

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

Form S-3

REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

ARCADIA BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware

81-0571538

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

5950 Sherry Lane, Suite 215
Dallas, TX 75225
(Address of Principal Executive Offices) (Zip Code)

Stanley E. Jacot, Jr.
President and Chief Executive Officer
5950 Sherry Lane, Suite 215
Dallas, TX 75225
(214) 974-8921

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Stanley E. Jacot, Jr.
Chief Executive Officer
5950 Sherry Lane, Suite 215
Dallas, TX 75225

Michael De Angelis, Esq.
Jeffrey Pietsch, Esq.
Weintraub Tobin Chediak Coleman Grodin Law Corporation
400 Capitol Mall, Suite 1100
Sacramento, CA 95814

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 Securities Exchange Act of 1934.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Small reporting company

Emerging growth company

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

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

Subject To Completion, Dated April 3, 2023

Prospectus

ARCADIA BIOSCIENCES, INC.

**2,032,319 Shares of
Common Stock**

This prospectus covers the sale or other disposition from time to time of up to 2,032,319 shares of our common stock, \$0.001 par value per share, by the selling stockholders identified in this prospectus, including their transferees, pledgees, donees or successors. The selling stockholders may, from time to time, sell, transfer, or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market, or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

We are not offering any shares of our common stock for sale under this prospectus. We will not receive any of the proceeds from the sale or other disposition of the shares of our common stock by the selling stockholders.

Our common stock is listed on the NASDAQ Capital Market under the symbol "RKDA." On March 31, 2023, the last reported sale price of our common stock was \$7.47 per share.

INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES DESCRIBED UNDER THE HEADING "RISK FACTORS" CONTAINED ON PAGE 2 HEREIN AND IN OUR ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2022, AS WELL AS OUR SUBSEQUENTLY FILED PERIODIC AND CURRENT REPORTS, WHICH WE FILE WITH THE SECURITIES AND EXCHANGE COMMISSION AND ARE INCORPORATED BY REFERENCE INTO THIS PROSPECTUS. YOU SHOULD READ THE ENTIRE PROSPECTUS CAREFULLY BEFORE YOU MAKE YOUR INVESTMENT DECISION.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is _____.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC using a “shelf” registration or continuous offering process.

You should read this prospectus and the information and documents incorporated by reference carefully. Such documents contain important information you should consider when making your investment decision. See “Where You Can Find Additional Information” and “Incorporation of Information by Reference” in this prospectus.

You should rely only on the information provided in this prospectus or documents incorporated by reference into this prospectus. We have not authorized anyone to provide you with different information. This prospectus covers offers and sales of our common stock only in jurisdictions in which such offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front cover of this prospectus, or that the information contained in any document incorporated by reference is accurate as of any date other than the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

In this prospectus, we refer to Arcadia Biosciences, Inc. as “we,” “us,” “our,” the “Company” or “RKDA.” You should rely only on the information we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We have not authorized anyone to provide you with different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus.

ABOUT ARCADIA BIOSCIENCES, INC.

We are a producer and marketer of innovative, plant-based food and beverage products. Our history as a leader in science-based approaches to developing high value crop improvements, primarily in wheat, designed to enhance farm economics by improving the performance of crops in the field, as well as their value as food ingredients, has laid the foundation for our path forward. We have used non-genetically modified advanced breeding techniques to develop these proprietary innovations which we are now commercializing through the sales of seed and grain, food ingredients and products, trait licensing and royalty agreements. The acquisition of the assets of Live Zola, LLC (“Zola”) added coconut water to our portfolio of products.

Our commercial strategy is to satisfy consumer nutrition demands with the superior functional benefits our crops deliver directly from the farm, enabling us to share premium economics throughout the ag-food supply chain and to build a world-class estate of high value traits and varieties. The acquisition of the Zola brand allows us to broaden our reach within beverage sector.

We were founded in 2002, and our principal executive offices are located at 5950 Sherry Lane, Suite 215, Dallas, TX 75225. Our telephone number is (214) 974-8921. Our website is located at www.arcadiabio.com. Information contained on, or that can be accessed through, our website is not part of this prospectus.

