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LATHAM & WATKINS LLP

September 20, 2023

VIA EDGAR DELIVERY

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-6010

Attention: Cindy Polynice
Alan Campbell
Sasha Parikh
Mary Mast

Re: Frequency Therapeutics, Inc.
Amendment No. 1 to Registration Statement on Form S-4
Filed September 1, 2023
File No. 333-273490

Ladies and Gentlemen:

On behalf of Frequency Therapeutics, Inc., a Delaware corporation (the "***Company***"), we are providing this letter in response to comments received from the staff (the "***Staff***") of the Securities and Exchange Commission (the "***Commission***") by letter dated September 15, 2023 (the "***Comment Letter***") with respect to the Company's Amendment No. 1 to Registration Statement on Form S-4, as filed on September 1, 2023 ("***Amendment No. 1***").

In connection with this letter responding to the Comment Letter, the Company is concurrently filing Amendment No. 2 to the Company's Registration Statement on Form S-4 ("***Amendment No. 2***"), which reflects certain revisions to Amendment No. 1 in response to the Comment Letter as well as certain other changes.

For ease of review, we have set forth below each of the numbered comments of the Comment Letter in bold type, followed by the Company's responses thereto. Unless otherwise indicated, capitalized terms used herein have the meanings assigned to them in Amendment No. 2 and all references to page numbers in such responses are to page numbers in Amendment No. 2.

LATHAM & WATKINS LLP

Amendment No. 1 to Registration Statement on Form S-4 filed September 1, 2023

Prospectus Summary
Korro Bio, Inc., page 14

1. **Please revise this section or elsewhere in your registration statement, as appropriate, to disclose (i) how Korro Bio currently expects to allocate the proceeds from the Pre-Closing Financing and Frequency Net Cash among its development programs and (ii) how far Korro Bio currently expects to reach in its development programs with these proceeds.**

   Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on pages 15-16 and 354-355 of Amendment No. 2.

Korro Bio's Pipeline, page 16

2. **We note your response to prior comment 14. Please provide us with an analysis as to why each of the four programs other than Korro Bio's AATD program is sufficiently material to Korro Bio to merit inclusion in the pipeline chart on an individual basis. In your analysis, please address the projections disclosed elsewhere in the prospectus which do not appear to contemplate Korro Bio recognizing material revenue from any program other than the AATD program prior to December 31, 2045. Please also tell us the amounts of proceeds from the Pre-Closing Financing and Frequency Net Cash that are anticipated to be allocated to each of these programs. Alternatively, please remove these programs from the pipeline chart.**

   Response: The Company respectfully acknowledges the Staff's comment and has revised the pipeline chart on pages 18, 288 and 297 of Amendment No. 2, as well as included disclosure regarding expected use of the cash, cash equivalents and marketable securities upon completion of the Merger (on pages 15-16 and 354-355 of Amendment No. 2), accordingly.

   The Company notes for the Staff that it has removed the pipeline program for severe Alcoholic Hepatitis (sAH) from the pipeline chart graphic even though it believes it is material. For competitive reasons, Korro Bio is not yet disclosing the intended target. The Company further directs the Staff's attention to the analysis below of the materiality of each of the other pipeline programs in Korro Bio's pipeline chart (including the now removed sAH program).

   As disclosed in Amendment No. 2, Korro Bio was founded on a proprietary RNA-editing platform (OPERA) and funded with a goal of developing a novel class of RNA editing therapies using learnings from a combination of genetics and approved medicines (see pages 20 and 290 of Amendment No. 2). The Company further respectfully advises the Staff that Korro Bio believes that each of its other pipeline programs (other than the AATD program) on an individual basis is material to Korro Bio because each demonstrates the versatility of the oligonucleotide-based ADAR-mediated RNA editing approach to bring additional precision and tunability to address a broad range of rare and highly prevalent diseases (see pages 17 and 287 of Amendment No. 2), which is a key component of Korro Bio's business.

