UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 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, 2016

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)**

(530) 756-7077
(Registrant's Telephone Number, Including Area Code)

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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☒

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 April 29, 2016, the number of outstanding shares of the registrant's common stock, par value $0.001 per share, was 44,252,896.

Arcadia Biosciences, Inc.

FORM 10-Q FOR THE QUARTER ENDED MARCH 31, 2016

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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, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 29,540	$ 23,973
Short-term investments	20,654	26,270
Accounts receivable	587	706
Unbilled revenue	106	82
Inventories — current	316	294
Prepaid expenses and other current assets	1,332	692
Total current assets	52,535	52,017
Property and equipment, net	656	585
Inventories — noncurrent	1,831	1,867
Long-term investments	14,907	19,748
Other noncurrent assets	176	25
Total assets	$ 70,105	$ 74,242
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 2,792	$ 2,423
Amounts due to related parties	13	19
Unearned revenue — current	1,353	1,008
Total current liabilities	4,158	3,450
Notes payable	24,978	24,930
Unearned revenue — noncurrent	2,492	2,637
Other noncurrent liabilities	3,000	3,000
Total liabilities	34,628	34,017
Stockholders' equity (deficit):		
Common stock, $0.001 par value—400,000,000 and 400,000,000 shares authorized as of March 31, 2016 and December 31, 2015; 44,248,893 and 44,184,195 shares issued and outstanding as of March 31, 2016 and December 31, 2015	44	44
Additional paid-in capital	172,580	172,222
Accumulated deficit	(137,116)	(131,926)
Accumulated other comprehensive loss	(31)	(115)
Total stockholders' equity	35,477	40,225
Total liabilities and stockholders' equity	$ 70,105	$ 74,242

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,	
	2016	2015
Revenues:		
Product	$ 255	$ 81
License	152	158
Contract research and government grants	445	576
Total revenues (which includes $23 and $23 from related parties — Note 12)	852	815
Operating expenses:		
Cost of product revenues	147	56
Research and development	2,202	1,832
Selling, general and administrative	3,436	2,638
Total operating expenses	5,785	4,526
Loss from operations	(4,933)	(3,711)
Interest expense	(327)	(467)
Other income (expense), net	76	(1,396)
Net loss before income taxes	(5,184)	(5,574)
Income tax provision	(6)	(229)
Net loss	(5,190)	(5,803)
Accretion of redeemable convertible preferred stock to redemption value	—	(1,695)
Deemed dividends to warrant holder	—	(197)
Net loss attributable to common stockholders	$ (5,190)	$ (7,695)
Net loss per share attributable to common stockholders:		
Basic and diluted	$ (0.12)	$ (3.71)
Weighted-average number of shares used in per share calculations:		
Basic and diluted	44,215,156	2,075,407
Other comprehensive income, net of tax		
Unrealized gains on available-for-sale securities	84	—
Other comprehensive income	84	—
Comprehensive loss attributable to common stockholders	$ (5,106)	$ (7,695)

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,	
	2016	**2015**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (5,190)	$ (5,803)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation and amortization	67	72
Net amortization of investment premium	76	—
Stock-based compensation	221	387
Change in fair value of derivative liabilities related to convertible promissory notes	—	1,399
Accretion of debt discount	48	141
Changes in operating assets and liabilities:		
Accounts receivable	119	892
Unbilled revenue	(24)	210
Inventories	14	(49)
Prepaid expenses and other current assets	(641)	24
Other noncurrent assets	(152)	8
Accounts payable and accrued expenses	414	235
Amounts due to related parties	(7)	22
Unearned revenue	200	(136)
Net cash used in operating activities	(4,855)	(2,598)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(137)	(7)
Proceeds from sales and maturities of investments	10,465	—
Net cash provided by (used in) investing activities	10,328	(7)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments of IPO issuance costs	—	(1,238)
Payments of debt issuance costs	(45)	—
Proceeds from exercise of stock options and ESPP purchases	139	2
Payments on notes payable and convertible promissory notes	—	(1,452)
Net cash provided by (used in) financing activities	94	(2,688)
Net increase (decrease) in cash and cash equivalents	5,567	(5,293)
Cash and cash equivalents — beginning of period	23,973	16,571
Cash and cash equivalents — end of period	$ 29,540	$ 11,278
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid for interest	$ 193	$ 510
Cash paid for income taxes	$ 1	$ 148
NONCASH INVESTING AND FINANCING ACTIVITIES:		
Accretion of redeemable convertible preferred stock	$ —	$ 1,695
Change in deferred offering costs included in accounts payable and accrued expenses	$ —	$ (264)
Purchases of property and equipment included in accounts payable and accrued expenses	$ 1	$ —
Deemed dividend to common stock warrant holder	$ —	$ 197

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 the state of Arizona in 2002 and maintains its headquarters in Davis, California, with additional facilities in Seattle, Washington; Phoenix, Arizona; and American Falls, Idaho. The Company was reincorporated in Delaware in March 2015.

The Company pursues agriculture-based biotechnology business opportunities that improve the environment and human health. The Company is an agricultural biotechnology trait company with an extensive and diversified portfolio of late-stage crop productivity and product quality traits addressing multiple crops that supply the global food and feed markets. Its traits are focused on high-value enhancements that increase crop yields by enabling plants to more efficiently manage environmental and nutrient stresses, and that enhance the quality and value of agricultural products.

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 was formed to develop and deregulate soybean varieties using both partners' agricultural technologies.

Reverse Stock Split

In April 2015, the Company's board of directors approved an amended and restated certificate of incorporation to effect a reverse split on the Company's issued and outstanding common stock at a one-for-four ratio. In May 2015, the Company's stockholders approved the certificate of amendment, which the Company filed on May 8, 2015 with the Secretary of State of Delaware to effect the reverse split. The par value and authorized shares of common stock and convertible preferred stock were not adjusted as a result of the reverse split. All issued and outstanding common stock, options to purchase common stock and per share amounts contained in the consolidated financial statement have been retroactively adjusted to reflect the reverse stock split for all periods presented. The consolidated financial statements have also been retroactively adjusted to reflect a proportional adjustment for the conversion ratio for each series of redeemable convertible preferred stock and convertible preferred stock.

Initial Public Offering

In May 2015, the Company completed an initial public offering (the "IPO") and subsequently in June 2015, the Company completed the sale of additional shares upon exercise of the underwriters' over-allotment option. In connection with the IPO, the Company issued 8,528,306 shares of common stock at $8.00 per share, which raised $58.4 million in proceeds, net of underwriting discounts and commissions of $4.8 million and offering expenses of $5.0 million. At the closing of the IPO, all of the outstanding shares of convertible preferred stock and redeemable convertible preferred stock were automatically converted into 32,972,793 shares of common stock. Following the IPO, there were no shares of preferred stock outstanding.

In connection with the IPO, the Company filed an Amended and Restated Certificate of Incorporation to change the authorized capital stock to 400,000,000 shares designated as common stock and 20,000,000 shares designated as preferred stock, all with a par value of $0.001 per share.

Basis of Presentation and Principles of Consolidation

The accompanying unaudited condensed consolidated financial statements include the accounts of the Company and Verdeca LLC 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 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 a full fiscal year. The information included in these 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, 2015 included in the Company's Annual Report on Form 10-K, filed on March 8, 2016.

2. Recent Accounting Pronouncements

In January 2016, the FASB issued ASU 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, and interim periods within those fiscal years, beginning after December 15, 2017, with early adoption permitted if the entity meets certain early application guidance. The Company is evaluating the impact of the adoption of ASU 2016-01 on its operating results and financial position.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. Based on the new standard, leases 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 currently evaluating the impact of the adoption of ASU 2016-02 on its Consolidated Balance Sheets.

In March 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)* and ASU 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The revenue-related update does not change the core principal of the guidance but provides clarification on the implementation guidance on principal versus agent considerations. The standard's effective date is the same as the effective date of ASU 2014-09, which is January 1, 2018. The Company does not anticipate that the adoption of this ASU will materially change the presentation of its consolidated financial statements. The compensation-related standard involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The standard is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted. The Company is evaluating the impact of the adoption of ASU 2016-09 on its 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, 2016	December 31, 2015
Raw materials	$ 719	$ 665
Finished goods	1,428	1,496
Inventories	$ 2,147	$ 2,161

The Company had inventory reserves for excess and slow-moving inventory of $2.3 million as of March 31, 2016 and December 31, 2015.

4. Investments and Fair Value of Financial Instruments

Available-for-Sale Investments

The Company classified cash equivalents, short-term and long-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 income (loss), which is reflected as a separate component of stockholder's equity (deficit) in the Consolidated Balance Sheets. Gains and losses are recognized when realized in the Consolidated Statements of Operations and Comprehensive Loss. The Company did not have available-for-sale securities prior to third quarter of 2015.

The Company's investments in fixed income securities consisted of the following as of March 31, 2016:

(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Assets at Fair Value				
Cash equivalents:				
Money market funds	$ 28,489	$ —	$ —	$ 28,489
Short-term investments:				
Certificates of Deposit	2,557	—	(6)	2,551
U.S. government securities	16,360	2	(6)	16,356
U.S. government agency securities	1,747	—	—	1,747
Long-term investments:				
Certificates of Deposit	2,407	1	(4)	2,404
U.S. government securities	7,521	—	(13)	7,508
U.S. government agency securities	5,000	—	(5)	4,995
Total Assets at Fair Value	$ 64,081	$ 3	$ (34)	$ 64,050

The Company did not have any investment categories that were in a continuous unrealized loss position for more than twelve months as of March 31, 2016. The unrealized gains and losses amounts above are included in AOCI. All long-term investments will mature in 2017.

As of March 31, 2016, 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, 2016.

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 consolidated financial statements on a recurring basis. Assets and liabilities recorded at fair value in the 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 fair value of the available-for-sale investments at March 31, 2016 were as follows:

	Fair Value Measurements at March 31, 2016			
(Dollars in thousands)	Level 1	Level 2	Level 3	Total
Assets at Fair Value				
Cash equivalents:				
Money market funds	$ 28,489	$ —	$ —	$ 28,489
Short-term investments:				
Certificates of Deposit	—	2,552	—	2,552
U.S. government securities	16,356	—	—	16,356
U.S. government agency securities	—	1,746	—	1,746
Long-term investments:				
Certificates of Deposit	—	2,404	—	2,404
U.S. government securities	7,508	—	—	7,508
U.S. government agency securities	—	4,995	—	4,995
Total Assets at Fair Value	$ 52,353	$ 11,697	$ —	$ 64,050

The carrying values of the Company's promissory notes, convertible promissory notes, and notes payable approximate their fair values for the three ended March 31, 2016 and 2015 as the market rates currently available to the Company and other assumptions have not changed significantly. These were classified as Level 2.

The Company's Level 3 liabilities measured and recorded on a recurring basis consist of derivative liabilities related to the convertible promissory note. The following table sets forth a summary of the changes in the fair value and other adjustments of these derivative liabilities (in thousands):

	Three Months Ended March 31,	
	2016	2015
Beginning balance	$ —	$ 1,580
Change in fair value and other adjustments	—	1,399
Ending balance	$ —	$ 2,979

5. Investment in Unconsolidated Entity

The Company owns a 35% ownership position in Limagrain Cereal Seeds LLC ("LCS"). The remaining 65% of LCS is owned by Vilmorin & Cie, a major global producer and marketer of field crop and vegetable seeds and affiliate of Groupe Limagrain ("Limagrain"), through its wholly owned subsidiary, Vilmorin USA ("VUSA"). LCS improves and develops new wheat and barley varieties utilizing genetic and breeding resources, as well as advanced technologies from Limagrain and the Company. Funding for LCS comes from an initial pro rata equity investment from each partner and with subsequent financing in the form of debt from VUSA. As of March 31, 2016, the debt balance was $20.0 million with a maturity date of July 15, 2016. It is the Company's expectation that VUSA will provide LCS with additional debt financing and extend maturity for repayment as needed. Should the debt be converted into equity or additional capital in the form of equity be necessary to support the operations of LCS, the Company has the option to fund its pro rata share of such cash or elect to have its ownership percentage diluted subject to an agreed valuation. As of March 31, 2016 and December 31, 2015, the Company's investment in LCS has been reduced to $0 as a result of its equity method loss recognition.

6. Variable Interest Entity

In February 2012, the Company formed Verdeca LLC, 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 owned by approximately 250 shareholders, including some of South America's largest soybean growers. Verdeca was formed to develop and deregulate soybean varieties using both partners' agricultural technologies.

Both the Company and Bioceres incur expenses in support of specific activities agreed, as defined 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. An agreement executed in conjunction with the formation of Verdeca specified that if Bioceres determines it requires cash to fund its contributed services (subject to certain annual limits), Bioceres, S.A. may elect to sell shares of its common stock to the Company for an amount not exceeding $5.0 million in the aggregate over a four-year period. The Company determined that its commitment to purchase common

stock in Bioceres, S.A. as a means to provide capital to Verdeca resulted in a de facto agency relationship between the Company and Bioceres. 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.

As a result of the agreement to fund future contributions by Bioceres, Inc., the Company purchased common stock of Bioceres, S.A. in the aggregate amount of $2.0 million between January 2013 and August 2014. The Company's maximum commitment to purchase stock in Bioceres, S.A. under the original funding agreement amounted to $2.0 million for 2014 and $1.2 million for 2015. In September 2014, the Company and Bioceres, S.A. entered into an agreement to reduce the annual commitment for 2014 to $500,000 and to eliminate the 2015 commitment. In consideration for these amendments, the Company surrendered 1,832 shares of Bioceres, S.A. held by the Company. The Company recorded an expense of $1.5 million related to this agreement, which is classified as research and development expense in the Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2014.

In addition, the Company had a right to require Bioceres, S.A. to repurchase any shares of common stock then owned by the Company upon the occurrence of certain events specified in the agreement, and similarly, Bioceres, S.A. had the right to require the Company to sell back any shares of common stock owned by the Company under certain circumstances. The Company entered into a subcontracted research agreement in 2015 with Bioceres S.A. and Bioceres Semillas, S.A., a subsidiary of Bioceres S.A. Per the agreement, the Company could pay for these services with a combination of cash and Bioceres S.A. shares. As of December 31, 2015, the liability for the aforementioned research agreement was settled with $205,000 of cash and the remaining 632 Bioceres S.A. shares, with a fair value of $500,000, held by the Company, thus reducing the cost investment on the Company's Condensed Consolidated Balance Sheet to $0.

Under the terms of the joint development agreement, the Company has incurred direct expenses and allocated overhead in the amounts of $40,000 and $163,000 for the three months ended March 31, 2016 and 2015, respectively.

