal, CBER/OCBQ/DBSQC  
Colleen Caldwell, MS, MPH, CBER/OTP/ORMRR  
Hawa Camara, MS, PMP, CBER/OTP/ORMRR  
Yang Chang, PhD, PharmD, CBER/OTP/OCE  
Brianna Davis, CBER/OCBQ/DBSQC  
Maryna Eichelberger, PhD, CBER/OCBQ/DBSQC  
Denise Gavin, PhD, CBER/OTP/OGT  
Basil Golding, MD, CBER/OTP/OPPT  
Joshua Kufera, PhD, CBER/OTP/OGT  
Christine Harman, PhD, OCBQ/DMPQ  
Jin Sung Hong, PhD, CBER/OTP/OCTHT  
Alicia Howard, CBER/OCBQ/DBSQC  
Simleen Kaur, MSc, CBER/OCBQ/DBSQC  
Vijay Kumar, MD, CBER/OTP/OCE  
Carolyn Laurencot, PhD, CBER/OTP/OCTHT  
Wei Liang, PhD, CBER/OTP  
Heather Lombardi, PhD, CBER/OTP/OCTHT  
Ou Ma, CBER/OCBQ/DMPQ  
Ileana Marrero-Berrios, PhD, CBER/OTP/OCTHT  
Bao-Ngoc Nguyen, PhD, CBER/OTP/OCTHT  
Steven Oh, PhD, CBER/OTP/OCTHT  
Sarada Panchanathan, MD, CBER/OBPV/DPV  
Carolina Panico, MD, PhD, CBER/OTP/OCTHT  
Graeme Price, PhD, CBER/OTP/OGT  
Tejashri Purohit-Sheth, MD, CBER/OTP/OCE  
Laura Ricles, PhD, CBER/OTP/OCTHT  
Christopher Saeui, PhD, CBER/OTP/OPT  
Helen Sansone, CBER/OTP/ORMRR  
Kimberly Schultz, PhD, CBER/OTP/OGT  
John Scott, PhD, MA, CBER/OBPV/DB  
Ramani Sista, PhD, CBER/OTP/ORMRR  
Theodore Stevens, MS, RAC, CBER/OTP

Zehra Tosun, PhD, CBER/OTP/OCTHT  
Nicole Verdun, MD, CBER/OTP  
Kerry Welsh, CBER/OBPV/DPV  
Boguang Zhen, PhD, CBER/OBPV/DB  
Iryna Zubkova, PhD, CBER/OCBQ/DMPQ

**Applicant Attendees:**

Dr. Vishwas Seshdri, Chief Executive Office, Abeona  
Carl Denny, Senior Vice President, Regulatory Affairs, Abeona  
Kate Imhoff, Vice President, Regulatory Affairs, Abeona  
Steven La, Associate Director, Regulatory Affairs, Abeona  
(b) (4), (b) (6) Senior Regulatory Consultant  
Dr. Brian Kevany, Senior Vice President, Chief Technical Officer & CSO, Abeona  
Dr. Paul Wille, Director, Product Development, Abeona  
Amanda Moore, VP, Program Leadership& Clinical Operations, Abeona  
Scott Kerns, Senior Manager, Program Leadership, Abeona  
Dr. Ann Durbin, Senior Director, Assay Development and Quality Control, Abeona  
Ryan Wolford, Director, Manufactuirng, Abeona  
Megan Callan, Executive Director, Head of Quality, Quality Assurance, Abeona  
Dr. Dmitriy Grachev, Chief Medical Officer, Abeona  
(b) (4), (b) (6) Head of Biometrics, Consultant  
(b) (4), (b) (6) Principal Statistician, Consultant  
Shelby Davis, Director, Program Leadership

**Agenda:**

**Discussion Summary:**

1. Any significant issues/major deficiencies identified by the Review Committee to date.

**CMC:**

- Sterility assurance of drug product: (b) (4)  
(b) (4) testing are part of your sterility testing plan and are used to release the final product. (b) (4) sterility test results are not available (b) (4) release and administration of the final drug product. Current proposed sterility testing may be inadequate to ensure safety because (b) (4) testing is conducted (b) (4) (b) (4) to final product assembly), while robust sterility test results from (b) (4) are not available (b) (4) release. As communicated in CMC IR #7, additional sterility testing (e.g., rapid sterility testing on final product sample) may be necessary.

