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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**SCHEDULE 13D**  
Under the Securities Exchange Act of 1934  
(Amendment No. )\*

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**Cartesian Therapeutics, Inc.**  
(Name of Issuer)

**Common Stock, \$0.0001 par value**  
(Title of Class of Securities)

**816212104**  
(CUSIP Number)

**William R. Kolb  
Daniel S. Clevenger  
Foley Hoag LLP  
155 Seaport Boulevard  
Boston, MA 02210  
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(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

**November 13, 2023**  
(Date of Event which Requires Filing of this Statement)

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If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

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**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are sent.

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\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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1.	Names of Reporting Persons Michael Singer	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 23,701,822
	8.	Shared Voting Power 2,359,105
	9.	Sole Dispositive Power 23,701,822
	10.	Shared Dispositive Power 2,359,105
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 26,060,927	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 13.9%	
14.	Type of Reporting Person (See Instructions) HC, IN	

1.	Names of Reporting Persons Thirsty Brook 2010 Irrevocable Trust	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 11,513,926
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 11,513,926
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 11,513,926	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 6.6%	
14.	Type of Reporting Person (See Instructions) OO	

1.	Names of Reporting Persons Singer Asefzadeh Family Holding Trust	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 1,701,601
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 1,701,601
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,701,601	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 1.0%	
14.	Type of Reporting Person (See Instructions) OO	

1.	Names of Reporting Persons Bakezilla 2019 Irrevocable Trust	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 213,822
	8.	Shared Voting Power 0
	9.	Sole Dispositive Power 213,822
	10.	Shared Dispositive Power 0
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 213,822	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 0.1%	
14.	Type of Reporting Person (See Instructions) OO	

1.	Names of Reporting Persons Baharak Asefzadeh	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power
	8.	Shared Voting Power 13,873,031
	9.	Sole Dispositive Power
	10.	Shared Dispositive Power 13,873,031
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 13,873,031	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 7.9%	
14.	Type of Reporting Person (See Instructions) HC, IN	

1.	Names of Reporting Persons Barbara P. Martin	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) OO	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 329,073
	8.	Shared Voting Power 11,513,926
	9.	Sole Dispositive Power 329,073
	10.	Shared Dispositive Power 11,513,926
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 11,842,999	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 6.8%	
14.	Type of Reporting Person (See Instructions) HC, IN	

**Item 1. Security and Issuer**

This joint statement on Schedule 13D relates to the common stock, par value \$0.0001 (the “**Common Stock**”), of Cartesian Therapeutics, Inc., a Delaware corporation (the “**Issuer**”). The address of the Issuer’s principal executive offices is 65 Grove Street, Watertown, MA 02472.

**Item 2. Identity and Background**

(a) This joint statement on Schedule 13D is being filed by Michael Singer, Thirsty Brook 2010 Irrevocable Trust (“Thirsty Brook Trust”), Singer Asefzadeh Family Holding Trust (“Singer Asefzadeh Trust”), Bakezilla 2019 Irrevocable Trust (“Bakezilla Trust” and together with Thirsty Brook Trust and Singer Asefzadeh Trust, the “Trusts”), Baharak Asefzadeh and Barbara P. Martin. Each of the foregoing is referred to in this Schedule 13D as a “Reporting Person” and, collectively, as the “Reporting Persons.” Dr. Singer is a trustee of Singer Asefzadeh Trust and Bakezilla Trust and a beneficiary of Singer Asefzadeh Trust and Bakezilla Trust. Dr. Asefzadeh is a trustee of Thirsty Brook Trust, Singer Asefzadeh Trust and Bakezilla Trust and a beneficiary of Thirsty Brook Trust and Singer Asefzadeh Trust. Ms. Martin is a trustee of Thirsty Brook Trust. Dr. Asefzadeh is Dr. Singer’s spouse.

The Reporting Persons have entered into a Joint Filing Agreement, a copy of which is filed as Exhibit 1 to this Schedule 13D, pursuant to which they have agreed to file this Schedule 13D jointly in accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

(b) The principal business address of each Reporting Person is c/o Cartesian Therapeutics, Inc., 704 Quince Orchard Road, Gaithersburg, Maryland 20878.

(c) The present principal occupation of Dr. Singer is as a member of the Board of Directors of the Issuer and as a private investor.

Each of the Trusts is a trust for the benefit of Dr. Singer’s family members.

The present principal occupation of Dr. Asefzadeh is: homemaker.

The present principal occupation of Ms. Martin is: retired.

(d) None of the Reporting Persons has, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) None of the Reporting Persons was, during the last five years, a party to a civil proceeding of a judicial or administrative body of competent jurisdiction as a result of which he or it became subject to a judgment, decree or final order (1) enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws, or (2) finding any violation with respect to such laws.

(f) Each of Dr. Singer, Dr. Asefzadeh and Ms. Martin is a citizen of the United States. Each of the Trusts was formed and operates in the United States.