RISK FACTORS

An investment in our common stock involves risks. Prior to deciding to invest in our common stock, you should consider carefully the risks together with all of the other information contained or incorporated by reference in this prospectus, including any risks described in the section entitled “Risk Factors” contained in any supplements to this prospectus and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 and in our subsequent filings with the SEC. Each of the referenced risks and uncertainties could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities. Additional risks not known to us or that we believe are immaterial may also adversely affect our business, operating results and financial condition and the value of an investment in our securities.

DESCRIPTION OF PRIVATE PLACEMENT

On March 2, 2023, we entered into a securities purchase agreement with certain institutional and accredited investors (the “Purchasers”) for the sale and issuance in a private placement (the “Private Placement”) of (i) 165,500 shares of our common stock (the “Shares”) at a purchase price per share of \$9.00, (ii) pre-funded warrants (the “Warrants”) to purchase up to 500,834 shares of our common stock (the “Warrant Shares”); (iii) Series A preferred investment options (the “Series A Investment Options”) to purchase up to a total of 666,334 shares of our common stock (“Series A Option Shares”) and (iv) Series B preferred investment options (the “Series B Investment Options”, and together with the Warrant and the Series A Investment Options, the “Convertible Securities”) to purchase up to a total of 666,334 shares of our common stock (“Series B Option Shares”, and together with the Warrant Shares and the Series A Option Shares, the “Exercised Shares”). The Warrants sold in the Private Placement have a purchase price of \$8.9999 per share of common stock underlying each such warrant (equal to the purchase price per share of common stock, minus the exercise price of \$0.0001). Each Warrant sold in the Private Placement is exercisable for one share of common stock at an exercise price of \$0.0001 per share, is immediately exercisable, and will not expire until fully exercised. The Series A Investment Options will be exercisable immediately upon issuance and will expire five years following the issuance date and have an exercise price of \$9.00 per share. The Series B Investment Options will be exercisable immediately upon issuance and will expire eighteen months following the issuance date and have an exercise price of \$9.00 per share. The closing of the sale of the Shares and the Convertible Securities occurred on March 6, 2023.

A Purchaser (together with its affiliates) may not exercise any portion of the Convertible Securities to the extent that the Purchaser would own more than 4.99% (or 9.99% at the election of the Purchaser) of the outstanding common stock immediately after exercise, which percentage may be changed at the Purchaser’s election to a lower percentage at any time or to a higher percentage not to exceed 9.99% upon 61 days’ notice to the Company.

Also on March 2, 2023 and in connection with the Private Placement, the Company entered into a registration rights agreement (the “Registration Rights Agreement”) with the Purchasers. Pursuant to the Registration Rights Agreement, the Company agreed to prepare and file a registration statement (the “Resale Registration Statement”) with the United States Securities and Exchange Commission (the “SEC”) by April 3, 2023 for purposes of registering the resale of the Shares and Exercised Shares. The Company also agreed to use its best efforts to cause this registration statement to be declared effective by the SEC by May 1, 2023 (May 31, 2023 in the event of a “full review” of the registration statement by the SEC). If the Company fails to meet the specified filing deadlines or keep the Resale Registration Statement effective, subject to certain permitted exceptions, the Company will be required to pay liquidated damages to the Purchasers.

The Company entered into an engagement letter with H.C. Wainwright & Co., LLC (“Wainwright”) dated March 2, 2023 (the “Engagement Letter”), pursuant to which Wainwright agreed to serve as the Company’s exclusive placement agent for certain equity financing transactions, including the Private Placement. The Company agreed to pay Wainwright an aggregate fee equal to 6.0% of the gross proceeds received by the Company from the Private Placement. The Company also agreed to grant to Wainwright, or its designees, unregistered preferred investment options to purchase up to 5.0%, or 33,317 shares, of the aggregate number of shares of common stock and pre-funded warrants sold to the Purchaser (“Placement Agent Investment Options”) at an exercise price per share of \$11.25 and with a term of five years.

