IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GENZYME CORPORATION,	)	
	)	
Plaintiff,	)	[redacted]
	)	
v.	)	**REDACTED PUBLIC VERSION**
	)	**FILED: May 29, 2025**
SAREPTA THERAPEUTICS, INC., and SAREPTA THERAPEUTICS THREE, LLC.	)	C.A. No. 24-cv-00882-RGA
	)	
	)	JURY TRIAL DEMANDED
	)	
Defendants.	)	

SECOND AMENDED COMPLAINT

Plaintiff Genzyme Corporation ("Genzyme"), by and through its undersigned attorneys, bring this action against Defendants Sarepta Therapeutics, Inc. ("Sarepta Therapeutics"), and Sarepta Therapeutics Three, LLC ("Sarepta Three") (together "Sarepta" or "Defendants").

NATURE OF ACTION

1. This is an action for infringement of United States Patent Nos. 9,051,542 (the "'542 Patent"), 7,704,721 (the "'721 Patent"), 12,031,894 (the "'894 Patent"), 12,013,326 (the "'326 Patent"), 11,698,377 (the "'377 Patent"), 12,123,880 (the "'880 Patent"), and 12,298,313 (the '313 Patent") (collectively, "the Patents-In-Suit") arising from Defendants' manufacture and sale of Elevidys® (delandistrogene moxeparvovec-rokl), a gene therapy for the treatment of a neuromuscular disease known as Duchenne muscular dystrophy ("DMD"). This action is based upon the Patent Laws of the United States, 35 U.S.C. §§ 100, *et seq.* True and correct copies of the '542 Patent and the '721 Patent are attached as Exhibit A and Exhibit B, respectively. True and correct copies of the '894 Patent, the '326 Patent, the '377 Patent, the '880 Patent, and the '313 Patent are attached as Exhibits O-S, respectively.

PARTIES

2. Plaintiff Genzyme is a corporation organized and existing under the laws of the Commonwealth of Massachusetts, having its principal place of business at 450 Water Street, Cambridge, MA 02141. Genzyme is the owner of the ’542 Patent, the ’721 Patent, the ’894 Patent, the ’326 Patent, the ’377 Patent, the ’880 Patent, and the ’313 Patent.

3. Genzyme and its affiliates focus on the development of specialty treatments for debilitating diseases that are often difficult to diagnose and treat.

4. On information and belief, Defendant Sarepta Therapeutics is a company organized and existing under the laws of the State of Delaware, having its corporate offices and principal place of business at 215 First St., Cambridge, MA 02142. On information and belief, Sarepta Therapeutics has a registered agent for service of process, Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808.

5. On information and belief, Defendant Sarepta Three is a corporation organized and existing under the laws of the State of Delaware, having its corporate offices and principal place of business at 215 First St., Cambridge, MA 02142. On information and belief, Sarepta Three has a registered agent for service of process, Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808. On information and belief, Sarepta Therapeutics is the direct or indirect parent of Sarepta Three and has at all times directed and controlled the infringing actions of its subsidiary.

6. On information and belief, Sarepta Therapeutics is a biopharmaceutical company in the business of, among other activities, developing gene therapy products using adeno-associated virus (“AAV”) technology to treat diseases, and Sarepta Three is engaged in the commercialization and/or manufacture of biopharmaceutical products in collaboration with Sarepta Therapeutics.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 100 *et seq.*, including § 271(a). This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a).

8. Venue is proper in this district pursuant to 28 U.S.C. § 1400(b) and/or 28 U.S.C. § 1391(b) and (c) for at least the reason that each Defendant resides in this district.

9. This Court has personal jurisdiction over Sarepta Therapeutics and Sarepta Three because they are incorporated in Delaware, knowingly transact business in Delaware, maintain a registered agent in Delaware, avail themselves of the rights and benefits of Delaware law, and, on information and belief, have engaged in, and made meaningful preparations to engage in, infringing conduct in Delaware.

10. On information and belief, each of the Defendants has established, and will continue to maintain, minimum contacts with this judicial district such that the exercise of jurisdiction over each of the Defendants would not offend traditional notions of fair play and substantial justice.

FACTUAL BACKGROUND

Gene Therapy Technology

11. It has long been recognized that certain diseases are caused by missing or defective genes, resulting in the inability of the body to produce key proteins. The result can be devastating, but the options for treating such genetic diseases have been limited. The radical approach taken by gene therapy is to attack the problem at the source—the patient's own genome—by providing a working copy of a defective or missing gene with what is referred to as a transgene. Gene therapy is at the cutting edge of medical technology, and the problems faced both in the delivery of transgenes and their manufacture are daunting.

12. Gene therapy can be performed by taking advantage of one of the body's age-old enemies, viruses, which have evolved to enter human cells. By removing part of the native viral DNA and substituting the DNA of the desired human transgene, a recombinant virus can be created that can enter cells and then deliver a desired human gene into a cell. At the time of the inventions of the Patents-In-Suit, it was known that in the right circumstances a modified adeno-associated virus ("AAV") could be used to achieve the delivery of a transgene. These genetically-engineered versions of the AAV are known as recombinant AAV ("rAAV") vectors.

13. Manufacturing rAAV-based therapeutics is a highly technical, multi-phase process involving rAAV vector production, which includes the creation of the vector genome, or genetic payload carrying the transgene, encapsidation of the vector genome in a protein shell called a capsid, followed by purification and formulation. A major concern during production is that the rAAV vector particles will become insoluble and aggregate into clusters of viral particles, which can result in production difficulties and loss of vector functionality. Low solubility and aggregation are problems thought to be attributable to the highly symmetrical nature of rAAV vector particles in conjunction with the stabilizing effect of complementary charged regions between neighboring particles in aggregates. Filtration can remove these aggregates during the purification process but at the cost of significantly reducing viral vector yields and thus increasing production costs.

14. Aggregation is particularly problematic with respect to formulations that are administered in ultraconcentrated, small volumes, as the high concentration levels promote aggregation. In such cases, aggregation can negatively impact the effectiveness of treatment, as well as increase the chance of an immune reaction following administration.

15. The inventions described in the ’542 Patent and the ’721 Patent are directed towards solving these problems. John Fraser Wright and Guang Qu, the inventors of the subject matter claimed in the ’542 Patent and the ’721 Patent, discovered that the use of certain high ionic strength solutions for preparing and storing rAAV vectors can prevent significant aggregation of virus particles at the concentrations needed for effective gene therapy. They invented rAAV formulations and related methods in which vector particles remain soluble when elevated ionic strengths are used during purification and for final vector formulation.

16. The process of creating an rAAV-based therapeutic involves the initial creation of the vector genome, followed by encapsidation of the vector genome in a protein shell called a capsid. Packaging the vector genome in the capsid is not a perfect process and it can result in a mixture of viral particles including capsids containing full, properly formed vector genomes, empty capsids that contain no vector genome, and partially filled capsids that contain fragmented or incomplete vector genomes.

17. Empty capsids and partially filled capsids are undesirable, and characterizing and purifying the preparations is a major difficulty in commercial manufacturing of rAAV therapies. In particular, it is critical to avoid introducing unwanted gene fragments and other impurities into patients. The Food and Drug Administration (“FDA”) has identified these issues as raising important health concerns and has focused on the manufacturing process in evaluating which therapies will obtain marketing approval. *See, e.g.*, Cellular, Tissue, and Gene Therapies Advisory Committee, “Toxicity Risks of Adeno-associated Virus (AAV) Vectors for Gene Therapy,” FOOD AND DRUG ADMINISTRATION, Sept. 2-3, 2021, at §§ 2.3-2.4.1, 2.4.3 (last accessed May 13, 2025), https://www.nxgenvectorsolutions.com/wp-content/uploads/2024/01/FDA_CTGTAC-09.02.21-09.03.21-Meeting-Briefing-Document-FDA.pdf.

18. Determining the capsid and genome quality within an rAAV-based therapeutic is an important and necessary step in the manufacturing process. Prior to the inventions claimed in the ’894 Patent and the ’326 Patent, the DNA content of recombinant viral DNA vectors was typically determined by Southern blot analysis using a sequence specific probe. But Southern blot analysis is unable to detect fragmented genomes of unknown sequence. There was not a single assay that could distinguish full, properly-formed capsids from the undesired species—empty capsids and partially-filled capsids—on a quantitative basis.

19. The inventions described in the ’894 Patent and the ’326 Patent are directed towards solving that problem. Catherine R. O’Riordan and Brenda Burnham, the inventors of the subject matter claimed in the ’894 Patent and the ’326 Patent, developed techniques using analytical ultracentrifugation (“AUC”) that allow for the detection and quantification of rAAV species, including full capsid particles, empty viral capsids with no rAAV genomes, and partially filled rAAV capsids, regardless of the nucleotide sequence of the recombinant viral genome or the serotype of the recombinant viral capsid. In so doing, the claimed AUC methods can be used to assess, quantitatively and qualitatively, an rAAV therapeutic for homogeneity, purity, and consistency of manufacturing. Thus, the ’894 Patent and the ’326 Patent represent a significant advancement to ensure consistency in the final gene therapy product.

20. rAAV viral capsid proteins, or “VPs,” are the proteins that make up the viral shell encasing the transgene and are composed of three viral proteins: VP1, VP2 and VP3. These proteins are important to the viral infectivity and vector potency of rAAV therapies and, in turn, to enhancing safety and efficacy for patients. Post-translational modifications of these VPs, such as N-terminal acetylation, deamidation, glycosylation, and ubiquitination, can impact infectivity, potency, and heterogeneity of rAAV preparations, and in turn the safety and efficacy of rAAV

therapies comprising these VPs. Thus, accurate characterization of these VPs is critical, particularly as new rAAV therapies are brought into the clinic and to the market.

21. VP characterization was typically performed in the prior art through using sodium dodecyl sulfate polyacrylamide gel electrophoresis ("SDS-PAGE") analysis, followed by enzymatic digestion/gel separation and liquid chromatography/tandem mass spectrometry analysis ("LC/MS/MS"). This process resulted in a limited recovery of peptides after protein in-gel digestion and incomplete sequencing of the specific VPs, which led to potentially inaccurate results. Moreover, SDS-PAGE is not specific enough to differentiate every AAV serotype or post-translational modifications, including of the VPs.

22. The inventions described in the '880 Patent and the '313 Patent solved the problems that existed in the prior art. The inventors of the '880 Patent and the '313 Patent —Xiaoying Jin, Catherine O'Riordan, Lin Liu, and Kate Zhang—developed a method for analyzing VPs and AAV particles comprising such VPs. This method comprises denaturing AAV particles and subjecting the denatured particles to liquid chromatography/mass spectrometry ("LC/MS"). This method involves analysis of intact proteins, rather than proteins that have been digested or subjected to gel separation as in the prior art, to more accurately determine the masses of VPs in AAV particles. This method can be applied generally or specifically to more accurately determining posttranslational modifications of VPs, as described and claimed in the '880 Patent. This method can also be applied in the preparation of a pharmaceutical composition, as described and claimed in the '313 Patent.

23. Further, identification of the serotype of rAAV particles is important to the potency and selectivity of rAAV therapeutics, and in turn to improved safety and efficacy. Serotype identification was typically performed in the prior art by antibody-based enzyme-linked

immunosorbent assays or Western blotting, but these tests were generally not specific enough to differentiate between different rAAV serotypes. SDS-PAGE analysis followed by in gel digestion and LC/MS/MS analysis had also been used, but this extended process typically required several days and numerous steps, including digestion by multiple enzymes to obtain the full VP sequences.

24. The inventions described in the ’377 Patent include improved methods for analyzing the serotype of AAV particles. The improvements arise from the greater resolution of the claimed methods compared to the prior art. This improved resolution can differentiate between a wider range of serotypes, particularly those with high sequence homology and overlapping epitopes. This differentiation is particularly important given the increasing number of AAV serotypes and engineered capsids being developed for therapeutic applications. The inventors of the ’377 Patent—Xiaoying Jin, Catherine O’Riordan, Lin Liu, and Kate Zhang—developed methods for analyzing VPs and AAV particles comprising VPs. These methods comprise denaturing AAV particles and subjecting the denatured particles to LC/MS. These methods involve the analysis of intact proteins, rather than proteins that have been digested or subjected to gel separation as in the prior art, to more accurately determine the masses of VPs in AAV particles. These methods can be applied to more quickly and accurately determine the serotype of an AAV particle, as described and claimed in the ’377 Patent.