**Item 3. Source and Amount of Funds or Other Consideration**

The Reporting Persons acquired the right to receive an aggregate 453,043 shares of Common Stock and 25,936.957 shares of Series A Non-Voting Convertible Preferred Stock of the Issuer, par value \$0.0001 per share (the "Series A Preferred Stock") pursuant to the Merger described in Item 4 below.

The information set forth under Item 4 of this Schedule 13D is incorporated by reference into this Item 3.

**Item 4. Purpose of Transaction****Agreement and Plan of Merger**

On November 13, 2023, the Issuer, acquired Cartesian Therapeutics, Inc., a Delaware corporation ("Cartesian"), in accordance with the terms of an Agreement and Plan of Merger, dated November 13, 2023 (the "Merger Agreement"), by and among the Issuer, Sakura Merger Sub I, Inc., a Delaware corporation and wholly owned subsidiary of the Issuer ("First Merger Sub"), Sakura Merger Sub II, LLC, a Delaware limited liability company and wholly owned subsidiary of the Issuer ("Second Merger Sub"), and Cartesian. Pursuant to the Merger Agreement, First Merger Sub merged with and into Cartesian, pursuant to which Cartesian was the surviving corporation and became a wholly owned subsidiary of the Issuer (the "First Merger"). Immediately following the First Merger, Cartesian merged with and into Second Merger Sub, pursuant to which Second Merger Sub was the surviving entity (the "Second Merger" and, together with the First Merger, the "Merger"). In connection with the Second Merger, Cartesian changed its name to Cartesian Bio, LLC.

The Merger is intended to qualify as a tax-free reorganization for U.S. federal income tax purposes. As a result of the Merger, the Issuer changed its corporate name to Cartesian Therapeutics, Inc. and began trading under the symbol "RNAC" on November 14, 2023.

Under the terms of the Merger Agreement, following the consummation of the Merger (the "Closing"), in exchange for the outstanding shares of capital stock of Cartesian immediately prior to the effective time of the First Merger, the Issuer will issue to the stockholders of Cartesian that are "accredited investors," as defined in Regulation D promulgated under the Securities Act of 1933, as amended (the "Securities Act"), (A) 6,723,662 shares Common Stock, which amount is (together with the shares underlying certain assumed Cartesian stock options) approximately 19.9% of the number of shares of Common Stock outstanding immediately prior to the Merger, and (B) 384,930.725 shares of Series A Preferred Stock, each share of which is convertible into 1,000 shares of Common Stock, subject to certain conditions described below. An exchange agent selected in accordance with the Merger Agreement will issue book-entry shares of Common Stock and Series A Preferred Stock to be issued in the Merger as soon as reasonably practicable, but no earlier than 21 days after the Closing and no later than 25 days after the Closing.

Pursuant to the Merger Agreement, the Issuer has agreed to hold a stockholders' meeting to submit the following matters to its stockholders for their consideration: (i) the approval of the conversion of shares of Series A Preferred Stock into shares of Common Stock in accordance with the rules of the Nasdaq Stock Market LLC (the "Conversion Proposal"), and (ii) either or both of (A) the approval of an amendment to the Issuer's restated certificate of incorporation, as amended (the "Charter"), to increase the number of shares of Common Stock authorized under the Charter and (B) the approval of an amendment to the Charter to effect a reverse stock split of all outstanding shares of Common Stock, in either case (A) and (B) by a number of authorized shares or at a stock split ratio, as the case may be, sufficient to allow the conversion of all shares of Series A Preferred Stock issued in the Merger, including the shares of Series A Preferred Stock underlying certain assumed Cartesian stock options (the "Charter Amendment Proposal," and together with the Conversion Proposal, the "Meeting Proposals").

The foregoing description of the Merger Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Merger Agreement a copy of which is filed as Exhibit 7 to this Schedule 13D and incorporated herein by reference.

### **Certificate of Designation**

On November 13, 2023, the Issuer filed a Certificate of Designation of Preferences, Rights and Limitations of the Series A Non-Voting Convertible Preferred Stock (the "Certificate of Designation") with the Secretary of State of the State of Delaware in connection with the Merger and the Financing (as defined and discussed below). The Certificate of Designation provides for the designation of shares of the Series A Preferred Stock.