The Shares, the Exercised Shares and the shares underlying the Placement Agent Investment Options are being registered for resale hereunder.

DESCRIPTION OF CAPITAL STOCK

The description of our common stock and our preferred stock is incorporated by reference to Exhibit 4.7 of our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the SEC on March 30, 2023.

SELLING STOCKHOLDERS

The selling stockholders named in the table below may from time to time offer and sell pursuant to this prospectus and any applicable prospectus supplements up to 2,032,319 shares of our common stock.

Relationships with the Selling Stockholders

Each of Michael Vasinkevich, Noam Rubinstein, Craig Schwabe and Charles Worthman are affiliated with Wainwright. Wainwright served as our placement agent in several offerings of our securities within the past three years for which it received cash and warrant compensation. In connection with all of the offerings Wainwright served as a placement agent, each of Michael Vasinkevich, Noam Rubinstein, Craig Schwabe and Charles Worthman, as a designee of Wainwright, has received warrants or options to purchase shares of our common stock.

Except with respect to the foregoing, none of the selling stockholders has, or within the past three years has had, any position, office or other material relationship with us.

Information About Selling Stockholder Offering

The shares of common stock being offered by the selling stockholders are those previously issued to the selling stockholders, and those issuable to the selling stockholders, upon the exercise of the Warrants, the Investment Options or the Placement Agent Investment Option. For additional information regarding the issuances of these securities, see “—Description of Private Placement” above. We are registering the Shares and the Exercised Shares in order to permit the selling stockholders to offer these shares for resale from time to time.

The table below lists the selling stockholders and other information regarding the ownership of the shares of common stock by each of the selling stockholders. The second column lists the number of shares of common stock owned by each selling stockholder, based on its ownership of the shares of common stock and securities convertible into shares of common stock, as of March 31, 2023, assuming exercise of the securities convertible into shares of common stock held by the selling stockholders on that date, without regard to any limitations on exercises.

The third column lists the shares of Common Stock being offered by this prospectus by the selling stockholders.

The table below assumes that the outstanding Convertible Securities and the Placement Agent Investment Option were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination, without regard to any limitations on the exercise thereof. The fourth column assumes the sale of all of the shares of common stock offered by the selling stockholders pursuant to this prospectus. The fifth column lists the percentages of shares of common stock owned by the selling stockholders after this offering, taking account of any limitations on exercise set forth in the applicable Convertible Securities.

Under the terms of the Convertible Securities, a selling stockholder may not exercise the Convertible Securities to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 4.99% or 9.99%, as applicable, of our then outstanding common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon the exercise of the Convertible Securities, which have not been exercised. The number of shares in the second column does not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.” The total number of outstanding shares of common stock as of March 31, 2023 was 857,572.

Name of Selling Stockholder	Number of shares of Common Stock Owned Prior to Offering	Shares to be Sold in this Offering	Shares Beneficially Owned After Offering	
			Number	Percentage
Sabby Volatility Warrant Master Fund, Ltd. (1)	803,926	750,000	43,984	4.99%
Armistice Capital Master Fund Ltd., (2)	1,144,322	1,000,002	45,040	4.99%
Altium Growth Fund, LP (3)	249,000	249,000	-	-
Michael Vasinkevich (4)	37,633	21,365	16,268	1.86%
Noam Rubinstein (5)	19,060	10,495	8,565	*
Craig Schwabe (6)	1,852	1,124	7,851	*
Charles Worthman (7)	605	333	4,576	*

* Represents beneficial ownership of less than one percent.

