
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2019

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 No. 000-26770

NOVAVAX, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

22-2816046

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

21 Firstfield Road, Gaithersburg, MD
(Address of principal executive offices)

20878
(Zip code)

(240) 268-2000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, Par Value \$0.01 per share	NVAX	The Nasdaq Global Select Market

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 every Interactive Data File required to be submitted 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 such files). Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

The number of shares outstanding of the Registrant's Common Stock, \$0.01 par value, was 26,577,433 as of October 31, 2019.

NOVAVAX, INC.
TABLE OF CONTENTS

	Page No.
<u>PART I. FINANCIAL INFORMATION</u>	
<u>Item 1.</u>	<u>Consolidated Financial Statements</u>
	<u>1</u>
	<u>Consolidated Balance Sheets as of September 30, 2019 (unaudited) and December 31, 2018</u>
	<u>1</u>
	<u>Unaudited Consolidated Statements of Operations and Unaudited Consolidated Statements of Comprehensive Loss for the three and nine months ended September 30, 2019 and 2018</u>
	<u>2</u>
	<u>Unaudited Consolidated Statements of Changes in Stockholders' Deficit for the three and nine months ended September 30, 2019 and 2018</u>
	<u>3</u>
	<u>Unaudited Consolidated Statements of Cash Flows for the nine months ended September 30, 2019 and 2018</u>
	<u>5</u>
	<u>Notes to the Consolidated Financial Statements (unaudited)</u>
	<u>6</u>
<u>Item 2.</u>	<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>
	<u>19</u>
<u>Item 3.</u>	<u>Quantitative and Qualitative Disclosures about Market Risk</u>
	<u>30</u>
<u>Item 4.</u>	<u>Controls and Procedures</u>
	<u>30</u>
<u>PART II. OTHER INFORMATION</u>	
<u>Item 1A.</u>	<u>Risk Factors</u>
	<u>31</u>
<u>Item 6.</u>	<u>Exhibits</u>
	<u>32</u>
<u>SIGNATURES</u>	<u>33</u>

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

NOVAVAX, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share information)

	September 30, 2019	December 31, 2018
	(unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 71,167	\$ 70,154
Marketable securities	—	21,980
Restricted cash	4,355	10,847
Prepaid expenses and other current assets	13,500	16,295
Total current assets	<u>89,022</u>	<u>119,276</u>
Restricted cash	408	958
Property and equipment, net	12,244	28,426
Intangible assets, net	5,469	6,541
Goodwill	50,305	51,967
Other non-current assets	7,362	810
Total assets	<u>\$ 164,810</u>	<u>\$ 207,978</u>
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	\$ 4,210	\$ 9,301
Accrued expenses	11,553	19,550
Accrued interest	2,031	5,078
Deferred revenue	2,590	10,010
Other current liabilities	1,191	1,600
Total current liabilities	<u>21,575</u>	<u>45,539</u>
Deferred revenue	2,500	2,500
Convertible notes payable	320,255	319,187
Other non-current liabilities	10,318	8,687
Total liabilities	<u>354,648</u>	<u>375,913</u>
Commitments and contingencies		
Stockholders' deficit:		
Preferred stock, \$0.01 par value, 2,000,000 shares authorized; no shares issued and outstanding as of September 30, 2019 and December 31, 2018, respectively	—	—
Common stock, \$0.01 par value, 600,000,000 shares authorized at September 30, 2019 and December 31, 2018; 25,575,578 shares issued and 25,528,642 shares outstanding at September 30, 2019 and 19,245,302 shares issued and 19,222,410 shares outstanding at December 31, 2018	256	192
Additional paid-in capital	1,226,314	1,144,621
Accumulated deficit	(1,399,971)	(1,299,107)
Treasury stock, 46,936 shares, cost basis at September 30, 2019 and 22,892 shares, cost basis at December 31, 2018	(2,583)	(2,450)
Accumulated other comprehensive loss	(13,854)	(11,191)
Total stockholders' deficit	<u>(189,838)</u>	<u>(167,935)</u>
Total liabilities and stockholders' deficit	<u>\$ 164,810</u>	<u>\$ 207,978</u>

The accompanying notes are an integral part of these financial statements.

NOVAVAX, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share information)
(unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2019	2018	2019	2018
Revenue:				
Grant and other	\$ 2,507	\$ 7,735	\$ 9,846	\$ 28,161
Total revenue	<u>2,507</u>	<u>7,735</u>	<u>9,846</u>	<u>28,161</u>
Expenses:				
Research and development	18,611	41,326	84,502	130,382
Gain on Catalent transaction	(9,016)	—	(9,016)	—
General and administrative	7,899	8,309	26,236	25,185
Total expenses	<u>17,494</u>	<u>49,635</u>	<u>101,722</u>	<u>155,567</u>
Loss from operations	(14,987)	(41,900)	(91,876)	(127,406)
Other income (expense):				
Investment income	342	752	1,236	2,090
Interest expense	(3,403)	(3,403)	(10,209)	(10,209)
Other income (expense)	5	(19)	(15)	111
Net loss	<u>\$ (18,043)</u>	<u>\$ (44,570)</u>	<u>\$ (100,864)</u>	<u>\$ (135,414)</u>
Basic and diluted net loss per share	<u>\$ (0.74)</u>	<u>\$ (2.33)</u>	<u>\$ (4.43)</u>	<u>\$ (7.42)</u>
Basic and diluted weighted average number of common shares outstanding	<u>24,327</u>	<u>19,116</u>	<u>22,761</u>	<u>18,262</u>

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)
(unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2019	2018	2019	2018
Net loss	\$ (18,043)	\$ (44,570)	\$ (100,864)	\$ (135,414)
Other comprehensive income (loss):				
Net unrealized gains (losses) on marketable debt securities available-for-sale	—	(13)	5	9
Foreign currency translation adjustment	(1,564)	160	(2,668)	(2,418)
Other comprehensive gain (loss)	<u>(1,564)</u>	<u>147</u>	<u>(2,663)</u>	<u>(2,409)</u>
Comprehensive loss	<u>\$ (19,607)</u>	<u>\$ (44,423)</u>	<u>\$ (103,527)</u>	<u>\$ (137,823)</u>

The accompanying notes are an integral part of these financial statements.

NOVAVAX, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT
Three Months Ended September 30, 2019 and 2018
(unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Treasury Stock	Other Comprehensive Income(Loss)	Stockholders' Equity (Deficit)
	Shares	Amount					
(in thousands, except share information)							
Balance at June 30, 2019	23,495,466	\$ 235	\$ 1,210,941	\$ (1,381,928)	\$ (2,451)	\$ (12,290)	\$ (185,493)
Non-cash compensation cost for stock options, RSUs, SARs and ESPP	—	—	2,624	—	—	—	2,624
Exercise of stock options/Vesting of RSUs/Purchases under ESPP	122,485	1	181	—	(132)	—	50
Issuance of common stock, net of issuance costs of \$161	1,957,627	20	12,568	—	—	—	12,588
Foreign currency translation adjustment	—	—	—	—	—	(1,564)	(1,564)
Net loss	—	—	—	(18,043)	—	—	(18,043)
Balance at September 30, 2019	25,575,578	\$ 256	\$ 1,226,314	\$ (1,399,971)	\$ (2,583)	\$ (13,854)	\$ (189,838)
Balance at June 30, 2018	19,106,971	\$ 191	\$ 1,130,928	\$ (1,205,203)	\$ (2,450)	\$ (11,173)	\$ (87,707)
Non-cash compensation cost for stock options, ESPP and restricted stock	—	—	4,431	—	—	—	4,431
Exercise of stock options/Purchases under ESPP	52,329	1	1,019	—	—	—	1,020
Unrealized loss on marketable securities	—	—	—	—	—	(13)	(13)
Foreign currency translation adjustment	—	—	—	—	—	160	160
Net loss	—	—	—	(44,570)	—	—	(44,570)
Balance at September 30, 2018	19,159,300	\$ 192	\$ 1,136,378	\$ (1,249,773)	\$ (2,450)	\$ (11,026)	\$ (126,679)

The accompanying notes are an integral part of these financial statements.

NOVAVAX, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT
Nine Months Ended September 30, 2019 and 2018
(unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Treasury Stock	Other Comprehensive Income(Loss)	Stockholders' Equity (Deficit)
	Shares	Amount					
(in thousands, except share information)							
Balance at December 31, 2018	19,245,302	\$ 192	\$ 1,144,621	\$ (1,299,107)	\$ (2,450)	\$ (11,191)	\$ (167,935)
Non-cash compensation cost for stock options, RSUs, SARs and ESPP	—	—	12,803	—	—	—	12,803
Exercise of stock options/Vesting of RSUs/Purchases under ESPP	173,873	2	1,122	—	(132)	—	992
Fractional shares purchased in stock split	—	—	—	—	(1)	—	(1)
Issuance of common stock, net of issuance costs of \$1,273	6,156,403	62	67,768	—	—	—	67,830
Unrealized gain on marketable securities	—	—	—	—	—	5	5
Foreign currency translation adjustment	—	—	—	—	—	(2,668)	(2,668)
Net loss	—	—	—	(100,864)	—	—	(100,864)
Balance at September 30, 2019	25,575,578	\$ 256	\$ 1,226,314	\$ (1,399,971)	\$ (2,583)	\$ (13,854)	\$ (189,838)
Balance at December 31, 2017	16,184,241	\$ 162	\$ 1,023,532	\$ (1,114,359)	\$ (2,450)	\$ (8,617)	\$ (101,732)
Non-cash compensation cost for stock options, ESPP and restricted stock	—	—	13,928	—	—	—	13,928
Exercise of stock options/Purchases under ESPP	112,065	1	2,461	—	—	—	2,462
Restricted stock cancelled	(938)	—	—	—	—	—	—
Issuance of common stock, net of issuance costs of \$4,220	2,863,932	29	96,457	—	—	—	96,486
Unrealized gain on marketable securities	—	—	—	—	—	9	9
Foreign currency translation adjustment	—	—	—	—	—	(2,418)	(2,418)
Net loss	—	—	—	(135,414)	—	—	(135,414)
Balance at September 30, 2018	19,159,300	\$ 192	\$ 1,136,378	\$ (1,249,773)	\$ (2,450)	\$ (11,026)	\$ (126,679)

The accompanying notes are an integral part of these financial statements.

NOVAVAX, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2019	2018
Operating Activities:		
Net loss	\$ (100,864)	\$ (135,414)
Reconciliation of net loss to net cash used in operating activities:		
Depreciation and amortization	4,744	6,177
Loss (Gain) on disposal of property and equipment	88	(55)
Gain on Catalent transaction	(9,016)	—
Non-cash impact of lease termination	—	(4,381)
Amortization of debt issuance costs	1,068	1,068
Non-cash stock-based compensation	12,803	13,928
Other	1,269	(1,820)
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	1,326	1,692
Accounts payable and accrued expenses	(16,882)	(10,498)
Deferred revenue	(7,416)	(10,256)
Net cash used in operating activities	<u>(112,880)</u>	<u>(139,559)</u>
Investing Activities:		
Capital expenditures	(1,641)	(855)
Proceeds from Catalent transaction	18,333	—
Proceeds from maturities of marketable securities	39,500	98,305
Purchases of marketable securities	(17,484)	(117,172)
Net cash provided by (used in) investing activities	<u>38,708</u>	<u>(19,722)</u>
Financing Activities:		
Net proceeds from sales of common stock	67,220	96,486
Proceeds from the exercise of stock options and employee stock purchases	992	2,462
Net cash provided by financing activities	<u>68,212</u>	<u>98,948</u>
Effect of exchange rate on cash, cash equivalents and restricted cash	(69)	(62)
Net decrease in cash, cash equivalents and restricted cash	(6,029)	(60,395)
Cash, cash equivalents and restricted cash at beginning of period	81,959	135,431
Cash, cash equivalents and restricted cash at end of period	<u>\$ 75,930</u>	<u>\$ 75,036</u>
Supplemental disclosure of non-cash activities:		
Sale of common stock under the Sales Agreement not settled at quarter-end	\$ 610	\$ —
Property and equipment purchases included in accounts payable and accrued expenses	<u>\$ 183</u>	<u>\$ 126</u>
Supplemental disclosure of cash flow information:		
Cash payments of interest	<u>\$ 12,188</u>	<u>\$ 12,188</u>

The accompanying notes are an integral part of these financial statements.

