UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 001-37383

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.)**
202 Cousteau Place, Suite 105 Davis, CA	**95618**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's telephone number, including area code: (530) 756-7077

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a small reporting company)	Smaller 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 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 4, 2018, the registrant had 2,979,139 shares of common stock, $0.001 par value per share, outstanding.

Arcadia Biosciences, Inc.

FORM 10-Q FOR THE QUARTER ENDED March 31, 2018

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ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Arcadia Biosciences, Inc.

Condensed Consolidated Balance Sheets

(Unaudited)

(In thousands, except share data)

	March 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 20,418	$ 9,125
Short-term investments	—	3,898
Accounts receivable	52	1,231
Unbilled revenue	49	4
Inventories — current	309	229
Prepaid expenses and other current assets	417	560
Total current assets	21,245	15,047
Property and equipment, net	280	299
Inventories — noncurrent	1,067	1,168
Other noncurrent assets	7	56
Total assets	$ 22,599	$ 16,570
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 2,457	$ 2,496
Amounts due to related parties	4	29
Unearned revenue — current	571	1,000
Total current liabilities	3,032	3,525
Unearned revenue — noncurrent	—	2,038
Common stock warrant liability	9,900	—
Common stock adjustment feature liability	6,000	—
Other noncurrent liabilities	3,000	3,000
Total liabilities	21,932	8,563
Stockholders' equity:		
Common stock, $0.001 par value—150,000,000 shares authorized as of March 31, 2018 and December 31, 2017; 2,481,137 and 2,134,154 shares issued and outstanding as of March 31, 2018 and December 31, 2017	43	42
Additional paid-in capital	176,125	175,223
Accumulated deficit	(175,501)	(167,257)
Accumulated other comprehensive loss	—	(1)
Total stockholders' equity	667	8,007
Total liabilities and stockholders' equity	$ 22,599	$ 16,570

See accompanying notes to the unaudited condensed consolidated financial statements.

Arcadia Biosciences, Inc.

Condensed Consolidated Statements of Operations and Comprehensive Loss

(Unaudited)

(In thousands, except share and per share data)

	Three Months Ended March 31,	
	2018	**2017**
Revenues:		
Product	$ 61	$ 205
License	—	106
Contract research and government grants	153	707
Total revenues	214	1,018
Operating expenses:		
Cost of product revenues	36	106
Research and development	1,396	1,823
Selling, general and administrative	2,621	3,052
Total operating expenses	4,053	4,981
Loss from operations	(3,839)	(3,963)
Interest expense	—	(339)
Other income, net	38	96
Initial loss on common stock warrant and common stock adjustment feature liabilities	(4,000)	—
Change in fair value of common stock warrant and common stock adjustment feature liabilities	(1,900)	—
Offering costs related to securities purchase agreement	(904)	—
Net loss before income taxes	(10,605)	(4,206)
Income tax provision	(10)	(10)
Net loss	$ (10,615)	$ (4,216)
Net loss per share attributable to common stockholders:		
Basic and diluted	$ (4.86)	$ (1.90)
Weighted-average number of shares used in per share calculations:		
Basic and diluted	2,186,196	2,218,010
Other comprehensive income (loss), net of tax		
Unrealized gains (loss) on available-for-sale securities	1	(1)
Other comprehensive income (loss)	1	(1)
Comprehensive loss attributable to common stockholders	$ (10,614)	$ (4,217)

See accompanying notes to the unaudited condensed consolidated financial statements.

Arcadia Biosciences, Inc.

Condensed Consolidated Statements of Stockholders' Equity

(Unaudited)

(In thousands, except share data)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance at January 1, 2017	2,224,384	$ 44	$ 173,723	$ (151,550)	$ (19)	$ 22,198
Issuance of shares related to employee stock purchase plan	1,964	—	24	—	—	24
Stock-based compensation	—	—	1,474	—	—	1,474
Other comprehensive income	—	—	—	—	18	18
Exchange of membership interest in unconsolidated entity for common stock	(92,194)	(2)	2	—	—	—
Net loss	—	—	—	(15,707)	—	(15,707)
Balance at December 31, 2017	2,134,153	$ 42	$ 175,223	$ (167,257)	$ (1)	$ 8,007
Impact of adoption of Topic 606 (Note 5)	—	—	—	2,371	—	2,371
Issuance of shares related to employee stock option exercises	44,354	—	963	—	—	963
Issuance of shares related to employee stock purchase plan	567	—	3	—	—	3
Issuance of shares related to securities purchase agreement	300,752	1	—	—	—	1
Offering costs related to securities purchase agreement	—	—	(888)	—	—	(888)
Issuance of placement agent warrants	—	—	526	—	—	526
Stock-based compensation	—	—	298	—	—	298
Issuance of shares related to reverse stock split	1,311	—	—	—	—	—
Other comprehensive income	—	—	—	—	1	1
Net loss	—	—	—	(10,615)	—	(10,615)
Balance at March 31, 2018	2,481,137	$ 43	$ 176,125	$ (175,501)	$ —	$ 667

See accompanying notes to the unaudited condensed consolidated financial statements.

Arcadia Biosciences, Inc.

Condensed Consolidated Statements of Cash Flows

(Unaudited)

(In thousands)

	Three Months Ended March 31,	
	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (10,615)	$ (4,216)
Adjustments to reconcile net loss to cash used in operating activities:		
Initial loss on common stock warrant and common stock adjustment feature liabilities	4,000	—
Change in fair value of common stock warrant and common stock adjustment feature liabilities	1,900	—
Offering costs related to securities purchase agreement	904	—
Depreciation and amortization	52	81
Gain on disposal of equipment	(3)	(3)
Net amortization of investment premium	(2)	(36)
Stock-based compensation	298	371
Accretion of debt discount	—	49
Changes in operating assets and liabilities:		
Accounts receivable	1,179	65
Unbilled revenue	(45)	72
Inventories	21	62
Prepaid expenses and other current assets	137	(404)
Other noncurrent assets	—	(423)
Accounts payable and accrued expenses	(322)	(176)
Amounts due to related parties	(25)	(10)
Unearned revenue	(96)	38
Net cash used in operating activities	(2,617)	(4,530)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from sale of property and equipment	9	4
Purchases of property and equipment	(33)	(57)
Purchases of investments	—	(4,582)
Proceeds from sales and maturities of investments	3,900	14,695
Net cash provided by investing activities	3,876	10,060
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock and warrants from securities purchase agreement	10,000	—
Payments of offering costs related to securities purchase agreement	(932)	—
Proceeds from exercise of stock options and ESPP purchases	966	16
Net cash provided by financing activities	10,034	16
Net increase in cash and cash equivalents	11,293	5,546
Cash and cash equivalents — beginning of period	9,125	2,013
Cash and cash equivalents — end of period	$ 20,418	$ 7,559
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid for interest	$ —	$ 288
Cash paid for income taxes	$ 24	$ —
NONCASH INVESTING AND FINANCING ACTIVITIES:		
Proceeds from sale of fixed assets included in prepaid expenses and other current assets at end of period	$ 1	$ —
Offering costs in accounts payable and accrued expenses at end of period	$ 334	$ —
Common stock warrants issued to placement agent and included in offering costs	$ 526	$ —
Purchases of property and equipment included in accounts payable and accrued expenses	$ —	$ 2
Exchange of membership interest in unconsolidated entity for common stock	$ —	$ 2

See accompanying notes to the unaudited condensed consolidated financial statements.

1. Description of Business and Basis of Presentation

Organization

Arcadia Biosciences, Inc. (the "Company") was incorporated in Arizona in 2002 and maintains its headquarters in Davis, California, with additional facilities in Phoenix, Arizona, and American Falls, Idaho. The Company was reincorporated in Delaware in March 2015.

We are a consumer-driven, agricultural food ingredient company. We aim to create value across the agricultural production and supply chain beginning with enhanced crop productivity for farmers and ultimately to deliver accelerated innovation in nutritional quality consumer foods. We use state of the art gene-editing technology and advanced breeding techniques to naturally enhance the nutritional quality of grains and oilseeds to address the rapidly evolving trends in consumer health and nutrition. In addition, we have developed a broad pipeline of high value crop productivity traits designed to enhance farm economics.

In February 2012, the Company formed Verdeca LLC ("Verdeca," see Note 6), which is jointly owned with Bioceres, Inc. ("Bioceres"), a U.S. wholly owned subsidiary of Bioceres, S.A., an Argentine corporation. Bioceres, S.A. is an agricultural investment and development cooperative. Verdeca**,** which is consolidated by the Company, was formed to develop and deregulate soybean varieties using both partners' agricultural technologies.

Common Stock Authorized

In June 2017, the shareholders approved an Amendment to the Company's Amended and Restated Certificate of Incorporation to reduce the authorized common stock from four hundred million to one hundred and fifty million shares.

Reverse Stock Split

In January 2018, the Company's board of directors and its shareholders approved a reverse split of 1:20 on the Company's issued and outstanding common stock which became effective on January 23, 2018. All issued and outstanding common stock, options to purchase common stock and per share amounts contained in the condensed consolidated financial statement have been retroactively adjusted to reflect the reverse stock split for all periods presented.