7. Debt

Long-term Debt

Long-term debt consisted of the following (in thousands):

	March 31, 2016	December 31, 2015
Notes payable	$ 24,978	$ 24,930
Total	24,978	24,930
Less current portion	—	—
Long-term portion	$ 24,978	$ 24,930

In July 2012, a 36month $8.0 million term note was executed with Moral Compass Corporation ("MCC"), the Company's largest stockholder, and was subordinate to existing promissory notes and convertible promissory notes. The interest rate on the loan was prime plus 2%, with interest only paid monthly in arrears. The principal was due in full at maturity in July 2015. On November 10, 2014, the Company and MCC entered into an amendment to the term loan under which the maturity date was extended to the first to occur of the following dates: (i) April 1, 2016, (ii) the date of an Event of Default, or (iii) a date designated by MCC, by notice to the Company, no earlier than the 20th day following consummation by the Company of an equity financing with gross proceeds to the Company of at least $50 million. In addition, the interest rate remained at prime plus 2% through December 31, 2014, and was amended to increase to 11% per annum thereafter until maturity. The balance of the note, inclusive of accrued interest, was approximately $8.0 million as of December 31, 2014. Accrued interest of $36,000 was recorded in amounts due to related parties on the balance sheet as of December 31, 2014. This term note, including the principal balance of $8.0 million and accrued interest and prepayment fee of $148,000 was paid in full in April 2015. A prepayment fee of $80,000 was recorded as a loss on extinguishment of debt.

Promissory notes were executed with an unrelated party in August 2013 and November 2013 in the amounts of $2.0 million and $1.1 million, respectively. The interest rate on the notes was 10% with principal and interest due in 36 equal monthly installments over the course of their respective threeyear terms. These notes, including the aggregate outstanding principal balance of $1.6 million and accrued interest and prepayment fee of $44,000, were paid in full in April 2015. A prepayment fee of $37,000 was recorded as a loss on extinguishment of debt.

In April 2015, the Company entered into a loan and security agreement with an unrelated party, under which the Company incurred an aggregate principal amount of $20.0 million in term loan borrowings (the "Term Loans"), proceeds of which were used to repay existing debt with MCC and an unrelated party as described above. Under this loan agreement, interest on the Term Loans accrued at a rate per annum equal to the greater of (i) 9.0% and (ii) a fluctuating rate of interest equal to threemonth LIBOR as in effect from time to time plus 8.74%. The Company was required to make interestonly payments under this agreement from the drawdown dates through April 30, 2016, subject to certain conditions for extension to October 31, 2016. . This agreement provided for a right of prepayment with associated prepayment fees and an additional end-of-term payment of $600,000 due upon maturity or when the Term Loans are prepaid in whole or in part to the lenders.

As part of the Term Loans, the Company also issued the lenders warrants to purchase 1,503,760 shares of its common stock at an exercise price of $5.32 per share, which were only exercisable in the event that an IPO was not completed prior to September 30, 2015 and would have remained exercisable until November 1, 2018. The Company initially recorded $356,000 for the fair value of the warrants as a liability in the Consolidated Balance Sheets, which was subject to subsequent remeasurement for changes in fair value until exercise or expiration. In addition, the Company concluded that the interest rate adjustment upon nonoccurrence of an IPO was an embedded derivative and recorded $81,000 for the fair value of the embedded derivative as a liability, which was subject to subsequent remeasurement for changes in fair value until exercise or expiration. The proceeds received under the Term Loans, less fees paid to the lender of $290,000, were allocated to the warrant liability and the embedded derivative liability based on their initial fair values with the residual amount recorded as notes payable. The resulting debt discount was to be amortized as interest expense over the term of the Term Loans using the effective interest method. The interest expense related to the debt discount was $301,000 for the year ended December 31, 2015.

In May 2015, upon the completion of the IPO, the warrants were terminated and the right to adjust the interest rate upon nonoccurrence of an IPO was relinquished. As such, the Company released the initial fair value of the warrants and the embedded derivative of $437,000 to other income. The Company recognized interest expense inclusive of the debt discount related to the combined Term Loans of $1.5 million for the year ended December 31, 2015.

Two convertible promissory notes ("Convertible Promissory Notes") and a warrant purchase agreement were executed in September 2013 and December 2013 with Mahyco International, an affiliate of Maharashtra Hybrid Seeds Company Ltd. ("Mahyco"), which is a licensee of the Company's technologies. The Convertible Promissory Notes were issued in the amounts of $500,000 in September 2013 and $4.5 million in December 2013. The interest rate on the Convertible Promissory Notes was prime plus 2%, compounded monthly over the course of the fiveyear terms ending September and December 2018, and was payable in full on the maturity dates. At any time during the term, the lender could convert all or part of the outstanding balance of the Convertible Promissory Notes (including principal and accrued but unpaid interest) into common stock of the Company at $16.52 per share through December 2016 and at 90% of the most recent offering thereafter.

At its option, Mahyco International could offset future fee payments due from Mahyco to the Company against the outstanding balance of the Convertible Promissory Notes (including principal and accrued but unpaid interest). Mahyco International had the right to demand immediate settlement of a portion of the outstanding balance of the Convertible Promissory Notes, subject to mutual agreement by the Company. The Company recorded a derivative liability for the initial fair value of the settlement obligation. In addition, Mahyco International had the right, at its option, to place another $5.0 million of convertible debt with the Company during the fiveyear term. The Company recorded an additional derivative liability for the initial fair value of the Company's obligation to issue the additional $5.0 million of convertible promissory notes. Changes in the fair value of the derivative liabilities were recorded to other income (expense), net in the Consolidated Statement of Operations and Comprehensive Loss.

In conjunction with the Convertible Promissory Notes, the Company issued to Mahyco International a warrant (the "Mahyco Warrant") to purchase 75,666 shares of common stock at an exercise price of $16.52. The Mahyco Warrant was issued in December 2013, vested immediately and remains exercisable throughout the original fiveyear term. The Company allocated the gross proceeds from the Convertible Promissory Notes to the derivative liabilities based on their initial fair values and the remainder of the proceeds to the Convertible Promissory Notes and Mahyco Warrant on a relative fair value basis. The amount allocated to the Mahyco Warrant was recorded as a debt discount to be amortized as interest expense over the estimated term of the note and warrant purchase agreement using the effective interest rate method. The Company recognized interest expense related to the Convertible Promissory Notes of $276,000 for the three months ended March 31, 2015. In March 2015, the parties amended the Mahyco Warrant to clarify certain terms relating to expiration. The Company accounted for the amendment as a modification with the incremental increase in fair value of $197,000 as of the amendment date, which was accounted for as a deemed dividend to the warrant holder.

In December 2015, the Company entered into a new loan and security agreement with Silicon Valley Bank (the "Bank") providing for a senior secured term loan facility in the amount of $25.0 million. Proceeds were used by the Company to repay all existing debt including the Term Loans' principal balance of $20.0 million and related accrued interest, prepayment and other fees in the amount of $1.3 million and the Convertible Promissory Notes' principal balance of $3.7 million and associated accrued interest of $154,000. The Term Loans' prepayment and end of term fees of $1.2 million were recorded as a loss on extinguishment of debt, along

with the $427,000 unamortized debt discount and $58,000 of deferred loan issuance fees. In addition, Mahyco International's option to place another $5.0 million of convertible debt was surrendered with the repayment and the related derivative liabilities totaling $1.6 million were released and recorded as a gain on extinguishment of debt.

Under this new loan and security agreement, interest accrues at a floating rate per annual rate equal to nine tenths of one percentage point (0.90%) above the prime rate published from time to time in The Wall Street Journal. The agreement requires the Company to make monthly interest-only payments through December 2017. After this date, the Company is required to make thirty-six (36) equal monthly installments of principal, plus accrued interest. The Company's final payment, due on the maturity date of December 1, 2020, shall include all outstanding principal and accrued and unpaid interest plus a final payment equal to $600,000. In the event the loan is repaid prior to its maturity, a prepayment fee is due equal to 3% of the outstanding principal amount if prepayment occurs after December 29, 2016 but on or before December 29, 2017, and 1% of the outstanding principal amount if the prepayment occurs after December 29, 2017. The loan has been recorded on the Consolidated Balance Sheet as of December 31, 2015, net of approximately $70,000 related to issuance fees. The Company recognized interest expense of $327,000 for the three months ended March 31, 2016. Of the total interest expense recognized, $49,000 was related to the amortization of the debt discount and end of term payment.

This loan and security agreement contains customary events of default and covenants, including a financial covenant that requires the Company to maintain either a liquidity ratio (defined as the ratio of the Company's cash, cash equivalents and net accounts receivable to the Company's obligation owed to the Bank) of at least 1.4:1.0, or to cash collateralize 100% of the Company's obligations to the Bank. The Company's obligations to the Bank are secured by substantially all of the Company's assets, excluding intellectual property. As of March 31, 2016, the Company is in compliance with the covenant.

8. Stock-Based Compensation

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 options 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 under the 2006 Plan. Certain options vested upon completion of the IPO and the remaining unvested options vest over original service periods between two-and-a-quarter and four years. The 2015 Plan became effective upon the IPO 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 3,087,729 shares of common stock reserved for future issuance, which included 212,729 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, beginning on January 1, 2016. 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"), nonstatutory stock options ("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 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 generally are exercisable for up to 10 years.

As of March 31, 2016, a total of 4,829,040 shares of common stock were reserved for issuance under the 2015 Plan, of which 4,784,040 shares of common stock are available for future grant. As of March 31, 2016, a total of 3,326,795 and 45,000 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, 2015	3,427,509	$ 3.76	$ 3,707
Options granted	—	—	
Options exercised	(29,939)	1.66	
Options cancelled and forfeited	(25,775)	3.35	
Outstanding — Balance at March 31, 2016	3,371,795	$ 3.78	$ 2,989
Options vested and exercisable — March 31, 2016	3,142,149	$ 3.53	$ 2,989

As of March 31, 2016, there was $511,000 of unrecognized compensation cost related to unvested stock-based compensation grants that will be recognized over the weighted-average remaining recognition period of 1.82 years.

The weighted-average estimated grant-date fair value of employee stock options granted during the three months ended March 31, 2015 was $4.62. There were no options granted during the three months ended March 31, 2016.

Employee Stock Purchase Plan

Concurrent with the effectiveness of the Company's registration statement on Form S-1 on May 14, 2015, the Company's 2015 Employee Stock Purchase Plan ("ESPP") became effective. The ESPP allows eligible employees to purchase shares of the Company's common stock at a discount through payroll deductions of up to 15% of their eligible compensation, 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 day of the offering period. As of March 31, 2016, the number of shares of common stock reserved for future issuance under the ESPP is 1,027,741. The ESPP provides for automatic annual increases in the shares available for purchase beginning on January 1, 2016. As of March 31, 2016, 34,759 shares had been issued under the ESPP. The Company recorded $30,000 of compensation expense for the three months ended March 31, 2016.

9. 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 34%. The Company's effective tax rate (ETR) was -0.1% and -4.1% for the three months ended March 31, 2016 and 2015, respectively. The difference between the effective tax rate and the federal statutory rate of 34% was primarily due to the full valuation allowance recorded on the Company's net deferred tax assets and foreign withholding taxes.

As of March 31, 2016, there have been no material changes to the Company's uncertain tax positions.

10. 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" or "Sellers"), to purchase the Sellers' food and agricultural research company through a stock purchase. Pursuant to the merger with Anawah, 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 and, as a result, reduced the contingent liability to $3.0 million. As of March 31, 2016, the Company believes the contingent liability is appropriate as it continues to pursue three development programs using this technology.

11. 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 and conversion of convertible promissory notes, redeemable convertible preferred stock and convertible preferred stock. As the Company had net losses for the three months ended March 31, 2016 and 2015, 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,	
	2016	2015
Convertible preferred stock	—	23,385,029
Redeemable convertible preferred stock	—	8,938,094
Options to purchase common stock	3,371,795	4,062,172
Warrants to purchase common stock	1,336,894	1,336,894
Convertible notes	—	312,156
Total	4,708,689	38,034,345

12. Related-Party Transactions

The Company's related parties include MCC, Blue Horse Labs, Inc. ("BHL"), and Limagrain. BHL is deemed a related party as a result of its existing contractual relationship with the Company and because a Director of the Company also serves as the Treasurer of BHL and as an Officer and Director of MCC, the Company's controlling stockholder as of March 31, 2016.

Transactions with related parties are reflected in the condensed consolidated financial statements under amounts due to or from related parties and notes payable to related party. Outlined below are details of agreements between the Company and its related parties:

A term note was executed with MCC in July 2012 for $8.0 million (see Note 7). This note was paid off in full in April 2015. The interest expense for the three months ended March 31, 2015 was $217,000.

Under a license agreement executed in 2003 and amended in 2009, BHL receives a single-digit 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 from BHL. Royalty fees due to BHL were $13,000 and $19,000 as of March 31, 2016 and December 31, 2015, respectively, and are included in the consolidated balance sheets as amounts due to related parties.

License agreements were executed with Limagrain, a stockholder of the Company, in September 2009 and February 2011. The agreements license certain of the Company's traits to Limagrain and include up-front license fees, annual license fees, milestone fees and value-sharing payments. The Company recognized $23,000 of revenue under these agreements in each of the three months ended March 31, 2016 and 2015. No amounts were due from Limagrain as of March 31, 2016 and December 31, 2015.

13. Subsequent Events

During the first quarter, the Company conducted a comprehensive review of development program priorities and a reprioritization of its pipeline development activities, which identified a number of projects where resources should be reduced, eliminated or reallocated. As a result, seven staff positions at different levels of the Company were eliminated on April 22, 2016, representing approximately 8% of its current workforce.

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

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, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under "Risk Factors."

Special Note Regarding Forward-Looking Statements

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 under Part II, Item 1A below. 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

Overview

We are a leading agricultural biotechnology trait company with an extensive and diversified portfolio of late-stage yield and product quality traits addressing multiple crops that supply the global food and feed markets. Our traits are focused on high-value enhancements that increase crop yields by enabling plants to more efficiently manage environmental and nutrient stresses, and that enhance the quality and value of agricultural products. Our traits increase value not only for farmers, but also for users of agricultural products. Our target market is the $40.5 billion global seed market. Our goal is to increase the value of this market significantly by increasing yields in the more than $1.0 trillion market for the five largest global crops, and to capture a portion of the increased value.

Our crop yield traits are being utilized by our commercial partners to develop higher yielding seeds for the most widely grown global crops, including wheat, rice, soybean, corn, and sugarcane, as well as for other crops such as cotton, turf and trees. Our business model positions us at the nexus of basic research and commercial product development, as we apply our strong product development and regulatory capabilities to collaborate with, and leverage the skills and investments of, upstream basic research institutions and downstream commercial partners. We believe our approach significantly reduces risk and capital requirements, while simplifying and expediting the product development process. We also believe that our collaboration strategy leverages our internal capabilities, enabling us to capture much higher value than would otherwise be the case, and enabling our commercial partners to develop and commercialize products more cost-effectively.

