

**Frequency Therapeutics, Inc.  
19 Presidential Way, 2nd Floor  
Woburn, MA 01801**

November 20, 2020

**VIA EDGAR TRANSMISSION**

Securities and Exchange Commission  
Division of Corporation Finance  
Mail Stop 4720  
100 F Street, N.E.  
Washington, D.C. 20549

Attention: Tim Buchmiller

**Re: FREQUENCY THERAPEUTICS, INC.**

**Registration Statement on Form S-3 (Registration No. 333-250099)**

Ladies and Gentlemen:

In accordance with Rule 461 under the Securities Act of 1933, as amended, we hereby request acceleration of the effective date of the Registration Statement on Form S-3 (Registration No. 333-250099) (the "Registration Statement") of Frequency Therapeutics, Inc. (the "Company"). We respectfully request that the Registration Statement become effective as of 4:00 p.m., Eastern Time, on November 24, 2020, or at such later time as the Company or its counsel may orally request via telephone call to the staff. Please contact Nathan Ajiashvili of Latham & Watkins LLP, counsel to the Company, at (212) 906-2916, or in his absence, Jennifer Yoon at (617) 880-4540, to provide notice of effectiveness, or if you have any other questions or concerns regarding this matter.

Very truly yours,

**FREQUENCY THERAPEUTICS, INC.**

By: /s/ Michael D. Bookman

Name: Michael D. Bookman

Title: Deputy General Counsel

cc: David L. Lucchino., Frequency Therapeutics, Inc.  
John Chory, Esq., Latham & Watkins LLP  
Nathan Ajiashvili, Esq., Latham & Watkins LLP  
Jennifer A. Yoon, Esq., Latham & Watkins LLP