The Patents-in-Suit

The ’542 Patent

25. On June 9, 2015, the United States Patent & Trademark Office (“USPTO”) duly and legally issued the ’542 Patent, titled “Compositions and Methods to Prevent AAV Vector

Aggregation." The '542 Patent is assigned to Genzyme. A true and correct copy of the '542 Patent is attached as Exhibit A.

26. The claims of the '542 Patent are generally directed to the preparation of high ionic strength compositions for the storage of purified, rAAV vector particles in which the vector particles do not significantly aggregate. On June 15, 2023, Genzyme statutorily disclaimed claims 1 and 2 of the '542 Patent. Claims 3-6 of the '542 Patent expire on June 1, 2025.

The '721 Patent

27. On April 27, 2010, the USPTO duly and legally issued the '721 Patent, titled "Compositions and Methods to Prevent AAV Vector Aggregation." The '721 Patent is assigned to Genzyme. A true and correct copy of the '721 Patent is attached as Exhibit B.

28. The claims of the '721 Patent are generally directed to methods for the preparation of high ionic strength compositions for the storage of purified, rAAV vector particles in which the vector particles do not significantly aggregate. The claims of the '721 Patent expire on June 1, 2025.

The '894 Patent

29. On July 9, 2024, the USPTO duly and legally issued the '894 Patent, titled "Analytical Ultracentrifugation for Characterization of Recombinant Viral Particles." The '894 Patent is assigned to Genzyme. A true and correct copy of the '894 Patent is attached as Exhibit O.

30. The claims of the '894 Patent are generally directed to methods to quantify one or more species of individual variant viral particles comprising fragmented rAAV genomes in a heterogeneous mixture of viral particles using analytical ultracentrifugation. The claims of the '894 Patent expire on January 19, 2036.

The ’326 Patent

31. On June 18, 2024, the USPTO duly and legally issued the ’326 Patent, titled “Analytical Ultracentrifugation for Characterization of Recombinant Viral Particles.” The ’326 Patent is assigned to Genzyme. A true and correct copy of the ’326 Patent is attached as Exhibit P.

32. The claims of the ’326 Patent are generally directed to methods to determine the size of one or more fragmented genomes in a preparation of viral particles comprising rAAV vectors encapsidated into viral capsids and/or determine the molar concentrations of each species of individual viral particles in a heterogeneous mixture of viral particles comprising rAAV vectors encapsidated into viral capsids using analytical ultracentrifugation. The claims of the ’326 Patent expire on January 19, 2036.

The ’377 Patent

33. On July 11, 2023, the USPTO duly and legally issued the ’377 Patent, titled “Methods for Detecting AAV.” The ’377 Patent is assigned to Genzyme. A true and correct copy of the ’377 Patent is attached as Exhibit Q.

34. The claims of the ’377 Patent are generally directed to methods for determining the serotype of a denatured AAV particle by LC/MS intact protein analysis. The claims of the ’377 Patent expire on August 8, 2038.

The ’880 Patent

35. On October 22, 2024, the USPTO duly and legally issued the ’880 Patent, titled “Methods for Detecting AAV.” The ’880 Patent is assigned to Genzyme. A true and correct copy of the ’880 Patent is attached as Exhibit R.

36. The claims of the ’880 Patent are generally directed to methods for analyzing and determining post-translational modifications of denatured AAV particles by LC/MS intact protein analysis. The claims of the ’880 Patent expire on August 14, 2037.

The ’313 Patent

37. On May 13, 2025, the USPTO duly and legally issued the ’313 Patent, titled “Methods for Detecting AAV.” The ’880 Patent is assigned to Genzyme. A true and correct copy of the ’313 Patent is attached as Exhibit S.

38. The claims of the ’313 Patent are generally directed to methods for analyzing and determining post-translational modifications of denatured AAV particles by LC/MS intact protein analysis, and methods of preparing compositions comprising such AAV particles subjected to analysis and determination. The claims of the ’313 Patent expire on August 14, 2037.

Elevidys®

39. Sarepta Therapeutics is the holder of Biologics License Application (“BLA”) No. 125781 for Elevidys® (delandistrogene moxeparvovec-rokl) (also referred to as “SRP-9001”). Elevidys® is a one-time rAAV gene therapy product that is used to treat certain patients with DMD. A true and correct copy of the current Elevidys® package insert, dated August 2024, is attached as Exhibit C.

40. DMD is a form of muscular dystrophy caused by a mutation in the DMD gene that renders patients unable to produce a functional dystrophin protein. The disease typically strikes young boys around the age of four and leads to progressive muscle weakness. Patients with DMD experience various physical symptoms, including but not limited to, frequent falls, difficulty rising from a lying or sitting position, trouble running and jumping, waddling gait, and muscle pain and stiffness. By adolescence, many patients lose the ability to walk.

41. Elevidys® is designed to deliver a gene encoding a micro-dystrophin protein in the subject's muscle cells. On information and belief, the micro-dystrophin protein is a shortened, but functional, version of the dystrophin protein, comprising only selected domains and a fraction of the molecular weight of the dystrophin protein that is normally expressed in skeletal muscle cells. Elevidys® uses a non-replicating, rAAV vector of the serotype rh74 ("rAAVrh74") capsid to package and deliver a human micro-dystrophin transgene under the control of the MHCK7 promoter. *See* Exhibit C, § 11 Description.

42. On June 22, 2023, Sarepta obtained FDA accelerated approval to market Elevidys® for the treatment of ambulatory pediatric patients aged 4 through 5 years with DMD with a confirmed mutation in the DMD gene. *See* Exhibit D, Accelerated BLA Approval. On or about June 20, 2024, Sarepta subsequently obtained full FDA approval for an expanded indication for Elevidys® that significantly broadened the population of eligible patients to include DMD patients four years of age and older who are ambulatory and have a confirmed mutation in the DMD gene and accelerated approval for DMD patients four years of age and older who are non-ambulatory and have a confirmed mutation in the DMD gene. *See* Exhibit E, June 20, 2024, Supplemental Approval.

43. On information and belief, Sarepta has entered into agreements with Catalent, Inc. and/or Catalent Maryland, Inc. (collectively, "Catalent"), encompassing process development, clinical production and testing, and commercial manufacturing of Elevidys® for the U.S. market. *See* Sarepta Therapeutics, Inc., Annual Report (Form 10-K) p. 10 (Feb. 28, 2024), https://www.sec.gov/Archives/edgar/data/873303/000095017024022036/srpt-20231231.htm ("Sarepta 2024 Form 10-K"); Sarepta Therapeutics, Inc., Annual Report (Form 10-K) p. 9 (Feb. 28, 2025), https://www.sec.gov/Archives/edgar/data/873303/000095017025029973/srpt-

20241231.htm ("Sarepta 2025 Form 10-K"). On information and belief, Catalent manufactures the Elevidys® drug substance on behalf of Sarepta in Harmans, MD and the finished drug product in Baltimore, MD. *See* Exhibit F, § 3.2.A, Facilities Table. On information and belief, Elevidys® is manufactured by Catalent on Sarepta's behalf and under Sarepta's direction and control as the BLA holder. On information and belief, Catalent has been manufacturing Elevidys® on Sarepta's behalf and under Sarepta's direction and control, and Defendants have been marketing Elevidys® in the United States since obtaining FDA approval in 2023. *See* Exhibit D, Accelerated BLA Approval. On information and belief Defendants have formed a joint enterprise with third-party manufacturers and testing companies, such as Catalent, for the manufacture and sale of Elevidys®.

44. Detailed information about the manufacture of Elevidys®, including the release testing performed on Elevidys®, is contained in the Sarepta BLA, which was submitted to the FDA and is maintained by the FDA on a confidential basis.

45. As noted by Beckman Coulter, an analytical ultracentrifuge equipment manufacturer, analytical ultracentrifugation is acknowledged as the "gold standard" in the detection and quantification of AAV particles and "a valuable tool to analyze rAAV vectors notwithstanding the composition and length of the transgene or the viral serotype." Exhibit T.

46. Catalent also touts analytical ultracentrifugation as the "gold standard" method to detect and quantify capsids in a sample to ensure that patients are receiving a product containing the highest concentration of full rAAV capsids possible. *See* CATALENT BIOLOGICS, https://biologics.catalent.com/expert-content/gene-therapy/measuring-quality-attributes-for-gene-therapies-empty-vs-full-viral-vector-capsids/.

47. On information and belief, Defendants are required to verify the vector capsid identity, percent full capsid, capsid purity, and potency at least as part of the drug product release

specifications for Elevidys®. *See* Exhibit G, CBER CMC BLA Review Memo at § 3.2.P.5, Control of Drug Product. On information and belief, Defendants cannot sell Elevidys® without performing release testing. Identification of capsid purity includes identifying the uniformity of the capsid serotype such that it does not contain other serotypes that may exist through viral contamination.

48. In manufacturing Elevidys® drug product, on information and belief, Defendants quantify the viral particles in Elevidys® utilizing the claimed analytical ultracentrifugation methods of the ’894 Patent and ’326 Patent.

49. On information and belief, Defendants use the methods claimed in the ’377 Patent to identify the rAAVrh74 capsid serotype of Elevidys® at various stages of manufacturing.

50. Sarepta is the current assignee of U.S. Patent Application US 2023/0204595 A1, entitled “Methods for analyzing AAV capsid proteins,” to Daud et al., published June 29, 2023 (the “’595 Application”). *See* Exhibit U.

51. On information and belief, Defendants perform the methods described and claimed in the ’595 Application as part of the release testing of commercial batches of Elevidys®. On information and belief, Defendants cannot sell Elevidys® without performing release testing. As described below, the methods practiced by Defendants infringe the ’377 Patent and ’880 Patent.

52. Example 4 of the ’595 Application is entitled “Characterization of the VP1, VP2, and VP3 capsid proteins in an AAV particle.” Example 4 of the ’595 Application describes a method for analyzing VP1, VP2, and VP3 proteins in an rAAVrh74 capsid. Figure 3 and Table 6 of the ’595 Application report the results of Example 4. According to the disclosures of the ’595 Application, “Fig. 3 shows detection of post-translation modification of VP1, VP2, and VP3. Table 6 shows the intact mass analysis of AAV.rh74 capsid proteins.”

53. The method set forth in Example 4 of the ’595 Application infringes at least one claim of each of the ’880 Patent, the ’377 Patent, and the ’313 Patent.

Sarepta’s Knowledge of the Patents-In-Suit

54. On July 26, 2024, Genzyme sent a notice letter to Sarepta advising Sarepta of Genzyme’s concerns that Sarepta was infringing the ’721 Patent, the ’542 Patent, the ’326 Patent, the ’894 Patent, and the ’377 Patent in its manufacture and sale of Elevidys®. Exhibit I.

55. On July 26, 2024, Genzyme filed a complaint for patent infringement in this matter (D.I. 1) alleging infringement of the ’542 Patent and the ’721 Patent by Sarepta by making, using, offering for sale, and/or selling Elevidys® in the United States in violation of 35 U.S.C. § 271(a), (b) and/or (c).

56. On October 31, 2024, Genzyme sent a second notice letter to Sarepta again advising Sarepta of Genzyme’s concerns that Sarepta was infringing the ’542 Patent, the ’721 Patent, the ’326 Patent, the ’894 Patent, the ’377 Patent, and the ’880 Patent in its manufacture and sale of Elevidys®. Exhibit J.

57. On May 1, 2025, Genzyme sent a third notice letter to Sarepta again advising Sarepta of Genzyme’s concerns that Sarepta was infringing the ’542 Patent, the ’721 Patent, the ’326 Patent, the ’894 Patent, the ’377 Patent, and the ’880 Patent, as well as U.S. Patent Application No. 19/013,863 (which issued as the ’313 Patent as set forth in the third notice letter) in its manufacture and sale of Elevidys®. Exhibit X.