We were incorporated in 2002 to pursue agricultural-based biotechnology business opportunities that improve the environment and human health, and in 2004, we entered into our first collaboration agreement with a potential commercial partner. In 2009, we completed the U.S. Food and Drug Administration, or FDA, regulatory process for our Sonova brand gamma linolenic acid safflower oil, called Sonova 400 GLA safflower oil, just six years after we first began developing the trait under a research and commercial agreement with Abbott. We introduced this product commercially in late 2010, and in 2014, we introduced Sonova Ultra GLA safflower oil, a more concentrated version of our Sonova 400 GLA safflower oil. We refer to these products as our Sonova products.

We have formed strategic partnerships and developed strong relationships with global agricultural leaders for development and commercialization of our traits in major crops and consumer products. Our collaborators include Limagrain (Vilmorin & Cie), Mahyco (Maharashtra Hybrid Seeds Company Limited), Dow AgroSciences, DuPont Pioneer (E.I. du Pont de Nemours and Company), SES Vanderhave, Genective (a joint venture between Limagrain and KWS SAAT), Scotts, U.S. Sugar, Abbott, Ardent Mills, Bioceres, and others. Additionally, in order to increase our participation in the value of two major crops, wheat and soybean, we have formed two joint ventures. Limagrain Cereal Seeds LLC is our joint venture with Limagrain for the development and commercialization of wheat and barley products for North America. Verdeca LLC is our joint venture with Bioceres for the development and deregulation of soybean traits globally. In April 2015, we entered into a collaboration agreement with Dow AgroSciences and Bioceres under which our Verdeca joint venture will collaborate with Dow AgroSciences on the development and deregulation of soybean traits on a global basis. In December 2015, we announced a strategic collaboration with Dow AgroSciences to

develop traits in corn. We intend to enter into future collaboration agreements and joint ventures depending on our assessment of which structure provides the best ratio of risk to investment return.

The process of developing and commercializing innovative traits and seed products requires significant time and investment. Our business model focuses on creating value by leveraging collaborator investments and capabilities upstream in basic research, and downstream in product development and commercialization. We bridge the gap between basic research and commercial development, reducing risk and adding value as a result. We reduce risk and avoid most of the costs associated with basic research by acquiring trait technologies that have already completed initial feasibility screening, thus achieving proof of concept, through basic research carried out elsewhere. We further develop these technologies by optimizing function and validating performance through intensive field trial testing in multiple crops. We then form collaborations with major seed and consumer product companies that develop and commercialize products incorporating our traits. As a result of our expertise and this additional development work, we are positioned to capture significantly greater payments in our downstream license and collaboration agreements than we believe is otherwise typical in our industry.

In certain instances, we may also work to complete the regulatory process to support the commercial launch of products containing our traits. We would do this in order to obtain a greater share of the economics of the commercial product. We intend to pace any regulatory investments so that we only make such investments after the performance risk for the seed trait has been significantly reduced through extensive field testing. We may pursue regulatory investments in these instances if we believe that they will result in a highly positive rate of return due to increased payments from our commercial partners or joint ventures.

Our commercial strategy aims to balance our near-term revenue goals with long-term value capture. Our trait license agreements with our commercial partners contain two main types of financial components:

- A set of pre-commercialization payments from our commercial partners that are linked to their pursuit of technical and regulatory milestones under a well-defined diligence plan. The pre-commercialization payments typically include upfront and annual license fees, as well as multiple payments for key technical and development milestones such as demonstration of greenhouse efficacy, demonstration of field efficacy, regulatory submission, regulatory approval, and commercial launch. Under most of our license agreements, failure of our commercial partners to adhere to the diligence plan may result in a reduction, or elimination, of their license rights. The combination of diligence requirements and milestone payments motivates our commercial partners to develop and commercialize products containing our traits, while providing us with revenue to fund our development programs.
- 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 that 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.

Most of our agreements include the grant of exclusive rights to a particular trait for use in a particular crop within a defined geography. To date, we have not granted exclusive rights to all of our traits for use in a particular crop to a single partner and, likewise, we have not granted exclusive rights to utilize a particular trait in all crops to a single partner. Our approach to selecting commercial partners involves careful consideration of their market channels and capabilities to ensure that they are well matched to the trait, crop, and geography that form the foundation of our commercial relationship.

The process of discovering, developing, and commercializing a seed trait through either genetic modification or advanced breeding involves multiple phases and takes an average of 13 years from discovery to commercialization. The length of the process may vary depending on both the complexity of the trait and the type of crop involved. This long product development cycle is in large part attributable to the limitations of natural growing seasons and the impact of this on the time it takes to breed commercial seed products. For genetically modified, or GM, seeds, there is also a rigorous and lengthy regulatory process that operates in parallel to the later stages of the seed breeding process.

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, and we do not anticipate generating any revenues from commercial product sales other than from sales of our Sonova products for at least the next three to five years. 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 $137.1 million as of March 31, 2016. We incurred net losses of $5.2 million and $5.8 million for the three months ended March 31, 2016 and 2015, 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. We expect that over the next several years, a substantial majority of our revenues will consist of license revenues and contract research and government grant revenues until our license revenues increase with the introduction of our seed trait products to the market, if and when they are commercially available. Further, we expect that our license revenues will vary as we enter into new license agreements and with the timing of milestone payments and recognition of deferred upfront license fees under 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 delivery to our third-party distributors or customers. Our revenues will 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 generally recognize nonrefundable up-front license fees and guaranteed, time-based payments as revenue proportionally over the expected development period. We recognize annual license fees proportionally over the related term subject to cancellation provisions.

We recognize milestone payments as revenue when the related performance criteria are achieved. 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 revenues consist of amounts earned from performing contracted research primarily related to breeding programs or the genetic engineering of plants for third parties. We generally recognize revenue as these services are provided. 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 do not expect to generate any revenues from the sale of any such products for at least the next three to five years.

We receive payments from government entities in the form of government grants. Government grant revenues are recognized as eligible research and development expenses are incurred. 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 reserve, 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. We expect our research and development expenses to increase on an absolute dollar basis for the foreseeable future, although our research and development expenses may increase significantly if we choose to accelerate certain research and development programs or if we elect to take a greater role in the regulatory and commercialization process with respect to one or more of our seed traits or products in development incorporating our seed traits. Our research and development expenses may also 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.

Interest Expense

Interest expense consists primarily of contractual interest and amortization of debt discounts on the borrowings under loan agreements.

Other Income (Expense), Net

Other income (expense), net, consists of changes in the fair value of our derivative liabilities related to our convertible promissory notes, the release of warrant and derivative liabilities related to notes payable, interest income and the amortization of investment premiums on our cash and cash equivalents and investments.

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 full valuation allowance against our U.S. deferred tax assets. 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, 2016 and 2015

	Three Months Ended March 31,		$ Change	% Change
	2016	2015		
	(In thousands except percentage)			
Revenues:				
Product	$ 255	$ 81	$ 174	215%
License	152	158	(6)	(4)%
Contract research and government grants	445	576	(131)	(23)%
Total revenues	852	815	37	5%
Operating expenses:				
Cost of product revenues	147	56	91	163%
Research and development	2,202	1,832	370	20%
Selling, general and administrative	3,436	2,638	798	30%
Total operating expenses	5,785	4,526	1,259	28%
Loss from operations	(4,933)	(3,711)	1,222	33%
Interest expense	(327)	(467)	(140)	(30)%
Other income (expense), net	76	(1,396)	(1,472)	(105)%
Net loss before income taxes	(5,184)	(5,574)	(390)	(7)%
Income tax provision	(6)	(229)	(223)	(97)%
Net loss	(5,190)	(5,803)	(613)	(11)%
Accretion of redeemable convertible preferred stock to redemption value	—	(1,695)	(1,695)	(100)%
Deemed dividends to warrant holder	—	(197)	(197)	(100)%
Net loss attributable to common stockholders	$ (5,190)	$ (7,695)	$ (2,505)	(33)%

Revenues

Product revenues accounted for 30% and 10% of our total revenues in the three months ended March 31, 2016 and 2015, respectively. Our product revenues from sales of our Sonova products increased by $174,000, or 215%, due to continued increased growth in encapsulated sales and higher volume orders from several of our existing clients.

License revenues accounted for 18% and 19% of our total revenues for three months ended March 31, 2016 and 2015, respectively. Our license revenues decreased by $6,000, or 4%, in the three months ended March 31, 2016 compared to revenues in the same period of 2015. The decrease in license revenue is primarily driven by the discontinuance of license agreements during second quarter of 2015 resulting in revenue recognition for deferred fees.

Contract research and government grant revenues comprise a significant portion of our total revenues and accounted for 52% and 71% of our total revenues for the three months ended March 31, 2016 and 2015, respectively. Our contract research and government grant revenues decreased by $131,000, or 23%, in the three months ended March 31, 2016 compared to the same period in 2015. The decrease in grant and contract research revenue is primarily driven by two contracts achieving successful project completion within 2015. 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 increased by $91,000, or 163%, in the three months ended March 31, 2016 compared to the three months ended March 31, 2015 due to the increase in volume of sales when comparing the respective periods.

Research and Development

Research and development expenses increased by $370,000, or 20%, in the three months ended March 31, 2016 compared to the three months ended March 31, 2015. The increase was primarily driven by increased in-licensing fees, contract research fees recognized and increased field trial activity. These increases were partially offset by lower utilization of subcontractor work pertaining to grant contracts correlating with decreased contract research and government grant revenues.

Selling, General, and Administrative

Selling, general, and administrative expenses increased by $798,000, or 30%, in the three months ended March 31, 2016 compared to the three months ended March 31, 2015. The increase was primarily related to severance expenses, increased accounting, legal and outside services associated with operating as a public company, and a state franchise tax expense as a result of the Company's reincorporation in March 2015.

Interest Expense

Interest expense was $327,000 for the three months ended March 31, 2016, a decrease of $140,000, or 30% compared to $467,000 for the three months ended March 31, 2015. The decrease was primarily related to the more favorable interest rate and smaller debt discount associated with the refinance of debt in December 2015.

Other Income (Expense), Net

Other income, net, of $76,000 for the three months ended March 31, 2016 was a decrease of $1.5 million, or 105%, in expenses when compared to a net expense of $1.4 million for the three months ended March 31, 2015. The decrease of $1.5 million in expenses primarily consisted of the release of derivative liabilities related to our convertible promissory notes, which balances were paid in December 2015.

Income Tax Benefit (Provision)

The income tax benefit increased by $223,000, or 97% for the three months ended March 31, 2016 when compared to the same period in 2015. The increase was the result of lower foreign tax expense expected for 2016 than recognized in 2015.

Accretion of Redeemable Convertible Preferred Stock to Redemption Value

Accretion of Series D redeemable convertible preferred stock to redemption value decreased by $1.7 million, or 100%, in 2016 compared to 2015. Our Series D redeemable convertible preferred stock converted into common stock upon the completion of our initial public offering in May 2015.

Deemed Dividend to Warrant Holder

In March 2015, the Company accounted for the amendment of a warrant related to the convertible promissory notes as a modification with the incremental increase in the fair value of $197,000.

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 variables on which sales of our products are dependent 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

Since our inception, we have funded our operations primarily with the net proceeds from placements of equity and debt securities, as well as proceeds from the sale of our Sonova products, payments under license agreements, contract research agreements, and government grants. Our principal use of cash is to fund our operations, which primarily are focused on progressing our agricultural yield and product quality seed traits through the regulatory process and to commercialization. This includes conducting replicated 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, 2016, we had cash and cash equivalents of $29.5 million, short-term investments of $20.7 million, and $14.9 million of long-term investments.

In May 2015, we completed our initial public offering. In connection with this offering, we issued and sold 8,528,306 shares of common stock at a price to the public of $8.00 per share and received $58.4 million in net proceeds, after deducting underwriting discounts and commissions of $4.8 million and offering expenses of $5.0 million.

In December 2015, we obtained debt financing in the form of a $25.0 million senior secured term loan, allowing us to prepay all existing debt with a more favorable terms.

We may seek to fund our operations through additional 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 could result in additional dilution to our stockholders. Our incurrence of additional debt would result in increased 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.

Term Note, Related Party

In July 2012, we entered into a 36-month unsecured term note with MCC, our largest stockholder, in the amount of $8.0 million. The interest rate on the loan was prime plus 2%, with interest paid monthly in arrears, and the principal was due in full at maturity in July 2015. In November 2014, we amended this note to change the maturity date to the first to occur of (i) April 1, 2016, (ii) the date of an event of default, or (iii) a date designated by MCC no earlier than the 20th day following our completion of an equity financing with gross proceeds to us of at least $50.0 million. In addition, the interest rate on the term loan remained at prime plus 2% through December 31, 2014, after which the rate increased to 11% per annum until maturity. This term note, including the principal balance of $8.0 million and accrued interest and prepayment fee of $148,000, was paid in full in April 2015. The $80,000 prepayment fee was recorded as a loss on extinguishment of debt.

Promissory Notes

We entered into promissory notes in August 2013 and November 2013 in the amounts of $2.0 million and $1.1 million, respectively. The interest rate on the notes was fixed at 10% with principal and interest due in 36 equal monthly installments over the course of the three-year terms. As described below under “Term Loans,” these notes, including the aggregate outstanding principal balance of $1.6 million and accrued interest and prepayment fees of $44,000, were paid in full in April 2015. The $37,000 prepayment fee was recorded as a loss on extinguishment of debt.

Convertible Promissory Notes

In September 2013, we entered into a note and warrant purchase agreement in the amount of $5.0 million with Mahyco International, an affiliate of Mahyco, one of our commercial partners with which we have several research and license agreements. We issued a convertible promissory note under this agreement in exchange for $0.5 million in September 2013 and issued a second convertible promissory note in exchange for $4.5 million in December 2013. The interest rate on the notes was prime plus 2%, compounded monthly over the course of the five-year terms ending in September and December 2018, respectively. At any time during the term, Mahyco International could convert all or part of the aggregate outstanding balance of the notes (including principal and accrued but unpaid interest) into shares of our common stock at $16.52 per share. Mahyco International had the right, at its option, to place another $5.0 million of convertible debt with us during the five-year term. Mahyco International, at its option, could offset future fee payments to us due from Mahyco under any license agreements or contract research and development agreements with us against the outstanding balance of the note, including principal and accrued but unpaid interest. With the exception of such offset payments, no principal or interest was due until the end of the term. Under this note and warrant purchase agreement, we also issued Mahyco International warrants to purchase 75,666 shares of our common stock at an exercise price of $16.52 per share. The warrants were issued in December 2013, vested immediately, and remain exercisable. The notes were paid in full in December 2015, as further described below in “Term Loans.”