NOVAVAX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(unaudited)

Note 1 – Organization

Novavax, Inc. (“Novavax,” and together with its wholly owned subsidiary, Novavax AB, the “Company”) is a late-stage biotechnology company that promotes improved global health through the discovery, development and commercialization of innovative vaccines to prevent serious infectious diseases. The Company’s vaccine candidates, including its lead candidates, NanoFlu™ and ResVax™, are genetically engineered, three-dimensional nanostructures of recombinant proteins critical to disease pathogenesis and may elicit differentiated immune responses, which may be more efficacious than naturally occurring immunity or traditional vaccines. The Company’s technology targets a variety of infectious diseases.

Note 2 – Going Concern

The accompanying unaudited consolidated financial statements have been prepared assuming that the Company will continue as a going concern within one year after the date that the financial statements are issued. During 2018, the Company incurred a net loss of \$184.7 million and had net cash flows used in operating activities of \$184.8 million. At September 30, 2019, the Company had \$75.9 million in cash and cash equivalents, marketable securities and restricted cash and had no committed source of additional funding from either debt or equity financings. Management believes that given the Company’s current cash position and forecasted negative cash flows from operating activities over the next twelve months as it continues its product development activities, there is substantial doubt about its ability to continue as a going concern through one year from the date that these financial statements are issued, without obtaining additional financing or entering into another form of non-equity or debt arrangement.

The Company’s ability to fund its operations is dependent upon management’s plans, which include raising additional capital in the near term primarily through a combination of equity and debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements and in the longer term, from revenue related to product sales, to the extent its product candidates receive marketing approval and can be commercialized. New financings may not be available to the Company on commercially acceptable terms, or at all. Also, any collaborations, strategic alliances and marketing, distribution or licensing arrangements may require the Company to give up some or all of its rights to a product or technology, which in some cases may be at less than the full potential value of such rights. If the Company is unable to obtain additional capital, the Company will assess its capital resources and may be required to delay, reduce the scope of or eliminate one or more of its research and development programs, and/or downsize its organization.

The unaudited consolidated financial statements do not include any adjustments that might be necessary if the Company is not able to continue as a going concern.

Note 3 – Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (“U.S. GAAP”) for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. The consolidated balance sheet as of September 30, 2019, the consolidated statements of operations and the consolidated statements of comprehensive loss for the three and nine months ended September 30, 2019 and 2018, the consolidated statements of changes in stockholders’ deficit for the three and nine months ended September 30, 2019 and 2018 and the consolidated statements of cash flows for the nine months ended September 30, 2019 and 2018 are unaudited, but include all adjustments (consisting of normal recurring adjustments) that the Company considers necessary for a fair presentation of the financial position, operating results, comprehensive loss, changes in stockholders’ deficit and cash flows, respectively, for the periods presented. Although the Company believes that the disclosures in these unaudited consolidated financial statements are adequate to make the information presented not misleading, certain information and footnote information normally included in consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted as permitted under the rules and regulations of the United States Securities and Exchange Commission (“SEC”).

The unaudited consolidated financial statements include the accounts of Novavax, Inc. and its wholly owned subsidiary, Novavax AB. All intercompany accounts and transactions have been eliminated in consolidation.

The accompanying unaudited consolidated financial statements are presented in U.S. dollars. The functional currency of Novavax AB, which is located in Sweden, is the local currency (Swedish Krona). The translation of assets and liabilities of Novavax AB to U.S. dollars is made at the exchange rate in effect at the consolidated balance sheet date, while equity accounts are translated at historical rates. The translation of the statement of operations data is made at the average exchange rate in effect for the period. The translation of operating cash flow data is made at the average exchange rate in effect for the period, and investing and financing cash flow data is translated at the exchange rate in effect at the date of the underlying transaction. Translation gains and losses are recognized as a component of accumulated other comprehensive loss in the accompanying unaudited consolidated balance sheets. The foreign currency translation adjustment balance included in accumulated other comprehensive loss was \$13.9 million and \$11.2 million at September 30, 2019 and December 31, 2018, respectively.

The accompanying unaudited consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018. Results for this or any interim period are not necessarily indicative of results for any future interim period or for the entire year. The Company operates in one business segment.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ materially from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist of highly liquid investments with maturities of three months or less from the date of purchase. Cash and cash equivalents consist of the following at (in thousands):

	September 30, 2019	December 31, 2018
Cash	\$ 8,486	\$ 6,750
Money market funds	42,681	39,168
Asset-backed securities	20,000	15,000
Corporate debt securities	—	9,236
Cash and cash equivalents	<u>\$ 71,167</u>	<u>\$ 70,154</u>

Cash equivalents are recorded at cost, which approximate fair value due to their short-term nature.

Marketable Securities

Marketable securities consist of debt securities with maturities greater than three months from the date of purchase that have historically included commercial paper, asset-backed securities and corporate notes. Classification of marketable securities between current and non-current is dependent upon the maturity date at the balance sheet date taking into consideration the Company's ability and intent to hold the investment to maturity.

Interest and dividend income is recorded when earned and included in investment income in the consolidated statements of operations. Premiums and discounts, if any, on marketable securities are amortized or accreted to maturity and included in investment income in the consolidated statements of operations. The specific identification method is used in computing realized gains and losses on the sale of the Company's securities.

The Company classifies its marketable securities with readily determinable fair values as "available-for-sale." Investments in securities that are classified as available-for-sale are measured at fair market value in the consolidated balance sheets, and unrealized gains and losses on marketable securities are reported as a separate component of stockholders' deficit until realized. Marketable securities are evaluated periodically to determine whether a decline in value is "other-than-temporary." The term "other-than-temporary" is not intended to indicate a permanent decline in value. Rather, it means that the prospects for a near term recovery of value are not necessarily favorable, or that there is a lack of evidence to support fair values equal to, or greater than, the carrying value of the security. Management reviews criteria, such as the magnitude and duration of the decline, as well as the Company's ability to hold the securities until market recovery, to predict whether the loss in value is other-than-temporary. If a decline in value is determined to be other-than-temporary, the value of the security is reduced and the impairment is recorded as other income (expense) in the consolidated statements of operations.

Restricted Cash

The Company's current and non-current restricted cash includes payments received under the Grant Agreement (as defined in Note 11) with the Bill & Melinda Gates Foundation ("BMGF") under which the Company was awarded a grant up to \$89.1 million, escrow funds received in connection with the Catalent transaction (see Note 12) and cash collateral accounts under letters of credit that serve as security deposits for certain facility leases. The Company will utilize the Grant Agreement funds as it incurs expenses for services performed under the agreement. At September 30, 2019 and December 31, 2018, the restricted cash balances (both current and non-current) consist of payments received under the Grant Agreement of \$2.9 million and \$10.8 million, respectively, \$1.5 million held in escrow received in connection with the Catalent transaction at September 30, 2019 and security deposits of \$0.4 million and \$1.0 million at September 30, 2019 and December 31, 2018, respectively.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same such amounts shown in the statement of cash flows (in thousands):

	September 30, 2019	December 31, 2018
Cash and cash equivalents	\$ 71,167	\$ 70,154
Restricted cash current	4,355	10,847
Restricted cash non-current	408	958
Cash, cash equivalents and restricted cash	<u>\$ 75,930</u>	<u>\$ 81,959</u>

Revenue Recognition

The Company performs research and development under grant, license and clinical development agreements. Payments received in advance of work performed are recorded as deferred revenue.

The Company's current revenue primarily consists of revenue under its Grant Agreement with BMGF (see Note 11). The Company is reimbursed for certain costs that support development activities, including the Company's global Phase 3 clinical trial in pregnant women in their third trimester, product licensing efforts and efforts to obtain World Health Organization ("WHO") prequalification of its RSV F Vaccine for infants via maternal immunization ("ResVax"). The Company's Grant Agreement does not provide a direct economic benefit to BMGF. Rather, the Company entered into an agreement with BMGF to make a certain amount of ResVax available and accessible at affordable pricing to people in certain low- and middle-income countries. Based on these circumstances, the Company does not consider BMGF to be a customer and concluded the Grant Agreement is outside the scope of Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers (Topic 606)*. Payments received under the Grant Agreement are considered conditional contributions under the scope of ASC 958-605, *Not-for-Profit Entities – Revenue Recognition*, and are recorded as deferred revenue until the period in which such research and development activities are performed and revenue can be recognized.

The Company analyzed the Grant Agreement with BMGF to determine whether the payments received should be recorded as revenue or as a reduction to research and development expenses. In reaching the determination that such payments should be recorded as revenue, management considered a number of factors, including whether the Company is principal under the arrangement, and whether the arrangement is significant to, and part of, the Company's core operations. Further, management has consistently applied its policy of presenting such amounts as revenue.

Net Loss per Share

Net loss per share is computed using the weighted average number of shares of common stock outstanding. At September 30, 2019 and 2018, the Company had outstanding stock options, stock appreciation rights ("SARs") and unvested restricted stock units ("RSUs") totaling 5,041,526 and 2,214,318, respectively. At September 30, 2019, the Company's Notes (see Note 8) would have been convertible into approximately 2,385,800 shares of the Company's common stock assuming a common stock price of \$136.20 or higher. These and any shares due to the Company upon settlement of its capped call transactions are excluded from the computation, as their effect is antidilutive.

Recent Accounting Pronouncements

Recently Adopted

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-02, *Leases (Topic 842)*, subsequently amended in 2018 by ASU 2018-01, ASU 2018-10, ASU 2018-11 and ASU 2018-20 (collectively, "Topic 842"), that increases transparency and comparability among organizations by requiring the recognition of right-of-use assets and lease liabilities on the balance sheet and disclosure of key information about leasing arrangements for both lessees and lessors. Leases are classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. In connection with the adoption of Topic 842, the Company conducted reviews of its facility and equipment operating leases and assessed contracts that may contain a right-of-use asset or embedded leasing arrangement.

The Company adopted Topic 842 on January 1, 2019 under the optional transition method, which does not require restatement of prior periods. The Company elected the package of practical expedients permitted under the transition guidance, which allowed the Company to carryforward its historical lease classification, its assessment of whether a contract is or contains a lease and its initial direct costs for any leases that existed prior to adoption of the standard. The Company also elected to combine lease and non-lease components for its facility leases and to exclude leases with an initial term of 12 months or less from its consolidated balance sheet and recognize the associated lease payments in its consolidated statements of operations on a straight-line basis over the lease term. The Company's equipment leases had a remaining term of 12 months or less at the adoption date.

The Company recorded approximately \$12 million in total right-of-use assets, net of the deferred rent liability, and approximately \$22 million in total lease liabilities on its consolidated balance sheet as of January 1, 2019. Adoption of the standard did not materially impact its consolidated statements of cash flows or results of operations.