Basis of Presentation and Principles of Consolidation

The accompanying unaudited condensed consolidated financial statements include the accounts of the Company and Verdeca in accordance with accounting principles generally accepted in the United States ("GAAP") for interim financial statements and are in the form prescribed by the Securities and Exchange Commission (the "SEC") in instructions to Form 10-Q and Rule 10-01 of Regulation S-X. In the opinion of management, the accompanying condensed consolidated financial statements reflect all adjustments, consisting of normal recurring adjustments, considered necessary for a fair statement of the Company's financial position, results of operations and cash flows for the periods indicated. All material intercompany accounts and transactions have been eliminated in consolidation. The Company uses a qualitative approach in assessing the consolidation requirement for variable interest entities ("VIEs"). This approach focuses on determining whether the Company has the power to direct the activities of the VIE that most significantly affect the VIE's economic performance and whether the Company has the obligation to absorb losses, or the right to receive benefits, that could potentially be significant to the VIE. For all periods presented, the Company has determined that it is the primary beneficiary of Verdeca, which is a VIE. The Company evaluates its relationships with the VIEs upon the occurrence of certain significant events that affect the design, structure or other factors pertinent to the primary beneficiary determination. Interim results are not necessarily indicative of results for any other interim period or for the full fiscal year. The information included in these condensed consolidated financial statements and notes thereto should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations included herein and Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements and notes thereto for the fiscal year ended December 31, 2017 included in the Company's Annual Report on Form 10-K, filed with the SEC on March 20, 2018.

Liquidity and Capital Resources

As of March 31, 2018, the Company had an accumulated deficit of $175.5 million and cash on hand of $20.4 million. Since the Company's inception, we have devoted substantially all efforts to research and development activities, including the discovery, advancement, and testing of the Company's traits and products incorporating the Company's traits. To date, we have not generated revenues from sales of commercial products, other than limited revenues from the Company's SONOVA products.

In March 2018 and subsequent to the issuance of the Company's 2017 consolidated financial statements, the Company executed definitive securities purchase agreements with institutional investors in connection with a private placement of common stock and warrants in the amount of $10 million, exclusive of any related transaction fees, which funding improved the Company's liquidity position.

With cash on hand of $20.4 million as of March 31, 2018, the Company believes that it currently has sufficient cash to fund its operations beyond the look forward period of 12 months from the issuance of these condensed consolidated financial statements.

We may seek to raise additional funds through debt or equity financings, if necessary. We may also consider entering into additional partner arrangements or pursuing additional government grants. The sale of additional equity would result in dilution to the Company's stockholders. The incurrence of debt would result in debt service obligations, and the instruments governing such debt could provide for additional operating and financing covenants that would restrict operations. If we are not able to secure adequate additional funding, we may be forced to reduce spending, extend payment terms with suppliers, liquidate assets, or suspend or curtail planned development programs. Any of these actions could materially harm the business, results of operations and financial condition.

2. Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers,* which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU replaces most existing revenue recognition guidance in U.S. GAAP. In August 2015, the FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606)*: Deferral of Effective Date, which defers the effective date of ASU No. 2014-09 by one year allowing early adoption as of the original effective date January 1, 2017. The deferral results in the new revenue standard being effective for the Company as of January 1, 2018. See Note 5.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. The amendments in this update impacts classification, additional fair value measurement, impairment assessment of equity investments and current required disclosures. This standard is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years, with early adoption permitted if the entity meets certain early application guidance. The Company adopted ASU No. 2016-01 with no material impact to the condensed consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*. Based on the new standard, lessees would recognize lease assets and lease liabilities for those leases classified as operating leases under previous GAAP. The standard is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early application is permitted. The Company is evaluating the impact of the adoption of ASU No. 2016-02 on its condensed consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The amendments affect loans, debt securities, trade receivables, net investments in leases, off-balance-sheet credit exposures, reinsurance receivables, and any other financial assets not excluded from the scope that have the contractual right to receive cash. The amendments in this update are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The Company is evaluating the impact of the adoption of ASU No. 2016-13 on its condensed consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The amendments address cash flow issues such as debt prepayment or debt extinguishment costs and zero-coupon debt instruments. The amendments in this update are effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. Early adoption is permitted, including adoption in an interim period. The amendments are to be applied using a retrospective transition method to each period presented. If it is impractical to retrospectively apply, it can be applied prospectively as of the earliest date practicable. The Company adopted ASU No. 2016-15 with no material impact to the condensed consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting*. The amendments affect any entity that changes the terms or conditions of a share-based payment award. The amendments in this update are effective for all entities for annual periods, and interim periods within those annual periods, beginning after December 15, 2017. The Company adopted ASU No. 2017-09 with no material impact to the condensed consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-03, *Technical Corrections and Improvements to Financial Instruments — Overall (Subtopic 825-10)*: Recognition and Measurement of Financial Assets and Financial Liabilities, which retained the current framework for accounting for financial instruments in generally accepted accounting principles (GAAP) but made targeted improvements to address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The amendments in this ASU are effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. The Company is currently evaluating the impact of the adoption of ASU No. 2018-03 on its condensed consolidated financial statements.

3. SONOVA® Gamma Linolenic Acid ("GLA") Safflower Oil Inventory

Raw materials inventories consist primarily of seed production costs incurred by the Company's contracted cooperators. Finished goods inventories consist of GLA oil that is available for sale. Inventories consist of the following (in thousands):

	March 31, 2018	December 31, 2017
Raw materials	$ 45	$ 45
Finished goods	1,331	1,352
Inventories	$ 1,376	$ 1,397

4. Investments and Fair Value of Financial Instruments

Available-for-Sale Investments

The Company classified short-term investments as "available-for-sale." Investments are free of trading restrictions. The investments are carried at fair value, based on quoted market prices or other readily available market information. Unrealized gains and losses, net of taxes, are included in accumulated other comprehensive loss, which is reflected as a separate component of stockholder's equity in the Consolidated Balance Sheets. Gains and losses are recognized when realized in the Consolidated Statements of Operations and Comprehensive Loss.

The following tables summarize the amortized cost and fair value of the available-for-sale investment securities portfolio at March 31, 2018 and December 31, 2017, and the corresponding amounts of unrealized gains and losses recognized in accumulated other comprehensive income ("AOCI"):

(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
March 31, 2018				
Cash equivalents:				
Money market funds	9,993	—	—	9,993
Treasury Bills	9,991	—	—	9,991
Total Assets at Fair Value	$ 19,984	$ —	$ —	$ 19,984

(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
December 31, 2017				
Cash equivalents:				
Money market funds	$ 8,943	$ —	$ —	$ 8,943
Short-term investments:				
Commercial paper	1,399	—	—	1,399
U.S. government securities	2,500	—	(1)	2,499
Total Assets at Fair Value	$ 12,842	$ —	$ (1)	$ 12,841

The Company did not have any investment categories that were in a continuous unrealized loss position for more than three months as of March 31, 2018. The unrealized gains and losses amounts above are included in accumulated other comprehensive income or loss.

As of March 31, 2018, for fixed income securities that were in unrealized loss positions, the Company has determined that (i) it does not have the intent to sell any of these investments, and (ii) it is not more likely than not that it will be required to sell any of these investments before recovery of the entire amortized cost basis. The Company anticipates that it will recover the entire amortized cost basis of such fixed income securities and has determined that no other-than-temporary impairments associated with credit losses were required to be recognized during the three months ended March 31, 2018.

Fair Value Measurement

Fair value accounting is applied for all financial assets and liabilities and non-financial assets and liabilities that are recognized or disclosed at fair value in the condensed consolidated financial statements on a recurring basis. Assets and liabilities recorded at fair value in the condensed consolidated financial statements are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels, which are directly related to the amount of subjectivity associated with the inputs to the valuation of these assets or liabilities, are as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company can access at the measurement date.
- Level 2 inputs are observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 inputs are unobservable inputs for the asset or liability.

The carrying values of the Company's financial instruments, including cash equivalents, accounts receivable, and accounts payable, approximated their fair values due to the short period of time to maturity or repayment.

The following table sets forth the fair value of the Company's financial assets and liabilities as of March 31, 2018 and December 31, 2017:

	Fair Value Measurements at March 31, 2018			
(Dollars in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets at Fair Value				
Cash equivalents:				
Money market funds	9,993	—	—	9,993
Treasury Bills	9,991	—	—	9,991
Total Assets at Fair Value	$ 19,984	$ —	$ —	$ 19,984
Liabilities at Fair Value				
Common stock warrant liability	—	—	9,900	9,900
Common stock adjustment feature liability	—	—	6,000	6,000
Total Liabilities at Fair Value	$ —	$ —	$ 15,900	$ 15,900

	Fair Value Measurements at December 31, 2017			
(Dollars in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets at Fair Value				
Cash equivalents:				
Money market funds	$ 8,943	$ —	$ —	$ 8,943
Short-term investments:				
Commercial paper	—	1,399	—	1,399
U.S. government securities	2,499	—	—	2,499
Total Assets at Fair Value	$ 11,442	$ 1,399	$ —	$ 12,841

The Company uses the market approach technique to value its financial instruments and there were no changes in valuation techniques during 2018 or 2017. The Company's financial instruments consist primarily of cash and cash equivalents, accounts receivable and accounts payable and accrued liabilities. For accounts receivable, accounts payable and accrued liabilities, the carrying amounts of these financial instruments as of March 31, 2018 and December 31, 2017 were considered representative of their fair values due to their short term to maturity or repayment. Cash equivalents are carried at cost, which approximates their fair value.