Term Loans

In April 2015, we entered into a loan and security agreement with lenders that are affiliates of Tennenbaum Capital Partners, LLC. Obsidian Agency Services, Inc. acted as administrative agent for the lenders under this agreement. Under the agreement, the lenders committed to advance term loans in an aggregate principal amount of up to $20.0 million, and we borrowed the entire $20.0 million of term loan commitments on the loan closing date. A portion of the proceeds were used to repay the balance of the promissory notes.

In December 2015, we entered into a new loan and security agreement with Silicon Valley Bank (the "Bank") providing for a senior secured term loan facility in the amount of $25.0 million. Proceeds were used to repay all existing debt, including the Tennenbaum term loans' principal balance of $20.0 million and related accrued interest, prepayment and other fees in the amount of $1.3 million and the Mahyco convertible promissory notes' principal balance of $3.7 million and associated accrued interest of $154,000. The Tennenbaum term loans' prepayment and end of term fees of $1.2 million were recorded as a loss on extinguishment of debt, along with the $427,000 unamortized debt discount and $58,000 of deferred loan issuance fees. In addition, Mahyco's option to place another $5.0 million of convertible debt was surrendered with the repayment and the related derivative liabilities totaling $1.6 million were released and recorded as a gain on extinguishment of debt.

Under this new loan and security agreement with the Bank, interest accrues at a floating annual rate equal to nine tenths of one percentage point (0.90%) above the prime rate published from time to time in The Wall Street Journal. The agreement requires us to make monthly interest-only payments through December 2017. After this date, we are required to make thirty-six (36) equal monthly installments of principal, plus accrued interest. Our final payment, due on the maturity date of December 1, 2020, shall include all outstanding principal and accrued and unpaid interest plus a final end of term payment equal to $600,000. Should the loan be repaid prior to the maturity date, the prepayment fee due is equal to 3% of the outstanding principal amount if prepayment occurs after December 29, 2016 but on or before December 29, 2017. If the prepayment occurs after December 29, 2017, the prepayment fee due is equal to 1% of the outstanding principal amount.

This loan and security agreement contains customary events of default and covenants, including a financial covenant that requires us to maintain either a liquidity ratio (defined as the ratio of our cash, cash equivalents and net accounts receivable to our obligation owed to the Bank) of at least 1.4:1.0, or to cash collateralize 100% of our obligations to the Bank. Our obligations to the Bank are secured by substantially all of our assets, excluding intellectual property.

Cash Flows

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

	Three Months Ended March 31,	
	2016	2015
Net cash (used in) provided by:		
Operating activities	$ (4,855)	$ (2,598)
Investing activities	10,328	(7)
Financing activities	94	(2,688)
Net increase (decrease) in cash	$ 5,567	$ (5,293)

Cash used in operating activities

Cash used in operating activities for the three months ended March 31, 2016 was $4.9 million. Our net loss of $5.2 million and adjustments in our working capital accounts of $77,000 were partly offset by non-cash charges of $221,000 for stock-based compensation, $76,000 for net amortization of investment premiums and $67,000 for depreciation and amortization. The decrease in cash associated with our net operating assets of $77,000 was primarily due to a $793,000 increase in the change of prepaid expenses and other current assets as a result of a license fee and annual contracted research fees paid at the beginning of the year, which was offset by a $414,000 decrease in accounts payable and accrued liabilities due to the timing of our payments on billings received, $200,000 decrease in unearned revenue due to the recognition of revenue, and a $119,000 decrease in accounts receivable as a result of a significant milestone payment which was invoiced in the fourth quarter of 2015 and received in the first quarter of 2016.

Cash used in operating activities for the three months ended March 31, 2015 was $2.6 million. Our net loss of $5.8 million was partly offset by non-cash charges of $1.4 million for the change in fair value of derivative liabilities, $0.4 million for stock-based compensation, $0.1 million for accretion of debt discount, and $72,000 for depreciation and amortization as well as adjustments in our working capital accounts. The increase in cash associated with our net operating assets of $1.2 million was primarily due to a $1.1 million decrease in accounts receivable and unbilled revenue as a result of a significant milestone payment which was invoiced in the fourth quarter of 2014 and received in the first quarter of 2015.

Cash provided by (used in) investing activities

Cash provided investing activities for the three months ended March 31, 2016 of $10.3 million primarily consisted of maturities of short-term investments, partially offset by purchases of property and equipment.

Cash used in investing activities for the three months ended March 31, 2015 of $7,000 primarily consisted of the purchase of property and equipment.

Cash provided by (used in) financing activities

Cash provided by financing activities for the three months ended March 31, 2016 of $94,000 consisted of proceeds from the exercise of stock options and the purchase of ESPP shares.

Cash provided by financing activities for the three months ended March 31, 2015 of $2.7 million was related to $1.5 million of payments on notes payable and convertible promissory notes and $1.2 million of deferred offering costs payments.

Contractual Obligations and Other Commitments

There have been no other material changes in our contractual obligations since December 31, 2015.

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 Polices 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, and stock based compensation. There have been no material changes to our critical accounting policies and estimates during the three months ended March 31, 2016 from those disclosed in our Annual Report on Form 10-K filed with the SEC on March 8, 2016.

ITEM 3: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of March 31, 2016, we had cash and cash equivalents of $29.5 million, short-term investments of $20.7 million and long-term investments of $14.9 million, consisting primarily of cash equivalents and other liquid investments deposited in highly rated financial institutions in the United States. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because the majority of our investments are shortterm in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

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 Interim Chief Executive Officer and Interim 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 Interim Chief Executive Officer and Interim 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, 2016 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

You should carefully consider the following risk factors, in addition to the other information contained in this report on Form 10-Q, including the section of this report titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes. If any of the events described in the following risk factors and the risks described elsewhere in this report occurs, our business, operating results and financial condition could be seriously harmed. This report on Form 10-Q also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this report.

Risks Related to Our Business and Our Industry

We or our collaborators may not be successful in developing commercial products that incorporate our traits.

Our future growth depends on our ability to identify genes that will improve selected crop traits and license these genes to our collaborators to develop and commercialize seeds that contain the genes. Our long-term growth strategy is based on our expectation that revenues related to the sale of seeds containing our traits will comprise a significant portion of our future revenues. Pursuant to our collaboration agreements, we are entitled to share in the revenues from the sale of products that integrate our trait. We expect that it will take several years before the first seeds integrating our agricultural yield traits complete the development process and become commercially available for sale, resulting in revenues for us. However, the development process could take longer than we anticipate or could ultimately fail to succeed in commercialization for any of the following reasons:

- our traits may not be successfully validated in one or more target crops;
- our traits may not have the desired effect sought by our collaborators in the relevant crop or geography, or under certain environmental conditions;
- relevant milestones under our agreements with collaborators may not be achieved; and
- we or our collaborators may be unable to complete the regulatory process for the products containing our traits.

If products containing our traits are never commercialized, or are commercialized on a slower timeline than we anticipate, our ability to generate revenues and become profitable, as well as our long-term growth strategy, would be materially and adversely affected.

Even if we or our collaborators are successful in developing commercial products that incorporate our traits, such products may not achieve commercial success.

Our long-term growth strategy is dependent upon our or our collaborators' ability to incorporate our traits into a wide range of crops with global scope. Even if we or our collaborators are able to develop commercial products that incorporate our traits, any such

products may not achieve commercial success as quickly as we project, or at all, for one or more of the following reasons, among others:

- products may fail to be effective in particular crops, geographies, or circumstances, limiting their commercialization potential;
- our competitors may launch competing or more effective traits or products;
- the market for abiotic seed traits is evolving and not well established, and the market opportunities for any product we or our collaborators develop may be smaller than we or our collaborators believe;
- as we do not have a sales or marketing infrastructure for our agricultural yield traits, we depend entirely on our collaborators to commercialize our products, and they may fail to devote the necessary resources and attention to sell, market, and distribute our current or any future products effectively;
- significant fluctuations in market prices for agricultural inputs and crops could have an adverse effect on the value of our traits;
- farmers are generally cautious in their adoption of new products and technologies, with conservative initial purchases and proof of product required prior to widespread deployment, and accordingly, it may take several growing seasons for farmers to adopt our or our collaborators' products on a large scale;
- farmers may reuse certain non-hybrid GM seeds from prior growing seasons in violation of applicable seed license agreements;
- our collaborators may not be able to produce high-quality seeds in sufficient amounts to meet demand; and
- our collaborators may decide, for whatever reason, not to commercialize products containing our traits.

Our financial condition and results of operations could be materially and adversely affected if any of the above were to occur.

Our product development cycle is lengthy and uncertain, and we may never earn revenues from the sale of products containing our traits.

Research and development in the seed, agricultural biotechnology, and larger agriculture industries is expensive and prolonged and entails considerable uncertainty. We and our collaborators may spend many years and dedicate significant financial and other resources, including the proceeds from our recent initial public offering, developing traits that will never be commercialized. The process of discovering, developing, and commercializing a seed trait through either genetic modification or advanced breeding involves multiple phases, and it may require from six to thirteen years or more from discovery to commercialization. The length of the process may vary depending on one or more of the complexity of the trait, the particular crop, and the intended geographical market involved. This long product development cycle is in large part attributable to the nature-driven breeding period for a commercial product, as well as a lengthy regulatory process.

There are currently more than 40 products in development incorporating our traits, each of which consists of the application of a specific seed trait to a specific crop. Although our Sonova products are on the market currently, we expect that it will take several years before the first products containing our agricultural yield traits complete the development process and become commercially available. However, we have little to no certainty as to which, if any, of these products will eventually reach commercialization in this timeframe or at all. Because of the long product development cycle and the complexities and uncertainties associated with agricultural biotechnology research, there is significant uncertainty as to whether we will ever generate revenues from the sale of products containing one of our traits and, even if such products reach commercialization, any resulting revenues may come at a later time than we currently anticipate.

We have a history of significant losses, which we expect to continue, and we may never achieve or maintain profitability.

We have incurred significant net losses since our formation in 2002 and expect to continue to incur net losses for the foreseeable future. We incurred net losses of $5.2 million and $5.8 million for the three months ended March 31, 2016 and 2015, respectively. As of March 31, 2016, we had an accumulated deficit of $137.1 million. We expect to continue to incur losses until we begin generating revenues from our collaborators' sale of products containing traits we are currently developing, which we expect will not occur for several years, if at all. Because we have incurred and will continue to incur significant costs and expenses for these efforts before we obtain any incremental revenues from the sale of seeds incorporating our traits, our losses in future periods could be even more significant. In addition, we may find our development efforts are more expensive than we anticipate or that they do not generate revenues in the time period we anticipate, which would further increase our losses. If we are unable to adequately control the costs associated with operating our business, including costs of development and commercialization of our traits, our business, financial condition, operating results, and prospects will suffer.

In addition, our ability to generate meaningful revenues and achieve and maintain profitability depends on our ability, alone or with strategic collaborators, to successfully complete the development of and complete the regulatory process to commercialize our traits. Most of our revenues since inception have consisted of upfront and milestone payments associated with our contract research and license agreements. Additional revenues from these agreements are largely dependent on successful development of our traits by us or our collaborators. To date, we have not generated any significant revenues from product sales other than from our Sonova products, and we do not otherwise anticipate generating revenues from product sales other than from sales of our Sonova products for the next several years. If products containing our traits fail to achieve market acceptance or generate significant revenues, we may never become profitable.

We may require additional financing in the future and may not be able to obtain such financing on favorable terms, if at all, which could force us to delay, reduce, or eliminate our research and development activities.

We will continue to need capital to fund our research and development projects and to provide working capital to fund other aspects of our business. If our capital resources are insufficient to meet our capital requirements, we will have to raise additional funds. If future financings involve the issuance of equity securities, our existing stockholders would suffer dilution. If we are able to raise additional debt financing, which will require the consent of our current debt holder, we may be subject to additional restrictive covenants that limit our operating flexibility. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop and commercialize products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research and development programs or the commercialization of products, or curtail operations. If adequate funds are not available, we will not be able to successfully execute on our business strategy or continue our business.

If ongoing or future field trials by us or our collaborators are unsuccessful, we may be unable to complete the regulatory process for, or commercialize, our products in development on a timely basis.

The successful completion of field trials in United States and foreign locations is critical to the success of product development and marketing efforts for products containing our traits. If our ongoing or future field trials, or those of our collaborators, are unsuccessful or produce inconsistent results or unanticipated adverse effects on crops or on non-target organisms, or if we or our collaborators are unable to collect reliable data, regulatory review of products in development containing our traits could be delayed or commercialization of products in development containing our traits may not be possible. In addition, more than one growing season may be required to collect sufficient data to develop or market a product containing our traits, and it may be necessary to collect data from different geographies to prove performance for customer adoption. Even in cases where field trials are successful, we cannot be certain that additional field trials conducted on a greater number of acres, or in different crops or geographies, will be successful. Generally, our collaborators conduct these field trials or we pay third parties, such as farmers, consultants, contractors, and universities, to conduct field trials on our behalf. Poor trial execution or data collection, failure to follow required agronomic practices, regulatory requirements, or mishandling of products in development by our collaborators or these third parties could impair the success of these field trials.

Many factors that may adversely affect the success of our field trials are beyond our control, including weather and climatic variations, such as drought or floods, severe heat or frost, hail, tornadoes and hurricanes, uncommon pests and diseases, or acts of protest or vandalism. For example, if there was prolonged or permanent disruption to the electricity, climate control, or water supply operating systems in our greenhouses or laboratories, the crops in which we or our collaborators are testing our traits and the samples we or our collaborators store in freezers, both of which are essential to our research and development activities, could be severely damaged or destroyed, adversely affecting these activities and thereby our business and results of operations. Unfavorable weather conditions can also reduce both acreage planted and incidence, or timing of, certain crop diseases or pest infestations, each of which may halt or delay our field trials. We have also experienced crop failures in the past for then-unknown reasons, causing delays in our achievement of milestones and delivery of results and necessitating that we repeat the impacted field trials. Any field test failure we may experience may not be covered by insurance and, therefore, could result in increased cost for the field trials and development of our traits, which may negatively impact our business and results of operations. Additionally, we are subject to U.S. Department of Agriculture, or USDA, regulations, which may require us to abandon a field trial or to purchase and destroy neighboring crops that are planted after our field trials have commenced. For example, while conducting early field trials for GLA safflower oil, we were forced to purchase and destroy an adjacent safflower crop when the placement of bee hives by a third party altered the required isolation distance between our crop and the neighboring crop, requiring us to either purchase and destroy the adjacent crop or abandon our field trial. In order to prevent the significant delays that would result from terminating our field trial, we decided to purchase and destroy the neighboring crop at a cost of approximately $30,000. Similar factors outside of our control can create substantial volatility relating to our business and results of operations.

Competition in traits and seeds is intense and requires continuous technological development, and, if we are unable to compete effectively, our financial results will suffer.