- (1) Shares beneficially owned before the offering includes 783,811 shares of common stock issuable upon exercise of the Convertible Securities, including 750,000 shares underlying the Convertible Securities that are being offered pursuant to this prospectus. Sabby Management, LLC is the investment manager of Sabby Volatility Warrant Master Fund, Ltd. and shares voting and investment power with respect to these shares in this capacity. As manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of Sabby Volatility Warrant Master Fund, Ltd. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein. Sabby Volatility Warrant Master Fund, Ltd. is not a registered broker-dealer or an affiliate of a registered broker-dealer.
- (2) The shares beneficially owned before the offering includes 1,061,822 shares of common stock issuable upon exercise of warrants, including 917,502 shares underlying the Convertible Securities that are being offered pursuant to this prospectus. These securities are directly held by (i) Armistice Capital Master Fund, Ltd. (the "Master Fund"), a Cayman Islands exempted company, and may be deemed to be indirectly beneficially owned by Armistice Capital, LLC ("Armistice"), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice. Armistice and Steven Boyd disclaim beneficial ownership of the reported securities except to the extent of their respective pecuniary interest therein. Each Convertible Security is subject to a 4.99% or 9.99% beneficial ownership limitation that precludes the Master Fund from exercising any portion of its Convertible Security to the extent that, following such exercise, the Master Fund's beneficial ownership of our then outstanding Common Stock would exceed 4.99% or 9.99%. The selling stockholder's address is c/o Armistice Capital, LLC 510 Madison Avenue, 7th Floor, New York, NY 10022.
- (3) Includes 166,000 shares underlying the Convertible Securities. Jacob Gottlieb has sole voting and dispositive power over the securities held for the account of this selling stockholder. The selling stockholder's address is 152 W. 57th Street, Floor 20, New York, NY 10019.
- (4) Shares beneficially owned before the offering includes 37,633 shares of common stock issuable upon exercise of warrants and options, including 21,365 shares underlying the Placement Agent Investment Option that are being offered pursuant to this prospectus.
- (5) Shares beneficially owned before the offering includes 19,060 shares of common stock issuable upon exercise of warrants and options, including 10,495 shares underlying the Placement Agent Investment Option that are being offered pursuant to this prospectus.
- (6) Shares beneficially owned before the offering includes 1,852 shares of common stock issuable upon exercise of warrants and options, including 1,124 shares underlying the Placement Agent Investment Option that are being offered pursuant to this prospectus.
- (7) Shares beneficially owned before the offering includes 605 shares of common stock issuable upon exercise of warrants and options, including 333 shares underlying the Placement Agent Investment Option that are being offered pursuant to this prospectus.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements in this prospectus and in any prospectus supplement we may file constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements relate to future events concerning our business and to our future revenues, operating results and financial condition. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “forecast,” “predict,” “propose,” “potential” or “continue,” or the negative of those terms or other comparable terminology.

Any forward-looking statements contained in this prospectus or any prospectus supplement are only estimates or predictions of future events based on information currently available to our management and management’s current beliefs about the potential outcome of future events. Whether these future events will occur as management anticipates, whether we will achieve our business objectives, and whether our revenues, operating results or financial condition will improve in future periods are subject to numerous risks. There are a number of important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements. These important factors include those that we discuss under the heading “Risk Factors” and in other sections of our Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission (SEC), as well as in our other reports filed from time to time with the SEC that are incorporated by reference into this prospectus. You should read these factors and the other cautionary statements made in this prospectus and in the documents we incorporate by reference into this prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus or the documents we incorporate by reference into this prospectus. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are required to file annual, quarterly and special reports, proxy statements and other information with the SEC. Our filings with the SEC are also available to the public at the SEC’s Internet web site at <http://www.sec.gov>.

We have filed a registration statement, of which this prospectus is a part, covering the securities offered hereby. As allowed by SEC rules, this prospectus does not include all of the information contained in the registration statement and the included exhibits, financial statements and schedules. You are referred to the registration statement, the included exhibits, financial statements and schedules for further information. This prospectus is qualified in its entirety by such other information.