The Company's Level 3 liabilities, which were measured and recorded on a recurring basis, consist of derivative liabilities related to the securities purchase agreement described in Note 9. The following table sets forth the establishment of these derivative liabilities, as well as a summary of the changes in the fair value and other adjustments (in thousands):

	(Level 3)		
(Dollars in thousands)	**Common Stock Warrant Liability**	**Common Stock Adjustment Feature Liability**	**Total**
Balance as of December 31, 2017	$ —	$ —	$ —
Common stock and warrants issued in conjunction with securities purchase agreement	10,200	3,800	14,000
Change in fair value and other adjustments	(300)	2,200	1,900
Balance as of March 31, 2018	$ 9,900	$ 6,000	$ 15,900

In determining the fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company's instruments measured at fair value and their classification in the valuation hierarchy are summarized below:

- *Money market funds and treasury bills* - Investments in money market funds are classified within Level 1. At March 31, 2018 and December 31, 2017, money market funds and treasury bills were included on the balance sheets in cash and cash equivalents.
- *Common stock warrant liability* - As of March 31, 2018, the Company had warrants to purchase 300,752 shares of common stock outstanding that it issued to certain accredited investors and its placement agent following the closing of the Private Placement on March 22, 2018 (as described in Note 9). The common stock warrants are classified as a liability within Level 3. The Company utilizes a binomial-lattice pricing model (the Monte Carlo simulation model) that involves a market condition to estimate the fair value of the common stock warrants. The application of the Monte Carlo simulation model requires the use of several assumptions including the Company's stock price, expected life of the warrants, stock price volatility determined from the Company's historical stock prices and the volatility of a peer group, and the risk-free interest rate for the term of the warrant. The estimated fair value of the common stock warrant liability was subsequently remeasured at March 31, 2018, and the change was recorded on the Company's condensed consolidated statements of operations and comprehensive loss.
- *Common stock adjustment feature liability* - As of March 31, 2018, the Company had issued 300,752 shares of common stock to certain accredited investors following the closing of the Private Placement on March 22, 2018 (as described in Note 9). The number of common stock shares issued, along with the number and exercise price of the common stock warrants issued, is subject to price adjustments. This common stock adjustment feature is classified as a liability within Level 3. The Company utilizes a binomial-lattice pricing model (the Monte Carlo simulation model) that involves a market condition to estimate the fair value of this feature. The application of the Monte Carlo simulation model requires the use of several assumptions including the Company's stock price, expected life of the feature, stock price volatility determined from the Company's historical stock prices and the volatility of a peer group, and risk-free interest rate for the expected life of the common stock adjustment feature. The estimated fair value of the common stock adjustment feature was subsequently remeasured at March 31, 2018, and the change was recorded on the Company's condensed consolidated statements of operations and comprehensive loss.

5. Adoption of ASC Topic 606, "Revenue from Contracts with Customers"

In May 2014, the FASB issued Accounting Standards Update No. 2014-09 (Topic 606) "Revenue from Contracts with Customers." Topic 606 supersedes the revenue recognition requirements in Topic 605 "Revenue Recognition" (Topic 605) and requires entities to recognize revenue when control of the promised goods or services is transferred to customers at an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services.

On January 1, 2018, the Company adopted Topic 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented in accordance with Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historical accounting under Topic 605. With the adoption of Topic 606, tax recognition will now follow book recognition for up-front license and commercial value sharing fees. Annual license fees and milestone fees may continue to be recognized differently for book and tax to the extent that revenue recognized for book is prior to cash receipts.

We recorded a net reduction to opening accumulated deficit of $2.4 million on January 1, 2018, with a corresponding reduction to unearned revenue, due to the cumulative impact of adopting Topic 606. The adjustment pertained to up-front license fees which were previously deferred for which the performance obligation was determined to be complete as of the date of adoption. The impact to revenues with the adoption of Topic 606 for the quarter ended March 31, 2018 was a decrease of $82,000, relating to the above mentioned up-front license fee revenues.

Revenues represent amounts earned from product sales, grants and contract research and license agreements. As it pertains to product sales and grants and contract research, there are no changes from Topic 605 compared to the adoption of Topic 606. There is a change in methodology from Topic 605 to Topic 606 that impacts the recognition of revenues from license agreements. The Company's license agreements have one performance obligation and various payment terms over a long commercial development timeline ranging from approximately 10 to 20 years. These payment terms may contain, but are not limited to:

1. Up-front non-refundable license fees
2. Annual license fees
3. Milestone fees
4. Commercial value share fees

Under Topic 605, up-front license fees were deferred and amortized over the estimated commercial development timeline. Under Topic 606, such fees will be recognized upon execution of the agreement. The deferred balance remaining from the existing portfolio of license agreements that were executed prior to January 1, 2018 were recorded as a reduction to accumulated deficit upon the adoption of ASC 606 on January 1, 2018. Up-front license fees for newly executed agreements will be recognized upon execution.

Under Topic 605, annual license fees were recognized on the annual due date as such fees were not due if a milestone was met or if termination of the agreement occurred. Under Topic 606, annual license fees are variable consideration that is initially constrained and recognized only when it is probable that such amounts would not be reversed. The evaluation and analysis of such fees is performed and once an annual license fee is deemed probable to have been earned, it is recognized in full in that period.

Under Topic 605, milestone fees were recognized when the Company and partner licensee mutually agreed the milestone had been achieved. Under Topic 606, milestone fees are variable consideration that is initially constrained and recognized only when it is probable that such amounts would not be reversed. The Company assesses when achievement of milestones are probable in order to determine the timing of revenue recognition for milestone fees. Once a milestone is deemed probable to be achieved, it is recognized in full in that period.

There is no change from Topic 605 to Topic 606 pertaining to future commercial value revenue recognition. Commercial value share fees will be recognized based on subsequent sales by the licensee. The Company has not recognized any of these fees to date and does not expect to do so for several years.

6. Variable Interest Entity

In February 2012, the Company formed Verdeca LLC ("Verdeca"), which is equally owned with Bioceres, Inc. ("Bioceres"), a U.S. wholly owned subsidiary of Bioceres, S.A., an Argentine corporation. Bioceres, S.A. is an agricultural investment and development cooperative owned by approximately 300 shareholders, including some of South America's largest soybean growers. Verdeca was formed to develop and deregulate soybean varieties using both partners' agricultural technologies.

The Company determined that a de facto agency relationship between the Company and Bioceres exists. The Company considers qualitative factors in assessing the primary beneficiary which include understanding the purpose and design of the VIE, associated risks that the VIE creates, activities that could be directed by the Company, and the expected relative impact of those activities on the economic performance of the VIE. Based on an evaluation of these factors, the Company concluded that it is the primary beneficiary of Verdeca.

Both the Company and Bioceres incur expenses in support of specific activities, as agreed upon by joint work plans, which apply fair market value to each partner's activities. Unequal contributions of services are equalized by the partners through cash payments. Verdeca is not the primary obligor for these activities performed by the Company or Bioceres. Under the terms of the joint development agreement, the Company has incurred direct expenses and allocated overhead in the amounts of $286,000 and $92,000 for the three months ended March 31, 2018 and 2017, respectively.

7. Collaborative Arrangements

In August 2017, the Company entered into a collaborative arrangement for the research, development and commercialization of an improved wheat quality trait in North America. This collaborative arrangement is a contractual agreement with a third party and involves a joint operating activity where both Arcadia and the third party are active participants in the activities of the collaboration. Arcadia and the third party participate in the research and development, and Arcadia has the primary responsibility for the intellectual property strategy while the third party will generally lead the marketing and commercialization efforts. Both parties are exposed to significant risks and rewards of the collaboration and the agreement includes both cost sharing and profit sharing. The activities are performed with no guarantee of either technological or commercial success.

The Company accounts for research and development ("R&D") costs in accordance ASC 730, *Research and Development*, which states R&D costs must be charged to expense as incurred. Accordingly, internal R&D costs are expensed as incurred. Third-party R&D costs are expensed when the contracted work has been performed or as milestone results are achieved.

8. Debt

Long-term Debt

There was no long-term debt as of March 31, 2018 and December 31, 2017.

Term Loan

In December 2015, the Company entered into a loan and security agreement ("Term Loan") with Silicon Valley Bank (the "Bank") providing for a senior secured term loan facility in the amount of $25.0 million, which proceeds were used to repay all existing debt. In July 2017, the Company repaid the Term Loan with Silicon Valley Bank, along with the $625,000 end-of-term fee and $500,000 prepayment fee. The prepayment and end of term fees of $1.1 million were recorded as a loss on extinguishment of debt, along with $41,000 of deferred loan issuance fees, partially offset by $267,000 of end of term fees previously amortized, netting to a loss of $900,000. As of the payoff date, the Company was in compliance with all covenants.