Holders of Series A Preferred Stock are entitled to receive dividends on shares of Series A Preferred Stock equal to, on an as-if-converted-to-Common-Stock basis, and in the same form as dividends actually paid on shares of the Common Stock; provided, however, that holders of Series A Preferred Stock (or any shares of Common Stock into which the Series A Preferred Stock is convertible) are not entitled to any CVRs (as defined and described below) with respect to those shares. Except as otherwise required by law, the Series A Preferred Stock does not have voting rights. However, as long as any shares of Series A Preferred Stock are outstanding, the Issuer will not, without the affirmative vote of the holders of a majority of the then-outstanding shares of the Series A Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series A Preferred Stock, (b) alter or amend the Certificate of Designation, (c) amend the Charter or other organizational documents in any manner that adversely affects any rights of the holders of Series A Preferred Stock, (d) issue further shares of Series A Preferred Stock (other than in connection with the exercise of certain assumed Cartesian stock options) or increase or decrease (other than by conversion) the number of authorized shares of Series A Preferred Stock, (e) prior to the stockholder approval of the Conversion Proposal or at any time while at least 30% of the originally issued Series A Preferred Stock remains issued and outstanding, consummate either (A) a Fundamental Transaction (as defined in the Certificate of Designation) or (B) any merger or consolidation of the Issuer or other business combination in which the stockholders of the Issuer immediately before such transaction do not hold at least a majority of the capital stock of the Issuer immediately after such transaction, (f) amend or fail to comply with, in any manner that would be reasonably likely to prevent, impede or materially delay the conversion (or the stockholder approval thereof), or terminate, any of the Support Agreements (as defined and described below), or agree to any transfer, sale or disposition of such shares subject to the Support Agreements (except for such transfers, sales or dispositions with respect to which the approval of the Issuer is not required pursuant to the applicable Support Agreement) or (g) enter into any agreement with respect to any of the foregoing. The Series A Preferred Stock does not have a preference upon any liquidation, dissolution or winding-up of the Issuer.

Following stockholder approval of the Conversion Proposal, each share of Series A Preferred Stock will automatically convert into 1,000 shares of Common Stock, subject to certain limitations, including that a holder of Series A Preferred Stock is prohibited from converting shares of Series A Preferred Stock into shares of Common Stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (to be established by the holder between 0% and 19.9%) of the total number of shares of Common Stock issued and outstanding immediately after giving effect to such conversion.

The Series A Preferred Stock is redeemable at the option of the holder thereof at any time following the date that is 18 months after the initial issuance of the Series A Preferred Stock, other than any shares of Series A Preferred Stock that would not be convertible into shares of Common Stock as a result of the application of the beneficial ownership limitation referred to in the foregoing paragraph (without regard to the lack of obtaining the requisite stockholder approval to convert the Series A Preferred Stock into Common Stock).

The foregoing description of the Series A Preferred Stock does not purport to be complete and is qualified in its entirety by reference to the full text of the Certificate of Designation, a copy of which is filed as Exhibit 8 to this Schedule 13D and incorporated herein by reference.

#### **Contingent Value Rights Agreement**

The Merger Agreement provides that no later than 30 days following the Closing, the Issuer will enter into a contingent value rights agreement (the "CVR Agreement") with a trustee entity (the "CVR Trustee"), pursuant to which each holder of Common Stock as of the applicable record date will be entitled to one contractual contingent value right (each, a "CVR") issued by the Issuer, subject to and in accordance with the terms and conditions of the CVR Agreement, for each share of Common Stock held by such holder as of the applicable record time. Holders of the warrants to purchase Common Stock of the Issuer (a "Warrant") will be entitled to receive, upon exercise of such Warrant and in accordance with the terms thereof, one CVR per each such share of Common Stock underlying such Warrant, assuming the same had been exercised on the record date for distribution of the CVR; except that the holders of the Warrants issued on April 11, 2022 will, as required by the terms of such Warrants, receive such CVRs upon the initial distribution of CVRs made to the holders of Common Stock, even if such Warrants are not exercised.

When issued, each contingent value right will entitle the holder (the "Holder") thereof to distributions of the following, pro rated on a per-CVR basis, during the period ending on the date on which the Royalty Term (as defined in the Issuer's License and Development Agreement, as amended, with Swedish Orphan Biovitrum AB (publ.) (the "Sobi License")) ends (the "Termination Date"):

(i) 100% of all milestone payments, royalties and other amounts paid to the Issuer or its controlled affiliates (the “Issuer Entities”) prior to the Termination Date under the Sobi License or, following certain terminations of the Sobi License, any agreement a Company Entity enters into that provides for the development and commercialization of SEL-212 (a “New Applicable Agreement”); and

(ii) 100% of all cash consideration and the actual liquidation value of any and all non-cash consideration of any kind that is paid to or is actually received by any Company Entity prior to the Termination Date pursuant to an agreement between a Company Entity and any person who is not a Company Entity relating to a sale, license, transfer or other disposition of any transferable asset of the Issuer Entities existing as of immediately prior to the Merger other than those exclusively licensed under the Sobi License or which the Issuer Entities are required to continue to own in order to comply with the Sobi License (a “Disposition Agreement”).