58. On April 4, 2025, Sarepta served Objections and Responses to Genzyme’s First Set of Interrogatories (Nos. 1-10). In response to Interrogatory No. 6, Sarepta’s response states that based on its “investigation to-date and facts currently known to it,” Sarepta became aware of the

’542 patent on August 22, 2023 and became aware of the ’721 patent on July 26, 2024. Exhibit K at 16-17.

59. On information and belief, because Sarepta was aware of the ’542 patent at least as of August 22, 2023 and the ’542 patent lists the ’721 patent on its face, Sarepta also knew of and/or willfully disregarded the existence of the ’721 patent at least as of August 22, 2023. On information and belief, Sarepta took deliberate actions to avoid learning of the existence of the ’721 patent after gaining knowledge of the ’542 patent.

60. On June 30, 2023, Sarepta filed a PCT International Search Report with the USPTO during prosecution of the ’595 Application. *See* Exhibit V. This PCT search was purportedly completed by April 9, 2021. This PCT search included, under “Documents Considered to Relevant,” WO 2018/035059 A1, assigned to Genzyme. This PCT search also included a paper by the inventors of the ’377 and ’880 patents. *See* Exhibit W (J. Xiaoying et al., *Direct Liquid Chromatography/Mass Spectrometry Analysis for Complete Characterization of Recombinant Adeno-Associated Virus Capsid Proteins*, HUM. GENE THER. METHODS, June 2017).

61. In the Written Opinion of the International Searching Authority attached to the PCT search, the claims of Sarepta’s ’595 Application were deemed to lack novelty at least in view of WO 2018/035059 A1. *See* Exhibit V.

62. Genzyme’s WO 2018/035059 A1 was PCT/US2017/046814 which was filed in the U.S. as a national phase application under 35 U.S.C. § 371, with U.S. Application No. 16/325,653. *See* Exhibit Q. This application issued as the ’377 patent. *See id.* The ’880 Patent is a divisional application of U.S. Application No. 16/325,653, filed as application No. PCT/US2017/046814, which issued as the ’377 Patent. *See* Exhibit R. The ’313 Patent is a continuation of application

No. 18/801,293, which is a divisional application of U.S. application No. 18/321,542, which issued as the ’880 Patent. *See* Exhibit S.

63. On information and belief, Sarepta monitors the patent family deriving from WO 2018/035059 A1 and PCT/US2017/046814—which includes the ’377, ’880, and ’313 Patents—at least for purposes of prosecuting the ’595 Application.

64. Sarepta has been aware of the ’542 Patent since, at the latest, August 22, 2023. *See* Exhibit K.

65. Sarepta has been aware of the ’721 Patent since, at the latest, July 26, 2024. *See* Exhibit I.

66. Sarepta has been aware of the ’894 Patent since, at the latest, July 26, 2024. *See* Exhibit I.

67. Sarepta has been aware of the ’326 Patent since, at the latest, July 26, 2024. *See* Exhibit I.

68. On information and belief, Sarepta has been aware of the application that led to the ’377 Patent since April 9, 2021, the date the international search was completed, or in the alternative, at least since June 30, 2023, the date Sarepta filed the international search with the PTO. Sarepta has been aware of the ’377 Patent since its issuance on July 11, 2023 and since, at the latest, July 26, 2024. *See* Exhibits I, Q, and V.

69. On information and belief, Sarepta has been aware of the application that led to the ’880 Patent since its publication on February 8, 2024, and aware of the ’880 Patent since its issuance on October 22, 2024 and at the latest, by October 31, 2024. *See* Exhibits J and R.

70. Sarepta has been aware of the application that led to the ’313 Patent since its publication on May 1, 2025, and aware of the ’313 Patent since, at the latest, its issuance on May 13, 2025. *See* Exhibits S and X.

COUNT I
INFRINGEMENT OF THE ’542 PATENT

71. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 70, above as though fully set forth herein.

72. Plaintiff has all substantial rights in and to the ’542 Patent, including the right to assert any claims for past, present, and future infringement of the ’542 Patent against Defendants.

73. Defendants have infringed at least one claim of the ’542 Patent by making, using, importing, offering for sale, and/or selling Elevidys® in the United States in violation of 35 U.S.C. § 271(a), (b) and/or (c).

74. The ’542 Patent has one independent claim, claim 1, which, as of June 15, 2023, has been statutorily disclaimed. Claims 3 and 6 each depend from claim 1, and thus incorporate all the limitations of claim 1. Claim 1 recites:

> A composition for the storage of purified, recombinant adeno-associated virus (AAV) vector particles, comprising:
>
> > purified, recombinant AAV vector particles at a concentration exceeding 1×10^{13} vg/ml up to 6.4×10^{13} vg/ml;
> >
> > a pH buffer, wherein the pH of the composition is between 7.5 and 8.0; and
> >
> > excipients comprising one or more multivalent ions selected from the group consisting of citrate, sulfate, magnesium, and phosphate; wherein the ionic strength of the composition is greater than 200 mM, and wherein the purified AAV vector particles are stored in the composition without significant aggregation.

75. Elevidys® is a pharmaceutical composition for the storage of purified, rAAV vector particles, employing a “serotype rh74 (AAVrh74) based vector containing the ELEVIDYS

micro-dystrophin transgene under the control of the MHCK7 promoter." Exhibit C, § 11 Description. Elevidys® has a "nominal concentration of 1.33 x 10^{13} vg/mL," which is within the claimed range of 1×10^{13} vg/ml up to 6.4×10^{13} vg/ml. Exhibit C, § 11 Description.

76. Elevidys® contains a pH buffer, which is a combination of tromethamine HCl and tromethamine, and wherein the pH of the composition, which can be calculated from its components, is between 7.5 and 8.0. Exhibit C, § 11 Description ("Each vial [of Elevidys®] contains an extractable volume of 10 mL and the following excipients: 200 mM sodium chloride, 13 mM tromethamine HCl, 7 mM tromethamine, 1 mM magnesium chloride, 0.001% poloxamer 188.").

77. The excipients in Elevidys® comprise a multivalent ion selected from the claimed group, magnesium in the form of magnesium chloride, wherein the ionic strength of the composition is greater than 200 mM.

78. On information and belief, Elevidys® is also stored in the composition without significant aggregation. *See* Exhibit G, § 3.2.P.3.2 Batch Formula (Defendants represented to the FDA that the drug product "[v]ials found to have defects, including visible particles are removed."); *id.*, § 3.2.P.5. Control of Drug Product (The Elevidys® drug product release specifications require the analytical testing of certain attributes of the final drug product before it is permitted to enter the market, including the testing of "Particulate Matter." The FDA reviewer commented that this attribute had "[a]cceptable compendial limits."); *id.*, § 3.2.P.2.6 Compatibility ("According to the Applicant, low levels of visible particles were observed in SRP-9001 drug product vials during the 100% visual inspection process in some batches and were rejected."). On information and belief, the FDA would not approve the product if it failed to meet this requirement.

79. Claim 3 depends from claims 1 and 2 and therefore incorporates all of the limitations of claims 1 and 2. Claims 2 and 3 recite:

> 2. The composition of claim 1, further comprising ethylene oxide/propylene oxide block copolymer Pluronic® F68.
>
> 3. The composition of claim 2, wherein the Pluronic® F68 is present at a concentration of 0.001% (w/v).

80. Elevidys® contains ethylene oxide/propylene oxide block copolymer Pluronic® F68, also known as poloxamer, in the amount of 0.001%. *See* Exhibit C, § 11 Description ("Each vial [of Elevidys®] contains . . . 0.001% poloxamer 188.").

81. Claim 6 depends from claim 1 and recites:

> 6. The composition of claim 1, wherein recovery of the purified, recombinant virus particles is at least about 90% following filtration of the composition of said AAV vector particles through a 0.22 μm filter.

82. On information and belief, the recovery of the purified, recombinant virus particles of Elevidys® is at least about 90% following filtration of the Elevidys® composition through a 0.22 μm filter. The manufacturing process for Elevidys® includes sterile filtration. Exhibit G, § 10.A EXECUTIVE SUMMARY, at p. iv. On information and belief, the sterile filtration utilizes a 0.22 μm filter. *See also* Exhibit C, § 2.4 Administration ("Recommended supplies and materials: Syringe infusion pump, 0.2 micron PES* in-line filter, PVC* (non-DEHP*), polyurethan IV infusion tubing and catheter); Exhibit G, § 3.2.P.2.6 Compatibility ("A study to assess the in-use compatibility and effectiveness of a 0.2 μm in-line filter as part of DP administration to remove potential intrinsic particulates in the [drug product], was conducted. . . ."). On information and belief, the yield of Elevidys® following sterile filtration is within plus or minus 10% of the FDA approved drug product specification (i.e., at least 90%).

83. Defendants' manufacture, sale, offer for sale, importation, and/or use of the patented compositions in Elevidys® claimed in the '542 Patent prior to the expiration of the '542 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 3 and 6 of the '542 Patent.

84. Defendants jointly infringe the '542 Patent by contracting with Catalent or other third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with manufacturers including Catalent for the manufacture of Elevidys®. *See, e.g.*, Sarepta Therapeutics, Inc., Quarterly Report (Form 10-Q) p. 22 (May 1, 2024), https://www.sec.gov/Archives/edgar/data/873303/000095017024051234/srpt-20240331.htm ("Sarepta May 2024 10-Q") ("We have adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs."); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 ("Catalent will be Sarepta's primary commercial manufacturing partner for this therapy [Elevidys®]."); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits by Catalent upon manufacture of Elevidys® and establish the manner and timing of Catalent's performance.

85. Defendants have infringed the '542 Patent by selling and offering to sell Elevidys® to third parties. *See, e.g.*, Exhibit D, June 22, 2023, Accelerated BLA Approval Letter (issuing "U.S. License No. 2308 to Sarepta Therapeutics, Inc." which "authorizes you to introduce or

deliver for introduction into interstate commerce" Elevidys®.); Sarepta 2024 Form 10-K at p. 8 ("We launched ELEVIDYS in the second quarter of 2023."); *id.* at p. 76 (Sarepta recorded more than $200 million in revenue from U.S. sales of Elevidys® in 2023 alone.); Sarepta 2025 Form 10-K at p. 8 ("We launched ELEVIDYS in the second quarter of 2023."); *id.* at p. 74 (Sarepta recorded more than $820 million in revenue from U.S. sales of Elevidys® in 2024 alone.); Sarepta Therapeutics, Inc. Quarterly Report (Form 10-Q), p.13 (May 6, 2025), https://www.sec.gov/ix?doc=/Archives/edgar/data/0000873303/000095017025064412/srpt-20250331.htm at p. 13 (Q1 2025 Elevidys® net revenue of $375 million) ("Sarepta 2025 Form 10-Q").

86. On information and belief, at least as of August 22, 2023, Defendants have actively induced infringement of one or more claims of the '542 Patent, including but not limited to claims 3 and 6, under 35 U.S.C. § 271(b), by providing the infringing product to third parties along with a label providing instructions for use with patients and/or by directing or instructing Catalent or other third parties to manufacture the infringing product, with knowledge of the '542 Patent and that the induced acts would constitute infringement.

87. Moreover, on information and belief, Defendants contribute to infringement of the '542 Patent, including but not limited to claims 3 and 6, under 35 U.S.C. § 271(c) by supplying components of the claimed compositions, such as the provision of engineered rAAV particles for formulation into finished drug product, such components having no substantially non-infringing uses, with knowledge of the '542 Patent and its infringement at least as of August 22, 2023.

88. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants' infringement of the '542 Patent.

89. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the '542 Patent.

90. Sarepta submitted its BLA for Elevidys® to FDA on September 28, 2022.

91. [redacted]

92. [redacted]

93. [redacted]

94. On June 22, 2023, Sarepta obtained FDA accelerated approval to market Elevidys® for the treatment of ambulatory pediatric patients aged 4 through 5 years with DMD with a confirmed mutation in the DMD gene. *See* Exhibit D, Accelerated BLA Approval.