We face significant competition in the markets in which we operate. The markets for traits and agricultural biotechnology products are intensely competitive and rapidly changing. In most segments of the seed and agricultural biotechnology market, the number of products available to consumers is steadily increasing as new products are introduced. At the same time, the expiration of patents covering existing products reduces the barriers to entry for competitors. We may be unable to compete successfully against our current and future competitors, which may result in price reductions, reduced margins and the inability to achieve market acceptance for products containing our traits. In addition, several of our competitors have substantially greater financial, marketing, sales, distribution, research and development, and technical resources than us, and some of our collaborators have more experience in research and development, regulatory matters, manufacturing, and marketing. We anticipate increased competition in the future as new companies enter the market and new technologies become available. Our technologies may be rendered obsolete or uneconomical by technological advances or entirely different approaches developed by one or more of our competitors, which will prevent or limit our ability to generate revenues from the commercialization of our traits being developed.

We derive a significant portion of our current revenues from government agencies, which may not continue in the future and which may expose us to government audits and potential penalties.

We historically have derived a significant portion of our revenues from grants from U.S. government agencies. Our ability to obtain grants is subject to the availability of funds under applicable government programs and approval of our applications to participate in such programs. The application process for these grants is highly competitive. We may not be successful in obtaining any additional grants. Once we successfully obtain a grant, the awarding U.S. government agency has the right to discontinue funding on such a grant at any time. The recent political focus on reducing spending at the U.S. federal and state levels may reduce the scope and amount of funds dedicated to seed and agricultural biotechnology innovations, if such funds continue to be available at all. To the extent that we are unsuccessful in obtaining any additional government grants in the future or if funding is discontinued on an existing grant, we would lose a significant source of our current revenues.

To the extent that we do not comply with the specific requirements of a grant, amounts we invoice may not be paid and any of our existing grants or new grants that we may obtain in the future may be terminated or modified. In addition, our activities funded by our government grants may be subject to audits by U.S. government agencies. As part of an audit, these agencies may review our performance, cost structures and compliance with applicable laws, regulations and standards, and the terms and conditions of the grant. An audit could result in a material adjustment to our results of operations and financial condition. Moreover, if an audit uncovers improper or illegal activities, we may also be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, or fines, and we may be suspended or prohibited from doing business with the government. In addition, serious reputational harm or significant adverse financial effects could occur if allegations of impropriety are made against us, even if we are ultimately found to have done no wrong.

A significant portion of our revenues to date are from a limited number of strategic collaborations, and the termination of these collaborations would have a material adverse effect on our results of operations.

We derive a substantial amount of our revenues from a limited number of strategic collaborations, under which we generate revenues through licensing arrangements such as research and development payments, up-front payments, milestone payments, and, once a product is commercialized, a portion of the commercial value of the trait. A small number of commercial partners are expected to continue to account for a substantial amount of our revenues for the next several years, most notably among them, Mahyco. Our agreements with Mahyco are terminable by Mahyco at will upon 90 days' notice. The termination or non-renewal of our arrangements with Mahyco or our other commercial partners would have a material adverse effect on our business, financial condition, results of operations, and prospects.

We expect to derive a substantial portion of our future revenues from commercial products sold outside the United States, which subjects us to additional business risks.

A significant number of our research and collaboration agreements include products under development for markets outside the United States. Our collaborators' operations in these regions are subject to a variety of risks, including different regulatory requirements, uncertainty of contract and intellectual property rights, unstable political and regulatory environments, economic and fiscal instability, tariffs and other import and trade restrictions, restrictions on the ability to repatriate funds, business cultures accepting of various levels of corruption, and the impact of anti-corruption laws. These risks could result in additional cost, loss of materials, and delays in our commercialization timeline in international markets and have a negative effect on our operating results.

Revenues generated outside the United States could also be subject to increased difficulty in collecting delinquent or unpaid accounts receivables, adverse tax consequences, currency and exchange rate fluctuations, relatively high inflation, exchange control

regulations, and governmental pricing directives. Acts of terror or war may impair our ability to operate in particular countries or regions and may impede the flow of goods and services between countries. Customers in these and other markets may be unable to purchase our products if their economies deteriorate, or it could become more expensive for them to purchase imported products in their local currency or sell their commodities at prevailing international prices, and we may be unable to collect receivables from such customers. If any of these risks materialize, our results of operations and profitability could be harmed.

We or our collaborators may fail to perform our respective obligations under contract research and collaboration agreements.

We are obligated under certain contract research agreements to perform research activities over a particular period of time. If we fail to perform our obligations under these agreements, in some cases our collaborators may terminate our agreements with them and in other cases our collaborators' obligations may be reduced and, as a result, our anticipated revenues may decrease. In addition, any of our collaborators may fail to perform their obligations under the diligence timelines in our collaboration agreements, which may delay development and commercialization of products containing our traits and materially and adversely affect our future results of operations.

Furthermore, the various payments we receive from our collaborators are a significant source of our current revenues and are expected to be the largest source of our revenues in the future. If our collaborators do not make these payments, either due to financial hardship, disagreement as to whether such payments are owed under the relevant collaboration agreement, or for any other reason, our results of operations and business could be materially and adversely affected. If disagreements with a collaborator arise, any dispute with such collaborator may negatively affect our relationship with one or more of our other collaborators and may hinder our ability to enter into future collaboration agreements, each of which could negatively impact our business and results of operations.

Our prospects for successful development and commercialization of our products are dependent upon the research, development, commercialization, and marketing efforts of our collaborators.

We primarily rely on third parties for research, development, commercialization, and marketing of our products and products in development. Other than as provided for in our collaboration agreements, we have no control over the resources, time and effort that our collaborators may devote to the development of products incorporating our traits, and have limited access to information regarding or resulting from such programs. We are dependent on our third party collaborators to fund and conduct the research and development of product candidates, to complete the regulatory process, and for the successful marketing and commercialization of one or more of such products or products in development. Such success will be subject to significant uncertainty.

Our ability to recognize revenues from successful collaborations may be impaired by multiple factors including:

- a collaborator may shift its priorities and resources away from our programs due to a change in business strategies, or a merger, acquisition, sale, or downsizing of its company or business unit;
- a collaborator may cease development in a specific crop area that is the subject of a collaboration agreement;
- a collaborator may change the success criteria for a particular program or product in development, thereby delaying or ceasing development of such program or product in development;
- a significant delay in initiation of certain development activities by a collaborator will also delay payment of milestones tied to such activities, thereby impacting our ability to fund our own activities;
- a collaborator could develop or acquire a product that competes, either directly or indirectly, with our current products or any future products;
- a collaborator with commercialization obligations may not commit sufficient financial or human resources to the marketing, distribution, or sale of a product;
- a collaborator with manufacturing responsibilities may encounter regulatory, resource, or quality issues and be unable to meet demand requirements;
- a collaborator may exercise its rights under the agreement to terminate our collaboration;
- a dispute may arise between us and a collaborator concerning the development and commercialization of a product in development, resulting in a delay in milestones, royalty payments, or termination of a program and possibly resulting in costly litigation or arbitration that may divert management attention and resources;

- a collaborator may not adequately protect the intellectual property rights associated with a product or product in development; and
- a collaborator may use our proprietary information or intellectual property in such a way as to expose us to litigation from a third party.

If our collaborators do not perform in the manner we expect or fulfill their responsibilities in a timely manner, or at all, the development, regulatory, and commercialization process could be delayed, terminated, or otherwise unsuccessful. Conflicts between us and our collaborators may arise. In the event of termination of one or more of our collaboration agreements, it may become necessary for us to assume the responsibility for any terminated products or products in development at our own expense or seek new collaborators. In that event, we likely would be required to limit the size and scope of one or more of our independent programs or increase our expenditures and seek additional funding, which may not be available on acceptable terms or at all, and our business may be materially and adversely affected.

We rely on third parties to conduct, monitor, support, and oversee field trials and, in some cases, to maintain regulatory files for those products in development, and any performance issues by third parties, or our inability to engage third parties on acceptable terms, may impact our or our collaborators' ability to complete the regulatory process for or commercialize such products.

We rely on third parties, including farmers, to conduct, monitor, support, and oversee field trials. As a result, we have less control over the timing and cost of these trials than if we conducted these trials with our own personnel. If we are unable to maintain or enter into agreements with these third parties on acceptable terms, or if any such engagement is terminated prematurely, we may be unable to conduct and complete our trials in the manner we anticipate. In addition, there is no guarantee that these third parties will devote adequate time and resources to our studies or perform as required by our contract or in accordance with regulatory requirements, including maintenance of field trial information regarding our products in development. If these third parties fail to meet expected deadlines, fail to transfer to us any regulatory information in a timely manner, fail to adhere to protocols, or fail to act in accordance with regulatory requirements or our agreements with them, or if they otherwise perform in a substandard manner or in a way that compromises the quality or accuracy of their activities or the data they obtain, then field trials of our products in development may be extended or delayed with additional costs incurred, or our data may be rejected by the USDA, the U.S. Food and Drug Administration, or FDA, the U.S. Environmental Protection Agency, or EPA, or other regulatory agencies. Ultimately, we are responsible for ensuring that each of our field trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our responsibilities.

If our relationship with any of these third parties is terminated, we may be unable to enter into arrangements with alternative parties on commercially reasonable terms, or at all. Switching or adding farmers or other suppliers can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when a new farmer or other third party commences work. As a result, delays may occur, which can materially impact our ability to meet our desired development timelines. If we are required to seek alternative supply arrangements, the resulting delays and potential inability to find a suitable replacement could materially and adversely impact our business.

In addition, recently there has been an increasing trend towards consolidation in the agricultural biotechnology industry. For example, in April 2015, DuPont acquired Taxon Biosciences. Other potential transactions, such as Syngenta's proposed takeover by ChemChina and the proposed merger of Dow and DuPont, would further consolidate our industry if consummated. Consolidation among our competitors and third parties upon whom we rely could lead to a changing competitive landscape, capabilities, and market share allocations, which could have an adverse effect on our business and operations.

Most of our collaborators have significant resources and development capabilities and may develop their own products that compete with or negatively impact the advancement or sale of products containing our traits.

Most of our collaborators are significantly larger than us and may have substantially greater resources and development capabilities. As a result, we are subject to competition from many of our collaborators, who could develop or pursue competing products and traits that may ultimately prove more commercially viable than our traits. In addition, former collaborators, by virtue of having had access to our proprietary technology, may utilize this insight for their own development efforts, despite the fact that our collaboration agreements prohibit such use. The development or launch of a competing product by a collaborator may adversely affect the advancement and commercialization of any traits we develop and any associated research and development and milestone payments and value-sharing payments we receive from the sale of products containing our traits.

Our joint venture agreements could present a number of challenges that may have a material adverse effect on our business, financial condition, and results of operations.

We currently participate in two joint ventures, Limagrain Cereal Seeds LLC, which focuses on the development and commercialization of improved wheat seeds, and Verdeca LLC, which focuses on the development and deregulation of soybean traits, and we may enter into additional joint ventures in the future. Our joint venture arrangements may present financial, managerial, and operational challenges, including potential disputes, liabilities, or contingencies and may involve risks not otherwise present when operating independently, including:

- our joint venture partners may have business interests, goals, or cultures that are or become inconsistent with our business interests, goals, or culture;
- our joint venture partners may share certain approval rights, or in some cases, as with Limagrain Cereal Seeds LLC, have control over major decisions;
- our joint venture partners may not pay their share of the joint venture's obligations, potentially leaving us liable for their share of such obligations, or we may be unable to pay our share of the joint venture's obligations, which may result in a reduction of our ownership interest;
- we may incur liabilities or losses as a result of an action taken by the joint venture or our joint venture partners;
- our joint venture partners may take action contrary to our instructions, requests, policies, or objectives, which could reduce our return on investment, harm our reputation, or restrict our ability to run our business; and
- disputes between us and our joint venture partners may result in delays, litigation, or operational impasses.

The risks described above or the failure to continue any joint venture or joint development arrangement or to resolve disagreements with our current or future joint venture partners could materially and adversely affect our ability to transact the business that is the subject of such joint venture, which would in turn negatively affect our financial condition and results of operations.

We and our collaborators may disagree over our right to receive payments under our collaboration agreements, potentially resulting in costly litigation and loss of reputation.

Our ability to receive payments under our collaboration agreements depends on our ability to clearly delineate our rights under those agreements. We typically license our intellectual property to our collaborators, who then develop and commercialize seeds with improved traits. However, a collaborator may use our intellectual property without our permission, dispute our ownership of certain intellectual property rights, or argue that our intellectual property does not cover, or add value to, their marketed product. If a dispute arises, it may result in costly patent office procedures and litigation, and our collaborator may refuse to pay us while the dispute is ongoing. Furthermore, regardless of any resort to legal action, a dispute with a collaborator over intellectual property rights may damage our relationship with that collaborator and may also harm our reputation in the industry.

Even if we are entitled to payments from our collaborators, we may not actually receive these payments, or we may experience difficulties in collecting the payments to which we believe we are entitled. After our collaborators launch commercial products containing our licensed traits, we will need to rely on the good faith of our collaborators to report to us the sales they earn from these products and to accurately calculate the payments we are entitled to, a process that will involve complicated and difficult calculations. Although we seek to address these concerns in our collaboration agreements by reserving our right to audit financial records, such provisions may not be effective.

Our business is subject to various government regulations and if we or our collaborators are unable to timely complete the regulatory process for our products in development, our or our collaborators' ability to market our traits could be delayed, prevented or limited.

Our business is generally subject to two types of regulations: regulations that apply to how we and our collaborators operate and regulations that apply to products containing our traits. We apply for and maintain the regulatory permits necessary for our operations, particularly those covering our field trials, while we or our collaborators apply for and maintain regulatory approvals necessary for the commercialization of products containing our seed traits. The large-scale field trials that our collaborators conduct during advanced stages of product development are subject to regulations similar to those to which we are subject. Even if we and our collaborators make timely and appropriate applications for regulatory permits for our field trials, government delays in issuing such permits can significantly affect the development timelines for our products, particularly if the planting period for a crop growing season expires before the necessary permits are obtained. For example, our collaborator in India has encountered delays in obtaining necessary regulatory permits for field trials, and these delays are expected to negatively impact the commercialization timelines for certain of our products. Pursuant to our collaboration agreements, our collaborators also apply for the requisite regulatory approvals prior to commercialization of products containing our traits. In most of our key target markets, regulatory approvals must be received prior to

the importation of genetically modified products. These regulatory processes may be complex; for example, the U.S. federal government's regulation of biotechnology is divided among the EPA, which regulates activity related to the use of plant pesticides and herbicides, the USDA, which regulates the import, field testing, and interstate movement of specific technologies that may be used in the creation of genetically modified plants, and the FDA, which regulates foods derived from new plant varieties.