Not Yet Adopted

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles-Goodwill and Other (Topic 350)* (“ASU 2017-04”), which will simplify the goodwill impairment calculation by eliminating Step 2 from the current goodwill impairment test. The new standard does not change how a goodwill impairment is identified. The Company will continue to perform its quantitative goodwill impairment test by comparing the fair value of its reporting unit to its carrying amount, but if the Company is required to recognize a goodwill impairment charge, under the new standard, the amount of the charge will be calculated by subtracting the reporting unit’s fair value from its carrying amount. Under the current standard, if the Company is required to recognize a goodwill impairment charge, Step 2 requires it to calculate the implied value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination and the amount of the charge is calculated by subtracting the reporting unit’s implied fair value of goodwill from the goodwill carrying amount. The standard will be effective January 1, 2020 for the Company, with early adoption permitted, and should be applied prospectively from the date of adoption. The Company is currently evaluating when it will adopt ASU 2017-04 and its expected impact to related disclosures.

Note 4 – Fair Value Measurements

The following table represents the Company’s fair value hierarchy for its financial assets and liabilities measured at fair value (in thousands):

Assets	Fair Value at September 30, 2019			Fair Value at December 31, 2018		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Money market funds(1)	\$ 42,681	\$ —	\$ —	\$ 39,168	\$ —	\$ —
Asset-backed securities(2)	—	20,000	—	—	19,997	—
Corporate debt securities(3)	—	—	—	—	26,219	—
Total assets	\$ 42,681	\$ 20,000	\$ —	\$ 39,168	\$ 46,216	\$ —
Liabilities						
Convertible notes payable	\$ —	\$ 134,553	\$ —	\$ —	\$ 197,935	\$ —

- (1) Classified as cash and cash equivalents as of September 30, 2019 and December 31, 2018, respectively, on the consolidated balance sheets.
- (2) Includes \$20,000 and \$15,000 classified as cash and cash equivalents as of September 30, 2019 and December 31, 2018, respectively, on the consolidated balance sheets.
- (3) Includes \$9,236 classified as cash and cash equivalents as of December 31, 2018 on the consolidated balance sheets.

Fixed-income investments categorized as Level 2 are valued at the custodian bank by a third-party pricing vendor’s valuation models that use verifiable observable market data, e.g., interest rates and yield curves observable at commonly quoted intervals and credit spreads, bids provided by brokers or dealers or quoted prices of securities with similar characteristics. Pricing of the Company’s Notes (see Note 8) has been estimated using other observable inputs, including the price of the Company’s common stock, implied volatility, interest rates and credit spreads among others. Over time, the Company expects a market for the Notes to develop when there is sufficient volume of trading. At that time, the Company intends to use trade data as the principal basis for measuring fair value.

During the nine months ended September 30, 2019 and 2018, the Company did not have any transfers between levels

The amount recorded in the Company’s unaudited consolidated balance sheets for accounts payable and accrued expenses approximates its fair value due to its short-term nature.

Note 5 – Marketable Securities

Marketable securities classified as available-for-sale as of September 30, 2019 and December 31, 2018 were comprised of (in thousands):

	September 30, 2019				December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Asset-backed securities	\$ —	\$ —	\$ —	\$ —	\$ 4,999	\$ —	\$ (2)	\$ 4,997
Corporate debt securities	—	—	—	—	16,986	—	(3)	16,983
Total	\$ —	\$ —	\$ —	\$ —	\$ 21,985	\$ —	\$ (5)	\$ 21,980

Marketable Securities – Unrealized Losses

The primary objective of the Company's investment policy is the preservation of capital; thus, the Company's investment policy limits investments to certain types of instruments with high-grade credit ratings, places restrictions on maturities and concentrations in certain industries and requires the Company to maintain a certain level of liquidity.

Note 6 – Goodwill and Other Intangible Assets

Goodwill

The change in the carrying amounts of goodwill for the nine months ended September 30, 2019 was as follows (in thousands):

	Amount
Balance at December 31, 2018	\$ 51,967
Currency translation adjustments	(1,662)
Balance at September 30, 2019	\$ 50,305

Identifiable Intangible Assets

Purchased intangible assets consisted of the following as of September 30, 2019 and December 31, 2018 (in thousands):

	September 30, 2019			December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Intangible Assets, Net	Gross Carrying Amount	Accumulated Amortization	Intangible Assets, Net
Finite-lived intangible assets:						
Proprietary adjuvant technology	\$ 7,597	\$ (2,341)	\$ 5,256	\$ 8,357	\$ (2,263)	\$ 6,094
Collaboration agreements	3,430	(3,217)	213	3,773	(3,326)	447
Total identifiable intangible assets	\$ 11,027	\$ (5,558)	\$ 5,469	\$ 12,130	\$ (5,589)	\$ 6,541

Amortization expense for the nine months ended September 30, 2019 and 2018 was \$0.5 million.

Estimated amortization expense for existing intangible assets for the remainder of 2019 and for each of the five succeeding years ending December 31 will be as follows (in thousands):

Year	Amount
2019 (remainder)	\$ 159
2020	530
2021	380
2022	380
2023	380
2024	380

Note 7 – Leases

The Company has operating leases for its research and development and manufacturing facilities, corporate headquarters and offices and certain equipment. At September 30, 2019, the facility leases have expirations that range from approximately 4 year to 7 years, some of which include options to extend the leases or terminate the leases early. Options to extend the leases or terminate the leases early are only included in the lease term when it is reasonably certain that the option will be exercised. The facility leases contain provisions for future rent increases, and obligate the Company to pay building operating costs. Upon closing of the Catalent transaction in July 2019, the Company assigned two of its manufacturing facility leases to Catalent (see Note 12). As a result, the Company wrote-off the corresponding right-of-use (“ROU”) assets of \$8.2 million and the associated lease liabilities of \$12.7 million.

The operating leases represent the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the asset and are capitalized as ROU assets for the expected lease term (net of the deferred rent liability) with corresponding lease liabilities representing the obligation to make lease payments arising from the lease.

Supplemental balance sheet information related to leases as of September 30, 2019 was as follows (in thousands, except weighted-average remaining lease term and discount rate):

Lease Assets and Liabilities	Classification	Amount
Assets:		
Operating lease ROU assets	Other non-current assets	\$ 6,712
Liabilities:		
Current operating lease liabilities	Other current liabilities	\$ 1,191
Non-current operating lease liabilities	Other non-current liabilities	10,250
Total operating lease liabilities		<u>\$ 11,441</u>
Weighted-average remaining lease term (years)		6.21
Weighted-average discount rate		15.58%

Lease expense for the operating and short-term leases for the three and nine months ended September 30, 2019 was as follows (in thousands):

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Operating lease expense	\$ 819	\$ 3,378
Short-term lease expense	86	422
Total lease expense	<u>\$ 905</u>	<u>\$ 3,800</u>

Supplemental cash flow information related to leases for the nine months ended September 30, 2019 was as follows (in thousands):

	Amount
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 4,342
ROU assets obtained in exchange for operating lease obligations	16,534

As of September 30, 2019, maturities of lease liabilities were as follows (in thousands):

Year	Amount
2019 (remainder)	\$ 711
2020	2,904
2021	2,969
2022	3,037
2023	2,897
Thereafter	5,679
Total operating lease payments	18,197
Less: imputed interest	(6,756)
Total operating lease liabilities	\$ 11,441

During the nine months ended September 30, 2019, the Company did not enter into any additional operating or finance leases other than in April 2019, when the Company extended the lease at its Rockville, MD facility to expire in January 2024. This lease was subsequently assigned to Catalent (see Note 12).

Note 8 – Long-Term Debt

Convertible Notes

The Company incurred approximately \$10.0 million of debt issuance costs during the first quarter of 2016 relating to the issuance of \$325 million aggregate principal amount of convertible senior unsecured notes that will mature on February 1, 2023 (the “Notes”), which were recorded as a reduction to the Notes on the consolidated balance sheet. The \$10.0 million of debt issuance costs is being amortized and recognized as additional interest expense over the seven-year contractual term of the Notes on a straight-line basis, which approximates the effective interest rate method.

Total convertible notes payable consisted of the following at (in thousands):

	September 30, 2019	December 31, 2018
Principal amount of the Notes	\$ 325,000	\$ 325,000
Unamortized debt issuance costs	(4,745)	(5,813)
Total convertible notes payable	\$ 320,255	\$ 319,187

Interest expense incurred in connection with the Notes consisted of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Coupon interest at 3.75%	\$ 3,047	\$ 3,047	\$ 9,141	\$ 9,141
Amortization of debt issuance costs	356	356	1,068	1,068
Total interest expense on the Notes	\$ 3,403	\$ 3,403	\$ 10,209	\$ 10,209

Note 9 – Stockholders’ Deficit

On May 8, 2019, the Company’s stockholders of record as of March 25, 2019 approved a one-for-twenty reverse stock split of the Company’s outstanding common stock, which reverse stock split was effected on May 10, 2019. The number of authorized shares of common stock and preferred stock of the Company was not affected and remains at 600,000,000 and 2,000,000, respectively, but the number of shares of common stock outstanding as of May 10, 2019 was reduced from 469,453,883 to 23,472,574. The aggregate par value of the issued common stock was reduced by reclassifying a portion of the par value amount of the outstanding common shares from Common stock to Additional paid-in-capital for all periods presented. In addition, all per share and share amounts, including stock options and restricted stock awards and units, have been retroactively restated in the accompanying Consolidated Financial Statements and Notes to Consolidated Financial Statements for all periods presented to reflect the reverse stock split.

In December 2018, the Company entered into an At Market Issuance Sales Agreement (“December 2018 Sales Agreement”), which allows it to issue and sell up to \$100 million in gross proceeds of its common stock. During the nine months ended September 30, 2019, the Company sold 3.6 million shares of common stock under the December 2018 Sales Agreement, of which 1.7 million shares of common stock were sold in the first quarter of 2019, resulting in \$29.3 million in net proceeds (this amount excludes \$0.6 million received in the fourth quarter of 2019 for shares traded in late September 2019) at a weighted average sales price of \$8.39 per share. From October 1 through November 1, 2019, the Company sold 1.0 million shares of common stock under the December 2018 Sales Agreement resulting in \$5.0 million in net proceeds, leaving \$64.4 million remaining available to be sold.

In April 2018, the Company completed a public offering of 1.7 million shares of its common stock, including 0.2 million shares of common stock that were issued upon the exercise in full of the option to purchase additional shares granted to the underwriters, at a price of \$33.00 per share resulting in net proceeds of approximately \$54 million.

In December 2017, the Company entered into an At Market Issuance Sales Agreement (“December 2017 Sales Agreement”), which allowed it to issue and sell up to \$75 million in gross proceeds of its common stock. During the nine months ended September 30, 2019, the Company sold 2.5 million shares of common stock under the December 2017 Sales Agreement, of which all were sold in the first quarter of 2019, resulting in \$37.9 million in net proceeds at a weighted average sales price of \$15.33 per share. The December 2017 Sales Agreement was fully utilized at that time. During the nine months ended September 30, 2018, the Company sold 0.8 million shares of common stock under the December 2017 Sales Agreement, of which all were sold in the first quarter of 2018, resulting in \$32.3 million in net proceeds at a weighted average sales price of \$41.86 per share.

In January 2017, the Company entered into an At Market Issuance Sales Agreement (“January 2017 Sales Agreement”), which allowed it to issue and sell up to \$75 million in gross proceeds of its common stock. During the nine months ended September 30, 2018, the Company sold 0.3 million shares of common stock under the January 2017 Sales Agreement, of which all were sold in the first quarter of 2018, resulting in \$10.3 million in net proceeds at a weighted average sales price of \$30.80 per share. The January 2017 Sales Agreement was fully utilized at that time.

Note 10 – Stock-Based Compensation

Stock Options

The 2015 Stock Incentive Plan, as amended (“2015 Plan”), was approved at the Company’s annual meeting of stockholders in June 2015. Under the 2015 Plan, equity awards may be granted to officers, directors, employees and consultants of and advisors to the Company and any present or future subsidiary.