The Company recognized interest expense of $339,000 for the three months ended March 31, 2017, of which $49,000 was related to the debt discount. There was no interest expense recognized for the three months ended March 31, 2018.

9. Private Placement and Securities Purchase Agreement

On March 22, 2018, the Company issued 300,752 shares of its common stock ("Common Stock") and warrants to purchase up to 300,752 shares of Common Stock with an initial exercise price equal to $45.75 (the "Warrants"), in a private placement (the "Private Placement") in accordance with a securities purchase agreement (the "Purchase Agreement") entered into with certain institutional and accredited investors (collectively, the "Purchasers") on March 19, 2018. The Warrants are immediately exercisable, subject to certain ownership limitations, and expire five years after the date of issuance.

The Purchase Agreement requires that the Company hold a special meeting of its shareholders no later than May 3, 2018 in order to obtain shareholder approve the issuance of Common Stock in the Private Placement. If the shareholders do not approve the Private Placement at that meeting, the Company is required to seek shareholder approval every four months thereafter until the issuance of Common Stock is approved or until the Warrants have terminated. The shareholders approved the Company's issuance of shares of common stock at the special meeting of shareholders held on May 2, 2018.

The per share purchase price of the Common Stock and per share exercise price for the Warrants are subject to adjustment based on the volume weighted average price for the three trading days (the "VWAP Calculation") after each of the following: (i) the date that a registration statement covering the resale of the securities being issued in the Private Placement ("Resale Registration Statement") has been declared effective by the SEC, (ii) if a registration statement covering all securities issued in the Private

Placement is not declared effective, then the date that the securities can be sold under Rule 144 under the Securities Act of 1933, as amended, and (iii) if later than the dates set forth in item (i) and (ii), then the date that the Company's shareholders approve the Private Placement. After each adjustment, the per share purchase price for Common Stock shall automatically be reduced, if applicable, to 80% of the VWAP Calculation, and the per share exercise price for the Warrant shall automatically be reduced, if applicable, to 110% of the VWAP Calculation; provided, that in no event, will the per share purchase price for the Common Stock or the exercise price for the Warrants be less than $8.322. In the event, the per share exercise price for the Warrants is adjusted, then the number of shares exercisable under the Warrants shall be increased so that the aggregate exercise price payable after adjustment is equal to the aggregate exercise price payable prior to such adjustment.

The Company filed the Resale Registration Statement with the SEC on March 30, 2018, and it was declared effective on April 23, 2018. As described above and based upon the applicable VWAP Calculations relating to these events, each of these events caused an adjustment to the number of shares issued in the Private Placement and the terms of the Warrants. Following the effectiveness of the Resale Registration Statement, on April 23, 2018 the number of shares issued pursuant to the Purchase Agreement increased from 300,752 to 798,754, the total number of shares issuable upon exercise of the Warrants increased from 300,752 to 799,300 and the per share exercise price of the Warrants reduced from $45.75 to $17.2143. Following shareholder approval of the issuance of shares in the Private Placement, on May 8, 2018 the number of shares issued pursuant to the Purchase Agreement increased from 798,754 to 1,201,636, the total number of shares issuable upon exercise of the Warrants increased from 799,300 to 1,282,832 and the per share exercise price of the Warrants reduced from $17.2143 to $10,7258. These condensed consolidated financial statements do not reflect these additional issuances as such events occurred after March 31, 2018. The Company has not yet completed its valuation of the common stock adjustment feature and common stock warrants for any events that occurred after March 31, 2018.

The aggregate net proceeds received by the Company for the Private Placement was $8.7 million, consisting of gross proceeds of $10.0 million less offering costs of $1.3 million. The Company entered into the Private Placement to secure additional capital to strengthen its cash resources required to launch its new health and nutrition ingredient product commercialization and production scale-up plans, as well as to continue the deregulation and commercialization of its stress tolerant HB4 soybean trait. More specifically, net proceeds will be used for working capital to fund the continued introgression of quality ingredient traits into elite germ plasm, additional seed bulk-up, increased planting acreage, consumer brand development and a number of other pre-commercialization and commercialization activities.

The common stock adjustment feature and common stock warrants were determined to be liabilities based on each instrument's adjustment features and were accounted for at their respected fair value at inception using a Monte Carlo simulation model with the following assumptions: volatility of 100 percent, stock price of $32.52 and risk-free rate of 2.63%. At inception, the fair value of the common stock adjustment feature and the common stock warrant liabilities were $3.8 million and $10.2 million, respectively. As the combined values of the liabilities exceeded the $10.0 million of proceeds, no value was assigned to the common stock issued and an initial loss of $4.0 million was recognized. The liabilities are marked-to-market and were valued at $15.9 million at March 31, 2018, resulting in an additional loss of $1.9 million in the accompanying condensed consolidated statement of operations and comprehensive loss for the quarter ended March 31, 2018. The liabilities will be marked to market and the balances subsequently reclassified to equity as of the date the final adjustments to the number of common stock shares and common stock warrant shares to be issued are determined.

Registration Rights Agreement

In connection with the Private Placement, the Company entered into a registration rights agreement (the "Registration Rights Agreement"). Pursuant to the Registration Rights Agreement, the Company filed the Resale Registration Statement with the SEC on March 30, 2018 for purposes of registering the resale of the shares of Common Stock issued pursuant to the Purchase Agreement and the shares of Common Stock issuable upon exercise of the Warrants. The SEC declared the registration statement effective on April 23, 2018.

Offering Costs

In connection with the Private Placement, the Company paid to a placement agent an aggregate fee equal to $850,000. The Company also granted warrants to purchase a total of 15,038 shares of common stock ("Placement Agent Warrants") that have an exercise price per share equal to $41.5625 and a term of five years. The Placement Agent Warrants were issued for services performed by the placement agent as part of the Private Placement and were treated as offering costs. The value of the Placement Agent Warrants was determined to be $526,000 using the Black-Scholes Model with input assumptions including the Company's stock price, expected life of the warrants, stock price volatility determined from the Company's historical stock prices and the volatility of a peer group, and the risk-free interest rate for the term of the warrants. The Company incurred additional offering costs totaling $1.3 million that consist of direct incremental legal, advisory, accounting and filing fees relating to the Private Placement. The offering costs,

inclusive of the Placement Agent Warrants, totaled $1.8 million. The allocation of the offering costs to the common stock, common stock liability and common stock adjustment feature liability was based on the relative fair value of each. The portion attributable to the liabilities was $904,000 and expensed, while the portion attributable to the common stock was $888,000 and offset to additional paid in capital.

10. Stock-Based Compensation and Warrants

Stock Incentive Plans

The Company has two equity incentive plans: the 2006 Stock Plan ("2006 Plan") and the 2015 Omnibus Equity Incentive Plan ("2015 Plan").

In 2006, the Company adopted the 2006 Plan, which provided for the granting of stock options to executives, employees, and other service providers under terms and provisions established by the Board of Directors. The Company granted non-statutory stock options ("NSOs") under the 2006 Plan until May 2015, when it was terminated as to future awards, although it continues to govern the terms of options that remain outstanding and were issued under the 2006 Plan. The 2015 Plan became effective in May 2015 and all shares that were reserved, but not issued, under the 2006 Plan were assumed by the 2015 Plan. Upon effectiveness, the 2015 Plan had 154,387 shares of common stock reserved for future issuance, which included 10,637 shares under the 2006 Plan that were transferred to and assumed by the 2015 Plan. The 2015 Plan provides for automatic annual increases in shares available for grant. In addition, shares subject to awards under the 2006 Plan that are forfeited or canceled will be added to the 2015 Plan. The 2015 Plan provides for the grant of incentive stock options ("ISOs"), NSOs, restricted stock awards, stock units, stock appreciation rights, and other forms of equity compensation, all of which may be granted to employees, officers, non-employee directors, and consultants. The ISOs and NSOs will be granted at a price per share not less than the fair value at the date of grant. Options granted generally vest over a four-year period, with 25% vesting at the end of one year and the remaining vesting monthly thereafter. Options granted, once vested, are generally exercisable for up to 10 years after grant.

As of March 31, 2018, a total of 479,603 shares of common stock were reserved for issuance under the 2015 Plan, of which 298,778 shares of common stock are available for future grant. As of March 31, 2018, a total of 71,730 and 180,825 options are outstanding under the 2006 and 2015 Plans, respectively.

A summary of activity under the stock incentive plans is as follows (in thousands, except share data and price per share):

	Shares Subject to Outstanding Options	Weighted-Average Exercise Price Per Share	Aggregate Intrinsic Value
Outstanding — Balance at December 31, 2017	288,129	$ 63.62	$ —
Options granted	10,000	45.69	
Options exercised	(44,354)	21.73	
Options cancelled and forfeited	(1,221)	67.44	
Outstanding — Balance at March 31, 2018	252,554	$ 70.35	$ —
Vested and expected to vest — March 31, 2018	246,625	$ 70.96	$ —
Exercisable —March 31, 2018	104,210	$ 106.20	$ —

As of March 31, 2018, there was $1.2 million of unrecognized compensation cost related to unvested stock-based compensation grants that will be recognized over the weighted-average remaining recognition period of 2.98 years.