**Meeting Discussion for Agenda item 1:**

During the meeting, FDA reiterated that we would like to see a robust sterility testing plan to provide sterility assurance for the final product. Specifically, FDA voiced concerns regarding the proposed testing conducted on the (b) (4) collected from the primary packaging for use in (b) (4) testing due to the limited contact of the media with the final product. Additionally, FDA indicated that the (b) (4) testing conducted was not considered a sterility assay, as it only assesses (b) (4) and not (b) (4). Lastly, FDA emphasized that (b) (4) testing by itself, without an adequate sterility assay, such as a rapid sterility test, is not a sufficiently robust assay to release the final product.

Abeona and FDA discussed the use of destructive sterility testing, using a sample of the drug product, but the applicant indicated that such testing would require the destruction of an entire unit from the manufactured lot, decreasing the amount of product available for administration to the patient.

Abeona then discussed options for media sampling (b) (4) from the final product lot release for use in sterility testing. FDA indicated that additional studies would be required under this approach to demonstrate that manipulation of the final drug product during assembly and packing would not introduce any contamination. FDA also recommended that Abeona consider a more appropriate contact duration time for the (b) (4) to detect potential contaminants.

FDA provided additional information regarding rapid sterility test methods, including (b) (4) method such as (b) (4) from (b) (4) based method from (b) (4) (b) (4) that could be utilized to allow for sterility results prior to release of the final product.

Abeona agreed to develop a revised sterility testing plan based on the feedback and provide for FDA review within two weeks of this meeting.

**2. Information regarding major safety concerns.**

- At this time, no major safety concerns have been identified.

**Meeting Discussion for Agenda item 2:**

There was no discussion of Agenda item 2

**3. Preliminary Review Committee thinking regarding a.) risk management, b) the potential need for any post-marketing requirement(s) (PMRs), and c.) the ability**

of adverse event reporting and CBER's Sentinel Program to provide sufficient information about product risk.

- Risk Evaluation and Mitigation Strategies (REMS) are not anticipated at this time.
- The review of the BLA is on-going. If PMRs are anticipated, we will notify the applicant.

**Meeting Discussion for Agenda item 3:**

There was no discussion of Agenda item 3

**4. Any information requests sent, and responses not received.**

- CMC IR #8 sent on January 19, 2024, response requested by February 2, 2024: DP container closure, labeling, and leachables testing; acceptance criteria for validation methods used to evaluate RVV DS; method reports; in-process testing; and potency assays.

**Meeting Discussion for Agenda item 4:**

There was no discussion of Agenda item 4

**5. Any new information requests to be communicated.**

- As the review continues, new information requests will be conveyed as needed.

**Meeting Discussion for Agenda item 5:**

There was no discussion of Agenda item 5

**6. Proposed dates for the Late-Cycle Meeting (LCM) and the Late-Cycle Meeting Materials:**

- The LCM between you and the review committee is scheduled on **March 21, 2024 from 11:00 am to 12:00 pm.**
- We intend to send the LCM meeting materials to you approximately 10 days in advance of the LCM, on **March 11, 2024.**

**Meeting Discussion for Agenda item 6:**

There was no discussion of Agenda item 6

**7. Updates regarding plans for the AC meeting, if appropriate.**

- There are currently no plans for an AC meeting.

**Meeting Discussion for Agenda item 7:**

There was no discussion of Agenda item 7

8. Other projected milestone dates for the remainder of the review cycle, including changes to previously communicated dates, and notification of intent to inspect manufacturing facilities.

<b>Task Title</b>	<b>Date/Time</b>
Communicate Anticipated PMRs, if applicable	Apr 13, 2024
Communicate Proposed PMCs, if applicable, and Start Labeling Negotiations	Apr 25, 2024
Send FDA Action Letter	<b>May 25, 2024</b>

**Meeting Discussion for Agenda item 8:**

There was no discussion of Agenda item 8