In addition to regulation by the U.S. government, products containing our biotech traits may be subject to regulation in each country in which such products are tested or sold. International regulations may vary from country to country and from those of the United States. The difference in regulations under U.S. law and the laws of foreign countries may be significant and, in order to comply with the laws of foreign countries, we may have to implement global changes to our products or business practices. Such changes may result in additional expense to us and either reduce or delay product development or sales. Additionally, we or our collaborators may be required to obtain certifications or approvals by foreign governments to test and sell the products in foreign countries.

The regulatory process is expensive and time-consuming, and the time required to complete the process is difficult to predict and depends upon numerous factors, including the substantial discretion of the regulatory authorities. Other than our Sonova products and Stress Tolerant soybeans in Argentina through Verdeca, our joint venture with Bioceres, Inc., neither we nor our collaborators have completed all phases of the regulatory process for any of our products in development. Our traits could require a significantly longer time to complete the regulatory process than expected, or may never gain approval, even if we and our collaborators expend substantial time and resources seeking such approval. A delay or denial of regulatory approval could delay or prevent our ability to generate revenues and to achieve profitability. For example, we are currently awaiting completion of the regulatory process for one of our Sonova products to be used in pet food, which has taken longer than expected. Changes in regulatory review policies during the development period of any of our traits, changes in, or the enactment of, additional regulations or statutes, or changes in regulatory review practices for a submitted product application may cause a delay in obtaining approval or result in the rejection of an application for regulatory approval. Regulatory approval, if obtained, may be made subject to limitations on the indicated uses for which we or our collaborators may market a product. These limitations could adversely affect our potential revenues. Failure to comply with applicable regulatory requirements may, among other things, result in fines, suspensions of regulatory approvals, product recalls, product seizures, operating restrictions, and criminal prosecution. We have on certain occasions notified the USDA of instances of noncompliance with regulations. Although these occasions did not result in any enforcement actions, we may have occasions of noncompliance in the future that result in USDA or other governmental agency enforcement action.

Consumer resistance to genetically modified organisms may negatively affect our public image and reduce sales of seeds containing our traits.

We are active in the field of agricultural biotechnology research and development in seeds and crop protection, including GM seeds. Foods made from such seeds are not accepted by many consumers due to concerns over such products' effects on food safety and the environment. The high public profile of biotechnology in food production and lack of consumer acceptance of products to which we have devoted substantial resources could negatively affect our public image and results of operations. The current resistance from consumer groups, particularly in Europe, to GM crops not only limits our access to such markets, but also has the potential to spread to and influence the acceptance of products developed through biotechnology in other regions of the world. For example, we have temporarily suspended certain initiatives in response to recent legislative requirements in Vermont related to labeling of food products containing GM ingredients until such time as we determine that there is clarity and uniformity in nationwide food labeling requirements. Certain labeling-related initiatives have heightened consumer awareness of GM crops generally and may make consumers less likely to purchase food products containing GM ingredients, which could have a negative impact on the commercial success of products that incorporate our traits and materially and adversely affect our financial condition and results of operations.

Governmental restrictions on the testing and production of GM crops may negatively affect our business and results of operations.

The production of certain GM crops is effectively prohibited in certain countries, including throughout the European Union, which limits our commercial opportunities and may influence regulators in other countries to limit or ban the testing or production of GM crops. Our GM crops are grown principally in North America, South America, India and Australia, where there are fewer restrictions on the production of GM crops. If these or other countries where our GM crops are grown enact laws or regulations that ban the production of such crops or make regulations more stringent, we could experience a longer product development cycle for our products, encounter difficulty obtaining intellectual property protection, and may even have to abandon projects related to certain crops or geographies, any of which would negatively affect our business and results of operations. Furthermore, any changes in such laws and regulations or consumer acceptance of our GM crops could negatively impact our collaborators, who in turn might terminate or reduce the scope of their collaborations with us or seek to alter the financial terms of our agreements with them.

Changes in laws and regulations to which we are subject, or to which we may become subject in the future, may materially increase our costs of operation, decrease our operating revenues, and disrupt our business.

Laws and regulatory standards and procedures that impact our business are continuously changing. Responding to these changes and meeting existing and new requirements may be costly and burdensome. Changes in laws and regulations could:

- impair or eliminate our ability, or increase our cost, to develop our traits, including validating our products in development through field trials;
- increase our compliance and other costs of doing business through increases in the cost to patent or otherwise protect our intellectual property or increases in the cost to our collaborators to complete the regulatory process to commercialize and market the products we develop with them;
- render any products less profitable, obsolete, or less attractive compared to competing products;
- affect our collaborators' willingness to do business with us;
- reduce the amount of revenues we receive from our collaborators; and
- discourage our collaborators from offering, and consumers from purchasing, products that incorporate our traits.

Any of these events could have a material adverse effect on our business, results of operations, and financial condition. Legislators and regulators have increased their focus on plant biotechnology in recent years, with particular attention paid to GM crops.

Our future growth relies on the ability of our collaborators to commercialize and market our products in development, and any restrictions on such activities could materially and adversely impact our business and results of operations. Any changes in regulations in countries where GM crops are grown or imported could result in our collaborators being unable or unwilling to develop, commercialize, or sell products that incorporate our traits. Any changes to these existing laws and regulations may also materially increase our costs of operation, decrease our operating revenues, and disrupt our business.

The unintended presence of our traits in other products or plants may negatively affect us.

Trace amounts of our traits may unintentionally be found outside our containment area in the products of third parties, which may result in negative publicity and claims of liability brought by such third parties against us. Furthermore, in the event of an unintended dissemination of our genetically engineered materials to the environment or the presence of unintended but unavoidable trace amounts, sometimes called "adventitious presence," of our traits in conventional seed, or in the grain or products produced from conventional or organic crops, we could be subject to claims by multiple parties, including environmental advocacy groups, as well as governmental actions such as mandated crop destruction, product recalls, or additional stewardship practices and environmental cleanup or monitoring.

Loss of or damage to our germplasm collection would significantly slow our product development efforts.

We have developed and maintain a comprehensive collection of germplasm through strategic collaborations with leading institutions, which we utilize in our non-GM programs. Germplasm comprises collections of genetic resources covering the diversity of a crop, the attributes of which are inherited from generation to generation. Germplasm is a key strategic asset since it forms the basis of seed development programs. To the extent that we lose access to such germplasm because of the termination or breach of our collaboration agreements, our product development capabilities would be severely limited. In addition, loss of or damage to these germplasm collections would significantly impair our research and development activities. Although we restrict access to our germplasm at our research facilities to protect this valuable resource, we cannot guarantee that our efforts to protect our germplasm collection will be successful. The destruction or theft of a significant portion of our germplasm collection would adversely affect our business and results of operations.

We depend on our key personnel and, if we are not able to attract and retain qualified scientific and business personnel, we may not be able to grow our business or develop and commercialize our products.

Our future performance depends on the continued services and contributions of our management team and other key employees, the loss of whose services might significantly delay or prevent the achievement of our scientific or business objectives. The replacement of any member of our management team would involve significant time and costs and such loss could significantly delay or prevent the achievement of our business objectives. Many members of our executive team have been our employees for many years and therefore have significant experience and understanding of our business that would be difficult to replace.

Additionally, the vast majority of our workforce is involved in research, development, and regulatory activities. Our business is therefore dependent on our ability to recruit and maintain a highly skilled and educated workforce with expertise in a range of disciplines, including molecular biology, biochemistry, plant genetics, agronomics, mathematics, agribusiness, and other subjects relevant to our operations. All of our current employees are at-will employees, and the failure to retain or hire skilled and highly educated personnel could limit our growth and hinder our research and development efforts.

Many of our employees have become vested in a substantial number of stock options. Our employees may be more likely to leave us if the shares they own or the shares underlying their vested options have significantly appreciated in value relative to the original purchase prices of the shares or the exercise prices of the options.

Our business is subject to the risks of earthquakes, fire, flood, and other catastrophic natural events, and security breaches, including cybersecurity incidents.

Our headquarters, certain research and development operations and our seed storage warehouse are located in Davis, California. We also conduct certain research and development operations and store certain biomaterials in Seattle, Washington. The safflower grain used in the production of our Sonova products is grown in several locations throughout Idaho and is stored in a single facility in Idaho. Our production of our Sonova products takes place at a single facility in Northern California, and the inventory is stored in a single cold storage facility in Northern California. We take precautions to safeguard our facilities, including insurance, health and safety protocols, and off-site storage of critical research results and computer data. However, a natural disaster, such as a fire, flood, or earthquake, could cause substantial delays in our operations, damage or destroy our equipment, inventory, or development projects, and cause us to incur additional expenses. The insurance we maintain against natural disasters may not be adequate to cover our losses in any particular case.

We utilize and critically rely upon information technology systems in all aspects of our business, including increasingly large amounts of data to support our products and advance our research and development. Failure to effectively prevent, detect, and recover from the increasing number and sophistication of information security threats could result in theft, misuse, modification, and destruction of information, including trade secrets and confidential business information, and cause business disruptions, delays in research and development, and reputational damage, which could significantly affect our results of operations and financial condition.

Disruption to our IT system could adversely affect our reputation and have a material adverse effect on our business and results of operations.

Our technologies rely on our IT system to collect and analyze our genomic data, including TILLING and other experimental data, and manage our plant inventory system, which tracks every plant that we have ever produced. We can provide no assurance that our current IT system is fully protected against third-party intrusions, viruses, hacker attacks, information, or data theft, or other similar threats. Furthermore, we store significant amounts of data and, though we are developing back-up storage for our stored data, we cannot assure you that our back-up storage arrangements will be effective if it becomes necessary to rely on them.

If our IT system does not function properly or proves incompatible with new technologies, we could experience interruptions in data transmissions and slow response times, preventing us from completing routine research and business activities. Furthermore, disruption or failure of our IT system due to technical reasons, natural disaster, or other unanticipated catastrophic events, including power interruptions, storms, fires, floods, earthquakes, terrorist attacks, and wars could significantly impair our ability to deliver data related to our projects to our collaborators on schedule and materially and adversely affect the outcome of our collaborations, our relationships with our collaborators, our business, and our results of operations.

Our use of hazardous materials exposes us to potential liabilities.

Certain of our operations involve the storage and controlled use of hazardous materials, including herbicides and pesticides. This requires us to conduct our operations in compliance with applicable environmental and safety standards, and we cannot completely eliminate the risk of accidental contamination from hazardous materials. In the event of such contamination, we may be held liable for significant damages or fines, which could have a material adverse effect on our business and operating results.

Most of the licenses we grant to our collaborators to use our proprietary genes in certain crops are exclusive within certain jurisdictions, which limits our licensing opportunities.

Most of the licenses we grant our collaborators to use our proprietary genes in certain crops are exclusive within specified jurisdictions, so long as our collaborators comply with certain diligence requirements. That means that once genes are licensed to a collaborator in a specified crop or crops, we are generally prohibited from licensing those genes to any third party. The limitations imposed by these exclusive licenses could prevent us from expanding our business and increasing our product development initiatives with new collaborators, both of which could adversely affect our business and results of operations.

Our business model for discovery of genes is dependent on licensing patent rights from third parties, and any disruption of this licensing process could adversely affect our competitive position and business prospects.

Our business model involves acquiring technologies that have achieved proof of concept through rigorous development and testing by third-party basic researchers in order to avoid the significant risks and high costs associated with basic research. Only a small number of the genes we evaluate for acquisition are likely to provide viable commercial candidates and an even more limited number, if any, are likely to be commercialized by us or our collaborators. A failure by us to continue identifying genes that improve specific crop traits could make it difficult to grow our business. If we are unable to identify additional genes, we may be unable to develop new traits, which may negatively impact our ability to generate revenues.

If we are unable to enter into licensing arrangements to acquire rights to these potentially viable genes on favorable terms in the future, it may adversely affect our business. In addition, if the owners of the patents we license do not properly maintain or enforce the patents underlying such licenses, our competitive position and business prospects could be harmed. Without protection for the intellectual property we license, other companies might be able to offer substantially similar or identical products for sale, which could adversely affect our competitive business position and harm our business prospects.

If we fail to comply with our obligations under license agreements, our counterparties may have the right to terminate these agreements, in which event we may not be able to develop, manufacture, register, or market, or may be forced to cease developing, manufacturing, registering, or marketing, any product that is covered by these agreements or may face other penalties under such agreements. Such an occurrence could materially adversely affect the value of the applicable products to us and have an adverse effect on our business and result of operations.

Our success depends on our ability to protect our intellectual property and our proprietary technologies.

Our commercial success depends, in part, on our ability to obtain and maintain patent and trade secret protection for our proprietary technologies, our traits, and their uses, as well as our ability to operate without infringing upon the proprietary rights of others. If we do not adequately protect our intellectual property, competitors may be able to use our technologies and erode or negate any competitive advantage we may have, which could harm our business and ability to achieve profitability.

If we are unable to protect the confidentiality of our trade secrets, the value of our technology could be materially and adversely affected and our business could be harmed.

We treat our proprietary technologies, including unpatented know-how and other proprietary information, as trade secrets. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with any third parties who have access to them, such as our consultants, independent contractors, advisors, corporate collaborators, and outside scientific collaborators. We also enter into confidentiality and invention or patent assignment agreements with employees and certain consultants. Any party with whom we have executed such an agreement could breach that agreement and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time consuming, and the outcome is unpredictable. In addition, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, or if we otherwise lose protection for our trade secrets or proprietary know-how, the value of this information may be greatly reduced and our business and competitive position could be harmed.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products in development.

As an agricultural biotechnology company, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents involves technological and legal complexity, and is costly, time consuming, and inherently uncertain. In addition, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the U.S. Patent and Trademark Office, the laws and regulations governing patents could change in unpredictable ways that may weaken or undermine our ability to obtain new patents or to enforce our existing patents and patents we might obtain in the future.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, maintaining, and defending patents on products in development in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States are less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. For example, several countries outside the United States prohibit patents on plants and seeds entirely. In addition, we may at times license third-party technologies for which limited international patent protection exists and for which the time period for filing international patent applications has passed. Consequently, we are unable to prevent third parties from using intellectual property we develop or license in all countries outside the United States, or from selling or importing products made using our intellectual property in and into the jurisdictions in which we do not have patent protection. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products, and we may be unable to prevent such competitors from importing those infringing products into territories where we have patent protection, but where enforcement is not as strong as in the United States. These products may compete with our products in development and our patents and other intellectual property rights may not be effective or sufficient to prevent them from competing in those jurisdictions. Moreover, farmers or others in the chain of commerce may raise legal challenges to our intellectual property rights or may infringe upon our intellectual property rights, including through means that may be difficult to prevent or detect, and local regulators may choose to not enforce our intellectual property rights.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions where we have filed patent applications. The legal systems of certain countries have not historically favored the enforcement of patents or other intellectual property rights, which could hinder us from preventing the infringement of our patents or other intellectual property rights and result in substantial risks to us. Proceedings to enforce our patent rights in the United States or foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert patent infringement or other claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful or even cover our associated legal costs. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license from third parties.