   Each of these additional pipeline programs is material to Korro Bio and merits inclusion in the pipeline chart because:

   - ***They are material to an investment decision in Korro Bio***. Korro Bio engaged in extensive due diligence discussions with investors in the Pre-Closing Financing. These investors, who collectively agreed to purchase approximately $117.3 million of Korro Bio common stock in the Pre-Closing Financing (as disclosed on page 18 and elsewhere in Amendment No. 2), were focused on the versatility and broad potential of the OPERA Platform and applicability of the RNA editing technology. Discussions with these investors focused on both the AATD program, as it is the most advanced, but also the extensive pre-clinical studies and development work to support Korro Bio's earlier stage programs in Parkinson's disease, amyotrophic lateral sclerosis (ALS), subsets of pain (collectively the three other indications in the pipeline chart), as well as other undisclosed targets for sAH and cardiometabolic disease.

- ***They are supported by pre-clinical studies***. As disclosed on pages 19, 287-289, and 311-316 of Amendment No. 2, Korro Bio has done multiple pre-clinical studies that demonstrate its ability to repair a pathogenic variant (Parkinson's disease program), prevent protein aggregation (ALS) and selectively modulate ion channels (subsets of pain). The additional programs and the pre-clinical proof-of-concept data generated to date evidence that Korro Bio's RNA editing technology is a novel way to potentially alleviate disease and, if developed successfully and approved, provide tangible benefit to patients. Korro Bio has also done similar work (and included similar disclosure) for its sAH program, which is no longer included in the updated pipeline chart given the undisclosed nature of the target.
- ***They are covered by extensive intellectual property***. As disclosed on pages 319-320 of Amendment No. 2, Korro Bio has a broad intellectual property portfolio that supports these additional pipeline programs.

The Company has also included the graphic below, as a reference guide for the Staff for the fulsome details in Amendment No. 2 regarding each Korro Bio program included in the updated pipeline chart other than AATD, supporting the materiality of each program on an individual basis to Korro Bio and, upon completion of the Merger, the combined company.

Indication	Target	Concept	Approach	Supporting preclinical data	IP
Parkinson's disease	LRRK2	Repairing a pathogenic variant	Repairing aberrant amino acids on proteins implicated in disease biology	**See page 311 of Amendment No. 2**	**See pages 319-320 of Amendment No. 2**
Amyotrophic lateral sclerosis	TDP43	Preventing protein aggregation	Preventing disease-causing protein aggregation	**See pages 314-315 of Amendment No. 2**	
Subsets of pain	$Na_v1.7$	Selectively modulating ion channels	Regulating the activation of ion-channels to physiological levels	**See pages 315-316 of Amendment No. 2**	

The Company further respectfully advises the Staff that all of Korro Bio's pipeline programs were considered by the Company while evaluating the potential of the combined company to generate future value for stockholders. As disclosed in the sections titled "Background of the Merger" (beginning on page 157 of Amendment No. 2) and "Frequency's Reasons for the Merger" (beginning on page 170 of Amendment No. 2), the Company evaluated and selected Korro Bio as a merger partner because of, among other things, the potential for success for Korro Bio's platform technology (page 163 of Amendment No. 2), including the potential value of Korro Bio's product candidate development (page 170 of Amendment No. 2); the opportunity for Korro Bio's RNA editing technology to generate substantial long-term value for the combined company and its stockholders (page 171 of Amendment No. 2); and Korro Bio's focus on RNA editing technology to leverage genetics transiently, expanding the target space to intervene in biology in a unique manner (page 171 of Amendment No. 2).

As for the Staff's request to address why the projections used do not appear to contemplate Korro Bio recognizing material revenue from any program other than the AATD program prior to December 31, 2045, the Company respectfully submits to the Staff that the projections used by the Company's board of directors were provided for the limited purpose of assessing the value of Korro Bio's business. Within this context, the Company determined to focus on Korro Bio's most advanced program in AATD, which was the first product candidate likely to generate revenue for the combined company, and used the potential revenue streams from the AATD program to support its valuation of Korro Bio.

Further, while the Company acknowledges the Staff's request to disclose the amounts of proceeds from the Pre-Closing Financing and Frequency Net Cash that are anticipated to be allocated to programs other than the AATD program, the Company respectfully advises the Staff that it has revised the disclosure on pages 15-16 and 354-355 of Amendment No. 2 to reflect its expected use of the cash, cash equivalents and marketable securities after completion of the Merger. As a pre-clinical company, Korro Bio has not yet begun to track spending on a program by program basis and has not allocated its spending on a program by program basis. As disclosed on page 355 of Amendment No. 2, Korro Bio plans to track program costs upon nomination of a development candidate or filing of an Investigational New Drug application.