The distributions in respect of the CVRs will be made on a semi-annual basis, and will be subject to a number of deductions, subject to certain exceptions or limitations, including for (A) certain taxes, (B) certain out-of-pocket expenses incurred by the Issuer Entities, including audit and accounting fees incurred in connection with reporting obligations relating to the CVRs, in respect of its performance of the Sobi License or any New Applicable Agreement, in connection with the entry into a Disposition Agreement and under any Disposition Agreement and performance of the Issuer Entities’ related obligations thereunder, (C) a fixed amount of \$750,000 for each Distribution Period (as defined below) to account for general and administrative overhead incurred by the Issuer Entities, (D) in the case of a distribution that includes payments for certain milestones under clause (ii) above and for the upfront portion, if any, of the consideration payable under a Disposition Agreement (a “Trigger Distribution”), the sum of payments made under any liabilities of the Issuer Entities arising under real property leases in effect as of immediately prior to Closing (“Lease Liabilities”) after the Closing and the aggregate remaining payment obligations under the Lease Liabilities outstanding as of the applicable date of measurement (but subject to a positive adjustment in case amounts held back under this clause (D) exceed the liabilities actually incurred under the Lease Liabilities at the time such a lease expires or is terminated, assigned or subleased), and (E) in the case of a Trigger Distribution, the sum of payments made after the Closing under certain liabilities relating to the Issuer’s Xork product candidate (“Xork Liabilities”) after the Closing and the aggregate remaining payment obligations under Xork Liabilities outstanding as of the applicable date of measurement but subject to a positive adjustment in case amounts held back under this clause (E) exceed the liabilities actually incurred under the Xork Liabilities at such time as the development activities with respect to Xork are terminated, transferred or assigned by the Issuer Entities or otherwise completed in accordance with the development plan set forth in the Issuer’s License and Development Agreement with Audentes Therapeutics, Inc. (the “Astellas Agreement”), when such termination, transfer, assignment or completion occurs.

The Issuer will calculate the amount of any payment due on the CVRs for each six-month period from January 1 through June 30 and each six-month period from July 1 through December 31 of each year (each such period, a “Distribution Period”), except that the initial Distribution Period will commence on the date of the CVR Agreement and run through June 30, 2024. Payments on the CVRs will be cumulative and will be payable no later than the close of business on each March 15 (for Distribution Periods that end on December 31) and September 15 (for Distribution Periods that end on June 30), commencing on September 15, 2024 (each such date, a

“Distribution Payment Date”), to holders of record of the CVRs as of the close of business on the first day of the month of the applicable Distribution Payment Date. If a Distribution Payment Date is not a business day, payment will be made on the immediately succeeding business day, without the accumulation of additional distributions. If the amount of any per-CVR distribution is less than \$0.02, the Issuer may elect to defer such distribution until the next Distribution Payment Date when the aggregate per-CVR distribution would be \$0.02 or greater.

Under the CVR Agreement, as long as any CVRs are outstanding, the Issuer will not: (i) without the affirmative vote of the Holders of at least 66 and 2/3% of the then-outstanding CVRs modify in a manner adverse to the Holders any provision contained in the CVR Agreement with respect to the termination of the CVR Agreement or the CVRs, or the time for payment and amount of any distribution, or modify in any manner any provision of the CVR Agreement if such modification would reduce the amounts payable in respect of the CVRs or modify any other payment term or payment date, (ii) without the consent of each Holder of each outstanding CVR affected thereby, reduce the number of CVRs, or modify any provision referenced in the preceding clause (i) or this clause (ii), except to increase the percentage of Holders from whom consent is required or to provide that certain other provisions of the CVR Agreement cannot be modified or waived without the consent of the Holder of each CVR affected thereby, (iii) without the consent of the affirmative vote of the Holders of a majority of the then-outstanding CVRs, alter, change, amend, or modify, in each case in any material respect or in any manner adverse to the Holders, the Sobi License, the Astellas Agreement, or the Issuer’s Exclusive License Agreement with Genovis AB (publ.), terminate the Sobi License, or sell, license, assign, transfer, enter into any monetization transaction, or otherwise dispose of or otherwise grant or suffer to exist a mortgage, pledge, lien, encumbrance or other security interest on all or a portion of (A) the patents or patent applications licensed under the Sobi License or (B) the Sobi License or any rights to receive any milestone payments, royalties or other amounts under the Sobi License, and (iv) subject to limited exceptions, issue any additional CVRs, other than pursuant to the Merger Agreement to former holders of Common Stock or to holders of warrants to purchase Common Stock.

Additionally, in the event of certain terminations of the Sobi License at a time when any CVRs are outstanding, the Issuer will, and will cause its applicable related entities to, exercise its rights to obtain a “reversion license” and enforce any of its rights under the terminated Sobi License that survive the termination or expiration thereof.

Under the CVR Agreement, the CVR Trustee has, and Holders of at least 20% of the CVRs then-outstanding may also instruct the CVR Trustee to exercise, certain rights to inspection, audit, and enforcement on behalf of all Holders of the CVRs.

The foregoing description of the CVR Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the CVR Agreement, a copy of which is included as Exhibit E to the Merger Agreement, which is filed as Exhibit 7 to this Schedule 13D and incorporated herein by reference.

**Appointment of Officers and Directors**

In accordance with the Merger Agreement, on November 13, 2023, immediately prior to the effective time of the First Merger (“Effective Time”), each of Peter Traber, Kei Kishimoto and Lloyd Johnston resigned as Chief Medical Officer, Chief Scientific Officer and Chief Operations Officer of this Issuer, respectively. Effective immediately after the Effective Time, the Issuer’s Board of Directors (the “Board”) appointed Metin Kurtoglu as the Issuer’s Chief Operating Officer, Milos Miljkovic as the Issuer’s Chief Medical Officer, and Chris Jewell as the Issuer’s Chief Scientific Officer. Prior to the Effective Time, Drs. Kurtoglu, Miljkovic and Jewell served as the Chief Operating Officer, Chief Scientific Officer and Chief Medical Officer, respectively, of Cartesian.