We are subject to the information and periodic reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and, in accordance therewith, file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available to the public over the Internet at the website of the SEC referred to above. We maintain a website at <http://www.arcadiabio.com>. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common stock.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and certain information that we will later file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below, as well as any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of the initial registration statement and prior to the effectiveness of this registration statement, and any filings made after the date of this prospectus until we sell all of the securities under this prospectus, except that we do not incorporate any document or portion of a document that was furnished and deemed by the rules of the SEC not to have been filed:

- Our annual report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 30, 2023;
- Our current report on Form 8-K/A filed with the SEC on January 5, 2023 and our current reports on Form 8-K filed with the SEC on February 21, 2023, February 28, 2023, March 3, 2023 and March 30, 2023; and
- The description of our common stock which is filed as Exhibit 4.7 to our Annual Report on Form 10-K for the year ended December 31, 2022, including all amendments or reports filed for the purpose of updating such description.

Additionally, all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after (i) the date of the initial registration statement and prior to effectiveness of the registration statement; and (ii) the date of this prospectus and prior to the termination or completion of this offering, shall be deemed to be incorporated by reference in this prospectus and to be part hereof from the date of filing of such reports and other documents. Any information that we subsequently file with the SEC that is incorporated by reference as described above will automatically update and supersede any previous information that is part of this prospectus. Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Items 2.02, 7.02 or 9.01 of Form 8-K.

We hereby undertake to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of any such person, a copy of any and all of the information that has been or may be incorporated by reference in this prospectus, other than exhibits to such documents. Requests for such copies should be directed to our Corporate Secretary at 5950 Sherry Lane, Suite 215, Dallas, TX 75225, Telephone (214) 974-8921.

Listing

Our common stock is listed on the NASDAQ Capital Market under the symbol "RKDA".

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

USE OF PROCEEDS

We are registering shares of our common stock pursuant to registration rights granted to the selling stockholders. We will not receive any of the proceeds from any sale or other disposition of the common stock covered by this prospectus. All proceeds from the sale of the common stock will be paid directly to the selling stockholders. We will receive proceeds upon the cash exercise of the Convertible Securities and the Placement Agent Investment Option for which the underlying shares of common stock are being registered hereunder. Assuming full cash exercise of the Convertible Securities and the Placement Agent Investment Option, we would receive proceeds of approximately \$12.3 million. We currently intend to use the cash proceeds from any exercise of the Convertible Securities and the Placement Agent Investment Option for working capital and general corporate purposes.

PLAN OF DISTRIBUTION

Each Selling Stockholder (the "Selling Stockholders") of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A Selling Stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act of 1933, as amended (the "Securities Act"), if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2121.

In connection with the sale of the securities or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The Selling Stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. The Company has agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

Weintraub Tobin Chediak Coleman Grodin Law Corporation will pass upon legal matters in connection with the validity of the common stock offered hereby.

EXPERTS

The financial statements of Arcadia Biosciences, Inc. as of December 31, 2022 and 2021, and for each of the two years in the period ended December 31, 2022, incorporated by reference in this Prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

Except as noted below, no expert or counsel named in this prospectus as having prepared or certified any part of this prospectus or having given an opinion upon the validity of the securities being registered or upon other legal matters in connection with the registration or offering of the securities was employed on a contingency basis, or had, or is to receive, in connection with the offering, a substantial interest, direct or indirect, in the registrant or any of its parents or subsidiaries. Nor was any such person connected with the registrant or any of its parents or subsidiaries as a promoter, managing or principal underwriter, voting trustee, director, officer, or employee.

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The estimated expenses payable by the registrant in connection with the issuance and distribution of the securities being registered are as follows:

SEC Registration Fee	\$ 1,677
Legal Fees and Expenses*	\$20,000
Accounting Fees and Expenses*	\$15,000
TOTAL:	\$36,677

* Estimated solely for the purposes of this Item. Actual expenses may vary.

Item 15. Indemnification of Directors and Officers

The Registrant's amended and restated certificate of incorporation contains provisions that eliminate, to the maximum extent permitted by the General Corporation Law of the State of Delaware, the personal liability of the Registrant's directors and executive officers for monetary damages for breach of their fiduciary duties as directors or officers. The Registrant's amended and restated certificate of incorporation and bylaws provides that the Registrant must indemnify its directors and executive officers and may indemnify its employees and other agents to the fullest extent permitted by the General Corporation Law of the State of Delaware.

