EXHIBIT 1

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. 22-252-MSG **CONTAINS INFORMATION MODERNA DESIGNATED HIGHLY CONFIDENTIAL – OUTSIDE COUNSEL EYES ONLY**

PLAINTIFFS' THIRD SET OF REQUESTS FOR PRODUCTION TO DEFENDANTS (NOS. 128–173)

Pursuant to Federal Rules of Civil Procedure 26 and 34, Plaintiffs Arbutus Biopharma Corporation ("Arbutus") and Genevant Sciences GmbH ("Genevant") direct the following requests for production to Defendants Moderna, Inc. and ModernaTX Inc. (collectively, "Moderna" or "Defendants"). Responses to these requests shall be served upon Plaintiffs' undersigned counsel within 30 days of service of these requests, or at such time and location as may be mutually agreed upon by the parties. Copies shall be produced as they are kept in the ordinary course of business, including their labeling as to the source of the documents. Pursuant to Fed. R. Civ. P. 26(e), these requests are continuing and require supplemental answers.

DEFINITIONS & INSTRUCTIONS

Plaintiffs incorporate herein by reference as though fully set forth herein the Definitions and Instructions of Plaintiffs' First Set of Requests for Production to Defendants (Nos. 1–98) served December 20, 2022.

1. The "2013 Moderna-AstraZeneca Agreement" refers to the 2013 agreement between Moderna and AstraZeneca related to the development of "mRNA therapeutics." *See, e.g.*, https://news.modernatx.com/news/news-details/2013/AstraZeneca-and-Moderna-Therapeutics-Announce-Exclusive-Agreement-to-Develop-Pioneering-Messenger-RNA-Therapeutics-in-Cardiometabolic-Diseases-and-Cancer/default.aspx; https://www.astrazeneca.com/media-centre/press-releases/2013/astrazeneca-moderna-therapeutics-cardiometabolic-diseases-cancer-treatment-21032013.html#!; https://www.sec.gov/Archives/edgar/data/1682852/000095012318009738/filename5.htm.

REQUESTS FOR PRODUCTION

REQUEST FOR PRODUCTION NO. 128

All documents that estimate, define, describe, assess, study, or summarize the market for the Accused Product, including but not limited to company reports or studies, third-party research, or other information related to the market for the Accused Product.

REQUEST FOR PRODUCTION NO. 129

All documents and other information relating to the pricing strategies for the Accused Product, including, but not limited to, the factors, information, and/or data that Moderna considered in developing pricing strategies for the Accused Product.

REQUEST FOR PRODUCTION NO. 130

All documents and communications created, prepared, and/or reviewed for or by Moderna's Board of Directors, or any committee of such Board, related to the Accused Product, including, but not limited to, meeting minutes of Moderna's Board of Directors, presentations prepared for or provided to Moderna's Board of Directors, or financial analyses or projections about sales of the Accused Product provided to Moderna's Board of Directors.

REQUEST FOR PRODUCTION NO. 160

All documents and communications relating to the conception, reduction to practice, research, or development of the subject matter disclosed and/or claimed in WO 2023/019181 and any priority application thereto (including U.S. Provisional Application No. 63/232,128 listed on the cover of WO 2023/019181), including but not limited to laboratory notebooks, notes, records, logs, files, invention disclosures, or other documents generated by or at the direction of any named inventors, and all laboratory notebooks, notes, records, logs, files, invention disclosures, or other documents in which any named inventors made any entries.

REQUEST FOR PRODUCTION NO. 161

All documents and communications regarding the disclosure in WO 2023/019181 concerning the effect of adding steric stabilizers, such as polyethylene glycol (PEG)[redacted]

REQUEST FOR PRODUCTION NO. 162

All documents and communications regarding the disclosure in WO 2023/019181 of "turbulent mixing ('T-mix')," "vortex mixing ("V-mix")," or "microfluidic mixing."

REQUEST FOR PRODUCTION NO. 163

Documents sufficient to show the lipid composition and/or lipid molar ratio for all Investigational New Drug Applications submitted by Moderna to the U.S. Food & Drug Administration and Moderna's reasons for selecting the lipid composition and lipid molar ratio.

REQUEST FOR PRODUCTION NO. 164

Documents sufficient to show the lipid composition and/or lipid molar ratio for all Investigational New Drug Applications submitted by Moderna to the U.S. Food & Drug Administration using (1) 50 mol % to 65 mol % cationic lipid; (2) 4 mol % to 10 mol % of phospholipid; (3) 30 mol % to 40 mol % cholesterol or derivative thereof; and (4) 0.5 mol % to 2 mol % PEG-lipid or conjugated lipid that inhibits aggregation of particles, and Moderna's reasons for selecting the lipid composition and lipid molar ratio.

REQUEST FOR PRODUCTION NO. 165

Documents sufficient to show the lipid composition and/or lipid molar ratio for all Investigational New Drug Applications submitted by Moderna to the U.S. Food & Drug Administration using (1) 50 mol % to 65 mol % cationic lipid; (2) 3 mol % to 15 mol % of phospholipid; (3) 30 mol % to 40 mol % cholesterol or derivative thereof; and (4) 0.5 mol % to 2 mol % PEG-lipid or conjugated lipid that inhibits aggregation of particles, and Moderna's reasons for selecting the lipid composition and lipid molar ratio.

REQUEST FOR PRODUCTION NO. 166

Documents sufficient to show the LNP manufacturing process for all Investigational New Drug Applications submitted by Moderna to the U.S. Food & Drug Administration wherein the proposed product comprised LNPs.

REQUEST FOR PRODUCTION NO. 167

Documents sufficient to show the lipid composition and lipid molar ratio for all Investigational New Drug Applications submitted by Moderna to the U.S. Food & Drug Administration wherein the proposed product comprised LNPs.

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.