Also pursuant to the Merger Agreement, on November 13, 2023, effective immediately after the Effective Time, Murat Kalayoglu and Michael Singer were appointed to the Board as Class II and Class I directors, respectively. Prior to the Effective Time, Dr. Kalayoglu was the Chief Executive Officer and a director of Cartesian, and Dr. Singer was the Chief Strategy Officer and Chairman of the Board of Cartesian. Pursuant to the Merger Agreement, a trust associated with Dr. Kalayoglu was granted a right to designate one individual (which is initially Dr. Kalayoglu) to be appointed to the Board for so long as that trust, collectively with its affiliates, directly or indirectly, holds at least 15% of the then-outstanding shares of Common Stock (assuming for such purposes that the conversion of Series A Preferred Stock into Common Stock, without regard to the application of any beneficial ownership limitation on such conversion, has occurred).

**Support Agreements**

In connection with the execution of the Merger Agreement, the Issuer and Cartesian entered into stockholder support agreements (the “Support Agreements”) with certain of the Issuer’s officers, directors and stockholders. Pursuant to the Support Agreements, among other things, each of the stockholder parties thereto has agreed to vote or cause to be voted all of the shares of Common Stock owned by such stockholder in favor of the Meeting Proposals.

The foregoing description of the Support Agreements does not purport to be complete and is qualified in its entirety by reference to the full text of the form of the Support Agreement, a copy of which is included as Exhibit C to the Merger Agreement, which is filed as Exhibit 7 to this Schedule 13D and incorporated herein by reference.

**Lock-up Agreements**

Concurrently and in connection with the execution of the Merger Agreement, certain Cartesian stockholders as of immediately prior to the Closing, including the Dr. Singer, Dr. Asefzadeh and the Trusts, and certain of the directors and officers of the Issuer as of immediately prior to the Closing entered into lock-up agreements with the Issuer and Cartesian, pursuant to which each such stockholder agreed to be subject to a 180-day lockup on the sale or transfer of shares of the Issuer held by each such stockholder at the Closing, including those shares of Common Stock and Series A Preferred Stock (including the shares of Common Stock into which such Series A Preferred Stock is convertible) received by each such stockholder in the Merger (the “Lock-up Agreements”).

The foregoing description of the Lock-up Agreements does not purport to be complete and is qualified in its entirety by reference to the full text of the form of the Lock-up Agreement, a copy of which is included as Exhibit B to the Merger Agreement, which is filed as Exhibit 7 to this Schedule 13D and incorporated herein by reference.

#### **Private Placement and Securities Purchase Agreement**

On November 13, 2023, the Issuer entered into a Securities Purchase Agreement (the “Securities Purchase Agreement”) with Timothy A. Springer, a member of the Issuer’s Board, TAS Partners, LLC, an affiliate of Dr. Springer, and Seven One Eight Three Four Irrevocable Trust, a trust associated with Dr. Murat Kalayoglu, a co-founder and the former chief executive officer of Cartesian, who joined the Company Board effective as of the Closing.

Pursuant to the Securities Purchase Agreement, the Issuer agreed to issue and sell an aggregate of 149,330.115 shares of Series A Preferred Stock (the “PIPE Securities”) for an aggregate purchase price of approximately \$60.25 million, or \$403.46851 per share (collectively, the “Financing”).

In the Financing, each of TAS and Dr. Springer agreed to settle its purchases in three approximately equal tranches of shares of Series A Preferred Stock, each for a purchase price of approximately \$20 million, with the three tranches settling 30, 60, and 90 days, respectively, following the Closing. TAS, Dr. Springer and Seven One Eight Three Four Irrevocable Trust each purchased their respective PIPE Securities at the same offering price per share.

The closing of the Financing occurred on November 15, 2023 (the “Financing Closing Date”).

The foregoing summary of the Securities Purchase Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Securities Purchase Agreement, a copy of which is filed as Exhibit 9 to this Schedule 13D and incorporated herein by reference.

#### **Registration Rights Agreement**

On November 13, 2023, in connection with the Securities Purchase Agreement, the Issuer entered into a Registration Rights Agreement (the “Registration Rights Agreement”) with the holders of Common Stock and Series A Preferred Stock signatory thereto. Pursuant to the Registration Rights Agreement, the Issuer is required to prepare and file a resale registration statement with the Securities and Exchange Commission within 90 calendar days following the Financing Closing Date (the “Filing Deadline”), with respect to the shares of Common Stock underlying the PIPE Securities and the Common Stock and Series A Preferred Stock issued to the signatories to the Registration Rights Agreement in the Merger. The Issuer will use its commercially reasonable efforts to cause such registration statement to be declared effective by the SEC within 45 calendar days of the Filing Deadline (or within 90 calendar days if the SEC reviews the registration statement).