The 2015 Plan authorizes the issuance of up to 3,800,000 shares of common stock under equity awards granted under the 2015 Plan, which includes an increase of 1,000,000 shares approved for issuance under the 2015 Plan at the Company's 2019 annual meeting of stockholders. All such shares authorized for issuance under the 2015 Plan have been reserved. The 2015 Plan will expire on March 4, 2025.

The Amended and Restated 2005 Stock Incentive Plan ("2005 Plan") expired in February 2015 and no new awards may be made under such plan, although awards will continue to be outstanding in accordance with their terms.

The 2015 Plan permits and the 2005 Plan permitted the grant of stock options (including incentive stock options), restricted stock, stock appreciation rights and restricted stock units. In addition, under the 2015 Plan, unrestricted stock, stock units and performance awards may be granted. Stock options and stock appreciation rights generally have a maximum term of 10 years and may be or were granted with an exercise price that is no less than 100% of the fair market value of the Company's common stock at the time of grant. Grants of stock options are generally subject to vesting over periods ranging from one to four years.

Stock Options and Stock Appreciation Rights

The following is a summary of stock options and stock appreciation rights activity under the 2015 Plan and 2005 Plan for the nine months ended September 30, 2019:

	2015 Plan		2005 Plan	
	Stock Options	Weighted-Average Exercise Price	Stock Options	Weighted-Average Exercise Price
Outstanding at January 1, 2019	2,392,567	\$ 62.41	582,616	\$ 65.72
Granted	1,479,337	\$ 6.15	—	\$ —
Exercised	(1,514)	\$ 27.42	(1,500)	\$ 11.20
Canceled	(451,774)	\$ 53.23	(30,167)	\$ 92.11
Outstanding at September 30, 2019	<u>3,418,616</u>	<u>\$ 39.29</u>	<u>550,949</u>	<u>\$ 64.43</u>
Shares exercisable at September 30, 2019	<u>954,785</u>	<u>\$ 89.06</u>	<u>550,949</u>	<u>\$ 64.43</u>
Shares available for grant at September 30, 2019	<u>233,059</u>			

In the three months ended September 30, 2019, the Company granted 192,400 stock appreciation rights with a weighted-average exercise price of \$5.95 under the 2015 Plan. In addition, due to the limitations on the equity awards currently available under the 2015 Plan, the Company granted 1,014,200 stock options to certain employees with a weighted-average exercise price of \$5.95 under the 2015 Plan that are subject to approval at the Company's annual meeting of stockholders in June 2020. As these stock options have not yet been approved by the Company's stockholders, the Company will not record any stock-based compensation expense for these awards until such time these awards are approved by the stockholders and a measurement date occurs.

The fair value of stock options and stock appreciation rights (not including awards that are subject to stockholders' approval) granted under the 2015 Plan was estimated at the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Weighted-average Black-Scholes fair value of stock options and SARs granted	\$4.91	\$21.80	\$5.42	\$25.80
Risk-free interest rate	1.52%-1.57%	2.68%-2.86%	1.52%-2.55%	2.26%-2.86%
Dividend yield	0%	0%	0%	0%
Volatility	128.00%-133.80%	113.64%-114.90%	111.65%-133.80%	113.64%-114.90%
Expected term (in years)	3.97-4.45	4.08-4.10	3.97-4.50	4.08-4.14
Expected forfeiture rate	0%	0%	0%	0%

The total aggregate intrinsic value and weighted-average remaining contractual term of stock options and stock appreciation rights outstanding under the 2015 Plan and 2005 Plan as of September 30, 2019 was \$0 million and 7.9 years, respectively. The total aggregate intrinsic value and weighted-average remaining contractual term of stock options and stock appreciation rights exercisable under the 2015 Plan and 2005 Plan as of September 30, 2019 was \$0 million and 5.5 years, respectively. The aggregate intrinsic value represents the total intrinsic value (the difference between the Company's closing stock price on the last trading day of the period and the exercise price, multiplied by the number of in-the-money stock options and stock appreciation rights) that would have been received by the holders had all stock option and stock appreciation rights holders exercised their stock options and stock appreciation rights on September 30, 2019. This amount is subject to change based on changes to the closing price of the Company's common stock. The aggregate intrinsic value of stock options and stock appreciation rights exercised for the nine months ended September 30, 2019 and 2018 was \$0.1 million and \$0.3 million, respectively.

Employee Stock Purchase Plan

The Employee Stock Purchase Plan, as amended (the "ESPP"), was approved at the Company's annual meeting of stockholders in June 2013. The amount of shares authorized for issuance under the ESPP was increased by 200,000 shares at the Company's 2019 annual meeting of stockholders. The ESPP currently authorizes an aggregate of 597,500 shares of common stock to be purchased, and the aggregate amount of shares will continue to increase 5% on each anniversary of its adoption up to a maximum of 600,000 shares. The ESPP allows employees to purchase shares of common stock of the Company at each purchase date through payroll deductions of up to a maximum of 15% of their compensation, at 85% of the lesser of the market price of the shares at the time of purchase or the market price on the beginning date of an option period (or, if later, the date during the option period when the employee was first eligible to participate). At September 30, 2019, there were 287,431 shares available for issuance under the ESPP.

The ESPP is considered compensatory for financial reporting purposes. As such, the fair value of ESPP shares was estimated at the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Range of Black-Scholes fair value of ESPP shares granted	\$2.57-\$35.00	\$7.20-\$70.60	\$2.57-\$35.00	\$7.20-\$70.60
Risk-free interest rate	1.34%-2.55%	0.74%-2.24%	1.20%-2.55%	0.66%-2.24%
Dividend yield	0%	0%	0%	0%
Volatility	59.71%-171.60%	52.19%-203.83%	52.19%-171.60%	52.19%-203.83%
Expected term (in years)	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0
Expected forfeiture rate	0%	0%	0%	0%

Restricted Stock Units

The following is a summary of restricted stock units activity for the nine months ended September 30, 2019:

	Number of Shares	Per Share Weighted- Average Grant-Date Fair Value
Outstanding and Unvested at January 1, 2019	—	\$ —
Restricted stock units granted	1,207,609	\$ 6.50
Restricted stock units vested	(72,637)	\$ 10.40
Restricted stock units forfeited	(63,011)	\$ 10.40
Outstanding and Unvested at September 30, 2019	<u>1,071,961</u>	<u>\$ 6.00</u>

The Company recorded all stock-based compensation expense in the consolidated statements of operations as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Research and development	\$ 723	\$ 2,611	\$ 6,347	\$ 8,199
General and administrative	1,901	1,820	6,456	5,729
Total stock-based compensation expense	<u>\$ 2,624</u>	<u>\$ 4,431</u>	<u>\$ 12,803</u>	<u>\$ 13,928</u>

As of September 30, 2019, there was approximately \$31 million of total unrecognized compensation expense related to unvested stock options, stock appreciation rights, restricted stock units and the ESPP. This unrecognized non-cash compensation expense is expected to be recognized over a weighted-average period of 1.4 years, and will be allocated between research and development and general and administrative expenses accordingly. This estimate does not include the impact of other possible stock-based awards that may be made during future periods and awards that require approval by the stockholders.

Note 11 – Grant Agreement

Bill & Melinda Gates Foundation Grant Agreement

In support of the Company's development of ResVax, in September 2015, the Company entered into the grant agreement with BMGF (the "Grant Agreement"), under which it was awarded a grant totaling up to \$89.1 million (the "Grant"). The Grant supports development activities, including the Company's global Phase 3 clinical trial in pregnant women in their third trimester, product licensing efforts and efforts to obtain WHO prequalification of ResVax. Unless terminated earlier by BMGF, the Grant Agreement will continue in effect until the end of 2021. The Company concurrently entered into a Global Access Commitments Agreement ("GACA") with BMGF as a part of the Grant Agreement. Under the terms of the GACA, among other things, the Company agreed to make a certain amount of ResVax available and accessible at affordable pricing to people in certain low- and middle-income countries. Unless terminated earlier by BMGF, the GACA will continue in effect until the later of 15 years from its effective date, or 10 years after the first sale of a product under defined circumstances. The term of the GACA may be extended in certain circumstances, by a period of up to five additional years.

Payments received in advance that are related to future performance are deferred and recognized as revenue when the research and development activities are performed. Cash payments received under the Grant Agreement are restricted as to their use until expenditures contemplated in the Grant Agreement are incurred. During the three and nine months ended September 30, 2019, the Company recognized revenue from the Grant of \$1.9 million and \$7.5 million, respectively, and has recognized approximately \$80 million in revenue since the inception of the agreement. At September 30, 2019, the Company's current restricted cash and deferred revenue balances on the consolidated balance sheet include its estimate of costs to be reimbursed and revenue to be recognized, respectively, in the next twelve months under the Grant Agreement.

Note 12 – Catalent Transaction

In June 2019, the Company entered into an asset purchase agreement (the “Agreement”) with Catalent Maryland, Inc. (formerly Paragon Bioservices, Inc.), a unit of Catalent Biologics (“Catalent”), pursuant to which the Company agreed to sell to Catalent certain assets related to its biomanufacturing and development activities located at the facilities situated at each of 20 Firstfield Road in Gaithersburg, Maryland 20878 and 9920 Belward Campus Drive in Rockville, Maryland 20850, for a purchase price of (i) \$18.0 million, including \$1.5 million to be held in escrow for one year following the closing of the transaction, plus (ii) an additional fee to purchase laboratory supplies of \$0.3 million, subject to certain adjustments. The transaction closed in July 2019. Pursuant to the transactions contemplated by the Agreement, approximately 100 Novavax manufacturing and quality employees transferred to Catalent, and the Company assigned two facility leases to Catalent. The Company also entered into other ancillary agreements upon the closing of the transaction, including a Non-Commercial GMP Manufacturing Services Agreement pursuant to which the Company is required to purchase \$6.0 million in certain services from Catalent set forth therein, through July 31, 2020. The transaction was treated as an asset disposition for accounting purposes. In the three months ended September 30, 2019, the Company recorded a gain on the disposition of such assets of \$9.0 million as a result of the Agreement.

Note 13 – Related Party Transactions

In July 2017, the Company entered into a consulting agreement with Dr. Sarah Frech, the spouse of Mr. Stanley C. Erck, the Company’s President and Chief Executive Officer. Dr. Frech is a seasoned biotechnology executive with significant experience managing multiple clinical programs. Under the agreement, Dr. Frech provided clinical development and operations services related to the Company’s Phase 3 clinical trial of ResVax and other professional services. The agreement terminated in July 2019. For the nine months ended September 30, 2019 and 2018, the Company incurred \$0.1 million and \$0.2 million, respectively, in consulting expenses under the agreement. No amount was due and unpaid for services performed under the agreement at September 30, 2019 as compared to less than \$0.1 million at December 31, 2018.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Any statements in the discussion below and elsewhere in this Quarterly Report about expectations, beliefs, plans, objectives, assumptions or future events or performance of Novavax, Inc. (“Novavax,” and together with its wholly owned subsidiary Novavax AB, the “Company,” “we” or “us”) are not historical facts and are forward-looking statements. Such forward-looking statements include, without limitation, statements with respect to our capabilities, goals, expectations regarding future revenue and expense levels and capital raising activities, including possible proceeds from our December 2018 Sales Agreement (defined below); obligations under our Services Agreement (defined below) with Catalent Maryland, Inc. (formerly Paragon Bioservices, Inc.), a unit of Catalent Biologics (“Catalent”); potential market sizes and demand for our product candidates; the efficacy, safety and intended utilization of our product candidates; the development of our clinical-stage product candidates and our recombinant vaccine and adjuvant technologies; the development of our preclinical product candidates; the conduct, timing and potential results from clinical trials and other preclinical studies; plans for and potential timing of regulatory filings; our expectations with respect to the anticipated ongoing development and potential commercialization or licensure of ResVax; the expected timing and content of regulatory actions; payments by the Bill & Melinda Gates Foundation (“BMGF”); our available cash resources and usage and the availability of financing generally; expected future cash savings and expense reductions associated with the Catalent transaction; plans regarding partnering activities, business development initiatives; the adoption of stock incentive plans and amendments thereto; the Reverse Stock Split (defined below) and its impact on the trading price of our common stock and other matters referenced herein. You generally can identify these forward-looking statements by the use of words or phrases such as “believe,” “may,” “could,” “will,” “would,” “possible,” “can,” “estimate,” “continue,” “ongoing,” “consider,” “anticipate,” “intend,” “seek,” “plan,” “project,” “expect,” “should,” “would,” or “assume” or the negative of these terms, or other comparable terminology, although not all forward-looking statements contain these words.