The fair value of stock option awards to executives, employees, and other service providers was estimated at the date of grant using a Black-Scholes option-pricing model with the following weighted-average assumption. There were 10,000 options granted during the three months ended March 31, 2018 and no options granted during the three months ended March 31, 2017.

	Three Months Ended March 31, 2018
Expected term (years)	6.25
Expected volatility	100%
Risk-free interest rate	2.73%
Dividend yield	—

Employee Stock Purchase Plan

The Company's 2015 Employee Stock Purchase Plan ("ESPP") became effective on May 14, 2015. The ESPP allows eligible employees to purchase shares of the Company's common stock at a discount of up to 15% of their eligible compensation through payroll deductions, subject to any plan limitations. After the first offering period, which began on May 14, 2015 and ended on February 1, 2016, the ESPP provides for six-month offering periods, and at the end of each offering period, employees are able to purchase shares at 85% of the lower of the fair market value of the Company's common stock on the first trading day of the offering period or on the last trading day of the offering period. As of March 31, 2018, the number of shares of common stock reserved for future issuance under the ESPP is 90,044. The ESPP provides for automatic annual increases in the shares available for purchase beginning on January 1, 2016. As of March 31, 2018, 6,324 shares had been issued under the ESPP. The Company recorded $1,200 and $4,000 of compensation expense for the three months ended March 31, 2018 and 2017, respectively.

Warrants

On December 2013, the Company issued warrants to Mahyco International to purchase 3,784 shares of common stock, exercisable as of the issuance date, at an exercise price of $330.40 per share.

In connection with the Series D preferred stock financing in the first half of 2014, the Company issued warrants, exercisable as of the issuance date, to the Series D preferred stock investors to purchase an aggregate of 61,397 shares of common stock at an exercise price of $363.20 per share and to the placement agents to purchase 1,674 shares of common stock at $268.80.

In March 2018, in connection with a private placement and in accordance with a securities purchase agreement, the Company issued warrants to purchase up to 300,752 shares of common stock with an initial exercise price equal to $45.75. The Company also issued warrants to the placement agents to purchase a total of 15,038 shares of common stock with an initial exercise price equal to $41.5625. Additional warrants were issued and the final exercise price was reduced in accordance with the Purchase Agreement's adjustment provisions. See Note 9. The warrants are immediately exercisable, subject to certain ownership limitations.

All warrants expire five years from the warrants' issuance date.

11. Income Taxes

Income tax expense during interim periods is based on applying an estimated annual effective income tax rate to year-to-date income, plus any significant unusual or infrequently occurring items that are recorded in the interim period. The computation of the annual estimated effective tax rate at each interim period requires certain estimates and significant judgment including, but not limited to, the expected operating income for the year, projections of the proportion of income earned and taxed in various jurisdictions, permanent and temporary differences, and the likelihood of recovering deferred tax assets generated in the current year. The accounting estimates used to compute the provision for income taxes may change as new events occur, more experience is obtained, additional information becomes known, or as the tax environment changes.

The interim financial statement provision for income taxes expense is different from the amounts computed by applying the United States federal statutory income tax rate of 21%. The Company's effective tax rate (ETR) was -0.2% and -0.2% for the three months ended March 31, 2018 and 2017, respectively. The difference between the effective tax rate and the federal statutory rate of 21% was primarily due to the full valuation allowance recorded on the Company's net deferred tax assets and foreign withholding taxes.

The Company may have experienced an ownership change under IRC Section 382 as a result of the common shares issued in connection with the securities purchase agreement in March 2018. That ownership change may limit the Company's ability to utilize its net operating loss carryforwards prior to expiration. Given the full valuation allowance, such a limitation would not impact the deferred tax asset balance as currently recorded.

As of March 31, 2018, there have been no material changes to the Company's uncertain tax positions.

12. Contingent Liability Related to the Anawah Acquisition

On June 15, 2005, the Company completed its agreement and plan of merger and reorganization with Anawah, Inc. ("Anawah"), to purchase the food and agricultural research company through a non-cash stock purchase. Pursuant to the merger with Anawah, and in accordance with the ASC 805 - Business Combinations, the Company incurred a contingent liability not to exceed $5.0 million. This liability represents amounts to be paid to Anawah's previous stockholders for cash collected on revenue recognized by the Company upon commercial sale of certain specific products developed using technology acquired in the purchase. As of December 31, 2010, the Company ceased activities relating to three of the six Anawah product programs, thus, the contingent liability

was reduced to $3.0 million. During the third quarter of 2016, one of the programs previously accrued for was abandoned and another program previously abandoned was reactivated. As of March 31, 2018, the Company continues to pursue a total of three development programs using this technology and believes that the contingent liability is probable. As a result, $3.0 million remains on the Condensed Consolidated Balance Sheet as an other noncurrent liability.

13. Net Loss per Share

Basic net loss per share is calculated by dividing net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period and excludes any dilutive effects of stock-based awards and warrants. Diluted net loss per share attributable to common stockholders is computed giving effect to all potentially dilutive common shares, including common stock issuable upon exercise of stock options and warrants. As the Company had net losses for the three months ended March 31, 2018 and 2017, all potentially dilutive common shares were determined to be anti-dilutive.

Securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows *(in shares):*

	Three Months Ended March 31,	
	2018	2017
Options to purchase common stock	252,554	219,015
Warrants to purchase common stock	382,645	66,845
Total	635,199	285,860

14. Related-Party Transactions

The Company's related parties include Moral Compass Corporation ("MCC") and the John Sperling Revocable Trust ("JSRV"). The rights to the intellectual property previously owned by Blue Horse Labs, Inc. ("BHL") were assigned to JSRV due to BHL's dissolution. The JSRV is deemed a related party of the Company because MCC, the Company's controlling stockholder, and JSRV share some common officers and directors.

Transactions with related parties are reflected in the condensed consolidated financial statements under amounts due to related parties.

JSRV receives a singledigit royalty from the Company when revenue has been collected on product sales or for license payments from third parties that involve certain intellectual property developed under research funding originally from BHL. Royalty fees due to JSRV, and previously BHL, were $4,000 and $29,000 as of March 31, 2018 and December 31, 2017, respectively, and are included in the Condensed Consolidated Balance Sheets as amounts due to related parties.

15. Subsequent Events

The Company has reviewed and evaluated subsequent events through May 9, 2018, the date the condensed consolidated financial statements were available to be issued.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Special Note Regarding Forward-Looking Statements

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and the related notes to those statements included herein. In addition to historical financial information, this report contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed in the forward-looking statements. The statements contained in this report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Forward-looking statements are often identified by the use of words such as, but not limited to, "anticipate," "believe," "can," "continue," "could," "estimate," "expect," "intend," "may," "plan," "project," "seek," "should," "strategy," "target," "will," "would" and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included in the most recent Annual Report on Form 10-K filed by the Company. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

"Arcadia Biosciences," "Sonova" and "Sonova GLA Safflower Oil and design" are our registered trademarks in the United States and, in some cases, in certain other countries. Other trademarks and service marks that we own include: "Sonova 400" and "Sonova ULTRA." This report may also contain trademarks, service marks, and trade names of other companies. Solely for convenience, the trademarks, service marks and trade names referred to in this report may appear without the ®, TM, or SM symbols, but such references do not constitute a waiver of any rights that might be associated with the respective trademarks, service marks, or trade names.

Overview

We are a consumer-driven, agricultural food ingredient company. We aim to create value across the agricultural production and supply chain beginning with enhanced crop productivity for farmers and ultimately to deliver accelerated innovation in nutritional quality consumer foods. We use state of the art gene-editing technology and advanced breeding techniques to naturally enhance the nutritional quality of grains and oilseeds to address the rapidly evolving trends in consumer health and nutrition. In addition, we have developed a broad pipeline of high value crop productivity traits designed to enhance farm economics.

Consumers are demanding food companies provide healthier, high quality foods, naturally and sustainably produced with greater ingredient simplicity and transparency. Now, more than ever, consumers are paying premium pricing to satisfy their dietary health requirements, such as higher fiber and lower gluten in grains, healthier oils and fewer processed ingredients. Consumer food companies recognize this shift but cannot rely upon the legacy ag-supply chain and traditional crop breeding techniques to meet these demands. Conventional and transgenic breeding processes can take between nine and 13 years to bring new food varieties or quality traits to market, causing consumer food companies to search for alternative means to satisfy the evolving customer demands. The need for rapid product differentiation at the consumer level has opened up a premium food market opportunity that is becoming one of the fastest growing segments in the food industry.

