

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

ARBUTUS BIOPHARMA CORPORATION )  
and GENEVANT SCIENCES GmbH, )  
 )  
Plaintiffs, )

v. )

C.A. No. 22-252-MSG

MODERNA, INC. and MODERNATX, INC., )  
 )  
Defendants. )

MODERNA, INC. and MODERNATX, INC., )  
 )  
Counterclaim-Plaintiffs, )



v. )

ARBUTUS BIOPHARMA CORPORATION )  
and GENEVANT SCIENCES GmbH, )  
 )  
Counterclaim-Defendants. )

**JOINT CLAIM CONSTRUCTION BRIEF**

John W. Shaw (No. 3362)  
Karen E. Keller (No. 4489)  
Nathan R. Hoeschen (No. 6232)  
Emily S. DiBenedetto (No. 6779)  
SHAW KELLER LLP  
I.M. Pei Building  
1105 North Market Street, 12th Floor  
Wilmington, DE 19801  
(302) 298-0700  
jshaw@shawkeller.com  
kkeller@shawkeller.com  
nhoeschen@shawkeller.com  
edibenedetto@shawkeller.com

*Attorneys for Plaintiffs*

Jack B. Blumenfeld (No. 1014)  
Brian P. Egan (No. 6227)  
Travis J. Murray (No. 6882)  
MORRIS, NICHOLS, ARSHT & TUNNELL LLP  
1201 North Market Street  
P.O. Box 1347  
Wilmington, DE 19899  
(302) 658-9200  
jblumenfeld@morrisnichols.com  
began@morrisnichols.com  
tmurray@morrisnichols.com

Patricia A. Carson  
Jeanna M. Wacker  
Mark C. McLennan  
Nancy Kaye Horstman  
Caitlin Dean  
Shaoyao Yu  
KIRKLAND & ELLIS LLP

David I. Berl  
Adam D. Harber  
Thomas S. Fletcher  
Shaun P. Mahaffy  
Jessica Palmer Ryan  
Anthony H. Sheh  
Jihad J. Komis  
Philip N. Haunschild  
WILLIAMS & CONNOLLY LLP  
680 Maine Avenue SW  
Washington, DC 20024  
(202) 434-5000

*Attorneys for Plaintiff Genevant  
Sciences GmbH*

Daralyn J. Durie  
Adam R. Brausa  
Eric C. Wiener  
Annie A. Lee  
Shaelyn K. Dawson  
MORRISON & FOERSTER LLP  
425 Market Street  
San Francisco, CA 94105-2482  
(415) 268-6080

Kira A. Davis  
MORRISON & FOERSTER LLP  
707 Wilshire Boulevard  
Los Angeles, CA 90017-3543  
(213) 892-5200

David N. Tan  
MORRISON & FOERSTER LLP  
2100 L Street, NW, Suite 900  
Washington, DC 20037  
(202) 887-1500

*Attorneys for Plaintiff Arbutus  
Biopharma Corporation*

Dated: December 20, 2023

601 Lexington Avenue  
New York, NY 10022  
(212) 446-4679

Alina Afinogenova  
KIRKLAND & ELLIS LLP  
200 Clarendon Street 47th Floor  
Boston, MA 0211  
(617) 385 -7500

Yan-Xin Li  
KIRKLAND & ELLIS LLP  
555 California Street 27th Floor  
San Francisco, CA 94104  
(415) 439-1400

*Attorneys for Defendants*

..

**TABLE OF CONTENTS**

I. PLAINTIFFS’ INTRODUCTION.....1

II. MODERNA’S INTRODUCTION.....2

III. PLAINTIFFS’ INTRODUCTION IN REPLY.....4

IV. DISPUTED TERMS.....5

A. “mol % of the total lipid present in the particle” .....5

1. Plaintiffs’ Opening Position.....5

a. Moderna’s construction impermissibly adds the word “finished.” .....7

b. The recited ranges follow the standard scientific conventions of significant figures and rounding.....10

2. Moderna’s Answering Position.....15

a. The claimed ranges should be construed with numerical precision.....16

b. The claims recite the lipid amounts in a “finished lipid particle.”.....25

3. Plaintiffs’ Reply Position.....31

a. Moderna fails to establish that Plaintiffs clearly and unmistakably disavowed particles subject to further processing. ....31

b. Moderna’s construction impermissibly imports an impossible degree of “numerical precision” into the claimed mol % ranges.....35

4. Moderna’s Sur-reply Position.....42

a. The claimed mol % ranges do not include variability. ....42

b. Arbutus defined “particle” as a “finished lipid particle.” .....46

B. “a cationic lipid having a protonatable tertiary amine” .....48

1. Plaintiffs’ Opening Position.....48

2. Moderna’s Answering Position.....51

...

- a. Arbutus made a clear and unmistakable disclaimer during prosecution of the '069 Patent. ....52
    - b. That disclaimer also applies to the '378 Patent because it claims the same subject matter and was never rescinded. ....53
    - c. The narrow description of the alleged invention in the specification confirms the claims are limited to compositions with at least 50 mol% cationic lipids.....55
  - 3. Plaintiffs’ Reply Position.....56
  - 4. Moderna’s Sur-reply Position.....60
- C. “wherein at least 70% / at least 80% / about 90% of the mRNA in the formulation is fully encapsulated in the lipid vesicles” / “fully encapsulated” .....63
  - 1. Plaintiffs’ Opening Position.....63
  - 2. Moderna’s Answering Position.....69
    - a. The inventors defined “lipid encapsulated” to distinguish between “fully encapsulated” and “partially encapsulated.” .....70
    - b. Plaintiffs’ construction ignores the word “fully” and the inventors’ definition, instead using phrases that are not found in the specification.....71
    - c. The inventors did not define “fully encapsulated” as “contained inside” during prosecution.....73
    - d. The Court should reject Plaintiffs’ attempt to inject method limitations into the '651 Patent’s composition claims.....73
    - e. Plaintiffs’ insinuation that Moderna is manufacturing an indefiniteness argument is false.....74
  - 3. Plaintiffs’ Reply Position.....75
    - a. The definition of “lipid encapsulated” is irrelevant and provides no clarity on what it means for mRNA to be “fully encapsulated.” .....76
    - b. Plaintiffs’ construction gives meaning to the word “fully” and is supported by the intrinsic evidence. ....77
    - c. The file history confirms Plaintiffs’ construction. ....77

d. Plaintiffs’ construction does not inject method limitations. ....78

4. Moderna’s Sur-reply Position .....79

# 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.