Forward-looking statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed or implied in the statements. Any or all of our forward-looking statements in this Quarterly Report may turn out to be inaccurate or materially different from actual results.

Because the risk factors discussed in this Quarterly Report and identified in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, and other risk factors of which we are not aware, could cause actual results or outcomes to differ materially from those expressed or implied in any forward-looking statements made by or on behalf of us, you should not place undue reliance on any such forward-looking statements. These statements are subject to risks and uncertainties, known and unknown, which could cause actual results and developments to differ materially from those expressed or implied in such statements. We have included important factors that could cause results to differ in the cautionary statements included in this Quarterly Report, particularly those identified in Part II, Item 1A “Risk Factors” of this Quarterly Report and in Part I, Item 1A “Risk Factors” of our Annual Report on Form 10-K. These and other risks may also be detailed and modified or updated in our reports and other documents filed with the Securities and Exchange Commission (“SEC”) from time to time. You are encouraged to read these filings as they are made.

We cannot guarantee future results, events, level of activity, performance or achievement. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, unless required by law. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Overview

We are a late-stage biotechnology company that promotes improved global health through the discovery, development and commercialization of innovative vaccines to prevent serious infectious diseases. Our vaccine candidates, including our lead candidates, NanoFlu™ and ResVax™, are genetically engineered, three-dimensional nanostructures of recombinant proteins critical to disease pathogenesis and may elicit differentiated immune responses, which may be more efficacious than naturally occurring immunity or traditional vaccines. Our technology targets a variety of infectious diseases. We are also developing proprietary immune stimulating saponin-based adjuvants at Novavax AB, our wholly owned Swedish subsidiary. Our lead adjuvant, Matrix-M™, has been shown to enhance immune responses and has been well-tolerated in multiple clinical trials.

Product Pipeline

Program	Current Development Stage
Seasonal Influenza •NanoFlu (Older Adults)	Phase 3
Respiratory Syncytial Virus (“RSV”) •ResVax* (Infants via Maternal Immunization) •Older Adults •Pediatrics	Phase 3 Phase 2 Phase 1
Combination Seasonal Influenza/RSV	Preclinical
Ebola Virus (“EBOV”)	Phase 1

*Supported by a grant of up to \$89.1 million from BMGF

A summary and status of these vaccine programs follows:

Seasonal Influenza

NanoFlu Program (Older Adults)

Influenza is a world-wide infectious disease with serious illness generally occurring in more susceptible populations such as children under 18 years old and older adults, but also occurring in the general population. According to influenza vaccines forecasts by Datamonitor in 2013, the market for seasonal influenza vaccines is expected to grow from approximately \$3.2 billion in the 2015-16 flu season to approximately \$5.3 billion in the 2021-22 flu season (in the countries comprising the top seven markets). Recent flu seasons have shown an increase in the influenza disease burden. For the 2017-18 flu season, the Center for Disease Control and Prevention estimates that influenza in the U.S. has resulted in 48.8 million illnesses, 959,000 hospitalizations and 79,400 deaths, a dramatic increase across all categories compared to previous years.

In October 2019, we initiated a pivotal Phase 3 clinical trial of NanoFlu in older adults (65 years and older). This randomized, observer-blinded, active-controlled trial will evaluate the immunogenicity and safety of NanoFlu with its proprietary Matrix-M adjuvant, compared to a U.S.-licensed quadrivalent vaccine, Fluzone® Quadrivalent. The trial’s primary objective is to demonstrate non-inferior immunogenicity as measured by hemagglutination inhibition (“HAI”) titers of vaccine homologous influenza strains compared to a licensed seasonal vaccine, and to describe its safety profile. In October 2019, we completed enrollment of 2,652 healthy older adults across 19 clinical sites in the U.S. and we expect to report top-line clinical data in the first quarter of 2020. These data would support a subsequent U.S. biologics license application (“BLA”) and licensure of NanoFlu using the FDA’s accelerated approval pathway.

In June 2019, we announced that the FDA acknowledged that the accelerated approval pathway is available for NanoFlu. An accelerated approval may be granted for certain biological products that have been studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments. Such an approval will be based on adequate and well-controlled clinical trials establishing that the biological product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit. For seasonal influenza vaccines, the HAI antibody response is considered an acceptable surrogate marker of activity that is reasonably likely to predict clinical benefit. To be considered for accelerated approval, a BLA for a new seasonal influenza vaccine should include results from one or more well-controlled studies designed to meet immunogenicity endpoints along with a commitment to conduct confirmatory post-marketing studies of clinical effectiveness in preventing influenza.

Respiratory Syncytial Virus (RSV)

Currently, there is no approved RSV vaccine available to combat the estimated 64 million RSV infections that occur globally each year. We have identified three susceptible target populations that we believe could benefit from the development of our respiratory syncytial virus fusion (F) protein nanoparticle vaccine candidate (“RSV F Vaccine”) in different formulations: (1) infants via maternal immunization, (2) older adults (60 years and older) and (3) children six months to five years old (“pediatrics”). With our current estimates of the annual global cost burden of RSV in excess of \$88 billion, we believe our RSV F Vaccine represents a multi-billion dollar worldwide opportunity.

ResVax Program (Infants via Maternal Immunization)

ResVax is our adjuvanted RSV F Vaccine for infants via maternal immunization. RSV is the most common cause of lower respiratory tract infections (“LRTI”) and the leading viral cause of severe lower respiratory tract disease in infants and young children worldwide. In the U.S., RSV is the leading cause of hospitalization of infants and, globally, is second only to malaria as a cause of death in children under one year of age.

Data from our Prepare trial, which was initiated in December 2015, was announced in February 2019. The Prepare trial was conducted to determine whether ResVax reduced incidence of medically significant RSV-positive LRTI in infants through a minimum of the first 90 days of life and up through the first six months of life. While these data did not meet the trial’s primary efficacy endpoint, it did demonstrate efficacy against a secondary objective by reducing RSV LRTI hospitalizations in treated infants. ResVax is thus the first RSV vaccine to show efficacy in a Phase 3 clinical trial, and in addition, showed important effects against a variety of pre-specified exploratory endpoints and post-hoc analyses. This included a ~60% reduction in RSV-related severe hypoxemia and a ~74% reduction in RSV-related, radiographically-confirmed pneumonia through day 90. As in previous clinical trials, ResVax also showed favorable safety and tolerability results. In light of the fact that the trial failed to meet the primary endpoints, the U.S. Food and Drug Administration (“FDA”) and European Medicines Agency (“EMA”) recommended that we conduct an additional Phase 3 clinical trial to confirm efficacy. We continue to work with the Bill & Melinda Gates Foundation, which is supporting the development of ResVax through a grant of up to \$89.1 million, to develop regulatory approaches for ResVax in certain low- and middle-income countries. We are currently in discussions with multiple potential commercial partners around the opportunity to bring ResVax to market globally, including assisting us with the regulatory licensure pathways in the U.S., European Union and other geographies.

RSV Older Adults Program

Older adults (60 years and older) are at increased risk for RSV disease due in part to immunosenescence, the age-related decline in the human immune system. RSV infection can also lead to exacerbation of underlying co-morbidities such as chronic obstructive pulmonary disease, asthma and congestive heart failure. In the U.S. alone, a reported RSV incidence rate of 5.5% in older adults would account for approximately 2.5 million infections per year. We estimate that approximately 900,000 medical interventions are caused by RSV disease in this U.S. population each year. We followed up the 2016 Phase 3 clinical trial of our RSV F Vaccine, which failed to meet its pre-specified primary or secondary efficacy objectives, with a 2017 Phase 2 clinical trial in older adults, to assess safety and immunogenicity of one and two dose regimens of our RSV F Vaccine, with and without aluminum phosphate or our proprietary Matrix-M adjuvant. Immunogenicity results from the 2017 trial indicate that both adjuvants increase the magnitude, duration and quality of the immune response versus the non-adjuvanted RSV F Vaccine. We continue to assess the development opportunities for our RSV F Vaccine in older adults in the United States.

RSV Pediatrics Program

By the age of five, essentially all children will have been exposed to RSV and will likely develop natural immunity against the virus; however, children under five remain vulnerable to RSV disease, offering a strong rationale for a pediatric vaccine that could offer enhanced protection. In 2015, we announced positive results in our Phase 1 clinical trial evaluating the safety and immunogenicity of our RSV F Vaccine in healthy children between two and six years of age. We continue to assess the development opportunities for our RSV F Vaccine for pediatrics.

Combination Seasonal Influenza/RSV F Vaccine

With the ongoing development of our NanoFlu and RSV F Vaccine, a strong rationale exists for developing a combination respiratory vaccine that is designed to protect susceptible populations against both diseases. Although testing is at an early stage, we believe that a combination vaccine against both influenza and RSV may be achievable.

Ebola Virus

Ebola virus (“EBOV”) is a filovirus that produces severe, often fatal illness in humans. Within the last decade, it has produced two large outbreaks in Sub-Saharan Africa with high mortality. There are currently no licensed treatments proven to prevent EBOV, although a range of blood, immunological and drug therapies are under development.

We have developed an EBOV glycoprotein vaccine candidate (“Ebola GP Vaccine”) expressed in insect cells, using our core recombinant baculovirus technology. In five separate studies, carried out in collaboration with the National Institute of Allergy and Infectious Disease, active immunization with Ebola GP Vaccine was shown to be highly immunogenic and efficacious in preventing lethal disease in non-human primates challenged with EBOV. Our 2015 Phase 1 clinical trial demonstrated that our Ebola GP Vaccine is highly immunogenic in humans, well-tolerated and, in conjunction with our proprietary Matrix-M adjuvant, demonstrated marked antigen dose-sparing and induced significant increases in neutralizing antibody titers. While we intend to advance our Ebola GP Vaccine, doing so will be dependent upon funding or a partner.

CPLB Joint Venture

CPL Biologicals Private Limited (“CPLB”), our joint venture between Novavax and Cadila Pharmaceuticals Limited (“Cadila”), is actively developing a number of vaccine candidates in India. CPLB is owned 20% by Novavax and 80% by Cadila.

Reverse Stock Split

On May 8, 2019, following stockholders approval at a Special Meeting earlier that day, we filed a Certificate of Amendment to our Second Amended and Restated Certificate of Incorporation with the Delaware Secretary of State to effect a reverse stock split of our issued and outstanding common stock, par value \$0.01, at a ratio of 1-for-20 (“Reverse Stock Split”), effective as of May 10, 2019. We have retroactively restated all per share and share amounts, including stock options and restricted stock awards and units, in this Quarterly Report for all periods presented to reflect the Reverse Stock Split.