To address this large and growing demand, we are building on our industry leading scientific expertise and advanced plant breeding and transformation technologies developed over the past 15 years, to directly edit the plant genome, without introducing foreign DNA, to produce nutrient-dense crops for use in the major foods we eat. By employing CRISPR Cas9 gene editing technology and our proprietary TILLING platform, we believe we can reduce the time to market for novel ingredient traits by half, thereby providing consumer food companies a steady and reliable source of cost effective, healthy natural food options.

We are developing a suite of consumer-branded, high value, healthy wheat varieties. First to market will be our Resistant Starch (RS) wheat, a product with more dietary fiber as conventional wheat. Increased fiber consumption is well recognized as a way to improve gut health and to control excessive weight gain. Concurrently, we are developing three additional wheat varieties, a reduced gluten wheat, an extended shelf life wheat and a superior yielding wheat. In the American diet, each day more than 500 calories come from wheat products, 25 percent of the FDA's recommended daily caloric intake for a woman and 20 percent for a man, which creates a natural market opportunity for our first two wheat products. We believe these varieties have broad application in the global wheat market which is estimated by the US FDA to be 758 million metric tons, which roughly equates to $127 billion.

In years to come, we expect to achieve enhanced nutritional characteristics within a number of other broad acre crops using advanced breeding and gene-editing techniques. Targets include but are not limited to higher fiber, longer shelf life and enhanced protein in crops other than wheat.

An important aspect of our business is also improving farmer productivity through the development of more robust crop varieties, by developing specific crop traits designed to counteract the detrimental impact of environmental stresses on harvest yields. Traditional genetic modification (GM) trait development has concentrated on crops where the combination of large acreage and high input costs (such as pest and weed control chemical costs) create significant economic value for herbicidal or insecticidal traits. However, far more deleterious to crop yields are abiotic stresses, such as drought, heat, nutrient deficiency, water scarcity, and soil salinity, and remains largely unpenetrated by the GM seed industry today. For example, industry estimates indicate greater than 80 percent of wheat yield loss and 65 percent of corn yield loss globally are lost due to abiotic factors. These stresses are prevalent in most agricultural environments with varying degrees of severity and often have material consequences on crop production, quality, and farmer incomes.

Phillips McDougall estimates the abiotic stress mitigation trait market to be worth several billion dollars. We devoted much of our early research to building the most comprehensive array of abiotic stress traits in the world. Furthermore, through broad out-licensing arrangements with our commercialization partners, many of our traits have been bred into several global crops, including rice, wheat, and soybeans, and we have demonstrated significant yield improvements in multiple years of field testing. Upon commercialization, we share in the trait fees ranging between 10% and 50%, depending upon the geography, crop and specific trait.

However, a key component of the development cycle of GM traits is local, or in some instances, global deregulation of the trait by one or more regulatory agencies may be required. As there continues to be a significant debate about the role of GM traits in agricultural crops, we have seen this issue begin to impact some regulatory agencies which exercise control over the pace of deregulation of our products. We have recently experienced delays in the review of many of our high value traits from certain of these government regulatory authorities. For example, in India, where regulators have not approved new products containing GM traits for a number of years, which has significantly delayed the trait development and crop commercialization timelines of our license partner in India, Mahyco.

We believe the fundamental value of these traits remains commercially significant and we, along with our development and commercialization partners, remain fully committed to their ultimate commercialization. However, to compensate for the near-term impact of these regulatory delays on our anticipated commercialization revenue share, the Company completed a comprehensive strategic review of its technology programs, product pipeline, partner progress, competitive landscape and market conditions in order to prioritize and appropriately resource its most promising products and opportunities. As a result, some programs were terminated or placed on hold while investments in other programs were accelerated with the aim of generating the highest potential near-term value for the Company and its shareholders.

In addition, in cooperation with its primary licensee partner, Mahyco, the Company has undertaken an evaluation of the current regulatory environment by territory of its license portfolio to determine the optimal strategy for continued deregulation and commercialization of its traits. In December 2017, we reached agreement with Mahyco for the return of licensed geographies for certain WUE, NUE & Salinity Tolerance traits where Mahyco either lacks the resources or expertise to effectively progress trait deregulation and commercialization. In addition, for other geographies where Mahyco has progressed trait development but does not possess the familiarity with, or influence on, the regulatory environment to affect deregulation, we have agreed we will endeavor to jointly pursue new in-country licensees we believe to be equipped and capable to achieve trait deregulation and commercialization. We will continue to work with our partners to closely monitor the progress of deregulation activities affecting our GM traits, and at the same time, we are realigning our core capabilities and evolving our business model to accelerate the development and near-term commercialization of non-GM nutrition and quality traits.

Balancing our near-term revenue goals with long-term value capture, we will continue to provide active support to our commercial partners working to advance our high value traits through development and deregulation for commercialization. We believe the commercialization of these traits is two to seven years away, each trait having their own estimated time to deregulation and commercialization. Once a product containing one or more of our traits is commercialized, we are entitled to receive a portion of the revenue that it generates for our commercial partner. For seeds incorporating valuable traits, farmers typically pay either a premium for the seed or a trait fee. This premium or trait fee represents the additional value generated for our commercial partner by our trait(s), and we receive a percentage of this additional value. Typically, our share of this value ranges from 15 to 20%, and it can increase to a range of 37 to 50% under certain agreements if we elect to co-invest in product development and/or deregulation. We expect that our participation in joint ventures will provide us with an opportunity to recognize additional value from our traits.

While we seek patent protection on our technologies and traits, we have structured our commercial agreements so that we receive our percentage of additional commercial value whether or not patent protection is in effect at any particular time or place. Nearly all of our agreements provide access to our traits, and our right to receive a share of commercial value, continue for a set number of years after products containing our traits are commercialized. While the exclusive rights afforded by patents may enable our commercial partners to realize greater commercial value attributable to our traits, our right to receive a portion of that increased commercial value is not dependent on the existence of patent rights in a particular geography.

Our commercial strategy is to migrate forward in the ag-food supply chain from the farmer and seed company to the consumer food company. Due to early stage focus on the development of abiotic stress traits, we have historically been commercially aligned with farmers and seed companies. However, by also establishing commercial relationships with consumer food companies and developing consumer brand awareness of our high value premium ingredients, we expect to be better positioned to garner a greater share of our product's value proposition. Consumer food companies are looking to simplify their food ingredient formulations and consumer are demanding "clean labeling" in their foods, paying more for foods having fewer artificial ingredients and more natural, recognizable and healthy ingredients. Ninety-one per cent of U.S. consumers believe food and beverage options with recognizable ingredients are healthier. Because we engineer nutrient density directly into the primary grains and oils, we provide the mechanism for food formulation simplification naturally, cost effectively and in a time-frame to meet evolving consumer demands. Our branding strategy is to link consumer's health and nutrition appreciation with the nutrients we source directly from the farm, enabling us to share premium economics throughout the ag-food supply chain.

This forward migration in the ag-food supply chain will require that we build additional organizational capabilities and industry expertise. For instance, we are expanding our in-house commercial grain production and logistics resources for greater scale capacity to bring our identity preserved products to market. We are also developing product branding strategies to build customer brand recognition and loyalty.

Since our inception, we have devoted substantially all of our efforts to research and development activities, including the discovery, development, and testing of our traits and products in development incorporating our traits. To date, we have not generated revenues from sales of commercial products, other than limited revenues from our SONOVA products. We do receive revenues from fees associated with the licensing of our traits to commercial partners. Our long-term business plan and growth strategy is based in part on our expectation that revenues from products that incorporate our traits will comprise a significant portion of our future revenues.

We have never been profitable and had an accumulated deficit of $175.5 million as of March 31, 2018. We incurred net losses of $10.6 million and $4.2 million for the three months ended March 31, 2018 and 2017, respectively. We expect to incur substantial costs and expenses before we obtain any revenues from the sale of seeds incorporating our traits. As a result, our losses in future periods could become even more significant, and we may need additional funding to support our operating activities.

Components of Our Statements of Operations Data

Revenues

We derive our revenues from product revenues, licensing agreements, contract research agreements, and government grants. Given our acute focus on the near term commercialization of our nutritional ingredient traits and products, we do not intend to continue pursuing contract research agreements, and government grant projects at the levels we have historically. Over the next 12 to 36 months, we expect these revenues to decline as our current contract research agreements and government grant projects conclude and are not replaced. Concurrently, as we introduce our new nutritional ingredient traits and products to the market, we expect revenues to increase from such activities. Furthermore, with the implementation of Topic ASC 606, as described more fully in Note 5, future license revenues will no longer include the recognition of deferred up-front license fees from existing license agreements.

Product Revenues

Our product revenues to date have consisted solely of sales of our SONOVA products. We generally recognize revenue from product sales upon sale to our third-party distributors or customers. Our revenues fluctuate depending on the timing of orders from our customers and distributors.

License Revenues

Our license revenues to date consist of up-front, nonrefundable license fees, annual license fees, and subsequent milestone payments that we receive under our research and license agreements. We have historically recognized nonrefundable up-front license fees and guaranteed, time-based payments as revenue proportionally over the expected development period. With the implementation of ASC Topic 606, revenue generated from up-front license fees will be recognized upon execution of the agreement. We recognize annual license fees when it is probable that a material reversal will not occur.

