

Frequency Therapeutics, Inc.
75 Hayden Avenue, Suite 300
Lexington, MA 02421

September 28, 2023

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, D.C. 20549

Re: Frequency Therapeutics, Inc.
Registration Statement on Form S-4
(File No. 333-273490)

Ladies and Gentlemen:

In accordance with Rule 461 of the General Rules and Regulations under the Securities Act of 1933, as amended, Frequency Therapeutics, Inc. (the "Company") hereby requests acceleration of the effective date of its Registration Statement on Form S-4 initially filed on July 27, 2023 and amended on September 1, 2023, September 21, 2023 and September 28, 2023 (the "Registration Statement"). The Company respectfully requests that the Registration Statement become effective as of 4:00 p.m., Eastern Time, on September 29, 2023, or as soon thereafter as practicable. Once the Registration Statement has been declared effective, please orally confirm that event with the Company's counsel, Latham & Watkins LLP, by calling Jennifer A. Yoon at (617) 880-4540.

Very truly yours,

Frequency Therapeutics, Inc.

By: /s/ David Lucchino

Name: David Lucchino

Title: President and Chief Executive Officer

cc: Jennifer A. Yoon, Esq., Latham & Watkins LLP
John H. Chory, Esq., Latham & Watkins LLP
Bradley C. Faris, Esq., Latham & Watkins LLP