Catalent Transaction

In June 2019, we entered into an asset purchase agreement (the “Agreement”) with Catalent, pursuant to which we agreed to sell to Catalent certain assets related to our biomanufacturing and development activities located at the facilities situated at each of 20 Firstfield Road in Gaithersburg, Maryland 20878 and 9920 Belward Campus Drive in Rockville, Maryland 20850, for a purchase price of (i) \$18.0 million, including \$1.5 million to be held in escrow for one year following the closing of the transaction, plus (ii) an additional fee to purchase laboratory supplies of approximately \$0.3 million, subject to certain adjustments. The transaction closed in July 2019. Pursuant to the transactions contemplated by the Agreement, approximately 100 Novavax manufacturing and quality employees transferred to Catalent, and we assigned two facility leases to Catalent. We also entered into other ancillary agreements upon the closing of the transaction, including a Non-Commercial GMP Manufacturing Services Agreement pursuant to which we are required to purchase \$6.0 million in certain services from Catalent set forth therein, through July 31, 2020. The transaction was treated as an asset disposition for accounting purposes. As a result of the transactions contemplated by the Agreement and related attrition since March 1, 2019, we have reduced our headcount by more than 200 employees. In the three months ended September 30, 2019, we recorded a gain on the disposition of such assets of \$9.0 million as a result of the Agreement.

Sales of Common Stock

In December 2018, we entered into an At Market Issuance Sales Agreement (“December 2018 Sales Agreement”), which allows us to issue and sell up to \$100 million in gross proceeds of our common stock. During the nine months ended September 30, 2019, we sold 3.6 million shares of common stock under the December 2018 Sales Agreement, of which 1.7 million shares of common stock were sold in the first quarter of 2019, resulting in \$29.3 million in net proceeds at a weighted average sales price of \$8.39 per share. From October 1 through November 1, 2019, we sold 1.0 million shares of common stock under the December 2018 Sales Agreement resulting in \$5.0 million in net proceeds, leaving \$64.4 million remaining available to be sold.

In December 2017, we entered into an At Market Issuance Sales Agreement (“December 2017 Sales Agreement”), which allowed us to issue and sell up to \$75 million in gross proceeds of our common stock. During the nine months ended September 30, 2019, we sold 2.5 million shares of common stock under the December 2017 Sales Agreement, of which all were sold in the first quarter of 2019, resulting in \$37.9 million in net proceeds at a weighted average sales price of \$15.33 per share. The December 2017 Sales Agreement was fully utilized at that time.

Critical Accounting Policies and Use of Estimates

There are no material changes to our critical accounting policies as described in Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as filed with the SEC.

Recent Accounting Pronouncements Not Yet Adopted

See “Note 3—Summary of Significant Accounting Policies” included in our Notes to Consolidated Financial Statements (under the caption “*Recent Accounting Pronouncements*”).

Results of Operations

The following is a discussion of the historical financial condition and results of operations of the Company and should be read in conjunction with the unaudited consolidated financial statements and notes thereto set forth in this Quarterly Report.

Three Months Ended September 30, 2019 and 2018(amounts in tables are presented in thousands, except per share information or as otherwise indicated)

Revenue:

	Three Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Revenue:			
Total revenue	\$ 2,507	\$ 7,735	\$ (5,228)

Revenue for the three months ended September 30, 2019 was \$2.5 million as compared to \$7.7 million for the same period in 2018, a decrease of \$5.2 million, or 68%. Revenue for the three months ended September 30, 2019 and 2018 was primarily comprised of services performed under the Grant Agreement with BMGF and to a lesser extent, revenue from Novavax AB. Revenue decreased as a result of completing enrollment of the Prepare trial in the second quarter of 2018.

We expect revenue in 2019 under the Grant Agreement to be significantly lower than in 2018 as the Prepare trial is expected to conclude in 2019.

Expenses:

	Three Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Expenses:			
Research and development	\$ 18,611	\$ 41,326	\$ (22,715)
Gain on Catalent transaction	(9,016)	—	(9,016)
General and administrative	7,899	8,309	(410)
Total expenses	<u>\$ 17,494</u>	<u>\$ 49,635</u>	<u>\$ (32,141)</u>

Research and Development Expenses

Research and development expenses include salaries, stock-based compensation, laboratory supplies, consultants and subcontractors, including external contract research organizations, and other expenses associated with our process development, manufacturing, clinical, regulatory and quality assurance activities for our programs. In addition, indirect costs such as fringe benefits and overhead expenses related to research and development activities, are also included in research and development expenses. Research and development expenses decreased to \$18.6 million for the three months ended September 30, 2019 from \$41.3 million for the same period in 2018, a decrease of \$22.7 million, or 55%. This decrease was primarily due to decreased development activities, including lower clinical trial costs, of ResVax, lower employee-related costs and other cost savings due to the Catalent transaction. At September 30, 2019, we had 127 employees dedicated to our research and development programs versus 313 employees as of September 30, 2018. For 2019, we expect research and development expenses overall to decrease primarily due to the completion of activities related to the conclusion of the Prepare trial and the expected impact of the Catalent transaction, including headcount reductions and assignment of certain facility leases, partially offset by our Phase 3 clinical trial of NanoFlu.

Expenses by Functional Area

We track our research and development expenses by the type of costs incurred in identifying, developing, manufacturing and testing vaccine candidates. We evaluate and prioritize our activities according to functional area and therefore believe that project-by-project information would not form a reasonable basis for disclosure to our investors. Historically, we did not account for internal research and development expenses by project, since our employees' work time is spread across multiple programs and our internal manufacturing clean-room facility produces multiple vaccine candidates.

The following summarizes our research and development expenses by functional area for the three months ended September 30 (in millions):

	2019	2018
Manufacturing	\$ 9.7	\$ 19.7
Vaccine Discovery	1.4	1.4
Clinical and Regulatory	7.5	20.2
Total research and development expenses	<u>\$ 18.6</u>	<u>\$ 41.3</u>

We do not provide forward-looking estimates of costs and time to complete our research projects due to the many uncertainties associated with vaccine development. As we obtain data from preclinical studies and clinical trials, we may elect to discontinue or delay clinical trials in order to focus our resources on more promising vaccine candidates. Completion of clinical trials may take several years or more, but the length of time can vary substantially depending upon the phase, size of clinical trial, primary and secondary endpoints and the intended use of the vaccine candidate. The cost of clinical trials may vary significantly over the life of a project as a result of a variety of factors, including:

- the number of participants who participate in the clinical trials;
- the number of sites included in the clinical trials;
- if clinical trial locations are domestic, international or both;
- the time to enroll participants;
- the duration of treatment and follow-up;
- the safety and efficacy profile of the vaccine candidate; and
- the cost and timing of, and the ability to secure, regulatory approvals.

As a result of these uncertainties, we are unable to determine with any significant degree of certainty the duration and completion costs of our research and development projects or when, and to what extent, we will generate future cash flows from our research projects.

Gain on Catalent Transaction

As a result of the Catalent transaction (see discussion above), we recorded a gain of \$9.0 million for the three months ended September 30, 2019.

General and Administrative Expenses

General and administrative expenses slightly decreased to \$7.9 million for the three months ended September 30, 2019 from \$8.3 million for the same period in 2018. At September 30, 2019, we had 41 employees dedicated to general and administrative functions versus 49 employees as of September 30, 2018. For 2019, we expect general and administrative expenses to be consistent with that of 2018.

Other Income (Expense):

	Three Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Other Income (Expense):			
Investment income	\$ 342	\$ 752	\$ (410)
Interest expense	(3,403)	(3,403)	—
Other income (expense)	5	(19)	24
Total other income (expense)	<u>\$ (3,056)</u>	<u>\$ (2,670)</u>	<u>\$ (386)</u>

We had total other expense, net of \$3.1 million for the three months ended September 30, 2019 as compared to total other expense, net of \$2.7 million for the same period in 2018, an increase of \$0.4 million. Our investment income decreased due to lower marketable securities balances.

Net Loss:

	Three Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Net Loss:			
Net loss	\$ (18,043)	\$ (44,570)	\$ 26,527
Net loss per share	\$ (0.74)	\$ (2.33)	\$ 1.59
Weighted shares outstanding	24,327	19,116	5,211

Net loss for the three months ended September 30, 2019 was \$18.0 million, or \$0.74 per share, as compared to \$44.6 million, or \$2.33 per share, for the same period in 2018. The decrease in net loss was primarily due to decreased development activities, including lower clinical trial costs, of ResVax, and the \$9.0 million gain recorded on the Catalent transaction, partially offset by decreased revenue under the Grant Agreement.

The increase in weighted average shares outstanding for the three months ended September 30, 2019 is primarily a result of sales of our common stock in 2019 and 2018.

Nine Months Ended September 30, 2019 and 2018 (amounts in tables are presented in thousands, except per share information or as otherwise indicated)

Revenue:

	Nine Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Revenue:			
Total revenue	\$ 9,846	\$ 28,161	\$ (18,315)

Revenue for the nine months ended September 30, 2019 was \$9.8 million as compared to \$28.2 million for the same period in 2018, a decrease of \$18.3 million, or 65%. Revenue for the nine months ended September 30, 2019 and 2018 was primarily comprised of services performed under the Grant Agreement with BMGF and to a lesser extent, revenue from Novavax AB. Revenue decreased as a result of completing enrollment of the Prepare trial in the second quarter of 2018.

Expenses:

	Nine Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Expenses:			
Research and development	\$ 84,502	\$ 130,382	\$ (45,880)
Gain on Catalent transaction	(9,016)	—	\$ (9,016)
General and administrative	26,236	25,185	1,051
Total expenses	<u>\$ 101,722</u>	<u>\$ 155,567</u>	<u>\$ (53,845)</u>

Research and Development Expenses

Research and development expenses include salaries, stock-based compensation, laboratory supplies, consultants and subcontractors, including external contract research organizations, and other expenses associated with our process development, manufacturing, clinical, regulatory and quality assurance activities for our programs. In addition, indirect costs such as fringe benefits and overhead expenses related to research and development activities, are also included in research and development expenses. Research and development expenses decreased to \$84.5 million for the nine months ended September 30, 2019 from \$130.4 million for the same period in 2018, a decrease of \$45.9 million, or 35%. This decrease was primarily due to decreased development activities, including lower clinical trial costs, of ResVax, lower employee-related costs and other cost savings due to the Catalent transaction. At September 30, 2019, we had 127 employees dedicated to our research and development programs versus 313 employees as of September 30, 2018.

Expenses by Functional Area

The following summarizes our research and development expenses by functional area for the nine months ended September 30 (in millions):

	2019	2018
Manufacturing	\$ 50.6	\$ 60.5
Vaccine Discovery	4.9	4.7
Clinical and Regulatory	29.0	65.2
Total research and development expenses	<u>\$ 84.5</u>	<u>\$ 130.4</u>

Gain on Catalent Transaction

As a result of the Catalent transaction (see discussion above), we recorded a gain of \$9.0 million for the nine months ended September 30, 2019.

General and Administrative Expenses

General and administrative expenses slightly increased to \$26.2 million for the nine months ended September 30, 2019 from \$25.2 million for the same period in 2018, an increase of \$1.1 million, or 4%. The increase in general and administrative expenses are primarily due to increased professional fees related to the Catalent transaction and our recent stockholders meetings. At September 30, 2019, we had 41 employees dedicated to general and administrative functions versus 49 employees as of September 30, 2018.

Other Income (Expense):

	Nine Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Other Income (Expense):			
Investment income	\$ 1,236	\$ 2,090	\$ (854)
Interest expense	(10,209)	(10,209)	—
Other income (expense)	(15)	111	(126)
Total other income (expense)	<u>\$ (8,988)</u>	<u>\$ (8,008)</u>	<u>\$ (980)</u>

We had total other expense, net of \$9.0 million for the nine months ended September 30, 2019 as compared to total other expense, net of \$8.0 million for the same period in 2018, an increase of \$1.0 million. Our investment income decreased due to lower marketable securities balances.