95. Given Sarepta's knowledge of the '542 Patent, [redacted] and the July and October 2024 letters from Genzyme, Sarepta's continued infringement of the '542 Patent by its manufacture, use, sale, importation, and/or offer to sell Elevidys® is deliberate and intentional.

96. In addition, given Sarepta's knowledge of the '542 Patent, its BLA submissions, and the July and October 2024 letters from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the '542 Patent constituted an unjustifiably high risk of infringement of the '542 Patent.

97. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '542 Patent has been and continues to be deliberate, intentional, egregious, willful, and in reckless disregard of the valid patent claims of the '542 Patent and entitles Genzyme to enhanced damages and attorneys' fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta's infringement of the '542 Patent has been willful.

COUNT II
INFRINGEMENT OF THE '721 PATENT

98. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 97, above as though fully set forth herein.

99. Plaintiff has all substantial rights in and to the ’721 Patent, including the right to assert any claims for past, present, and future infringement of the ’721 Patent against Defendants.

100. Defendants have infringed at least one claim of the ’721 Patent by making, using, importing, offering for sale, and/or selling Elevidys® in the United States in violation of 35 U.S.C. § 271(a), (b) and/or (c).

101. The ’721 Patent has one independent claim, claim 1. Claim 1 recites:

> A method of preventing aggregation of recombinant adeno-associated virus (rAAV) virions in a purified preparation of rAAV virions, comprising:
>
> 1) providing a lysate comprising rAAV virions;
>
> 2) purifying rAAV virions from the lysate using ultracentrifugation and/or chromatography, wherein said virions are purified; and
>
> 3) adding one or more salts of multivalent ions selected from the group consisting of citrate, phosphate, sulfate and magnesium to said purified virions to produce a preparation of virions with an ionic strength of at least 200 mM, wherein the concentration of purified rAAV virions in said preparation exceeds 1×10^{13} vg/ml up to 6.4×10^{13} vg/ml; and wherein the pH of the purified preparation of rAAV virions is between 7.5 and 8.0.

102. Elevidys® is a purified preparation of rAAV virions, comprising a “serotype rh74 (AAVrh74) based vector containing the ELEVIDYS micro-dystrophin transgene under the control of the MHCK7 promoter.” Exhibit C, § 11. On information and belief, Elevidys® is manufactured using a chromatography-based purification method. Exhibit G, § 3.2.P.2.3 Manufacturing Process Development (“Process B clinical DP is manufactured at Catalent BioPark and has been validated as the intended commercial process. . . .”); *id.*, § 10.A EXECUTIVE SUMMARY (“Process B utilizes a scaled-up purification method that incorporates chromatography-based methods purification of the DP, including separation of the empty capsid residuals from the full capsids.”).

103. On information and belief, Elevidys® is manufactured according to a method that prevents aggregation of the rAAV virions within the drug product. *See* Exhibit G, § 3.2.P.3.2

Batch Formula (Defendants represented to the FDA that the drug product "[v]ials found to have defects, including visible particles are removed."); *id.*, § 3.2.P.5. Control of Drug Product (The Elevidys® drug product release specifications require the analytical testing of certain attributes of the final drug product before it is permitted to enter the market, including the testing of "Particulate Matter." The FDA reviewer commented that this attribute had "[a]cceptable compendial limits."); *id.*, § 3.2.P.2.6 Compatibility ("According to the Applicant, low levels of visible particles were observed in SRP-9001 drug product vials during the 100% visual inspection process in some batches and were rejected."). On information and belief, the FDA would not approve Elevidys® if it failed to meet this requirement.

104. On information and belief, Elevidys® is manufactured recombinantly using a cell bank, and the drug substance is purified by providing a lysate containing the rAAV virions. Exhibit G § 3.2.A.2 Adventitious Agents Safety Evaluation ("generation of cell banks and DS manufacturing" were reviewed in "3.2.S.2.3 Control of Materials. The materials are satisfactorily controlled.").

105. On information and belief, the rAAV virions in Elevidys® are purified from the lysate using chromatography. Exhibit G, § 3.2.P.2.3 Manufacturing Process Development ("Process B clinical DP is manufactured at Catalent BioPark and has been validated as the intended commercial process . . . ."); *id.*, § 10.A EXECUTIVE SUMMARY ("Process B utilizes a scaled-up purification method that incorporates chromatography-based methods purification of the DP, including separation of the empty capsid residuals from the full capsids.").

106. Elevidys® is prepared by adding to the purified virions the salt of a multivalent ion, magnesium chloride, selected from the claimed group, to produce a preparation of virions with an ionic strength of at least 200 mM. Exhibit C, § 11 Description ("Each vial [of Elevidys®] contains

an extractable volume of 10 mL and the following excipients: 200 mM sodium chloride, 13 mM tromethamine HCl, 7 mM tromethamine, 1 mM magnesium chloride, 0.001% poloxamer 188.”).

107. Elevidys® has a “nominal concentration of 1.33 x 10^{13} vg/mL,” which is within the claimed range of 1×10^{13} vg/ml up to 6.4×10^{13} vg/ml. Exhibit C, § 11 Description.

108. The pH of the purified preparation of rAAV virions of Elevidys® is between 7.5 and 8.0. The pH of Elevidys® can be calculated from its components and is between 7.5 and 8.0. Exhibit C, § 11 Description (“Each vial [of Elevidys®] contains an extractable volume of 10 mL and the following excipients: 200 mM sodium chloride, 13 mM tromethamine HCl, 7 mM tromethamine, 1 mM magnesium chloride, 0.001% poloxamer 188.”).

109. Claim 7 depends from claim 1 and recites:

> The method of claim 1, wherein, after addition of the one or more salts of multivalent ions, recovery of the virions is at least about 90% following filtration of the preparation of virions through a 0.22 μm filter.

110. On information and belief, the recovery of the purified AAV virions of Elevidys® is at least about 90% recovered following filtration of the Elevidys® composition through a 0.22 μm filter, after the addition of a salt of a multivalent ion, magnesium chloride. The manufacturing process for Elevidys® includes sterile filtration. Exhibit G, § 10.A. EXECUTIVE SUMMARY at p. iv. On information and belief, the sterile filtration utilizes a 0.22 μm filter. *See also* Exhibit C, § 2.4 Administration (“Recommended supplies and materials: Syringe infusion pump, 0.2 micron PES* in-line filter, PVC* (non-DEHP*), polyurethan IV infusion tubing and catheter); Exhibit G, § 3.2.P.2.6 Compatibility (“A study to assess the in-use compatibility and effectiveness of a 0.2 μm in-line filter as part of DP administration to remove potential intrinsic particulates in the [drug product], was conducted.”). On information and belief, the yield of Elevidys® following sterile

filtration is within plus or minus 10% of the FDA approved drug product specification (i.e., at least 90%).

111. Defendants' practice of the patented methods claimed in the '721 Patent prior to the expiration of the '721 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 1 and 7 of the '721 Patent.

112. Defendants jointly infringe the '721 Patent by contracting with Catalent or other third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with manufacturers including Catalent for the manufacture of Elevidys®. *See, e.g.*, Sarepta May 2024 10-Q at p. 22 ("We have adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs."); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 ("Catalent will be Sarepta's primary commercial manufacturing partner for this therapy [Elevidys®]."); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits upon performance by Catalent of the steps of the patented methods of the '721 Patent in the manufacture of Elevidys®, and establish the manner and timing of Catalent's performance.

113. Defendants have infringed the '721 Patent by selling and offering to sell Elevidys®, made by the methods claimed in the '721 Patent to third parties. *See, e.g.*, Exhibit D, June 22, 2023, Accelerated BLA Approval Letter at p. 1 (issuing "U.S. License No. 2308 to Sarepta

Therapeutics, Inc." which "authorizes you to introduce or deliver for introduction into interstate commerce" Elevidys®.); Sarepta 2024 Form 10-K at p. 8 ("We launched ELEVIDYS in the second quarter of 2023."); *id.* at p. 76 (Sarepta recorded more than $200 million in revenue from U.S. sales of Elevidys® in 2023 alone.); Sarepta 2025 Form 10-K at p. 8 ("We launched ELEVIDYS in the second quarter of 2023."); *id.* at p. 74 (Sarepta recorded more than $820 million in revenue from U.S. sales of Elevidys® in 2024 alone.); Sarepta 2025 Form 10-Q at p. 13 (Q1 2025 Elevidys® net revenue of $375 million).

114. On information and belief, at least as of August 22, 2023, Defendants have actively induced Catalent or other third parties to infringe one or more claims of the '721 Patent, including but not limited to claims 1 and 7, under 35 U.S.C. § 271(b), by instructing and contracting with Catalent or other third parties to manufacture Elevidys® in accordance with the claimed methods, with knowledge of the '721 Patent and that the induced acts would constitute infringement.

115. Moreover, on information and belief, Defendants contribute to infringement of the '721 Patent, including but not limited to claims 1 and 7, under 35 U.S.C. § 271(c) by supplying materials or apparatuses for use in practicing the patented method, such as the provision of engineered rAAV virions to manufacture the finished drug product, such materials or apparatuses having no substantially non-infringing uses, with knowledge of the '721 Patent and its infringement at least as of August 22, 2023.

116. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants' infringement of the '721 Patent.

117. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the '721 Patent.

118. Sarepta submitted its BLA for Elevidys® to FDA on September 28, 2022.

119. [redacted]

120. [redacted]

121. [redacted]

[redacted]

122. On June 22, 2023, Sarepta obtained FDA accelerated approval to market Elevidys® for the treatment of ambulatory pediatric patients aged 4 through 5 years with DMD with a confirmed mutation in the DMD gene. *See* Exhibit D, Accelerated BLA Approval.

123. Given Sarepta's knowledge of the '721 Patent, [redacted] and the July and October 2024 letters from Genzyme, Sarepta's continued infringement of the '721 Patent by its manufacture, use, importation, sale, or offer to sell Elevidys®, or inducing others to manufacture, use, import, sell, or offer to sell Elevidys®, is deliberate and intentional.

124. In addition, given Sarepta's knowledge of the '721 Patent, its BLA submissions, and the July and October 2024 letters from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the '721 Patent constituted an unjustifiably high risk of infringement of the '721 Patent.

125. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '721 Patent has been and continues to be deliberate, intentional, egregious, willful, and in reckless disregard of the valid patent claims of the '721 Patent, and entitles Genzyme to enhanced damages and attorneys' fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta's infringement of the '721 Patent has been willful.

COUNT III
INFRINGEMENT OF THE '894 PATENT

126. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 125 above as though fully set forth herein.

127. Plaintiff has all substantial rights in and to the ’894 Patent, including the right to assert any claims for past, present, and future infringement of the ’894 Patent against Defendants.

128. Defendants have infringed at least one claim of the ’894 Patent by practicing the patented methods during the manufacture of Elevidys® in the United States in violation of 35 U.S.C. §§ 271(a), (b) and/or (c).

129. The ’894 Patent has one independent claim, claim 1. Claim 1 recites:

> A method of quantifying one or more species of individual variant viral particles comprising fragmented recombinant adeno-associated viral (rAAV) genomes in a heterogeneous mixture of viral particles, said method comprising:
>
> > (i) subjecting the heterogeneous mixture of viral particles to analytical ultracentrifugation under boundary sedimentation velocity conditions to generate sedimenting boundaries, wherein the boundary sedimentation velocity is from about 3,000 rpm to about 20,000 rpm;
> >
> > (ii) measuring the rate of movement or migration of the sedimenting boundaries, wherein movement or migration of each species of individual viral particles in the heterogeneous mixture of viral particles results in distinct sedimenting boundaries, each distinct sedimenting boundary corresponding to a resolvable species of viral particle, and wherein the individual viral particles comprise empty particles without genome, particles with full genomes and particles with fragmented genomes;
> >
> > (iii) determining the genome size of one or more species of the individual variant viral particles in the heterogeneous mixture of viral particles; and
> >
> > (iv) determining the quantity of one or more species of the variant viral particles in the heterogeneous mixture of viral particles.

