Roundtable Session 1 – Table 3 - FDA Draft Guidance on Potency Assurance

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Abstract:

In December 2023, FDA issued the draft guidance: Potency Assurance for Cellular and Gene Therapy Products for public comments. The final version of this guidance is to replace the current potency guidance published in 2011. This draft guidance provides recommendations for developing a science- and risk-based strategy to help assure the potency of a human cellular therapy or gene therapy (CGT) product. This draft guidance proposed a potency assurance strategy which is a multifaceted approach that covers manufacturing process design, manufacturing process control, material control, in-process testing, and potency lot release assays to assure the final drug product potency.

Discussion Questions and Notes:

1. **Is there any concern for this guidance to replace the 2011 potency guidance?**

Not much concern as attendees think this new guidance is very inclusive with new potency assurance strategy and the specific potency assay expectation. The potency assurance strategy quite aligns with the current industrial practice. The ultimate goal for drug development is to make sure the final drug product is safe and effective. Many controls have already implemented through existing quality system such as raw materials, in-process control to ensure product potency from beginning to the end. The in-process control strategy can be beneficial for some cell therapy product which has short storage time. In process test result can help those product concurrent release while waiting for the final release potency assay results.

2. **What's the challenge to implement this guidance for developmental and licensed product?**

For in-vivo gene therapy, it is quite straightforward to identify the potency related CQAs if not all. It is understandable the potency assurance strategy is a live document which can be updated throughout the product development lifecycle as knowledge gained. There is no expectation to list or test all potency related CQAs which make it flexible and feasible for sponsor to implement this strategy.

For cell therapy product, there might be challenges to identify suitable potency related CQA and suitable test method or even feasible for testing as batch size can be very small.

A general challenge can be the test method might be re-qualified or developed for in-process sample as the impurity profile can be different from DS or DP.

Another concern is if the potency related COA is implemented in the middle of development, there is no historical data to compare to so it can be hard for sponsor to interpret the test result.

For early-stage program, it might be challenging to identify meaningful potency related CQA for lack of product knowledge.

It is also discussed where the potency assurance document can be placed in the submission. It is acceptable in M2 or S.4.5 or 3.2.R.

3. **How soon are you planning to develop a potency assurance strategy for your product?**

Some sponsor already started drafting the potency assurance strategy. In general attendee think this can be done in a timely manner