

Exhibit E

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ARBUTUS BIOPHARMA CORPORATION)
and GENEVANT SCIENCES GmbH,)

Plaintiffs,)

v.)

MODERNA, INC. and MODERNATX, INC.,)

Defendants.)

C.A. No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Arbutus Biopharma Corporation (“Arbutus”) and Genevant Sciences GmbH (“Genevant”) file this Complaint seeking patent infringement damages against Defendants Moderna, Inc. and ModernaTX, Inc. (collectively, “Moderna”) and allege the following:

INTRODUCTION

1. The impact of the COVID-19 pandemic, one of the greatest public health challenges in modern history, would be immeasurably worse but for the rapid, widespread availability of cutting-edge mRNA-based vaccines like Moderna’s. Moderna brought its vaccine from lab bench to arms in record speed. That unprecedented accomplishment was made possible by Moderna’s use of breakthrough technology Arbutus had already created and patented—a revolutionary lipid nanoparticle (“LNP”) delivery platform that took the scientists of Arbutus years of painstaking work to develop and refine. Moderna was well aware of Arbutus’s LNP patents and licensed them for other product programs, but it chose not to do so for its COVID-19 vaccine. Instead, it attempted to invalidate several of the patents before the United States Patent

63. Arbutus and Genevant fully support Moderna’s efforts to supply vaccines to people in the United States and worldwide and in no way seek to interfere with those efforts. Accordingly, no injunctive relief is sought in this case.

64. However, Moderna has made extensive use of, and earned billions in profits exploiting, Arbutus’s patented technology, including the technology described and claimed in the Asserted Patents. Moderna’s actions have caused harm, and continue to cause harm, to Arbutus and Genevant. Arbutus and Genevant have no choice but to defend their proprietary and patented technology and seek fair and reasonable compensation for the value of their innovation.²⁷

COUNT 1: INFRINGEMENT OF U.S. PATENT NO. 8,058,069

65. Paragraphs 1 through 64 are incorporated by reference as if fully set forth herein.

66. The United States Patent and Trademark Office duly and legally issued the ’069 Patent to one of Arbutus’s predecessor companies on November 15, 2011. The ’069 Patent is titled “Novel Lipid Formulations for Nucleic Acid Delivery.”

67. Arbutus owns, and at all relevant times has owned, the ’069 Patent.

68. Genevant holds, and at all relevant times has held, a license to Exclusive Rights in the ’069 Patent for certain fields of use, which include the Accused Product. Genevant has the right to sue and seek damages for the infringement alleged herein.

69. Claims of the ’069 Patent cover, among other things, nucleic acid-lipid particles and compositions thereof.

²⁷ The allegations herein are exemplary and without prejudice to Arbutus and Genevant’s infringement contentions. In providing these allegations, Arbutus and Genevant do not convey or imply any particular claim constructions or the precise scope of the claims. Arbutus and Genevant’s claim construction contentions regarding the meaning and scope of the claim terms will be provided under the Court’s scheduling order and this District’s Local Rules.

70. Moderna has directly infringed and continues to directly infringe claims of the '069 Patent under 35 U.S.C. § 271(a) by manufacturing, offering to sell, selling, or using within the United States, or importing into the United States, the Accused Product incorporating Arbutus's patented LNP delivery technology covered by the '069 Patent, without authority or license to do so, during the term of the '069 Patent.

71. Moderna actively, knowingly, and intentionally has induced, and continues to induce, infringement of one or more claims of the '069 Patent under 35 U.S.C. § 271(b) by encouraging others to make and use the Accused Product in the United States in a manner specifically intended to infringe the '069 Patent.

72. Moderna has contributed, and continues to contribute, to the infringement of one or more claims of the '069 Patent by others under 35 U.S.C. § 271(c) by offering to sell and selling within the United States, or importing into the United States, a component of a patented manufacture, combination or composition, constituting a material part of the invention of the '069 Patent, knowing the same to be especially made or especially adapted for use in the infringement of the '069 Patent and not a staple article or commodity of commerce suitable for substantial non-infringing use.

73. For example, Claim 1 of the '069 Patent recites a "nucleic acid-lipid particle comprising: (a) a nucleic acid; (b) a cationic lipid comprising from 50 mol % to 65 mol % of the total lipid present in the particle; (c) a non-cationic lipid comprising a mixture of a phospholipid and cholesterol or a derivative thereof, wherein the phospholipid comprises from 4 mol % to 10 mol % of the total lipid present in the particle and the cholesterol or derivative thereof comprises from 30 mol % to 40 mol % of the total lipid present in the particle; and (d) a conjugated lipid

that inhibits aggregation of particles comprising from 0.5 mol % to 2 mol % of the total lipid present in the particle.”

74. The Accused Product is a pharmaceutical composition of nucleic acid-lipid particles. The nucleic acid in the Asserted Product is an mRNA which encodes the COVID-19 spike protein.

75. The Accused Product comprises nucleic acid-lipid particles comprising the following lipids: an ionizable cationic lipid (SM-102); a phospholipid (DSPC); cholesterol; and a conjugated lipid that inhibits aggregation of particles (a PEG-lipid conjugate).

76. On information and belief, as indicated in the Moderna/NIH preprint and in International Patent Publication WO 2021/159130, the Accused Product comprises nucleic acid-lipid particles comprising the following lipids in the following ratio of the total lipid present in the particle: 50 mol % of an ionizable cationic lipid; 10 mol % of a phospholipid; 38.5 mol % of cholesterol; and 1.5 mol % of a conjugated lipid that inhibits aggregation of particles.

77. Moderna has known of the '069 Patent since before it commenced the infringing conduct or has been willfully blind to its existence and contents since then. Moderna has long been aware of, and has actively monitored Arbutus's patent estate, including the '069 Patent.²⁸ Moderna secured unauthorized limited sublicenses to Arbutus's LNP-related patents through Acuitas; Moderna later sought to invalidate three of Arbutus's LNP-related patents, including the '069 Patent, through *inter partes* review; and Moderna has repeatedly made public representations regarding Arbutus's LNP technology and patents.²⁹ Despite such knowledge,

²⁸ See, e.g., Moderna Mot. at 4-5, Dkt. No. 18, *Moderna TX, Inc. v. Arbutus Biopharma Corp.* (Fed. Cir. No. 2020-2329).

²⁹ See, e.g., Moderna Mot. at 5, Dkt. No. 18, *Moderna TX, Inc. v. Arbutus Biopharma Corp.* (Fed. Cir. No. 2020-2329); Press Release, Moderna, Statement from Moderna on Patent Trial

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