Milestone fees are variable consideration that is initially constrained and recognized only when it is probable that such amounts would not be reversed. The Company assesses when achievement of milestones are probable in order to determine the timing of revenue recognition for milestone fees. Milestones typically consist of significant stages of development for our traits in a potential commercial product, such as achievement of specific technological targets, completion of field trials, filing with regulatory agencies, completion of the regulatory process, and commercial launch of a product containing our traits. Given the seasonality of agriculture and time required to progress from one milestone to the next, achievement of milestones is inherently uneven, and our license revenues are likely to fluctuate significantly from period to period.

Contract Research and Government Grant Revenues

Contract research and government grant revenues consist of amounts earned from performing contracted research primarily related to breeding programs or the genetic engineering of plants for third parties. Contract research revenue will continue to be accounted for as a single performance obligation for which revenues are recognized over time using the input method (e.g. costs incurred to date relative to the total estimated costs at completion). In addition, we are entitled to receive a portion of the revenues generated from sales of products that incorporate our seed traits. Products expected to result from such contract research are in various stages of the product development cycle and we expect to generate revenues from the sale of any such products in as soon as the next two to four years.

We receive payments from government entities in the form of government grants. Government grant revenue will continue to be accounted for as a single performance obligation for which revenues are recognized over time using the input method (e.g. costs incurred to date relative to the total estimated costs at completion). Our obligation with respect to these agreements is to perform the research on a best-efforts basis. Given the nature and uncertain timing of receipt of government grants and timing of eligible research and development expenses, such revenues are likely to fluctuate significantly from period to period.

Operating Expenses

Cost of Product Revenues

Cost of product revenues relates to the sale of our SONOVA products and consists of in-licensing and royalty fees, any adjustments to inventory, as well as the cost of raw materials, including inventory and third-party services costs related to procuring, processing, formulating, packaging, and shipping our SONOVA products.

Research and Development Expenses

Research and development expenses consist of costs incurred in the discovery, development, and testing of our products and products in development incorporating our traits. These expenses consist primarily of employee salaries and benefits, fees paid to subcontracted research providers, fees associated with in-licensing technology, land leased for field trials, chemicals and supplies, and other external expenses. These costs are expensed as incurred. Additionally, we are required from time to time to make certain milestone payments in connection with the development of technologies in-licensed from third parties. We expense these milestone payments at the time the milestone is achieved and deemed payable. Our research and development expenses may fluctuate from period to period as a result of the timing of various research and development projects.

Selling, General, and Administrative Expenses

Selling, general, and administrative expenses consist primarily of employee costs, professional service fees, and overhead costs. Our selling, general, and administrative expenses may fluctuate from period to period. In connection with our commercialization activities for our consumer ingredient products, we expect to increase our investments in sales and marketing and business development.

Interest Expense

Interest expense consists primarily of contractual interest and amortization of debt discount on our term loan that was repaid in July 2017.

Other Income, Net

Other income, net, consists of interest income and the amortization of investment premium and discount on our cash and cash equivalents and investments.

Initial Loss on Common Stock Warrant and Common Stock Adjustment Feature Liabilities

Initial loss on common stock warrant and common stock adjustment feature liabilities is comprised of the loss associated with the initial recognition of the common stock warrant and common stock adjustment feature liabilities associated with the Private Placement in March 2018 at their respective fair values.

Change in the Estimated Fair Value of Common Stock Warrant and Common Stock Adjustment Feature Liabilities

Change in the estimated fair value of common stock warrant and common stock adjustment feature liabilities is comprised of the fair value remeasurement of the liabilities associated with the Private Placement in March 2018.

Offering Costs

Offering costs consists of the portion of costs incurred with the issuance of common stock and common stock warrants in connection with the Private Placement that have been allocated to the common stock warrant and common stock adjustment feature liabilities. Costs include placement agent, legal, advisory, accounting and filing fees.

Income Tax Provision

Our income tax provision has not been historically significant, as we have incurred losses since our inception. The provision for income taxes consists of state and foreign income taxes. Due to cumulative losses, we maintain a valuation allowance against our U.S. deferred tax assets as of March 31, 2018 and 2017. We consider all available evidence, both positive and negative, including but not limited to, earnings history, projected future outcomes, industry and market trends and the nature of each of the deferred tax assets in assessing the extent to which a valuation allowance should be applied against our U.S. deferred tax assets.

Results of Operations

Comparison of the Three Months Ended March 31, 2018 and 2017

	Three Months Ended March 31,		$ Change	% Change
	2018	2017		
	(In thousands except percentage)			
Revenues:				
Product	$ 61	$ 205	$ (144)	(70)%
License	—	106	(106)	(100)%
Contract research and government grants	153	707	(554)	(78)%
Total revenues	214	1,018	(804)	(79)%
Operating expenses:				
Cost of product revenues	36	106	(70)	(66)%
Research and development	1,396	1,823	(427)	(23)%
Selling, general and administrative	2,621	3,052	(431)	(14)%
Total operating expenses	4,053	4,981	(928)	(19)%
Loss from operations	(3,839)	(3,963)	124	(3)%
Interest expense	—	(339)	339	(100)%
Other income, net	38	96	(58)	(60)%
Initial loss on common stock warrant and common stock adjustment feature liabilities	(4,000)	—	(4,000)	100%
Change in fair value of common stock warrant and common stock adjustment feature liabilities	(1,900)	—	(1,900)	100%
Offering costs related to securities purchase agreement	(904)	—	(904)	100%
Net loss before income taxes	(10,605)	(4,206)	(6,399)	152%
Income tax provision	(10)	(10)	—	0%
Net loss and net loss attributable to common stockholders	$ (10,615)	$ (4,216)	$ (6,399)	152%

Revenues

Product revenues accounted for 29% and 20% of our total revenues in the three months ended March 31, 2018 and 2017, respectively. Our product revenues from sales of our SONOVA products decreased by $144,000, or 70%, in the quarter-to-quarter comparison, primarily due to the timing of orders.

License revenues accounted for 0% and 10% of our total revenues for three months ended March 31, 2018 and 2017, respectively. Our license revenues decreased by $106,000, or 100%, in the three months ended March 31, 2018 compared to revenues in the same period of 2017. The decrease in license revenue was due to the adoption of ASC Topic 606 on January 1, 2018. Revenue recognized in the first quarter of 2017 for the amortization of up-front license fees previously collected and amortized over the entire commercial development timeline is not present in the first quarter of 2018 as up-front fees are currently recognized upon agreement execution under the new guidance. There were no agreements executed in the first quarter of 2018.

Contract research and government grant revenues comprise a significant portion of our total revenues and accounted for 72% and 70% of our total revenues for the three months ended March 31, 2018 and 2017, respectively. Our contract research and government grant revenues decreased by $554,000, or 78%, in the three months ended March 31, 2018 compared to the same period in 2017. The decrease in grant and contract research revenue was primarily driven by the completion of a government grant during 2017, as well as a short-term research contract in the first quarter of 2017 that was not present in 2018. Contract research and government grant revenues can vary from quarter-to-quarter depending on the timing of contract research projects and the completion of services provided, and the timing of the award of government grants and eligible research and development expenses.

Cost of Product Revenues

Cost of product revenues decreased by $70,000, or 66%, in the three months ended March 31, 2018 compared to the three months ended March 31, 2017 due to the decrease in sales when comparing the respective periods.

Research and Development

Research and development expenses decreased by $427,000, or 23%, in the three months ended March 31, 2018 compared to the three months ended March 31, 2017. The decrease was primarily driven by the termination of a license and subcontracted research agreement at the end of 2017, less subcontracting expense in support of government grants and lower salaries and benefits, mainly as a result of the reductions in our workforce that occurred in the first quarter of 2017.

Selling, General, and Administrative

Selling, general, and administrative expenses decreased by $431,000, or 14%, in the three months ended March 31, 2018 compared to the three months ended March 31, 2017. The decrease was primarily due to lower salaries and benefits, mainly as a result of the reductions in our workforce that occurred in the first quarter of 2017, which was partially offset by higher bonus and intellectual property legal fees in the first quarter of 2018.

Interest Expense

Interest expense decreased by $339,000, or 100%, in the three months ended March 31, 2018 compared to the three months ended March 31, 2017. The decrease was the result of the extinguishment of debt in July 2017. See Note 8.

Other Income, Net

Other income, net, of $38,000 for the three months ended March 31, 2018 was a decrease of $58,000, or 60%, in income when compared to other income, net of $96,000 for the three months ended March 31, 2017. The decrease was primarily related to the lower investment balance in 2018.

Initial Loss on Common Stock Warrant and Common Stock Adjustment Feature Liabilities

Initial loss on common stock warrant and common stock adjustment feature liabilities of $4.0 million is comprised of the non-cash loss associated with the initial recognition of the common stock warrant and common stock adjustment feature liabilities associated with the Private Placement in March 2018 at estimated fair values of $10.2 million and $3.8 million, respectively. The combined fair value of $14 million less $10 million of proceeds yields the $4.0 million initial loss.