The Issuer has also agreed to, among other things, indemnify the holders of Common Stock and Series A Preferred Stock signatory thereto, their officers, directors, members, employees, partners, managers, stockholders, affiliates, investment advisors and agents under such registration statement from certain liabilities and pay all fees and expenses (excluding any legal fees of the selling holder(s), and any underwriting discounts and selling commissions) incident to the Issuer’s obligations under the Registration Rights Agreement.

The foregoing summary of the Registration Rights Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Registration Rights Agreement, a copy of which is filed as Exhibit 10 to this Schedule 13D and incorporated herein by reference.

One or more of the Reporting Persons may from time to time purchase additional securities of the Issuer, dispose of all or a portion of the securities then held by such Reporting Persons, or cease trading in such securities. Any such additional purchases or sales of securities of the Issuer may be effected by the Reporting Persons in the open market, in privately negotiated transactions or otherwise.

The Reporting Persons intend to continuously review their options with respect to their equity interest in the Issuer but, except as set forth above, do not have any other specific plans that would result in (a) the acquisition of additional securities of the Issuer or the disposition of securities of the Issuer; (b) any extraordinary corporate transactions such as a merger, reorganization or liquidation involving the Issuer or any of its subsidiaries; (c) any sale or transfer of a material amount of the assets of the Issuer or of any of its subsidiaries; (d) any change in the present management or Board of Directors of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the Issuer's Board of Directors; (e) any material change in the present capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer's business or corporate structure; (g) any change in the Issuer's charter or by-laws that may impede the acquisition of control of the Issuer by any person; (h) the Common Stock being delisted from a national securities exchange or ceasing to be authorized to be quoted in an inter-dealer quotation system or a registered national securities association; (i) causing a class of equity securities of the Issuer to become eligible for termination of registration pursuant to Section 12(g)(4) of the Exchange Act; or (j) any action similar to those enumerated above.

#### **Item 5. Interest in Securities of the Issuer**

(a, b) The percentages of beneficial ownership reported in this Item 5, and on each Reporting Person's cover page to this Schedule 13D, are based on a total of 155,204,182 shares of Common Stock issued and outstanding as of November 10, 2023, as reported in the Issuer's quarterly report on Form 10-Q for the fiscal quarter ended September 30, 2023 plus 6,723,662 shares of Common Stock to be issued in the Merger. All of the share numbers reported herein are as of November 22, 2023, unless otherwise indicated. Each Reporting Person's cover page to this Schedule 13D for is incorporated by reference into this Item 5(a, b).

In aggregate, the Reporting Persons have voting and dispositive power over 26,390,000 shares of Common Stock, representing approximately 14.0% of such class of securities, which is comprised of (a) 453,043 shares of Common Stock, and (b) 25,936,957 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. In accordance with Rule 13d-3(d)(1)(i), the Reporting Persons are reporting their ownership of shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock, notwithstanding the fact that the Stockholder Approval Requirement has not yet been obtained.

The beneficial ownership of each Reporting Person is as follows.

- (i) Dr. Singer beneficially owns 26,060,927 shares of Common Stock representing approximately 13.9% of the class, which is comprised of (a) 447,394 shares of Common Stock, and (b) 25,613,533 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. Dr. Singer has the sole power to vote and dispose of (a) 6,414,682 shares of Common Stock held directly by him, (b) 5,773,214 shares of Common Stock that are held for the benefit of Dr. Singer's minor children in custodial accounts established pursuant to the Uniform Transfer to Minors Act for which Dr. Singer serves as custodian, and (c) 11,513,926 shares of Common Stock held directly by Thirsty Brook Trust that Dr. Singer has the right to acquire pursuant to a right of substitution in exchange for assets with an equal value to such shares. Dr. Singer has shared power to vote and dispose of (x) 1,701,601 shares of Common Stock held directly by Singer Asefzadeh Trust for which Dr. Singer is a trustee, (y) 213,822 shares of Common Stock held directly by Bakezilla Trust for which Dr. Singer is a trustee, and (z) 443,682 shares of Common Stock held directly by Dr. Asefzadeh.
- (ii) Thirsty Brook Trust beneficially owns 11,513,926 shares of Common Stock representing approximately 6.6% of the class, which is comprised of (a) 197,663 shares of Common Stock, and (b) 11,316,263 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. Thirsty Brook Trust has the sole power to vote and dispose of the shares of Common Stock beneficially owned by it.
- (iii) Singer Asefzadeh Trust beneficially owns 1,701,601 shares of Common Stock representing approximately 1.0% of the class, which is comprised of (a) 29,212 shares of Common Stock, and (b) 1,672,389 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. Singer Asefzadeh Trust has the sole power to vote and dispose of the shares of Common Stock beneficially owned by it.
- (iv) Bakezilla Trust beneficially owns 213,822 shares of Common Stock representing approximately 0.1% of the class, which is comprised of (a) 3,670 shares of Common Stock, and (b) 210,152 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. Bakezilla Trust has the sole power to vote and dispose of the shares of Common Stock beneficially owned by it.
- (v) Dr. Asefzadeh beneficially owns 13,873,031 shares of Common Stock representing approximately 7.9% of the class, which is comprised of (a) 238,161 shares of Common Stock, and (b) 13,634,870 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. Dr. Asefzadeh has shared power to vote and dispose of (a) 11,513,926 shares of Common Stock held directly by Thirsty Brook Trust for which Dr. Asefzadeh is a trustee, (b) 1,701,601 shares of Common Stock held directly by Singer Asefzadeh Trust for which she serves as trustee, (c) 213,822 shares of Common Stock held directly by Bakezilla Trust for which she serves as trustee, and (d) 443,682 shares of Common Stock held directly by her.