Sections 145 and 102(b)(7) of the General Corporation Law of the State of Delaware provide that a corporation may indemnify any person made a party to an action by reason of the fact that he or she was a director, executive officer, employee or agent of the corporation or is or was serving at the request of a corporation against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of an action by or in right of the corporation, no indemnification may generally be made in respect of any claim as to which such person is adjudged to be liable to the corporation.

The Registrant has entered into indemnification agreements with its directors and executive officers, in addition to the indemnification provided for in its amended and restated certificate of incorporation and bylaws, and intends to enter into indemnification agreements with any new directors and executive officers in the future.

The Registrant has purchased and intends to maintain insurance on behalf of each and any person who is or was a director or officer of the Registrant against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

Item 16. Exhibits

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	File No.	Exhibit	
3.1	Amended and Restated Certificate of Incorporation of Registrant.	8-K	001-37383	3.1	5/26/2015
3.2	Amendment to the Amended and Restated Certificate of Incorporation of Registrant.	8-K	001-37383	3.1	2/28/2023
3.3	Certificate of Designation of Series A Preferred Stock.	8-K	001-37383	3.1	12/8/2022
3.4	Amended and Restated Bylaws of Registrant.	8-K	001-37383	3.2	5/26/2015
3.5	Amendment to the Amended and Restated Bylaws of Registrant.	8-K	001-37383	3.2	12/8/2022
4.1	Form of Registrant's common stock certificate.	S-3	333-224061	4.1	3/30/2018
4.2	Form of Pre-Funded Warrant.	8-K	001-37383	4.1	3/3/2023

4.3	Form of Series A Preferred Investment Option.	8-K	001-37383	4.2	3/3/2023	
4.4	Form of Series B Preferred Investment Option.	8-K	001-37383	4.3	3/3/2023	
4.5	Form of Placement Agent Preferred Investment Option	8-K	001-37383	4.4	3/3/2023	
4.6	Form of Investment Option Amendment Agreement.	8-K	001-37383	10.3	3/3/2023	
5.1	Opinion of Weintraub Tobin Chediak Coleman Grodin Law Corporation.					X
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.					X
23.2	Consent of Weintraub Tobin Chediak Coleman Grodin Law Corporation (included in Exhibit 5.1).					X
24.1	Power of attorney (included in the signature page to this filing).					X
107	Filing Fee Table.					X

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933.

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement.

Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) above do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Dallas, State of Texas, on this 3rd day of April, 2023.

ARCADIA BIOSCIENCES, INC.

By:	<u>/s/ THOMAS J. SCHAEFER</u>
Name:	Thomas J. Schaefer
Title:	Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints Thomas J. Schaefer, his or her true and lawful attorney-in-fact and agent, with the power of substitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that such attorney-in-fact and agent, or any substitute or substitutes for him, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ STANLEY E. JACOT, JR.</u> Stanley E. Jacot, Jr.	President and Chief Executive Officer and Director (principal executive officer)	April 3, 2023
<u>/s/ THOMAS J. SCHAEFER</u> Thomas J. Schaefer	Chief Financial Officer (principal financial and accounting officer)	April 3, 2023
<u>/s/ KEVIN COMCOWICH</u> Kevin Comcowich	Director	April 3, 2023
<u>/s/ ALBERT D. BOLLES</u> Albert D. Bolles	Director	April 3, 2023
<u>/s/ LILIAN SHACKELFORD MURRAY</u> Lilian Shackelford Murray	Director	April 3, 2023
<u>/s/ GREGORY D. WALLER</u> Gregory D. Waller	Director	April 3, 2023
<u>/s/ AMY YODER</u> Amy Yoder	Director	April 3, 2023
<u>/s/ DEBORAH CAROSELLA</u> Deborah Carosella	Director	April 3, 2023