Net Loss:

	Nine Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Net Loss:			
Net loss	\$ (100,864)	\$ (135,414)	\$ 34,550
Net loss per share	\$ (4.43)	\$ (7.42)	\$ 2.99
Weighted shares outstanding	22,761	18,262	4,499

Net loss for the nine months ended September 30, 2019 was \$100.9 million, or \$4.43 per share, as compared to \$135.4 million, or \$7.42 per share, for the same period in 2018. The decrease in net loss was primarily due to decreased development activities, including lower clinical trial costs, of ResVax and the \$9.0 million gain recorded on the Catalent transaction, partially offset by decreased revenue under the Grant Agreement.

The increase in weighted average shares outstanding for the nine months ended September 30, 2019 is primarily a result of sales of our common stock in 2019 and 2018.

Liquidity Matters and Capital Resources

Our future capital requirements depend on numerous factors including, but not limited to, the commitments and progress of our research and development programs, the progress of preclinical and clinical testing, the time and costs involved in obtaining regulatory approvals, the costs of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights and manufacturing costs. We plan to continue to have multiple vaccines and product candidates in various stages of development, and we believe our operating expenses and capital requirements will fluctuate depending upon the timing of events, such as the scope, initiation, rate and progress of our preclinical studies and clinical trials and other research and development activities. We have primarily funded our recent operations with proceeds from the sale of common stock in equity offerings, the issuance of convertible debt and revenue under our Grant Agreement with BMGF.

As of September 30, 2019, we had \$75.9 million in cash and cash equivalents, marketable securities and restricted cash as compared to \$103.9 million as of December 31, 2018. These amounts consisted of \$71.2 million in cash and cash equivalents and \$4.8 million in restricted cash as of September 30, 2019 as compared to \$70.2 million in cash and cash equivalents, \$22.0 million in marketable securities and \$11.8 million in restricted cash as of December 31, 2018.

The following table summarizes cash flows for the nine months ended September 30, 2019 and 2018 (in thousands):

	Nine Months Ended September 30,		
	2019	2018	Change 2018 to 2019
Summary of Cash Flows:			
Net cash (used in) provided by:			
Operating activities	\$ (112,880)	\$ (139,559)	\$ 26,679
Investing activities	38,708	(19,722)	58,430
Financing activities	68,212	98,948	(30,736)
Effect on exchange rate on cash, cash equivalents and restricted cash	(69)	(62)	(7)
Net increase (decrease) in cash, cash equivalents and restricted cash	(6,029)	(60,395)	54,366
Cash, cash equivalents and restricted cash at beginning of period	81,959	135,431	(53,472)
Cash, cash equivalents and restricted cash at end of period	<u>\$ 75,930</u>	<u>\$ 75,036</u>	<u>\$ 894</u>

Net cash used in operating activities decreased to \$112.9 million for the nine months ended September 30, 2019, as compared to \$139.6 million for the same period in 2018. The decrease in cash usage is primarily due to decreased development activities, including lower clinical trial costs, of ResVax in the nine months ended September 30, 2019 as compared to the same period in 2018, as well as approximately \$9.3 million of one-time payments made in the first quarter of 2018 that included our lease termination fee and the milestone payment to Wyeth Holdings LLC along with the Company's reduced bonus payout in the first quarter of 2019 as compared to the same period in 2018, partially offset by receipt of a \$15 million payment under the Grant Agreement with BMGF in the nine months ended September 30, 2018.

We expect our cash used in operating activities to significantly decrease in the second half of 2019 as compared to the first half of 2019, as a result of the Catalent transaction, including expected future cash savings from the assignment of leases and transfer of employees to Catalent, and decreasing expenses due to the completion of activities related to the conclusion of the Prepare trial, partially offset by our Phase 3 clinical trial of NanoFlu.

During the nine months ended September 30, 2019 and 2018, our investing activities consisted of purchases and maturities of marketable securities, \$18.3 million in proceeds from the Catalent transaction during the nine months ended September 30, 2019 and, to a much lesser extent, capital expenditures. Capital expenditures for the nine months ended September 30, 2019 and 2018 were \$1.6 million and \$0.9 million, respectively. For 2019, we expect a slight increase in our capital expenditures from 2018.

Our financing activities consisted primarily of sales of our common stock, and to a much lesser extent, stock option exercises and purchases under our employee stock purchase plan. In the nine months ended September 30, 2019, we received net proceeds of \$67.2 million (this amount excludes \$0.6 million received in the fourth quarter of 2019 for shares traded in late September 2019) from selling shares of common stock through our December 2017 and December 2018 Sales Agreements at a weighted average sales price of \$11.22 per share. In the nine months ended September 30, 2018, we completed a public offering of 1.7 million shares of our common stock at a price of \$33.00 per share resulting in net proceeds of approximately \$54 million and received net proceeds of \$42.6 million from selling shares of common stock through our January 2017 and December 2017 Sales Agreements at a weighted average sales price of \$38.53 per share.

The accompanying unaudited consolidated financial statements have been prepared assuming that the Company will continue as a going concern within one year after the date that the financial statements are issued. During 2018, we incurred a net loss of \$184.7 million and had net cash flows used in operating activities of \$184.8 million. At September 30, 2019, we had \$75.9 million in cash and cash equivalents and restricted cash and had no committed source of additional funding from either debt or equity financings. Management believes that given the Company's current cash position and forecasted negative cash flows from operating activities over the next twelve months as we continue our product development activities, there is substantial doubt about our ability to continue as a going concern through one year from the date that these financial statements are issued, without obtaining additional financing or entering into another form of non-equity or debt arrangement.

Our ability to fund Company operations is dependent upon management's plans, which include raising additional capital in the near term primarily through a combination of equity and debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements and in the longer term, from revenue related to product sales, to the extent our product candidates receive marketing approval and can be commercialized. New financings may not be available to us on commercially acceptable terms, or at all. Also, any collaborations, strategic alliances and marketing, distribution or licensing arrangements may require us to give up some or all of our rights to a product or technology, which in some cases may be at less than the full potential value of such rights. If we are unable to obtain additional capital, we will assess our capital resources and may be required to delay, reduce the scope of or eliminate one or more of our research and development programs, and/or downsize our organization.

Off-Balance Sheet Arrangements

We did not have any material off-balance sheet arrangements as of September 30, 2019.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The primary objective of our investment activities is preservation of capital, with the secondary objective of maximizing income. As of September 30, 2019, we had cash and cash equivalents of \$71.2 million, \$4.8 million in restricted cash and working capital of \$67.4 million.

Our exposure to market risk is primarily confined to our investment portfolio, which historically has been classified as available-for-sale. We do not believe that a change in the market rates of interest would have any significant impact on the realizable value of our investment portfolio. Changes in interest rates may affect the investment income we earn on our marketable securities when they mature and the proceeds are reinvested into new marketable securities and, therefore, could impact our cash flows and results of operations.

Interest and dividend income is recorded when earned and included in investment income. Premiums and discounts, if any, on marketable securities are amortized or accreted to maturity and included in investment income. The specific identification method is used in computing realized gains and losses on the sale of our securities.

We are headquartered in the U.S. where we conduct the vast majority of our business activities. We have one foreign consolidated subsidiary, Novavax AB, which is located in Sweden. A 10% decline in the exchange rate between the U.S. dollar and Swedish Krona would result in a decline of stockholders' deficit of approximately \$2.4 million at September 30, 2019.

Our Notes have a fixed interest rate and we have no additional material debt. As such, we do not believe that we are exposed to any material interest rate risk as a result of our borrowing activities.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the assistance of our chief executive officer and chief financial officer, has reviewed and evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of September 30, 2019. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving such control objectives. Based on the evaluation of our disclosure controls and procedures as of September 30, 2019, our chief executive officer and chief financial officer 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

Our management, including our chief executive officer and chief financial officer, has evaluated any changes in our internal control over financial reporting that occurred during the quarterly period ended September 30, 2019, and has concluded that there was no change that occurred during the quarterly period ended September 30, 2019 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1A. Risk Factors

Other than the additional risk factors disclosed below, there are no material changes to the Company's risk factors as described in Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

The Nasdaq Global Select Market has a listing requirement; if a participating company no longer meets such requirements and fails to correct the listing deficiency, its stock may be delisted.

The Nasdaq Global Select Market ("Nasdaq"), on which our common stock is listed and traded, has listing requirements that include a \$1 minimum closing bid price requirement. On April 11, 2019, we received a notification letter from Nasdaq (the "Notice") advising us that for 30 consecutive business days preceding the date of the Notice, the bid price of our common stock had closed below this \$1.00 per share minimum closing bid price. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), the Company was provided a compliance period of 180 calendar days, or until October 8, 2019, to regain compliance with this requirement.

On May 8, 2019, our stockholders approved the Reverse Stock Split, which became effective on May 10, 2019. On May 24, 2019, we received a notification letter from Nasdaq advising us that our closing bid price of our common stock had been at \$1.00 per share or greater for ten consecutive business days and we had regained compliance with Nasdaq Listing Rule 5450(a)(2) accordingly. We continue to monitor the bid price for our common stock. If we fail to satisfy the minimum closing bid price requirement or any other listing requirements in the future, Nasdaq may elect, subject to any potential cure periods, to initiate a process that may delist our common stock. Should such a delisting occur, it may adversely impact the liquidity and price of our common stock, impede our ability to raise capital and would constitute a fundamental change under our Notes.

Because we depend on third-parties to conduct some of our laboratory testing and clinical trials, and all of our vaccine manufacturing, we may encounter delays in or lose some control over our efforts to develop products.

We are dependent on third-party organizations to conduct some of our laboratory testing and clinical trials and, as a result of the Agreement with Catalent, all of our vaccine manufacturing activities. If we are unable to obtain any necessary services on acceptable terms, we may not complete our product development efforts in a timely manner. We may lose some control over these activities and become too dependent upon these parties. These third-parties may not complete testing or manufacturing activities on schedule, within budget, or when we request. We may not be able to secure and maintain suitable third-parties to conduct our laboratory testing, clinical trials and manufacturing activities.

We are responsible for confirming that each of our clinical trials is conducted in accordance with its general investigational plan and protocol. Moreover, the FDA and foreign regulatory agencies require us to comply with regulations and standards, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the clinical trial participants are adequately protected. The FDA and foreign regulatory agencies also require us to comply with good manufacturing practices. Our reliance on third-parties does not relieve us of these responsibilities and requirements. These third-parties may not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines. Furthermore, if our third-party manufacturer is producing materials or products for themselves or other companies, our third-party manufacturer may be exposed to regulatory risks for the production of such materials and products. As a result, failure to meet the regulatory requirements for the production of those materials and products may generally affect the regulatory clearance of the third-party manufacturer's facility, which could impact its ability to produce our materials and products. Any of our third-party service providers may need to be replaced or the quality or accuracy of the data they obtain may be compromised or the product they manufacture may be contaminated due to the failure to adhere to our clinical and manufacturing protocols, regulatory requirements or for other reasons. In any such event, our preclinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval of, or commercially manufacture, our vaccine candidates.

Item 6. Exhibits

- [3.1](#) [Second Amended and Restated Certificate of Incorporation of the Company \(Incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, filed August 10, 2015 \(File No. 000-26770\)\) as amended by the Certificate of Amendment dated May 8, 2019 \(Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 9, 2019 \(File No. 000-26770\)\)](#)
- [3.2](#) [Amended and Restated By-Laws of the Company \(Incorporated by reference to Exhibit 3.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2012, filed on March 12, 2013 \(File No. 000-26770\)\)](#)
- [10.1††*](#) [Form of Stock Appreciation Right Award Agreement granted under the Novavax, Inc. Amended and Restated 2015 Stock Incentive Plan](#)
- [31.1*](#) [Certification of Chief Executive Officer pursuant to Rule 13a-14\(a\) or 15d-14\(e\) of the Securities Exchange Act](#)
- [31.2*](#) [Certification of Chief Financial Officer pursuant to Rule 13a-14\(a\) or 15d-14\(e\) of the Securities Exchange Act](#)
- [32.1*](#) [Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- [32.2*](#) [Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- 101 The following financial information from our Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, formatted in Extensible Business Reporting Language (XBRL): (i) the Consolidated Balance Sheets as of September 30, 2019 and December 31, 2018, (ii) the Consolidated Statements of Operations for the three and nine-month periods ended September 30, 2019 and 2018, (iii) the Consolidated Statements of Comprehensive Loss for the three and nine-month periods ended September 30, 2019 and 2018, (iv) the Consolidated Statements of Changes in Stockholders' Deficit for the three and nine-month periods ended September 30, 2019 and 2018, (v) the Consolidated Statements of Cash Flows for the nine-month periods ended September 30, 2019 and 2018, and (vi) the Notes to Consolidated Financial Statements.