130. On information and belief, Elevidys® is a heterogeneous mixture of viral particles, and Sarepta quantifies one or more species of individual variant viral particles comprising fragmented recombinant adeno-associated viral (rAAV) genomes in Elevidys®. Elevidys® uses a non-replicating, rAAV vector of the serotype rh74 (“rAAVrh74”) capsid to package and deliver a human micro-dystrophin transgene under the control of the MHCK7 promoter. *See* Exhibit C, §

11 Description. When rAAV vectors are packaged, a heterogeneous mixture of viral particles is generated.

131. In manufacturing Elevidys® drug product, on information and belief, Defendants calculate the percentage of full capsids in Elevidys® drug product. *See* Exhibit G, CBER CMC BLA Review Memo at 3.2.P.5, Control of Drug Product. As taught in the '894 patent, analytical ultracentrifugation can be used to calculate the percentage of full, empty, and partial capsids in a heterogeneous mixture of viral particles. *See* Exhibit O. As noted by Beckman Coulter, an analytical ultracentrifuge equipment manufacturer, analytical ultracentrifugation is acknowledged as the "gold standard" in the detection and quantification of AAV particles and "a valuable tool to analyze rAAV vectors notwithstanding the composition and length of the transgene or the viral serotype." Exhibit T. Thus, on information and belief, Defendants calculate the percentage of full capsids in Elevidys® drug product, in part, by subjecting it to analytical ultracentrifugation under boundary sedimentation velocity conditions to generate sedimenting boundaries. On information and belief, the boundary sedimentation velocity used by Defendants is from about 3,000 rpm to about 20,000 rpm. *See* Exhibit T (detailing analytical ultracentrifugation analysis on rAAV particles by the inventor run at 20,000 rpm); Exhibit O, Table 1 (showing exemplary rpm ranges of 3,000 to 20,000 rpm).

132. In manufacturing Elevidys® drug product, on information and belief, Defendants measure the rate of movement or migration of the sedimenting boundaries, wherein the movement or migration of each species of individual viral particles in the heterogenous mixture of viral particles results in distinct sedimenting boundaries, each distinct sedimenting boundary corresponding to a resolvable species of viral particle, and wherein the individual viral particles

comprise empty particles without genome, particles with full genomes and particles with fragmented genomes.

133. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants quantify each resolvable species of viral particle.

134. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants determine the relative percentage of each resolvable species of viral particle.

135. On information and belief, in order to accurately calculate the percentage of full capsids in the product, Defendants determine the genome size of one or more species of the individual variant viral particles.

136. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants must determine the quantity of one or more species of the variant viral particles in the heterogeneous mixture of viral particles.

137. Claim 20 depends from claim 1 therefore incorporates all of the limitations of claim 1. Claim 20 recites:

> 20. The method of claim 1, wherein the total concentration of viral particles in the heterogeneous mixture of viral particles prior to step (i) is greater than 5×10^{11} vg/mL.

138. Elevidys® has a "nominal concentration of 1.33 x 10^{13} vg/mL" following step (i) of claim 1, so the concentration prior to step (i) is within the claimed range of greater than 5×10^{11} vg/ml. Exhibit C, § 11 Description.

139. On information and belief, Defendants perform each and every step of at least the methods claimed in claims 1 and 20 of the '894 Patent at least during release testing prior to

releasing any batch of Elevidys® for commercial sale. On information and belief, this testing is required for commercialization of Elevidys®.

140. Defendants' use of the patented methods during the manufacture of Elevidys® as claimed in the '894 Patent prior to the expiration of the '894 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 1 and 20 of the '894 Patent.

141. Defendants jointly infringe the '894 Patent by contracting with third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with third-party manufacturers and testing companies for the manufacture, testing, and sale of Elevidys®. *See, e.g.*, Sarepta May 2024 10-Q at p. 22 ("We have adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs."); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 ("Catalent will be Sarepta's primary commercial manufacturing partner for this therapy [Elevidys®]."); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits by third parties upon manufacture of Elevidys®, and establish the manner and timing of those third parties' performance.

142. On information and belief, at least as of July 26, 2024, Defendants have actively induced third parties to infringe one or more claims of the '894 Patent, including but not limited

to claims 1 and 20, under 35 U.S.C. § 271(b), by instructing and contracting with third parties to manufacture Elevidys® in accordance with the claimed methods, with knowledge of the '894 Patent and that the induced acts would constitute infringement.

143. Moreover, on information and belief, Defendants contribute to infringement of the '894 Patent, including but not limited to claims 1 and 20, under 35 U.S.C. § 271(c) by supplying materials or apparatuses for use in practicing the patented method, such as the provision of engineered rAAV virions to manufacture the finished drug product, such materials or apparatuses having no substantially non-infringing uses, with knowledge of the '894 Patent and its infringement at least as of July 26, 2024.

144. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants' infringement of the '894 Patent.

145. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the '894 Patent.

146. Given Sarepta's knowledge of the '894 Patent from the July and October 2024, and May 2025, letters from Genzyme, Sarepta's continued infringement of the '894 Patent by its manufacture, use, importation, sale, or offer to sell Elevidys®, or inducing others to manufacture, use, import, sell, or offer to sell Elevidys®, is deliberate and intentional.

147. In addition, given Sarepta's knowledge of the '894 Patent from the July and October 2024, and May 2025, letters from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the '894 Patent constituted an unjustifiably high risk of infringement of the '894 Patent.

148. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '894 Patent has been and continues to be deliberate, intentional, egregious,

willful, and in reckless disregard of the valid patent claims of the ’894 Patent, and entitles Genzyme to enhanced damages and attorneys’ fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta’s infringement of the ’894 Patent has been willful.

COUNT IV
INFRINGEMENT OF THE ’326 PATENT

149. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 148 above as though fully set forth herein.

150. Plaintiff has all substantial rights in and to the ’326 Patent, including the right to assert any claims for past, present, and future infringement of the ’326 Patent against Defendants.

151. Defendants have infringed at least one claim of the ’326 Patent by using the patented methods during the manufacture of Elevidys® in the United States in violation of 35 U.S.C. §§ 271(a), (b) and/or (c).

152. The ’326 Patent has two independent claims, including claim 1. Claim 1 recites:

> A method of determining the size of one or more fragmented genomes in a preparation of viral particles comprising recombinant adeno-associated viral (rAAV) vectors encapsidated into viral capsids, said method comprising:
>
> > (i) subjecting the preparation to analytical ultracentrifugation under boundary sedimentation velocity conditions to generate one or more sedimenting boundaries, wherein the boundary sedimentation velocity is from about 3,000 rpm to about 20,000 rpm;
> >
> > (ii) measuring the rate of movement or migration of the one or more sedimenting boundaries, wherein movement or migration of the viral particles results in distinct sedimenting boundaries, each distinct sedimenting boundary corresponding to a resolvable viral particle, and wherein one or more of the viral particles comprise a fragmented genome, and determining the sedimentation coefficients of the viral particles comprising one or more of the fragmented genomes in the preparation; and
> >
> > (iii) determining the size of the one or more fragmented genomes as a function of the sedimentation coefficients of the viral particles comprising the one or more fragmented genomes.

153. On information and belief, Elevidys® is a preparation of viral particles comprising rAAV genomes encapsidated into viral vectors, and Sarepta determines the size of one or more fragmented genomes in Elevidys®. Elevidys® uses a non-replicating, rAAV vector of the serotype rh74 ("rAAVrh74") capsid to package and deliver a human micro-dystrophin transgene under the control of the MHCK7 promoter. *See* Exhibit C, § 11 Description.

154. In manufacturing Elevidys® drug product, on information and belief, Defendants calculate the percentage of full capsids in Elevidys® drug product. *See* Exhibit G, CBER CMC BLA Review Memo at 3.2.P.5, Control of Drug Product. As taught in the '326 patent, analytical ultracentrifugation can be used to calculate the percentage of full, empty, and partial capsids in a heterogeneous mixture of viral particles. *See* Exhibit P. As noted by Beckman Coulter, an analytical ultracentrifuge equipment manufacturer, analytical ultracentrifugation is acknowledged as the "gold standard" in the detection and quantification of AAV particles and "a valuable tool to analyze rAAV vectors notwithstanding the composition and length of the transgene or the viral serotype." Exhibit T. Thus, on information and belief, Defendants calculate the percentage of full capsids in Elevidys® drug product, in part, by subjecting it to analytical ultracentrifugation under boundary sedimentation velocity conditions to generate sedimenting boundaries. On information and belief, the boundary sedimentation velocity used by Defendants is from about 3,000 rpm to about 20,000 rpm. *See* Exhibit T (detailing analytical ultracentrifugation analysis on rAAV particles by the inventor run at 20,000 rpm); Exhibit P, Table 1 (showing exemplary rpm ranges of 3,000 to 20,000 rpm).

155. In manufacturing Elevidys® drug product, on information and belief, Defendants measure the rate of movement or migration of the one or more sedimenting boundaries, wherein movement or migration of the viral particles results in distinct sedimenting boundaries, each

distinct sedimenting boundary corresponding to a resolvable viral particle, and wherein one or more of the viral particles comprise a fragmented genome, and determine the sedimentation coefficients of the viral particles comprising one or more of the fragmented genomes in the preparation.

156. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants quantify each resolvable species of viral particle.

157. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants determine the size of the one or more fragmented genomes as a function of the sedimentation coefficients of the viral particles comprising the one or more fragmented genomes.

158. Claim 12 depends from claim 1 therefore incorporates all of the limitations of claim 1. Claim 12 recites:

> 12. The method of claim 1, wherein the total concentration of viral particles in the AAV vector preparation prior to step (i) is greater than 5×10^{11} vg/mL.

159. Elevidys® has a "nominal concentration of 1.33 x 10^{13} vg/mL" following step (i) of claim 1, so the concentration prior to step (i) is within the claimed range greater than 5×10^{11} vg/ml. Exhibit C, § 11 Description.

160. Independent claim 20 recites:

> A method of determining the molar concentrations of each species of individual viral particles in a heterogeneous mixture of viral particles comprising recombinant adeno-associated viral (rAAV) vectors encapsidated into viral capsids, said method comprising:
>
> (i) subjecting the heterogeneous mixture of viral particles to analytical ultracentrifugation under boundary sedimentation velocity conditions to

> generate sedimenting boundaries, wherein the boundary sedimentation velocity is from about 3,000 rpm to about 20,000 rpm;
>
> (ii) measuring the rate of movement or migration of the sedimenting boundaries, wherein movement or migration of each species of the individual viral particles in the heterogeneous mixture of viral particles results in distinct sedimenting boundaries, each distinct sedimenting boundary corresponding to a resolvable species of viral particle, and wherein the heterogeneous mixture of viral particles comprises full genomes, fragmented genomes and empty capsids without genome;
>
> (iii) determining the sedimentation coefficients of each species of the individual viral particles in the heterogeneous mixture of viral particles; and
>
> (iv) quantifying the molar concentration of each species of the individual viral particles in the heterogeneous mixture of viral particles.

161. On information and belief, Elevidys® is a preparation of a heterogeneous mixture of viral particles comprising rAAV vectors encapsidated into viral capsids and Sarepta determines the molar concentrations of each species of individual viral particles in the mixture. Elevidys® uses a non-replicating, rAAV vector of the serotype rh74 ("rAAVrh74") capsid to package and deliver a human micro-dystrophin transgene under the control of the MHCK7 promoter. *See* Exhibit C, § 11 Description. When rAAV vectors are packaged, a heterogeneous mixture of viral particles is generated.