- (vi) Ms. Martin beneficially owns 11,842,999 shares of Common Stock representing approximately 6.8% of the class, which is comprised of (a) 203,312 shares of Common Stock, and (b) 11,639,687 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock. Ms. Martin has the sole power to vote and dispose of 329,073 shares of Common Stock held directly by her. Ms. Martin has shared power to vote and dispose of 11,513,926 shares of Common Stock held directly by Thirsty Brook Trust for which Ms. Martin is a trustee.
- (c) Except for the Merger described in Item 4 above of this Schedule 13D, no Reporting Person effected any transaction in the Common Stock from September 23, 2023 (the date 60 days prior to the filing of this Schedule 13D) to November 22, 2023.
- (d) No person other than the Reporting Persons is known to have the right to receive or the power to direct the receipt of dividends from or the proceeds from the sale of shares of the Common Stock.
- (e) Not applicable.

**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer**

Except as otherwise described in this Schedule 13D, including the Exhibits attached hereto, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the Reporting Persons, or between the Reporting Persons and any third party, with respect to any securities of the Issuer, including, but not limited to, those involving the transfer or voting of securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or losses, or the giving or withholding of proxies.

**Item 7. Material to be Filed as Exhibits**

- Exhibit 1 Joint Filing Agreement by and among Michael Singer, Thirsty Brook 2010 Irrevocable Trust, Singer Asefzadeh Family Holding Trust, Bakezilla 2019 Irrevocable Trust, Baharak Asefzadeh and Barbara P. Martin dated November 22, 2023.
- Exhibit 2 Confirming Statement of Thirsty Brook 2010 Irrevocable Trust dated November 22, 2023.
- Exhibit 3 Confirming Statement of Singer Asefzadeh Family Holding Trust dated November 22, 2023.
- Exhibit 4 Confirming Statement of Bakezilla 2019 Irrevocable Trust dated November 22, 2023.

- Exhibit 5 Confirming Statement of Baharak Asefzadeh dated November 22, 2023.
- Exhibit 6 Confirming Statement of Barbara P. Martin dated November 22, 2023.
- Exhibit 7 Agreement and Plan of Merger, dated November 13, 2023, by and among Selecta Biosciences, Inc. Sakura Merger Sub I, Inc., Sakura Merger Sub II, LLC and Cartesian Therapeutics, Inc. (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by the Issuer with the Securities and Exchange Commission on November 13, 2023).
- Exhibit 8 Certificate of Designation of Series A Non-Voting Convertible Preferred Stock (incorporated by reference to Exhibit 3.4 to the Current Report on Form 8-K filed by the Issuer with the Securities and Exchange Commission on November 13, 2023).
- Exhibit 9 Securities Purchase Agreement, dated November 13, 2023, by and among Selecta Biosciences, Inc. and the Purchasers named therein (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Issuer with the Securities and Exchange Commission on November 13, 2023).
- Exhibit 10 Registration Rights Agreement, dated November 13, 2023, by and among Selecta Biosciences, Inc. and the Purchasers named therein (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed by the Issuer with the Securities and Exchange Commission on November 13, 2023)

*[signature page follows]*

*Signature*

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

DATE: November 22, 2023

Michael Singer

/s/ Michael Singer

THIRSTY BROOK 2010 IRREVOCABLE TRUST

By: /s/ Barbara P. Martin

Barbara P. Martin, Trustee

SINGER ASEFZADEH FAMILY HOLDING TRUST

By: /s/ Baharak Asefzadeh

Baharak Asefzadeh, Trustee

BAKEZILLA 2019 IRREVOCABLE TRUST

By: /s/ Baharak Asefzadeh

Baharak Asefzadeh, Trustee

BAHARAK ASEFZADEH

/s/ Baharak Asefzadeh

BARBARA P. MARTIN

/s/ Barbara P. Martin

Exhibit 1JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree, as of November 22, 2023, that only one statement containing the information required by Schedule 13D, and each amendment thereto, need be filed with respect to the ownership of each of the undersigned of shares of common stock of Cartesian Therapeutics, Inc., a Delaware corporation, and the statement to which this Joint Filing Agreement is attached as Exhibit 1 is filed on behalf of each of the undersigned.