If we or one of our collaborators are sued for infringing the intellectual property rights of a third party, such litigation could be costly and time consuming and could prevent us or our collaborators from developing or commercializing our products.

Our ability to generate significant revenues from our products depends on our and our collaborators' ability to develop, market and sell our products and utilize our proprietary technology without infringing the intellectual property and other rights of any third parties. In the United States and abroad there are numerous third-party patents and patent applications that may be applied toward our proprietary technology, business processes, or developed traits, some of which may be construed as containing claims that cover the subject matter of our products or intellectual property. Because of the rapid pace of technological change, the confidentiality of patent applications in some jurisdictions (including U.S. provisional patent applications), and the fact that patent applications can take many years to issue, there may be currently pending applications that are unknown to us that may later result in issued patents upon which our products in development or proprietary technologies infringe. Similarly, there may be issued patents relevant to our products in development of which we are not aware. These patents could reduce the value of the traits we develop or the genetically modified plants containing our traits or, to the extent they cover key technologies on which we have unknowingly relied, require that we seek to obtain licenses or cease using the technology, no matter how valuable to our business. We may not be able to obtain such a license on commercially reasonable terms. If any third party patent or patent application covers our intellectual property or proprietary rights and we are not able to obtain a license to it, we and our collaborators may be prevented from commercializing products containing our traits.

As the agricultural biotechnology industry continues to develop, we may become party to, or threatened with, litigation or other adverse proceedings regarding intellectual property or proprietary rights in our technology, processes, or developed traits. Third parties may assert claims based on existing or future intellectual property rights and the outcome of any proceedings is subject to uncertainties that cannot be adequately quantified in advance. Any litigation proceedings could be costly and time consuming, and negative outcomes could result in liability for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent. There is also no guarantee that we would be able to obtain a license under such infringed intellectual property on commercially reasonable terms or at all. A finding of infringement could prevent us or our collaborators from developing, marketing or selling a product or force us to cease some or all of our business operations. Even if we are successful in these proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel may be diverted as a result of these proceedings, which could have a material adverse effect on us. Claims that we have misappropriated the confidential information or trade secrets of third parties could similarly have a negative impact on our business.

Our results of operations will be affected by the level of royalty payments that we are required to pay to third parties.

We are a party to license agreements that require us to remit royalty payments and other payments related to in-licensed intellectual property. Under our in-license agreements, we may pay up-front fees and milestone payments and be subject to future royalties. We cannot precisely predict the amount, if any, of royalties we will owe in the future, and if our calculations of royalty payments are incorrect, we may owe additional royalties, which could negatively affect our results of operations. As our product sales increase, we may, from time to time, disagree with our third-party collaborators as to the appropriate royalties owed and the resolution of such disputes may be costly and may consume management's time. Furthermore, we may enter into additional license agreements in the future, which may also include royalty, milestone and other payments.

We are subject to governmental export and import controls that could impair our ability to compete in international markets due to licensing requirements and subject us to liability if we are not in compliance with applicable laws.

Our products and products in development are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. Exports of our products and technology must be made in compliance with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including the possible loss of export or import privileges; fines, which may be imposed on us and responsible employees or managers; and, in extreme cases, the incarceration of responsible employees or managers.

In addition, changes in our products or solutions or changes in applicable export or import laws and regulations may create delays in the introduction and sale of our products and solutions in international markets, prevent our customers from deploying our products and solutions or, in some cases, prevent the export or import of our products and solutions to certain countries, governments or persons altogether. Any change in export or import laws and regulations, shift in the enforcement or scope of existing laws and regulations, or change in the countries, governments, persons or technologies targeted by such laws and regulations, could also result in decreased use of our products and solutions, or in our decreased ability to export or sell our products and solutions to existing or potential customers. Any decreased use of our products and solutions or limitation on our ability to export or sell our products and solutions would likely adversely affect our business, financial condition and results of operations.

We are subject to anti-corruption and anti-money laundering laws with respect to both our domestic and international operations, and non-compliance with such laws can subject us to criminal and civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and possibly other anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit us and our collaborators from authorizing, offering, or directly or indirectly providing improper payments or benefits to recipients in the public or private sector. We or our collaborators may have direct and indirect interactions with government agencies and state-affiliated entities and universities in the course of our business. We may also have certain matters come before public international organizations such as the United Nations. We use third-party collaborators, joint venture and strategic partners, law firms, and other representatives for regulatory compliance, patent registration, lobbying, deregulation advocacy, field testing, and other purposes in a variety of countries, including those that are known to present a high corruption risk such as India, China, and Latin American countries. We can be held liable for the corrupt or other illegal activities of these third-party collaborators, our employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize such activities. In addition, although we have implemented policies and procedures to ensure compliance with anti-corruption and related laws, there can be no assurance that all of our employees, representatives, contractors, partners, or agents will comply with these laws at all times. Noncompliance with these laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and debarment from contracting with certain governments or other persons, the loss of export privileges, reputational harm, adverse media coverage, and other collateral consequences. If any subpoenas or investigations are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations, and financial condition could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees. Enforcement actions and sanctions could further harm our business, results of operations, and financial condition.

Adverse outcomes in future legal proceedings could subject us to substantial damages and adversely affect our results of operations and profitability.

We may become party to legal proceedings, including matters involving personnel and employment issues, personal injury, environmental matters, and other proceedings. Some of these potential proceedings could result in substantial damages or payment

awards that exceed our insurance coverage. We will estimate our exposure to any future legal proceedings and establish provisions for the estimated liabilities where it is reasonably possible to estimate and where an adverse outcome is probable. Assessing and predicting the outcome of these matters will involve substantial uncertainties. Furthermore, even if the outcome is ultimately in our favor, our costs associated with such litigation may be material. Adverse outcomes in future legal proceedings or the costs and expenses associated therewith could have an adverse effect on our results of operations.

We may be required to pay substantial damages as a result of product liability claims for which insurance coverage is not available.

We are subject to product liability claims with respect to our Sonova products, and as additional products integrating our traits reach commercialization, product liability claims will increasingly be a commercial risk for our business, particularly as we are involved in the supply of biotechnological products, some of which may be harmful to humans and the environment. Product liability claims against us or our collaborators selling products that contain our traits, or allegations of product liability relating to seeds containing traits developed by us, could damage our reputation, harm our relationships with our collaborators, and materially and adversely affect our business, results of operations, financial condition, and prospects. Furthermore, while our collaboration agreements typically require that our collaborators indemnify us for the cost of product liability claims brought against us as a result of our collaborator's misconduct, such indemnification provisions may not always be enforced, and we may receive no indemnification if our own misconduct contributed to the claims.

We may seek to expand through acquisitions of and investments in other brands, businesses, and assets. These acquisition activities may be unsuccessful or divert management's attention.

We may consider strategic and complementary acquisitions of and investments in other agricultural biotechnology brands, businesses or other assets, and such acquisitions or investments are subject to risks that could affect our business, including risks related to:

- the necessity of coordinating geographically disparate organizations;
- implementing common systems and controls;
- integrating personnel with diverse business and cultural backgrounds;
- integrating acquired manufacturing and production facilities, technology and products;
- combining different corporate cultures and legal systems;
- unanticipated expenses related to integration, including technical and operational integration;
- increased costs and unanticipated liabilities, including with respect to registration, environmental, health and safety matters, that may affect sales and operating results;
- retaining key employees;
- obtaining required government and third-party approvals;
- legal limitations in new jurisdictions;
- installing effective internal controls and audit procedures;
- issuing common stock that could dilute the interests of our existing stockholders;
- spending cash and incurring debt;
- assuming contingent liabilities; and
- creating additional expenses.

We may not be able to identify opportunities or complete transactions on commercially reasonable terms, or at all, or actually realize any anticipated benefits from such acquisitions or investments. Similarly, we may not be able to obtain financing for acquisitions or investments on attractive terms. In addition, the success of any acquisitions or investments also will depend, in part, on our ability to integrate the acquisition or investment with our existing operations.

We have recently experienced changes in our management team, which may cause transition problems in our business.

We recently have had significant changes in executive leadership, and more could occur. Effective February 11, 2016, Eric J. Rey resigned as our President and Chief Executive Officer, and as a member of our board of directors. In connection with Mr. Rey's

resignation, Roger Salameh, who was then serving as our Vice President of Business Development, was appointed as our Interim President and Chief Executive Officer. On February 10, 2016, Mark W. Wong resigned as a member of our board of directors and as our Acting President and Chief Executive Officer, which he had been serving as effective as of January 12, 2016 while Mr. Rey took a medical leave of absence. Effective October 16, 2015, Tom O'Neil resigned as our Chief Financial Officer and Steven F. Brandwein, who was then serving as our Vice President of Finance and Administration, was appointed as our Interim Chief Financial Officer.

As a result of the recent changes in our management team, Messrs. Salameh and Brandwein have taken on substantially more responsibility for the management of our business and our financial reporting, which has resulted in greater workload demands and could divert their attention away from certain key areas of our business. For instance, Mr. Salameh has taken on the role of Interim President and Chief Executive Officer in addition to his existing responsibilities as our Vice President of Business Development, positions that were previously filled by two persons. Disruption to our organization as a result of executive management transition could have a material adverse effect on our business, financial condition and results of operations.

We incur significant costs and devote substantial management time as a result of operating as a public company, and our management team has limited experience managing a public company.

As a public company, we incur significant legal, accounting, and other expenses that we did not incur as a private company. For example, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and are required to comply with the applicable requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC and The NASDAQ Stock Market, including the establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Compliance with these requirements has increased and will continue to increase our legal and financial compliance costs and has made and will continue to make some activities more time consuming and costly. Our management and other personnel has had to and will continue to divert attention from operational and other business matters to devote substantial time to these public company requirements, which could adversely affect our business, financial condition, and operating results. While we have recently increased our resources, we may still need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge.

Most members of our management team have limited experience managing a publicly-traded company, interacting with public company investors, and complying with the increasingly complex laws pertaining to public companies. Our management team's inexperience in dealing with these complex laws could be a significant disadvantage to us, because it is likely that an increasing amount of their time will be devoted to these activities, which may result in them spending less time on the management and growth of our company. In addition, our management team may not successfully or efficiently manage our transition to being a public company subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors, which could adversely affect our business, financial condition, and operating results.

As a result of being a public company, we are obligated to develop and maintain proper and effective internal control over financial reporting. We may not complete our analysis of our internal control over financial reporting in a timely manner, or these internal controls may not be determined to be effective, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

Pursuant to Section 404 of the Sarbanes-Oxley Act and the related rules adopted by the SEC and the Public Company Accounting Oversight Board, starting with the second annual report that we file with the SEC after the consummation of our public offering, our management will be required to report on the effectiveness of our internal control over financial reporting. In addition, once we no longer qualify as an emerging growth company under the JOBS Act and lose the ability to rely on the exemptions related thereto, our independent registered public accounting firm will also need to attest to the effectiveness of our internal control over financial reporting under Section 404. We are starting the process of determining whether our existing internal controls over financial reporting systems are compliant with Section 404. This process will require the investment of substantial time and resources, including by members of our senior management. As a result, this process may divert internal resources and take a significant amount of time and effort to complete. In addition, we cannot predict the outcome of this determination and whether we will need to implement remedial actions in order to implement effective internal control over financial reporting.

The magnitude of our recent executive management changes (described above) and the short time interval in which they have occurred could add to the risk of control failures, including a failure in the effective operation of our internal control over financial reporting or our disclosure controls and procedures. Additionally, as we hire new executives, it might take the newly constituted management team some time to become sufficiently familiar with our business and each other to effectively develop and implement our business strategies.

In connection with the preparation of our financial statements for the years ended December 31, 2015 and 2014, we identified certain internal control deficiencies that did not rise to the level of a material weakness, on an individual basis or in the aggregate. For

the year ended December 31, 2014, those control deficiencies represented significant deficiencies in our internal control over financial reporting. One deficiency related to our information technology access controls and the other related to the timeliness of our accounting and disclosure procedures. We successfully remediated the deficiency relating to the timeliness of our accounting and disclosure procedures during the year ended December 31, 2014. For the year ended December 31, 2015, we did not have any control deficiencies, which on an individual basis or in the aggregate arose to the level of a significant deficiency. We are currently working to improve our internal control environment. As a result, we may experience higher than anticipated operating expenses, as well as higher auditor fees during and after the implementation of these changes. If we are unable to implement any of the required changes to our internal control over financial reporting effectively or efficiently or are required to do so earlier than anticipated, it could adversely affect our operations, financial reporting, and results of operations and could result in an adverse opinion on internal controls from our independent registered public accounting firm.

Our ability to use our net operating loss carryforwards to offset future taxable income may be subject to certain limitations.

Under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its NOLs to offset future taxable income. Our existing NOLs may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change in the future, our ability to utilize NOLs could be further limited by Section 382 of the Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. There is also a risk that, due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities. For these reasons, we may not be able to realize a tax benefit from the use of our NOLs, whether or not we obtain profitability.

Risks Related to Ownership of Our Common Stock

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could cause our stock price to decline.

Sales of a substantial number of our common stock in the public market, or the perception that these sales might occur, could cause the market price of our common stock to decline and could impair our ability to raise capital through the sale of additional equity securities. As of March 31, 2016, there were 44,248,893 shares of our common stock outstanding, of which, approximately 7,000,000 shares were freely tradable.

Stockholders owning a substantial portion of our total outstanding shares have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or our stockholders. In addition, we have registered shares of our common stock that we may issue under 2015 Omnibus Equity Incentive Plan and 2015 Employee Stock Purchase Plan, and they may be sold freely in the public market upon issuance.

Our stock price has been and may continue to be volatile, and you could lose all or part of your investment.

The market price of our common stock since our initial public offering has been and may continue to be volatile. Since shares of our common stock were sold in our initial public offering in May 2015 at a price of $8.00 per share, our stock price has ranged from $2.02 to $8.80, through March 31, 2016. The market price of our common stock is subject to wide fluctuations in response to various risk factors, some of which are beyond our control and may not be related to our operating performance, including:

- addition or loss of significant customers, collaborators, or distributors;
- changes in laws or regulations applicable to our industry or traits;
- additions or departures of key personnel;
- the failure of securities analysts to cover our common stock after this offering;
- actual or anticipated changes in expectations regarding our performance by investors or securities analysts;
- price and volume fluctuations in the overall stock market;
- volatility in the market price and trading volume of companies in our industry or companies that investors consider comparable;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- our ability to protect our intellectual property and other proprietary rights;

- sales of our common stock by us or our stockholders;
- the expiration of contractual lock-up agreements;
- litigation involving us, our industry, or both;
- major catastrophic events; and
- general economic and market conditions and trends.