†† Management contracts, compensatory plans or arrangements.

* Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

NOVAVAX, INC.

Date: November 7, 2019

By: /s/ Stanley C. Erck
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 7, 2019

By: /s/ John J. Trizzino
Senior Vice President, Chief Business Officer, Chief Financial Officer and
Treasurer
(Principal Financial and Accounting Officer)



NOVAVAX, INC.
2015 Stock Incentive Plan
(Amended and Restated May 15, 2019)

Stock Appreciation Right Agreement

1. **Grant of Stock Appreciation Right.** Novavax, Inc., a Delaware corporation (the "Company"), hereby grants to (the "Grantee"), as of (the "Date of Grant"), a stock appreciation right (the "SAR"), pursuant to the Company's 2015 Stock Incentive Plan, as amended from time to time (the "Plan"), relating to shares of Common Stock ("Shares") of the Company, with a base value of \$ per share, to be settled in Shares, and subject to the terms and conditions of, this Stock Appreciation Right Agreement (this "Agreement") and the Plan.

The SAR evidenced by this Agreement is granted to the Grantee in connection with the Grantee's employment by or service to the Company and its qualifying subsidiaries. For purposes of the immediately preceding sentence, "qualifying subsidiary" means a subsidiary of the Company as to which the Company has a "controlling interest" as described in Treas. Regs. §1.409A-1(b)(5)(iii)(E)(1).

2. **Meaning of Certain Terms.** Except as otherwise defined herein, all capitalized terms used herein have the same meaning as in the Plan. The following terms have the following meanings:

(a) "Affiliate" means a subsidiary of the Company that would be described in the first sentence of Treas. Regs. § 1.409A-1(b)(5)(iii)(E)(1).

(b) "Beneficiary" means, in the event of the Grantee's death, the beneficiary named in the written designation (in form acceptable to the Administrator) most recently filed with the Administrator by the Grantee prior to the Grantee's death and not subsequently revoked, or, if there is no such designated beneficiary, the executor or administrator of the Grantee's estate. An effective beneficiary designation will be treated as having been revoked only upon receipt by the Administrator, prior to the Grantee's death, of an instrument of revocation in form acceptable to the Administrator.

(c) "SAR Holder" means the Grantee or, if as of the relevant time the SAR has passed to a Beneficiary, the Beneficiary.

(d) "Service" means the Grantee's service relationship with the Company and its Affiliates. Service will be deemed to continue, unless the Administrator expressly provides otherwise, so long as the Grantee is providing services in a capacity described in Section 3(a) of the Plan to, the Company or an Affiliate. If a Grantee's service relationship is with an Affiliate and that entity ceases to be an Affiliate, the Grantee's Service will be deemed to have terminated when the entity ceases to be an Affiliate unless the Grantee transfers Service to the Company or its remaining Affiliates.

3. Vesting, Exercise and Expiration.

(a) Vesting Schedule. As used herein with respect to the SAR or any portion thereof, the term “vest” means to become exercisable and the term “vested” as applied to any outstanding portion of the SAR means that the SAR is then exercisable, subject in each case to the terms of the Plan. Unless earlier terminated, forfeited, relinquished or expired, the SAR will vest as to .

(b) Expiration Date. The latest date on which the SAR or any portion thereof may be exercised will be the 10th anniversary of the Date of Grant (the “Expiration Date”). Except as provided in Section 5(e) of the Plan, if the SAR is not exercised by the Expiration Date the SAR or any remaining portion thereof will thereupon immediately terminate.

(c) Exercise Procedure. No portion of the SAR may be exercised until such portion vests. Each election to exercise any vested portion of the SAR will be subject to the terms and conditions of the Plan and this Agreement and shall be in writing (including in electronic form), signed by the SAR Holder (or in such other form as is acceptable to the Administrator). Each such written exercise election must be received by the Company at its primary office or by such other party as the Administrator may prescribe and be accompanied by payment in full of any tax withholdings due in connection with such exercise as provided below. The SAR Holder may exercise a portion of the SAR, provided that no partial exercise of the SAR may be for any fractional Share.

(d) Settlement upon Exercise. Upon exercise of the SAR, or any portion thereof, the Company shall issue to the Grantee a number of Shares (rounded down to the nearest whole share) having a Fair Market Value (determined as of the date on which the SAR is exercised) equal to the product of (a) the number of Shares with respect to which the SAR is exercised, and (b) the excess, if any, of (i) the Fair Market Value per Share upon the date of such exercise over (ii) the base value per share.

(e) Treatment of the SAR upon Cessation of Service. If the Grantee’s Service ceases, the SAR, to the extent not already vested, will cease to vest, except as provided in the last sentence of Section 3(a) and will be forfeited on the date that is three months after the date the Grantee’s Service ceases, and any vested portion of the SAR that is then outstanding will be treated as follows:

(i) Subject to clauses (ii) and (iii) below and Section 4 of this Agreement, the SAR, to the extent vested immediately prior to the cessation of the Grantee’s Service, will remain exercisable until the earlier of (A) the date that is three months following the date of such cessation of Service, or (B) the Expiration Date, and except to the extent previously exercised as permitted by this Section 3(e)(i) will thereupon immediately terminate.

(ii) Subject to clause (iii) below and Section 4 of this Agreement, the SAR, to the extent vested immediately on or prior to (A) the cessation of the Grantee’s Service due to death or disability (within the meaning of Section 22(e)(3) of the Code or any successor provision thereto), or (B) the Grantee’s death within three months following the Grantee’s termination of Service, will remain exercisable until the earlier of (x) the first anniversary of the date of the Grantee’s death or of the date of the termination of the Grantee’s Service due to disability, as applicable, or (y) the Expiration Date, and except to the extent previously exercised as permitted by this Section 3(e)(ii) will thereupon immediately terminate.

(iii) If the Grantee's Service is terminated by the Company and its subsidiaries in connection with an act or failure to act constituting Cause (as the Administrator, in its sole discretion, may determine), the SAR (whether or not vested) will immediately terminate and be forfeited upon such termination.

4. Forfeiture; Recovery of Compensation.

(a) The Administrator may cancel, rescind, withhold or otherwise limit or restrict the SAR at any time if the Grantee is not in compliance with all applicable provisions of this Agreement and the Plan.

(b) By accepting the SAR, the Grantee expressly acknowledges and agrees that his or her rights, and those of any permitted transferee of the SAR, under the SAR, including to any Shares acquired under the SAR or proceeds from the disposition thereof, are subject to Section 8(f) of the Plan (including any successor provision). Nothing in the preceding sentence shall be construed as limiting the general application of Section 9 of this Agreement.

5. Transfer of SAR. The SAR may not be transferred except as expressly permitted under Section 8(c) of the Plan.

6. Withholding.

(a) The Grantee acknowledges and agrees that any income or other taxes due with respect to the SAR or any Shares to be delivered pursuant to the exercise of the SAR shall be the Grantee's responsibility. As a condition to the exercise of the SAR, or in connection with any other event that gives rise to a federal or other governmental tax withholding obligation on the part of the Company or any of its Affiliates relating to the SAR, the Company shall be entitled to (i) deduct or withhold (or cause to be deducted or withheld) from any payment or distribution to the SAR Holder, whether or not pursuant to the Plan, (ii) require the SAR Holder to remit in cash to the Company, or (iii) enter into any other suitable arrangements to withhold, in each case, an amount sufficient to satisfy such withholding obligation. The SAR Holder authorizes the Company to withhold such amounts as may be necessary to satisfy the applicable federal, state and local withholding tax requirements that may arise in connection with this Award from any amounts otherwise owed to the Grantee, but nothing in this sentence shall be construed as relieving the SAR Holder of any liability for satisfying his or her tax obligations.

(b) Unless the Company notifies the SAR Holder in writing in connection with any exercise of the SAR, the Company shall hold back from the Shares otherwise deliverable hereunder that number of Shares necessary to satisfy the minimum applicable tax withholding obligation.

7. Effect on Service. Neither the grant of the SAR, nor the issuance of Shares upon exercise of the SAR, will give the Grantee any right to be retained in the service of the Company or any of its Affiliates, affect the right of the Company or any of its Affiliates to discharge or discipline such Grantee at any time, or affect any right of such Grantee to terminate his or her Service at any time.

8. Rights as a Stockholder. The SAR Holder shall have no rights as a stockholder with respect to any Shares that may be delivered by exercise of the SAR (including, without limitation, any rights to receive dividends or non-cash distributions with respect to such Shares) except as to Shares actually issued under the Plan. No adjustment shall be made for dividends or other rights for which the record date is prior to the date such Shares are issued.

9. Provisions of the Plan. This Agreement is subject in its entirety to the provisions of the Plan, which are incorporated herein by reference. A copy of the Plan as in effect on the Date of Grant has been furnished to the Grantee. By exercising all or any part of the SAR, the SAR Holder agrees to be bound by the terms of the Plan and this Agreement. In the event of any conflict between the terms of this Agreement and the Plan, the terms of the Plan shall control.

10. Acknowledgements. The Grantee acknowledges and agrees that (i) this Agreement may be executed in two or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument and (ii) this agreement may be executed and exchanged using facsimile, portable document format (PDF) or electronic signature, which, in each case, shall constitute an original signature for all purposes hereunder.

NOVAVAX, INC.

By: _____
Name:
Title:

GRANTEE'S ACCEPTANCE

The undersigned hereby accepts the SAR and agrees to the terms and conditions of this Agreement and the Plan. The undersigned hereby acknowledges receipt of a copy of the Plan.

GRANTEE

SIGN NAME

PRINT NAME

PRINT ADDRESS

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Stanley C. Erck, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Novavax, Inc.;
 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluations; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
-

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2019

By: /s/ Stanley C. Erck
President and Chief Executive Officer

CERTIFICATION OF PRINCIPAL FINANCIAL AND ACCOUNTING OFFICER

I, John J. Trizzino, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Novavax, Inc.;
 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluations; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
-

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2019

By: /s/ John J. Trizzino
Senior Vice President, Chief Business Officer, Chief Financial Officer and
Treasurer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT
TO 18 UNITED STATES C. §1350
(SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002)**

In connection with the Quarterly Report of Novavax, Inc. (the "Company") on Form 10-Q for the fiscal period ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Stanley C. Erck, President and Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

- 1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the dates and periods covered by this Report.

Date: November 7, 2019

By: /s/ Stanley C. Erck
President and Chief Executive Officer

**CERTIFICATION OF PRINCIPAL FINANCIAL AND ACCOUNTING OFFICER PURSUANT TO 18 UNITED STATES C. §1350
(SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002)**

In connection with the Quarterly Report of Novavax, Inc. (the "Company") on Form 10-Q for the fiscal period ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John J. Trizzino, Senior Vice President, Chief Business Officer, Chief Financial Officer and Treasurer of the Company, hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

- 1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- 2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the dates and periods covered by this Report.

Date: November 7, 2019

By: /s/ John J. Trizzino
Senior Vice President, Chief Business Officer, Chief Financial Officer and
Treasurer