Michael Singer

/s/ Michael Singer

THIRSTY BROOK 2010 IRREVOCABLE TRUST

By: /s/ Barbara P. Martin

Barbara P. Martin, Trustee

SINGER ASEFZADEH FAMILY HOLDING TRUST

By: /s/ Baharak Asefzadeh

Baharak Asefzadeh, Trustee

BAKEZILLA 2019 IRREVOCABLE TRUST

By: /s/ Baharak Asefzadeh

Baharak Asefzadeh, Trustee

BAHARAK ASEFZADEH

/s/ Baharak Asefzadeh

BARBARA P. MARTIN

/s/ Barbara P. Martin

Exhibit 2CONFIRMING STATEMENT

This Statement confirms that the undersigned has authorized and designated Michael Singer to execute and file on the undersigned's behalf all Forms 3, 4 and 5 and Schedules 13D and 13G (including any amendments thereto) that the undersigned may be required to file with the U.S. Securities and Exchange Commission as a result of the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation. The authority of Michael Singer under this Statement shall continue until the undersigned is no longer required to file any of Forms 3, 4 and 5 and Schedules 13D and 13G with regard to the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation, unless earlier revoked in writing. The undersigned acknowledges that Michael Singer is not assuming any of the undersigned's responsibilities to comply with Section 16 or Section 13 of the Securities Exchange Act of 1934, as amended.

Dated: November 22, 2023

THIRSTY BROOK 2010 IRREVOCABLE TRUST

By: /s/ Barbara P. Martin

Barbara P. Martin, Trustee

Exhibit 3CONFIRMING STATEMENT

This Statement confirms that the undersigned has authorized and designated Michael Singer to execute and file on the undersigned's behalf all Forms 3, 4 and 5 and Schedules 13D and 13G (including any amendments thereto) that the undersigned may be required to file with the U.S. Securities and Exchange Commission as a result of the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation. The authority of Michael Singer under this Statement shall continue until the undersigned is no longer required to file any of Forms 3, 4 and 5 and Schedules 13D and 13G with regard to the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation, unless earlier revoked in writing. The undersigned acknowledges that Michael Singer is not assuming any of the undersigned's responsibilities to comply with Section 16 or Section 13 of the Securities Exchange Act of 1934, as amended.

Dated: November 22, 2023

SINGER ASEFZADEH FAMILY HOLDING TRUST

By: /s/ Baharak Asefzadeh  
Baharak Asefzadeh, Trustee

Exhibit 4CONFIRMING STATEMENT

This Statement confirms that the undersigned has authorized and designated Michael Singer to execute and file on the undersigned's behalf all Forms 3, 4 and 5 and Schedules 13D and 13G (including any amendments thereto) that the undersigned may be required to file with the U.S. Securities and Exchange Commission as a result of the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation. The authority of Michael Singer under this Statement shall continue until the undersigned is no longer required to file any of Forms 3, 4 and 5 and Schedules 13D and 13G with regard to the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation, unless earlier revoked in writing. The undersigned acknowledges that Michael Singer is not assuming any of the undersigned's responsibilities to comply with Section 16 or Section 13 of the Securities Exchange Act of 1934, as amended.

Dated: November 22, 2023

BAKEZILLA 2019 IRREVOCABLE TRUST

By: /s/ Baharak Asefzadeh  
Baharak Asefzadeh, Trustee

Exhibit 5CONFIRMING STATEMENT

This Statement confirms that the undersigned has authorized and designated Michael Singer to execute and file on the undersigned's behalf all Forms 3, 4 and 5 and Schedules 13D and 13G (including any amendments thereto) that the undersigned may be required to file with the U.S. Securities and Exchange Commission as a result of the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation. The authority of Michael Singer under this Statement shall continue until the undersigned is no longer required to file any of Forms 3, 4 and 5 and Schedules 13D and 13G with regard to the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation, unless earlier revoked in writing. The undersigned acknowledges that Michael Singer is not assuming any of the undersigned's responsibilities to comply with Section 16 or Section 13 of the Securities Exchange Act of 1934, as amended.

Dated: November 22, 2023

/s/ Baharak Asefzadeh

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Baharak Asefzadeh

Exhibit 6CONFIRMING STATEMENT

This Statement confirms that the undersigned has authorized and designated Michael Singer to execute and file on the undersigned's behalf all Forms 3, 4 and 5 and Schedules 13D and 13G (including any amendments thereto) that the undersigned may be required to file with the U.S. Securities and Exchange Commission as a result of the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation. The authority of Michael Singer under this Statement shall continue until the undersigned is no longer required to file any of Forms 3, 4 and 5 and Schedules 13D and 13G with regard to the undersigned's ownership of or transactions in securities of Cartesian Therapeutics, Inc., a Delaware corporation, unless earlier revoked in writing. The undersigned acknowledges that Michael Singer is not assuming any of the undersigned's responsibilities to comply with Section 16 or Section 13 of the Securities Exchange Act of 1934, as amended.

Dated: November 22, 2023

/s/ Barbara P. Martin

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Barbara P. Martin