162. In manufacturing Elevidys® drug product, on information and belief, Defendants calculate the percentage of full capsids in Elevidys® drug product. *See* Exhibit G, CBER CMC BLA Review Memo at 3.2.P.5, Control of Drug Product. As taught in the '894 patent, analytical ultracentrifugation can be used to calculate the percentage of full, empty, and partial capsids in a heterogeneous mixture of viral particles. *See* Exhibit P. As noted by Beckman Coulter, an analytical ultracentrifuge equipment manufacturer, analytical ultracentrifugation is acknowledged as the "gold standard" in the detection and quantification of AAV particles and "a valuable tool to analyze rAAV vectors notwithstanding the composition and length of the transgene or the viral

serotype." Exhibit T. Thus, on information and belief, Defendants calculate the percentage of full capsids in Elevidys® drug product, in part, by subjecting it to analytical ultracentrifugation under boundary sedimentation velocity conditions to generate sedimenting boundaries. On information and belief, the boundary sedimentation velocity used by Defendants is from about 3,000 rpm to about 20,000 rpm. *See* Exhibit T (detailing analytical ultracentrifugation analysis on rAAV particles by the inventor run at 20,000 rpm); Exhibit P, Table 1 (showing exemplary rpm ranges of 3,000 to 20,000 rpm).

163. In manufacturing Elevidys® drug product, on information and belief, Defendants measure the rate of movement or migration of the sedimenting boundaries, wherein movement or migration of each species of the individual viral particles in the heterogeneous mixture of viral particles results in distinct sedimenting boundaries, each distinct sedimenting boundary corresponding to a resolvable species of viral particle, and wherein the heterogeneous mixture of viral particles comprises full genomes, fragmented genomes and empty capsids without genome.

164. In manufacturing Elevidys® drug product, on information and belief, Defendants determine the sedimentation coefficients of each species of the individual viral particles in the heterogeneous mixture of viral particles.

165. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants quantify each resolvable species of viral particle.

166. On information and belief, in order to accurately calculate the percentage of full capsids using analytical ultracentrifugation, Defendants quantify the molar concentration of each species of the individual viral particles in the heterogeneous mixture of viral particles.

167. On information and belief, Defendants perform each and every step of at least the methods claimed in claims 1, 12 and 20 of the ’326 Patent at least during release testing prior to releasing any batch of Elevidys® for commercial sale. On information and belief, release testing is required for commercialization of Elevidys®.

168. Defendants’ use of the patented methods during the manufacture of Elevidys® as claimed in the ’326 Patent prior to the expiration of the ’326 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 1, 12, and 20 of the ’326 Patent.

169. Defendants jointly infringe the ’326 Patent by contracting with third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with third-party manufacturers and testing companies for the manufacture, testing, and sale of Elevidys®. *See, e.g.*, Sarepta May 2024 10-Q at p. 22 (“We have adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs.”); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 (“Catalent will be Sarepta’s primary commercial manufacturing partner for this therapy [Elevidys®].”); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits by third parties upon manufacture of Elevidys®, and establish the manner and timing of those third parties’ performance.

170. On information and belief, at least as of July 26, 2024, Defendants have actively induced third parties to infringe one or more claims of the ’326 Patent, including but not limited to claims 1, 12, and 20, under 35 U.S.C. § 271(b), by instructing and contracting with third parties to manufacture Elevidys® in accordance with the claimed methods, with knowledge of the ’326 Patent and that the induced acts would constitute infringement.

171. Moreover, on information and belief, Defendants contribute to infringement of the ’326 Patent, including but not limited to claims 1, 12, and 20 under 35 U.S.C. § 271(c) by supplying materials or apparatuses for use in practicing the patented method, such as the provision of engineered rAAV virions to manufacture the finished drug product, such materials or apparatuses having no substantially non-infringing uses, with knowledge of the ’326 Patent and its infringement at least as of July 26, 2024.

172. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants’ infringement of the ’326 Patent.

173. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the ’326 Patent.

174. Given Sarepta’s knowledge of the ’326 Patent from the July and October 2024, and May 2025, letters from Genzyme, Sarepta’s continued infringement of the ’326 Patent by its manufacture, use, importation, sale, or offer to sell Elevidys®, or inducing others to manufacture, use, import, sell, or offer to sell Elevidys®, is deliberate and intentional.

175. In addition, given Sarepta’s knowledge of the ’326 Patent from the July and October 2024, and May 2025, letters from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the ’326 Patent constituted an unjustifiably high risk of infringement of the ’326 Patent.

176. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '326 Patent has been and continues to be deliberate, intentional, egregious, willful, and in reckless disregard of the valid patent claims of the '326 Patent, and entitles Genzyme to enhanced damages and attorneys' fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta's infringement of the '326 Patent has been willful.

COUNT V
INFRINGEMENT OF THE '377 PATENT

177. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 176 above as though fully set forth herein.

178. Plaintiff has all substantial rights in and to the '377 Patent, including the right to assert any claims for past, present, and future infringement of the '377 Patent against Defendants.

179. Defendants have infringed at least one claim of the '377 Patent by practicing the patented methods during the manufacture of Elevidys® in the United States in violation of 35 U.S.C. §§ 271(a), (b) and/or (c).

180. The '377 Patent has two independent claims. Claim 1 recites:

> A method to determine the serotype of an adeno-associated virus (AAV) particle comprising:
>
> (a) denaturing the AAV particle,
>
> (b) directly subjecting the denatured AAV particle to liquid chromatography/mass spectrometry (LC/MS) intact protein analysis, and
>
> (c) determining the masses of VP1, VP2, and VP3 of the AAV particle;
>
> wherein the specific combination of masses of VP1, VP2 and VP3 are indicative of the AAV serotype,
>
> and wherein the method is performed in the absence of a gel separation step.

181. Defendants are required to report the identity of the AAV vector capsid and the capsid purity in Elevidys® as part of its Drug Product release specification. *See* Exhibit G § 3.2.P.5, Table 100.

182. On information and belief, the methods disclosed by Sarepta in its '595 Application are used "to determine the serotype of an AAV particle at least based in part on the ratio of VP1, VP2 and VP3 capsid proteins in an AAV particle and/or the masses of one or more of the VP1, VP2 and VP3 capsid proteins, wherein the ratio of VP1, VP2 and VP3 capsid proteins and the masses of one or more of the VP1, VP2 and VP3 capsid proteins are determined by the methods disclosed herein." *See* Exhibit U at [0097].

183. On information and belief, Defendants determine the serotype of Elevidys® at least during release testing prior to commercial sale. On information and belief, serotype testing is required for commercialization of Elevidys®.

184. Sarepta's method denatures the AAV particles. *See* Exhibit U at [0010] ("In some aspects, the capsids on the AAV particle is denatured into the individual VP1, VP2 and VP3 proteins in the column of the liquid chromatography. In some aspects, the capsid proteins are separated by the liquid chromatography."); [0174] ("Here, an AAV particle was denatured and separated to the VP1, VP2 and VP3 capsid proteins in liquid chromatography.").

185. Sarepta's method directly subjects the denatured AAV particles to liquid chromatography/mass spectrometry (LC/MS) intact protein analysis. *See* Exhibit U at [0098] ("Mass Spectrometry is an analytical technique for protein characterization. In some aspects, a method for the characterization of the AAVrh74 capsid protein ratio along with the intact mass for all three capsid proteins by liquid chromatography and mass spectrometry is provided."); [0214] ("Table 10 three lots of Host Cell Protein analyzed by LC/MS").

186. Sarepta's method determines the masses of VP1, VP2, and VP3 of the AAV particle. *See* Exhibit U at [0008] ("The methods disclosed herein are used to determine the ratio of VP1, VP2 and VP3 capsid proteins in AAV particle, and/or the masses of one or more of the VP1, VP2 and VP3 capsid proteins."); [0186] ("The VP1, VP2 and VP3 capsid proteins separated in the liquid chromatography were first subjected to UV to determine the relative amounts and then to mass spectrometry to determine the masses of the VP1, VP2 and VP3 capsid proteins.")

187. On information and belief, Defendants use the methods described in the '595 Application, and particularly Example 4, to analyze the specific combination of masses of VP1, VP2 and VP3 for purposes of determining the AAV serotype of Elevidys® during release testing.

188. On information and belief, Sarepta performs the methods described in the '595 Application, and particularly Example 4, without gel separation. There is no reference to gel separation in the specification or claims of the '595 Application, and the methods recited in the '595 Application are directed to intact protein analysis. On information and belief, Sarepta's LC-MS intact mass method for Elevidys® is performed without gel separation.

189. Claim 4 of the '377 Patent depends from claim 1, and further recites "wherein the AAV particle is denatured with acetic acid, guanidine hydrochloride, and/or an organic solvent." Sarepta's method denatures using guanidine hydrochloride. *See* Exhibit U at [0017] ("In some aspects, the protein can be denatured using reagents like Guanidine and Urea."); [0196] ("The samples were first denatured by performing a buffer exchange into 6M Guanidine Hydrochloride, 20 mM Tris-HCl, pH 7.5.").

190. Claim 6 of the '377 Patent depends from claim 1, and further recites "wherein the liquid chromatography is reverse phase chromatography." Sarepta's method uses reverse phase chromatography. *See* Exhibit U at [0024] ("In some aspects, the liquid chromatography is a

reverse phase liquid chromatography."); cl. 4 ("The method of claim 1, wherein the liquid chromatography is a reverse phase liquid chromatography.").

191. Claim 7 of the '377 Patent depends from claim 6, and further recites "wherein the reverse phase chromatography is a C4 or C8 reverse chromatography." Sarepta's method uses C4 or C8 reverse chromatography. *See* Exhibit U at [0024] ("In some aspects, the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column."); cl. 5 ("The method of claim 4, wherein the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column.").

192. On information and belief, Defendants perform each and every step of at least the methods claimed in claims 1, 4, 6, and 7 of the '377 Patent at least during release testing prior to releasing any batch of Elevidys® for commercial sale. On information and belief, this testing is required for commercialization of Elevidys®. To the extent Defendants do not perform the methods as specifically set forth in the '595 Application, on information and belief, Sarepta performs a substantially similar method that includes each and every step of at least the methods claimed in claims 1, 4, 6, and 7 of the '377 Patent.

193. Defendants' use of the patented methods during the manufacture of Elevidys® as claimed in the '377 Patent prior to the expiration of the '377 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 1, 4, 6, and 7 of the '377 Patent.

194. Defendants jointly infringe the '377 Patent by contracting with third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with third-party manufacturers and testing companies for the manufacture, testing, and sale of Elevidys®. *See, e.g.*, Sarepta May 2024 10-Q at p. 22 ("We have

adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs."); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 ("Catalent will be Sarepta's primary commercial manufacturing partner for this therapy [Elevidys®]."); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits by third parties upon manufacture of Elevidys®, and establish the manner and timing of those third parties' performance.

195. On information and belief, at least as of July 11, 2023, Defendants have actively induced third parties to infringe one or more claims of the '377 Patent, including but not limited to claims 1, 2, 4 and 7, under 35 U.S.C. § 271(b), by instructing and contracting with third parties to manufacture Elevidys® in accordance with the claimed methods, with knowledge of the '377 Patent and that the induced acts would constitute infringement.

196. Moreover, on information and belief, Defendants contribute to infringement of the '377 Patent, including but not limited to claims 1, 2, 4 and 7, under 35 U.S.C. § 271(c) by supplying materials or apparatuses for use in practicing the patented method, such as the provision of engineered rAAV virions to manufacture the finished drug product, such materials or apparatuses having no substantially non-infringing uses, with knowledge of the '377 Patent and its infringement at least as of July 11, 2023.

197. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants' infringement of the '377 Patent.

198. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the '377 Patent.

199. Given Sarepta's knowledge of the '377 Patent from the July and October 2024, and May 2025, letters from Genzyme, Sarepta's continued infringement of the '377 Patent by its manufacture, use, importation, sale, or offer to sell Elevidys®, or inducing others to manufacture, use, import, sell, or offer to sell Elevidys®, is deliberate and intentional.

200. In addition, given Sarepta's knowledge of the '377 Patent from the July and October 2024, and May 2025, letters from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the '377 Patent constituted an unjustifiably high risk of infringement of the '377 Patent.

201. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '377 Patent has been and continues to be deliberate, intentional, egregious, willful, and in reckless disregard of the valid patent claims of the '377 Patent, and entitles Genzyme to enhanced damages and attorneys' fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta's infringement of the '377 Patent has been willful.

COUNT VI
INFRINGEMENT OF THE '880 PATENT

202. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 201 above as though fully set forth herein.

203. Plaintiff has all substantial rights in and to the '880 Patent, including the right to assert any claims for past, present, and future infringement of the '880 Patent against Defendants.

204. Defendants have infringed at least one claim of the '880 Patent by using the patented methods during the manufacture of Elevidys® in the United States in violation of 35 U.S.C. §§ 271(a), (b) and/or (c).

205. The '880 Patent has three independent claims. Claim 1 recites:

> A method of analyzing a preparation of AAV particles, the method comprising:
>
> (a) denaturing the AAV particles,
>
> (b) subjecting the denatured AAV particles to liquid chromatography/mass spectrometry (LC/MS) intact protein analysis, and
>
> (c) determining the masses of one or more viral proteins (VPs) of the particles in the preparation;
>
> wherein the method is performed in the absence of a gel separation step.

206. Defendants are required to report analysis of the capsid purity, potency, and vector genome concentration in Elevidys® as part of its Drug product release specification. *See* Exhibit G § 3.2.P.5, Table 100.

207. Elevidys® is a preparation of rAAV particles. On information and belief, the methods disclosed by Sarepta in its '595 Application are used to analyze Elevidys®. *See* Exhibit U at Title ("Methods for Analyzing AAV Capsid Proteins"); cl. 1 ("A method to characterize VP1, VP2 and VP3 capsid proteins in an adeno-associated virus (AAV) particle . . . .").

208. Sarepta's method denatures the AAV particles. *See* Exhibit U at [0010] ("In some aspects, the capsids on the AAV particle is denatured into the individual VP1, VP2 and VP3 proteins in the column of the liquid chromatography. In some aspects, the capsid proteins are separated by the liquid chromatography."); [0174] ("Here, an AAV particle was denatured and separated to the VP1, VP2 and VP3 capsid proteins in liquid chromatography.").

209. Sarepta's method subjects the denatured AAV particles to LC/MS intact protein analysis. *See* Exhibit U at [0098] ("Mass Spectrometry is an analytical technique for protein characterization. In some aspects, a method for the characterization of the AAVrh74 capsid protein ratio along with the intact mass for all three capsid proteins by liquid chromatography and mass spectrometry is provided."); *id.* at Example 4, [0189] (LC/MS working example with "detection of post-translation modification of VP1, VP2, and VP3" and "intact mass analysis of AAV.rh74 capsid proteins.").

210. Sarepta's method determines the masses of one or more viral proteins (VPs) of the particles in the preparation of Elevidys®. *See* Exhibit U at [0008] ("The methods disclosed herein are used to determine the ratio of VP1, VP2 and VP3 capsid proteins in AAV particle, and/or the masses of one or more of the VP1, VP2 and VP3 capsid proteins."); [0186] ("The VP1, VP2 and VP3 capsid proteins separated in the liquid chromatography were first subjected to UV to determine the relative amounts and then to mass spectrometry to determine the masses of the VP1, VP2 and VP3 capsid proteins.")

211. On information and belief, Sarepta performs the methods described in the '595 Application, and particularly Example 4, without gel separation. There is no reference to gel separation in the specification or claims of the '595 Application, and the methods recited in the '595 Application are directed to intact protein analysis. On information and belief, Sarepta's LC-MS intact mass method for Elevidys® is performed without gel separation.

212. Claim 3 of the '880 Patent depends from claim 1, and further recites "wherein the AAV particles are denatured with acetic acid, guanidine hydrochloride, and/or an organic solvent." Sarepta's method denatures with guanidine hydrochloride. *See* Exhibit U at [0017] ("In some aspects, the protein can be denatured using reagents like Guanidine and Urea."); [0196] ("The

samples were first denatured by performing a buffer exchange into 6M Guanidine Hydrochloride, 20 mM Tris-HCl, pH 7.5.”).

213. Claim 5 of the ’880 Patent depends from claim 1, and further recites “wherein the liquid chromatography is reverse phase liquid chromatography.” Sarepta’s method uses reverse phase liquid chromatography. *See* Exhibit U at [0024] (“In some aspects, the liquid chromatography is a reverse phase liquid chromatography.”); cl. 4 (“The method of claim 1, wherein the liquid chromatography is a reverse phase liquid chromatography.”).

214. Claim 6 of the ’880 Patent depends from claim 5, and further recites “wherein the reverse phase chromatography is performed with a C4 column.” Sarepta’s method uses a C4 column. *See* Exhibit U at [0024] (“In some aspects, the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column.”); cl. 5 (“The method of claim 4, wherein the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column.”).

215. Claim 10 of the ’880 Patent recites:

> A method of determining post-translational modifications of viral proteins (VPs) in a preparation of viral particles, the method comprising
>
> a) denaturing the viral particles,
>
> b) subjecting the denatured viral particles to liquid chromatography/mass spectroscopy (LC/MS) intact protein analysis, and
>
> c) determining the masses of one or more VPs of the viral particles
>
> wherein a deviation of one or more of the masses of the one or more VPs from the theoretical masses of VPs that have not undergone post-translational modifications is indicative of post-translational modifications of the VPs,
>
> and wherein the method is performed in the absence of a gel separation step.

216. Elevidys® is a preparation of rAAV particles. On information and belief, the methods disclosed by Sarepta in its '595 Application are used to determine post-translational modifications of viral proteins (VPs) in Elevidys®. *See* Exhibit U at [0018] ("In some aspects, the method further includes determining post translational modification of at least one of VP1, VP2 and VP3 capsid proteins. In some aspects, the method further includes post translational phosphorylation or acetylation of at least one of VP1, VP2 and VP3 capsid proteins."); [0189] ("FIG. 3 shows detection of post-translation modification of VP1, VP2, and VP3.").

217. Sarepta's method denatures the viral particles. *See* Exhibit U at [0010] ("In some aspects, the capsids on the AAV particle is denatured into the individual VP1, VP2 and VP3 proteins in the column of the liquid chromatography. In some aspects, the capsid proteins are separated by the liquid chromatography."); [0174] ("Here, an AAV particle was denatured and separated to the VP1, VP2 and VP3 capsid proteins in liquid chromatography.").

218. Sarepta's method subjects the denatured viral particles to LC/MS intact protein analysis. *See* Exhibit U at [0098] ("Mass Spectrometry is an analytical technique for protein characterization. In some aspects, a method for the characterization of the AAVrh74 capsid protein ratio along with the intact mass for all three capsid proteins by liquid chromatography and mass spectrometry is provided."); *id.* at Example 4, [0189] (LC/MS working example with "detection of post-translation modification of VP1, VP2, and VP3" and "intact mass analysis of AAV.rh74 capsid proteins.").

219. Sarepta's method determines the masses of one or more VPs of the viral particles in the preparation of Elevidys®. *See* Exhibit U at [0008] ("The methods disclosed herein are used to determine the ratio of VP1, VP2 and VP3 capsid proteins in AAV particle, and/or the masses of one or more of the VP1, VP2 and VP3 capsid proteins."); [0186] ("The VP1, VP2 and VP3 capsid

proteins separated in the liquid chromatography were first subjected to UV to determine the relative amounts and then to mass spectrometry to determine the masses of the VP1, VP2 and VP3 capsid proteins.")

220. On information and belief, Sarepta performs the methods described in the '595 Application, and particularly Example 4, without gel separation. There is no reference to gel separation in the specification or claims of the '595 Application, and the methods recited in the '595 Application are directed to intact protein analysis. On information and belief, Sarepta's LC-MS intact mass method for Elevidys® is performed without gel separation.

221. Claim 13 of the '880 Patent depends from claim 10, and further recites "wherein the liquid chromatography is reverse phase chromatography." Sarepta's method uses reverse phase chromatography. *See* Exhibit U at [0024] ("In some aspects, the liquid chromatography is a reverse phase liquid chromatography."); cl. 4 ("The method of claim 1, wherein the liquid chromatography is a reverse phase liquid chromatography.").

222. Claim 14 of the '880 Patent depends from claim 5, and further recites "wherein the reverse phase chromatography is a C4 or C8 reverse chromatography." Sarepta's method uses C4 or C8 reverse chromatography. *See* Exhibit U at [0024] ("In some aspects, the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column."); cl. 5 ("The method of claim 4, wherein the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column.").

223. Defendants' use of the patented methods during the manufacture of Elevidys® as claimed in the '880 Patent prior to the expiration of the '880 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 1, 3, 5, 6, 10, 13, and 14 of the '880 Patent.

224. On information and belief, Sarepta performs each and every step of at least the methods claimed 1, 3, 5, 6, 10, 13, and 14 of the '880 Patent at least during release testing prior to releasing any batch of Elevidys® for commercial sale. On information and belief, this testing is required for commercialization of Elevidys®. To the extent Defendants do not perform the methods as specifically set forth in the '595 Application, on information and belief, Sarepta performs a substantially similar method that includes each and every step of at least the methods claimed in claims 1, 3, 5, 6, 10, 13, and 14 of the '880 Patent.

225. Defendants jointly infringe the '880 Patent by contracting with third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with manufacturers and testing companies for the manufacture, testing, and sale of Elevidys®. *See, e.g.*, Sarepta May 2024 10-Q at p. 22 ("We have adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs."); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 ("Catalent will be Sarepta's primary commercial manufacturing partner for this therapy [Elevidys®]."); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits by third parties upon manufacture of Elevidys®, and establish the manner and timing of those third parties' performance.

226. On information and belief, at least as of October 22, 2024, Defendants have actively induced third parties to infringe one or more claims of the ’880 Patent, including but not limited to claims 1, 3, 5, 6, 10, 13, and 14 under 35 U.S.C. § 271(b), by instructing and contracting with third parties to manufacture Elevidys® in accordance with the claimed methods, with knowledge of the ’880 Patent and that the induced acts would constitute infringement.

227. Moreover, on information and belief, Defendants contribute to infringement of the ’880 Patent, including but not limited to claims 1, 3, 5, 6, 10, 13, and 14 under 35 U.S.C. § 271(c) by supplying materials or apparatuses for use in practicing the patented method, such as the provision of engineered rAAV virions to manufacture the finished drug product, such materials or apparatuses having no substantially non-infringing uses, with knowledge of the ’880 Patent and its infringement at least as of October 22, 2024. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants’ infringement of the ’880 Patent.

228. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the ’880 Patent.

229. Given Sarepta’s knowledge of the ’880 Patent from the October 2024 and May 2025 letters from Genzyme, Sarepta’s continued infringement of the ’880 Patent by its manufacture, use, importation, sale, or offer to sell Elevidys®, or inducing others to manufacture, use, import, sell, or offer to sell Elevidys®, is deliberate and intentional.

230. In addition, given Sarepta’s knowledge of the ’880 Patent from the October 2024 and May 2025 letters from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the ’880 Patent constituted an unjustifiably high risk of infringement of the ’880 Patent.

231. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '880 Patent has been and continues to be deliberate, intentional, egregious, willful, and in reckless disregard of the valid patent claims of the '880 Patent, and entitles Genzyme to enhanced damages and attorneys' fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta's infringement of the '880 Patent has been willful.

COUNT VII
INFRINGEMENT OF THE '313 PATENT

232. Plaintiff repeats and realleges the allegations set forth in paragraphs 1 through 231 above as though fully set forth herein.

233. Plaintiff has all substantial rights in and to the '313 Patent, including the right to assert any claims for past, present, and future infringement of the '313 Patent against Defendants.

234. Defendants have infringed at least one claim of the '313 Patent by using the patented methods during the manufacture of Elevidys® in the United States in violation of 35 U.S.C. §§ 271(a), (b) and/or (c).