Further, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. In addition, the stock prices of many seed and agricultural biotechnology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, interest rate changes, or international currency fluctuations, may cause the market price of our common stock to decline. If the market price of our common stock fluctuates or declines, you may not realize any return on your investment and may lose some or all of your investment.

Insiders have substantial control over us, which could limit your ability to influence the outcome of key transactions, including a change of control.

Our executive officers, directors, and their affiliates, in the aggregate, beneficially own approximately 72% of the outstanding shares of our common stock as of March 31, 2016. As a result, these stockholders, if acting together, would be able to influence or control matters requiring approval by our stockholders, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. They may have interests that differ from yours and may vote in a way with which you disagree and that may be adverse to your interests. This concentration of ownership may have the effect of delaying, preventing or deterring a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might affect the market price of our common stock.

Moral Compass Corporation, our largest stockholder, beneficially owns approximately 51% of our outstanding common stock, and Moral Compass Corporation and Mandala Capital together beneficially own approximately 71% of our outstanding common stock as of March 31, 2016. For so long as Moral Compass Corporation continues to own a significant percentage of our outstanding shares, they will be able to significantly influence the composition of our board of directors and the approval of actions requiring stockholder approval. Accordingly, for such period of time, Moral Compass Corporation may be able to exercise control over our management, business plans, and policies, including the appointment and removal of our officers, and may be able to cause or prevent a change of control of our company or a change in the composition of our board of directors and could preclude any unsolicited acquisition of our company. This concentration of ownership could deprive you of an opportunity to receive a premium for your shares as part of a sale of our company and ultimately might affect the market price of our common stock.

We expect our operating results to vary significantly from quarter to quarter, which may cause our stock price to fluctuate widely.

We expect our quarterly operating results to fluctuate widely and unpredictably for the following reasons, among others:

- our significant customer concentration;
- our uncertain ability to obtain government grant funding, which affects the timing and amounts of our payments from the U.S. government;
- the variable timing, stage, and results of our and our collaborators' research, development, and regulatory activities;
- the impact of seasonality in agricultural operations on our field trials and sales of products that incorporate our seed traits;
- supplier, manufacturing, or quality problems; and
- variance in the timing of customer and distributor orders for our Sonova products.

Further, a large proportion of our costs are fixed, due in part to our significant research and development costs and general and administrative expenses. Thus, even a small decline in revenues could disproportionately affect our quarterly operating results and could cause such results to differ materially from expectations. Any unanticipated change in revenues or operating results is likely to cause our stock price to fluctuate since such changes reflect new information available to investors and analysts.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws and under Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could depress the trading price of our common stock by discouraging, delaying or preventing a change of control of our company or changes in our management that the stockholders of our company may believe advantageous. These provisions include:

- establishing a classified board of directors so that not all members of our board of directors are elected at one time;
- authorizing "blank check" preferred stock that our board of directors could issue to increase the number of outstanding shares to discourage a takeover attempt;
- eliminating the ability of stockholders to call a special stockholder meeting;
- eliminating the ability of stockholders to act by written consent;
- the requirement that, to the fullest extent permitted by law and unless we consent to an alternate form, certain proceedings against or involving us or our directors, officers, or employees be brought exclusively in the Court of Chancery in the State of Delaware;
- providing that the board of directors is expressly authorized to make, alter, or repeal our bylaws; and
- establishing advance notice requirements for nominations for elections to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If any of the analysts who may cover us make adverse changes to their recommendation regarding our stock, or provide more favorable relative recommendations about our competitors, our stock price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

As an emerging growth company within the meaning of the Securities Act, we utilize certain modified disclosure requirements, and we cannot be certain if these reduced requirements will make our common stock less attractive to investors.

We are an emerging growth company within the meaning of the rules under the Securities Act and we plan in future filings with the SEC to utilize, the modified disclosure requirements available to emerging growth companies, including reduced disclosure about our executive compensation and omission of compensation discussion and analysis, and an exemption from the requirement of holding a nonbinding advisory vote on executive compensation. In addition, we are not subject to certain requirements of Section 404 of the Sarbanes-Oxley Act, including the additional testing of our internal control over financial reporting as may occur when outside auditors attest as to our internal control over financial reporting. As a result, our stockholders may not have access to certain information they may deem important. We cannot predict if investors will find our common stock less attractive because we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We could remain an emerging growth company for up to five years, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenues exceed $1.0 billion, (ii) the date that we become a large accelerated filer as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock that is held by non-affiliates exceeds $700 million as of the last business day of our most recently completed second fiscal quarter, or (iii) the date on which we have issued more than $1.0 billion in non-convertible debt during the preceding three-year period.

Because we do not expect to pay any dividends for the foreseeable future, investors may be forced to sell their stock to realize a return on their investment.

We do not anticipate that we will pay any dividends to holders of our common stock for the foreseeable future. Any payment of cash dividends will be at the discretion of our board of directors and will depend on, among other things, our results of operations, cash requirements, financial condition, contractual restrictions including compliance with covenants under our debt agreements, and other factors that our board of directors may deem relevant. Our ability to pay dividends might be restricted by the terms of any indebtedness that we incur in the future. In addition, certain of our current outstanding debt agreements prohibit us from paying cash dividends on our common stock. Consequently, you should not rely on dividends to receive a return on your investment.

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

Use of Proceeds from Public Offering of Common Stock

On May 20, 2015, we completed our initial public offering, or IPO, of our common stock, and on June 17, 2015, we completed the sale of additional shares upon exercise of the underwriters' over-allotment option. In connection with the IPO, we issued and sold 8,528,306 shares of common stock, including the over-allotment shares, at a price to the public of $8.00 per share. As a result of the IPO, we received $68.2 million in gross proceeds, and $58.4 million in net proceeds after deducting underwriting discounts and commissions of $4.8 million and offering expenses of $5.0 million payable by us. None of the expenses associated with the IPO were paid to directors, officers, persons owning 10% or more of any class of our equity securities, or to their associates, or to our affiliates. Credit Suisse Securities (USA) LLC and J.P. Morgan Securities LLC acted as joint lead book-running managers for the IPO, and Piper Jaffray & Co. acted as an additional book-running manager. The offering terminated after all of the shares of common stock were sold.

We registered the shares under the Securities Act of 1933 on a Registration Statement on Form S-1 (Registration No. 333-202124), which was filed with the Securities and Exchange Commission, or SEC, on February 17, 2015 and declared effective on May 14, 2015.

There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC on May 15, 2015 pursuant to Rule 424(b).

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

A list of exhibits filed with this Quarterly Report on Form 10-Q or incorporated herein by reference is found in the Index to Exhibits immediately following the signature page of this report and is incorporated into this Item 6 by reference.

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 10, 2016 By: /s/ ROGER J. SALAMEH
Roger J. Salameh
Interim Chief Executive Officer

May 10, 2016 By: /s/ STEVEN F. BRANDWEIN
Steven F. Brandwein
Interim Chief Financial Officer

EXHIBIT INDEX

Exhibit Number	Exhibit Description
10.14	Director Compensation Policy effective as of January 1, 2016
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.

AMENDED AND RESTATED
DIRECTOR COMPENSATION POLICY

Directors of Arcadia Biosciences, Inc., a Delaware corporation (the "***Company***") that are not employees of the Company ("***Non-Employee Directors***") shall receive for their service as a member of the Board of Directors (the "***Board***") of the Company (i) effective as of January 1, 2016, the following cash compensation and (ii) effective as of June 9, 2016 (the date of the 2016 annual meeting of stockholders), the following equity compensation:

Cash Compensation

Annual Retainer for Board Service

Each Non-Employee Director shall be entitled to an annual cash retainer of Thirty Thousand Dollars (US$30,000) (the "***Annual Retainer***"), payable quarterly in arrears, subject to such director's continued service to the Company as a Non-Employee Director on the last day of the preceding quarter. Such amounts shall be prorated in the case of service for less than the entire quarter. In addition, with respect to each regular, quarterly meeting of the Board, the Non-Employee Director shall receive the following amount for each meeting attended: (i) Two Thousand Five Hundred Dollars ($2,500) if the Non-Employee Director attends in person, or (ii) Five Hundred Dollars ($500) if the Non-Employee Director attends remotely through telephonic, video-conference, or other electronic means; provided, however, that the total meeting fees may not exceed $10,000 in any calendar year.

Annual Retainer for Chairperson of the Board

In addition to the Annual Retainer, the Non-Employee Director serving as the Chairperson of the Board (the "***Chairperson***") shall receive an additional annual cash retainer of Forty Thousand Dollars (US$40,000) (the "***Chairperson Annual Retainer***"), payable quarterly in arrears, subject to such director's continued service to the Company as the Chairperson on the last day of the preceding quarter. Such amounts shall be prorated in the case of service for less than the entire quarter.

Annual Retainer for Board Committee Chairs

In addition to the Annual Retainer, a Non-Employee Director who serves as Chair of the Company's Audit Committee, Compensation Committee or Nominating and Governance

Committee shall be entitled to an additional annual cash retainer equal to Eighteen Thousand Dollars (US$18,000) (in the case of the Chair of the Audit Committee), Twelve Thousand Dollars (US$12,000) (in the case of the Chair of the Compensation Committee), and/or Eight Thousand Five Hundred Dollars (US$8,500) (in the case of the Chair of the Nominating and Governance Committee), irrespective of the number of committees on which such director serves as Chair or as a member (collectively the "***Chair Retainers***"). Chair Retainers shall be payable quarterly in arrears, subject to such director's continued service to the Company as a Chair of a committee on the last day of the preceding quarter. Such amounts shall be prorated in the case of service for less than the entire quarter.

Annual Retainer for Service on a Board Committee

In addition to the Annual Retainer, other than the Chair, each Non-Employee Director who serves as member of the Company's Audit Committee, Compensation Committee or Nominating and Governance Committee shall be entitled to an additional annual cash retainer equal to Seven Thousand Five Hundred Dollars (US$7,500) (in the case of a member of the Audit Committee), Six Thousand Dollars (US$6,000) (in the case of a member of the Compensation Committee), and/or Four Thousand Five Hundred Dollars (US$4,500) (in the case of a member of the Nominating and Governance Committee), irrespective of the number of committees on which such director serves as Chair or as a member (collectively the "***Committee Membership Retainers***"). Committee Membership Retainers shall be payable quarterly in arrears, subject to such director's continued service to the Company as a member of a committee on the last day of the preceding quarter. Such amounts shall be prorated in the case of service for less than the entire quarter.

Equity Award

Initial Award for New Directors

On the date a new Non-Employee Director becomes a member of the Board, each such Non-Employee Director shall automatically, without further action by Board or Committee, receive an option (an "***Initial Option***") to purchase a number of shares of the common stock of the Company (each, a "***Share***") equal to (x) Sixty Thousand Dollars ($60,000) divided by (y) the Black-Scholes value of a Share on the date of grant, as determined consistent with the historical practices of the Company. The per share exercise price for the Initial Option shall be equal to the fair market value for a Share on the date of grant. The Initial Option shall vest and becomes exercisable in three equal annual installments, with one-third of the Shares subject to the Initial Option vesting on each of the first three anniversaries of the date of grant, subject to such director's continued board service through each applicable vesting date. An employee director who ceases to be an employee, but who remains a director, will not receive the Initial Option.

Annual Award for Continuing Board Members

At each Company's annual meeting of stockholders, all Non-Employee Directors shall automatically, without further action by Board or Committee, receive an option (an "***Annual Option***") to purchase a number of Shares equal to (x) Thirty Thousand Dollars ($30,000) divided by (y) the Black-Scholes value of a Share on the date of grant, as determined consistent with the

historical practices of the Company. The per share exercise price for the Annual Option shall be equal to the fair market value for a Share on the date of grant. The Annual Option shall vest and becomes exercisable on the earlier of (x) the one year anniversary of the date of grant of the Annual Option and (y) the date of the Company's next annual meeting of stockholders following the date of grant, subject to such director's continued board service through such vesting date. A Non-Employee Director who was previously an employee but ceases to be an employee, and who remains a director, will receive the Annual Option.

Annual Award for Chairperson

In addition to the Annual Option, at each Company's annual meeting of stockholders, the Chairperson shall automatically, without further action by Board or Committee, receive an option (an "***Chairperson Option***") to purchase a number of Shares equal to (x) Forty Thousand Dollars ($40,000) divided by (y) the Black-Scholes value of a Share on the date of grant, as determined consistent with the historical practices of the Company. The per share exercise price for the Chairperson Option shall be equal to the fair market value for a Share on the date of grant. The Chairperson Option shall vest and becomes exercisable on the earlier of (x) the one year anniversary of the date of grant of the Chairperson Option and (y) the date of the Company's next annual meeting of stockholders following the date of grant, subject to the Chairperson's continued board service through such vesting date.

Provisions Applicable to All Equity Awards

Each Initial Option, Annual Option and Chairperson Option shall be subject to the terms and conditions of the Company's 2015 Omnibus Equity Incentive Plan (the "***2015 Equity Plan***") and the terms of the Stock Option Agreement entered into by the Company and such director in connection with such award. For purposes of this Director Compensation Policy, "***Fair Market Value***" shall have the meaning as set forth in the 2015 Equity Plan. Furthermore, all vesting for any such equity awards to Non-Employee Directors shall terminate, and all such equity awards shall be fully vested, upon a "***Change in Control***" as defined in the 2015 Equity Plan.

Expense Reimbursement

The Company shall reimburse each director, consistent with the Company's travel and expense reimbursement policies and practices, for all reasonable out-of-pocket expenses incurred by any director of the Company directly in connection with travel to and from any meetings of the Board or committees thereof. The Company shall make expense reimbursements to all directors within a reasonable amount of time following submission by the director of reasonable written substantiation for the expenses.

Effective Date: January 1, 2016

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, Roger J. Salameh, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arcadia Biosciences, Inc. for the period ended March 31, 2016;

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) 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

    c) 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 10, 2016

/s/ ROGER J. SALAMEH

Roger J. Salameh
Interim Chief Executive Officer & President
(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, Steven F. Brandwein, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arcadia Biosciences, Inc. for the period ended March 31, 2016;

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) 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

    c) 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 10, 2016

/s/ STEVEN F. BRANDWEIN
Steven F. Brandwein
Interim 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, 2016 (the "Report"), I, Roger J. Salameh, Interim Chief Executive Officer and President 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 10, 2016

/s/ ROGER J. SALAMEH

Roger J. Salameh

Interim Chief Executive Officer & President
(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, 2016 (the "Report"), I, Steven F. Brandwein, Interim 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 10, 2016

/s/ STEVEN F. BRANDWEIN

Steven F. Brandwein,

Interim Chief Financial Officer
(Principal Financial Officer)