UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

CHARLES SEIFE, Plaintiff, *v.* FOOD AND DRUG ADMINISTRATION and DEPARTMENT OF HEALTH AND HUMAN SERVICES, Defendants, and SAREPTA THERAPEUTICS, Intervenor-Defendant.	Case No. 1:17-cv-3960 August 30, 2018

REPLY DECLARATION OF PETER LURIE

I, PETER LURIE, MD, MPH, declare as follows:

1. I submit this declaration in reply to defendants' opposition to plaintiff's pending motion for summary judgment. I make this declaration on personal knowledge as well as on my review of the public record regarding Exondys 51.

2. As established in plaintiff's motion, Sarepta has publicly released a significant amount of information about its drug, including on the Exondys 51 label, through mandated disclosures on clinicaltrials.gov and in SEC filings, and by voluntary publication in a variety of academic journals. Based on defendants' description, the CSR information that defendants are withholding is critical for scientists and independent researchers to be able to test and verify the accuracy of Sarepta's disclosures to date, particularly in light of the public controversy surrounding the drug's approval. However, it is

no contradiction that disclosure of this information would not be meaningfully useful to competitors because they are presumably designing different drugs, with different pharmacokinetic and pharmacodynamic properties.

3. An example is clarifying. As noted in my initial declaration, information about dosing that would be the most commercially valuable to competitors is already available on the Exondys 51 label, Lurie Decl. ¶ 22. To the extent that the information in the CSRs contains additional information about dosing, it would be very unlikely to be useful to Sarepta's competitors because other drugs in development are different compounds, with different pharmacological profiles and different absorption rates. Although knowing some information about the first drug in a class may be of some interest, companies still must perform new studies on their particular compounds, and the information most relevant for drugs in the same class has already been disclosed (*e.g.*, the information already required by the FDA to be on the label). The idea that far more granular information about dosing of Exondys 51 is incrementally valuable to competitors with different drugs with different profiles makes little scientific sense and Estepan provides no concrete details as to how defendants contend this information could be used by competitors to aid with the development of their own drugs and dosing. Of course, this information would be even less useful to companies developing drugs in a wholly different class or with wholly different mechanisms of action.

4. On the other hand, the withheld dosing information could, for example, help validate a scientific concern raised by FDA reviewers—in particular Dr. Unger—that Sarepta's dosing was sub-therapeutic, namely that the treatment dose is too low and the dosing too infrequent to produce any clinical response in patients taking it. *See* Kenney Decl., Ex. D, 41. Confirming whether this is so could be valuable for public health purposes and for clinicians and patients in determining whether and how to take the drug. But Sarepta's competitors would have to do studies on their own drugs to establish therapeutic levels.

5. Another example of this larger point pertains to the withheld Adverse Events (AEs). For instance, because of the rarity of any particular AE in small studies such as these, whether an event such as cardiomyopathy (one of Seife's concerns) is determined to be related to Exondys 51 is likely to be adjudicated on the basis of clinical assessments that are highly specific to that particular patient and unlikely to be resolved statistically. Thus, it is hard to imagine how releasing statistical AE data in the CSRs would help a competitor, as Sarepta claims. Because the FDA has already disclosed that there was a case of cardiomyopathy, the detailed information about Exondys 51 is only relevant to clinicians and patients who are concerned about using Exondys 51, or those monitoring patients taking the drug. They might consider stopping treatment if the patient shows similar symptoms, but this information is unlikely to be helpful to competitors.

6. It is highly unlikely that Sarepta has invented a novel statistical method for analyzing or testing AEs, since this testing and analysis has been well-studied for decades and comprises an entire field of research with concrete and established methods. It is especially unlikely that Sarepta devised a novel method for testing or analyzing AEs given the small numbers of patients in the trials, which constrain Sarepta's ability to use new statistical methods. Indeed, Sarepta makes no specific claim that the withheld material would reveal novel statistical techniques.

7. Estepan's opposition alleges that disclosed information could be taken out of context. Estepan 2d Decl. ¶ 33. But any information can be taken out of context, and, from a scientific perspective, releasing supporting data after related, high-level summary data is already disclosed will lead to greater, not lesser, context and transparency. Sarepta's take on the referenced particular stock market episode, for example, would call into question the FDA's well-established adverse events database that makes public adverse events for all approved drugs once they are on the market, lest the information be taken out of context. The appropriate approach to such a situation is to provide more context on the circumstances surrounding the AEs, not less.

8. With respect to both the historical control and the head-to-head analysis, the Estepan opposition declaration appears to conflate two distinct concepts that pertain to trial design. Estepan argues that the de-identified patient data would be useful to competitors, but he uses the term "de-identified" to refer to patient data stripped only of names and patient identifying numbers. That is not what Seife is requesting. As stated, *see* Kenney Decl. ¶ 7; Seife Decl. ¶ 53, Seife agreed that certain additional columns of data, such as demographic information, age, weight, and height, may all properly be removed from the data tables before disclosure. Without these columns, the data could not be used to create datasets for use as historical controls or for head-to-head trials because they could not be adjusted to account for differences in age, weight, height, and demographic information. The Estepan declaration does not contend that data lacking this more detailed information could be used in historical or head-to-head studies, and there is no scientific basis for such a claim.

9. In addition, the CSR data would be limited for historical control purposes, as only four patients were not exposed to Sarepta's drug in Study 201, providing very little statistical power.

10. In short, nothing presented in defendants' opposition undermines my demonstration that the high-level information Sarepta already has made publicly available is by far the most important for competitors, and that release of the withheld granular details is unlikely to cause substantial competitive harm because these details have a relatively small incremental value to competitors. The withheld granular details are therefore themselves valuable primarily to independent public health researchers seeking to test Sarepta's claims in light of the controversy over this particular drug's efficacy and safety to ensure the reported results are accurate and to clinicians monitoring patients and patients taking Exondys 51.

11. On a personal note, Estepan accuses me of being against "for-profit pharmaceutical research in the United States" and states that "research has led to the rapid development and distribution of many effective drug therapies, delivering great benefit to patients around the world." Estepan 2d

Decl. ¶ 45. I am not against pharmaceutical research and, having dedicated a large part of my life to the pursuit of safe and effective medicines, I know the benefits well. But, as the former head of FDA's Transparency Initiative, I do believe that the data should be carefully scrutinized by independent researchers, and that the public should not have to take Sarepta's word that the data mean what Estepan and Sarepta say they do.

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Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed this 30th day of August 2018, in Washington, DC.

Peter Lurie, MD, MPH