235. The '313 Patent has three independent claims. Claim 20 recites:

> A method of preparing a pharmaceutical composition of adeno-associated virus (AAV) particles, the method comprising:
>
> > monitoring AAV particles for consistency and/or identity;
> >
> > wherein the AAV particles comprise viral proteins (VPs) comprising VP1, VP2 and VP3 capsid proteins of an AAV particle capsid,
> >
> > wherein the AAV particle is monitored for consistency and/or identity by:
> >
> > > a) extracting an aliquot of an AAV particle preparation;
> > >
> > > b) denaturing the AAV particles;
> > >
> > > c) subjecting the denatured AAV particles to liquid chromatography/mass spectrometry (LC/MS) intact protein analysis;

> d) determining the masses of one or more VPs of the AAV particles; and
>
> e) comparing the determined masses of the one or more VPs to theoretical masses of corresponding VPs, wherein the theoretical masses of corresponding VPs are those VPs of known AAV serotypes and/or those that have not undergone undesired post-translational modifications; and
>
> f) determining if there is any deviation of the determined masses of the one or more VPs from the theoretical masses of the corresponding VPs;
>
> wherein the determination of any deviation of the determined masses of the one or more VPs from the theoretical masses of corresponding VPs thereby monitors the AAV particles for consistency and/or identity;
>
> wherein the monitoring for consistency and/or identity is performed in the absence of a gel separation step; and
>
> wherein if less than an undesirable amount of deviation is determined during the monitoring for consistency and/or identity, the AAV particles are combined with one or more pharmaceutically acceptable excipients to form the pharmaceutical composition.

236. Elevidys® is a pharmaceutical composition of rAAV vector particles. Exhibit C, § 11 Description.

237. Defendants are required to monitor the AAV particles in Elevidys® for consistency and/or identity and must report analysis of the capsid purity, potency, and vector genome concentration in Elevidys® as part of its Drug product release specification. *See* Exhibit G § 3.2.P.5, Table 100.

238. On information and belief, the methods disclosed by Sarepta in its '595 Application are used to analyze Elevidys® for quality, consistency, and/or identity. *See* Exhibit U at Title ("Methods for Analyzing AAV Capsid Proteins"); cl. 1 ("A method to characterize VP1, VP2, and VP3 capsid proteins in an adeno-associated virus (AAV) particle . . ."); [0007] ("[T]he accurate

measurement of the ratio among the three capsid proteins is important in the AAV vector quality control."); [0214] ("The identity and relative quantity of each residual protein were calculated against the amount of the amount of spike protein standards.")

239. On information and belief, the methods disclosed by Sarepta in its '595 Application are used to analyze Elevidys® viral proteins (VPs) comprising VP1, VP2 and VP3 capsid proteins of an AAV particle capsid. *See* Exhibit U at [0008] ("The methods disclosed herein are used to determine the ratio of VP1, VP2 and VP3 capsid proteins in AAV particle, and/or the masses of one or more of the VP1, VP2 and VP3 capsid proteins."); [0186] ("The VP1, VP2 and VP3 capsid proteins separated in the liquid chromatography were first subjected to UV to determine the relative amounts and then to mass spectrometry to determine the masses of the VP1, VP2 and VP3 capsid proteins.")

240. Sarepta's method denatures the AAV particles. *See* Exhibit U at [0010] ("In some aspects, the capsids on the AAV particle is denatured into the individual VP1, VP2 and VP3 proteins in the column of the liquid chromatography. In some aspects, the capsid proteins are separated by the liquid chromatography."); [0174] ("Here, an AAV particle was denatured and separated to the VP1, VP2 and VP3 capsid proteins in liquid chromatography.").

241. Sarepta's method subjects the denatured AAV particles to LC/MS intact protein analysis. *See* Exhibit U at [0098] ("Mass Spectrometry is an analytical technique for protein characterization. In some aspects, a method for the characterization of the AAVrh74 capsid protein ratio along with the intact mass for all three capsid proteins by liquid chromatography and mass spectrometry is provided."); *id.* at Example 4, [0189] (LC/MS working example with "detection of post-translation modification of VP1, VP2, and VP3" and "intact mass analysis of AAV.rh74 capsid proteins.").

242. Sarepta's method determines the masses of one or more viral proteins (VPs) of the particles in the preparation of Elevidys®. *See* Exhibit U at [0008] ("The methods disclosed herein are used to determine the ratio of VP1, VP2 and VP3 capsid proteins in AAV particle, and/or the masses of one or more of the VP1, VP2 and VP3 capsid proteins."); [0186] ("The VP1, VP2 and VP3 capsid proteins separated in the liquid chromatography were first subjected to UV to determine the relative amounts and then to mass spectrometry to determine the masses of the VP1, VP2 and VP3 capsid proteins.")

243. Sarepta's method compares the determined masses of the one or more VPs to theoretical masses of corresponding VPs, wherein the theoretical masses of corresponding VPs are those VPs of known AAV serotypes and/or those that have not undergone undesired post-translational modifications, followed by determining if there is any deviation of the determined masses of the one or more VPs from the theoretical masses of the corresponding VPs. *See* Exhibit U at Table 6 (comparing determined masses to theoretical masses for VP1, VP2, and VP3 for detection of post-translational modifications); [0097] (comparison of VP1, VP2, and VP3 masses for serotype determination).

244. On information and belief, Sarepta's determination of any deviation of the determined masses of the one or more VPs from the theoretical masses of corresponding VPs is used to monitor the Elevidys® AAV particles for consistency and/or identity. *See* Exhibit F; Exhibit G.

245. On information and belief, Sarepta performs the methods described in the '595 Application, and particularly Example 4, without gel separation. There is no reference to gel separation in the specification or claims of the '595 Application, and the methods recited in the

’595 Application are directed to intact protein analysis. On information and belief, Sarepta’s LC-MS intact mass method for Elevidys® is performed without gel separation.

246. On information and belief, if less than an undesirable amount of deviation is determined during the monitoring of Elevidys® for consistency and/or identity, the AAV particles are combined with one or more pharmaceutically acceptable excipients to form the Elevidys® pharmaceutical composition. *See* Exhibit C, § 11 Description (“Each vial [of Elevidys®] contains an extractable volume of 10 mL and the following excipients: 200 mM sodium chloride, 13 mM tromethamine HCl, 7 mM tromethamine, 1 mM magnesium chloride, 0.001% poloxamer 188.”).

247. Claim 26 of the ’313 Patent depends from claim 20, and further recites “wherein the liquid chromatography is reverse phase chromatography.” Sarepta’s method uses reverse phase liquid chromatography. *See* Exhibit U at [0024] (“In some aspects, the liquid chromatography is a reverse phase liquid chromatography.”); cl. 4 (“The method of claim 1, wherein the liquid chromatography is a reverse phase liquid chromatography.”).

248. Claim 27 of the ’313 Patent depends from claim 26, and further recites “wherein the reverse phase chromatography is C8 reverse phase chromatography.” Sarepta’s method uses C8 reverse chromatography. *See* Exhibit U at [0024] (“In some aspects, the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column.”); cl. 5 (“The method of claim 4, wherein the reverse phase liquid chromatography is performed using a C18 column, a C8 column, or a C4 column.”).

249. On information and belief, Defendants analyze Elevidys® by LC/MS intact protein analysis according to the method recited in claims 20, 26 and 27 of the ’313 Patent at least during release testing prior to commercial sale. On information and belief, this testing is required for commercialization of Elevidys®. To the extent Defendants do not perform the methods as

specifically set forth in the ’595 Application, on information and belief, Sarepta performs a substantially similar method that includes each and every step of at least the methods claimed in claims 20, 26 and 27 of the ’313 Patent.

250. Defendants’ use of the patented methods during the manufacture of Elevidys® as claimed in the ’313 Patent prior to the expiration of the ’313 Patent constitutes direct infringement under 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, of at least claims 20, 26 and 27 of the ’313 Patent.

251. On information and belief, Sarepta performs each and every step of at least the methods claimed in claims 20, 26 and 27 of the ’313 Patent as part of the manufacturing process of the Elevidys® pharmaceutical composition prior to releasing any batch of Elevidys® for commercial sale. On information and belief, performance of these methods is required for commercialization of Elevidys®.

252. Defendants jointly infringe the ’313 Patent by contracting with third-party contract manufacturers to manufacture Elevidys® under the direction and control of Sarepta, and/or by forming a joint enterprise with manufacturers and testing companies for the manufacture, testing, and sale of Elevidys®. *See, e.g.*, Sarepta May 2024 10-Q at p. 22 (“We have adopted a hybrid development and manufacturing strategy in which we have built internal expertise relative to all aspects of AAV-based manufacturing . . . while closely partnering with experienced manufacturing partners to expedite development and commercialization of our gene therapy programs. We have secured manufacturing capacity at Thermo and Catalent to support our clinical and commercial manufacturing demand for ELEVIDYS and our LGMD programs.”); Exhibit H, Catalent Jan. 5, 2023 Press Release at pp. 1-2 (“Catalent will be Sarepta’s primary commercial manufacturing partner for this therapy [Elevidys®].”); Exhibit F, § 3.2.A Facilities Table (The Elevidys® drug

substance and drug product are manufactured in Catalent facilities in Harmans, MD and Baltimore, MD, respectively). On information and belief, Defendants condition receipt of contractual benefits by third parties upon manufacture of Elevidys®, and establish the manner and timing of third parties' performance.

253. On information and belief, at least as of May 1, 2025, Defendants have actively induced third parties to infringe one or more claims of the '313 Patent, including but not limited to claims 20, 26 and 27 under 35 U.S.C. § 271(b), by instructing and contracting with third parties to manufacture Elevidys® in accordance with the claimed methods, with knowledge of the '313 Patent and that the induced acts would constitute infringement.

254. Moreover, on information and belief, Defendants contribute to infringement of the '313 Patent, including but not limited to claims 20, 26 and 27 under 35 U.S.C. § 271(c) by supplying materials or apparatuses for use in practicing the patented method, such as the provision of engineered rAAV virions to manufacture the finished drug product, such materials or apparatuses having no substantially non-infringing uses, with knowledge of the '313 Patent and its infringement at least as of May 1, 2025.

255. Plaintiff has suffered damages, including pre-suit damages, as a result of Defendants' infringement of the '313 Patent.

256. On information and belief, Sarepta has continued to manufacture, use, import, sell, or offer to sell Elevidys® in the United States after becoming aware of the '313 Patent.

257. Given Sarepta's knowledge of the '313 Patent from the May 2025 letter from Genzyme, Sarepta's continued infringement of the '313 Patent by its manufacture, use, importation, sale, or offer to sell Elevidys®, or inducing others to manufacture, use, import, sell, or offer to sell Elevidys®, is deliberate and intentional.

258. In addition, given Sarepta's knowledge of the '313 Patent from the May 2025 letter from Genzyme, Sarepta also knew or should have known that its continued manufacture and sale of Elevidys® after gaining knowledge of the '313 Patent constituted an unjustifiably high risk of infringement of the '313 Patent.

259. On information and belief, Sarepta's continued sale of Elevidys® and its infringement of the '313 Patent has been and continues to be deliberate, intentional, egregious, willful, and in reckless disregard of the valid patent claims of the '313 Patent, and entitles Genzyme to enhanced damages and attorneys' fees under 35 U.S.C. §§ 284 and 285. Accordingly, Sarepta's infringement of the '313 Patent has been willful.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that the Court:

A. Enter judgment that Defendants have infringed the '542 Patent, the '721 Patent, the '894 Patent, the '326 Patent, the '377 Patent, the '880 Patent, and the '313 Patent;

B. Enter judgment that Defendants' infringement of the '542 Patent, the '721 Patent, the '894 Patent, '326 Patent, '377 Patent, the '880 Patent, and the '313 Patent is deliberate and willful;

C. Award damages adequate to compensate Plaintiff for Defendants' infringement, including increased damages up to three times the amount found or assessed, together with pre-judgment and post-judgment interest and costs, under 35 U.S.C. § 284;

D. Enter judgment that this case is exceptional and award Plaintiff its reasonable attorneys' fees, costs, and expenses, under 35 U.S.C. § 285; and

E. Award such other and further relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a trial by jury as to all issues so triable.

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