UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 **REGISTRATION STATEMENT UNDER**

THE SECURITIES ACT OF 1933

Frequency Therapeutics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of Incorporation or organization)

47-2324450 (I.R.S. Employer Identification No.)

75 Hayden Avenue Lexington, MA 02421 (Address of principal executive offices) (Zip code)

Frequency Therapeutics, Inc. 2019 Incentive Award Plan Frequency Therapeutics, Inc. 2019 Employee Stock Purchase Plan (Full title of the plans)

David L. Lucchino President and Chief Executive Officer Frequency Therapeutics, Inc. 75 Hayden Avenue Lexington, MA 02421 (781) 315-4600 (Name and address of agent for service) (Telephone number, including area code, of agent for service)

With copies to:

John Chory, Esq. Latham & Watkins LLP 200 Clarendon Street Boston, MA 02116 (617) 948-6000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer \Box

Non-accelerated filer $\left| \times \right|$ Accelerated filer \Box

Smaller reporting company 🗵

Emerging growth company \boxtimes

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for comply with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering an additional 3,569,198 shares of the Registrant's common stock to be issued pursuant to the Frequency Therapeutics, Inc. 2019 Incentive Award Plan (the "2019 Plan") and the Frequency Therapeutics, Inc. 2019 Employee Stock Purchase Plan (together with the 2019 Plan, the "Plans") and for which a Registration Statement of the Registrant on Form S-8 relating to the same Plans is effective.

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENTS ON FORM S-8

The contents of the Registration Statements on <u>Form S-8</u> (File No. 333-234128), filed with the Securities and Exchange Commission, relating to the Plans, are incorporated herein by reference.

Item 8.	Exhibits
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Exhibit <u>Number</u>	Description
4.1	Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on October 7, 2019)
4.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on October 7, 2019)
5.1*	Opinion of Latham & Watkins LLP
23.1*	Consent of RSM US LLP, Independent Registered Public Accounting Firm
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (included on signature page)
99.2	Frequency Therapeutics, Inc. 2019 Incentive Award Plan (incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on September 23, 2019)
99.3	Frequency Therapeutics, Inc. 2019 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.13 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on September 23, 2019)
107*	<u>Filing Fee Table</u>

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Lexington, Commonwealth of Massachusetts, on March 17, 2022.

FREQUENCY THERAPEUTICS, INC.

By: /s/ David L. Lucchino

David L. Lucchino President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints David L. Lucchino and Peter P. Pfreundschuh, or each of them singly, with full power to act without the other, such person's true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign this registration statement and any and all amendments, including post-effective amendments to this registration statement, and to file the same, with exhibits and schedules thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary or desirable to be done in connection therewith as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ David L. Lucchino	President, Chief Executive Officer and Director	March 17, 2022	
David L. Lucchino	(Principal Executive Officer)		
/s/ Peter P. Pfreundschuh	Chief Financial Officer	March 17, 2022	
Peter P. Pfreundschuh	(Principal Financial and Accounting Officer)		
	Chairman and Director	March 17, 2022	
Marc. A. Cohen	_		
/s/ Timothy J. Barberich	Vice Chairman and Director	March 17, 2022	
Timothy J. Barberich	_		
/s/ Cynthia L. Feldman			
Cynthia L. Feldman	Director	March 17, 2022	
/s/ Michael Huang			
Michael Huang	Director	March 17, 2022	
/s/ Robert S. Langer			
Robert S. Langer, Sc.D.	Director	March 17, 2022	
/s/ Joel S. Marcus			
Joel S. Marcus	Director	March 17, 2022	

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FIRM / AFFILIATE OFFICES

Austin Moscow Beijing Munich New York Boston Brussels Orange County Century City Paris Riyadh Chicago Dubai San Diego Düsseldorf San Francisco Frankfurt Seoul Shanghai Hamburg Hong Kong Silicon Valley Houston Singapore London Tel Aviv Los Angeles Tokyo Madrid Washington, D.C. Milan

March 17, 2022

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

Re: Registration Statement on Form S-8; 3,569,198 shares of Frequency Therapeutics, Inc. Common Stock, \$0.001 par value per share

To the addressee set forth above:

We have acted as special counsel to Frequency Therapeutics, Inc., a Delaware corporation (the "*Company*"), in connection with the proposed issuance by the Company of up to 3,569,198 shares of common stock of the Company, \$0.001 par value per share (the "*Shares*") issuable under the Frequency Therapeutics, Inc. 2019 Incentive Award Plan (the "*2019 Plan*") and the Frequency Therapeutics, Inc. 2019 Employee Stock Purchase Plan (together with the 2019 Plan, the "*Plans*"). The Shares are included in a registration statement on Form S-8 under the Securities Act of 1933, as amended (the "*Act*"), filed with the Securities and Exchange Commission (the "*Commission*") on March 17, 2022 (the "*Registration Statement*"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or related prospectus, other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, and have been issued by the Company for legal consideration in excess of par value in the circumstances contemplated by

the Plans, assuming in each case that the individual grants or awards under the Plans are duly authorized by all necessary corporate action and duly granted or awarded and exercised in accordance with the requirements of law and the Plans (and the agreements and awards duly adopted thereunder and in accordance therewith), the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-8 of Frequency Therapeutics, Inc. of our report dated March 15, 2022, relating to the consolidated financial statements of Frequency Therapeutics, Inc., appearing in the Annual Report on Form 10-K of Frequency Therapeutics, Inc. for the year ended December 31, 2021.

/s/ RSM US LLP

Boston, Massachusetts March 17, 2022

CALCULATION OF FILING FEE TABLE

FORM S-8

(Form Type)

FREQUENCY THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in its Charter)

Table I: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, par value \$0.001 per share	Rule 457(c) and 457(h)	3,569,198(2)	\$1.90(3)	\$6,781,476.20	\$92.70 per million dollars	\$628.64
Total Offering Amounts					\$6,781,476.20		\$628.64
Total Fee Offsets							\$—
Net Fee Due							\$628.64

(1) Pursuant to Rule 416(a) and Rule 416(b) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover additional shares of the Registrant's Common Stock, par value \$0.001 per share ("Common Stock"), which become issuable under the Frequency Therapeutics, Inc. 2019 Incentive Award Plan (the "2019 Plan") and the Frequency Therapeutics, Inc. 2019 Employee Stock Purchase Plan (the "ESPP") by reason of any stock split, stock dividend, recapitalization, or other similar transaction. In addition, pursuant to Rule 416(c) under the Securities Act, this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described herein.

(2) Represents (a) 1,476,789 shares of Common Stock available for issuance under the 2019 Plan and an additional 1,723,211 shares of Common Stock that may become issuable under the 2019 Plan pursuant to its terms and (b) 369,198 shares of Common Stock available for issuance under the ESPP.

(3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act, and based upon the average of the high and low prices of the Registrant's Common Stock as reported on The Nasdaq Global Select Market on March 11, 2022.