April 3, 2023

Arcadia Biosciences, Inc.
5950 Sherry Lane, Suite 215
Dallas, TX 75225

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing with the Securities and Exchange Commission (the "**Commission**"), by Arcadia Biosciences, Inc., a Delaware corporation (the "**Company**"), of a Registration Statement on Form S-3 (the "**Registration Statement**"), including a related prospectus to be filed with the Commission pursuant to Rule 424(b) of Regulation C (the "**Prospectus**") under the Securities Act of 1933, as amended, relating to the resale from time to time by the selling stockholders named in the Registration Statement (the "**Selling Stockholders**") of up to 2,032,319 shares of the Company's common stock, \$0.001 par value per share (the "**Shares**"), in the manner set forth in the Registration Statement. The Shares consist of up to 165,500 shares ("**Outstanding Shares**") of common stock and up to 1,866,819 shares of common stock ("**Exercised Shares**") issuable upon the exercise of outstanding warrants and options of the Company (the "**Convertible Securities**"), as described in the Registration Statement.

In connection with this opinion, we have examined and relied upon the Registration Statement and related Prospectus; the Company's certificate of incorporation, as amended and restated to date; the Company's Bylaws as in effect on the date hereof; the Convertible Securities; and certain resolutions and minutes of meetings of the Board of Directors of the Company relating to the issuance of the Convertible Securities, the Shares and the Registration Statement. We have considered such matters of law and of fact, including the examination of originals or copies, certified or otherwise identified to our satisfaction, of such records, documents, certificates, and other instruments of the Company, certificates of officers, directors and representatives of the Company, certificates of public officials, and such other documents as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. As to matters of fact material to our opinions, we have relied, without independent verification, on certificates

and other inquiries of officers of the Company. We have assumed without investigation the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof, the accuracy and completeness of all records made available to us by the Company, and that all offers and sales of the Shares will be made in compliance with the securities laws of the states having jurisdiction thereof. We have also assumed that (i) the Registration Statement and any amendments thereto (including post-effective amendments) have become effective and will continue to be effective at the time of the resale of any Shares, (ii) if necessary, a prospectus supplement will have been prepared and filed with the Commission describing any Shares offered thereby or any Selling Stockholders, (iii) all Shares will be sold in the manner stated in the Registration Statement and, if necessary, the applicable prospectus supplement, and (iv) at the time of the offering, there will not have occurred any changes in the law affecting the authorization, execution, delivery, validity or enforceability of the Shares.

The opinions set forth in this letter are limited solely to the federal laws of the United States of America and the State of California, and we express no opinion as to the laws of any other jurisdiction.

Based upon the foregoing, and in reliance thereon, we are of the opinion that the Outstanding Shares are validly issued, fully paid and non-assessable and that the Exercised Shares, when issued in accordance with the terms of the Convertible Securities, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement. In giving our consent, we do not admit that we are "experts" within the meaning of Section 11 of the Securities Act or within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Weintraub Tobin Chediak Coleman Grodin Law Corporation
WEINTRAUB TOBIN CHEDIAK COLEMAN GRODIN LAW CORPORATION

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 30, 2023 relating to the financial statements of Arcadia Biosciences, Inc., appearing in the Annual Report on Form 10-K of Arcadia Biosciences, Inc. for the year ended December 31, 2022. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte & Touche LLP

Tempe, Arizona

April 3, 2023

Calculation of Filing Fee Tables

Form S-3
(Form Type)Arcadia Biosciences, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation Or Carry Forward Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Share (2)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Stock, \$0.001 par value per share (3)	457(c)	2,032,319	\$7.49	\$15,222,069.31	\$0.0001102	\$1,677.48
	Total Offering Amounts					\$15,222,069.31		\$1,677.48
	Total Fees Previously Paid							—
	Total Fee Offsets							—
	Net Fees Due							\$1,677.48

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement shall also cover any additional shares of the Registrant’s common stock that may be issued in connection with a stock dividend, stock split, recapitalization or similar transactions.
- (2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457 under the Securities Act, based on the average of the high and low prices of the Common Stock on the Nasdaq Capital market on March 31, 2023.
- (3) Consists of 2,032,319 shares of Common Stock that may be sold by the selling stockholders named herein, including 1,866,819 shares that are issuable upon exercise of warrants and preferred investment options.