Change in the Estimated Fair Value of Common Stock Warrant and Common Stock Adjustment Feature Liabilities

Change in the estimated fair value of common stock warrant and common stock adjustment feature liabilities of $1.9 million for the three months ended March 31, 2018 resulted from the fair value remeasurement of the liabilities on March 31, 2018. The estimated fair value of the common stock adjustment feature increased by $2.2 million and the estimated fair value of the common stock warrants decreased by $300,000.

Offering Costs

Offering costs for the three months ended March 31, 2018 of $904,000 is comprised of the costs associated with the Private Placement that have been allocated to the common stock warrant and common stock adjustment feature liabilities and charged to expense. The costs for the quarter include $429,000 for placement agent fees, $265,000 for common stock warrants issued to the placement agent, $152,000 for advisory fees, $50,000 for legal and accounting fees and $8,000 for registration and filing fees.

Income Tax Provision

Income tax provision of $10,000 for the three months ended March 31, 2018 was consistent when compared to the $10,000 for three months ended March 31, 2017.

Seasonality

We and our commercial partners operate in different geographies around the world and conduct field trials that are used for data generation, which must be conducted during the appropriate growing seasons for particular crops and markets. Often, there is only one crop-growing season per year for certain crops and markets. Similarly, climate conditions and other factors that may influence the sales of our products may vary from season to season and year to year. In particular, weather conditions, including natural disasters such as heavy rains, hurricanes, hail, floods, tornadoes, freezing conditions, drought, or fire, may affect the timing and outcome of field trials, which may delay milestone payments and the commercialization of products incorporating our seed traits. In the future, sales of commercial products that incorporate our seed traits will vary based on crop growing seasons and weather patterns in particular regions.

The level of seasonality in our business overall is difficult to evaluate at this time due to our relatively early stage of development, our relatively limited number of commercialized products, our expansion into new geographical markets, and our introduction of new products and traits.

Liquidity and Capital Resources

We have funded our operations primarily with the net proceeds from our initial public offering and private placements of equity and debt securities, as well as proceeds from the sale of our SONOVA products and payments under license agreements, contract research agreements, and government grants. Our principal use of cash is to fund our operations, which are primarily focused on progressing our agricultural yield and product quality seed traits through the regulatory process and to commercialization. This includes replicating field trials, coordinating with our partners on their development programs, and collecting, analyzing, and submitting field trial data to regulatory authorities. As of March 31, 2018, we had cash and cash equivalents of $20.4 million.

As is disclosed in Note 9, on March 19, 2018, the Company entered into definitive securities purchase agreements with institutional investors in connection with a private placement of common stock and warrants in the amount of $10 million, exclusive of any related transaction fees. The number of shares to be issued and at what price are variable and subject to the terms of the agreement. The Company also repaid its $25.0 million term loan and related interest, prepayment and end-of-term payments totaling $1.3 million with Silicon Valley Bank in July 2017. See Note 8.

The Company believes that its existing cash, cash equivalents and investments will be sufficient to meet its anticipated cash requirements for at least the next 12 months. See Note 1.

We may seek to raise additional funds through debt or equity financings, if necessary. We may also consider entering into additional partner arrangements or pursuing additional government grants. Our sale of additional equity would result in dilution to our stockholders. Our incurrence of debt would result in debt service obligations, and the instruments governing our debt could provide for additional operating and financing covenants that would restrict our operations. If we are not able to secure adequate additional funding, we may be forced to reduce our spending, extend payment terms with our suppliers, liquidate assets, or suspend or curtail planned development programs. Any of these actions could materially harm our business, results of operations and financial condition.

Cash Flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Three Months Ended March 31,	
	2018	2017
Net cash provided by (used in):		
Operating activities	$ (2,617)	$ (4,530)
Investing activities	3,876	10,060
Financing activities	10,034	16
Net increase (decrease) in cash	$ 11,293	$ 5,546

Cash used in operating activities

Cash used in operating activities for the three months ended March 31, 2018 was $2.6 million. Our net loss of $10.6 million, gain on the disposal of equipment of $3,000 and net amortization of investment premium and discount of $2,000 were partially offset by non-cash charges of $4.0 million for the change in fair value of, and $1.9 million for the initial loss on, common stock warrant and common stock adjustment feature liabilities, $904,000 for offering costs, $298,000 for stock-based compensation, and depreciation and amortization of $52,000, as well as adjustments in our working capital accounts of $849,000.

Cash used in operating activities for the three months ended March 31, 2017 was $4.5 million. Our net loss of $4.2 million, net amortization of investment premiums and discounts of $36,000, and adjustments in our working capital accounts of $776,000 were partly offset by non-cash charges of $371,000 for stock-based compensation, $81,000 for depreciation and amortization, and $49,000 for accretion of debt discount.

Cash provided by investing activities

Cash provided by investing activities for the three months ended March 31, 2018 consisted of $3.9 million in proceeds from maturities of investments and $9,000 from the sale of equipment, which was offset by $33,000 in purchases of property and equipment.

Cash provided by investing activities for the three months ended March 31, 2017 of $10.0 million primarily consisted of $14.7 million in proceeds from sales and maturities of investments, which was offset by $4.6 million in purchases of short-term investments.

Cash provided by financing activities

Cash provided in financing activities for the three months ended March 31, 2018 consisted of proceeds from the issuance of stock and warrants relating to the stock purchase agreement totaling $10.0 million, partially offset by $932,000 of offering costs paid during the quarter. Proceeds from the exercise of stock options and purchase of ESPP shares totaled $966,000.

Cash provided by financing activities for the three months ended March 31, 2017 of $16,000 consisted of proceeds from the purchase of ESPP shares.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements, including the use of structured finance, special purpose entities, or variable interest entities other than Verdeca, which is discussed in the notes to our condensed consolidated financial statements.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We consider our critical accounting policies and estimates to be revenue recognition, inventories, income taxes, the liabilities relating to the stock purchase agreement and stock-based compensation. See Notes 4 and 9 for the estimates made in connection with the securities purchase agreement executed this quarter and Note 5 for our accounting policies in effect with the adoption of ASC Topic 606.

ITEM 3: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not Required.

ITEM 4: CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as such term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, or Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms, and that such information is accumulated and communicated to our management, including our President and Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Our disclosure controls and procedures have been designed to meet reasonable assurance standards. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any disclosure controls and procedures also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Based on their evaluation as of the end of the period covered by this Quarterly Report on Form 10-Q, our President and Chief Executive Officer and our Chief Financial Officer have concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) identified in connection with the evaluation identified above that occurred during the quarter ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We currently are not a party to any material litigation or other material legal proceedings. From time to time, we may be subject to legal proceedings and claims in the ordinary course of business.

ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Quarterly Report, you should carefully consider the factors discussed in Part I, "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017, which could materially affect our business, financial condition, liquidity or future results. The risks described in our Annual Report on Form 10-K are not the only risks facing our company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, liquidity or future results.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

The following exhibits are attached hereto or are incorporated herein by reference.

Exhibit Number	Exhibit Description
4.1*	Form of Warrant
10.1*	Securities Purchase Agreement dated as of March 19, 2018 between Arcadia Biosciences, Inc. and each purchaser named in the signature pages thereto
10.2*	Form of Registration Rights Agreement
31.1	Principal Executive Officer's Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Principal Financial Officer's Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1(1)	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2(1)	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

(1) This certification is deemed not filed for purpose of Section 18 of the Exchange Act or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

*Exhibit is incorporated by reference and was originally filed in Form 8-K, file #001-37383 on March 23, 2018.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Arcadia Biosciences, Inc.

May 9, 2018 By: /s/ RAJENDRA KETKAR
Rajendra Ketkar
President and Chief Executive Officer

May 9, 2018 By: /s/ MATTHEW T. PLAVAN
Matthew T. Plavan
Chief Financial Officer

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Rajendra Ketkar, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arcadia Biosciences, Inc. for the period ended March 31, 2018;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 9, 2018

/s/ RAJENDRA KETKAR

Rajendra Ketkar
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew T. Plavan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arcadia Biosciences, Inc. for the period ended March 31, 2018;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles; and

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 9, 2018

/s/ MATTHEW T. PLAVAN

Matthew T. Plavan
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION
PURSUANT TO 18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the accompanying Quarterly Report of Arcadia Biosciences, Inc. (the "Company"), on Form 10-Q for the quarter ended March 31, 2018 (the "Report"), I, Rajendra Ketkar, President and Chief Executive Officer of the Company, hereby certify pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002 that:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 9, 2018

/s/ RAJENDRA KETKAR

Rajendra Ketkar

President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION
PURSUANT TO 18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the accompanying Quarterly Report of Arcadia Biosciences, Inc. (the "Company"), on Form 10-Q for the quarter ended March 31, 2018 (the "Report"), I, Matthew T. Plavan, Chief Financial Officer of the Company, hereby certify pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002 that:

(1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 9, 2018

/s/ MATTHEW T. PLAVAN

Matthew T. Plavan,

Chief Financial Officer

(Principal Financial Officer)