Korro Bio's Strategy, page 19

3. We note your response to prior comment 16 and revised disclosure. Please revise here and on page 289 to provide the basis for your statements that Korro Bio has "position as a leader" in RNA editing.

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on pages 20 and 290 of Amendment No. 2.

Background of the Merger, page 156

4. We note your response to prior comment 19 and revised disclosure. Please revise further to disclose why the Frequency Board modified its position regarding the valuation of Korro Bio and Frequency's equity premium. Alternatively, please advise.

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on page 168 of Amendment No. 2.

Financial Analyses, page 177

5. We note your response to prior comment 22 and re-issue in part. Please disclose the stage of development of each company presented in the comparable company analysis. Please also present the estimated enterprise value for each selected company in the comparable company analysis and disclose whether TD Cowen applied any discount factor to companies at a more advanced stage of development than Korro Bio. You may state that individual estimated enterprise values of each selected company were not independently determinative or utilized in deriving the results of TD Cowen's selected publicly traded companies analysis.

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on pages 178-179 of Amendment No. 2.

6. We note your response to prior comment 23. Please revise to disclose whether TD Cowen's DCF analysis incorporated the possibility that Korro Bio's products are not approved and/or Korro Bio does not achieve profitability.

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on page 179 of Amendment No. 2.

Certain Unaudited Financial Projections for Korro Bio, page 179

7. We note your response to prior comment 24 and re-issue. Please revise to disclose the extent to which the Frequency Board considered the Korro Bio Projections in making its decision to approve the Merger. To the extent the Frequency Board considered the Korro Bio Projections, please disclose whether the Frequency Board determined that the time period and revenue figures presented in the projections were reasonable and, if so, the reasons underlying these determinations.

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on page 182 of Amendment No. 2.

Key Advantages of Oligonucleotide-Based ADAR-Mediated RNA Editing as a Therapeutic Modality, page 292

8. We note your response to prior comment 29 and re-issue. We note your disclosure in the graphic that oligo-based RNA editing has precedented delivery, tolerability and manufacturing as well as multiple approved products. Please revise the graphic to reconcile these claims with your statements in Risk Factors that Korro Bio is uncertain how it will deliver product candidates to target tissues, RNA editing is a novel technology that has not yet been validated for human therapeutic use, Korro Bio is not aware of clinical trials being completed by third parties using RNA editing or similar technologies, regulators have not established definitive guidelines for oligonucleotide drugs and no gene editing therapeutic product has been approved in the U.S. or Europe.

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on pages 17-18, the risk factor on page 104 and pages 289 and 301 of Amendment No. 2 to clarify the uncertainty. The Company supplementally informs the Staff that there are currently three approved oligonucleotide products that leverage various delivery modalities, including lipid nanoparticles, or LNP, for liver tissue (ONPATTRO®), GalNAC conjugates for liver tissue (LEQVIO®) and unconjugated oligonucleotides for neuronal cells (SPINRAZA®). For Korro Bio's first product, focused on AATD, Korro Bio is using LNP for delivery to liver tissue. The delivery modality is not the limiting factor for Korro Bio's current pipeline that targets liver tissue as evidenced by the three approved oligonucleotide products referenced above. In contrast, the limitation is the risk-benefit profile that indicates clinical benefit with acceptable safety benefits as determined by the relevant regulatory authorities. The Company has also added clarifying language to the graphic on page 293 of Amendment No 2, including cautionary language regarding the uncertainties faced by Korro Bio's novel technologies.

Patent Portfolio, page 318

9. We note your response to prior comment 32 and re-issue in part. Please revise to disclose for each material patent and patent application the subject matter to which such patents or patent applications relate and the type of patent protection. In your revisions, please discuss the patent protection for your lead product candidate(s).

Response: The Company respectfully acknowledges the Staff's comment and has revised the disclosure on pages 319-320 of Amendment No. 2.

* * *

We hope the foregoing answers are responsive to your comments. Please do not hesitate to contact me by telephone at (617) 880-4540 with any questions or comments regarding this correspondence.

LATHAM & WATKINS LLP

Very truly yours,

/s/ Jennifer A. Yoon

Jennifer A. Yoon, Esq.
of LATHAM & WATKINS LLP

cc: David Lucchino, President and Chief Executive Officer, Frequency Therapeutics, Inc.
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